

User's Guide

EDACS[®] VAX/VMS SYSTEM MANAGER Version 6.XX (Group 6)

REVISION HISTORY

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CHAPTER 1 - INTRODUCTION

This manual is a user's guide for personnel operating the **Enhanced Digital Access Communications System (EDACS®)** System Manager operating with Version 6.XX software.

The manual contains information on basic equipment operation, setting up and using the software, typical operations, and detailed screen-by-screen field definitions. A representation of each menu and help information for each screen is also provided.

A separate manual is available for the Hardware Installation/Set-Up. Refer to LBI-38703.

DESCRIPTION

The EDACS System Manager is a computerized management system for EDACS systems and networks. The system is based on proven VAX computer technology from Digital Equipment Corporation (DEC™) using the highly reliable, multitasking, multi-user VMS operating system, and running custom EDACS application software.

The System Manager provides a common database for all the system elements, such as the Site Controller and **Console Electronics Controller (CEC)** or **Integrated Multisite and Console Controller (IMC)**. It enables the user to directly access the databases and some of the parameters affecting the performance of each system element. Through user-friendly menu driven screens, the user can configure the system, monitor system activity in real time, maintain user databases, monitor alarms, and control other types of activity at each site. Many of the more sophisticated EDACS features can be directly accessed and controlled from a System Manager terminal.

Figure 1-1 shows a typical Multisite system with CEC/IMC and the System Manager. The System Manager may connect to the Sites, Multisite controller (CEC/IMC), and remote terminals directly, through a dedicated modem, or via a dial-up modem. If the system element is co-located with the System Manager, it may connect directly to the System Manager via a 19.2 Kilobaud RS-232 serial interface. While the System Manager may be co-located with the site equipment allowing "direct" hard wired connection to the Site Controller or CEC/IMC, it is more often located remotely in an office convenient to administrative personnel. A remote System Manager-to-CEC/IMC, remote terminal, or Site Controller connection requires a modem at both locations. A 9600 baud modem

is recommended for dedicated connection or dial-up connection to Site Controllers. Modems connected to the CEC/IMC may operate at 9600 or 19.2k baud

SITE CONTROLLER

The Site Controller receives the current site database from the System Manager. This database contains unique personality profiles segmented by individual and group. If the System Manager reconfigures the site data, the database changes are sent to the Site Controller immediately.

The Site Controller continuously monitors site fault indications from the various diagnostic equipment at the site. Alarms, are reported to the System Manager immediately. Major and minor alarms classifications, and most alarm parameters, can be reconfigured by the System Manager.

The Site Controller also sends stored activity records to the System Manager when they reach a preset level or when the System Manager requests them.

CEC/IMC

The System Manager contains a common database for Multisite operations. This database stores system and user data for all systems within the CEC/IMC network. Pertinent database information used to control the Multisite equipment is downloaded from the System Manager into the CEC/IMC network switch. Group ID, Unit ID, and alias information is forwarded to all dispatch positions for call display purposes. This eliminates the need for separate entry and maintenance of this information at the dispatch positions.

STARGATE CONTROLLER

The System Manager may also be connected to a StarGate Controller. The StarGate Controller adds distributed Multisite call capability to EDACS IMC networks. Up to eight (8) IMCs can be linked together via the StarGate Controller. This allows the EDACS wide area system to be greatly expanded to provide extended network communication capability.

Equipping the StarGate Controller with a System Manager is optional if the StarGate Controller uses firmware 3.0 (and later). All StarGate Controllers using Firmware 2.x require the System Manager.

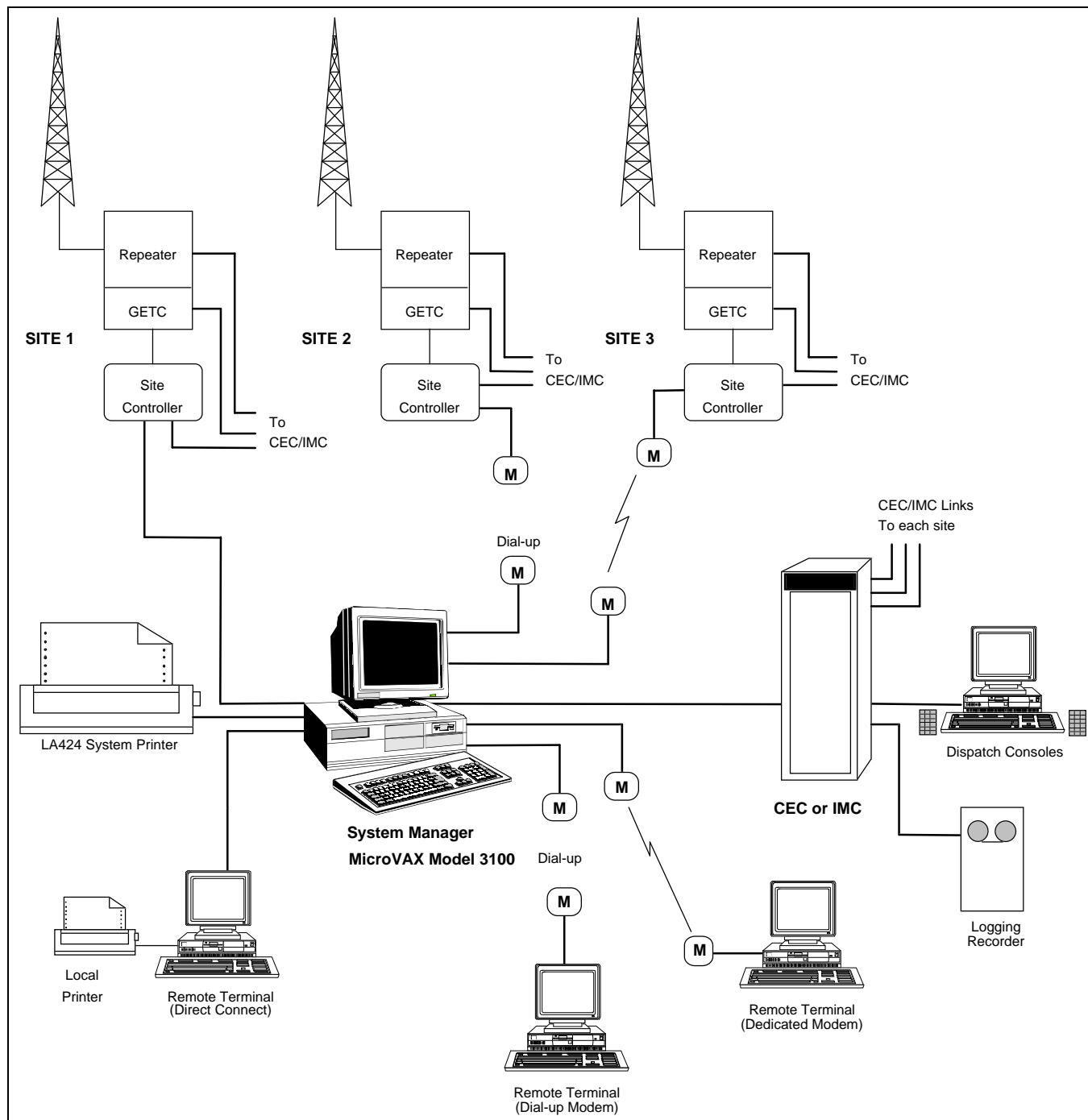


Figure 1-1. System Overview

CENTRALIZED ACTIVITY LOGGER

The Centralized Activity Logger (CAL) is an optional system which interfaces with the CEC/IMC. This equipment enables the System Manager to monitor and download activity from sites not equipped with a Site Controller. In existing EDACS networks, the System Manager communicates with Site Controllers at RF systems using modems and dial-up or leased line connections.

Since the IMC is already connected to all the sites, it has centrally available much of the data that individual Site Controllers normally output to the System Manager. The CAL connects to the IMC and demultiplexes incoming call activity information messages into activity download data and site monitor data and sends it to the System Manager.

REFERENCE DOCUMENTATION

It may be necessary to consult one or more of the following documents during the installation or configuration process. These manuals will also provide additional guidance if you encounter technical difficulties during the configuration process.

		LBI-38962	- EDACS Data Gateway Installation and Maintenance Manual
		LBI-38965	- EDACS BCU/CAL System and Installation Manual
		LBI-38985	- EDACS Site Controller Maintenance Manual.
		LBI-38987	- EDACS SCAT GETC Configuration Manual (for GETC SCAT Software 344A3835G2 or earlier)
		LBI-38988	- EDACS Station GETC Configuration Manual.
		LBI-39000	- EDACS Jessica PBX Gateway Systems Manual
		LBI-39024	- CEC Manager Operations Guide, V3.0x
		LBI-39031	- EDACS SatrGate Controller Digital Audio Switch Maintenance Manual
AE/LZB 119 1889	- EDACS Site Interface Module (SIM) Installation and Operation Manual	LBI-39074	- EDACS MASTR III Basic or Level 1 System Installation Manual.
		LBI-39124	- CEC Manager Operations Guide, V4.0x
LBI-38224	- EDACS Voter Equipment System Manual.	LBI-39149	- EDACS Compact Vertical Voter Maintenance Manual.
LBI-38430	- MASTR IIe Control Shelf Maintenance Manual.	LBI-39186	- EDACS Simulcast Control Point Maintenance Manual.
LBI-38662	- EDACS Console Electronics Controller (CEC) and Integrated Multisite and Console Controller (IMC) Digital Audio Switch Maintenance Manual.	SRN-1001	- Software Release Notes for System Manager Software
		SRN-1009	- Software Release Notes for GETC SCAT Software 344A3835G2
LBI-38703	- System Manager Installation, Setup, and Troubleshooting	SRN-1010	- Software Release Notes for GETC Turbo Board Software, 344A4414G1 only.
LBI-38737	- Electrostatic Discharge Protection		
LBI-38775	- MASTR III Base Station Maintenance Manual	SRN-1024	- Software Release Notes for GETC 900 MHz Software, 19A705595G8.
LBI-38896	- EDACS Site Downlink and CEC/IMC Uplink Configuration Manual.	SRN-1060	- Software Release Notes for GETC1e Software, 349A9607G1 (or later).
LBI-38911	- CEC Manager Operations Guide, V2.1		

USING THIS MANUAL

This manual is designed for use by System Manager operators, supervisors and the System or Network Administrator. The information is presented in such a way, that a novice or experienced user will be able to quickly find the necessary information.

Chapter 1, Introduction - The introductory chapter presents information on the various hardware and software configurations, a description of the System Manager's operation, and information on using this manual.

Chapter 2, System Manager Basics - This chapter provides the basics for using the keyboard controls, how to operate the System Manager, and how to read the information presented by the various screens.

Chapter 3, System Manager Operation - This chapter details the steps necessary to set up the System Manager system and the basics of day to day operation.

Chapter 4, File Maintenance - This chapter describes those activities necessary to maintain the System Manager and associated databases. By performing these operations on a periodic basis, the System Manager will operate efficiently and will maintain the integrity of its databases.

Chapter 5, Database Maintenance - This chapter details the various features of the Database Maintenance category. This category is used to set up and maintain the databases distributed to the CEC/IMC and Site Controllers.

Chapter 6, Site Configuration - The Site Configuration chapter allows you to make real time temporary changes to the operating characteristics of the selected site.

Chapter 7, Device Communication - The chapter for Device Communication allows the user to periodically upload new databases to sites and devices, to download site activity data, and to monitor each site's activity on a real time basis.

Chapter 8, Alarm Control - The Alarm Control chapter provides you with instructions for setting up the alarm monitors and for reviewing alarms received from the sites. It also allows you to define a combination of alarm events necessary to control other site functions.

Chapter 9, Radio Monitor and Control - This chapter provides you with the information necessary to remotely enable, disable, or regroup selected radios. It also contains

instructions for locating units or groups operating in a Multisite or extended network.

Chapter 10, Reports - This chapter explains how to generate and read the various reports which are available from the System Manager.

Chapter 11, System Maintenance - This is one of the most important chapters in this manual. The System Maintenance chapter provides detailed instructions for setting up the Agency Partition Table, User Accounts, and allocation of disk space. It also provides instructions for archiving and retrieving databases and activity data.

Chapter 12, EDACS Optional Subsystems - This chapter provides the additional information required for the System Manager to interface with optional network devices.

Chapter 13, Database Import/Export Utility - This chapter provides instruction for installing and using the Database import/export utility.

Appendix A, Channel Monitor Display, Channel Status and Activity Messages - This appendix contains a list of messages and status calls which may be displayed when using the Site Monitor function (User Menu item #32).

Appendix B, System Manager Messages - This is a listing of various messages which may appear during normal operation of the System manager software.

Appendix C, Automatic Control Channel Rotation - This appendix provides instructions for loading and using the Automatic Control Channel Rotation utility.

Appendix D, Alarm Definitions - This appendix lists the various alarms which may be encountered when reviewing Alarm Reports.

Appendix E, Database Summary and Acceptable Values - This appendix summarizes the database default values and their acceptable ranges.

Appendix F, CAD Interface Message Definitions - This appendix describes the interface messaging used to communicate with the Computer Aided Dispatch (CAD) system.

Appendix G, Glossary - The Glossary defines the various terms and abbreviations used in this manual.

Appendix H, Miscellaneous Functions - This appendix details procedures for miscellaneous functions, such as, obtaining the Site Controller's software version number and setting up a terminal for Remote Printer operation..

Appendix I, Index - The Index provides a cross reference listing to pertinent information within this manual.

SYSTEM MANAGER CONFIGURATIONS

HARDWARE CONFIGURATIONS

There are five different System Manager hardware configurations available, depending on system size. All of the configurations use a Digital Equipment Corporation (DEC) VAX 3100 computer as the System Manager base. The amount of internal RAM, hard drive size and number of Ethernet network servers depends on the number of sites and peripheral equipment supported. The following information describes the five standard system configurations and hardware provided, at the time of this manual's printing. Current configurations could be different.

<u>Standard Configuration:</u>	<u>A1</u>	<u>A2</u>	<u>A3</u>	<u>A4</u>	<u>A5</u>
Maximum Trunked Systems	1	5	10	20	30
Video Monitor (Amber)	1	1	1	1	1
System Printer	1	1	1	1	1
IMC/CEC Support	No	Yes	Yes	Yes	Yes
Device Terminal Ports ¹	3	7	10	16	22
Max. Simultaneous Terminals ²	2	5	9	15	21

<u>Expanded Configuration:</u> ³					
Maximum Trunked Systems	1	5	10	20	30
IMC/CEC Support	No	Yes	Yes	Yes	Yes
Device/Terminal Ports ¹	11	15	18	24	30
Max. Simultaneous Terminals ²	6	13	17	23	29

<u>Standard Hardware:</u>					
MicroVAX Model	40	40	40	40	85 ⁴
Hard Drive (Gigabytes)	1.05	1.05	1.05	1.05	2.10 ⁵
Internal RAM (Mbytes)	16	16	24	32	64
TLZ07 Tape Drive ⁶	1	1	1	1	1
Spare TLZ07 Tapes	3	3	3	3	3
DECservers (Ethernet Network Servers)			1	3	5
For Extended Configurations add:		+1	+1	+1	+1

¹ Device/Terminal Ports are used to communicate with devices other than sites; such as terminals, printers, an IMC, or centralized Telephone Interconnect. All but one of these ports support full modem control (i.e. dial up).

² The maximum number of terminals that can be logged on simultaneously.

³ The expanded system provides extra Device/Terminal ports only. Using these ports to communicate with extra sites is a violation of the EDACS License agreement!

⁴ Includes a 600 megabyte CD-ROM.

⁵ Two 1.05 Gigabyte Drives for A5.

⁶ The TLZ07 Tape Drive replaces the TK50 Tape Drive in all MicroVax computers shipped after 9/95.

HARDWARE SPECIFICATIONS**MicroVAX Computer**

Physical Characteristics	A1, A2, A3, A4, A5	
Height:	14.99 cm (5.90 in.)	
Width:	46.38 cm (18.26 in.)	
Depth:	40.00 cm (15.75 in.)	
Weight:	18.40 kg (40.00 lb.)	
Power Requirements	A1, A2, A3, A4	A5
Nominal Voltage:	110/240 Vrms	110/240 Vrms
Power source phasing:	Single	Single
Nominal Frequency:	50 - 60 Hz	50 - 60 Hz
Voltage Range:	88 - 132 Vrms 176 - 264 Vrms	88 - 132 Vrms 176 - 264 Vrms
Line Frequency Tolerance:	47 - 63 Hz	47 - 63 Hz
Typical running current:	1.1/0.6A	1.2/0.65A
Typical power requirements:	132/144 VA	144/156 VA

	<u>Printer</u>		<u>Monitor</u>	<u>Keyboard</u>
Physical Characteristics	<u>System</u>	<u>Local (Option)</u>	<u>Video Monitor</u>	<u>Keyboard</u>
Height:	17.0 cm (6.7 in.)	13.4 cm (5.3 in.)	31.2 cm (13.2 in.)	4.5 cm (1.75 in.)
Width:	61.5 cm (24.2 in.)	36.9 cm (14.5 in.)	31.5 cm (12.4 in.)	47.8 cm (18.8 in.)
Depth:	31.0 cm (12.2 in.)	42.7 cm (16.8)	33.0 cm (13.0 in.)	17.8 cm (7.0 in.)
Weight:	14.3 kg (23 lb.)	10.5 kg (23 lb.)	8.5 kg (18.7 lb.)	1.4 kg (3.0 lb.)
Power Requirements				
Voltage:	120/240 V	120/240 V	120/240 V	
Frequency:	50/60 Hz	50/60 Hz	50/60 Hz	
Phases:	1	1	1	
Max. Power Consumption	170 W	170 W	170 W	

System**Operating Environment**

Temperature (sea level):	10° - 40°C (50° - 104° F)
Relative Humidity:	10% - 90% non-condensing
Maximum operating altitude:	2.4 km (8,000 feet)

SOFTWARE CONFIGURATIONS

The System Manager software allows the user to set-up, control, and monitor EDACS Trunked Systems and networks. Not all installations will require all of the features available to the System Manager. As a result, the System Manager functions are grouped into three software configurations - the Core, Mid-Featured, and Full-Featured configuration.

Core Configuration

The Core configuration (344A4067Gx for TK50 tape, or 350A1816Gx for TLZ07 tape) is the basic software package used in single site systems requiring minimal software features. The package contains those features most commonly needed to setup, control, and maintain a basic EDACS system and includes the following features:

<u>Database Maintenance</u>	<u>Site Reconfiguration</u>	<u>Reports</u>
<ul style="list-style-type: none"> • Site/Device Definition • Logical Unit Definition • Group Definition • Rotary Definition • Line Definition • Toll Call Restrictions • ACU Parameters • SAID Definition** • Database Import/Export* • Extended Network Support* • Multiple Channel Partitioning* • Logical Record Duplication* • Group Record Duplication* 	<ul style="list-style-type: none"> • Channel • Call Parameters • Test Parameters • Miscellaneous • Relay 	<ul style="list-style-type: none"> • Report Manager • Device Report • Logical Unit • Group • Remote Printer Support*
	<u>Site (Device) Communications</u>	<u>System Maintenance</u>
	<ul style="list-style-type: none"> • Database Upload • Site Monitor • WWVB Time Synchronization* Note: Operates in Stand-alone (no WWVB Receiver) mode. • Network Manager Interface** 	<ul style="list-style-type: none"> • Agency Partition Table • User Account Maintenance • Database Archive • Database Retrieval • System Backup • A/F/S Access Restrictions*

Mid-Featured Configuration

The Mid-Feature configuration (344A4582Gx for TK50 tape, or 350A1817Gx for TLZ07 tape) is used in single site systems requiring advanced features and in Multisite systems not requiring unit tracking. This package includes all the Core features plus the following additional features:

<u>Site (Device) Communications</u>	<u>Radio Monitor and Control</u>	<u>Reports</u>
<ul style="list-style-type: none"> • Activity Download 	<ul style="list-style-type: none"> • Unit Enable/Disable 	<ul style="list-style-type: none"> • Activity Detail • Activity Summary • Alarm • Channel Statistics • Site Statistics • Event Log Display
<u>Alarm Control</u>	<u>System Maintenance</u>	
<ul style="list-style-type: none"> • Alarm Control Display • Relay Trigger Definitions • Alarm Logging to Printer* • MASTR III Alarm Support** 	<ul style="list-style-type: none"> • Activity Archive • Activity Retrieval 	

Full-Featured Configuration

The Full-Feature configuration (344A4583Gx for TK50 tape, or 350A1818Gx for TLZ07 tape) is used in Multisite systems requiring unit tracking capabilities. The package includes all the Core and Mid-Feature features plus the following additional features:

Radio Monitor and Control

- Dynamic Regrouping
- Multisite Unit Location
- Multisite Group Location

* - These features added by Version 5.01 software.

** - These features added by Version 6.00 software.

EDACS COMPATIBILITY

The System Manager Version 6.xx is compatible with other EDACS component software versions shown in Table 1-1.

Table 1-1. VAX System Manager Version 6.xx Compatibility

Product	Software Compatibility
Billing Correlation Unit (BCU)	N/A, operates independently of System Manager.
CADlink	Compatible with the most recent release.
Centralized Activity Logger (CAL)	Compatible with Group 1 release.
Consoles: C3 Maestro C3 Modular	Compatible with all versions through Group 10. Compatible with all versions through Group 10.
EGE Switch:*	* In order to use WWVB time synchronization or Extended Network functionality that informs the EGE switch of a Logical or Group ID's Extended Network enable status, the EGE switch, MOM Controller, and MOM PC must be using Group 11 (V4.00 or later) software.
MSC or MSC II	Compatible with all released versions up to Group 10.
CEC/IMC	Compatible with all released versions up to Group 10.
StarGate Controller	Compatible with all released versions up to Group 10.
Jessica PBX Gateway	Phase 1 not interfaced to System Manager, Phase 2 compatible with this release.
MSC I	Not compatible.
Radios:	
PCS, Rangr, FMD and MPD	Compatible with all released versions.
MPA	Fully compatible with Group 12 (or later). Prior to Group 12, Dynamic Regrouping operates with the following restrictions: <ul style="list-style-type: none"> • If a group is forced, it must be the only regroup setting. If other regroup settings are present with a forced setting, the MPA radio will begin to re-boot continuously. • Up to eight (8) regroup settings may be programmed into a radio. However, there are known difficulties in selecting individual regroup settings on the radio. Remember that no settings should be forced if more than one regroup setting is defined.
MRK	Group 15 (or later) is required when using Dynamic Regrouping.
Orion	Group 15 (or later) is required when using Dynamic Regrouping.
Prism	Compatible with all released versions.
Network Manager:	Compatible with Group 1 release.
Site Controllers:	
PDP**	Compatible with all released versions. ** Some features, such as MCP are not supported by PDP. These limitations will be detected by the VAX System Manager and no problems will result. Also, the Test Unit display will never show the PDP's Test Unit as being turned off completely, since the PDP does not have that ability.
VAX	Compatible with Group 3 thru Group 5 software. <ul style="list-style-type: none"> • Group 1 and 2 have difficulty with Test Unit manipulations. • Group 6 required when using the MCP function.

SOFTWARE FUNCTIONS

DESCRIPTION

The System Manager software functions are grouped into seven categories. The following list identifies the categories as shown in the Main Selections sub-menu in the main User Menu. This is followed by a brief description of the features within each category:

- Database Maintenance.
- Site Reconfiguration.
- Site (Device) Communications.
- Alarm Control.
- Radio Monitor and Control.
- Management Reports.
- System Maintenance.

Database Maintenance

Files stored in the System Manager contain information that affect trunked system performance. Access to these files, gained through menu driven screens, allow authorized personnel to manipulate files or tailor the performance of the system for specific requirements.

The database defines a personality profile by unit ID and Group. This personality profile defines the level of service provided to the individual or group. The database must be transferred to the Site Controller and/or CEC/IMC to become effective.

Maintenance of the files, once the system has been initially configured, is minimal. Addition of users and groups and adjustment of priorities are examples of the more common activities required after initial system set-up. These are easily and quickly accomplished. The changes can be thoroughly reviewed and then “uploaded” to the Site Controller where they go into effect immediately.

Site Reconfiguration

The Site Reconfiguration function permits the user to make temporary changes affecting the site parameters and operating characteristics. The System Manager can call the Site and monitor all activity in real time. This allows the operator to intervene in system operation, enabling and disabling repeaters, or moving the control channel to operate on a different repeater and make temporary changes to a site’s database. These changes may improve site operation, change test parameters, or be used to remotely troubleshoot the site. Although these changes are

implemented immediately, they are not stored as part of the permanent database. As a result, if the Site Controller reboots or if the permanent databases are sent to the site via the Device Communication commands, the System manager will upload selected databases (set up using Database Maintenance) which will over-write any temporary changes made to the site’s database.

Site (Device) Communications

The Device Communication function enables the System Manager to upload any added, changed, or existing site databases or initiate a request to the site(s) to download individual site activity reports.

This function also allows the user to monitor the status and any activity on all channels at the selected site. The Channel Monitor display is continuously updated by the Site Controller.

Alarm Control

The Alarm Control function allows the user to monitor site alarm activity from the System Manager terminal. The System Manager can define alarms as Major or minor, active high or low, etc., from the terminal. It also defines how the site will report the alarm status and what action the Site Controller must take if the conditions which caused the alarm are cleared.

The site automatically communicates with the System Manager to ensure that the Dispatch Center is alerted for all alarms. Control relays can also be activated at the site from the System manager terminal. This feature might be used to turn lights on or off, monitor security systems, or lock doors remotely.

Radio Monitor and Control

The Radio Monitor and Control function allows the System Manager to selectively enable, disable, or regroup radios. In the event a radio is stolen or lost, the unit can be disabled to prevent monitoring or transmitting on the system. When recovered, the unit can then be enabled to operate normally.

This function also allows the System Manager, when connected to a Multisite network, to identify the selected radio’s site and group location or lists all sites within the Multisite network and the number of units supported by each.

Management Reports

The Management Reports function allows the System Manager to define and generate various reports, providing

the user with detailed information on system activity, performance, and efficiency. These reports can be customized to meet the user's needs or generated using the default conditions. All reports generated are stored until they are deleted by using the Reports Manager. The Reports Manager allows the user to print the report, view it on the display, or to delete the report. In addition, the Reports function also allows the user to examine all System Manager activities for a particular date.

Site activity can be automatically downloaded to the System Manager computer on a periodic basis, or called for manually. Data can be sorted by agency, fleet, subfleet, or individual, based upon site or even a specific channel. Operators select reports desired from a System Manager menu.

System Maintenance

The System Maintenance function enables the user to archive and or restore the System Manager database and the Site Controller Activity data periodically downloaded from the sites. The maintenance function is also used to setup the Agency Partition Table to manage the number of radios grouped together at various levels and to manage the amount of disk space allocated for storing unarchived Activity data.

The most important purpose of the System Maintenance function is assigning password protection to the various System manager functions and features. This access control allows the database and control of functions to be partitioned for multi-user access. Each user has access only to authorized portions of the database and the necessary subset of features, as defined by the System Administrator.

NEW FEATURES

Software Release 6.xx

The VAX System Manager Version 6.xx adds the following new features to the System manager software packages. These features include the following:

- Network Management Support (Core Feature).
- System Assigned ID (SAID) Support (Core Feature).
- MASTR III Alarm Support (Mid Feature).

Network Management Support

The System Manager provides vital services to the Network Manager (release 1), such as connectivity to the Site Controller as well as storage and distribution services for various databases (e.g. LID, GID). Under Network Management, the System Manager will act primarily as a server to the Network Manager.

System Manager screen access from the Network Manager will be accomplished via telnet using VT320 terminal emulation.

Alarming within the System Manager will translate into fault notification within the context of Network Management. Current alarm information received from the site will be filtered into actual fault information followed by SNMP trap generation.

Network Management Support is transparent to the System Manager user. Refer to the LBI documentation for the Network Manager for procedures on accessing System Manager information from the Network Manager.

System Assigned ID (SAID) Support

System Assigned ID (SAID) is a feature that uses certain Subfleet GROUP IDs (GIDs w/ Fleet = 0, Subfleet ≠ 0) to make Patch and Simulselect calls from the system console. SAID support will consist of the creation and maintenance of a **Master SAID Pool**. The Master SAID Pool will consist mainly of the Subfleet GIDs that are based on the A/F/S structure (Fleet = 0; Subfleet ≠ 0) and defined in PST Signaling Definition Document. The Master SAID Pool may contain other Subfleet GIDs (Fleet ≠ 0; Subfleet ≠ 0) that the User allocates. The Master SAID Pool is used to create **SAID pools** for each of the switches that are a part of the system.

The switch's SAID pool is a subset of the Master SAID Pool and is uploaded to the switch associated with it. The maximum number of SAIDs in a switch's SAID pool is 192. (Up to 6 SAIDs for each of a maximum of 32 consoles per switch.) If the Extended Console Information (5 GID fields for Patches, 1 GID field for Simulselect) is set to "POOL", the consoles use its switch's SAID pool for GIDs to use. If all 6 of the Extended Console Information fields are set to distinct GIDs, the switch's SAID pool is not used for that particular console.

A graphic representation of the Master SAID Pool and Switch's SAID Pool schema is presented in Figure 1-2.

Definitions

SAID (System Assigned ID) - A GID with a group-type of SAID. This special type of GID allows the user to make Patch and Simulselect calls from the system console.

Master SAID Pool - A collection of GIDs which have a group type of SAID. This collection is used to allocate SAIDs to the SAID Pools for the switches.

Switch's SAID Pool - A collection of GIDs which are uploaded to the switch for use by its console for Patch and Simulselect calls. The Switch's SAID Pool is a subset of the Master SAID Pool. GIDs are only allowed to be in one Switch's SAID Pool at a given time.

Extended Console Information - Extended Console Information consists of the GIDs to be used for the five Patch and one Simulselect buttons that are on the console operator panel.

MASTR III AlarmSupport

This feature adds four new alarms:

- GETC Synthesizer (Synth) Alarm
- GETC Power Amplifier (PA) Alarm
- Turbo Alarm
- Voter Alarm

Activities affected by the addition of these alarms include Alarm Logging, Alarm Reporting, and Alarm Notification.

Synthesizer (Synth) Alarm

Each station GETC monitors the Base Station synthesizer for locked condition through a control line. If the GETC fails to detect a synthesizer locked condition then an alarm condition exists.

Power Amplifier (PA) Alarm

Each station GETC can be configured to monitor its RF power level through a control line driven by the station or power sensor. If the power level drops below a threshold level, an alarm condition exists.

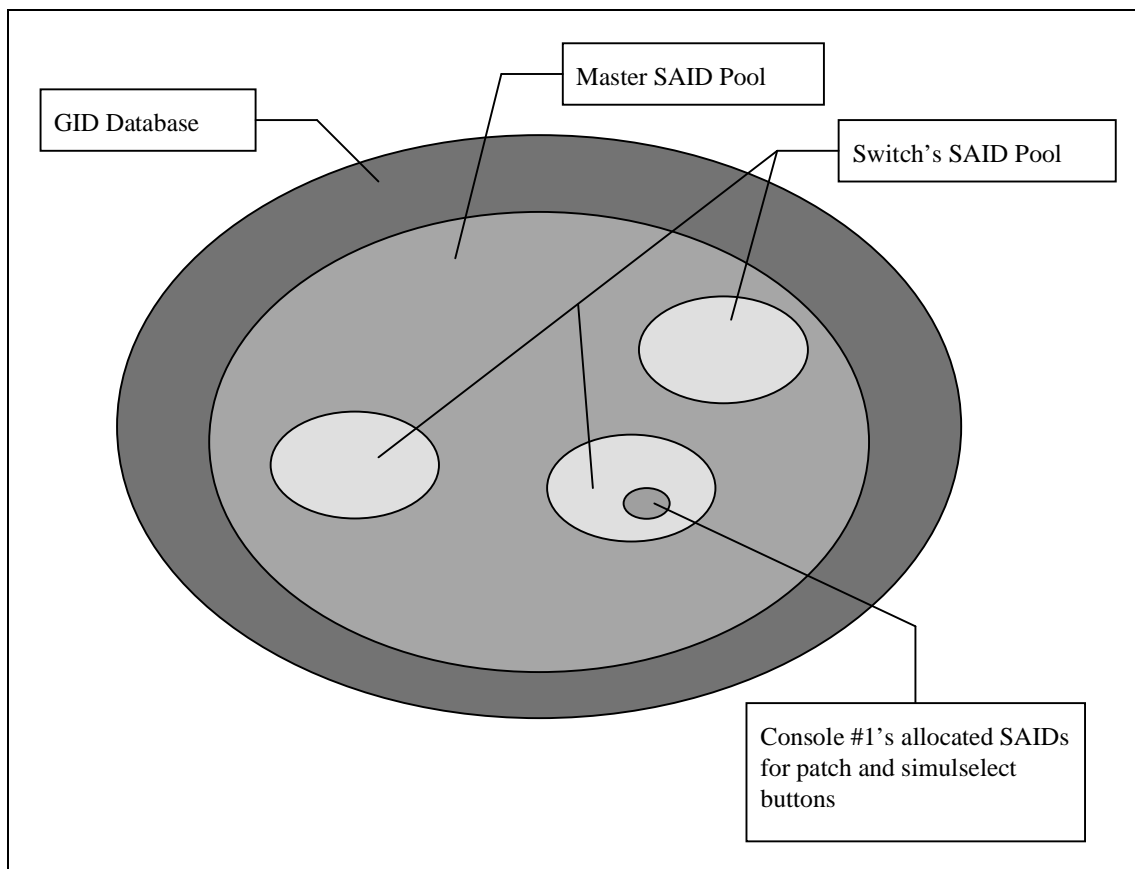


Figure 1-2. Master SAID Pool Representation

Turbo Alarm

The main GETC processor and Turbo communicate through a specialized RAM interface. If communication is disrupted then an alarm condition exists.

Voter Alarm

The GETC monitors the remote data (Rockwell Modem) for error messages from the Voter. If Voter error messages are received then an alarm conditions exists.

Software Release 5.01

The VAX System Manager Version 5.01 has added nine new features to the System manager software packages. These additions are as follows:

- Extended Network Support (Core Feature).
- Database Import/Export (Core Feature).
- Multiple Channel Partitioning (Core Feature).
- WWVB Time Synchronization (Core Feature).
- Remote Printer Support (Core Feature).
- Console Definition (Core Feature).
- A/F/S Access Restrictions (Core Feature).
- Database Record Copy (Core Feature).
- Alarm Logging to Printer (Mid-level Feature).

Extended Network Support - The new Extended Network feature adds two additional features for use by the Extended Wide Area networked customer. The first feature allows for single point of entry for logical and group database records, for multiple VAX System Manager users. The second, provides a direct mechanism for indicating Extended Network functionality to the StarGate Controllers. Refer to Chapter 3, Step 5, for Extended Network Setup procedures.

Database Import/Export or CAD Interface - The System Manager Database Import/Export (SMIX) feature allows the user to extract the logical, group, and device database records from the VAX System Manager's files in a comma delimited format. This data can then be used with a variety of PC-based software tools and packages where the records may be manipulated, updated, or created. The records are then stored in the comma delimited format and can be imported back into the VAX System Manager's database.

This feature uses the Computer Aided Dispatch (CAD) interface protocol. Therefore, reference in this documentation and in the System Manager software will refer to the PC as a CAD device.

For information on configuring CAD Interface on the System Manager, refer to LBI-38703, System Manager Technical Reference Manual.

Multiple Channel Partitioning - This feature provides the ability, in conjunction with the VAX Site Controller, to partition the RF channels at a site into sets of channels. These channel sets can then be assigned to different radio users, so that coverage and/or functionality is limited for those users.

NOTE

NOTE

The Site Controller must be using Software V6.00 (or later).

WWVB Time Synchronization - This feature allows a user to synchronize all of the clocks in the EGE Switch devices and the Site Controllers with the System Manager's clock. Additionally, this feature allows the System Manager to obtain its clock time from an EGE Switch configured with a WWVB receiver which is synchronized to the coordinated Universal Time Standard (UTC).

NOTE

NOTE

In order to set the EGE Switch's clock, or read the WWVB time from the EGE switch, the EGE Switch version must be 4.00 (or later). Refer to Chapter 3 for WWVB setup details.

The WWVB operates on a frequency of 60 kHz. The CEC/IMC option uses Spectracom® Corporation's NETCLOCK/2™ WWVB receiver which interfaces with the CEC/IMC via an RS-232 serial port at the CEC/IMC Manager. With this option installed, the System Manager is able to periodically download time information synchronized to UTC signals broadcast by WWVB located in Fort Collins, Colorado. Refer to Chapter 3, Step 1 for the steps needed to activate this feature.

Remote Printer Support - This feature allows the VAX System Manager's Report Manager function (User Menu item #69) to print reports on a printer connected locally to a remote terminal. Refer to Appendix H for instructions on setting up a terminal for Remote Printer support.

Console Definition - This feature allows the System Manager Logical Unit Definition function (User Menu item #11) to define a Logical ID with a Unit Type of "EGE Console." This information is uploaded (User Menu item #30) to the CEC/IMC attached to the System Manager so the consoles will be able to differentiate between units and other consoles.

A/F/S Access Restrictions - This feature is used to restrict access to the Logical and Group database records, by using the Agency/Fleet/Subfleet structure of the system. This feature applies to Logical and Group definition screens, Logical and Group database reports, Unit Enable/Disable features, and the Report Manager's file view and file print functions.

Using this feature allows you to create System Manager user accounts (User Menu item #71) which can have access to the screens mentioned, but only for the A/F/S ranges set up for that account.

Database Record Copy - This feature allows you to copy information from a displayed logical database to a new logical database record, or from a group database record to a new group database record.

Alarm Logging to Printer - This feature allows you to configure an RS-232 port on the VAX or a DECserver, to function as a continuous alarm logging port. Normally, a line printer would be attached to the port and dedicated to this function; a PC or other computer could also be set up to capture and/or display the alarm information. The alarm information is printed for all sites (with Site Controllers) that are attached to the System Manager, when that alarm information changes. Refer to Appendix D for Alarm log to printer definitions and to LBI-38703 for the Alarm Log to Printer setup instructions.

IN CASE OF DIFFICULTY

Should a problem of a technical nature arise with this software (for instance, a site is not communicating), then consult the Installation, Maintenance, and Troubleshooting Manual (LBI-38703).

If the problem is more of an application usage problem (for example, a screen does not seem to function as you would expect), then refer to the applicable chapter in this manual.

If you are unable to resolve the problem to your satisfaction, then contact the Ericsson Technical Assistance Center (TAC) at 1-800-528-7711 or 804-528-7711 (for international customers outside the United States/ North America region).

CHAPTER 2 - SYSTEM MANAGER BASICS

This chapter explains the basics for operating the System Manager equipment, the various functions of the keyboard controls, and how to read the information presented by the various screens.

VIDEO TERMINAL

The System Manager installation includes a DEC VT520 Video Terminal with keyboard. Prior to use, this terminal must be properly configured for use with the EDACS system. This is normally done at the factory, however instructions for setting up the terminal are also provided in LBI-38703 and the DEC *Installing and Using The VT520 Video Terminal* manual.

The information presented in this section is mainly for the DEC Video Terminal provided with the System Manager. If a personal computer (PC) is used, the keys must be remapped. Refer to the Personal Computer information presented later in this section for additional information.

KEYBOARD FUNCTIONS

The System Manager typically uses a DEC LK401 keyboard. This allows the user to access all of the menus, and to enter or change information on the site/location screens. The various menus and screens can be easily accessed using the number or cursor (arrow) keys. Any changes, updates or other information entered can be saved, cleared, or deleted by using the various function (F) keys. The keyboard layout shown in Figure 2-1 is a typical DEC Video Terminal Keyboard.

The keyboard has four groups of keys which are grouped by function:

- Main keypad
- Editing keypad
- Numeric keypad
- Top-row function keys

The Main keypad and Numeric keypad allow the user to enter data. They function similar to a standard keyboard or calculator keypad. The Editing keypad includes four directional arrow keys and six editing keys. The top-row function keys have been programmed to perform special

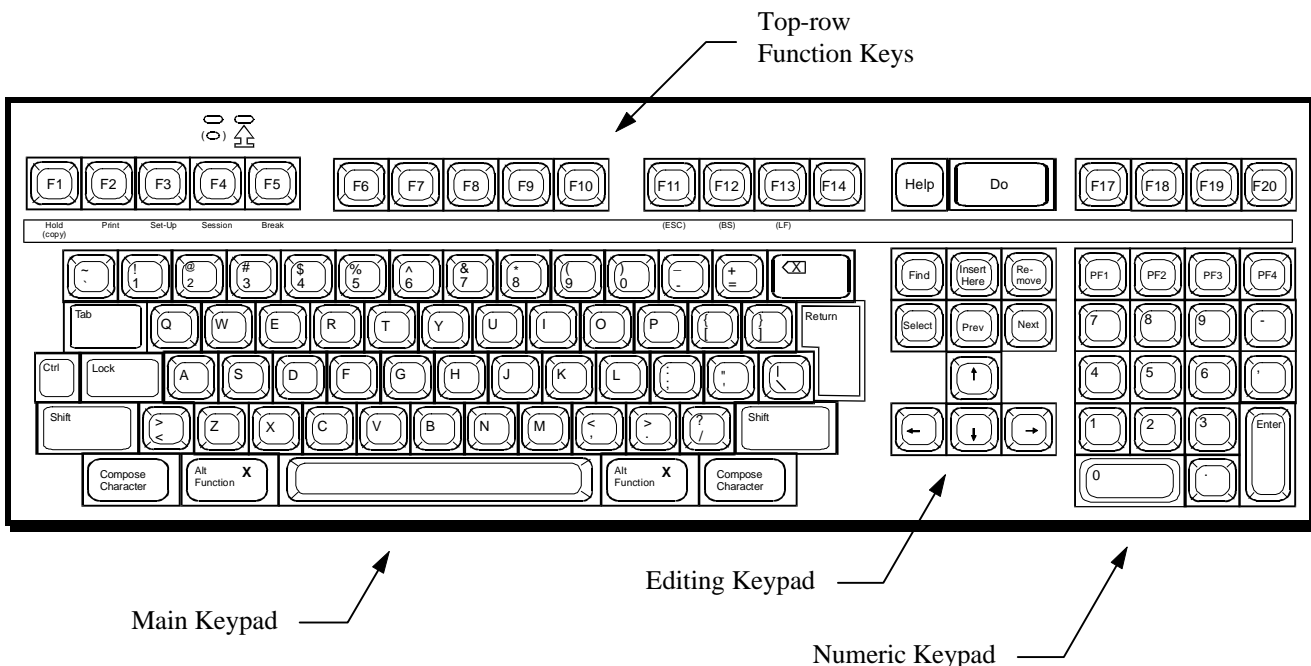


Figure 2-1. System Manager DEC Keyboard

functions as defined in the System Manager programming.

A brief explanation of the main DEC keyboard functions is given below. Some of the editing and function keys perform multiple operations. These are always identified at the bottom of the feature screen.


<u>KEY</u>	<u>PURPOSE</u>
<u>Main Keypad</u>	
RETURN	Enters information into a field and causes the cursor to move to the next field.
Ctrl R	Refreshes the screen.
Ctrl W	Redraws the screen.
<u>Editing Keypad</u>	
[Up Arrow]	Moves to the previous field (also decreases numbers in the Enter Menu Item field).
[Right Arrow]	Moves the cursor right.
[Left Arrow]	Moves the cursor left.
[Down Arrow]	Moves to the next field (also increases numbers in the Enter Menu Item field).
Do	Saves a new record or changes to an existing record, (i.e., writes to the Database or Site).
Find	When available (see bottom of screen), the Find allows the user to open the Select Window. This window provides a list of the available sites, devices, groups, etc. This list available depends on the particular screen and database selected.
Select	Pressing the Select key selects the desired menu, sub-menu, or data corresponding to the record tagged when using the Select Window.

Top-row Function Keys

Help	Displays help information for the current screen.
F9	Pressing F9 toggles the function key definitions for F1 through F20 at the bottom of each screen. Only the keys used for each screen are displayed.
F6 EXIT	Press F6 to return to a Main User screen.
F7	Logs off the System Manager from the Main Menu.

Default Keys for Built-in Functions

The System Manager uses the built-in DEC key functions, listed below in alphabetical order, unless the key's purpose is redefined by the specific System Manager function.

Built-in Function Name	Common Key Names
DELETE CHARACTER	 (Back arrow key)
ERASE FIELD	F13 (Line Feed)
INSERT OVERSTRIKE	CTRL + A
NEXT ITEM	TAB , or RETURN , or Keypad ENTER
NEXT PANEL	NEXT
PREVIOUS ITEM	F12 (Backspace)
PREVIOUS PANEL	PREV

USING A PC AS A TERMINAL

When using a personal computer (PC) in place of a DEC VT520 Video Terminal, certain considerations must be made.

1. The PC must be a DOS based IBM PC or true compatible.
2. The PC must be capable of running a VT 220, 320, 420, or 520 emulation software, such as COTERM, VTERM, or PCPLUS.

3. The user must map the PC keyboard to provide the functions available on the VT520. Figure 2-3 is an example of mapping the functions keys on a PC when using COTERM software. Macs and other computers will work with proper terminal emulation software.

USING SYSTEM MANAGER

To start the System Manager system, you must turn on the System Manager equipment and log into the system.

The System Manager video terminal displays the Login screen with the cursor blinking at the USERNAME field (see Figure 2-2). If the Login screen does not appear, press **Return** again. If the screen still does not appear, press **F1** for terminal set-up and verify the terminal is setup for proper operation with the EDACS system (refer to LBI-38703 for terminal setup instructions).

EDACS System Manager

USERNAME : _

PASSWORD : _

Figure 2-2. Login Screen

LOGGING IN

The first time you log into the System Manager, both the user name and password are set to EGESYSMGR.

NOTE

To protect the security of the system, one of the first actions taken by the System Administrator should be to change the EGESYSMGR account password. This is done by selecting User Account Maintenance (User Menu item #71) from the System Maintenance category.

Logging into the System Manager

To log into the System Manager, use the following procedure:

1. Type in your USERNAME and press **Return**.
2. Type in your PASSWORD and press **Return**.
3. The User Menu now appears. This can sometimes take a minute or two.

PC FUNCTION KEYS										
Normal →	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10
SHIFT + →	F11	F12	F13	F14	F15	F16	F17	F18	F19	F20
CTRL + →	FIND	INSERT	REMOVE	SELECT	PREV	NEXT			HELP	DO

Figure 2-3. Mapping PC Function Keys

USER MENU

The User Menu screen is the first screen you see after logging in. This screen displays the currently Selected Menu Item (upper window) and the Menu Selections (lower window) as shown in Figure 2-4.

The Selected Menu Item window is the command window that allows you to select the Menu Categories and sub-function.

The Menu Selections window displays the Main Categories (or functions) which are all of the functional areas that the System Manager controls. The right side of the Main Categories window is titled the same as the Main Category selected (highlighted) and displays sub-functions (features) associated with the selected function.

When the function and sub-function is highlighted, the selection numbers are automatically placed after the "Enter Menu Item" prompt. In the example, the Database Maintenance function (item #1) is selected (highlighted) and in the Database Maintenance window, the Site / Device Definition (item #0) is selected. This number set (10) is displayed after the "Enter Menu Item" prompt in the Selected Menu Item window.

Menu selections

When the cursor is resting on the "tens" digit at the Enter Menu Item prompt, you can use the up and down arrow keys to change the digit and move the highlighted selection in the Main Categories window accordingly. You will notice that the window on the right changes, displaying sub-selections for each category selected.

When the cursor is resting on the "ones" digit at the Enter Menu Item prompt, the up and down arrow keys change that digit and move the highlighted selection in the Database Maintenance window accordingly. The left and right arrows are used to switch between the "tens", and "ones" digit. When the desired category and function are highlighted, press the **Return** key to access that function.

For example, press the down arrow until "6) Reports" is highlighted in the Main Categories window. You will notice that the window on the right is titled "Reports". Move the cursor to the "ones" digit by pressing the right arrow. Press the down arrow until "2) Group" is highlighted in the Reports window. By pressing the **Return** key, you will access the first screen for the group ID reports. Press **F6** to return to the User Menu.

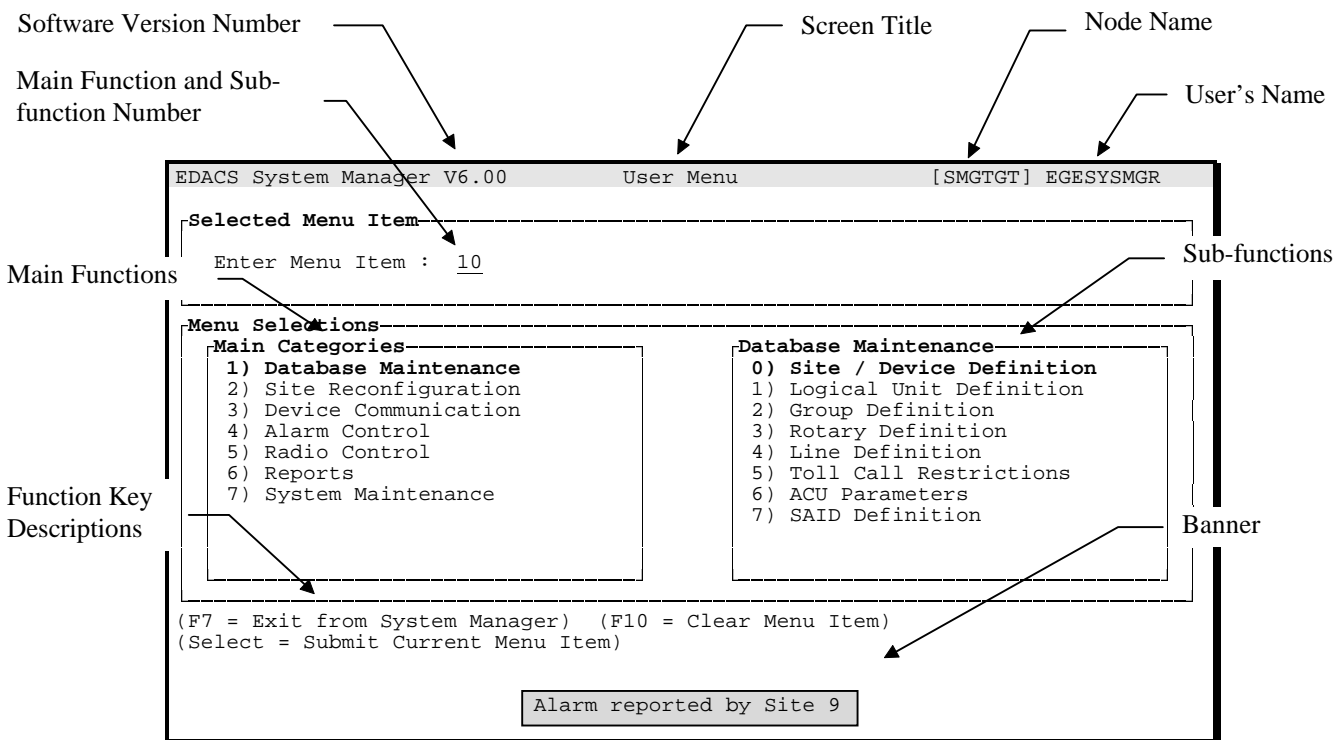


Figure 2-4. User Menu Screen

Each of the functions has from one to nine additional numbered screens containing the System Manager field definitions and parameters. The first of these screens is accessed by pressing **Return** when the desired function is selected in the Enter Menu Item field. Additional field definition screens, if present, are accessed by pressing the **Next Screen** key.

Each of the user screens and menu selections are explained in this manual. Each screen has an explanation telling what type of information must be entered in each field with the system defaults, where applicable. All information in the field definition screens must be entered for System Manager to accept and save the information.

Selecting a Function

The cursor remains at the Enter Menu Item prompt (two-digit number) until a function is selected. Functions can be selected from the prompt through one of the following methods:

1. Type the Function/sub-function numbers at the Enter Menu Item prompt and press the **Return** key or the **Select** function key.
2. Using the up and down arrows, highlight the function. This will bring up the applicable sub-function menu. Again using the arrow keys, highlight the desired sub-function item. The numbers corresponding to these items is displayed after the "Enter Menu Item" prompt. Select the function by pressing the **Return** key or pressing the **Select** key.

Function Keys

The function keys descriptions shown below the Menu Selections screen provide the current description of these key's purpose. The key word is **current** because the purpose of a particular function key may change when used in another function. As an example, when using the Database Maintenance function, the **Do** key saves the database record or file; when in Site Reconfiguration, the **Do** key sends the change data to the site; and when using the Reports function, the **Do** key generates the report.

RECORDS

A record, by definition, is a collection of related data items. In the System Manager database files, a record contains all of the configuration data associated with a screen in the Main Menu selection. The individual fields

on the screens are the attributes within that record. In example, Site / Device Definition sub-function has four screens (Channel Configuration, Site Parameters, Site Test Parameters, and System Manager Communications Parameters) associated with the function for each site or device. When the communications function is selected, the site or device records (files) are transferred to the applicable site or device.

Creating a Record:

When creating a new record, use the following procedure:

1. Enter a new Site, LID, or GID Number. The word **CREATE** appears in the upper right corner of the screen.
2. Enter all required fields. These are identical to the required fields in the screens described in the following paragraphs.
3. Press the **Do** key to save the screen.

NOTE

You must press the **Do** key to save the data prior to moving to another screen. Failure to perform the save operation may result in lost data.

Locating a Record:

Use the following procedure to locate a record:

1. Enter the Site, LID, or GID Number or Site, Unit, or Group Name.
2. Press **Return**.

NOTE

If the requested record cannot be found, the closest record in alphanumeric order is displayed.

Modifying an Existing Record:

Use the following procedure to modify an existing record:

1. Locate the record. The word **MODIFY** appears in the upper right corner of the screen.
2. Make desired changes on the screen.
3. Press the **DO** key to save the screen.

NOTE

You must press the **Do** key to save the data prior to moving to another screen. Failure to perform the save operation may result in lost data.

Deleting a Record:

The following procedure provides instructions for deleting a record:

1. Locate the record. The word **MODIFY** appears in the upper right corner of the selected definition screen.
2. Press **F8** to delete all entries from the fields on the screen.
3. Press **F8** again to confirm the delete operation.

User Tip: When creating or modifying a record, and before the screen is saved, you can delete all of your entries by pressing **F10**. This is a quick way to clear the fields if you want to start over.

USING THE SELECT WINDOW

The following narration describes how to use the Select Window. In the following example, a device is selected, however, the Select Window will also list sites, groups, units, etc., depending on the database selected.

As an example, when the Site/Device Definition database is selected from the User Menu, the system displays the External Device Definition screen containing the Selected Device and Channel Configuration screen (screen 1:4 or 1 of 4) for the selected device, as shown in Figure 2-5. The system positions the cursor at the Device Number field, waiting for entry of the Device Number. If the specific device number is unknown or the user wishes to view a list of all devices assigned, press the **Find** key. The screen displays the Select Device list (Select Window), listing all the devices currently in the database. To tag a device, use the up and down arrows to move the asterisk (*) to the left of the desired device and number.

To select the tagged device, simply press the **Select** key. The Selected Device screen displays the device identification data and the Channel Configuration screen displays the configuration data from the database pertaining to the selected device.

To switch back to your original screen or another site, press the **Find** key to view the device list and select another device or enter the device number if known.

Use these same procedures whenever using the Select Window for one of the other databases.

BANNERS

Banners are used by the System Manager to display messages, notify the user of equipment status changes or changes in operating conditions which affect system performance, confirming Unit enable or disable, and alarm messages.

These messages are displayed at the bottom of the screen, below the function key descriptions.

Alarm Banner messages will continue to cycle every minute or so to the next site with an alarm condition.

For example, an alarm is reported on site 1, the "Alarm reported by Site 1" banner message will continue to flash for about a minute. If there is also an alarm being reported by site 2, the banner message will change to "Alarm reported by Site 2." The system will continue to sequence through all the reported alarms and then repeat the sequence. The flashing alarm banners will continue to notify you until all the alarms at the particular site have been acknowledged, using screen 40 Alarm Control Display.

ENDING A SESSION

After you have finished using the System Manager, you should exit the System Manager system to prevent unauthorized use of the System Manager. Use the following procedure to properly exit the System Manager:

NOTE

It is recommended that you log off the System Manager when you are away from the terminal, or at the end of a session. This helps prevent unauthorized use of the System Manager.

1. If the User Menu is not displayed, exit the current screen by pressing **F6** (Exit) and return to the User Menu screen.

EDACS System Manager V6.00 User Menu [SMGTGT] EGESYSMGR

Selected Menu Item

Enter Menu Item : 10

Menu Selections

Main Categories	Database Maintenance
1) Database Maintenance	0) Site / Device Definition
2) Site Reconfiguration	1) Logical Unit Definition
3) Device Communication	2) Group Definition
4) Alarm Control	3) Rotary Definition
5) Radio Control	4) Line Definition
6) Reports	5) Toll Call Restrictions
7) System Maintenance	6) ACU Parameters
	7) SAID Definition

(F7 = Exit from System Manager) (F10 = Clear Menu Item)
(Select = Submit Current Menu Item)

Press the **Select** or **Return** key to activate the selected subfunction.

Enter identification data.

Pressing the **Find** key displays the Select Device list. Move the asterisk and highlight the desired device. Press the **Select** key

The refreshed screen shows the database for the selected device.

EDACS System Manager External Device Definition [SMGTGT] EGESYSMGR

Selected Device

Device Number : Device Name : MODIFY

Device Type : 12345678

Select Device

[*]	3·RADIOLAB
[]	5·MSDS 3
[]	6·MSDS 4
[]	7·MODMTEST
[]	9·LABGNET
[]	13·DIGNIM
[]	16·PSTCIC
[]	21·ASDF

Indicates **MODIFY** when making changes to an existing record or **CREATE** when adding a new record.

Identifies the screen number (1) and the total number of screens (4) for the selected subfunction

F6 = Exit) (F8 = Delete (F14 = Toggle Search Key) 1 = Next Record) (Find = Device List)

Active Function keys for the screen selected.

Press the **HELP** key for assistance

EDACS System Manager External Device Definition [SMGTGT] EGESYSMGR

Selected Device

Device Number : 3 Device Name : RADIOLAB MODIFY

Device Type : SITE

Channel Configuration

	1	2	
RF	12345678901234567890123456		Relay on : 12345678
Interconnect	CCCCCCCCCCCCCCCCCCCC		NNNNNNNN
Digital Voice	YYYYYYYYYYYYYYYYYYYY		
Data	YYYYYYYYYYYYYYYYYYYY		
Channel Test	NNNNNNNNNNNNNNNNNNNN		
Allowed CC	YNYNNNNNNNNNNNNNNNN		
Wide Area	YNYNNNNNNNNNNNNNNNN		
Downlink	NNNNNNNNNNNNNNNNNNNN		
MC Partition	00000000000000000000		

MC Partitioning Enabled: N

(F6 = Exit) (F8 = Delete Record) (F10 = Clear Record) (F11 = Next Record)
(F14 = Toggle Search Key) (Do = Save Record) (Find = Device List)
Help message display

Figure 2-5. Using The Select Window

NOTE

If required, press the **Do** key to complete the current task prior to leaving the screen.

2. Then press **F7** (EXIT from System Manager).

USING THE TAPE DRIVE

TLZ07 Tape Drive

Tape Installation

To install the tape, slowly insert the tape into the tape drive unit until the unit grabs the tape and completes the insertion process. The tape is now ready for use.

Tape Removal

To remove the tape, simply press the eject button and remove the tape

TK50 Tape Drive

Inserting a Tape Cartridge

1. Open the front cover by pushing in on the cover and then releasing it.
2. Move the tape drive lever to the unlock position.
3. Ensure the tape cartridge is write enabled (not write protected) and insert tape cartridge into the tape drive.

NOTE

If you insert the cartridge more than half way into the drive, you must finish loading the cartridge before attempting to remove the cartridge from the tape drive.

4. The green LED will light.
5. Move the cartridge lever to the lock position to lock the tape cartridge in the drive. The green LED turns OFF and the yellow LED begins to blink. This indicates the tape is loading.
6. When the tape is finished loading (ready for use) the yellow LED will be ON and the green LED will be OFF. If any other indications are observed, refer to the VAX 3100 User's guide for assistance.

Removing the Tape Cartridge

1. If the Green LED is on, skip to step 4.
2. Press the unload button. The yellow LED will flash as the tape rewinds.
3. When the tape has rewound completely, the beeper sounds twice and the green LED will light.
4. Move the cartridge level to the unlock position.
5. The cartridge ejects and can be removed from the tape drive.

CAUTION

Remove tape cartridges from the tape drive before turning OFF the drive's power. Failure to do this may result in damage to the cartridge and tape drive.

CHAPTER 3 - SYSTEM MANAGER OPERATION

INITIAL SET UP

This section describes those steps necessary to set up and initialize the System Manager. These steps should be performed in sequence, first establishing the System Manager's operating parameters and then initializing the databases.

NOTE

For following procedures assume you have read this manual and are logged into the System Manager system.

The set up procedures listed below are detailed in this chapter:

1. Set the system Date and Time.
2. Establish Selected Agency, Fleet, and Subfleet Structures.
3. Initialize System Manager User Accounts and privileges.
4. Set Up Disk Space Manager Limits.
5. Initialize Site Database.
6. Define Telephone Lines.
7. Generate Site Database Reports and Verify Data.
8. Initialize Radio Database (SAIDs, Groups and Units).
9. Generate Radio Database Reports and Verify Data.
10. Archive Databases.

Step 1 - Set Date and Time

Accurate records require accurate date and time settings. The time used by the System Manager may be internal or synchronized to WWVB through the CEC/IMC.

For System Manager systems which rely on their internal clock, perform the following steps:

1. Log out of the System Manager software.

2. Log into the System Account and perform the steps outlined in LBI-38703 Chapter 5 for *Displaying or Setting System Time*.
3. After setting the date and time, and logging out of the System Account; log into the System Manager account using normal login procedures.

For System Manager systems connected to a Multisite device with an optional WWVB receiver, perform the following steps:

1. Select the Site / Device Definition function (#10) from the User Menu - Database Maintenance screen.
2. In the Selected Device window, identify the device which is connected to the NETCLOCK WWVB receiver. This device should be an EGE Switch type device.
3. After selecting the device, the System Manager will display the System Manager Communications Parameters window.
4. Verify the Communication Services, Time Source is set to "Y". This instructs the System Manager to periodically connect with the EGE Switch device for timing synchronization and to verify the date and time.
5. Exit the System Manager and log into the **sminstall** account (refer to LBI-38703).
6. Select option 4, "Add or delete system or EDACS devices."
7. Select sub-option 7, "Clock Service definition." Enable the Clock Services to activate the WWVB feature.

Completely executing the option will start the clock services utility just after midnight of the current day, and will run it approximately on the hour, every hour, from then on. If the system should reboot, the clock services will again be started just after midnight of the day the reboot occurred.

8. Exit the **sminstall** utility and log into the **Shutdown** account to reboot the system.

Step 2 - Establish Selected Agency, Fleet, and Subfleet Structures

The Agency Partition Table allows you to group radio units together enabling radio users with common purposes to communicate freely with each other (group communications). Each agency can be further divided into fleets, and fleets divided into subfleets.

Through the Agency Partition Definition function of the System Maintenance category (User Menu item #70), the number of agencies, fleets, and subfleets supported by the EDACS system are defined.

NOTE

When setting up any system, the Agency Partition Table must be created first. No user, unit, or group records can be created until this table is defined.

When setting up the Agency, Fleet, and Subfleet structure, refer to Agency Partition Definition, described in Chapter 11, for instructions on entering the pertinent structure data.

If you are not familiar with setting up Agency, Fleet, and Subfleet structures, you may also want to obtain a copy of ECR-4102 from Ericsson Inc.

Step 3 - Initialize System Manager User Accounts and Privileges

The next step in setting up the System Manager system is to set up user accounts. These accounts identify who has access to the System Manager system and to which features they are authorized to use.

Refer to the procedures outlined in Chapter 11 relating to User Account Maintenance (User Menu item #71) and setup the user accounts.

Follow these procedures to identify each user account, the user's password, and the account's feature privileges. It will also be necessary to indicate if the account user will have access to the Extended Network (if applicable).

NOTE

Be sure to save the current user account record before attempting to create another user account.

Step 4 - Set Up Disk Space Manager Limits

The Disk Space Manager allows you to define the amount of disk space allocated to storing activity data. Unchecked, this data will grow over time until the disk is

full. When the amount of stored data exceeds the "Deletion Threshold," the System Manager will automatically begin to delete unarchived files.

Refer to Chapter 11 and select the Disk Space Manager function (User Menu item #77) in the System Maintenance category. Follow the guidelines for setting up the Deletion Threshold, Warning Threshold, and the Disk Checking Interval. The values used for these elements depends on the size of the disk drive.

Step 5 - Initialize Site Databases

Set up Site Databases and identify the system structure by defining the sites and devices which interface with the System Manager. Refer to Chapter 5 and the Site/Device Definition function (User Menu item #10) and the ACU Parameters function (User Menu item #16) in the Database Maintenance category.

Setting Up Sites/Devices

Using the instructions contained in Site/Device Definition function, define each site's channel configuration, Site Parameters, Site Test Parameters, and System Manager Communications Parameters. The Site/Device Definition function is also used to define EGE Switches (CEC/IMC) and Remote System Manager terminals.

NOTE

When creating site and device records, remember to save the record before selecting another site or exiting the screen and returning to the main menu.

NOTE

Before defining sites and devices, they must be added to the system via the **sminstall** account. After adding the sites and devices, you must enter the **Shutdown** account and reboot the system.

Setting up Extended Network Support

Use the following procedure to setup for Extended Network support:

1. Define the Remote System Manager using the Site/Device Definition function (User Menu item #10).
2. Exit the System Manager and enter the **sminstall** account. Select option 4, suboption 6 to add a server on this machine for the Remote System Manager.

3. Refer to LBI-38703 on DECnet configurations, and reconfiguration of DECnet addresses.

Setting up Alarm Control Unit Parameters

If a site is equipped with a Alarm Control Unit, define the individual alarms (up to 32), as desired.

The instructions for defining these parameters are contained in Chapter 5 in the section entitled *16) ACU Parameters* (User Menu item #16). The information given in this section will enable you to define the parameters for the 32 alarms which may be available at each site.

Step 6 - Defining Telephone Lines

Define the Telephone line used for telephone interconnect calls. The information needed for the telephone interconnect databases (Line Definition, Rotary Definition, and Toll Call Restrictions) depends on the type of Interconnect equipment and where the equipment is installed.

For centralized telephone interconnect systems, such as Jessica PBX Gateway, refer to special setup information contained in Chapter 12 of this manual and the applicable Jessica Installation manual.

For Local Telephone Interconnect equipment including the optional equipment manufactured by IDA, it will be necessary to perform the following steps:

NOTE

If the local interconnect equipment is an Enhanced Local Interconnect (ELI) system, refer to Chapter 12 for supplemental information.

1. Define the outgoing telephone interconnect line parameters (User Menu item #14, *Line Definition*).
2. Define the rotary hunt sequence (User Menu item #13, *Rotary Definition*).
3. Setup the outgoing telephone call restrictions (User Menu item #15, *Toll Call Restrictions*).

Setting Up Line Definition

Use this procedure to define the telephone line interconnect parameters for each site. This information must be provided prior to defining the rotary sequence or the toll call restrictions. When performing these steps, refer to Chapter 5, Database Maintenance - Line Definition.

NOTE

The selected site and some Unit databases must be setup before defining the telephone line parameters.

1. Select the Line Definition function (User Menu item #14) from the User Menu. The System Manager will display the Interconnect Line Definition screen shown in Figure 5-27.
2. Enter the site number or site name. If the number is not known, use the **Find** key to reveal the Site List.
3. Press the **Return** or **Select** key. The cursor will drop to the Line Parameters window.
4. Identify an active line by entering a "Y" in the Line Active column. Enter an "N" (default) if the line is inactive.
5. In the Pulse Dial column, enter a "Y" if the line is for pulse dialing only or an "N" (default) if the line is capable of using DTMF (Dual-Tone Multi-frequency) tone dialing.
6. Determine which radio unit will be designated to automatically receive any incoming calls. Enter the radio unit's LID in the "Dedicated To Unit" field.
7. Repeat steps 4 thru 6 for each active telephone line attached to the site. This may be up to 32 lines on pages 1 thru 2.

NOTE

Pages 3 to 16 are not used by IDA or ELI based interconnect systems.

8. After defining all the lines connected to the selected site, press the **Do** key to save the record.

NOTE

The record must be saved before selecting another site. All phone data entered for the site will be lost if a new site is selected before saving the record.

9. Repeat steps 2 thru 8 for each site assigned to the system. The next site may be selected by pressing the F11 (Next Record) key.

Setting Up Rotary Definition

Define the rotary hunt sequence. This sequence is used by the telephone equipment to locate an available phone line when a radio unit places an outbound call.

Refer to the Chapter 5, Database Maintenance - Rotary Definition function (User Menu item #13).

NOTE

Before defining the rotary sequence for a site, ensure each telephone line is properly defined (function #14) and the site database identifies which channels are connected to the local Telephone Interconnect equipment (function #10).

Setting up Toll Call Restrictions

The last step in setting up the local telephone interconnect system is to define the toll call restriction plan.

This function allows you to define up to 16 different four digit patterns. Each pattern may have up to 16 user restriction levels.

Select the Toll Call Restrictions function (User Menu item #15) from the Database Maintenance category (Chapter 5) and identify the outgoing telephone call restrictions assigned to the different levels of radio users.

Step 7 - Generate Site Database Reports and Verify Data

Generate a Device Report (refer to Chapter 10, Reports) by selecting the Device Report function (User Menu item #60).

This report will contain all the information entered when the Site/Device database and telephone interconnect databases were defined.

Generating a Site Database Report

Use the following procedure to generate a site database report:

1. Select the Device Report function from the User Menu by selecting Reports (User Menu item #60). Press the **Return** or **Select** key. The System Manager will display the Site/Device Report Menu.
2. Use the arrow keys and highlight "**All SITES**" (default)
3. Move the cursor to the Report Contents Menu.
4. Use the arrow keys to highlight option 1 to include all reports for selected sites and press the **Select** key to complete the selection.

5. Press the **Do** key to generate the report. The System manager will issue the message "The system is processing your request. Please stand by."
6. When the system is ready, the System Manager will display the banner message "Site/Device report generation starting." When the report generation is finished, the System Manager will report via the banner message "Site/Device report generation complete."
7. Exit the Device Report function by pressing **F6**.
8. Select the Reports Manager function by entering User Menu item #69 and pressing **Return**.
9. Highlight the desired report and press **F10** to print the report or **F11** to view the report on the terminal.
10. View the report or print out the report. Verify all data stored in the database for each site and device is correct.
11. If the information contained in the reports is correct proceed to define the LID and GID databases. If any errors were detected, return to the appropriate database and select the desired site or device. Modify the record as necessary. Properly exit the database and repeat this procedure as required.

Step 8 - Initialize Unit Database

After setting up the sites and devices, you can define the individual radio units (logical IDs or LIDs) and their operating parameters. This information will be stored in the Logical ID database.

Use the following procedure to assign radios and set up their operating parameters. The parameters for each radio is saved as a Logical ID record in the Logical ID database. When performing these steps, refer to the Database Maintenance category (Chapter 5) and the Logical Unit Definition function (User Menu item #11).

1. Select the Logical Unit Definition function (User Menu item #11). The System Manager will display the Unit Identification screen with the word CREATE in the upper right hand corner.

NOTE

A user can only create Logical IDs which will be within their user's assigned A/F/S restriction range.

2. Enter all the pertinent data relating to the identification of the radio unit in the Selected Unit panel.

NOTE

All unique data fields must have entries which cannot be duplicated for any other radio unit which is defined on this System Manager.

3. Enter all pertinent data for the selected unit.
 Defining a logical unit requires making entries in multiple Unit Identification screens. The number of screens depends on the type of unit. Follow the guidelines available in Chapter 5 for field descriptions and required entries.
4. After all the data for a unit has been entered, you must save the record by pressing the **Do** key.

NOTE

You must save the record before selecting another unit or exiting to the User Menu.

5. Repeat steps 1 thru 4 for each logical unit.
 Hint: You can copy data from one record to another, refer to the Duplicating Unit Records feature described in Chapter 5.
6. Exit the Logical Unit Definition function.

Step 9 - Generate Unit Database Report and Verify Data

This step is used to verify the data contained in the Logical Unit database.

Generate a Logical Unit Report (refer to Chapter 10, *Reports*) by selecting the Logical Unit Report function (User Menu item #61). This report will contain all the information entered when the Logical Unit ID database was defined.

Use the following procedure to generate a Logical Unit database report:

1. Select the Logical Unit Report function from the User Menu (User Menu item #61). Press the **Return** or **Select** key. The System Manager will display the Logical Report Menu.
2. Use the arrow keys and highlight **"FULL"** (default)
3. Press the **Do** key to generate the report.

The System Manager will generate the report based on default settings in Unit ID sequence.

After pressing the Do key, the System Manager will issue the message "The system is processing your request. Please stand by."

4. When the system is ready, the System Manager will display the banner message "Unit Database report generation starting." When the report generation is finished, the System Manager will report via the banner message "Unit Database report generation complete."
5. Exit the Logical Unit Report function by pressing **F6**.
6. Select the Reports Manager function by entering User Menu item #69 and pressing **Return**.
7. Highlight the desired report and press **F10** to print the report or **F11** to view the report on the terminal.
8. View the report or print out the report. Verify all data stored in the database for each logical unit is correct.
9. If the information contained in the reports is correct proceed to define the GID database. If any errors were detected, return to the appropriate database record and modify the record as necessary. Remember to save the modifications. Properly exit the database and repeat this procedure as required.

Step 10 - Initialize Group Database

Use the following procedure to set up call groups and their operating parameters. The parameters for each group is saved as a Group ID record in the Group ID database. When performing these steps, refer to the Database Maintenance category (Chapter 5) and the Group Unit Definition function (User Menu item #12).

1. Select the Group Unit Definition function (User Menu item #12). The System Manager will display the Group Identification screen with the word **CREATE** in the upper right hand corner.
2. Enter all the pertinent data relating to the identification of the group in the Selected Group panel.

NOTE

The range available for data entries depends on the user account limitations set up in the Agency Partition Table and defined for the user's account.

3. Enter all pertinent data for the selected group.

Defining a logical group requires making entries in multiple Group Identification screens. Follow the guidelines available in Chapter 5 for field descriptions and required entries.

4. After all the data for a group has been entered, you must save the record by pressing the **Do** key.

NOTE

You must save the record before selecting another group or exiting to the User Menu.

5. Repeat steps 1 thru 4 for each group.
6. Exit the Group Definition function.

Step 11 - Generate Group Database Report and Verify Data

This step is used to verify the data contained in the Group database.

Generate a Group Report (refer to Chapter 10, *Reports*) by selecting the Group Report function (User Menu item #62). This report will contain all the information entered when the Group database was defined.

Use the following procedure to generate a group database report:

1. Select the Group Report function from the User Menu (User Menu item #62). Press the **Return** or **Select** key. The System Manager will display the Group Report Menu.
2. Use the arrow keys and highlight **"FULL"** (default)
3. Press the **Do** key to generate the report.

The System Manager will generate the report based on default settings in Group ID sequence.

After pressing the **Do** key, the System Manager will issue the message "The system is processing your request. Please stand by."

4. When the system is ready, the System Manager will display the banner message "Group Database report generation starting." When the report generation is finished, the System Manager will report via the banner message "Group Database report generation complete."
5. Exit the Logical Unit Report function by pressing **F6**.

6. Select the Reports Manager function by entering User Menu item #69 and pressing **Return**.
7. Highlight the desired report and press **F10** to print the report or **F11** to view the report on the terminal.
8. View the report or print out of the report. Verify all data stored in the database for each group is correct.
9. If the information contained in the report is correct proceed to *Archiving the Databases*. If any errors were detected, return to the appropriate database record and modify the record as necessary. Remember to save the modifications. Properly exit the database and repeat this procedure as required.

Step 12 - Archive the Databases

After initializing the Site/Device, Logical Unit ID, and Group ID Databases, we recommend archiving (saving) the databases as soon as possible. This procedure allows you to save database information to a back up tape.

Perform the following steps to archive the databases, refer to Chapter 11, System Maintenance.

CAUTION

This procedure will overwrite the contents of whatever tape is inserted into the tape drive. Once this procedure starts, you may not exit until it completes (5 to 15 minutes, depending on the file sizes).

Since this procedure shuts down all other System Manager software, please make sure that this is the only terminal on the system running the application software package.

1. Select User Menu item #72, Database Archive.
2. The System Manager will display the Database Archive screen.
3. Insert a write enabled tape cartridge into the tape drive. Refer to the tape loading instructions contained in Chapter 2.
4. Start the archive process by pressing the **Do** key.
5. After the System Manager archives the databases, it will restart the System Manager software.

Depending on the number of sites, this process may take up to ten minutes.

6. After the archive is complete, remove and label the tape.
7. Label the tape "Database Archive" and enter the data in DD-MM-YYYY format, where the date matches the current date.
8. Press **F6** to exit to the User Menu.

TYPICAL OPERATIONS

This section describes those typical tasks which may be required when performing various day-to-day operations of the System Manager System. Procedures are provided for performing the following operations:

- Uploading Site and Radio Databases.
- Reconfiguring the Site Database.
- Verifying Site Database in Site Controller.
- Monitor and Verify Site Activity.
- Control and Monitor Radio Units.
- Download Site Activity Data.
- Generate and Display Activity Reports.
- Responding to Alarms.

Uploading Site and Radio Databases

The following procedure provides information for uploading site and radio databases. Use this procedure after adding, changing, or deleting a database record. The function sends the selected databases to all Site and Devices or to Sites or Devices only. When performing these operations refer to the Database Upload function in the Device Communication category (Chapter 7).

1. Select the Database Upload function (User Menu item #30). The System Manager will display the Database Upload Request screen.
2. Indicate if this will be a full upload or just changes.
3. Indicate if any "site only" data, such as Line database, will be uploaded.
4. Indicate if any "Device only" data is to be uploaded to the CEC/IMC, such as the site alias list.
5. Press the **Do** key to initiate the upload process.

The System Manager will display the message "Upload Requests Submitted."

When the database transfer is completed at each site or device, the System Manager will display a banner indicating the site (or device) number, the database type (LID, GID, etc.) and whether the upload was successful. For example, "Site 15 GID update upload successful" or "Site 3 LID upload failed."

NOTE

It is not necessary to remain in this function during the upload process. After initiating the upload, the System Manager will continue the process in the background, thus allowing you to perform other tasks. However, you will see the completion banners regardless of the screen being viewed.

Reconfiguring the Site Database

The following procedure will enable you to view and make changes to the site database currently loaded in the Site Controller. This procedure involves using the Site Database Definition function (for permanent changes) and the Site Reconfiguration function to activate both permanent and temporary changes.

By following the steps for making temporary changes, you can compare the database currently being used by the Site Controller with the database record stored in the System Manager for the selected site.

When performing these steps, it may be helpful to refer to the Site Reconfiguration information in Chapter 6 of this manual.

Temporary Site Database Changes

Temporary changes to the Site Controller configuration database are useful when diagnosing problems, optimizing the system, or making temporary changes as needed to support temporary activities.

NOTE

Changes made using this procedure are temporary and will not alter the Site database defined using the Site Definition function. These changes will be lost upon a Site Controller reboot.

1. Select the Site Reconfiguration parameter desired (User Menu item #20 thru #24).
 - 20 - Channel
 - 21 - Call Parameters
 - 22 - Test Parameters
 - 23 - Miscellaneous
 - 24 - Relay

The System Manager will display the appropriate Site Reconfiguration screen and will await input of a Site Number.

2. Enter the Selected Site Number. The System Manager will display the site's record (Database panel), from the System Manager's Site database, and the Site Controller's current configuration (Site panel) once communication is established with the Site Controller.
3. Toggle between the function screens (functions # 20 thru 24) by pressing the **Next Screen** and **Previous Screen** keys until the desired parameters are displayed.
4. Make any temporary changes desired in the Database panel.
5. Move the cursor to the send column located between the two panels. Enter a "Y" in the send column for any data to be sent to the Site Controller. The corresponding Site data will be highlighted.

NOTE

Most of the time, the System Manager will do this for you.

6. Press the **Do** key to initiate the reconfiguration process.
7. The System Manager uploads the modified database to the Site Controller and then requests the Site Controller to verify its configuration.
8. Changes accepted by the Site Controller are displayed in the Site panel after the site responds to the System Manager's request.
9. The System Manager refreshes the screen and displays the temporary Database and Site configuration.

NOTE

The Database and Site panels should now match.

NOTE

Changes made in the Site Reconfiguration category **DO NOT** affect the original Site Database configuration as defined by the Site Definition function (User Menu item #10). If the Site Controller is reset or experiences a power outage, it will automatically download the original Database settings when it is put back in service.

Permanent Site Database Changes

Permanent changes to the site database can be made by first making changes or modifying the site database configuration stored in the System Manager using the Site Definition function (User Menu item #10). This revised database is then uploaded to the Site Controller as described in the following procedure:

1. Select the Site Definition function (User Menu item #10).
2. Enter the Site Number.
3. Make the necessary changes to the site database and save the changes using the **Do** key.
4. Select the Site Reconfiguration - Channel function (User Menu item #20).
5. Enter the Site Number. The System Manager will display the Site Reconfiguration screen and the Channel Configuration panel. This panel will display the revised site record (Database panel) defined in step 3 and the existing configuration at the Site Controller (Site).
6. Identify which parameters will be uploaded to the Site Controller by entering a "Y" in the send column, located between the Database and Site panels. The corresponding data in the Site panel will be highlighted.
7. Upload the selected information by pressing the **Do** key.

The System Manager uploads the database to the Site Controller and then asks the Site Controller to verify its configuration. Accepted changes will be displayed in the Site panel after the site responds to the System Manager's request.

NOTE

Do not press the F6 key or change the selected site number before completing step 8.

8. Toggle between the function screens by pressing the **Next Screen** and **Previous Screen** keys.

9. Repeat steps 6 and 7 for any changes to be uploaded on the other Site Reconfiguration screens for this site.
10. Exit to the User Menu by pressing **F6**.

Monitor and Verify Site Activity

This section provides recommended methods for monitoring and verifying site activity. The function displays the continuously updated status and activity of all channels at the selected site. Refer to Chapter 7, *Device Communication* for additional details when using the Site Monitor function.

1. Select the Site Monitor function by entering User Menu item #32.
2. Enter the desired Site Number.

The System Manager will try to communicate with the site and will display the message “Connecting to site, press F8 to abort.”

When the communication link is established, the System Manager will display the site’s current activity in the Site Monitor screen and the message “Connected to site...”

3. The current status and activity for each channel is displayed and continually updated (about once every second).
4. Refer to Appendix A for an explanation of Channel Status and Channel Activity messages.
5. Exit and return to the User Menu by pressing **F6**.

Control and Monitor Radio Units

This section provides suggestions for controlling and monitoring radio units assigned to the system. Included are instructions for performing Dynamic Regrouping, and tracking unit locations via the CEC/IMC Multisite controllers. Refer to Chapter 9, *Radio Monitor and Control* when performing these operations.

NOTE

The Enable/Disable functions are restricted by A/F/S. Therefore, the availability of the Logical ID records to any particular user is restricted by the user’s Agency/Fleet/Subfleet restrictions, and the Home Group field of the Logical ID record. Refer to the Agency Partition Table and User Account Maintenance functions (User Menu items #70 and #71) for user restriction information.

Disabling A Radio

Radio Units can be temporarily disabled through the System Manager to prevent their unauthorized use. For the disable command to be effective, the radio unit must be operational and within range of one of the connected sites with a Site Controller. Use the following procedure to remotely disable a radio unit:

1. Select the Unit Enable/Disable function (User Menu item #50) from the User Menu.

The System Manager will display the Unit State Enable/Disable screen.

2. Enter the identification data for the desired radio unit.

For valid units, the System Manager will provide the remaining identification data.

3. Press **F12** to submit the disable request to all Site Controllers.

The Current State panel will be flashing the “Disabled” message as the Desired State.

4. If the desired radio unit is in communication with a Site Controller, the Site Controller will attempt to disable the radio unit.

If the radio unit is successfully disabled, the System Manager will display the message, “Unit (*selected ID*) has been disabled” and the Current State will change to “Disabled.”

5. If the radio is not operational at the site, the System Manager sends the request to the next site and step 4 is repeated.

6. If, after contacting all sites, the radio unit has not been disabled, the Desired State “Disabled,” will cease flashing.

However, all sites have the disable request, thus the next time the radio unit logs onto the network - the disable request will be implemented.

7. If the system was unable to contact one or more sites and was unsuccessful in making the change, the Current State panel will indicate the number of sites not reached.

8. To exit and return to the User Menu, press **F6**.

Enabling A Radio

Radio Units that have been temporarily disabled can be returned to service (enabled) by the System Manager. For the enable command to be effective, the radio unit

must be operational and within range of one of the sites connected with a Site Controller. Use the following procedure to remotely enable a radio unit:

1. Select the Unit Enable/Disable function (User Menu item #50) from the User Menu.

The System Manager will display the Unit State Enable/Disable screen.

2. Enter the identification data for the desired radio unit.

For valid units, the System Manager will provide the remaining identification data.

3. Press **F7** to submit the enable request to all Site Controllers.

The System Manager will display a flashing "Enabled" message as the Desired State.

4. If the desired radio unit is within the range of a Site Controller, the Site Controller will attempt to enable the radio unit.

5. If the radio unit is successfully enabled, the System Manager will display the message, "Unit (*selected unit number*) has been enabled" and the Current State will change to "Enabled."

6. If the radio cannot be contacted by the site, the System Manager sends the request to the next site, if the change is still not successful after contacting all sites, the Desired State, "Enabled," will cease flashing.

However, all sites have the enable request, thus if the radio unit is within the range of any site - the request will be implemented.

7. If the system was unable to contact one or more sites and was unsuccessful in making the change, the panel will indicate the number of sites not reached.

8. Return to the User Menu by pressing **F6**.

Canceling a Remote Enable/Disable Request

You can cancel an enable or disable request through the System Manager. However, if the change action has been confirmed, then the cancel request will be ignored and have no effect on the radio unit.

1. Select the Unit Enable/Disable function (User Menu item #50) from the User Menu.

The System Manager will display the Unit State Enable/Disable screen.

2. Enter the identification data for the desired radio unit.

For valid units, the System Manager will provide the remaining identification data.

3. Press the **F8** key to submit the Cancel request to the Site Controller. If the Cancel command is successful, the Desired State will revert to its previous condition.

4. Return to the User Menu by pressing **F6**.

Regrouping a Radio

The Dynamic Regrouping function allows you to remotely (over-the-air) reprogram radios with a maximum of eight (8) new talk groups.

Use the following procedure to identify new talk groups and send the regrouping request to a radio unit in the field:

1. Select the Dynamic Regrouping function (User Menu item #51).

The System Manager will display the Dynamic Regroup screen.

2. Enter the radio unit's number or name.

The System Manager will display the current regroup settings for the selected unit.

3. Move the cursor to the Group Number field for Group Set 1.

4. Enter the group number to be programmed into the radio. If a valid group is entered, a message is displayed indicating "*Group Number - Group Name* is the current group for this setting."

Repeat this step for each Group Set. If a Group Number is not going to be assigned, leave the Group Number field blank.

5. Determine if the radio will be forced into one of the new group(s). Enter a "Y" in the Forced field, for the applicable Group Set, if the radio will be forced. Remember, the radio may only be forced into one (1) regroup setting.

6. If the radio is to be forced, determine if it will also be captive (unable to change group settings). Enter a "Y" in the Captive field, for the applicable Group Set, if the radio will not be allowed to change groups.

NOTE

It only makes sense to have one (1) regroup on a radio, when the *Captive* function is selected.

7. Complete the regrouping by pressing the **DO** key.

The Regrouping request is sent to each Site Controller which in turn reprograms the radio if it is linked with the site.

During this process, a message will be displayed indicating the radio's number and name, and the Current Radio Status (i.e., "Radio Unit Number for Unit Name Regroup Pending").

When the radio acknowledges the regrouping, the Regroup Pending status changes to "Regrouped."

8. Exit to the User menu by pressing **F6**.

Canceling the Regrouping

To cancel all of a radio's regroups, perform the following steps:

1. Select the Dynamic Regrouping function (User Menu item #51).

The System Manager will display the Dynamic Regroup screen.

2. Enter the radio unit's number or name.

The System Manager will display the current regroup settings for the selected unit.

3. If the Current Radio Status indicates Pending, press the **F7** key to clear the pending regroup action.

NOTE

Even though the screen indicates "pending," the regroup information may have already been transmitted to the unit.

4. If the Current Radio Status indicates the radio is fully regrouped (not pending), press the **F8** key to cancel the regrouping and return the radio to its normal (unregrouped) state.

The message "Radio Unit Number for Unit Name Cancel Pending" will be displayed.

5. After the radio unit acknowledges the cancellation the Current Radio Status will indicate "Not Regrouped."

6. Exit to the User Menu by pressing **F6**.

Locating a Radio Unit

This procedure allows you to determine, via the selected CEC/IMC, the current location (current site and current group) of a radio unit. This function can only be used when the System Manager interfaces with a Multisite network.

Use the following procedure when attempting to locate a radio unit using the Multisite Unit Location function:

1. Select the Multisite Unit Location function (User Menu item #52) from the User Menu. The System Manager will display the Unit Location Display screen.
2. Enter the identification (number or name) of the MSC linked to the sites where you expect to find the radio unit. Use the **Return** key or arrow keys and move to the Selected Unit panel.
3. Identify the radio unit (subject of the search) by using **F14** key to move the entry cursor to the appropriate field and enter the selected unit identification data.

You may also move to the Unit Type field, select the radio type and scroll through a unit list, using the **F11 (Next Record)** key to identify the radio unit.

4. After entering a data item, press the **Return** key.

The System Manager will validate the entry against the Logical ID database and for valid entries, will fill in all the other data fields.

5. Press the **Find** key.

The System Manager initiates the search by linking with the MSC. The MSC searches its database, and provides the System Manager with the location data for the radio unit in question.

6. Upon receiving the location data from the MSC, the System Manager displays the Site's number, name, and the Group ID in the Current Location panel. This Group ID information results from the last group call performed by the unit or its last login message.
7. Data in the Current Location panel is continuously updated every five (5) seconds. This will allow you to track the radio unit if it switches sites or talk groups.

8. To quit the operation press the **F8** (cancel) key or enter another radio unit.
9. To exit the Multisite Unit Location function, press **F6**. The System Manager will return to the User Menu.

Locating Active Groups

Selecting the Multisite Group Location function provides you with a list naming all the supported sites and distribution of radio units logged into the group at each site. This function can only be used with Multisite networks.

Use the following procedure to review the active groups at each site and the distribution of radio units.

1. Select the Multisite Group Location function (User Menu item #53) from the User Menu.

The System Manager will display the Group Location Display screen.

2. Enter the Multisite system identification (number only) of the MSC linked to the sites. Use the **Return** key and move to the Selected Group panel.
3. Identify the Group (subject of the search) by using the **F14** key to move the entry cursor to the appropriate field and enter the selected group identification data.

If you are locating a Group based on the Group Type, use the Select key to view the Group Type list.

Move the asterisk to the desired Group Type and press the Select key again. Next, select the specific Group by scrolling through the Group ID database using the F11 (next record) key.

4. After entering a data item, press the **Return** key.

The System Manager will validate the entry against the Logical ID database and for valid entries, will fill in all the other data fields.

5. Press the **Find** key.

The System Manager initiates the search by linking with the MSC. The MSC searches its database, and provides the System Manager with the location data for the group and radio units.

6. Upon receiving the location data from the MSC, the System Manager displays, in the Current Location panel, the number and name for all sites defined in the Site/Device Database (User Menu item #10), the sites where the Group is active, and the number of radios currently logged into the Group.

7. Location data displayed in the Current Location panel is continuously updated every five (5) seconds. This will allow you to monitor group usage as required for troubleshooting.
8. To quit the operation press the **F8** (cancel) key or enter another radio unit.
9. To exit the Multisite Unit Location function, press **F6**.

Download Activity Data

This section provides instructions for downloading selected site activity data to the Site Controller. It is often advisable to download the site's activity data before generating any reports. Refer to the Chapter 7, *Device Communication* for additional information on using this function.

Downloading the Activity Record

Use the following procedure to download the Site's activity record:

1. From the User Menu, select the Activity Download function (User Menu item #31). The System Manager will display the Activity Download Request screen.
2. Enter the Site's Number or name and press the **Return** key. The System Manager will verify this is a valid site by providing the other field variable.
3. Initiate the request by pressing the **Do** key. The System Manager will respond with the message "Activity download request sent successfully."
4. When the System Manager and the Site Controller establish a communication link, the System Manager will display the banner "Download Request sent to Site xx (where xx is the site number).

If for some reason there is a problem linking with the site, the System Manager will flash the banner "Unable to access Site xx for activity download." If the problem is with the site activity handler, the System Manager will flash the banner "Activity handler not found."

5. After the Site Controller has successfully downloaded the activity records, the System Manager will display the banner "Activity download completed on Site xx."

NOTE

The System Manager is a multi-processing system. Therefore, it is not necessary for you to remain in this function waiting for a response from a site. You may exit this function and proceed to open any other function. When the responses are received, which may take a few minutes, the System Manager will display the banner messages.

Generate and Display Activity Reports

The following procedures describe the steps necessary to generate Activity Reports and the method for viewing the reports using the Reports Manager. Refer to Chapter 10, *Reports* for specific details when generating and viewing reports..

Activity Detail

The Activity Detail Report generates a report that includes a detailed description of all calls made at a specific site during the selected time period.

1. Select the Activity Download function (User Menu item #31) and download the latest site activity data.

Refer to the instructions in *Download Activity Data* described previously.

2. After downloading the latest site activity data, select the Activity Detail function (User Menu item #63).

The System Manager will display the Activity Details Report screen.

3. Enter the site number and the start and stop date and times.
4. Move to the Select Criteria and Sort Criteria panels and insert the desired selection limits and the sort sequence of the report.
5. Generate the report by pressing the **Do** key.

The System Manager will display the message "The system is processing your request."

When ready, the System Manager will display the banner "Activity report generation starting."

When the report generation is complete, the System Manager will display the banner "Activity report generation complete."

6. The report is now available through the Reports Manager.

7. Press **F6** to exit the Activity Detail function.
8. To view the report or obtain a printout, select the Reports Manager function (User Menu item #69).

The System Manager will display the Reports Manager screen.
9. Highlight the desired report. Reports are listed by Report Type and Site Number.
10. If you want to view the report, press the F11 key, the System Manager will display the report.
11. If you desire a hard copy printout of the report, press the **F10** key. You must indicate the type of printer (System or Terminal Printer) and press the **Select** key.

The System Manager will send the report to the designated printer.

Activity Summary

The Activity Summary Report summarizes the number and types of calls which occurred at the selected site during the specified time period. Refer to the Reports screen #64.

1. Select the Activity Download function (User Menu item #31) and download the latest site activity data.

Refer to the instructions in *Download Activity Data* described previously.

2. After downloading the latest site activity data, select the Activity Summary function (User Menu item #64).

The System Manager will display the Activity Summary Report screen.

3. Refer to the Activity Details section and repeat steps 3 through 11 for an Activity Summary Report for the selected site.

Alarm Control

When an alarm condition exists, the Site Controller issues an alarm message to the System Manager. The System Manager notifies the user, if the notification feature is enabled, by displaying an alarm banner indicating the site has an alarm condition. These alarm banners will continue to be displayed until action is taken to acknowledge the alarm.

The Alarm Display and Acknowledge screen allows you to view the alarms for the selected site and to

acknowledge the alarm. Acknowledging the alarm will clear the alarm indication if the cause no longer exists, or changes the alarm indication if the alarm results from a hard malfunction.

Additional details on working with the Alarm Control functions and features can be found in Chapter 8.

Acknowledging Alarms

When viewing the Alarm Display and Acknowledge Display screen, any alarms received will be identified by a diamond. The diamond may be bold or normal, and steady or flashing.

A flashing diamond indicates that an alarm has transitioned causing the Site Controller to issue an alarm message to the System Manager. A steady diamond indicates the alarm has been acknowledged, but the condition which caused the alarm still exists.

You can acknowledge an alarm by pressing the **F13** key. However, if the alarm is normal and flashing, then the alarm indication must first be enabled and the record saved before it can be acknowledged.

Use the following steps to acknowledge an alarm condition:

1. Select the Alarm Control Display function (User Menu item #40).

The System Manager will display the Alarm Display and Acknowledge screen.

2. Enter the site number in the Selected Site panel.

For a valid site, the System Manager will display the Current Alarms panel indicating alarm conditions. All alarms which have occurred since the last acknowledgment will be displayed as flashing diamonds.

3. If all alarm conditions are identified by a bold flashing diamond proceed to step 7. If an alarm is identified by a normal flashing diamond, then the alarm position must be enabled before it can be cleared.
4. Using the arrow keys, move the cursor to the position with a normal flashing diamond.
5. Press the **Insert** key to enable the alarm. The diamond will turn bold and continue to flash.
6. Save the enable data by pressing the **Do** key. The System Manager will display the message "Alarm Enable data for site xx has been saved."

NOTE

For Poll channel number 25 the diamond will return to its disabled state, this is normal operation.

7. Press **F13** to acknowledge all alarms. The System Manager will display the message "Acknowledging all enabled alarms for Site xx."
8. If the condition which caused the alarm no longer exists, then the diamond will disappear.

For example, an alarm was issued when a device failed to respond to Poll Messages, however before the alarm was acknowledged, the device started responding to Poll messages. The problem no longer exists and the diamond automatically disappears.

9. If the diamond switches from a flashing state to a steady state, the cause of the failure still exists. This alarm indication will remain on the screen even if you exit the screen and then return.
10. If the condition which caused the steady diamond is corrected, then the diamond will disappear without further user action. The rationale for this is the fact that you have already acknowledged the alarm condition.
11. If the alarm condition persists, then the problem is probably caused by improper system configuration.

For example, the device may be communicating, but is not configured in the System Manager or Site Controller and they perceive the device as not being installed.

Generating Alarm Reports

When viewing alarms using the Alarm Display and Acknowledge Display screen it is not possible to determine the root cause of the alarm. Therefore in order to determine the exact cause of the alarm you must generate an Alarm Report.

The Alarm Report provides a listing of site alarm conditions for a specified period. The type of alarm and the channel numbers may also be specified. Refer to Chapter 10, *Reports* for an in depth discussion of the Alarm Report in how to interpret the data. Appendix D provides a list describing the different alarm types.

Use the following procedure to generate the Alarm Report:

1. Select the Alarm Report function (User Menu item #65).

The System Manager will display the Alarm Report screen.

2. Enter the site number and the start and stop date and times.
3. Move to the Select Alarm panel and identify the alarms which will be included in the report.

NOTE

The default alarm list provided is sufficient to handle almost any failure condition. Other types of messages can be included when further diagnosis of the problem(s) is (are) needed.

4. Move to the Channel Selection and enter the range of channels to be included in the report.

After determining the Alarm Types and site channels, it will be necessary to generate the report.

5. Generate the report by pressing the **Do** key.

The System Manager will display the message "The system is processing your request. Please stand by."

When ready, the System Manager will display the banner "Alarm report generation starting."

When the report generation is complete, the System Manager will display the banner "Alarm report generation complete."

6. The report is now available through the Reports Manager.
7. To view the report, it will be necessary to exit this function and select the Reports Manager function. Return to the User Menu by pressing **F6**.
8. Select the Reports Manager function (User Menu item #69).

The System Manager will display the Reports Manager screen.

9. Highlight the desired report. Reports are listed by Report Type and Site Number.
10. If you want to view the report, press the **F11** key, the System Manager will display the report.
11. If you desire a hard copy printout of the report, press the **F10** key. You must indicate the type of printer (System or Terminal Printer) and press the **Select** key.

The System Manager will send the report to the designated printer.

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CHAPTER 4 - FILE MANAGEMENT

This chapter describes those tasks necessary for maintaining the System Manager files. These activities should be performed periodically, as needed, or as directed by local procedures. Procedures are provided for the following operations:

- Periodically Archiving Activity Records.
- Deleting Excess Reports.
- Generating Statistical Reports.
- Retrieving Databases.
- Retrieving Activity Records.
- Backing Up System Files.

PERIODICALLY ARCHIVING ACTIVITY

The following procedure provides instructions for periodically archiving activity data. Performing this operation will free up vital disk space and prevent the System Manager from automatically deleting the activity data when the preset storage capacity is exceeded. Additional information on archiving activity data can be found in Chapter 11, *System Maintenance*.

Use the following procedures to archive activity data:

1. Select the Activity Archive function (User Menu item #74) by highlighting "Activity Archive" in the System Maintenance panel or enter "74" as the Selected Menu Item and press the **Return** or **Select** key.

The System Manager will display the Activity Archive Display screen.

NOTE

The Activity Archive process may be completed while the system is in use. However, once the process starts, you may not exit the function until the process is complete (duration will depend on the number of activity files).

NOTE

The time required to archive the activity data may be lengthy and depends on the amount of data. The system transfers data at a rate of 62.5k bytes/sec. For example, to transfer 150 MB of data will require two 95 MB (TK50) tape cartridges and take about an hour and a half. If your system has a TLZ07 Tape Drive, it will require one (1) tape and will be considerably faster. The system will write the data and perform a complete data verification.

CAUTION

This procedure will overwrite the contents of any write enabled TK50 or TLZ07 tape that is inserted into the tape drive.

2. Insert a write enabled tape cartridge into the tape drive. Refer to the tape loading procedures in Chapter 2 of this manual.
3. Enter the ending date for the Archive process. This may be today's date (default) or any date after the last archive end date.

NOTE

The System Manager will archive all activity data between the two dates.

4. Press the **Do** key to start the process.

CAUTION

Once this procedure starts, you may not exit until it is complete.

5. Upon completion of the archive process, remove and label the tape cartridge(s).

NOTE

Label the archive tape as: "Label=dd-mmm-yyyy." Where dd-mmm-yyyy matches the date entered for the "Ending date of today's archive." Failure to do this will impair the retrieval process. You should also maintain an archive log book.

6. Store the archived activity data tape cartridges in accordance with the guidelines given in the Introduction chapter of this manual.

DELETING EXCESS REPORTS

This section provides instructions for removing excess or out-dated reports from the System Manager in order to free up valuable disk space.

NOTE

The System Manager's standard configuration will only allow four (4) reports of the same type per site, for the site-based reports. Database reports can have only four (4) of each type on disk.

To remove an old report, perform the following steps (refer to Chapter 10, *Reports - Reports Manager*):

1. Select the Reports Manager function (User Menu item #69).
2. Using the **Up** and **Down** arrow keys, highlight the report to be deleted.
3. Press the **F12** key to delete the report.

The System Manager will request you press the **F12** key again to confirm that you really want to delete this report.

4. Press the **F12** key again to confirm the delete action.

GENERATING STATISTICAL REPORTS

This section provides procedures for generating channel and site statistical reports (refer to Chapter 10). The Channel Statistics Report (User Menu item #65) reports channel availability and channel activity information for each channel at a site. This information is useful in determining channel loading.

The Site Statistics Report (User Menu item #67) provides site performance data, breaking down calls placed during each hour of site operation. It also provides information on call duration and call queuing. These reports provide statistical data on Channel and Site operation.

Channel Statistics

Use the following procedure to generate the Channel Statistics Report:

1. Select the Channel Statistics Report function (User Menu item #66).

The System Manager will display the Channel Statistics screen.

2. Enter the site number and the start and stop date and times.
3. Generate the report by pressing the **Do** key.

The System Manager will display the message "The system is processing your request. Please stand by."

When ready, the System Manager will display the banner "Channel Statistics report generation starting."

When the report generation is complete, the System Manager will display the banner "Channel Statistics report generation complete."

4. The report is now available through the Reports Manager.
5. To view the report, it will be necessary to exit this function and select the Reports Manager function. Return to the User Menu by pressing **F6**.
6. Select the Reports Manager function (User Menu item #69).

The System Manager will display the Reports Manager screen.

7. Highlight the desired report. Reports are listed by Report Type and Site Number.
8. If you want to view the report, press the **F11** key, the System Manager will display the report.
9. If you desire a hard copy printout of the report, press the **F10** key. You must indicate the type of printer (System or Terminal Printer) and press the **Select** key.

The System Manager will send the report to the designated printer.

Site Statistics

Use the following procedure to generate the Site Statistics Report:

1. Select the Site Statistics Report function (User Menu item #67).

The System Manager will display the Site Statistics screen.

2. Enter the site number and the start and stop date and times.
3. Generate the report by pressing the **Do** key.

The System Manager will display the message "The system is processing your request. Please stand by."

When ready, the System Manager will display the banner "Site Statistics report generation starting."

When the report generation is complete, the System Manager will display the banner "Site Statistics report generation complete."

4. The report is now available through the Reports Manager.
 5. To view the report, it will be necessary to exit this function and select the Reports Manager function. Return to the User Menu by pressing **F6**.
 6. Select the Reports Manager function (User Menu item #69).
- The System Manager will display the Reports Manager screen.
7. Highlight the desired report. Reports are listed by Report Type and Site Number.
 8. If you want to view the report, press the **F11** key, the System Manager will display the report.
 9. If you desire a hard copy printout of the report, press the **F10** key. You must indicate the type of printer (System or Terminal Printer) and press the **Select** key.

The System Manager will send the report to the designated printer.

RETRIEVING DATABASES

The following procedure describes the steps necessary to retrieve (restore) an archived System Manager database. Refer to Chapter 11, *System Maintenance* - Database Retrieval.

To retrieve an archived database, perform the following steps:

1. Ensure all users are logged off the system.

CAUTION

Since this procedure shuts down all other System Manager software, please make sure that this is the only terminal on the system running the application software package.

2. Insert the archived tape cartridge into the tape drive. Refer to the tape loading procedures in the Chapter 2 of this manual.
 3. Select the Database Retrieval function (User Menu item #73) from the User Menu.
- The System Manager will display the Database Retrieval Display screen.
4. Enter the Last Archive Date. This is the date on the tape cartridge label. The function default is the date the System Manager stored when the last archive was made.

NOTE

The System Manager stored the date of the last archive (Database Archive - Present Date) on the system disk and it will compare this date to the date entered to ensure the correct tape is being loaded.

5. Start the retrieval procedure by pressing the **Do** key.

CAUTION

Once this procedure starts, you may not exit until it completes (5 to 15 minutes, depending on the file sizes).

6. After the System Manager retrieves the database it will restart the System Manager software application.
7. Depending on the number of sites, the restart procedure may take up to 10 minutes. If you attempt to access the system before completion of the restart procedure, the System Manager will

respond immediately with the message "Unable to connect to Site."

RETRIEVING ACTIVITY RECORDS

This procedure allows you to restore archived activity files from the back up tape to the System Manager. Refer Chapter 11, *System Maintenance - Activity Retrieval*.

Use the following procedures to retrieve the activity data for a particular period:

1. Select the Activity Retrieval function (User Menu item #75) from the User Menu.

The System Manager will display the Activity Retrieval Display screen.

2. Enter the beginning date for the activity you wish to retrieve. Use the DD-MMM-YYYY format.

NOTE

The default dates are the last dates recorded for archiving activity files stored in the System Manager.

3. Enter the ending date for the activity data you wish to retrieve. Use the DD-MMM-YYYY format.

The default value is the most recently archived activity file date on record in the System Manager.

4. Press the **Return** key.

The System Manager will identify the required Archive tape (the tape is identified by the date label) and will indicate (Yes/No) if more than one tape will be needed.

5. Insert the selected tape cartridge into the tape drive. Refer to the tape loading procedures in the Chapter 2 of this manual.

6. Press the **Do** key to start the retrieval process.

CAUTION

Once this procedure starts, you may not exit until it is complete.

7. Upon completion of the retrieval process, remove the tape cartridge(s).

BACKING UP SYSTEM FILES

This procedure allows you to make a backup copy of the entire system disk. This will provide a secure copy of all system parameters and software which can be quickly re-installed to restart the System Manager in the event of a catastrophic equipment outage resulting from fires, floods, etc. When performing these steps refer to the Chapter 11, *System Maintenance - System Backup* (User Menu item #76).

NOTE

Additional information for back up and retrieval of the VMS operating system disk may be found in LBI-38703. Chapter 5, *VMS Operating System Maintenance Tasks*.

Backup the System Disk using the following procedure:

1. Shut down the computer by logging into the shutdown account, from the Console Terminal **ONLY**, as follows:

```
Username:      SHUTDOWN<cr>
Password:     SHUTDOWN<cr>
```

2. Select the "**S <cr>**" option to shut down.
3. After receiving a message indicating the shutdown is complete, depress the Halt/restart switch at the rear of the MicroVax 3100 computer.

NOTE

The following commands must be entered at the console terminal. All occurrences of ddmmmyyyy should be replaced by the current date.

3. At the >>> prompt, enter: **B/E0000000**
4. Load the desired data tape in the tape drive.
5. In a few moments the \$ prompt will appear, enter the following:

```
BACKUP/REW/VER/IMAGE/LABEL=SYSBK - ↵
DKA300: MKA500:ddmmmyyyy.SAV
```

NOTE

The backup will take approximately 80 min./tape for TK50 tapes (and can take several tapes), but will be considerably faster if using TLZ07 tapes. The system will inform you when to replace the tapes.

Carefully label all tapes as 'sysddmmmyyyy Vol # (number of this tape) of # (total number of tapes it took to complete the backup)'.

For example: Sys12DEC1994 Vol 1 of 4.

6. Upon completion, depress the Halt/restart button and at the >>> prompt, enter:

BOOT

The System Manager will restart momentarily.

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CHAPTER 5 - DATABASE MAINTENANCE

The Database Maintenance functions are used to setup and maintain databases for sites and devices, radio units, call groups, telephone interconnect parameters, and alarm parameters. The Database Maintenance function is divided into the seven sub-functions listed below:

10) Site / Device Definition - Use to create or modify site or device records containing configuration and/or operating parameter stored in the Site (device) database.

11) Logical Unit Definition - Use to create or modify individual radio unit records containing user information and operating parameters stored in the Logical ID database.

12) Group Definition - Use to create or modify call group records containing group identification, and operating parameters stored in the Group ID database.

13) Rotary Definition - Use to designate the telephone line rotary (hunt) sequence, up to 15 rotaries on the selected site. Used when a radio requests an outbound telephone line, with its defined rotary number in the LID database. Data is stored in the Rotary database.

14) Line Definition - Use to setup the telephone line parameters (i.e., line availability, pulse vs. tone dialing, radio unit receiving incoming calls, etc.). Data is stored in the Line database.

15) Toll Call Restrictions - Use to identify outgoing telephone interconnect restrictions assigned to different radio user levels. Data is stored in the Toll Call database.

16) ACU Parameters - Use to define Alarm Control Unit (ACU) parameters for each site. Data is stored in the ACU Alarm database.

17) SAID Definition - Use to assign System Assigned IDs to specific switches within the system network.

These Database Maintenance functions are displayed on the right side of the User Menu when the Database Maintenance Category is selected, as shown in Figure 5-1. To select one of the eight functions, enter the function number or use the arrow keys to highlight the selection. Press the **Return** or **Select** key and the first field definition screen (Select Screen) is displayed. If the function contains multiple screens, you may move between screens by using the **Next Screen** or **Previous Screen** keys.

The screenshot shows the 'User Menu' interface of the EDACS System Manager V6.00. At the top, the title bar reads 'EDACS System Manager V6.00 User Menu [SMGTGT] EGESYSMGR'. Below this, a dashed box labeled 'Selected Menu Item' contains the text 'Enter Menu Item : 10'. Underneath, another dashed box labeled 'Menu Selections' is divided into two columns. The left column, titled 'Main Categories', lists: 1) Database Maintenance, 2) Site Reconfiguration, 3) Device Communication, 4) Alarm Control, 5) Radio Control, 6) Reports, and 7) System Maintenance. The right column, titled 'Database Maintenance', lists: 0) Site / Device Definition, 1) Logical Unit Definition, 2) Group Definition, 3) Rotary Definition, 4) Line Definition, 5) Toll Call Restrictions, 6) ACU Parameters, and 7) SAID Definition. At the bottom of the menu, a legend states: '(F7 = Exit from System Manager) (F10 = Clear Menu Item) (Select = Submit Current Menu Item)'.

Figure 5-1. User Menu - Database Maintenance

10) SITE / DEVICE DEFINITION

The Site/Device Definition under the Database Maintenance main category, item "10", defines the channel configurations and operating parameters for each site or device. The current settings contained in the database remain in effect until a parameter is changed and the record is saved.

Select the Site/Device Definition function (Menu Item #10) from the User Menu by highlighting "Site/Device Definition" in the Database Maintenance panel or enter "10" for the Selected Menu Item and press the **Return** or **Select** key. The System Manager displays the Selected Device panel (Figure 5-3), in the upper part of the External Device Definition screen.

Selecting a Site or Device

The Selected Device panel, shown in Figure 5-3, is used to locate existing site or device records or for entering identification data for a new site or device. When creating a new record, the Selected Device panel will indicate "CREATE" in the upper right corner of the panel and it will indicate "MODIFY" when viewing an existing site or device record. After completing the Selected Site entries, the System Manager provides screens 1:4 to 4:4 as shown in Figure 5-4. Use the following field definitions when making entries in the Selected Device panel:

NOTE

When adding a Site/Device or changing a Site/Device's comm port designation, the system must be rebooted before the addition or change goes into effect.

Make changes or additions by exiting the System Manager and logging into the **sminstall** account, refer to LBI-38703. Use the sminstall utility to make the additions or changes. Exit the **sminstall** account.

Log into the **Shutdown** account and reboot/restart the System Manager. This will activate the change or addition.

Device Number - Enter the number assigned to the site (1 thru 32) or device (33 thru 64).

To locate an existing record - enter the Device (site or device) Number, or enter the Device Name, or press the **FIND** key for a list of sites and devices in the Site/Device database. The current record for the selected site or device appears.

When creating a new record - enter a number in the 1-32 range and press the **Return** key to select a "SITE" as the Device Type. This range is also used to identify special devices (i.e., CTIS) which appear as sites to the System Manager.

Entering a number in the 33-64 range identifies a device, other than a site, which only needs to define the System Manager Communications Parameters. After entering the number and pressing the **Return** key, the System Manager will display a list of possible device types as shown in Figure 5-2.

Device Type - When selecting a site number (1 to 32), "SITE" is automatically entered as the Device Type. Entering a Device Number in the 33 to 64 range causes the System Manager to display the Select Device Type pop-up menu shown in Figure 5-2. Move the asterisk to the desired device type and press the **Select** key. There are different screens for different device types. The following device names are currently recognized by the System Manager:

- **MSC** - No longer used. Formally identified the device as a Multisite I Coordinator (MSC I).

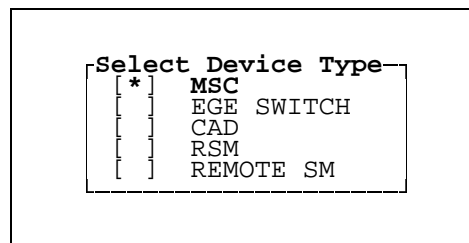


Figure 5-2. Select Device Type

Figure 5-3. Selected Device Panel

- **EGE Switch** - Use when the device is a Multisite Controller, Central Electronics Controller (CEC), an Integrated Multisite and Console Controller (IMC), or a StarGate Controller.
- **CAD** - Use when the device is a Computer Aided Dispatch (CAD) system or a PC using the Import/Export Utility. Refer to Chapter 13 for additional details.
- **RSM** - Use when the device is a Request Status Monitor.
- **REMOTE SM** - Use when the device is a remote System Manager computer or application.

Device Name - Enter the device name. The name must be unique for each site or device and may be up to eight alphanumeric characters in length.

After entering the pertinent site or device identification data, the System Manager will display the Site Channel Configuration panel or the System Manager Communications Parameters panel if the type is a device.

Site Definition

For sites there are four External Device Definition panels, numbered 1:4 (1 of 4) through 4:4 (4 of 4). The panels listed are shown in Figure 5-4:

- 1:4 - Channel Configuration
- 2:4 - Site Parameters
- 3:4 - Site Test Parameters
- 4:4 - System Manager Communications Parameters

NOTE

These screens comprise a single record for each site and are temporary until saved. To save the record press the **Do** key before selecting another site or exiting the screen and returning to the Main Menu. Failure to save the record will result in losing the data.

EDACS System Manager External Device Definition [SMGTGT] EGESYSMGR

1:4 Channel Configuration

Selected Device: Device Number : 3 Device Name : RADIOLAB Device Type : SITE

Channel Configuration: 1 2 12345678901234567890123456 12345678

2:4 Site Parameters

Selected Device: Device Number : 3 Device Name : RADIOLAB Device Type : SITE

Channel Assignment Parameters

Message Conv Limit : 300 Transmission Conv Limit : 300 Interconnect Emergency H Rotat Assign Assign Chan Recent Call Max # Concur Max # Concur

Miscellaneous Parameters

Morse Code Id Interval : 15 Scramble Data Call Int : 0

3:4 Site Test Parameters

Selected Device: Device Number : 3 Device Name : RADIOLAB Device Type : SITE

Test Equipment Parameters

Power Monitor Unit Enabled : Y PMU Power Level : 3

4:4 System Manager Communications Parameters

Selected Device: Device Number : 3 Device Name : RADIOLAB Device Type : SITE

Communication Parameters

Device Password : 16PLUS Device Internal Id : 3 Tim Line Phone No. : Tim Line Port Name : LTA5: Tim Line Baud Rate : 19200

Software Parameters

Message Retry Attempts : 3 Dial Retry Attempts : 3 Attach Time Interval : 15 Acknowledgement Timeout : 5 Disconnect Hang Time : 10 Sanity Poll Interval : 5 Carrier Timeout : 60

Network Manager Communications

Code number : 33

(F6 = Exit) (F8 = Delete Record) (F10 = Clear Record) (F11 = Next Record) (F14 = Toggle Search Key) (Do = Save Record) (Find = Device List)

Figure 5-4. Site Definition Screens

Each of these screens contains two panels, the Selected Device panel, containing the Site identification data and a configuration or parameters panel. The screen also displays the definitions of active function keys.

Channel Configuration Panel (1:4)

The Channel Configuration fields define the operating parameters for each channel (up to 25) assigned to the site. An example of the Channel Configuration panel is shown in Figure 5-5 and field descriptions given below.

NOTE

The "Selected Device" panel of the display remains on the screen when the System Manager displays the configuration or parameter panels 1:4, 2:4, 3:4, & 4:4 (see Figure 5-4).

RF - The RF field identifies which channel will be designated the Control Channel, which channels are Working Channels, and which channels are not used. When defining a new site, the System Manager default sets up channel 2 as the Control Channel. Enter the appropriate code for each channel:

N (default) - Identifies all unused channels.

C - Enter to designate the Control Channel. (Only one Control Channel per site allowed.)

Y - Enter to designate a Working Channel.

Interconnect - The Interconnect field identifies the channels connected to optional telephone interconnect equipment installed at the site. (This is referred to as "Local Interconnect").

N (default) - Identifies all unused channels and channels not connected to telephone interconnect equipment.

Y - Enter for channels connected to telephone interconnect equipment.

Digital Voice - The Digital Voice field identifies repeater channels with high speed digital voice data processing enabled.

N (default) - Identifies all unused channels and channels not capable of processing Digital Voice calls.

Y - Enter for channels with Digital Voice enabled.

Data - The Data field identifies the repeater channels designated to process data transmissions to and from Mobile Data Terminals (MDT).

N (default) - Identifies all unused channels and channels not capable of processing data transmissions.

Y - Enter for channels with mobile data capability enabled.

EDACS System Manager		External Device Definition		[SMGTGT] EGESYSMGR
Selected Device -----CREATE				
Device Number :	4	Device Name :	Test One	
Device Type :	SITE			
Channel Configuration -----1:4				
	1	2		
	12345678901234567890123456		12345678	
RF :	NCNNNNNNNNNNNNNNNNNNNNNNNN	Relay on :	NNNNNNNN	
Interconnect :	NNNNNNNNNNNNNNNNNNNNNNNNNN			
Digital Voice :	NNNNNNNNNNNNNNNNNNNNNNNNNN			
Data :	NNNNNNNNNNNNNNNNNNNNNNNNNN			
Channel Test :	NNNNNNNNNNNNNNNNNNNNNNNNNN			
Allowed CC :	NYNNNNNNNNNNNNNNNNNNNNNNNN			
Wide Area :	NNNNNNNNNNNNNNNNNNNNNNNNNN			
Downlink :	NNNNNNNNNNNNNNNNNNNNNNNNNY			
MC Partition :	111111111111111111111111			
MC Partitioning Enabled: N				
(F6 = Exit) (F8 = Delete Record) (F10 = Clear Record) (F11 = Next Record)				
(F14 = Toggle Search Key) (Do = Save Record) (Find = Device List)				

Figure 5-5. Site Definition - Channel Configuration Screen (Function #10, 1:4)

Channel Test - Assigns a set of channels for special assignment to selected radios and groups used for system test and diagnostics. This feature allows maintenance personnel to test EDACS systems without interfering with normal communications.

N (default) - Normal operation or channel unused.

Y - Channel reserved for testing of radios and groups so enabled.

Allowed CC - An Allowed Control Channel is a channel that is allowed to be used as a Control Channel. Several channels are generally designated as Allowed Control Channels, to allow for possible channel failures. At a partitioned site, all of the Allowed Control Channels do not all have to be in the same partition. However, if they are not all in the same partition, the Control Channel can be in one partition at one time and in another partition at another time.

NOTE

It is advisable not to designate a channel used for local interconnect as a potential Control Channel. When a channel becomes the Control Channel it no longer processes voice communications; thus any attempt to use the telephone interconnect will potentially be disrupted.

Enter the following code for each channel:

N (default) - Enter to disable or prohibit using the channel as the Control Channel.

Y - Enter for channels which can be used as backup Control Channels.

Wide Area - Identifies channels which are connected to a Multisite network and can be used for wide area communications. Calls made on these channels may be routed to radios or groups at other sites.

Y - Allows the channel to be used as part of a Multisite configuration.

N (default) - Channel not part of a Multisite network and wide area communication is disabled.

Downlink - The Downlink field designates which channel number will be the redundant downlink to the Multisite coordinator or console. Channel 25 is the default setting for the redundant downlink.

To change the redundant Downlink channel, enter **N** to disable channel 25 and enter **Y** to enable the channel selected as the redundant downlink channel.

NOTE

Channel 26 is always the site's primary downlink channel and cannot be changed to anything else.

NOTE

You may also designate more additional downlink channels (singularly or in pairs) for other communication devices, such as a CEC attached to a site which also has an IMC or MSC attached.

MC Partition - For sites with Multiple Channel Partition (MCP) enabled, each RF channel must be assigned to a specific partition. Each channel is assigned to only one partition at a time. The range is 1 to 9 and 10 to 15 (entered as A thru F hexadecimal).

To assign a partition number to a channel, insert a digit in the **MC Partition** field in the column for that channel. The numeric digits 1 (default) through 9 represent partitions 1 through 9 respectively, and the alpha digits A through F represent partitions 10 through 15 respectively. Partition number assignments do not have to be sequential, to groups of adjacent channels, or in any order whatever.

Any channel not given a partition assignment remains assigned to partition 1 as part of the initial MCP Data. However, having a partition assignment (either by the system administrator or as part of the initial MCP Data) does not mean that the channel is enabled. The **RF** field, in the **Channel Configuration** panel 1:4, still defines which channels are enabled for the site.

MC Partitioning Enabled - This read only field indicates if MCP is Disabled (N) or Enabled (Y) at the Site Controller.

The System Manager sends an inquiry message to verify Site Controller's firmware version. If the Site Controller is using V5.xx (or earlier) the Site Controller is not MCP capable. If the version is 6.0 (or later) the System Manager asks the Site Controller if MCP is enabled. The information provided indicates the following:

- **N (Disabled)** (default) - Indicates that the selected site is using firmware 5.xx (or earlier), the System Manager has not communicated with the selected site since the site was MCP enabled, or the last time the selected site communicated with the System Manager it reported its MCP feature was disabled.
- **Y (Enabled)** - Indicates the last time the selected site communicated with the System Manager, the site reported its MCP feature was enabled.

NOTE

To enable MCP at the selected Site, the site must be MCP capable, that is using V6.0 (or later) firmware and must have its personality programmed to be MCP enabled.

Regardless of the message in the **Site MCP Enabled** field, the system administrator can enter MCP Channel Data for that site. However, the MCP Channel Data will not be sent to the site until the site is MCP enabled. At any site that is not MCP enabled, IDs will be given channel assignments as if the MCP feature did not exist.

Relay On - Relay number headings 1-8 for the relay state fields correspond to the eight control output relays at the Test and Alarm Unit (TAU).

N (default) - Identifies relays you want to remain in the reset state.

Y - Identifies relays you want set when a Reconfiguration request is submitted to the Site Controller (see User Menu item #24, Site Reconfiguration - Relay).

Site Parameters Panel (2:4)

Press **Next Screen** to access the Site Parameters screen from the Channel Configuration screen.

The Site Parameters screen contains the Channel Assignment Parameters in the first column, and Miscellaneous Parameters in the second column.

An example of the Site Parameters Screen 2:4 is shown in Figure 5-6.

Channel Assignment Parameters:**NOTE**

The Message and Transmission Conversation Limits set maximum call duration limits, however, under normal operating conditions, the actual call duration may be the set limit plus 15 seconds. (For example; if the limit is set to 300 seconds, the actual duration of the call may be up to 315 seconds long.) For Sites using the GETC Group 4 merge code, this additional time is reduced to less than 2 seconds.

Message Conv Limit - When the site operates in the Message Trunked mode (i.e., an interconnect or emergency call), the channel is assigned for the duration of the call. This field sets the maximum time limit before the system will automatically re-allocate the working channel for another call.

The limit is from 10 to 2550 seconds with a default setting of 300 seconds or 5 minutes.

Transmission Conv Limit - When the site operates in the Transmission Trunked mode (i.e., normal EDACS), the channel is assigned for the duration of the callers transmission. This field sets the maximum time limit during which the working channel remains assigned to the caller. If the caller fails to terminate the transmission within the allotted time limit, the transmission is automatically terminated and the working channel is made available for another call.

The limit is from 10 to 2550 seconds with a default setting of 300 seconds or 5 minutes.

EDACS System Manager		External Device Definition		[SMGTGT] EGESYSMGR
Selected Device -----CREATE				
Device Number : 4		Device Name : Test One		
Device Type : SITE				
Site Parameters -----2:4				
Channel Assignment Parameters		Miscellaneous Parameters		
Message Conv Limit : 300		Morse Code Id Interval : 30		
Transmission Conv Limit : 300		Scramble Data Call Int : 5		
Interconnect Hang Time : 30		Activity Dump Threshold : 1000		
Emergency Hang Time : 2		Assign Non-Adjacent Chan: N		
Rotate Assignments : Y				
Assign Chan Ascending : N				
Recent Call Queue Int : 5000				
Max # Concurrent Intcon : 2				
Max # Concurrent Indiv : 20				
(F6 = Exit) (F8 = Delete Record) (F10 = Clear Record) (F11 = Next Record)				
(F14 = Toggle Search Key) (Do = Save Record) (Find = Device List)				

Figure 5-6. Site Parameter Panel (Function #10, 2:4)

Interconnect Hang Time - The time the channel will remain on the air after releasing the PTT (unkey command) and channel drop for telephone interconnect calls. When the hang time expires, the channel is available for reassignment

Hang time range is 1 to 255 seconds with a default of 30 seconds.

Emergency Hang Time - The time the channel will remain on the air after releasing the PTT (unkey command) and a channel drop for emergency calls. This time is normally shorter in duration, freeing up channels more quickly during emergency conditions.

Emergency Hang time range is 0 to 255 seconds with a default of 2 seconds. Setting this feature to zero (0) will cause emergency calls to be transmission trunked.

Rotate Assignments - Rotating working channel assignments makes it more difficult for unauthorized individuals to intercept complete conversations.

Y (default) - If you want the working channel assignments automatically rotated by the system.

N - To disable automatic working channel rotation.

Assign Chan Ascending - This field sets the order in which the Site Controller makes working channel assignments. Used in conjunction with rotating channel assignments, this increases the difficulty for scanners to follow conversations.

Y (default) - Assigns channels in ascending order starting at channel one.

N - Assigns channels in descending order starting from the highest channel number.

Recent Call Queue Interval - During times when calls are queued, the channel requests are stored in the Site Controller until a working channel becomes available. The Site Controller manages the calls at their highest priority (emergencies calls which are priority 7).

If a call request is queued, and a previous call request was made, the queue priority of the queued call may be increased by one half. The queue priority is incremented if the time between the previous call request and current request is less than the Recent Call Queue Interval. This gives ongoing conversations a slightly higher priority than new conversations.

Interval range is from 0 to 30,000 milliseconds (30 seconds), with a default of 5,000 milliseconds (5 seconds).

Max # Concurrent Intcon - Sets the maximum number of simultaneous telephone interconnect calls permitted on the site. Each interconnect call ties up a channel for the duration of the call.

The maximum number of calls may be set for 0 to 30 calls. The field defaults to 2 concurrent interconnect calls.

Max # Concurrent Indiv - Sets the maximum number of simultaneous individual calls permitted on the site. Allowing too many individual calls reduces the number of channels available for group calls and decreases the site's efficiency.

The maximum number of calls may be set for 0 to 30 calls. The field defaults to 2 concurrent individual calls.

Miscellaneous Parameters:

Morse Code ID Intrvl - The time interval in minutes between transmissions of the Morse Code site identification (ID).

The time interval range is from 0 to 30 minutes with a default of 30 minutes. Entering a value of zero (0) will disable Morse code transmissions.

Scramble Data Call Int - The Site Controller is capable of placing random data calls on working channels to discourage unauthorized monitoring of the site. This field sets the length of time in seconds between data calls.

The range is from 0 (no calls) to 32,767 with a default of 5. A value of zero will inhibit this feature.

Activity Dump Threshold - The number of activity records contained in the Site Controller activity file before the Site Controller automatically downloads the file. A download will dump the activity file to the System Manager.

The threshold range is from 500 to 16,383 records. The default setting is 1,000 records. Entering a value of zero (0) will disable downloads.

Assign Non-adjacent Channels - Using the non-adjacent channel assignment algorithm reduces potential channel intermodulation. This is normally enabled for 900 MHz systems.

Y - Enables the feature.

N (default) - Disables the feature.

Site Test Parameters Panel (3:4)

Press **Next Screen** to access the Site Test Parameters screen from the Site Parameters screen.

The Site Test Parameters screen contains the Test Equipment and Alarm Response parameters. A example of the Site Test Parameters screen 3:4 is shown in Figure 5-7.

Test Equipment Parameters:

Power Monitor Unit Enabled - The Power Monitor Unit (PMU) monitors each repeater station's transmit power output and transmits antenna's forward and reflected power. This field enables the Power Monitor Unit option if installed.

Y (default) - Enables the Power Monitor Unit.

N - Disables the Power Monitor Unit.

PMU Power Level - Sets the Output Power Level for each transmitter channel. This is the output power level from which the PMU will calculate the channel's power alarm threshold.

Power level alarm threshold (transmitter output level) can be set from 1 to 255 watts and has a default setting of 40 watts.

NOTE

When using a Model 8843 PMU, this value must be 10 times the desired value, since the PMU will divide the value by 10. For example, if you set the value to 100, then the PMU will alarm if the power level is 9.99 watts or less.

Test Unit Enabled - The Test Unit (TU) performs RF testing by continuously monitoring the Control Channel and periodically testing the working channels as directed by the Site Controller.

Y (default) - Enables the Test Unit.

N - Disables all Test Unit functions including Control Channel monitoring and recovery test calls.

Local Test Unit - This field is used to indicate if the Test Unit is co-located with the Site Controller and repeater equipment or remotely located (i.e., Simulcast Systems have a TU located at each satellite site).

Use the left and right arrows to select **LOCAL** (default) or **REMOTE**.

Background Test Call Interval - The background Test Call interval sets the length of time between background test calls, in minutes.

The range is from 0 to 1440 minutes (24 hours). The default value is 5-minutes. Entering a value of 0 inhibits background test calls.

NOTE

If the Background Test Call Interval is set to zero, background test calls will not be made. However, the Test Unit will continue to be used for Control Channel monitoring and recovery test calls.

Alarm Responses:

The Alarm Response instructions are not downloaded to the Site Controllers. However, the following field

EDACS System Manager		External Device Definition		[SMGTGT] EGESYSMGR
-----Selected Device-----CREATE				
Device Number :	4	Device Name :	Test One	
Device Type :	SITE			
-----Site Test Parameters-----3:4				
Test Equipment Parameters				
Power Monitor Unit Enabled :	Y			
PMU Power Level :	40			
Test Unit Enabled :	Y			
Local Test Unit :	Local Remote			
Background Testcall Interval :	5			
Alarm Responses				
Respond to Carrier Failure :	N			
Respond to Phone Line Failure:	Y			
Respond to Auxiliary Alarms :	Y			
(F6 = Exit) (F8 = Delete Record) (F10 = Clear Record) (F11 = Next Record)				
(F14 = Toggle Search Key) (Do = Save Record) (Find = Device List)				

Figure 5-7. Site Test Parameter Panel (Function #10, 3:4)

descriptions are provided for informational purposes only. These fields are in the Site Controller's personality PROM.

Respond to Carrier Failure - Determines if the site responds to (takes predetermined action to correct or resolve) a reported carrier failure.

N (default) - Disables the feature.

Y - Enables the Respond to Carrier Failure feature.

Respond to Phone Line Failure - Determines if the site responds to (takes predetermined action to correct or resolve) a reported phone line failure.

Y (default) - Enables the Respond to Phone Line Failure feature.

N - Disables the feature.

Respond to Auxiliary Alarms - Determines if the site responds to (takes predetermined action to correct or resolve) a reported auxiliary alarm failure.

Y (default) - Enables the Respond to Auxiliary Alarm feature.

N - Disables the feature.

System Manager Communication Parameters Panel (4.4)

Press **Next Screen** to access the System Manager Communications Parameters screen from the Site Test Parameters screen.

The Communications Parameters screen defines how the System Manager will communicate with the EDACS site. It contains the Communications Parameters in the first column, and Software Parameters in the second column. An example of the System Manager Communications Parameters panel 4:4 for a site is shown in Figure 5-8.

Communications Parameters:

These parameters identify the physical characteristics of the communication link between the System Manager and the Site Controller.

Device Password - The Password for the site must match the System Manager communications password stored in the Site Controllers personality PROM.

Enter the password (1 to 12 characters).

NOTE

Although the System Manager will allow embedded spaces in the password, we do not recommend their use. The Central Activity Logger (CAL) will not accept a password with embedded spaces.

Device Internal ID - This is the ID for the site that was coded into the Site Controller's personality PROM. This will default to the Device Number.

Enter the site's internal ID (0 to 255).

EDACS System Manager		External Device Definition		[SMGTGT] EGESYSMGR
Selected Device				CREATE
Device Number :	4	Device Name :	Test One	
Device Type :	SITE			
System Manager Communications Parameters				4:4
Communication Parameters		Software Parameters		
Device Password :		Message Retry Attempts :	3	
Device Internal Id :	4	Dial Retry Attempts :	3	
Prim Line Phone No. :		Attach Time Interval :	15	
Prim Line Port Name :		Acknowledgement Timeout :	5	
Prim Line Baud Rate :	9600	Disconnect Hang Time :	10	
		Sanity Poll Interval :	5	
		Carrier Timeout :	60	
Network Manager Communications				
Node number :	33			
(F6 = Exit) (F8 = Delete Record) (F10 = Clear Record) (F11 = Next Record)				
(F14 = Toggle Search Key) (Do = Save Record) (Find = Device List)				

Figure 5-8. System Manager Communications Parameters Panel for Sites (Function #10, 4:4)

Prim line Phone No. - This is the phone number assigned to the primary phone line to the Site Controller.

Enter the phone number. This field accepts from 1 to 16 alphanumeric characters.

NOTE

The telephone number must contain all digits required to dial. The digits must have no spaces between them. For example, the phone number 1 (800) 555-1212 would be entered as 18005551212.

Prim Line Port Name - This is the name of the port connected to the Primary Line devices (examples: TTA1:, LTA1:, or TXA1:). This name is assigned during installation and connection of the System Manager.

Enter the Port Name (i.e., LTA1:, TXA1:, etc.)

NOTE

When entering the Port Name, be sure to include the colon at the end of the Port Name.

Prim Line Baud Rate - This field sets the Port Baud Rate for the Primary Line. Acceptable values are: 0, 1200, 2400, 4800, 9600, and 19,200 baud.

Enter the primary line baud rate; for Site Controllers the default rate is 9600 baud.

Software Parameters:

The Software parameters set up the communication parameters used when the System Manager communicates with the Site Controller and the conditions under which the System Manager determines the communication link to be acceptable. In general, it should *not* be necessary to change these fields from the default values.

Message Retry Attempts - When the System Manager sends a message to the Site Controller it expects the Site Controller to acknowledge receiving the message. If the Site Controller fails to acknowledge receiving the message, the System Manager will continue sending the message until the Site Controller acknowledges receipt or this limit is reached.

This field sets the maximum limit on the number of times the System Manager will attempt to send a particular message to the Site Controller.

The field range is from 0 to 10 tries. The default is 3 retries.

Dial Retry Attempts - When the System Manager uses a modem to communicate with the Site Controller, the two modems communicate with each other. If the carrier times out indicating no connection has been established between the modems, the System Manager will continue redialing until a connection is made or this limit is reached.

This field sets the maximum limit on the number of times the System Manager will attempt to establish a link with the Site Controller's modem.

The field range is from 0 to 10 tries. Defaults to 3 retries.

Attach Time Interval - Time interval in seconds from Site Controller login to System Manager log out, if no System Manager function attaches the Site Controller.

The field range is from 10 to 60 seconds. The default is 15 seconds.

Acknowledgment Timeout - This is the maximum time (in seconds) that the System Manager will wait for the Site Controller to acknowledge a message before attempting to send the message again. If the time limit is exceeded, the System Manager will attempt to send the message again unless the Message Retry Attempt limit has been reached.

The field range is from 5 to 60 seconds, and defaults to 5.

Disconnect Hang Time - This field sets the time (in seconds) the System Manager waits to drop the line after all users of the line detach.

The field range is from 10 to 60 seconds. The default is 10 seconds.

Sanity Poll Interval - During periods of inactivity, the System Manager periodically polls the Site Controller to confirm the communication link is still valid. Each polling message elicits a response from the Site Controller.

This field establishes how long the System Manager will wait for the Site Controller to respond to the polling message before sending another poll message. If the Site Controller repeatedly fails to respond to the polling message, the System Manager will indicate that it is unable to communicate with the site.

The field range for the Device Sanity Poll is from 2 to 60 seconds. The default is 5 seconds.

Carrier Timeout - This field sets the maximum time (in seconds) the System Manager will wait for the modem

carrier signal indicating connection has been established with the site modem, thus permitting data communication.

This field defaults to 25 seconds.

Network Manager Communications:

Node Number - This field contains the node number (Device Number) of the CEC/IMC switch associated with this System Manager when installed as part of a Network Management system. Refer to LBI-39171 for additional Network Manager configuration instructions as they pertain to the System Manager.

Device Definition - General

When defining a device, there is only one parameter panel (1:1), either the System Manager Communications Parameters panel or the Remote System Manager Parameters panel.

The Communications Parameters screen defines how the System Manager will communicate with the selected devices. It contains the Communications Parameters in the first column, and Software Parameters in the second column. This is the same for all devices except the EGE Switch (MSC II or CEC/IMC) and the Remote System Managers. An example of System Manager Communications Parameters panel 1:1 for devices is shown in Figure 5-9. An example of the Remote System Manager Parameters panel 1:1 is shown in Figure 5-10.

Communications Parameters:

Field definitions for the Communications Parameters panel are the same as those entered for sites as explained in

the System Manager Communication Parameters panel for sites (Function #10, 4:4).

Software Parameters:

Field definitions for the Communications Parameters panel are the same as those entered for sites as explained in the System Manager Communication Parameters panel for sites (Function #10, 4:4).

EGE Switch Definition

The System Manager Communications Parameters screen defines how the System Manager communicates with an EGE Switch device. The EGE Switch device type is used to identify Multisite controllers such as the Integrated Multisite and Console Coordinator (IMC), for Multisite systems or the Console Electronics Control (CEC), for single site systems.

The screen defines the Communications Parameters in the first column, and Software Parameters in the second column. An example of System Manager Communications Parameters panel 1:1 for the EGE Switch is shown in Figure 5-9.

Communications Parameters:

Field definitions for the Communications Parameters panel are the same as those entered for sites. Use the descriptions provided for the System Manager Communication Parameters panel for sites (Function #10, 4:4) with the following exceptions:

- Device Password - Enter "GE MULTISITE".
- Device Internal ID - Enter "1".

EDACS System Manager		External Device Definition		[SMGTGT] EGESYSMGR
Selected Device				
Device Number :	44	Device Name :	TEST1	
Device Type :	EGE SWITCH			
System Manager Communications Parameters 1:1				
Communication Parameters		Software Parameters		
Device Password :	GE MULTISITE	Message Retry Attempts :	3	
Device Internal Id :	1	Dial Retry Attempts :	3	
Prim Line Phone No. :		Attach Time Interval :	15	
Prim Line Port Name :		Acknowledgement Timeout :	5	
Prim Line Baud Rate :	9600	Disconnect Hang Time :	10	
		Sanity Poll Interval :	5	
		Carrier Timeout :	60	
Communication Services				
Time Source :	N			
(F6 = Exit) (F8 = Delete Record) (F10 = Clear Record) (F11 = Next Record)				
(F14 = Toggle Search Key) (Do = Save Record) (Find = Device List)				

Figure 5-9. System Manager Communications Parameters Panel for Devices (Function #10, 1:1)

Software Parameters:

Field definitions for the Communications Parameters panel are the same as those entered for sites as explained in the System Manager Communication Parameters panel for sites (Function #10, 4:4).

Communication Services:

When the EGE Switch is selected as the device type, the System Manager Communications Parameters panel also defines the Communication Services. This information indicates if the EGE Switch (MSC II or CEC/IMC) is connected to an optional Coordinated Universal Time (UTC) standard.

Time Source - Indicate if the UTC option is available and is connected to the EGE Switch.

Y - Indicates the UTC is connected.

N (default) - Indicates UTC option is not available.

Remote System Manager Definition

The Remote System Manager Parameters screen defines interface information for identifying remote System Managers. An example of the screen is shown in Figure 5-10. It may be necessary to refer to LBI-38703 chapter 4 and your local Network Administrator for the DECnet network when making the following entries:

DECNET Node Name - Enter the network node name of the remote System Manager.

DECNET Address - Enter the DECnet address of the remote System Manager node. This usually starts at 1.1 and is incremented by .1 for each node in the whole network.

Remote System Manager Group - Enter the remote System Manager UIC group number, which is running the application. This field defaults to two (2). This is done only as a custom installation at this time.

Remote Password - Enter the terminal's password. The default password is "NEVERUSED".

EDACS System Manager		External Device Definition		[SMGTGT] EGESYSMGR
Selected Device -----CREATE				
Device Number :	44	Device Name :		
Device Type :	REMOTE SM			
Remote System Manager Parameters -----1:1				
DECNET Node Name:		Remote Password: NEVERUSED		
DECNET Address:	1.0001			
Remote System Manager Group:	2			
(F6 = Exit) (F8 = Delete Record) (F10 = Clear Record) (F11 = Next Record) (F14 = Toggle Search Key) (Do = Save Record) (Find = Device List)				

Figure 5-10. Remote System Manager Parameters Panel (Function #10, 1:1)

11) LOGICAL UNIT DEFINITION

The Logical Unit Definition function (User Menu item #11) under the Database Maintenance category, defines the individual radio units and their operating parameters. The default values programmed into the Site Controller are used when it is first powered up, and remain in effect until the desired parameter changes are made to the database for each individual site via the automatic database upload process described in Chapter 7, *Device Communication*.

Select the Logical Unit Definition function (Menu Item #11) from the User Menu by highlighting “Logical Unit Definition” in the Database Maintenance panel or enter “11” for the Selected Menu Item and press the **Return** or **Select** key. The System Manager displays the Selected Unit panel.

The Selected Unit panel identifies the unit and contains fields for the unit (radio) number, name, ID, serial number, asset number and unit type. The cursor appears first at the Unit (radio) number. Entering the Unit Number causes the System Manager to display the radio Description screen 1:4 (1:5 if the Unit Type is a console) just below the Selected Unit screen as shown in Figure 5-15.

Logical Unit Definitions are made using four configuration screens, plus one additional screen for console selection data when the Unit Type is an EGE Console. Each of these screens contains two panels; a Selected Unit panel and a description or parameters panel. The configuration panels are numbered 1:4 (1:5 for consoles) thru 4:4 (5:5 for consoles). These numbers appear at the top right of each configuration panel. The configuration panels are:

- 1:4 (1:5) - Description
- 2:4 (2:5) - Radio Parameters
- 3:4 (3:5) - Wide Area
- 4:4 (4:5) - Multi Channel Partitioning
- (5:5) - Console Selection

NOTE

Screen identification for consoles shown in parentheses.

All of the Selected Unit screens as well as the function key definitions at the bottom of these screens are identical for screens 1:4 (1:5) thru 4:4 (4:5).

Selecting a Unit

The Selected Unit panel, shown in Figure 5-11, is used to locate existing unit records or identify a new unit by creating a new record.

NOTE

The availability of the Logical ID records to any particular user is restricted by the user's Agency/Fleet/Subfleet restrictions, and the Home Group field of the Logical ID record. Refer to the Agency Partition Table and User Account Maintenance functions (User Menu items #70 and #71) for user restriction information.

When creating a new record, the Selected Unit panel will indicate “CREATE” in the upper right corner of the panel and it will indicate “MODIFY” when viewing an existing unit record. Use the following field definitions when making entries in the Selected Unit panel:

Unit Number - This field identifies the specific radio unit or console. Enter the unique Logical Identification (LID) number (0 to 16383) programmed into the personality of each radio unit assigned to the system. When assigning LID numbers, we recommend not using the following reserved LID's:

0 - Reserved for test unit.

1 thru 15 - Reserved for use by EDACS Data Gateway system.

16383 - accesses a record that defines the default values for Unit Identification screens.

Selected Unit		MODIFY
Unit Number :	16018	Unit Name : GETC 1
Physical Id :	16018	Serial Number : 1297762
Unit Type :	PORTABLE	Asset Number : 16018

Figure 5-11. Selected Unit Panel

NOTE

The user should define record 16383, and make it valid or invalid as desired. Invalidating the record (done on a site-by-site basis), keeps LIDs not in the database from placing calls

To locate an existing record, enter the LID (Unit) Number. The current record for the selected unit appears. You may also use the **F11** (Next Record) key to scroll through a list of existing records.

NOTE

The **F11** (Next Record) key will select the next record within the AFS range of the user, which matches or follows the current key of access. The current key of access is **bolded** on the screen's Selected Unit panel.

Physical ID - Enter a unique physical ID number (0-999999999) that identifies the radio unit. If this field is not used, enter the LID number, do not leave blank.

Unit Type - Enter the description of the unit (mobile, portable, console, etc.). At the Unit Type prompt, press **Select** key for a list of unit types. The Select Unit Type pop-up menu appears. Use the arrow keys to identify the desired unit type and press the **Select** key.

Unit Name - Enter the unique eight-character alphanumeric name (or alias) programmed into the unit's personality which identifies the unit.

```

Select Unit Type
[ * ] Portable
[   ] Mobile
[   ] Desktop
[   ] EGE Console
[   ] Other
  
```

Figure 5-12. Select Unit Type

Serial Number - Enter the serial number of the unit. This is not a unique field, since different models may have duplicate serial numbers. However, the length of the number must not exceed 16-alphanumeric characters.

Asset Number - Enter the unique asset number. If this field is not used, enter the unit's LID, do not leave blank. This field may contain up to 16-alphanumeric characters.

Saving Unit Records

After completing any modifications to a LID or creating a new LID the record must be saved. To save the record, press the **Do** key. This will save the record to the LID Database.

NOTE

Pressing the **Do** key only saves the currently displayed Unit record. Always save the current record before selecting a new Logical ID.

Updating the sites and/or devices with the revised unit data can be made when exiting this function or by using the Database Upload function (User Menu item #30). This database will also be uploaded whenever any site or device reinitializes its database.

When exiting the function, the System Manager will display the Upload Selection pop-up window as shown in Figure 5-13. Move the cursor to highlight the desired selection and press the **Select** key to initiate, if selected, uploading all database records or just the changed records.

```

Upload Selection
None ALL Modified
  
```

Figure 5-13. LID Upload Selection

Wide Area and Extended Network Enabled Saving Unit Records

If a record is Wide Area and Extended Network enabled (panel 3:4, or 3:5 for consoles), pressing the **DO** key causes the System Manager to request additional instructions for saving the record. This is done through a pop-up menu where you can elect to save the record either to other System Managers on the network or only locally, or cancel the operation. After pressing the **DO** key the System Manager displays the following pop-up menu:

```

EXTENDED NETWORK OPERATION REQUESTED
NETWORK    LOCAL    CANCEL
  
```

Figure 5-14. Extended Network Upload Selection

In both database functions, selecting the "Network" option will copy the entire contents of the user's selected record, EXCEPT for the VALID SITES and the FORCED

SITES fields, to the other System Managers defined in the user's network of System Managers.

The VALID SITES field data, when copied to other System Manager's databases, will be set to all "Y"s - in other words, the unit record will be valid on all possible 32 sites on the other System Managers.

The FORCED SITES field data, when copied to other System Manager's databases, will be set to all "N"s - in other words, the unit record will not be forced for wide area calls to any sites on the other System Managers.

If it is necessary to define these two fields differently on the different System Managers, you MUST log into those other System Managers, make the changes and save the changes locally. However, if the record is ever changed anywhere in the network and the user making the changes saves the record with the "NETWORK" operation, then the data on all of the other System Managers will be changed as per the above description.

Duplicating Unit Records

The duplicating record feature allows you to copy the operating parameters of an existing record for use when creating a new record.

Select the record you wish to duplicate. The System Manager displays the identification and definition data for the selected unit.

Enter the new LID in the Unit Number field, the "MODIFY" label changes to "CREATE" and the System Manager clears the Description panel. However, it retains the information contained in the Radio Parameters, Wide

Area, and Multi Channel Partitioning panels.

Since the System Manager does not clear the fields in the Selected Unit panel, it will be necessary to enter the appropriate data in these fields.

NOTE

Failure to enter unique identification data in the Selected Unit fields which require unique data will result in the message "You may not duplicate the Selected Unit fields" when you attempt to save the record.

Description Panel (1:4 or 1:5)

This panel is used to identify the radio unit's owner, user, equipment type, etc.

Agency - Enter the name of the agency to which the radio unit is assigned. This name may or may not be the same as the agency/fleet names. The name may be up to 16-alphanumeric characters long or the field may be left blank.

Department - Enter the name of the department to which the radio unit is assigned. The name may be up to 16-alphanumeric characters long or the field may be left blank.

Property Asset - Enter the property asset identification. This may be any locally assigned property or inventory number or responsible individual and is provided as an extra field for customer use. The entry may be up to

EDACS System Manager		Unit Identification		[SMGTGT] EGESYSMGR
Selected Unit				MODIFY
Unit Number :	16018	Unit Name :	GETC 1	
Physical Id :	16018	Serial Number :	1297762	
Unit Type :	PORTABLE	Asset Number :	16018	
Description				1:4
Agency :	EGE			
Department :	TRUNKED PRODUCTS			
Property Asset :	CHUCK HUGHES			
Operator :	GETC TEAM			
Equipment Type :	MPA PORTABLE			
Additional Comments :	USED FOR TESTING GETC CODE			
(F6 = Exit) (F8 = Delete Record) (F10 = Clear Record) (F11 = Next Record) (F14 = Toggle Search Key) (Do = Save Record) (Find = Find Unit)				

Figure 5-15. Unit Identification and Description Panel (Function #11, 1:4)

16-alphanumeric characters long or the field may be left blank.

Operator - Enter the name or code assigned to the individual or group using the radio unit. The entry may be up to 16-alphanumeric characters long or the field may be left blank.

Equipment Type - Enter a description or equipment model associated with the LID. The entry may be up to 16-alphanumeric characters long or the field may be left blank.

Additional Comments - A 40-character field for brief notes, comments, etc.

Radio Parameters Panel (2:4 or 2:5)

Press **Next Screen** to access the Radio Parameters screen from the Description screen.

The Radio Parameters screen contains the Call Priority parameters in the first column, Radio Features in the second column, and Interconnect parameters in the third column. An example of the Radio Parameters screen is shown in Figure 5-16.

Call Priority:

Call priority sets the order in which queued calls are assigned working channels (de-queued). In other words, the system is continually sorting the queue priority. Queued calls with the highest priority will be given working channels before those with a lower priority.

In the example shown in Figure 5-16, radio units transmitting an analog voice call, may only need to be processed with a priority 4. On the other hand, when the unit needs to transmit critical or confidential information, it can increase its priority to priority 6 by transmitting in the digital voice mode.

During a telephone interconnect call, the working channel is out of service for all users not involved in the interconnect call. Therefore, it is usually advisable to set the unit interconnect call priority lower than the analog or digital voice priority. However, Telephone Interconnect priority may be required for critical individuals. If these individuals are assigned a higher interconnect priority, then on a busy system they are placed in front of calls of lower priority.

NOTE

For call priorities, 0 is the lowest priority and 7 is the highest assignable priority. Level 7, the highest priority, is usually reserved for emergency calls.

When reviewing Activity Reports, these priorities will be shown doubled, and possibly also increased by +1 depending on the Recent Call Queue Interval setting.

Voice - This setting establishes the queue priority for the unit's voice calls.

Priorities range from a low of 0 to a high of 7.

Default = 0.

EDACS System Manager		Unit Identification		[SMGTGT] EGESYSMGR
Selected Unit -----MODIFY				
Unit Number :	16018	Unit Name :	GETC 1	
Physical Id :	16018	Serial Number :	1297762	
Unit Type :	PORTABLE	Asset Number :	16018	
Radio Parameters -----2:4				
Call Priority	Radio Features	Interconnect		
Voice : 4	Inb Interconnect : Y	Toll Call Rest : 0		
Data : 1	Channel Test : N	Dedicated Line : 1		
Interconnect : 0	Hang Time : 0	Rotary Number : 1		
Digital Voice : 6				
(F6 = Exit) (F8 = Delete Record) (F10 = Clear Record) (F11 = Next Record) (F14 = Toggle Search Key) (Do = Save Record) (Find = Find Unit)				

Figure 5-16. Unit Radio Parameters Panel (Function #11, 2:4)

Data - This setting establishes the queue priority for the unit's data calls.

Priorities range from a low of 0 to a high of 7.

Default = 0.

Interconnect - This setting establishes the unit's queue priority for Interconnect calls.

Priorities range from a low of 0 to a high of 7.

Default = 0.

Digital Voice - This setting establishes the unit's queue priority for Digital Voice calls.

Priorities range from a low of 0 to a high of 7.

Default = 0.

Radio Features:

Inb Interconnect - The Inbound Interconnect indicates if the selected unit is allowed to receive inbound interconnect calls.

Y - Indicates the unit is allowed to receive inbound interconnect calls.

N (default) - Indicates no inbound interconnect calls.

Channel Test - Enables the radio unit for operation on channels defined for Channel Test (formerly Partition 2) in the Channel Configuration panel under Site / Device designation (User Menu item #10).

Y - Enables the unit to operate on channels enabled as test channels.

N (default) - Sets the unit for operation on channels other than the test channel.

Hang Time - This is the time between release of the PTT and channel drop. This controls whether message trunking or transmission trunking is used. Hang time of 0 is transmission trunked. Hang time greater than 0 is message trunked.

Hang time can be set from 0-255 seconds.

Default value is 0.

NOTE

Transmission trunking takes advantage of the system efficiencies created by fast channel access and drop times. This leads to faster channel access during peak periods and minimizes queuing.

Interconnect:

This panel identifies radio unit specific limitations and assignments when using telephone interconnect. For additional information about telephone interconnect parameters for each site, refer to the sections covering Rotary Definition (User Menu item #13), Line Definition (User Menu item #14), and Toll Call Restrictions (User Menu item #15).

NOTE

The following field definitions refer to telephone interconnect systems other than Jessica. For systems using the Jessica PBX Gateway, refer to Chapter 12 for field definitions.

Toll Call Restrictions - Toll Call Restrictions identify the outgoing call restriction level for this radio unit. The value entered in this field ranges from 0 to 15 and corresponds to the levels set for each site using the Toll Call Restrictions function (User Menu Item #15). Figure 5-17 is an example of the restriction level section of the Toll Call restriction Parameters panel.

In this example, if the Toll Call Restriction level for this radio unit is set to 11 (bold column in Figure 5-17), then calls may be placed to phone number patterns identified by "Y" (i.e., pattern #5, 9-911, police emergency), but may not be placed to phone number prefixes marked "N" (i.e., pattern #4 for x-900-xxxx toll calls).

The default value for Toll Call Restrictions is 0.

Toll Call Parameters-----		
	Digit Pattern	Restriction Level
		0123456789012345
1	1234	NNNNNNNNNNNNNNNN
2	7XXX	YYYYYYYYYYYYYYYY
3	6XXX	YYYYYYYYYYYYYYYY
4	X900	YYYYYYYYYNNNNNNN
5	9911	YYYYYYYYYYYYYYYY
6	9X0X	YNNNNNNNNNNNNNNN
7	9X1X	YNNNNNNNNNNNNNNN
8	9XXX	YYYYYYYNNNNNNNN

Figure 5-17. Toll Call Parameters Panel

Dedicated Line - The Dedicated Line parameter is used to restrict radio units to one specific interconnect line for outgoing calls when zero (0) is assigned to the Rotary Number. When a number from 1 to 15 is assigned to the Rotary Number, that rotary sequence will be used if the dedicated line is busy or fails. The range for this field is from 0 to 255, however, sites using IDA or ELI

interconnects are limited to a maximum of 32 lines. Normally, units assigned dedicated lines are not granted rotary access.

The default is one (1).

Rotary Number - The Rotary Number specifies the phone line rotary hunt sequence used by the telephone interconnect equipment when the radio unit places an outgoing telephone call. The Rotary hunt sequence is defined in the Rotary Definition function (User Menu item #13) for each site.

Enter the number (0 to 15) that corresponds to the desired rotary hunt sequence

The default is 0. Zero means no rotary access!

NOTE

A unit with a zero (0) in both the Rotary Number **AND** Dedicated Line fields cannot access the telephone system.

Wide Area Panel (3:4 or 3:5)

Press **Next Screen** to access the Wide Area screen from the Radio Parameters screen.

The Wide Area panel contains data required by the Integrated Multisite and Console Controller (IMC) to control routing of all wide area (Multisite) individual calls. The IMC, which links two or more sites together, allows radio units to complete calls to units logged into other systems (sites) and provides tracking and unit location information to the System Manager on demand.

The EDACS Extended Network, using the StarGate Controller, links multiple Multisite Controllers in a star or extended network. Although operating in an extended network is transparent to the radio user, it extends the unit roaming, tracking, and call routing features to other Multisite networks.

Figure 5-18 is an example of the Wide Area panel 3:4 (3:5 for consoles).

Wide Area Enable - The Wide Area Enable feature allows individual units to communicate with radio units logged into other sites. The IMC will track all units with Wide Area enabled, and route the call to the site the receiving unit is currently logged into. For this operation to function properly, both units must have Wide Area enabled. If a Wide Area is not enabled, then calls can only be completed to units logged into the home site.

Y - Enables Wide Area capabilities.

N (default) - To disable Wide Area.

Home Site - In a Multisite network, this is the site the radio unit is normally assigned or logged into. The IMC enters this data as the default site when initializing its tracking database. Refer to the Site / Device Definition screen (User Menu item #10) or the Device Report (User Menu item #60) for a list of valid site numbers.

Enter the home or originating site number (1 to 32) for the radio unit. After entering a valid site number, the System Manager provides the site name.

EDACS System Manager		Unit Identification		[SMGTGT] EGESYSMGR
Selected Unit -----MODIFY				
Unit Number :	16018	Unit Name :	GETC 1	
Physical Id :	16018	Serial Number :	1297762	
Unit Type :	PORTABLE	Asset Number :	16018	
Wide Area -----3:4				
Wide Area Enable :		Y		
Confirmed Call Enable :		N		
Home Site :		5 / MSDS 3		
Home Group :		273 / ENGR 1		
Extended Network :		Y		
		Automatic Tracking : Y		
		Home Switch Id : 33		
		<div style="text-align: center;"> 1 2 3 12345678901234567890123456789012 </div>		
Valid Sites :		NNYNYNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNY		
Forced Sites :		NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN		
(F6 = Exit) (F8 = Delete Record) (F10 = Clear Record) (F11 = Next Record) (F14 = Toggle Search Key) (Do = Save Record) (Find = Find Unit)				

Figure 5-18. Unit Wide Area Panel (Function #11, 3:4)

This field defaults to the first defined site in the system ("1" if no sites are defined).

NOTE

For CEC/IMC systems using firmware V3.0 (and later), the CEC/IMC does *not* reset tracking data during database upload operations. As a result, unit tracking data (group and site) is retained and data contained in this field is basically not used.

Home Group - In a Multisite network, the IMC also tracks which group the unit is logged into. The IMC uses the home group data as the default group when initializing its tracking database. Refer to the Group Identification Definition (User Menu item # 12) or the Group Report (User Menu item #62) for a listing of valid groups.

NOTE

This field may also be used to restrict access to the logical database on a per user, per record basis

Enter the home or originating group number (0 to 2047) for this radio unit. After entering the group number, the System Manager will provide the group name.

This field defaults to the first Group ID the user can access; that group may *not* be defined in the Group Database.

NOTE

For CEC/IMC systems using firmware V3.0 (and later), the CEC/IMC does *not* reset tracking data during database upload operations. As a result, unit tracking data (group and site) is retained.

Extended Network - This field enables the radio unit to complete individual calls to units logged into sites linked to other Multisite networks. The extended network feature is transparent to the individual units and functions the same as multisite calls except the Multisite networks are linked together by an extended network.

When this feature is enabled, the System Manager, when directed, will establish communications and attempt to share databases with the other System Manager applications defined using the Device Database Maintenance Screen (User Menu item #10).

Y - Enables Extended Network capabilities.

N (default) - To disable Extended Network.

NOTE

1. You cannot gain access to this field if the account you are in does not have Extended Network Access privileges. Refer to the User Account Maintenance function (User Menu item #71).
2. You cannot modify a Logical ID record which is Extended Network enabled if the account you are using does not have Extended Network Access enabled.
3. Although you may enter **Yes** to enable the Extended Network feature, it is not functional unless the Wide Area Enable is also selected.
4. It is also necessary to identify the Home Switch (Multisite controller) when enabling the Extended Network.

Automatic Tracking - Enabling this feature allows the IMC to track the radio unit as it roams from site to site. When enabled the IMC routes calls to the site the called unit is logged into. If the Automatic Tracking is disabled, the IMC will only route calls to the unit if it is logged into a "Forced Site."

Enter **Y** - To enable Automatic Tracking.

N (default) - Disables the feature.

NOTE

Although you may enter Yes to enable the Automatic Tracking feature, it is not functional unless the Wide Area is also enabled.

Confirmed Call Enable - If the Confirmed Call feature is enabled, individual calls made to and from this unit must be confirmed. If the system the receiving unit is logged into is busy, the call will be queued until the unit is assigned a working channel.

For Unconfirmed Calls (Confirmed Call is disabled), all units on the local system and dispatch consoles monitoring the talk group will hear the call immediately after a working channel is assigned. Units on other systems monitoring the talk group will also hear the call immediately unless the system is busy. If the system is busy, the units will automatically "Late Enter" the conversation after being assigned a working channel.

Enter **Y** - To enable Confirmed Call.

N (default) - Calls will be unconfirmed.

NOTE

You may not access the Confirmed Call field unless the Wide Area Enable field is set to enable ("Y").

NOTE

Even if this unit has confirmed call enabled, an individual call will not confirm on radio systems (sites) that have confirmed call disabled by the CEC/IMC Manager.

Home Switch ID - When a unit has the Extended Network enabled, it will be necessary to identify the Home Switch or IMC. This field is only displayed when the Extended Network is enabled.

Enter the EGE Switch number. Refer to the Site / Device Definition (User Menu item #10) or the Device Report (User Menu item #60) for a valid listing of assigned site and devices.

Valid Site - Each unit having Wide Area capability must be assigned two (2) or more radio systems (sites). Wide area calls can only be made if both the calling unit and the receiving unit are valid on the secondary (receiving) radio system. However, during Failsoft periods, all units can make calls.

Enter **Y** - Below the site numbers where the unit is allowed to communicate.

N (default) - Identifies sites the radio does not normally communicate on or sites which are not defined.

Forced Site - This field identifies sites to which the IMC will unconditionally route individual calls made to this unit.

Enter **Y** - All sites marked **Y** will bring up a channel for the call.

N (default) - Disables the feature.

Multiple Channel Partitioning Panel (4:4 or 4:5)

Press **Next Screen** to access the Multiple Channel Partitioning Panel, Figure 5-19 from the Wide Area screen.

The MCP feature allows for the assignment of one primary partition for each Unit. Whenever a call request is received at an MCP enabled site (to and from MCP enabled units having the same primary partition), the site scans through the primary partition assigned to those IDs looking for an available channel.

If a call request is to or from a radio unit that is not MCP enabled, or if both units do not have the same primary partition assignment, the site will only look in the Active Control Channel (ACC) Partition for an available channel. Therefore, units that call each other frequently should probably be assigned the same primary partition.

If a unit has been given the ALL assignment for its primary partition, its call request is treated as if partitioning does not exist. That is, all the channels at the site will be searched for an available channel, regardless of what primary partition has been assigned to the called unit.

NOTE

If all the channels do not have the same coverage area, and the first available channel covered a smaller area than needed to complete the call, the call would not be completed and the caller would have to call again. In this case, the ALL assignment is not a good choice.

The MCP feature allows for the assignment of up to three backup partitions for each Unit ID. Whenever an MCP enabled site cannot find an available channel in the primary partition, it looks at the three backup partitions in the order of their names: First, Second, and Third. The site looks at a backup partition first to see if the condition for using that backup partition is met. If the condition is met, the site then looks in the partition to see if there is an available channel. If the condition is not met, the site looks at the next backup partition, and so on. If, after looking at all of the assigned backup partitions, no available channel was found in the partition(s) searched (but at least one channel was found busy), the call request is queued. If all channels in the partition(s) searched failed, the call request would be denied.

There is no requirement that backup partitions must be assigned. Initially, the database contains no backup partition assignments. If a backup partition is to be assigned, its condition for use must first be selected from one of the following:

- Not Used (default) - Indicates this partition should not be used.
- Failed/Busy - ALL - Indicates this partition should be scanned only if all channels in the partition last searched failed or were busy.
- Failed/Busy - Emergency - Indicates this partition should be scanned only if this is an emergency call, and all channels in the partition last searched failed or were busy.

- Failed Only - Indicates this partition should be scanned only if all channels in the partition last searched failed (none were busy).

In the previous statements, "Partition last searched," means last searched for an available channel, not a partition just looked at to see if the condition for using that backup partition is met.

NOTE

The result of the partition last searched (failed/busy or failed only) may change as the search proceeds from partition to partition.

There is no requirement for the backup partitions to have all the capabilities of the primary partition. However, the system administrator should be aware of any limitations. Before backup partitions are assigned, the system administrator should compare the capabilities of the primary and possible backup partitions for the following:

- Coverage Area - The coverage area of a backup partition should at least include the coverage area of the primary partition.
- Channel Capabilities - If the user of the primary partition requires features such as data, digital voice, and/or telephone interconnect, any backup partition for this user should support these same features.

Before a backup partition is assigned, the system administrator should be convinced that the backup partition is necessary. Here are some things to consider:

- Reliability - Assigning a backup partition improves the reliability of small partitions because they are especially vulnerable to a small number of channel failures.
- Too Many Backups - On the other hand, assigning too many backup partitions tends to cancel the effects of partitioning.
- The ALL Assignment - This partition assignment is extremely prone to canceling the effects of partitioning and should be used with extreme care.

MCP Availability:

Within the Multiple Channel Partitioning panel 4:4 (4:5 for consoles), the MCP Availability field is a message field that cannot be modified. The field will display either Disabled, Selective, or Universal. The information indicated by each message is as follows:

No Sites - indicates that none of the valid sites for this UNIT, have the MCP feature enabled.

Selective - indicates that one or more (but not all) of the valid sites for this unit, have the MCP feature enabled.

Universal - indicates that all of the valid sites for this unit have the MCP feature enabled.

EDACS System Manager		Unit Identification		[SMGTGT] EGESYSMGR
Selected Unit -----MODIFY				
Unit Number :	16018	Unit Name :	GETC 1	
Physical Id :	16018	Serial Number :	1297762	
Unit Type :	PORTABLE	Asset Number :	16018	
Multiple Channel Partitioning -----4:4				
MCP Availability: No Sites				
ID Subject to Partitioning: N				
Primary Partition: 1				
Backup Partition	Condition For Use	MC Partition		
First	Not Used			
Second	Not Used			
Third	Not Used			
(F6 = Exit) (F8 = Delete Record) (F10 = Clear Record) (F11 = Next Record)				
(F14 = Toggle Search Key) (Do = Save Record) (Find = Find Unit)				

Figure 5-19. Unit Multiple Channel Partitioning Panel (Function #11, 4:4)

NOTE

Regardless of the message in the **MCP Availability** field, the system administrator can enter MCP Data for this unit. However, the MCP Data will only be used at those sites which are MCP enabled. At any site that is not MCP enabled, this unit will be given channel assignments as if the MCP feature did not exist.

ID Subject to Partitioning:

Use this field to indicate how this Unit will be given channel assignments if the site is MCP is enabled. At any site that is not MCP enabled, this Unit will be given channel assignments as if no partitioning exists, regardless of whether the unit is subject to partitioning or not.

No (default) - Indicates this unit will not be given channel assignments in accordance with the remaining MCP Data fields. At any site that is MCP enabled, this unit will be given channel assignments only in the Active Control Channel (ACC) partition. The ACC partition is the partition which currently includes the Control Channel.

Yes - Indicates this unit will be assigned channels in accordance with the remaining MCP Data fields. At any site that is MCP enabled, this unit will be assigned channels in accordance with the remaining MCP Data.

NOTE

To enable MCP at the selected Site, the site must be MCP capable, that is using V6.0 (or later) firmware and must have its personality programmed to be MCP enabled.

Primary Partition

The Primary Partition field shows the present partition assignment. Partition 1 is assigned by default. To change the partition assignment, enter a new digit in place of the present digit. Allowable partition assignments are as follows:

Numeric digit **1** through **9** - Indicates the Site Controller computer should search only the channels in partition 1 through 9 respectively.

Alpha digit **A** through **F** - Indicates that the Site Controller computer should search only the channels in partition 10 through 15 respectively.

ALL - Indicates that the Site Controller computer should search all channels regardless of partitions.

Backup Partitions:

Within the Multiple Channel Partitioning panel 4:4 (4:5 for consoles), there are three backup partition fields: First, Second, and Third. Each of these fields has two parts: Condition For Use and MC Partition.

Condition for Use

For each backup partition to be assigned, the Condition For Use must be selected from one of the following:

Not Used (default)- Indicates this partition should not be used.

Failed/Busy - All - Indicates this partition should be scanned only if all channels in the partition last searched were failed or busy.

Failed/Busy - Emergency - Indicates this partition should be scanned only if this is an emergency call, and all channels in the partition last searched were failed or busy.

Failed Only - Indicates this partition should be scanned only if all channels in the partition last searched were failed (none were busy).

Press the **Select** key for the list of conditions. Highlight the desired condition and press the **Select** key to enter the condition.

MC Partition

For each backup partition to be assigned, an MC Partition must be assigned from one of the following (by default all backup partition assignments are initially shown blank):

Numeric digit **1** through **9** - Indicates the Site Controller computer should search only the channels in partition 1 through 9 respectively.

Alpha digit **A** through **F** - Indicates the Site Controller computer should search only the channels in partition 10 through 15 respectively.

ALL - Indicates the Site Controller computer should search all channels regardless of partitions.

Each partition assignment (primary or backup) must be different, but does not have to be in any order, except ALL. ALL may be used for a primary or backup partition assignment, but no additional partition assignments should be made after the ALL assignment. (Any remaining backup partitions should have Not Used selected as the Condition For Use.) Whenever Not Used is selected as a Condition For Use, the MC Partition part of the backup partition field will automatically be blank.

Console Selection Panel (5:5)

Press **Next Screen** to access the Console Selection Panel, Figure 5-20 from the Multiple Channel Partitioning screen.

NOTE

This panel only appears when the Unit Type is defined as an "EGE Console."

The Console Selection panel further defines selected EGE Consoles. This information will include the EGE Switch (CEC/IMC) the console is attached to, the type of console, and the number assigned to the console.

EGE Switch Attached To:

This field identifies the EGE Switch, usually a CEC or IMC, to which the console is connected. When the cursor moves to the field prompt, the System Manager will automatically display the first EGE switch listed in the Device database. To change the switch number, enter the desired EGE Switch device number, defined in the Device Definition (User Menu item #10). If the device number is not known, press the **Select** key to display a list of defined sites and devices or review the Device Report (User Menu item #60).

Enter EGE Switch number; default is the first EGE Switch listed in the Device database.

Console Type:

Use this field to select the type of console being identified by this record. When the cursor is in the Console Type field, enter the type of console. Acceptable descriptions may be displayed by pressing the **Select** key. The System Manager will display the Select Console Type pop-up menu as shown in Figure 5-21.

MAESTRO - (Default) Identifies the EDACS C3 Maestro Dispatch CRT Console.

C3 DESKTOP -Identifies the EDACS C3 Modular/Desktop Dispatch Console system.

Vendor - Used to indicate the console is other than the EGE consoles listed above.

```

Select Console Type
[ * ] MAESTRO
[ ] C3 DESKTOP
[ ] VENDOR
  
```

Figure 5-21. Select Console Type

```

EDACS System Manager      Unit Identification      [SMGTGT] EGESYSMGR

Selected Unit-----MODIFY
Unit Number : 16321      Unit Name : WEST 1
Physical Id : 16321      Serial Number : 1297762
Unit Type : EGE CONSOLE  Asset Number : 16321

Console Selection-----5:5
EGE Switch Attached To : 44      Console Number: 23

Console Type : Maestro

Secondary Logical ID 1 : NONE      SAID Group 1 : POOL
Secondary Logical ID 2 : NONE      SAID Group 2 : POOL
                                   SAID Group 3 : POOL
                                   SAID Group 4 : POOL
                                   SAID Group 5 : POOL
                                   SAID Group 6 : POOL

(F6 = Exit) (F8 = Delete Record) (F10 = Clear Record) (F11 = Next Record)
(F14 = Toggle Search Key) (Do = Save Record) (Find = Find Unit)
  
```

Figure 5-20. Unit Console Selection Panel (Function #11, 5:5)

Console Number:

The Console Number is used to identify the individual consoles associated with each EGE Switch. There may be up to 32 consoles attached to each CEC or IMC.

Enter **1 to 32** - This number should match the console number identified in the Console Configuration. Refer to LBI-39024 - *EDACS CEC/IMC Manager Operations Guide*. The field defaults to the first undefined console for the EGE Switch selected. This information should be verified using the switch's MOM PC.

Pressing the **Select** key will toggle this field through the undefined console numbers assigned to the switch.

Secondary Logical ID 1 and 2:

The Secondary Logical ID 1 and 2 can be used as a call director for the console.

None - (default) indicates that a secondary LID is not used.

1 to 16382 - indicates which LID to use as the Secondary LID.

SAID Group 1 to 6:

The SAID Group 1 to 6 are used to allocate specific SAIDs to the six (6) Console buttons.

Pool - (default) indicates that the switch will use SAIDs from its SAID pool for Patch calls and SimulSelect functions..

1 to 2047 - indicates which SAID to use for the specific Console button.

12) GROUP DEFINITION

The Group Definition under the Database Maintenance main category screen, item "12", allows you to define call groups and their operating parameters. The data record for each Group ID (GID) is stored in the GID Database. This database is uploaded to the sites and devices when they are first powered up, and remains in effect until parameter changes are made and the modified database is uploaded to the sites or devices (see *Device Communication - Database Upload*, User menu function #30).

Select the Group Definition function (User Menu item #12) by highlighting "Group Definition" in the Database Maintenance panel or enter "12" for the Selected Menu Item and press the **Return** or **Select** key. The System Manager responds by displaying a blank Selected Group panel, shown in Figure 5-22.

The group data entered in the Selected Group panel is used to define the record for a new group or to search the database for an existing group.

When creating a new record, the Selected Group panel will indicate "CREATE" in the upper right corner of the panel and it will indicate "MODIFY" when viewing an existing Group record.

The complete Group Definition record consists of four Group Identification definition panels. The panels are numbered 1:4 thru 4:4 or 1 of 4 thru 4 of 4. These numbers appear at the top right of each definition panel. The definition panels are:

- 1:4 - Description
- 2:4 - Group Parameters
- 3:4 - Wide Area
- 4:4 - Multi Channel Partition

All Selected Group panels and the function key definitions at the bottom of these screens are identical for screens 1:4 thru 4:4.

Selecting a Group

The Selected Group panel identifies the Group ID, A/F/S (Agency/Fleet/Subfleet), Group Name and Group Type. The cursor appears first at the Group ID. Use the following field definitions when making entries in the Selected Group panel:

NOTE

The Group IDs displayed or created using this screen are limited by the Agency/Fleet/Subfleet restrictions assigned to the User's account.

Group ID - The Group ID is a unique number used to identify a specific collection of radio units that normally communicate with each other.

When a Group ID is entered, the System Manager searches the database for the existence of a matching record. If it locates the GID record, it displays the definition data associated with the selected Group ID and indicates "MODIFY" in the Selected Group panel.

If the System Manager cannot find a match in the database, it indicates "CREATE" in the Selected Group panel, displays the default data in the definition panels. It then prompts you to enter additional identification data for the new group.

Enter a number (range is lowest accessible Group ID to highest, maximum range is 0 to 2047) to identify a communications group.

A/F/S - The A/F/S entry is a set of three fields (one for the agency number, one for the fleet number and one for subfleet number).

NOTE

These fields must be setup using the Agency Partition Table (User Menu item #70) before creating groups.

The screenshot shows a terminal-style interface for the 'Selected Group' panel. It contains the following text and input fields:

```

Selected Group
Group Id :
A/F/S   : (      /      /      )
Group Name :
Group Type :
  
```

Figure 5-22. Selected Group Panel

NOTE

Minimum and maximum values are defined by the A/F/S Access restrictions defined using the User Account Maintenance function (User Menu item #71).

Enter the Agency number (range is min. to max. agency) followed by the **Return** key.

Enter the Fleet number (range is min. to max. fleet for selected agency) and press the **Return** key.

Enter the Subfleet number (range is min. to max. subfleet for selected agency) and press the **Return** key.

Group Name - The Group name is a unique name (up to eight alphanumeric characters) used to identify the communications group.

Enter the Group name (up to eight alphanumeric characters).

NOTE

Groups defined as SAIDs should be given a name in the "SAIDxxxx" format, where xxxx is any valid alphanumeric character which will help identify the SAID entry. This will facilitate the identification of SAID entries at the IMC Manager and the Maestro Consoles.

Group Type - This field description (up to eight alphanumeric characters) identifies the type of group, such as Agency, Fleet, Subfleet, SAID, or Other.

Agency - A specific group of fleets and associated subfleets. (Example: Police Department.)

Fleet - A specific group of subfleets consisting of individual units' assignments. (Example: Police Dept. Detectives.)

Subfleet - A specific group of individual units. (Example: Detective Group 1, 2, etc.)

SAID - A group used by a console for patch communications or SimulSelect functions.

Other - Used to designate a group for functions not

```

Select Group Type
[ * ]
[ ] Agency
[ ] Fleet
[ ] Subfleet
[ ] SAID
[ ] Other
  
```

Figure 5-23. Select Group Type

covered by the other types listed.

Enter the Group Type by pressing the **Select** key to display the Group Type pop-up menu, Figure 5-23. Using the up and down arrows, highlight the desired Group Type and press the **Select** key to complete the selection.

NOTE

Changing the "key of access," displayed as a **bold field name** in the Selected Group panel, can be done with the **F14** key or "Toggle Key" key. This allows you to access the database by using another key besides the Group ID, such as the Group Name or Group Type.

Saving Group Records

After completing any modifications to a GID or creating a new GID the record must be saved. To save the record, press the **Do** key. This will save the record to the GID Database.

NOTE

Pressing the **Do** key only saves the currently displayed Group record. Always save the current record before selecting a new Group ID.

Updating the sites and/or devices with the revised group data can be made by using the Database Upload function (User Menu item #30) or when exiting this function. This database will also be uploaded whenever any site or device reinitializes its database.

When exiting the function, the System Manager will display the Upload Selection pop-up window as shown in Figure 5-24. Move the cursor to highlight the desired selection and press the **Select** key to initiate, if selected, uploading all database records or just the changed records.

```

Upload Selection
[ None ALL Modified ]
  
```

Figure 5-24. Group Upload Selection

Wide Area and Extended Network Enabled Saving Group Records

If a record is Wide Area and Extended Network enabled (panel 3:4, or 3:5 for consoles), pressing the **DO** key causes the System Manager to request additional instructions for saving the record. This is done through a

pop-up menu where you can elect to save the record either to other System Managers on the network or only locally, or cancel the operation. After pressing the **DO** key the System Manager displays the following pop-up menu:

EXTENDED NETWORK OPERATION REQUESTED		
NETWORK	LOCAL	CANCEL

Figure 5-25. Extended Network Upload Selection

In both database functions, selecting the "Network" option will copy the entire contents of the user's selected record, EXCEPT for the VALID SITES and the FORCED SITES fields, to the other System Managers defined in the user's network of System Managers.

The VALID SITES field data, when copied to other System Manager's databases, will be set to all "Y"s - in other words, the group record will be valid on all possible 32 sites on the other System Managers.

The FORCED SITES field data, when copied to other System Manager's databases, will be set to all "N"s - in other words, the group record will not be forced for wide area calls to any sites on the other System Managers.

If it is necessary to define these two fields differently on the different System Managers, you MUST log into those other System Managers, make the changes and save the changes locally. However, if the record is ever changed anywhere in the network and the user making the changes saves the record with the "NETWORK" operation, then the data on all of the other System Managers will be changed

as per the above description.

Duplicating Group Records

The duplicating record feature allows you to copy the operating parameters of an existing record for use when creating a new record.

Select the record you wish to duplicate. The System Manager displays the identification and definition data for the selected group.

Enter the new GID in the Group ID field, the "MODIFY" label changes to "CREATE" and the System Manager clears the Description panel. However, it retains the information contained in the Group Parameters, Wide Area, and Multi Channel Partitioning panels.

Since the System Manager does not clear the fields in the Selected Group panel, it will be necessary to enter the appropriate data in these fields.

NOTE

Failure to enter unique identification data in the Selected Group fields will result in the message "You may not duplicate the Selected Group fields" when you attempt to save the record.

Description Panel (1:4)

After identifying the desired Group, the System Manager provides the Description panel (see Figure 5-26). This panel is used to identify the organization or individual responsible for the selected group.

EDACS System Manager		Group Identification		[SMGTGT] EGESYSMGR
Selected Group				
Group Id :	256	Group Name :	DFD	
A/F/S :	1 / 0 / 0	Group Type :	AGENCY	
	:(DFD / /)			
Description				
Agency :	DALLAS FIRE DEPT			
Division :	Headquarters			
Address :				
(F6 = Exit) (F8 = Delete Record) (F10 = Clear Record) (F11 = Next Record) (F14 = Toggle Search Key) (DO = Save Record) (Find = Find Group)				

Figure 5-26. Group Identification and Description Panel (Function #12. 1:4)

Agency - Enter the name of the agency responsible for the group. This name may be the same as the agency/fleet names. The field may contain up to 16 alphanumeric characters or may be left blank.

Division - This field may be used to further identify the individual or department responsible for the group. The field may contain up to 16 alphanumeric characters or may be left blank.

Address - Use this field to enter a brief address or other locating information which will aid you if it becomes necessary to contact the individual or department responsible for the group. The field may contain up to 16 alphanumeric characters or may be left blank.

Group Parameters Panel (2:4)

Press **Next Screen** to access the Group Parameters panel from the Description panel.

This screen contains the Call Priority parameters in the first column, and Features parameters in the second column. If the Group Type is SAID a third column is displayed which shows the switch allocation and console allocation field. A typical Group Parameters screen is shown in Figure 5-27.

Call Priority

Call priority sets the order in which queued calls are assigned working channels (de-queued). In other words, the system is continually sorting the queue priority. Queued calls with the highest priority will be given

working channels before those with a lower priority.

In the example shown in Figure 5-27, users within the group transmitting an analog voice call, may only need to be processed with a priority 4. On the other hand, when the group transmits critical or confidential information, they can increase their priority to priority 6 by transmitting in the digital voice mode.

During a telephone interconnect call, the working channel is out of service for the balance of the users. Therefore, it is usually advisable to set the group interconnect call priority lower than the analog or digital voice priority.

NOTE

For call priorities, 0 is the lowest priority and 7 is the highest assignable priority. Level 7, the highest priority, is reserved for emergency calls.

Voice - This setting establishes the queue priority for the group voice calls.

Priorities range from a low of 0 to a high of 7.

Default = 0.

Data - This setting establishes the group's queue priority for data calls.

Priorities range from a low of 0 to a high of 7.

Default = 0.

EDACS System Manager		Group Identification		[SMGTGT] EGESYSMGR	
Selected Group MODIFY					
Group Id : 256		Group Name : DFD			
A/F/S : 1 / 0 / 0		Group Type : SAID			
: (DFD / /)					
Group Parameters 2:4					
Call Priority		Features		Additional	
Voice	: 4	Inb Interconnect	: N	Switch Allocation	: 50
Data	: 1	Channel Test	: N	Console Allocation	: 1
Interconnect	: 0	Hang Time	: 0		
Digital Voice	: 6				
(F6 = Exit) (F8 = Delete Record) (F10 = Clear Record) (F11 = Next Record) (F14 = Toggle Search Key) (Do = Save Record) (Find = Find Group)					

Figure 5-27. Group Parameters Panel (Function #12, 2:4)

Interconnect - This setting establishes the groups queue priority for Interconnect calls.

Priorities range from a low of 0 to a high of 7.

Default = 0.

Digital Voice - This setting establishes the group's queue priority for Digital Voice calls.

Priorities range from a low of 0 to a high of 7.

Default = 0.

Features

Inb Interconnect - The Inbound Interconnect indicates if the selected group is allowed to receive inbound interconnect calls; in other words, a telephone user could call the group.

Y - Indicates the group is allowed to receive inbound interconnect calls.

N (default) - Indicates no inbound interconnect calls.

Channel Test - Enables the group for operation on channels defined for Channel Test in the Channel Configuration panel under Site / Device Designation (User Menu item #10).

Y - Enables the group to operate on channels assigned to the test channel.

N (default) - Sets the group for operation on channels not assigned to the test channel.

Hang Time - This is the time between an unkey command (releasing the PTT) and channel drop. This controls whether message trunking or transmission trunking is used. Hang time of 0 is transmission trunked. Hang time greater than 0 is message trunked.

Hang time can be set from 0-255 seconds.

Default value is 0.

Additional

Switch Allocation - The Switch Allocation field indicates the switch that this SAID is associated with. If the Console Allocation field is zero (0), this SAID is in the switch pool associated with this field. If the Console Allocation is non-zero, this SAID is dedicated to that Console and is not in the switch's pool. If the Switch Allocation and the Console Allocation are both zero (0), this SAID is only in the Master SAID Pool.

The SAID can be manually allocated to a particular switch by changing this field.

NOTE

This field can only be changed if it is not allocated to a Console, that is - Console Allocation = 0. If the Console Allocation is not zero, the Switch Allocation field is not accessible to the user.

The SELECT key may be used to select an available switch.

Console Allocation - The Console Allocation field is inaccessible to the user and is designed for informational purposes only. If the field indicates zero (0), the SAID is not allocated to a Console. If the field is non-zero, then the SAID is allocated to the Console indicated.

Wide Area Panel (3:4)

Press **Next Screen** to access the Wide Area screen from the Group Parameters screen.

The Wide Area panel contains data required by the Integrated Multisite and Console Controller (IMC) to control routing of all wide area (Multisite) group calls. The IMC, which links two or more sites together, allows group calls to be made to group units logged into other systems (sites) and provides tracking and group location information to the System Manager on demand.

The EDACS Extended Network, using the StarGate Controller, links multiple Multisite Controllers in a star or extended network. Although operating in an extended network is transparent to the group members, it extends the group roaming, tracking, and call routing features to other Multisite networks.

An example of the Wide Area panel is shown in Figure 5-28.

Wide Area Enable - The Wide Area Enable feature allows wide area group calls to be made to units logged into the group at other sites. The IMC will track all units (with automatic tracking enabled) logged into the group, and route the wide area group calls to the sites with at least one unit logged into the group. If Wide Area group calls are disabled, only units logged into the site the group call is placed on will hear the call. The Console Dispatch will also hear the call, if consoles are attached to the site through a switch.

Y - Enables Wide Area Group Calls.

N (default) - To disable Wide Area Group Calls.

Confirmed Call Enable - Enabling the Confirmed Call feature ensures that all units logged into the group have working channels before the caller is given channel access (allowed to talk). When enabled, wide area group calls are queued until all sites with at least one unit logged into the group are assigned a working channel for the call.

For Unconfirmed Calls (Confirmed Call is disabled), only units logged into the group and are immediately assigned a working channel will receive the call. If any sites are busy, the units will automatically “Late Enter” the conversation after being assigned a working channel.

Enter **Y** - To enable Confirmed Call.

N (default) - Calls to this group will be unconfirmed.

Automatic Tracking - Enabling this feature for a wide area group allows the IMC to route wide area group calls to radio systems that have at least one unit logged into the group being called.

If the Automatic Tracking feature is disabled, the IMC will only route wide area group calls to a “Forced Site.”

Enter **Y** - To enable Automatic Tracking.

N (default) - Disables the Automatic Tracking feature.

NOTE

Although you may enter **Yes** to enable the Automatic Tracking feature, it is not functional unless the **Wide Area Enable** is also selected.

Extended Network - Enabling the Extended Network feature allows wide area group calls to be made to units logged into the group which are at sites linked to another Multisite system. This feature expands the wide area group call features to each Multisite network linked by the Extended Network.

When this feature is enabled, the System Manager, when directed, will establish communications and attempt to share databases with the other System Manager applications defined using the Device Database Maintenance Screen (User Menu item #10).

Y - Enables Extended Network Group Calls.

N (default) - Disables Extended Network Group Calls.

NOTE

1. You cannot gain access to this field if the account you are in does not have Extended Network Access privileges. Refer to the User Account Maintenance function (User Menu item #71).
2. You cannot modify a Group ID record which is Extended Network enabled if the account you are using does not have Extended Network Access enabled.
3. Although you may enter Yes to enable the Extended Network Group Call feature, it is not functional unless the Wide Area Enable is also selected.

```

EDACS System Manager      Group Identification      [SMGTGT] EGESYSMGR
Selected Group-----MODIFY
Group Id : 256                               Group Name : DFD
A/F/S    : 1       /       0       /       0   Group Type : AGENCY
          :(DFD     /               /         )
Wide Area-----3:4
Wide Area Enable : Y
Confirmed Call Enable : N
Automatic Tracking : N                Home Switch Number: 33
Extended Network : Y

                                1           2           3
Valid Sites : 12345678901234567890123456789012
Forced Sites : YNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN

```

(F6 = Exit) (F8 = Delete Record) (F10 = Clear Record) (F11 = Next Record)
(F14 = Toggle Search Key) (Do = Save Record) (Find = Find Group)

Figure 5-28. Group Wide Area Panel (Function #12, 3:4)

4. It is also necessary to identify the Home Switch (Multisite controller) when enabling the Extended Network.

NOTE

Although you may enter **Yes** to enable the Confirmed Call feature, it is not functional unless the Wide Area feature is also enabled.

Even if this group has confirmed call enabled, group calls will not confirm on radio systems (sites) that have confirmed call disabled by the CEC/IMC Manager.

Home Switch - When a group is enabled for Extended Network, it will be necessary to identify the Home Switch or IMC. This field is only displayed when the Extended Network is enabled.

Enter the EGE Switch number, refer to the Site / Device Definition (User Menu item #10) or the Device Report (User Menu item #60) for a valid listing of assigned site and devices.

NOTE

This field is not displayed if the Group Type is "SAID".

Valid Site - Each Wide Area group must be assigned one (1) or more radio systems (sites). Wide area calls can only be made on a site if it is designated as a valid site for the selected group. The site will deny a group call request if

the group is not a valid (enabled) group as defined in this field

Enter **Y** - To indicate valid sites for the group.

N (default) - Indicates the group is not active at this site.

Forced Site - This field identifies sites to which the IMC will unconditionally route group calls.

Enter **Y** - All sites marked **Y** will bring up a channel for the call.

N (default) - Disables the feature.

Multiple Channel Partitioning Panel (4:4)

Press **Next Screen** to access the Multiple Channel Partitioning Panel, Figure 5-29 from the Radio Parameters screen.

Use the following information when making entries in the Group MCP panel. For additional information on the rationale for the various entries, refer to the Unit MCP section, Function #11, 4:5.

MCP Availability:

Within the Multiple Channel Partitioning panel 4:4, the MCP Availability field is a message field that cannot be modified. The field will display either No Sites, Selective, or Universal. The information indicated by each message is as follows:

No Sites - indicates that none of the valid sites for this group, have the MCP feature enabled.

EDACS System Manager		Group Identification		[SMGTGT] EGESYSMGR	
Selected Group					
Group Id : 256		Group Name : DFD		MODIFY	
A/F/S : 1 / 0 / 0		Group Type : AGENCY			
: (DFD / /)					
Multiple Channel Partitioning					
MCP Availability:		No Sites			
ID Subject to Partitioning:		N			
Primary Partition:		1			
Backup Partition		Condition For Use		MC Partition	
First		Failed/Busy - All		ALL	
Second		Not Used			
Third		Not Used			
(F6 = Exit) (F8 = Delete Record) (F10 = Clear Record) (F11 = Next Record) (F14 = Toggle Search Key) (Do = Save Record) (Find = Find Group)					

Figure 5-29. Group Multiple Channel Partitioning Panel (Function #12, 4:4)

Selective - indicates that one or more (but not all) of the valid sites for this group, have the MCP feature enabled.

Universal - indicates that all of the valid sites for this group have the MCP feature enabled.

NOTE

Regardless of the message in the MCP Availability field, the system administrator can enter MCP Data for this group. However, the MCP Data will only be used at those sites which are MCP enabled. At any site that is not MCP enabled, the group will be given channel assignments as if the MCP feature did not exist.

ID Subject to Partitioning:

Use this field to indicate how this group will be given channel assignments if the site is MCP is enabled. At any site that is not MCP enabled, this group will be given channel assignments as if no partitioning exists, regardless of whether the group is subject to partitioning or not.

No (default) - Indicates the group will not be given channel assignments in accordance with the remaining MCP Data fields. At any site that is MCP enabled, this group will be given channel assignments only in the Active Control Channel (ACC) partition. The ACC partition is the partition which currently includes the Control Channel.

Yes - Indicates this group will be assigned channels in accordance with the remaining MCP Data fields. At any site that is MCP enabled, this group will be assigned channels according to the primary and backup MCP Data.

Primary Partition

The Primary Partition field shows the present partition assignment. Partition 1 is assigned by default. To change the partition assignment, enter a new digit in place of the present digit. Enter the partition number (1-F or All) using the following allowable partition assignments:

Numeric digit **1** through **9** - Indicates the Site Controller computer should search only the channels in partition 1 through 9 respectively.

Alpha digit **A** through **F** - Indicates that the Site Controller computer should search only the channels in partition 10 through 15 respectively.

ALL - Indicates that the Site Controller computer should search all channels regardless of partitions.

Backup Partitions:

Within the Multiple Channel Partitioning panel 4:4, there are three backup partition fields: First, Second, and Third. Each of these fields has two parts: Condition For Use and MC Partition.

Condition for Use

For each backup partition to be assigned, the Condition for Use must be selected from one of the following:

Not Used (default) - Indicates this partition should not be used.

Failed/Busy - ALL - Indicates this partition should be scanned only if all channels in the partition last searched were failed or busy.

Failed/Busy - Emergency - Indicates this partition should be scanned only if this is an emergency call, and all channels in the partition last searched were failed or busy.

Failed Only - Indicates this partition should be scanned only if all channels in the partition last searched were failed (none were busy).

Press the **Select** key for the list of conditions. Highlight the desired condition and press the **Select** key to enter the condition.

MC Partition

For each backup partition to be assigned, an MC Partition must be assigned from one of the following (by default, all backup partition assignments are initially shown blank):

Numeric digit **1** through **9** - Indicates the Site Controller computer should search only the channels in partition 1 through 9 respectively.

Alpha digit **A** through **F** - Indicates the Site Controller computer should search only the channels in partition 10 through 15 respectively.

ALL - Indicates the Site Controller computer should search all channels regardless of partitions.

Each partition assignment (primary or backup) must be different, but does not have to be in any order, except ALL. ALL may be used for a primary or backup partition assignment, but no additional partition assignments should be made after the ALL assignment. (Any remaining backup partitions should have Not Used selected as the Condition For Use.) Whenever Not Used is selected as a Condition For Use, the MC Partition part of the backup partition field will automatically be blank.

13) ROTARY DEFINITION

Rotary Definition (User Menu item #13) under the Database Maintenance category screen defines the rotary hunt sequence. This sequence is used by the telephone equipment to locate an available phone line when a radio unit places an outbound call. This feature allows you to define up to 15 different rotary phone line hunt sequences (panel 1:2, Rotary 1-8 and 2:2 Rotary 9-15). Each hunt sequence defines which active phone lines (see Figure 5-31) to check and the order in which they are checked when hunting for a free line. The System Manager allows you to identify up to 15 phone lines per hunt sequence.

In the example, Figure 5-30, five active phone lines are defined using four hunt sequences. When calls are placed by radio units assigned Rotary Number 1 (Function #11, 2:5) the telephone equipment will check the phone lines in the 1,2,3,4 sequence. For units assigned Rotary Number 2, the search for a free line is made in the 4,3,2,1 sequence. Radio Units assigned Rotary Number 3 are only allowed to call out on lines 1 and 2 and only the radio units assigned Rotary Number 4 are allowed to call out on line 5. If a free line is not found, the originating unit hears a busy signal. If the radio unit is assigned a Rotary Number of zero, it will not be permitted to make an interconnect call.

Select the Rotary Definition function (User Menu item #13) by highlighting "Rotary Definition" in the Database maintenance panel or enter "13" for the Selected Menu Item and press the **Return** or **Select** key. The System Manager displays the Interconnect Rotary Definition screen as shown in Figure 5-30.

The Interconnect Rotary Definition screen consists of two panels, the Selected Site and the Line Selection. The Selected Site panel contains fields for identifying the Site Number and Site Name. The cursor appears first at the Site Number. Typing in the Site Number displays the first of two Line Selection panels for the selected site.

The Line Selection panels are numbered 1:2 and 2:2. These numbers appear in the upper right corner of the panel. The Line Selection panels are:

- 1:2 - Line Selection (Rotary 1-8)
- 2:2 - Line Selection (Rotary 9-15)

Panel 1:2 contains rotary sequences 1 through 8. Panel 2:2 is a continuation of 1:2, for rotary sequences 9 through 15.

Selected Site Panel

The Selected Site panel is used to locate the site record in the Rotary database.

NOTE

Before defining the rotary sequence for a site, ensure each telephone line is properly defined (Function #14) and the site database identifies which channels are connected to the local Telephone Interconnect equipment (Function #10).

Site Number - This is the numeric designation of the site as defined in Database Maintenance #10 - Site / Device Definition.

EDACS System Manager
Interconnect Rotary Definition
[SMGTGT] EGESYSMGR

Selected Site

Site Number : 3
Site Name : RADIOLAB

Line Selection 1:2

Rotary	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	1	2	3	4	0	0	0	0	0	0	0	0	0	0	0	0
2	4	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0
3	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(F6 = Exit) (F8 = Delete Record) (F10 = Clear Record) (F11 = Next Record)
 (F14 = Toggle Search Key) (Do = Save Record) (Find = Site List)

Figure 5-30. Interconnect Rotary Definition (Function # 13, 1:2)

Enter the site number (**1 - 32**) or press the **Find** key to display a list of valid sites and associated names. Use the up and down arrow keys to highlight the desired site and press the **Select** key.

The desired site may also be located by repeatedly pressing the **F11** (Next Record) key to scroll through the site database.

Site Name - After the System Manager validates the site number in the Site Database, it will display the associated site name.

Line Selection Panel (1:2 and 2:2)

The Line Selection panel allows you to define up to 15 hunt sequences (Rotary Number). The Rotary Number, identified in the column labeled “Rotary,” is the number identifying the available phone lines and the sequence used

when looking for a free line. This rotary number may then be assigned to individual radio units by selecting the Unit Identification function (User Menu item #11), Interconnect - Rotary Number (2:5).

Line Selection - For each Rotary Number enter the search sequence for selected active phone lines (default is 0).

In example, for Rotary 1 - if active phone lines 3, 6, 12, and 14 will be used in descending sequence, then enter “14” in the zero column, “12” in the one column, “6” in the two column, and “3” in the three column for Rotary 1 as shown below.

Rotary	0	1	2	3	4	5
1	14	12	6	3	0	0
2	0	0	0	0	0	0

14) LINE DEFINITION

Line Definition (User Menu item #14) under the Database Maintenance category screen is used to define the outgoing telephone interconnect line parameters. This feature allows you to identify the line parameters for up to 255 phone lines which may be attached to the site. The line parameters indicate if the line is active or inactive, if DTMF or pulse dialing is used, and which unit will be notified when incoming calls are received. The Site Controller default values are used when the system is first powered up, and remain in effect until changes are made and saved for each individual system.

NOTE

The following field definitions refer to telephone interconnect systems other than Jessica. For systems using the Jessica PBX Gateway, refer to Chapter 12 for field definitions and required entries.

Select the Line Definition function (User Menu item #14) by highlighting "Line Definition" in the Database Maintenance panel or enter "14" for the Selected Menu Item and press the Return or Select key. The System Manager will display the Interconnect Line Definition screen shown in Figure 5-31.

The Interconnect Line Parameters screen contains two panels, the Selected Site panel and the Line Parameters panel. The Selected Site panel contains fields for identifying the Site Number and Site Name. The cursor appears first at the Site Number. Typing in the Site Number displays page 1 of the Line Parameters panel for the site selected.

The Line Parameters panel consists of 16 pages, listing telephone line parameters for up to 255 telephone lines. Page 1 covers phone lines 1 thru 16, page 2 is identical to page 1 except it covers phone lines 17 thru 32, page 3 covers lines 33 thru 48, etc.

Selected Site Panel

The Selected Site panel is used to locate the site record in the Line database.

Site Number - This is the numeric designation of the site as defined in Database Maintenance #10 - Site / Device Definition.

Enter the site number (1 - 32) or press the **Find** key to display a list of valid sites and associated names. Use the up and down arrow keys to highlight the desired site and press the **Select** key.

The desired site may also be located by repeatedly pressing the **F11** (Next Record) key to scroll through the site database.

Site Name - After the System Manager validates the site number in the Site Database, it will display the associated site name.

Line Parameters Panel (Pages 1 thru 16)

The Line Parameters panel shown in Figure 5-31 defines the line parameters for phone lines 1 thru 16. Parameters for lines 17 thru 32 are on page 2, lines 33 thru 48 on page 3, etc.

EDACS System Manager				Interconnect Line Definition [SMGTGT] EGESYSMGR			
Selected Site							
Site Number : 3				Site Name : RADIOLAB			
Line Parameters Page: 1							
Line No	Line Active	Pulse Dial	Dedicated To Unit	Line No	Line Active	Pulse Dial	Dedicated To Unit
1	Y	N	0	9	N	N	0
2	Y	N	0	10	N	N	0
3	Y	N	0	11	N	N	0
4	Y	N	0	12	N	N	0
5	Y	N	235 JOE BOSS	13	N	N	0
6	N	N	0	14	N	N	0
7	N	N	0	15	N	N	0
8	N	N	0	16	N	N	0

(F6 = Exit) (F8 = Delete Record) (F10 = Clear Record) (F11 = Next Record)
(F14 = Toggle Search Key) (Do = Save Record) (Find = Site List)

Figure 5-31. Interconnect Line Definition (Function #14, Page 1)

Page Number - Movement from page to page differs slightly from other functions. You may still use the **Next Screen** and **Previous Screen** keys, however, you may go directly to the desired page by entering the desired page number (1 thru 16). Entering a page number that is out of bounds, (i.e., 17) causes the System Manager to display the message "Data Invalid; enter a value at least 1 but not greater than 16."

CAUTION

If you should attempt to exit the function by pressing the **F6** key with an invalid page number still displayed - the System Manager program will ABORT! You must replace an invalid page number with a valid number before exiting the function.

Line Number - The Line Number identifies the individual telephone lines. These lines are connected to the site interconnect equipment via the EDACS Interface Panel Phone Line modules.

Line Active - The Line Active field is used to indicate which telephone lines are available for use by the interconnect equipment.

NOTE

For IDA and ELI Telephone Interconnect equipment the maximum number of lines is 32.

Enter **Y** - If the Telephone line is available for use.

N (default) - If the line is not available.

Pulse Dial - Allows you to select pulse or Dual Tone Multi-frequency (DTMF) signaling. This permits interfacing with telephone networks which have not been upgraded to a digital telephone system.

Enter **Y** - For telephone lines requiring pulse tone dialing

N (default) - For interface to digital telephone systems using DTMF signaling.

Dedicated To Unit - The Dedicated to Unit field allows you to identify which radio unit will ring when receiving an incoming telephone interconnect call. The radio unit is identified by LID and Name. After entering the LID, the system manager searches the Unit database for a match. When the System Manager validates the LID, it displays the associated Unit Name. This radio unit must also have Inbound Interconnect enabled in its LID database (see User Menu item #11, Radio Parameters 2:5).

Enter the radio unit Logical **ID** (LID).

NOTE

If the System Manager cannot find the LID, it will indicate you have entered an invalid or undefined Logical Unit. Review the Logical Unit Report (User Menu item #61) or the Logical Unit Definition database (User Menu item #11) for a list of valid LID's.

15) TOLL CALL RESTRICTIONS

The Toll Call Restrictions function under the Database Maintenance category screen, item "15", is used to setup outgoing telephone call restrictions. Each site may have up to 16 different telephone digit patterns with up to 16 restriction levels defined for different levels of radio user.

The digit patterns represent the first four telephone digits received by the Site Controller before receiving the digital stream terminator. The terminator is added to the end of the digit stream by the call originating radio. The Controller checks the four digits against the Toll Call Restriction database to determine if the interconnect call is authorized for the radio unit initiating the call. If the Controller determines that the four digits do not pass the call restrictions test for the radio unit, it terminates the call and deallocates the telephone line. If the four digits pass, the Controller initiates the telephone interconnect process. (See LBI-38985 for a functional description of the Site Controller with the local interconnect option.)

Select the Toll Call Restrictions function (User Menu item #15) by highlighting "Toll Call Restrictions" in the Database Maintenance panel or by entering "15" for the Selected Menu Item and press the **Return** or **Select** key. The System Manager will display the Interconnect Toll Call Restrictions screen as shown in Figure 5-32.

The Interconnect Toll Call Restrictions screen contains two panels, the Selected Site panel and the Toll Call Parameters panel. The Selected Site panel contains fields for identifying the Site Number and Site Name. The cursor appears first at the Site Number.

The Toll Call Parameters panel (1:1) is used to identify the toll call restrictions by defining up to 16 four-digit patterns and 16 user restriction levels.

Selected Site Panel

The Selected Site panel is used to locate the site record in the Toll Call Restrictions database.

Site Number - This is the numeric designation of the site as defined in Database Maintenance #10 - Site / Device Definition.

Enter the site number (**1 - 32**) or press the **Find** key to display a list of valid sites and associated names. Use the up and down arrow keys to highlight the desired site and press the **Select** key.

The desired site may also be located by repeatedly pressing the **F11** (Next Record) key to scroll through the site database.

Site Name - After the System Manager validates the site number in the Site Database, it will display the associated site name.

Toll Call Parameters Panel (1:1)

The Toll Call Parameters panel is divided into two similar sections. The left section contains the first eight four-digit patterns (1 thru 8) and the right section contains the last eight four-digit patterns (9 thru 16). Each digit pattern is associated with 16 user Restriction Levels.

```

EDACS System Manager  Interconnect Toll Call Restrictions  [SMGTGT] EGESYSMGR

-----Selected Site-----
Site Number :    9                      Site Name :  LABGNET

-----Toll Call Parameters-----1:1
Digit Pattern  Restriction Level  Digit Pattern  Restriction Level
1  8804  NYNNNNNNNNNNNNNNNN  9  ....  NNNNNNNNNNNNNNNNN
2  8XXX  NYNNNNNNNNNNNNNNNN 10  ....  NNNNNNNNNNNNNNNNN
3  90XX  NYNNNNNNNNNNNNNNNN 11  ....  NNNNNNNNNNNNNNNNN
4  9800  NYNNNNNNNNNNNNNNNN 12  ....  NNNNNNNNNNNNNNNNN
5  9911  NYNNNNNNNNNNNNNNNN 13  ....  NNNNNNNNNNNNNNNNN
6  6XXX  NYNNNNNNNNNNNNNNNN 14  ....  NNNNNNNNNNNNNNNNN
7  7XXX  NYNNNNNNNNNNNNNNNN 15  ....  NNNNNNNNNNNNNNNNN
8  ....  NNNNNNNNNNNNNNNNN 16  ....  NNNNNNNNNNNNNNNNN

(F6 = Exit) (F8 = Delete Record) (F10 = Clear Record) (F11 = Next Record)
(F14 = Toggle Search Key) (Do = Save Record) (Find = Site List)

```

Figure 5-32. Interconnect Toll Call Restrictions (Function #15, 1:1)

Digit Pattern - The four-digit pattern represents the first four digits dialed by the radio originating the call. These digits may represent a dial access code + local exchange (9 + local (7-digit) number) for local calls, a dial access code + area code (8 + area code + number) for long distance toll calls, the dial access code + telephone company code + area code or local number (9+0+area code + number) for credit card calls, etc.

When entering the four-digit patterns, you must observe the following rules:

- A space will match any character 0 thru 9, *, #, etc. (Site Controller default)
- An "X" can be used as a wild card to represent any digit from 0 thru 9.
- All unused digit pattern spaces are represented by periods (default).
- Define the most restrictive (fewer X's) first, and the least restrictive (more X's) last..

NOTE

When making the Toll Call Restriction test, if the Site Controller receives less than four digits, it will pad the remaining digits with spaces.

Enter the first four digits of the telephone number on which restriction levels are in effect.

Restriction Level - The 16-position restriction level field for each four-digit pattern, indicates whether the four-digit pattern is permitted or denied.. As soon as a match is found for a permitted four-digit pattern, the call is allowed. As soon as a match is found for a denied four-digit pattern, the call is denied (even if there is a match for a permitted four-digit pattern further down the table). Each column (0 to 15) corresponds to the Toll Call Restriction level assigned to each radio unit allowed to make outgoing calls. This Restriction Level is assigned to the individual radio units using the Logical Unit Definition (User Menu item #11, 2:5), Interconnect - Toll Call Restrictions.

Y - Indicates that the call will be permitted when the first four digits dialed match the four-digit pattern

N - (default) - Indicates that the call will be denied when the first four digits dialed match the four-digit pattern.

The four-digit patterns and restriction levels shown in Figure 5-32 are explained as follows. (For the purpose of these examples it is assumed that a 9 first digit allows access to local calls and an 8 allows access to long distance calls.)

Table 5-1. Toll Call Parameter Examples

Pattern Number	Digit Pattern	Restriction Level
1	8804	Only radio units with a level of "1" or "2" are allowed to make calls to the 804 area code (i.e. access code + 804 + local number).
2	8XXX	Only radio units with a level of "1" are allowed to make unrestricted long distance calls starting with 8-xxx-xxx-xxxx (access code + area code + local number).
3	90XX	Only radio units with a level of "1," "2," or "3" are allowed to make credit card calls (i.e. access code + 0 + area code + local number + card no. overdial).
4	9800	Radio Units with restriction levels "1" thru "8" are allowed to make toll free long distance calls (i.e., WATS calls - Access code + 800 + 7-digit number).
5	9911	All Radio Units with the exception of those with restriction level "0" are allowed to make emergency 911 calls (i.e., Access code + 911).
6	6XXX	Radio Units with restriction levels "1" thru "5" and "10" are allowed to call any in-house number starting with six (i.e., 6123).

Table 5-1 explains the toll call restrictions from a digit pattern perspective. However when the Restriction Levels are assigned to a radio unit - it may be viewed as follows:

- Radio Units, in the example, with a level of zero have no rights to any four-digit pattern. Therefore cannot make telephone interconnect calls.
- Radio Units with a level "1" are virtually unrestricted and have access to all four-digit patterns listed.

NOTE

In the example shown in Table 5-1, if the four-digit pattern for pattern numbers 1 and 2 are reversed, radio units with a level 2 would not now be allowed to make calls to the 804 area code (i.e., access code + 804 + local number) because the four-digit pattern 8XXX, which is a denial (N), is matched first and the call will be denied at that point.

16) ACU PARAMETERS

The Alarm and Control Unit (ACU) Parameters under the Database Maintenance category, screen "16", is used to setup the ACU database. This database stores the records defining the 32 alarm inputs for each site. The definition includes the alarm name, the enable or disable condition, what signal levels trip the alarm, and how the alarm is reported to the System Administrator. The Site Controller uses its internal default values when first powered up. These values remain in effect until the ACU database for the site is uploaded, changing the parameters for the selected site.

Select the ACU Parameters function (User Menu item #16) by highlighting "Alarm Control Unit" in the Database Maintenance panel or by entering "16" for the Selected Menu Item and press the **Return** or **Select** key. The System Manager will display the Alarm Control Unit Definition screen as shown in Figure 5-33.

The Alarm Control Unit Definition screen is divided into two panels, the Selected Site panel and the ACU Parameters panel. The Selected Site panel contains fields for identifying the Site Number and Site name. The cursor appears first at the Site Number field.

The ACU Parameters panel defines the ACU parameters associated with the selected site. The first page (1:2) defines the parameters for alarm inputs 1 thru 8 and 9 thru 16. The second page is displayed by stepping through all the fields on 1:2 or by pressing the **Next Screen**. Page 2:2 displays the alarm inputs 17 thru 24 and 25 thru 32. Each of the 32 ACU alarm inputs is identified by its number and the associated parameters in four data fields.

The data fields are the Alarm Name, Enabled, Active High, and Major fields.

Selected Site Panel

The Selected Site panel is used to locate the site record in the Alarm Control Unit database.

Site Number - This is the numeric designation of the site as defined in Database Maintenance #10 - Site / Device Definition.

Enter the site number (1 - 32) or press the **Find** key to display a list of valid sites and associated names. Use the up and down arrow keys to highlight the desired site and press the **Select** key.

The desired site may also be located by repeatedly pressing the **F11** (Next Record) key to scroll through the site database.

Site Name - After the System Manager validates the site number in the Site Database, it will display the associated site name.

ACU Parameters Panel (1:2 and 2:2)

ACU No. - The ACU number identifies one of the 32 alarms.

Alarm Name - This is an eight character field used to assign a user recognizable name associated with the ACU number.

Enter an 8-digit Alphanumeric Alarm Name.

EDACS System Manager Alarm Control Unit Definition [SMGTGT] EGESYSMGR					
Selected Site					
Site Number : 5			Site Name : MSDS 3		
ACU Parameters 1:2					
Acu No	Alarm Name	Enabled	Active High	Major	
1		Y	N	N	
2		Y	N	N	
3		Y	N	N	
4		Y	N	N	
5		Y	N	N	
6		Y	N	N	
7		Y	N	N	
8		Y	N	N	
Acu No	Alarm Name	Enabled	Active High	Major	
9		Y	N	N	
10		Y	N	N	
11		Y	N	N	
12		Y	N	N	
13		Y	N	N	
14		Y	N	N	
15		Y	N	N	
16		Y	N	N	
(F6 = Exit) (F8 = Delete Record) (F10 = Clear Record) (F11 = Next Record) (F14 = Toggle Search Key) (Do = Save Record) (Find = Site List)					
Alarm reported by Site 6					

Figure 5-33. Alarm Control Unit Definition (Function #16, 1:2)

Enabled - Indicates if the alarm is enabled for reporting.

Y - Indicates the alarm is enabled for reporting.

N (default) - Indicates the alarm is disabled or not in use.

Active High - Indicates if the alarm condition is triggered by an active high transition (i.e., a low to a high transition indicates alarm condition) or an active low transition (i.e., a high to a low transition indicates an alarm condition).

Y - (Default) Indicates the alarm looks for an active high transition. Enter “Y” for each enabled alarm which is active high.

N - Indicates the alarm looks for an active low transition. Enter “N” for each enabled alarm which is active low.

Major - This field identifies the triggered alarm as being either a Major or Minor alarm. The Major/Minor alarm

mask is used by the ACU to determine which Alarm Unit Status Alarm LED to turn on. When an alarm occurs, the Site Controller will notify the System Manager of the alarm condition and store the alarm details in the Activity Log.

Alarms conditions are brought to the user’s immediate attention by flashing the alarm message in a banner at the bottom of the screen. This message will continue to flash or will step through alarms from other sites until the alarm is acknowledged. Refer to the Alarm Control Display (User Menu item #40) to acknowledge any alarms reporting problems or failures.

The conditions causing the alarm(s) may be determined by viewing the Alarm Report (User Menu item #65).

Y - Selects ACU Alarm inputs that will be identified as a major alarm events.

N - (Default) Identifies ACU Alarm inputs that will be identified as a minor alarm events.

17) SAID DEFINITION

The System Assigned ID Database under the Database Maintenance category, screen 17, is used to allocate SAIDs to a specific switch's SAID Pools. The switches then use these SAIDs for Patch and SimulSelect calls.

The SAID Database screen is divided into two panels, the Master SAID Pool panel and a panel below it used to allocate or de-allocate SAIDs to and from switches. The cursor appears first at the SAIDs Allocated field for the first switch on the list.

Master SAID Pool Panel

The Master SAID Pool panel is used for information only. There is no field on the panel that can be accessed by the user. This panel informs the user how many SAIDs are in the Master SAID pool. If more SAIDs are needed the user can create them by using the Group Database screen 12.

The panel below the Master SAID Pool panel contains a field for allocated SAIDs for each switch in the list.

To allocate SAIDs to a particular switch:

1. Move the cursor to the "SAIDs Allocated" field for the switch being used.
2. Type in the total number of SAIDs to allocate to that particular switch.
3. Press the ENTER key.

To de-allocate SAIDs from a particular switch:

1. Move the cursor to the "SAIDs Allocated" field for the switch being used.
2. Type in the total number of SAIDs that you want allocated to that particular switch. (This should be less than the original number of SAIDs allocated to the switch.)
3. Press the ENTER key.

EDACS System Manager		SAID Database		[SMGTGT] EGESYSMGR
Master SAID Pool				
SAIDs Allocated to Master Pool : 156				
Unallocated SAIDs Remaining : 144				
Switch Number	Name	SAIDs Allocated	Page 1 of 1	
33	MSCII	1		
34	DLMR_IMC	0		
35	TEST_MSC	0		
36	LABSWITCH	5		
40	EGESW40	0		
50	EGESW50	6		
64	TESTIMC	0		
(F6 = Exit)				

Figure 5-34. SAID Definition (Function #17, 1:1)

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CHAPTER 6 - SITE RECONFIGURATION

The Site Reconfiguration category provides the means for updating, changing, or reviewing the existing site configuration database in the Site Controller.

Changes to the site's configuration parameters may be permanent or temporary. For the change to be permanent, the database must be modified using the Site Definition function (User Menu Item # 10) and then uploaded to the Site Controller.

Temporary changes are initiated by changing the database parameters in the Database panel of the Site Reconfiguration screens and reconfiguring these changes to the Site Controller.

This category also allows you to review the current site configuration stored in the System Manager's database and the Site Controller's existing configuration side-by-side.

The Site Reconfiguration category has five functions, listed as 0 thru 4, under the Site Reconfiguration panel in the User Menu screen as shown in Figure 6-1. The five functions are described as follows:

20) Channel - The Channel Configuration panel displays the hardware configuration data for each channel assigned to the site. The database values are defined in the Site Definition function - Channel Configuration panel (User Menu item #10, 1:4).

21) Call Parameters - The Channel Assignment Parameters panel displays the channel operating parameters used by the Site Controller. The database values are defined in the Site Definition function - Site Parameters panel (User Menu item #10, 2:4).

22) Test Parameters - The Site Test Parameters displays the current settings for the Test Unit and Power Monitor Unit. The database values are defined in the Site Definition function - Site Test Parameters panel (User Menu item #10, 3:4).

23) Miscellaneous - The Miscellaneous Parameters panel displays the additional channel operating parameters used by the Site Controller. The database values are defined in the Site Definition function - Miscellaneous Parameters panel (User Menu item #10, 2:4).

24) Relay - The Relay Reconfiguration panel displays the eight Test and Alarm Unit control output relays assigned to the site. The database values are defined in the Site Definition function - Channel Configuration panel (User Menu item #10, 1:4).

To select one of the functions, highlight the desired function in the Site Reconfiguration panel or enter the function's number as the User Menu Item number. Press the **Return** or **Select** key. The System Manager will display the Site Reconfiguration screen for the selected function.

EDACS System Manager V5.01 User Menu [SMGTGT] EGESYSMGR

Selected Menu Item-----

Enter Menu Item : 20

Menu Selections-----

Main Categories	Site Reconfiguration
1) Database Maintenance	0) Channel
2) Site Reconfiguration	1) Call Parameters
3) Device Communication	2) Test Parameters
4) Alarm Control	3) Miscellaneous
5) Radio Control	4) Relay
6) Reports	
7) System Maintenance	

(F7 = Exit from System Manager) (F10 = Clear Menu Item)
 (Select = Submit Current Menu Item)

Figure 6-1. User Menu - Site Reconfiguration

Each function screen has two panels, a Selected Site and a parameters panel. Unlike the other System Manager categories, after the first function is selected, the other functions in the Site Reconfiguration category can be selected by using the **Next Screen** or **Previous Screen** keys instead of returning to the User Menu. This eliminates the need to exit the screen, go into another and reenter the site number for each function.

The function selections correspond to the Site Reconfiguration screens in the following manner:

- 20) Channel \iff 1:5 - Channel Configuration
- 21) Call Parameters \iff 2:5 - Channel Assignment Parameters
- 22) Test Parameters \iff 3:5 - Site Test Parameters
- 23) Miscellaneous \iff 4:5 - Miscellaneous Parameters
- 24) Relay \iff 5:5 - Relay Reconfiguration

For example, if you enter “21” as the User Menu Item, the Call Parameters screen is displayed consisting of the Selected Site panel and the Channel Assignment Parameters panel (2:5). If you want to get to the Miscellaneous Parameters screen (User Menu Item # 23), instead of using F6 to exit and then entering “23” as the User menu Item, just press the **Next Screen** key twice and the display will step to the Miscellaneous Parameters panel (4:5).

Selecting a Site

All of the Selected Site panels and the function key definitions at the bottom of each screen (1:5 through 5:5) are identical.

At the Site Number prompt in the Selected Site panel, enter the site number. You may also select the site number by using the **Find** key to open the pop-up Select Site list. Use the up and down arrows and highlight the desired site. To select the site, press the **Select** key.

Activate the reconfiguration function by pressing the **Return** key. The System Manager displays its current site database (Database panel) and indicates it is:

- **“Unable to Connect to Site xx”** - The System Manager is unable to establish a communication link with the site.
- **“Connecting to Site; Press F8 to Abort.”** - Indicates the site is busy, but the System manager will continue trying to connect until it reaches the Message Retry Attempt limit or user intervenes by pressing **F8**.

- **“Asking Site for Configuration...”** - Indicates the System manager successfully connected to the Site Controller. The Site Controller downloads its existing configuration as shown in the Site panel.

Permanent Site Database Changes

Permanent changes to the site database can be made by first making changes or modifying the site database configuration stored in the System Manager using the Site Definition function (User Menu item #10). This revised database is then uploaded to the Site Controller as described in the following procedure:

1. Select the Site Definition function (User Menu item #10).
2. Select the Site Number.
3. Make the necessary changes to the site database and save the changes using the **Do** key.
4. Select the Site Reconfiguration - Channel function (User Menu item #20).
5. Enter the Site Number. The System Manager will display the Channel Configuration panel, shown in Figure 6-2, listing the Site database (Database panel) defined in step 2 and the existing configuration at the Site Controller (Site).
6. Identify which parameters will be uploaded to the Site Controller by entering a “Y” in the send column, located between the Database and Site panels. The corresponding data in the Site panel will be highlighted.
7. Upload the selected information by pressing the **Do** key.

The System Manager uploads the database to the Site Controller and then asks the Site Controller to verify its configuration. Accepted changes will be displayed in the Site panel after the site responds to the System Manager’s request.

NOTE

Do not press the **F6** key or change the selected site number before completing step 8.

8. Toggle between the function screens by pressing the **Next Screen** and **Previous Screen** keys.
9. Repeat steps 6 and 7 for any changes to be uploaded on the other Site Reconfiguration screens for this site.

Temporary Site Database Changes

The Reconfiguration function also allows the System Manager to make temporary changes to the Site Controller configuration database. This is useful when diagnosing problems, optimizing the system, or making temporary changes as needed to support temporary activities.

Use the following procedure when making temporary changes to the site database:

NOTE

Changes made using this procedure are temporary and will not alter the Site database defined using the Site Definition function.

1. Select a Site Reconfiguration function.
2. Enter the Selected Site Number. The System Manager will display the site database configuration (Database panel) and the Site Controller's existing configuration (Site panel).
3. Toggle between the function screens by pressing the **Next Screen** and **Previous Screen** keys until the desired parameters are displayed.
4. Make the necessary changes to the Database panel.
5. Move the cursor and enter a "Y" in the send column, located between the Database and Site panels. The corresponding Site data will be highlighted.

NOTE

Most of the time, the System Manager will do this for you.

6. Press the **Do** key to initiate the reconfiguration process.
7. The System Manager uploads the modified database to the Site Controller and then requests the Site Controller to verify its configuration.
8. Changes accepted by the Site Controller are displayed in the Site panel after the site responds to the System Manager's request.
9. The System Manager refreshes the screen and displays the temporary Database and Site configuration.

NOTE

The Database and Site panels should now match.

Remember, changes made in the Site Reconfiguration category **DO NOT** affect the original Site Database configuration as defined by the Site Definition function. If the Site Controller is reset or experiences a power outage, it will automatically download the original Database settings when it is put back in service. Permanent changes to the database must be made using the Database Maintenance category, Site/Device Definition (User Menu item #10).

20) CHANNEL

The Channel Configuration fields define the hardware configuration of the selected site. An example of this screen is shown in Figure 6-2.

A channel is a uniquely numbered GETC shelf. A channel can be further identified as an RF Channel (which has a repeater connected), a Downlink Channel (No RF), or a Control Point Channel for Simulcast. Control Point Channels are considered RF Channels even though there is no RF repeater directly connected to the GETC.

Channel Configuration Panel

The data presented in the Channel Configuration panel represents the current site database as defined using the Site Definition function (Database panel) and the existing configuration stored at the Site Controller (Site panel).

The following brief field definitions are for convenience only. For complete field descriptions and the associated default settings, refer to the Site Definition - Channel Configuration screen, function #10, 1:4.

RF - Designates the Control Channel and Working Channels.

NOTE

These cannot be Downlink Channels.

Interconnect - Identifies channels connected to optional Telephone Interconnect equipment.

Digital Voice - Identifies repeater channels capable of processing high speed digital communications.

Data - Identifies channels designated to process data transmissions from Mobile data terminals (MDT).

Channel Test - Assigns a set of channels for special assignment to selected radios and groups used for system test and diagnostics.

Allowed CC - Identifies channels which are allowed to operate as the Control Channel if necessary.

Wide Area - Identifies channels which are connected to a Multisite network and can be used for wide area communications.

Downlink - Designates a channel number to be used as a downlink to the Multisite coordinator or console.

NOTE

These cannot be RF Channels.

MC Partition - Identifies the Multiple Channel Partition number assigned to the channel.

MC Partition Enabled - Indicates if the site's Multiple Channel Partitioning function is enabled.

EDACS System Manager		Site Reconfiguration		[SMGTGT] EGESYSMGR	
Selected Site					
Site Number : 3			Site Name : TESTSITE		
Channel Configuration 1:5					
	Database			Site	
	1	2		1	2
	1234567890123456789012345			1234567890123456789012345	
RF	YCYNNNNNNNNNNNNNNNNNNNNNN		Y	YYCNNNNNNNNNNNNNNNNNNNNNN	
Interconnect	NNYNNNNNNNNNNNNNNNNNNNNNN		N	NNYNNNNNNNNNNNNNNNNNNNNNN	
Digital Voice	NNNNNNNNNNNNNNNNNNNNNNNNNN		N	NNNNNNNNNNNNNNNNNNNNNNNNNN	
Data	YYYYNNNNNNNNNNNNNNNNNNNNNN		N	YYYYNNNNNNNNNNNNNNNNNNNNNN	
Channel Test	NNNNNNNNNNNNNNNNNNNNNNNNNN		N	NNNNNNNNNNNNNNNNNNNNNNNNNN	
Allowed CC	YYYYNNNNNNNNNNNNNNNNNNNNNN		N	YYYYNNNNNNNNNNNNNNNNNNNNNN	
Wide Area	YYYYNNNNNNNNNNNNNNNNNNNNNN		N	YYYYNNNNNNNNNNNNNNNNNNNNNN	
Downlink	NNNNNNNNNNNNNNNNNNNNNNNNNN		N	NNNNNNNNNNNNNNNNNNNNNNNNNN	
MC Partition	11111111111111111111111111		N	11111111111111111111111111	
MC Partitioning Enabled : N					
Perform Test Calls After Reconfig : Y					
(F6 = Exit) (F8 = Stop Connect Attempt) (F10 = Reset Data)					
(F14 = Toggle Search Key) (Do = Reconfigure Site) (Find = Site List)					

Figure 6-2. Channel Reconfiguration (Function #20 or 1:5)

Perform Test Call After Reconfig - This field instructs the Test Unit when to perform test calls on the new channel configuration, when enabling an RF Channel.

Y (default) -Indicates you want the Test Unit to initiate a test call immediately after reconfiguration in which an RF Channel is turned on.

N - Indicates you want the Test Unit to perform its test call using its normal sequence testing.

21) CALL PARAMETERS

The Call Parameters function defines the Channel Assignments Parameters for the selected site. An example of this screen is shown in Figure 6-3.

Channel Assignment Parameters Panel

The data presented in the Channel Assignment Parameters panel represents the current site database as defined using the Site Definition function (Database panel) and the existing configuration stored at the Site Controller (Site panel).

The following brief field definitions are for convenience only. For complete field descriptions and the associated default settings, refer to the Site Definition - Channel Assignment Parameters panel, Function #10, 2:4.

NOTE

The Message and Transmission Conversation Limits set maximum call duration limits, however, under normal operating conditions, the actual call duration may be the set limit plus 15 seconds. (For example; if the limit is set to 300 seconds, the actual duration of the call may be up to 315 seconds long.) For Sites using the GETC Group 4 merge code, this additional time is reduced to less than 2 seconds.

Message Conv Limit - Sets the conversation time limit for message trunked calls.

Transmission Conv Limit - Sets the conversation time limit for transmission trunked Calls.

Interconnect Hang Time - The time between an unkey command (also referred to as releasing the PTT) and channel drop for telephone interconnect calls.

Emergency Hang Time - The time between an unkey command (also referred to as releasing the PTT) and a channel drop for emergency calls.

Rotate Assignments - Automatically rotates Working Channel assignments.

Assign Chan Ascending - Uses the ascending sequence for assignments. If set to "N," then channels are assigned in a descending sequence.

Recent Call Queue Int - During times when calls are queued, the queue priority of a call may be increased by one half. The queue priority is incremented if the time between the last call request and current request is less than the recent call queue interval.

Max # Concurrent Intcon - Sets the maximum number of simultaneous telephone interconnect calls permitted on the site. This applies to all types of Telephone Interconnect.

Max # Concurrent Indiv - Sets the maximum number of simultaneous individual calls permitted on the site.

EDACS System Manager		Site Reconfiguration		[SMGTGT] EGESYSMGR	
Selected Site					
Site Number : 3			Site Name : RADIOLAB		
Channel Assignment Parameters 2:5					
	Database	----	Site		
Message Conv Limit	30	N	30		
Transmission Conv Limit	30	N	30		
Interconnect Hang Time	30	N	30		
Emergency Hang Time	0	N	0		
Rotate Assignments	Y	N	Y		
Assign Chan Ascending	N	N	N		
Recent Call Queue Int	5000	N	5000		
Max # Concurrent Intcon	2	Y	1		
Max # Concurrent Indiv	20	N	20		
(F6 = Exit) (F8 = Stop Connect Attempt) (F10 = Reset Data)					
(F14 = Toggle Search Key) (Do = Reconfigure Site) (Find = Site List)					

Figure 6-3. Channel Assignment Parameters (Function #21 or 2:5)

22) TEST PARAMETERS

The Test Parameters function defines the Site Test Parameters for the selected site. An example of this screen is shown in Figure 6-4.

Site Test Parameters Panel

The data presented in the Site Test Parameters panel represents the current site database as defined using the Site Definition function (Database panel) and the existing configuration stored at the Site Controller (Site panel).

The following brief field definitions are for convenience only. For complete field descriptions and the associated default settings, refer to the Site Definition - Site Test Parameters Panel, Function #10, 3:4.

Test Unit Enabled - Enables the Test Unit for continuous monitoring of the Control Channel and periodic testing of the Working Channels.

NOTE

If an "N" is entered to disable the site Test Unit, Screen 40, Alarm Control Display, will indicate an alarm condition. User notification will depend on the type of notification selected.

Test Unit Type - Indicates if the Test Unit is installed at the site or a remote location. This is the same as the "Local Test Unit" field in screen #10, 3:4. Remote Test Units are used in Simulcast Systems.

Background Test Call Interval - Sets the length of time between background test calls.

NOTE

If the Background Test Call Interval is set to zero, background test calls will not be made. However, the Test Unit will continue to be used for Control Channel monitoring and recovery test calls.

Test Unit Poll Failure Level - Indicates the number of missed poll responses before a TU Failure is reported.

Power Monitor Unit Enabled - The Power Monitor Unit (PMU) monitors each channel's RF output power and the antenna's reflected power. Disabling the PMU will keep the Site Controller from reporting PMU alarms and acting on those alarms.

PMU Power Level - Sets the Output Power Level from which the PMU calculates the alarm threshold for each transmitter channel.

NOTE

If an "N" is entered to disable the Power Monitor Unit, Screen 40, Alarm Control Display, will indicate an alarm condition. User notification will depend on the type of notification selected.

EDACS System Manager		Site Reconfiguration		[SMGTGT] EGESYSMGR	
Selected Site					
Site Number : 3			Site Name : RADIOLAB		
Site Test Parameters 3:5					
Test Unit Enabled	Database		Site		
Test Unit Type	Y	N	Y		
	Local	Remote	Local		
Background Test Call Interval	1	N	1		
Test Unit Poll Failure Level	2	N	2		
Power Monitor Unit Enabled	Y	N	Y		
PMU Power Level	3	N	3		

(F6 = Exit) (F8 = Stop Connect Attempt) (F10 = Reset Data)
 (F14 = Toggle Search Key) (Do = Reconfigure Site) (Find = Site List)

Figure 6-4. Site Test Parameters (Function #22 or 3:5)

23) MISCELLANEOUS PARAMETERS

The Miscellaneous Parameter definitions under the Site Reconfiguration category defines the miscellaneous parameters for the selected site. An example of the Miscellaneous Parameters screen is shown in Figure 6-5.

Miscellaneous Parameters Panel

The data presented in the Miscellaneous Parameters panel represents the current site database as defined using the Site Definition function (Database panel) and the existing configuration stored at the Site Controller (Site panel).

The following brief field definitions are for convenience only. For complete field descriptions and the associated default settings, refer to the Site Definition - Miscellaneous Parameters Panel, Function #10, 2:4.

Morse Code ID Intrvl - The time interval between transmissions of the Morse Code site identification (ID).

Scramble Data Call Int - The system is capable of placing random data calls on working channels to discourage unauthorized monitoring of the system. This field sets the length of time, in seconds, between data calls. Setting this field to zero (0) disables the function

NOTE

This is not recommended for Simulcast Systems, and should be set to zero (0).

Activity Dump Threshold - The number of activity records accumulated by the Site Controller before the Site Controller attempts to download to the System Manager. There are a maximum of 16,384 records. It is recommended that this value not be set below 500 or above 5000 records, except by EGE. Setting the value to zero (0) will stop the Site Controller from downloading activity records. However, the Site Controller will continue to accumulate activity records and will maintain up to a maximum of 16,384 records.

Assign Nonadjacent Chan - The Assign Non-Adjacent Channel field, when enabled, tells the Site Controller to use the non-adjacent channel assignment algorithm when assigning channels. If a non-adjacent channel is available, this assignment method will reduce the possibility of intermodulation.

N (default) - Directs the Site Controller to not use the non-adjacent algorithm when assigning channels.

Y - Directs the Site Controller to use the non-adjacent channel assignment algorithm when assigning channels.

EDACS System Manager		Site Reconfiguration		[SMGTGT] EGESYSMGR	
Selected Site					
Site Number : 3			Site Name : RADIOLAB		
Miscellaneous Parameters -----4:5					
	Database		----	Site	
Morse Code Id Interval :	15	N		15	
Scramble Data Call Int :	5	Y		0	
Activity Dump Threshold :	1000	N		1000	
Assign Nonadjacent Chan :	N	N		N	
(F6 = Exit) (F8 = Stop Connect Attempt) (F10 = Reset Data) (F14 = Toggle Search Key) (Do = Reconfigure Site) (Find = Site List)					

Figure 6-5. Miscellaneous Parameters (Function #23 or 4:5)

24) RELAY

The Relay definitions under the Site Reconfiguration category defines the relay settings for the selected site. An example of this screen is shown in Figure 6-6.

Relay Reconfiguration Panel

The data presented in the Relay Reconfiguration panel represents the current site database as defined using the Site Definition function (Database panel) and the existing configuration stored at the Site Controller (Site panel).

The following brief field definitions are for convenience only. For complete field descriptions and the associated default settings, refer to the Site Definition - Channel Configuration Panel, Function #10, 1:4.

Relay Number -. Identifies the numbers corresponding to the eight control output relays at the Test and Alarm Unit (TAU). The relays are latching and are used to control customer-supplied equipment.

N (default) - Identifies relays you want to remain in the reset state when the reconfiguration request is sent to the Site Controller..

Y - Identifies relays you want set when the reconfiguration request is submitted to the Site Controller.

NOTE

The System Manager treats this field as a single entry. You must enter all eight (8) characters, matching those not being changed, before sending the reconfiguration request.

EDACS System Manager		Site Reconfiguration		[SMGTGT] EGESYSMGR	
Selected Site					
Site Number : 3			Site Name : RADIOLAB		
Relay Reconfiguration 5:5					
Relay Number	Database	----	Site		
	12345678		12345678		
	NNNNNNNN	N	NNNNNNNN		
(F6 = Exit) (F8 = Stop Connect Attempt) (F10 = Reset Data) (F14 = Toggle Search Key) (Do = Reconfigure Site) (Find = Site List)					

Figure 6-6. Relay Reconfiguration (Function #24, 5:5)

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CHAPTER 7 - DEVICE COMMUNICATION

The Device Communication category allows the System Manager to perform the following functions:

- Transfer databases, defined in Database Maintenance, to all sites and devices.
- Collect activity data from a site.
- Monitor a site's activity on a real-time basis.

These features are particularly useful when optimizing or troubleshooting a system or just checking site operations. Database changes uploaded to the sites become effective immediately. The results from these changes can be observed by using the Site Monitor function or after a suitable operating period, the activity data may be downloaded and analyzed.

The Device Communication screen displays three functions. These functions are listed in the Device

Communication panel as 0, 1, and 2 and are described as follows:

30) Database Upload - The Database Upload function is used for transferring any new or modified databases, defined in the Database Maintenance functions, to the sites and/or devices.

31) Activity Download - The Activity Download feature is used when it is necessary to download all site activity.

32) Site Monitor - The Site Monitor function allows the you to monitor all site activity on a real-time basis.

Each of these functions has one or more data screen(s). To select one of these functions, highlight the desired function in the Device Communication panel or enter the function number as the Selected Menu Item. The selection is activated by pressing the **Return** or **Select** key.

```

EDACS System Manager V6.00      User Menu      [SMGTGT] EGESYSMGR

Selected Menu Item-----
Enter Menu Item : 30

Menu Selections-----
Main Categories-----
1) Database Maintenance
2) Site Reconfiguration
3) Device Communication
4) Alarm Control
5) Radio Control
6) Reports
7) System Maintenance

Device Communication-----
0) Database Upload
1) Activity Download
2) Site Monitor

(F7 = Exit from System Manager) (F10 = Clear Menu Item)
(Select = Submit Current Menu Item)
  
```

Figure 7-1. User Menu - Device Communication

30) DATABASE UPLOAD

The Database Upload feature allows the System Manager to upload selected databases to the sites and devices.

Uploading the databases occurs automatically only when a Site Controller initially powers up. At this point, the restarting Site Controller requests the latest databases from the System Manager. The System Manager responds by sending the current databases to the site or device requesting the data. A Device requests database uploads only when directed by the Device's operator.

During normal day-to-day operations, the sites and devices will not be requesting database uploads. Therefore, any other uploading of the databases to the sites or devices must be made manually using this function. When the selected database data is distributed to the sites and devices, the new or modified data goes into effect immediately.

NOTE

Database records may be uploaded after creation, modification, or deletion by using the Upload Selection pop-up menu displayed before exiting the LID or GID Definition function.

The upload function allows you to upload new or modified records from the following databases, defined by the Database Maintenance functions:

- Logical ID (Unit)
- Group ID
- Telephone Line Definition
- Rotary Definition
- Toll Call Restrictions
- Alarm and Control Unit Parameters
- Site Names and Numbers

This function also allows you to upload the System Manager's current time to all connected Site Controllers and Devices.

NOTE

The Database Upload function cannot be used to upload new or modified site configuration databases. To upload site database records, use the Site Reconfiguration functions (User Menu items #20 thru #24) described in Chapter 6.

Select the Database Upload function (User Menu item #30) by highlighting "Database Upload" in the Device Communication panel or enter "30" as the Selected Menu Item and press the **Return** or **Select** key. The System Manager will display the Database Upload Request screen, as shown in Figure 7-2.

EDACS System Manager		Database Upload Request		[SMGTGT] EGESYSMGR	
All Sites and Devices					
Full Logical ID Database	: N	Logical ID Changes	: N		
Full Group ID Database	: N	Group ID Changes	: N		
Current Time	: N				
Sites Only			Devices Only		
Line Database	: N	Site Aliases	: N		
Rotary Database	: N				
Toll Call Database	: N				
ACU Alarm Masks	: N				
(F6 = Exit) (F10 = Reset Fields) (DO = Submit Uploads)					

Figure 7-2. Database Upload Request (Function #30)

The Database Upload Request screen contains three sections; All Sites and Services, Sites Only, and Devices Only. These sections and instructions for selecting databases are described in detail in the following paragraphs.

After making the desired selections, you must press the **Do** key to initiate the upload process. The System Manager starts the communication process as indicated by the message "Upload Requests Submitted." It then attempts to communicate with each site and device. If the System Manager is unable to establish a communication link with the site or device uploader, it will so indicate with a banner message "Site (Device) XX (Device Number) Uploader Not Found."

After establishing upload communication links with the remaining sites and devices, the System Manager begins the transfer process. When the database transfer is complete, the System Manager will display a banner message indicating the site (device) number, the database type (LID, GID, Line, etc.) and whether the upload was successful or failed (i.e., "Site 15 GID update upload successful" or "Site 3 LID upload failed.").

NOTE

All of the messages displayed during the upload process are also stored in the system's Event Log. To review the Event Log activity refer to the Event Log Display (User Menu item #68) in the Reports chapter.

All Sites and Devices

The All Sites and Devices section is used to indicate whether or not to distribute the full Logical ID and/or Group ID databases or just database changes to all sites and devices. This section is also used to upload the current time to all sites and devices.

NOTE

Full Upload - All records are sent.

Devices - After completing the upload process, Devices use the new database and wipe out their old database.

Site Controllers - On completion of the upload process, Site Controllers will :

- Invalidate all non-uploaded GIDs.
- Copy the system ID (16383) into all non-uploaded LIDs. If 16383 does not exist in the upload, then the Site Controller will use whatever was the last uploaded, or a default record of "Invalid," if no record was ever uploaded.

Changes only - Only those records created, modified, or deleted since the last upload are sent.

Devices and Site Controllers - Take the change records as they come, and do nothing to the LIDs or GIDs which are not uploaded.

Any record which has been deleted by the System Manager will have a default record sent as a replacement. Devices see a record which is cleared, and not enabled for Wide Area operations etc.

Site Controllers only - The LIDs use 16383's record in the System Manager's database, GIDs use an "Invalid" record.

Full Logical ID Database - Use this field to select all Logical (unit) ID database records for the upload process.

Y - To upload all Logical ID database records to all sites and devices. (LID Changes field must be "N.")

N (default) - All LID database records will not be included in the upload.

Logical ID Changes - Use this field to upload only those LID records which have been created, modified, or deleted since the last upload process.

Y - To upload LID database records with changes since the last upload. (Full LID field must be "N.")

N (default) - Changed LID records will not be uploaded separately.

Full Group ID Database - Use this field to select all Group ID database records for the upload process.

Y - To upload all Group ID database records to all sites and devices. (GID Changes field must be "N.")

N - GID database records will not be included in the upload.

Group ID Changes - Use this field to upload only those GID records which have been created, modified, or deleted since the last upload process.

Y - To upload GID database records with changes since the last upload. (Full LID field must be "N.")

N (default) - Changed GID records will not be uploaded separately.

Current Time - Use this field to request that the System Manager send the current system time to all sites and devices. System time is set using the procedures outlined in Chapter 2 - System Manager Set up.

Y - To transfer the current time to all sites and devices.

N (default) - Time will not be sent.

NOTE

For systems that use the Coordinated Universal Time (UTC) option, the System Manager periodically downloads the time from the CEC/IMC. When the System Manager uploads the system time to the CEC/IMC, the CEC/IMC connected to the UTC option will acknowledge receiving the time upload, but will ignore the data. The specific action taken by the CEC/IMC upon receiving the time message depends on its configuration. The configuration is set up using the CEC/IMC Manager (MOM PC).

Sites Only

The following databases are uploaded to sites only. Any or all of these databases may be transferred along with the LID and GID selections previously described.

Line Database - Indicate if the Line database records, defined using function #14, will be included in this upload.

Y - To include the Line database records in the upload.

N (default) - Line records will not be included in this upload.

Rotary Database - Indicate if the Rotary database records, defined using function #13, will be included in this upload.

Y - Indicates the Rotary database records will be sent to the site when the upload is initiated.

N (default) - Rotary records will not be included in this upload.

Toll Call Database - Indicate if the Toll Call Restrictions database records, defined using function #15, will be included in this upload.

Y - Indicates the Toll Call Restrictions records will be sent to the sites when the upload is initiated.

N (default) - Toll Call Restriction records will not be included in this upload.

ACU Alarm Masks - Indicate if the Alarm and Control Unit parameters database will be included in this upload.

Y - Indicates the ACU Alarm Mask (Parameters) database will be transferred to the sites during this upload.

N (default) - ACU Parameters will not be included in the upload.

Devices Only

This section is used when it is necessary to upload the Site number and Name to the CEC/IMC Manager via the CEC/IMC (EGE Switch). This data allows the CEC/IMC Manager to associate the Site Name (alias) with the Site Number. The alias is then passed on to the consoles for use by console operators.

Site Aliases - Indicate if the all Site Numbers and their associated names will be uploaded to the devices during this upload process.

Y - Indicates all site names and numbers will be uploaded to the devices.

N (default) - Site names and numbers will not be included in this upload.

31) ACTIVITY DOWNLOAD (Mid)

The Site Controllers continuously monitor the EDACS site and log all call requests, channel dispositions (assignments and disassignments), channel or equipment failures, and alarm information. These activities are formatted into records and stored. Under normal circumstances, the stored activity records are sent to the System Manager after reaching a preset volume. This preset volume, called the Activity Dump Threshold, is configured using the External Device Definition function - Site Parameters (User Menu item #10, 2:4).

The Activity Download function is a Mid-level feature which allows the System Manager to direct the selected Site Controller to download the site activity records (all records since the last download) immediately. These activity records are normally used in compiling the various management reports described in the Reports chapter of this manual. However, recent activity may be required to diagnose a problem or document a specific event.

Select the Activity Download function (User Menu item #31) by highlighting "Activity Download" in the Device Communication panel or enter "31" as the Selected Menu Item and press the **Return** or **Select** key. The System Manager will display the Activity Download Request screen shown in Figure 7-3.

Selected Site Panel

The Selected Site panel is used to identify which site will be sent the activity download request.

Site Number - This is the numeric designation of the site as defined in Database Maintenance #10 - Site / Device Definition.

Enter the site number (**1 - 32**) or press the **Find** key to display a list of valid sites and associated names. Use the up and down arrow keys to highlight the desired site and press the **Select** key.

The desired site may also be located by repeatedly pressing the **F11** (Next Record) key to scroll through the site database.

Site Name - After the System Manager validates the site number in the Site Database, it will display the associated site name.

Do key - Pressing the **Do** key initiates the request to download activity records.

NOTE

Use the **F14** - Toggle Search key to change the search field. This allows you to select the site by entering a Site Name. For valid names, the System Manager will provide the corresponding Site Number.

```

EDACS System Manager      Activity Download Request      [SMGTGT] EGESYSMGR

Selected Site-----
Site Number :    5                      Site Name :  MSDS 3

(F6 = Exit) (F10 = Clear Record) (F11 = Next Record)
(F14 = Toggle Search Key) (Do = Request Download) (Find = Site List)
Press <Find> for a list of valid sites.
  
```

Figure 7-3. Activity Download Request (Function #31)

32) SITE MONITOR

The Site Monitor function allows you to monitor the site activity in a real-time mode. After selecting a valid site, the System Manager displays the status and activity of all channels. This information is continuously updated (once per second) by the Site Controller.

The uses of this function are too numerous to mention. However, it is particularly useful in diagnosing repeater problems. If, for example, a site seems to be experiencing problems with one of the channels, go to the Site Reconfiguration screen and enable the Test Unit with a short Test Call interval. Return to the monitor function and verify the test calls are being made and channels are being assigned properly. If a problem exists, it should be identified in the Channel Activity column of the Site Monitor display.

Select the Site Monitor function (User menu item #32) by highlighting "Site Monitor" in the Device Communications panel or enter "32" as the Selected Menu Item and press the **return** or **Select** key. The System Manager will display the Site Monitor site selection screen as shown in Figure 7-4.

Selected Site Panel

The Selected Site panel is used to identify which site will be monitored.

Site Number - This is the numeric designation of the site as defined in the Database Maintenance function - Site / Device Definition (User Menu item #10).

Enter the site number (**1 - 32**) and press the **Return** key or press the **Find** key to display a list of valid sites and associated names. Use the up and down arrow keys to highlight the desired site and press the **Select** key.

Site Name - After the System Manager validates the site number in the Site Database, it will display the associated site name.

Channel Monitor Panel

Immediately after pressing the **Return** key, or the **Select** key when selecting a site from the site list, the System manager will attempt to communicate with the Site Controller.

Successful connections are indicated by the message "Connected to site ..." and the System Manager will redraw the Site Monitor screen with the Channel Monitor panel as shown in Figure 7-5.

If the site is busy, the System Manager will continue attempts to make the connection as indicated by the message "Connecting to site, press **F8** to abort." This message will remain on the screen until the connection is successful, the Message Retry Attempt limit is exceeded as indicated by an unable to connect message, or the user aborts the process by pressing the **F8** key or selecting another site to monitor.

EDACS System Manager		Site Monitor		[SMGTGT] EGESYSMGR	
Selected Site					
Site Number : 7			Site Name : MODMTEST		
<p>(F6 = Exit) (F8 = Stop Connect Attempt) (Find = Site List)</p> <p>Connecting to site; press F8 to abort.</p>					

Figure 7-4. Site Monitor Selection (Function #32)

NOTE

If the site is down or the modem link is defective, as indicated by the SM-to-Site Comm alarm indication (see screen 40), the System Manager will immediately display the message "Unable to connect to site xx."

NOTE

If the site enters Failsoft, as indicated by the SysStatus Failsoft alarm (see screen 40), the Channel Monitor will cease updating activity information since the Site Controller is no longer acquiring real-time data.

NOTE

Dial-up sites can take several minutes to fail a communication attempt. The Dial Retry Attempts times the Carrier Detect Timeout determines the length of time.

When the Channel Monitor panel is displayed it will contain real time activity data similar to the example shown in Figure 7-5.

At the top right of the panel the System manager displays the current system date and time. If this information is incorrect, it can be changed by following the Set Date and Time instructions contained in Chapter 3.

The Channel Monitor panel also contains seven columns of information. The information reflects current channel activity and is updated once every second. The following information describes the purpose of each column:

CHAN - The **Channel Number** column, located on both the left and right sides of the panel, identifies the channel number. This makes associating the Site Status or Channel Activity to a channel number a little easier. In addition to 26 possible channels, the panel also displays four special channels 28 thru 31 which are not numbered. (Channel 27 is reserved and therefore omitted). The four special channels are Convert to Callee, Call Queued, System Busy, and Call Denied. The Call Denied channel activity is always the last entry.

Convert to Callee - Shows the last occurrence of a caller placing a call to a group which was already on channel.

Call Queued - Shows the last occurrence of a call being placed in the queue as a result of the system being fully loaded.

System Busy - Indicates the last occurrence when the system was unable to handle the call request.

Call Denied - Indicates the last occurrence when a caller requested a service which could not be performed.

EDACS System Manager			Site Monitor		[SMGTGT] EGESYSMGR	
Selected Site						
Site Number : 3			Site Name : RADIOLAB			
Channel Monitor					22-JUL-1994 14:43:34	
CHAN	STATUS	TIME	CALLER	CALLEE	CHANNEL ACTIVITY	CHAN
1	BUSY	09:44	0	0	GROUP0	1
2	FREE	14:43	16383	16383	SYSTEM	2
3	BUSY	09:44	0	0		3
25	FAIL	00:00	0	0	DOWNLINK CHANNEL	25
26	FAIL	00:00	0	0	DOWNLINK CHANNEL	26
		00:00	0	0	CONVERT TO CALLEE	
		08:39	6175	274	ENGR 2	
		08:41	12304	0	CALL QUEUED	
		10:12	6175	256	SYSTEM BUSY	
					CALL DENIED	

(F6 = Exit)

(F8 = Stop Connect Attempt)

(Find = Site List)

Connected to site...

Figure 7-5. Site Monitor Screen with Channel Monitor Display

NOTE

If the number of active channel downlinks and the four special entries is greater than 15, then some channel activity will flow over to a second page. You may toggle between pages by using the **Next Page** and **Previous Page** keys.

STATUS - The Status column indicates the current operating mode of the channel. This may be any one of the following modes:

OFF - This indicates the channel is defined in the database, but it is not currently available.

FAIL - The Fail status, shown bold and flashing, indicates the channel is configured for operation, but is not operational. The reason for this condition may be identified in the Channel Activity column.

FREE - The Free status, shown as normal text, indicates the channel is operational and available for use.

BUSY - The Busy status, shown in bold text, indicates the channel is in use. This may be for use as the Control Channel, Downlink Channel, Group call, individual call, etc.

BUSY - If the word BUSY is displayed in reverse video, the channel is in use for an emergency call.

Time - Indicates the time the call or event was initiated. This will not change until the channel status changes.

Caller - Identifies the originating caller by LID number and name.

Callee - Identifies the destination of the call by LID or GID number and name.

Channel Activity - A brief description of channel activity. (Group Call, Individual Call, GETC CommError, etc.). A complete listing of Channel Activity messages and their meaning can be found in Appendix A.

CHAPTER 8 - ALARM CONTROL

The Alarm Control category allows the System Manager to perform the following functions:

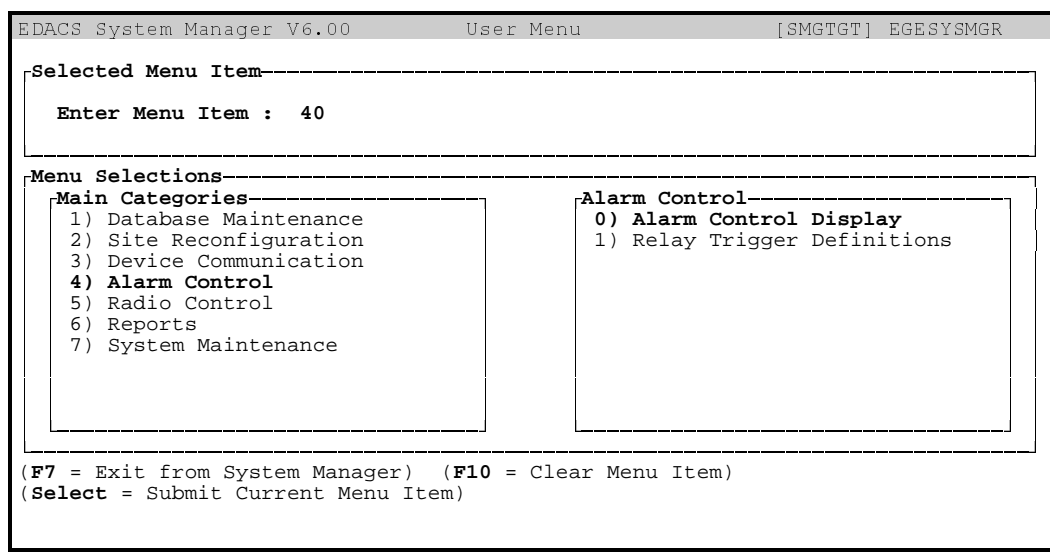
- Monitor alarms at a selected site.
- Enable the alarm notification feature.
- Acknowledge alarms issued by the Site Controller.
- Identify the type of alarm and the affected channels.
- Establish algebraic relationships between alarm events at one site for the purpose of triggering output ACU Relays at another site.

The Alarm Control screen displays two functions. These functions are listed as 0) and 1) under the Alarm Control panel in the User Menu screen shown in Figure 8-1. The two functions are described as follows:

40) Alarm Control Display - The Alarm Control Display allows you to continuously monitor the alarm status of a selected site. It also allows you to enable the alarm notification feature and to acknowledge alarms issued by the Site Controller.

41) Relay Trigger Definitions - The Relay Trigger Definitions function allows you to define a combination of alarm occurrences at a selected site or sites and use this alarm grouping to control ACU Relays at other sites.

To select one of the functions, highlight the desired function in the Alarm Control panel or enter the function's number as the User Menu Item number. Press the **Return** or **Select** key. The System Manager will display the entry screen for the function.



```

EDACS System Manager V6.00      User Menu      [SMGTGT] EGESYSMGR

Selected Menu Item-----
Enter Menu Item :  40

Menu Selections-----
Main Categories-----
1) Database Maintenance
2) Site Reconfiguration
3) Device Communication
4) Alarm Control
5) Radio Control
6) Reports
7) System Maintenance

Alarm Control-----
0) Alarm Control Display
1) Relay Trigger Definitions

(F7 = Exit from System Manager) (F10 = Clear Menu Item)
(Select = Submit Current Menu Item)
  
```

Figure 8-1. User Menu - Alarm Control

40) ALARM CONTROL DISPLAY (MID)

The Alarm Control Display is a mid-level feature which allows you to monitor alarm conditions at a selected site. If enabled, it will also notify the user by issuing an *alarm banner message*.

NOTE

Only those users permitted access to the Alarm Control Display will be able to receive alarm notification messages. Users not permitted access to this function will not receive notification.

When an alarm condition exists, the Site Controller logs the event in the Activity Log and immediately issues an alarm message to the System Manager. The System Manager notifies the user, if the notification feature is enabled, by generating an alarm banner indicating the site has an alarm condition.

The Alarm Display and Acknowledge screen allows you to view the alarms for the selected site. It also allows you to acknowledge the alarm. Acknowledging the alarm will clear the alarm indication if the cause no longer exists, or changes the alarm indication if the alarm is still active.

Select the Alarm Control Display function (User Menu item #40) by highlighting "Alarm Control Display" in the Alarm Control panel or enter "40" as the Selected Menu Item and press the Return or Select key. The System Manager will display the Alarm Display and Acknowledge screen, as shown in Figure 8-2.

Selecting a Site

The Selected Site panel is used to locate the site record in the alarm database.

Site Number - This is the numeric designation of the site as defined in Database Maintenance #10 - Site / Device Definition.

Enter the site number (**1 - 32**) and press the **Return** key.

or

Press the **Find** key to display a pop-up window containing a list of valid sites and associated names. Use the up and down arrow keys to highlight the desired site and press the **Select** key.

or

The desired site may selected by repeatedly pressing the **F11** (Next Record) key to scroll through the site database until the desired site is selected.

For valid sites, the System Manager will obtain the alarm data for the specific site and display the data in the Current Alarm panel. It also moves the cursor to the Site Name field and displays the associated Site Name stored in the site database.

Site Name - After the System Manager validates the Site Number in the Site Database, it will display the associated Site Name. If so desired, you may also select the site using the Site Name by pressing **F14** to make the Site Name the primary search key.

EDACS System Manager Alarm Display and Acknowledge [SMGTGT] EGESYSMGR			
Selected Site			
Site Number :	3	Site Name :	TestLab
Current Alarms			
RF GETCs:	123456789012345678901234	All GETCs:	12345678901234567890123456
Auxil	Phone
Carrier	Poll
Power	Turbo
Synth		
Voter		
Sw Audio		
Devices:	123456789012345678901234	PowerMontr:	
Intercon XXXX	Antenna Feed #1
PowerMontr XXXX	Antenna Feed #2
Test Unit		
ACU	12345678901234567890123456789012	SM to site:	
	SM/Site Comm Down
		DevPolling:	
		Test Unit
		PowerMontr
		Alarm/Cntl
		Intercon Line
		SysStatus:
		Failsoft
(F6 = Exit) (F11 = Next Record) (Insert = Enable Alm) (Remove = Disable Alm) (F13 = Ack Alm) (F14 = Toggle Search Key) (DO = Save Record) (Find = Site List)			

Figure 8-2. Alarm Display and Acknowledge Screen (Function #40)

Alarm Indications

The Display is used to set up notification conditions, Display alarm conditions, and to acknowledge the alarms.

When a monitoring device detects a fault condition, it notifies the Site Controller. The Site Controller logs the event in the Activity Log and then immediately issues the alarm message to the System Manager identifying the alarm type and channel. Depending on the fault, the Site Controller may also take the channel out of service or take some other predetermined action, such as moving the Control Channel.

If the notification feature is enabled for a user, the System Manager broadcasts the “Alarm Reported by Site xx” alarm banner message which is immediately displayed at the bottom of all of that user’s screens. The System Manager continuously updates the alarm messages every minute. This may be observed when there is more than one site affected.

The System Manager will flash the Alarm message for a particular site for one minute, then display the alarm message for the next site for one minute, and so on, until the last site is reached. At the end of the site sequence, the cycle starts all over again. The alarm banners will continue to be displayed until the alarms are acknowledged. New users logging into the system will therefore get updated as time progresses on the alarm status of the sites.

Alarm Notification

Initially, by default, all alarms for all channels are enabled for user notification, that is, to display the “Alarm Reported by Site xx” alarm banner. Channels with notification enabled are identified by the presence of a dot (·). If the notification feature is disabled for a user, then that user will not be notified when the System Manager receives an alarm message.

To enable the notification feature, perform the following steps:

1. Select the desired site.
2. Move the cursor to the desired alarm type and channel number.
3. Press the **Insert** (Enable Alm) key, a dot will appear at the selected location.
4. If you are finished making changes, press the **Do** key to save the record. The System Manager will display the message “Alarm enable data for Site xx has been saved.” Note, this action only saves enable/disable information.

To disable the notification feature, perform the following steps:

1. Select the desired site.
2. Move the cursor to the desired alarm type and channel number.
3. Press the **Remove** (Disable Alm) key, the dot will disappear leaving a space at the selected location.
4. If you are finished making changes, press the **Do** key to save the record. The System Manager will display the message “Alarm enable data for Site xx has been saved.” Note, this action only saves enable/disable information.

Alarm Display

When the site is selected, the System Manager reads data from memory as indicated by the message “Obtaining Alarm Data for a specific site...” Any alarms conditions identified by the Site Controller will be displayed as a diamond (♦) symbol corresponding to the type of alarm and channel. The Site Controller alarm data is continuously monitored and updated on the screen every ten (10) seconds.

The diamond indicates an alarm has been issued, bold indicates the notification feature is enabled, and flashing indicates an unacknowledged alarm. Table 8-1 shows the various alarm states and how they are displayed.

Acknowledging Alarms

When viewing the Alarm Display and Acknowledge Display screen, any alarms received will be identified by a diamond. The diamond may be bold or normal and steady or flashing.

A flashing diamond indicates the alarm has transitioned causing the Site Controller to issue an alarm message to the System Manager. A steady diamond indicates the alarm has been acknowledged, but the condition which caused the alarm still exists.

You can acknowledge all alarms enabled for notification by pressing the **F13** key. However, if the alarm is normal and flashing, then the alarm indication must first be enabled and the record saved before it can be acknowledged.

Table 8-1 - Alarm States

Alarm Symbol	Indication	Alarm Received ?	Banner Notification	Alarm Acknowledgment	Meaning
Space (Normal Font)		NO	Disabled		Indicates no alarms received and if an alarm is received the user will <u>not</u> be notified.
Centered dot (Normal Font)		NO	Enabled		Indicates no alarms received and if an alarm is received the user will be notified via an Alarm Banner message.
Diamond (Normal Font)	On - Flashing	YES	Disabled	Unacknowledged	Indicates an active alarm which has not been acknowledged and is not enabled for notification. No banner messages initiated. Alarm cannot be acknowledged using F13 .
Diamond (Normal Font)	On - Steady	YES	Disabled	Acknowledged	Indicates alarm has been acknowledged, however the condition that triggered the alarm still exists. Notification is disabled.
Diamond (Bold Font)	On - Flashing	YES	Enabled	Unacknowledged	Indicates an active alarm which has not been acknowledged by the user. A banner message indicating "Alarm Reported at Site xx" has been initiated.
Diamond (Bold Font)	On - Steady	YES	Enabled	Acknowledged	Indicates alarm has been acknowledged, however the condition that triggered the alarm still exists. Notification is enabled.

Use the following steps to acknowledge an alarm condition:

1. Select the site with unacknowledged alarm conditions. Flashing diamonds indicate alarms which have occurred since the last acknowledgment. Steady diamonds indicate alarms that are still active, but have been acknowledged.
2. If all alarm conditions are identified by a bold flashing diamond proceed to step 6. If an alarm is identified by a normal flashing diamond, then the alarm position must be enabled before it can be cleared.
3. Using the arrow keys, move the cursor to the position with a normal flashing diamond.
4. Press the **Insert** key to enable the alarm. Diamond will turn bold and continue to flash.
5. Save the enable data by pressing the **Do** key. The System Manager will display the message "Alarm Enable data for site xx has been saved."

NOTE

For Poll channel number 25 the diamond will return to its disabled state, this is normal operation.

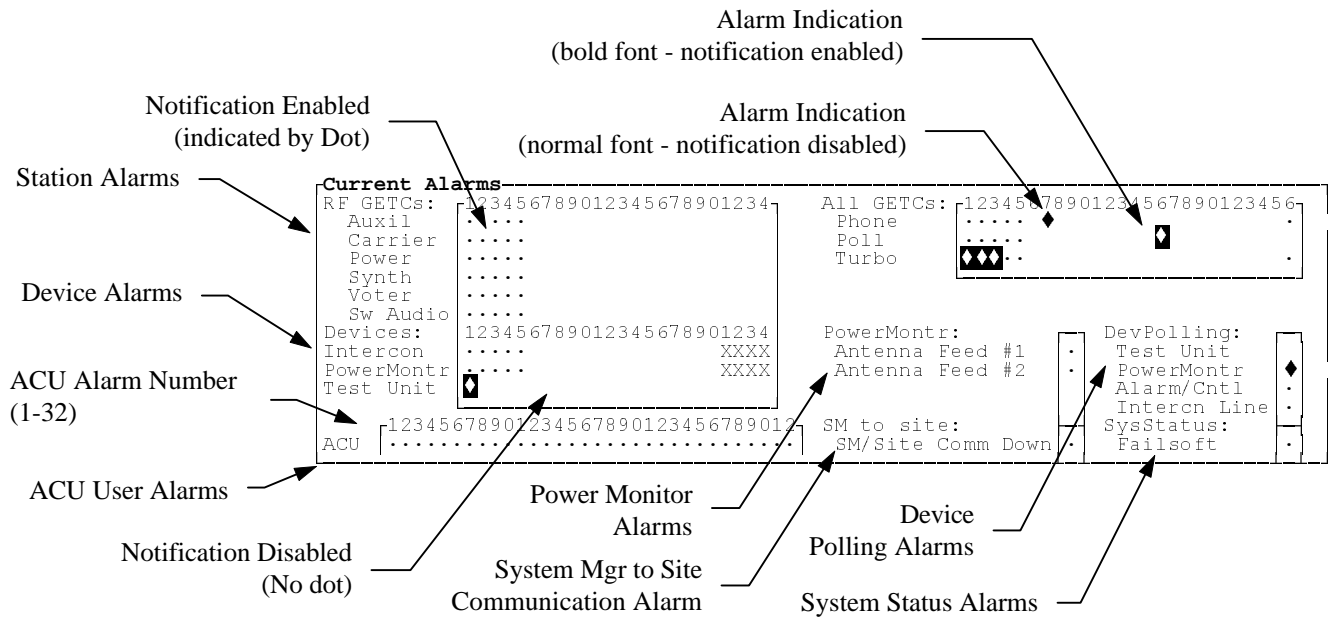


Figure 8-3. Current Alarms Panel

- Press **F13** to acknowledge all alarms. The System Manager will display the message "Acknowledging all enabled alarms for Site xx."
- If the condition which caused the alarm no longer exists, then the diamond will disappear. In example, an alarm was issued when a device failed to respond to Poll Messages, however before the alarm was acknowledged, the device started responding to Poll messages. The problem no longer exists and the diamond automatically disappears.
- If the diamond switches from a flashing state to a steady state, the cause of the failure still exists. This alarm indication will remain on the screen even if you exit the screen and then return. Only by fixing the problem can this be removed.
- If the condition which caused the steady diamond is corrected, then the diamond will disappear without further user action. The rational for this is the fact that you have already acknowledged the alarm condition.
- If the alarm condition persists, then the problem is probably caused by improper system configuration. In example, the device may be communicating, but is not configured in the System Manager or Site Controller and they perceive the device as not being installed.

Current Alarms

The Current Alarms panel, shown in Figure 8-3, can be functionally divided into seven sections, Station Alarms (RF GETCs and All GETCs), Device Alarms, ACU User Alarms, Power Monitor Alarms, System Manager Communication Alarms, Device Polling Alarms and System Status Alarms.

Station Alarms - RF GETCs

System Alarms are used to identify the alarm type and the affected channel. The alarm types are defined as follows:

Auxil - The Auxiliary alarm is issued when the Remote Test Unit notifies the Site Controller via the System Alarm and Control Point GETC, that a channel has failed. This alarm is typically used only with Simulcast systems. Details as to the specific cause of the alarm may be viewed using the Alarms Monitoring System.

Carrier - The Carrier alarm is issued when a Station GETC detects a carrier on the receiver when it should not be there. The GETC notifies the Site Controller of the unexpected carrier and the Site Controller reassigns the Control Channel to another GETC or stops assigning the GETC as a Working Channel until the problem clears.

Power - Each Station GETC can be configured to monitor its RF power level through a control line by the station or power sensor. If the power level drops below a threshold level an alarm condition exists. This may be caused by a PA failure, antenna failure, or high VSWR.

Synth - Each Station GETC monitors the Base Station synthesizer for a locked condition (MASTR III stations only) through a control line. If the GETC fails to detect the synthesizer locked condition, an alarm condition exists. This may be caused by a faulty synthesizer or failure of the GETC to load the synthesizer.

Voter - The GETC monitors the remote data (Rockwell modem) for error messages from the Voter. If Voter error messages are received, then an alarm condition exists. This may be caused by any number of Voter failures (refer to the Voter protocol specifications).

SW Audio - Alarms issued by the EGE switch indicating an audio failure at the switch.

Station Alarms - All GETCs

Phone - The Phone Line alarm is issued when the channel GETC fails to detect data coming from the voter in a voted system.

Poll - The polling alarm is issued when a Station GETC fails to respond to the Site Controller Poll message. The controller assumes the GETC is defective and does not assign it for use as a Control or Working Channel until it begins to respond to Poll messages again.

NOTE

Polling Channel 25 notification is currently disabled and as a result will always indicate that it is not enabled for notification.

Turbo - The main GETC processor and the Turbo board communicate through a specialized RAM interface. If communication is disrupted an alarm condition exists. This may be caused by a Turbo board failure, incorrect software version, or the Turbo Board may still be configured in the programming mode.

Devices:

Intercon - The Interconnect alarm is issued when a Repeater Interconnect Controller (RIC) fails to respond to Site Controller polling.

PowerMontr - A Power Monitor Unit alarm is issued when the transmitter's output power drops below the PMU Power Level set by the System Manager (see Site Test Parameters, User Menu item #10, 3:4). The PMU sends an Alarm Status message to the Site Controller, which takes the channel out of service.

NOTE

The PMU is an optional device which must be enabled by the System Manager (see Site Test Parameters, User Menu item #10, 3:4).

Test Unit - The Test Unit alarm is issued when the Test Unit detects a failure during RF testing of a Working Channel or if the High Speed Data transmission from the Control Channel is interrupted. When the failure is detected, the Test Unit notifies the Site Controller. The Site Controller then takes the channel out of service. If the channel is the Control Channel, the Site Controller also reassigns one of the Working Channels as the Control Channel.

NOTE

For a Working Channel to be assigned as a Control Channel, it must be an Allowed Control Channel (ACC) as defined in the Channel Configuration (User Menu item #10, 1:4).

The Test Unit must be enabled in order to function. When enabled, it will continually monitor the Control Channel. However, for background test calls to be made on the Working Channels, the Test Unit Background Test Call Interval must be between 1 and 1440 (see Site Test Parameters, User Menu item #10, 3:4).

SM To Site:

SM/site Comm Down - The System Manager to Site communication down alarm is generated when the System Manager EIO detects an interruption in the communication link between the System Manager and the site.

Device Polling Alarms

The Device Polling Alarms section indicates a real or perceived equipment failure. The alarms for the Test Unit, Power Monitor Unit, Alarm Control Unit, and the Line Interconnect Controller (LIC) may show up as a result of any one of following conditions:

1. **Polling Failure** - The Site Controller issues an alarm if the equipment is not responding to Poll messages. The Site Controller will always issue an alarm if the equipment is not installed.
2. **Equipment Disabled or Inactive** (PMU and TU only) - The Site Controller issues an alarm if the System Manager has directed it to disable the equipment (User Menu item #10, 3:4) or User Menu item #22. Screen #10 is mentioned because when the Site Controllers reboot, they will effectively reconfigure themselves.
3. **Faulting Out** (PMU and TU only) - The number of failed channels has exceeded a preset limit. The Site Controller disables the equipment responsible for most of the failures on the assumption it is falsely failing channels. The Site Controller will ignore any further alarm messages from the equipment.

The only way to determine the specific cause of the alarm is to review the Alarm Report. The Alarm Report will describe the cause for each External Device Activity entry.

Power Monitor Alarms

Antenna Feed #1 and #2- The Antenna Feed alarms are issued when the PMU determines the antenna VSWR (calculated from the Power Sensor's forward and reverse power measurements) has exceeded the threshold values programmed into the PMU.

NOTE

This will also show up as channel alarm 21 or 22.

System Status Alarms

Failsoft - The Failsoft alarm indicates the site is operating in the Failsoft mode. This alarm is sent by the Site Controller when the site has been forced into the Failsoft mode. However, the alarm indication may or may not be displayed if a malfunctioning Site Controller believes the site is in the Failsoft mode.

The SysStatus Failsoft alarm is not automatically cleared, therefore the user must press the **F13** key to clear the alarm indication.

ACU User Alarms

The ACU User Alarms section displays alarms issued by the Site Controller for the 32 user defined ACU alarm inputs. These alarms are defined using the Alarm Control Unit Definition Screen (User Menu item #16) in the Database Maintenance category and uploaded to the Site Controller. The Site Controller sends the alarm masks to the ACU which stores the masks in its database.

The alarm inputs may be used to monitor or sense other site equipment such as AC Power, door alarms, tower lights, etc. They may be activated using dry contacts such as relays, switch closures to ground (Active Low) or switch closures to a positive voltage (Active High).

The ACU continually scans the 32 alarm inputs, looking for changes from user-supplied alarm-sensing devices. The ACU uses the Active High/Low mask to determine the alarm state and the Enable/Disable mask to determine if it should report an alarm input or ignore it. If the ACU detects a change of state (i.e., a high to low transition for an Active Low) in an enabled alarm input, it sends a status message to the Site Controller. The status message contains the current condition of all 32 alarm inputs. The Site Controller then reports the alarm condition to the System Manager.

NOTE

The Major/Minor alarm mask is used by the ACU to determine which Alarm Unit Status Alarm LED to turn on. This information will also be included in the Alarm Report (User Menu item #65).

The System Manager displays the alarm diamond corresponding to the ACU Alarm Number. However, in order to determine the exact meaning of these alarms, you will have to refer to the ACU database for the site being examined.

41) RELAY TRIGGER DEFINITIONS (Mid)

The Relay Trigger Definitions function is a Mid-level feature which allows you to specify combinations of alarm events which will trigger one of the eight Alarm Control Unit (ACU) control output relays.

The Relay Trigger function allows you to define under what circumstances the relays will be Set or Reset. In addition you can define at which site the ACU control output relays are located, and if the relays can be reset after the condition which caused the alarm is cleared. These control outputs are customer defined and are typically configured as shown in Figure 8-5.

Select the Relay Trigger Definitions function (User Menu item #41) by highlighting "Relay Trigger Definitions" in the Alarm Control panel or enter "41" as the Selected Menu Item and press the Return or Select key. The System Manager will display the Alarms Activated Relays screen as shown in Figure 8-4.

The Alarms Activated Relays screen is divided into two panels, the Selected Relay panel and the Relay Trigger Definition panel. The Selected Relay panel is used to identify the output relay and the input site number. The Relay Trigger Definition panel is used to define the conditions under which the alarm triggers will cause the output relay to Set (Reset).

ACU Output Relays

The relay examples, Figure 8-5, are shown in the Reset configuration, relay contacts in the normally-closed (N.C.) position. In the Set configuration each control output relay would have the normally-open (N.O.) contacts closed. The

relay's normal state is defined using the Site Definition function (User Menu item #10, 1:4).

The ACU continually scans the 8 control output relay positions using the Set Relays message mask. This mask is uploaded to the Site Controller using the Relay Reconfiguration function (User Menu item #24). The Site Controller downloads the relay Set or Reset information to the ACU and the ACU responds by setting (or resetting) each control relay to agree with the mask.

Selecting the Relay

The Selected Relay panel is used to identify the ACU Output Relay, the Input Site, the normal relay state, if the alarm will reset, and the location of the selected output relays by designating the Output Sites.

Relay Number - The Relay Number field identifies the ACU Control Output Relay which will be triggered if the Input Site(s) meet the defined trigger conditions. The relay number corresponds to the control output relays at the Test and Alarm Unit (TAU) located at each site indicated in the Output Sites field.

Enter the relay number (1-8) in the Relay Number field.

Site # - The Site number field identifies the Input Site. After entering the site number, press the Return key. The System Manager will highlight the site number in the Input Sites field and display the associated Relay Trigger Definitions panel.

EDACS System Manager Alarm Activated Relays		[SMGTGT] EGESYSMGR
Selected Relay -----MODIFY		
Relay Number	: 1	Site # : 11
Normal State off (Y/N)	: N	
Reset if Alarm clears (Y/N)	: N	
Input Sites	12345678901234567890123456789012 NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN	
Output Sites	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN	
Relay Trigger Definitions -----		
Alarm Class	Alarm Triggers(N=NO,1=AND,0=OR)	Connect
Class 1 Poll	01234567890123456789012345678901	N
Class 2 TU	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN	N
Class 3 ACU	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN	N
Class 4 RF/IF	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN	N
Class 5 PMU	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN	N
(F6 = Exit) (F8 = Delete Record) (F10 = Clear Record) (F11 = Next Record) (Do = Save Record) (PF4 = Position to Relay Field)		

Figure 8-4. Alarm Activated Relays (Function #41)

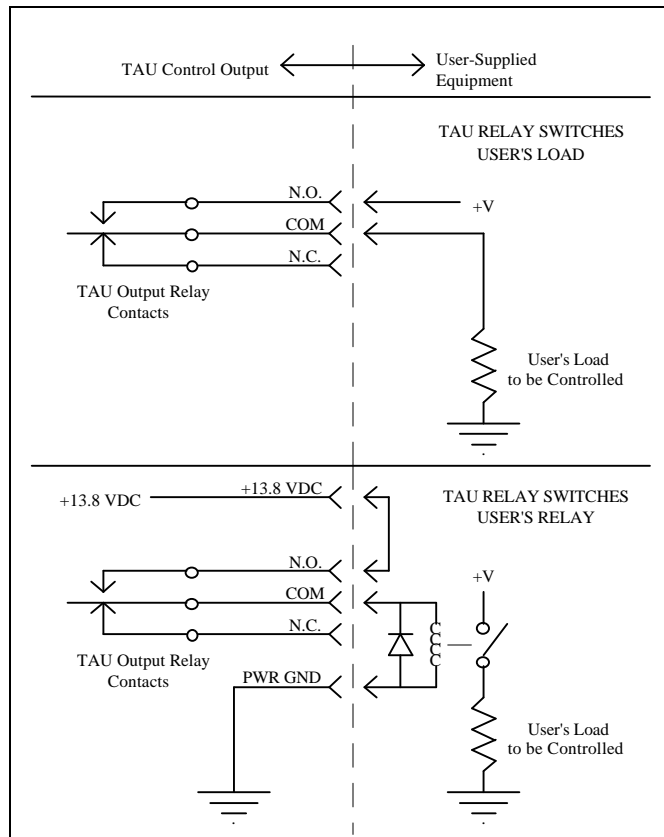


Figure 8-5. Typical Control Output Configurations

Normal State off (Y/N) - The "Normal State off (Y/N)" field indicates if the relay's normal state is Off or On. If the relay's normal state is Off (Yes) the relay is normally de-energized or in the Set (N.C.) condition as shown in Figure 8-5. If the relay is normally On (No), its normal state is energized or the Reset (N.C.) condition. This state is defined using the Site Definition function (User Menu item #10, 1:4).

N (default) - A No in this field indicates the relay is energized in the normal state.

Y - A Yes indicates the relay is de-energized in the normal state.

Reset if Alarm Clears (Y/N) - The "Reset if Alarm clears (Y/N)" field allows you to specify if the alarm will remain latched after the cause of the alarm is removed.

N (default) - Entering No latches the alarm state. The alarm will remain in this state even after the cause of the alarm is removed or corrected. To manually reset the relay, use the Relay Reconfiguration function (User Menu item #24).

Y - Entering a Yes allows the alarm to automatically reset when the cause of the alarm is removed or corrected.

Input Sites - The input site(s) (1-32) that will be issuing alarms which will be defined in the Relay Trigger Definition panel. By default the Site Number entered (Site #) will be highlighted and is selected.

N (default) - Indicates alarms issued by the site(s) will not be considered when defining alarm triggers.

Y - Indicates alarms issued by the site(s) will be used when defining the alarm trigger combinations. As a minimum, the site identified in the Site # field should be changed to "Y."

NOTE

At least one input site must be defined.

Output Sites - The Output Sites field indicates which site(s) (1-32) will receive the relay outputs. Relay outputs are sent to the site(s) when the conditions defined in the Relay Trigger Definitions panel are met. This allows controlling relays at multiple sites by alarms occurring at any other site(s).

N (default) - Indicates relay outputs will not be sent to this site.

Y - Indicates relay outputs will be sent to this site.

NOTE

At least one output site must be defined.

Relay Trigger Definitions

The Relay Trigger Definitions panel is used to indicate the alarm combinations needed to trigger the output relay. There are 15 classes shown on three panels. This panel allows you to indicate the combinations needed to trigger the relay for each of the alarm classes.

Alarm Classes

The various alarm classes are defined as follows:

Class 1 Poll - Poll Alarms issued by the Site Controller indicating a change in the state of a GETC; GETCs are located on RF and Downlink Channels.

Class 2 TU - Alarms issued when the Test Unit detects a Control Channel data failure or a Working Channel fails an RF test.

Class 3 ACU - Alarms issued by user equipment connected to any one of the 32 user alarm inputs on the Alarm Control Unit (ACU).

Class 4 SW Audio (formerly RF/IF) - Alarms issued by the EGE Switch for each channel indicating an audio failure at the switch.

Class 5 PMU - An alarm issued by the Power Monitor Unit indicating a change in state on an RF channel or antenna.

Class 6 RIC - Alarms issued when there is a change in state of a Repeater Interconnect Controller (RIC).

Class 7 Carrier - Alarms issued when a repeater GETC detects a carrier on its channel when there should not be any.

Class 8 Auxiliary - Alarms issued when a Control Point GETC initiates an alarm report for a channel (Simulcast systems).

Class 9 Turbo - Alarms issued when the communication between the GETC logic Board and the GETC Turbo Board is interrupted.

Class 10 FSL - The Frame Sync Link alarms (not currently available).

Class 11 Phone - Phone Line alarms are issued when a channel GETC does not detect data coming from a voter in a voted system.

Class 12 Synth Fail - The GETC Synthesizer Failure alarm (available with G6 or later).

Class 13 GETC Power - The GETC Power Failure alarm (available with G6 or later).

Class 14 Voter - Voter alarms are issued when the GETC receives Voter error messages (available with G6 or later).

Class 15 Ext_eqp_pow - Alarms issued when a piece of external equipment (such as a PMU, LIC, ACU, etc.) fails or has Faulted-out, or when a type of alarm (Phone, Aux, Carrier, FSL, Synth, or GETC Power) has faulted-out.

Alarm Triggers

The alarm trigger combinations may be defined as follows:

N (default) - An alarm issued does not cause the relay to set.

1 (one) - The output relay will be triggered only if all the selected alarms are issued. In other words, the Relay Trigger Definition performs a logical AND on the selected alarms in the same class. All alarms marked with a "1" must be issued before the output relay will be set.

0 (zero) - The output relay will be triggered if any of the selected alarms are issued. In other words, the Relay Trigger Definition performs a logical OR on alarms in the same class. This alarm causes the relay (if connected) to set, regardless of other alarm states.

NOTE

When setting the alarm triggers, the 32 numbered positions represent different inputs, depending on the type of alarm. Refer to the following section, *Alarm Trigger Definitions*, for the meaning of the 32 positions for each alarm class.

It is permissible to have both 1 and 0 triggers in the same class. Any or all of the alarm classes can specify triggers.

Alarm classes are logically OR'ed together. In example, if you have a class with a logical AND and another class with a logical OR the output of those two classes are OR'ed together.

If you have multiple input sites they are also OR'ed together.

Alarm Trigger Definitions

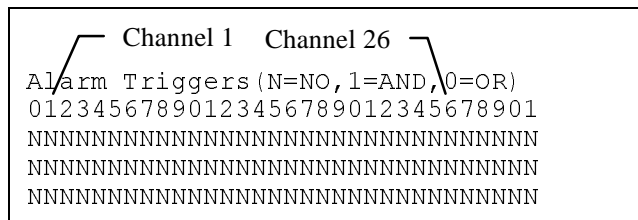
The Alarm Trigger section contains 32 positions for each class. The positions represent different values depending on the class type. For most classes these positions represent channels as described for the following classes.

Classes Using Channel Definitions:

1. Poller Alarm
2. Test Unit Alarm
4. SW Audio (formerly RF/IF) Alarm
6. RIC Alarm

7. Carrier Alarm
8. Auxiliary Alarm
11. Phone Alarm

Classes using the channel definitions use the following general rules.



1. Position zero (0) is never used, always enter "N."
2. Positions 27 thru 31 are not used and should always be "N."

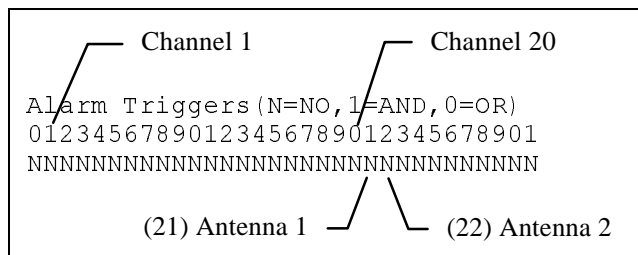
NOTE

The Site Controller is designed to handle 25 channels and one downlink channel.

3. For the RIC Alarm, positions 21 thru 26 are also not used and should be "N."

PMU Trigger Definitions

The Power Monitor Unit trigger definition positions are defined as follows:



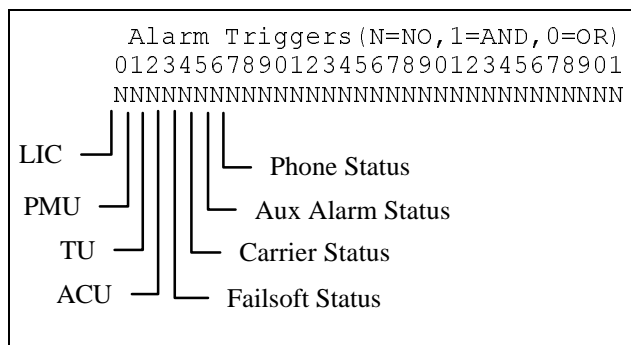
1. Position zero (0) is never used, always enter "N."
2. Positions 1 thru 20 are alarms for channels 1 thru 20 only.
3. Positions 21 and 22 are for antennas 1 and 2.
4. positions 23 thru 31 are not used.

ACU Trigger Definitions

The Alarm Control Unit trigger definition positions represent the 32 alarm leads on the ACU. These leads are connected to user supplied devices. Refer to LBI-38985 and LBI-31939 for details on connecting and using the ACU.

Ext_eqp_pow Trigger Definitions

The External device or equipment trigger definition positions are defined as follows:



0. Position zero (0) is defined as Site Down. However, the position is not currently being used, therefore always enter "N."
1. Position 1 represents the LIC. An alarm is issued if the device fails or has faulted-out.
2. Position 2 represents the PMU. An alarm is issued if the device fails or has faulted-out.
3. Position 3 represents the TU. An alarm is issued if the device fails or has faulted-out.
4. Position 4 represents the ACU. An alarm is issued if the device fails or has faulted-out.
5. Position 5 represents a Failsoft status. This position is used to indicate a communication problem between most of the site GETC's and the Site Controller. The Site Controller issues the alarm indicating the GETC's have faulted-out.
6. Position 6 represents Carrier Status. This results when the Site Controller determines that too many GETC's have reported a Carrier Alarm condition. The Site Controller issues the alarm indicating the GETC's have faulted-out.
7. Position 7 represents the Auxiliary Alarm Status. This results when the Site Controller determines that too many GETC's have reported a Auxiliary Alarm condition. The Site Controller issues the alarm indicating the GETC's have faulted-out.
8. Position 8 represents the Phone Line Status. This results when the Site Controller determines that too many GETC's have reported a Phone Alarm condition. The Site Controller issues the alarm indicating the GETC's have faulted-out.

NOTE

When the Site Controller issues an alarm resulting from a Faulted-out condition, it has determined that the device(s) sending the alarm is probably issuing false fault indications. The Site Controller will begin ignoring the alarms sent by the device and send a reset message to the GETC's.

9. Positions 9 thru 31 are not used. Always enter an "N."

Connect

After entering the Alarm Triggers for this class, it will be necessary to indicate if the relay will be connected to this class. This means that if the class is evaluated to a true condition, and the class is "connected" to the relay, then the relay's state will change to the opposite of its normal state. Not connecting a relay to a class will cause that class's trigger definitions (if any) to be used to keep the relay in its opposite state, until the alarms in that class clear.

Yes - Instructs the System Manager to connect the relay with the indicated site's alarm class; if the class evaluates TRUE then the relay will be triggered..

No - Indicates you will not be connecting the relay to this class on this site, for purposes of triggering the relay.

Saving the Trigger Definition Record

Before exiting or selecting another record, you should save the displayed record by creating a new record or updating the existing record.

Press the **DO** key to save the displayed record.

Function Keys

The following function key is unique to the Relay Trigger Definitions function:

PF4 - The PF4 function key is used to move the cursor directly to the Relay Number field.

Relay Trigger Definitions		
	Alarm Triggers(N=NO,1=AND,0=OR)	
Alarm Class	01234567890123456789012345678901	Connect
Class 6 RIC	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN	N
Class 7 Carrier	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN	N
Class 8 Auxilary	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN	N
Class 10 FSL	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN	N

Figure 8-6. Relay Trigger Definitions Panel, page 2

Relay Trigger Definitions		
	Alarm Triggers(N=NO,1=AND,0=OR)	
Alarm Class	01234567890123456789012345678901	Connect
Class 11 Phone	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN	N
Class 12 Synth Fail	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN	N
Class 13 GetC Power	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN	N
Class 15 Ext_eqp_pow	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN	N

Figure 8-7. Relay Trigger Definitions Panel, page 3

CHAPTER 9 - RADIO MONITOR AND CONTROL

The Radio Monitor and Control functions allow the System Manager to remotely enable, disable, or regroup selected radios. In the event a radio is stolen or lost, the unit can be disabled to prevent monitoring or transmitting on the system. When recovered, the unit can then be enabled to operate normally.

Dynamic Regrouping allows the operator to individually change the settings of user radios, forcing them to a new group if desired.

These functions also allow the System Manager, when connected to a multisite network, to identify a radio's selected site and group being used, or the usage of a group on all sites, in terms of the radios using the group.

There are four functions associated with the Radio Control category. These functions are listed in the Radio Control panel as 0, 1, 2, and 3 and are described as follows:

50) Unit Enable / Disable - The Unit Enable / Disable feature allows the user to remotely enable or

disable radios across all sites with Site Controllers linked to the System Manager.

51) Dynamic Regroup - This feature allows the user to reprogram or regroup selected radios into new talk groups across all sites with Site Controllers linked to the System Manager.

52) Multisite Unit Location - Select this feature if you need to determine the site and group location of any radio on an IMC or MSC.

53) Multisite Group Location - Use this feature to review a list of sites assigned to a multisite controller and the number of radio units on each site which are using the selected group.

Each of these categories has one or more field definition screens. To select one of these features, highlight the desired feature in the Radio Control panel or enter the menu item in the Selected Menu Item panel. The selection is activated by pressing the **Select** or **Return** key. The main screen for the selected feature will be displayed.

EDACS System Manager V6.00		User Menu	[SMGTGT] EGESYSMGR
Selected Menu Item Enter Menu Item : 50			
Menu Selections			
Main Categories 1) Database Maintenance 2) Site Reconfiguration 3) Device Communication 4) Alarm Control 5) Radio Control 6) Reports 7) System Maintenance		Radio Control 0) Unit Enable / Disable 1) Dynamic Regroup 2) Multisite Unit Location 3) Multisite Group Location	
(F7 = Exit from System Manager) (F10 = Clear Menu Item) (Select = Submit Current Menu Item)			

Figure 9-1. User Menu -Radio Control

50) UNIT ENABLE/DISABLE (Mid)

The Unit Enable/Disable is a Mid-level feature which allows the System Manager to disable radio units remotely. This feature is commonly used if a radio unit is stolen, or if a radio is disrupting communications on the system. The System Manager can also enable a previously disabled radio.

Select the Unit Enable/Disable function (User Menu item #50) by highlighting “Unit Enable/Disable” in the Radio Control panel or enter “50” for the Selected Menu Item and press the **Select** or **Return** key. The System Manager will display the Unit State Enable/Disable Screen as shown in Figure 9-2.

The Unit State Enable/Disable Screen contains two panels, the Selected Unit panel and the Current Status panel. The Selected Unit panel is used to identify the desired unit. The System Manager uses this information to ensure data entered is valid and displays the selected unit’s current operating status.

The Current Status panel, in addition to displaying the unit’s current status, is also used for disabling the unit, enabling a disabled unit, or to cancel pending operations.

Selected Unit Panel

The data entries in the Selected Unit panel identify the unit which will be enabled or disabled. When identification data is entered into any of the key fields, the System Manager will search the LID database for the corresponding record. Upon matching the entered data, the System Manager displays the corresponding ID

information in the other fields. Therefore, the data entered must match the identification data stored in the LID database. This information may be obtained by reviewing a list of valid units using the Logical Unit Report (User Menu item #61).

NOTE

If the System Manager responds with the message “Record locked to another user, try again later,” it is currently unable to open the record. This indicates the record is in use by another user or by the System Manager itself while performing background tasks.

NOTE

No LID record which has a group outside of a user’s A/F/S restriction will be displayed / selected. This means that a user can only enable or disable LIDs they are allowed to access.

When entering data, observe the following field conventions:

Unit Number - This field identifies the specific radio unit. Enter the unique Logical Identification (LID) number (0 to 16383) assigned to the unit in the LID database.

Physical ID - Enter a unique physical ID number (0-999999999) that identifies the radio unit.

Unit Type - Enter the description of the unit (mobile, portable, or Desktop). Press **Select** key for a pop-up

EDACS System Manager		Unit State Enable/Disable		[SMGTGT] EGESYSMGR	
Selected Unit					
Unit Number :	521	Unit Name :	PERS11		
Physical Id :	521	Serial Number :	521		
Unit Type :	PORTABLE	Asset Number :	521		
Current State					
Current State :	Enabled		Requested by:		
Desired State :	Enabled				
(F6 = Exit) (F10 = Clear Record) (F14 = Toggle Search Key) (Find = Find Unit) (F7 = Enable) (F12 = Disable) (F8 = Cancel)					

Figure 9-2. Unit State Enable/Disable (Function #50)

window, Figure 9-3, listing unit types. The Select Unit Type pop-up menu appears. Use the arrow keys to identify the desired unit type and press the **Select** key.

Unit Name - To identify the unit by using the Unit Name, enter the unique eight-character alphanumeric name (or

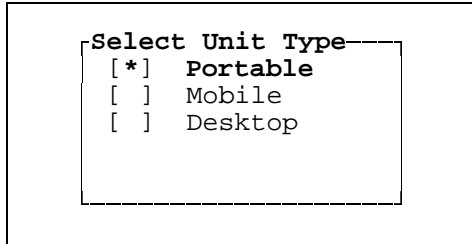


Figure 9-3. Select Unit Type

alias) which identifies the unit.

Serial Number - You may enter a serial number. However, since this field is not unique - it is possible to retrieve the identification of a radio model (i.e., MPA, MRK, MTD, etc.) with the same serial number which may or may not be the desired unit. If this field is used to identify the unit, the length of the number must not exceed 16-alphanumeric characters.

Asset Number - The Asset Number field may contain up to 16-alphanumeric characters. However, the System Manager is not setup to search for a matching record using this field.

Current State Panel

The Current State panel displays the operating status of the unit selected, a sample of this panel is shown in Figure 9-4. When a change is entered, the System manager immediately tries to communicate the changed information to all sites. The sites, in turn, contact the selected radio and initiate the change request. If the radio is not logged into a site, then the sites will continue to contact the unit until reset, told to stop, or they succeed in contacting the unit.

After the radio acknowledges compliance, the site controlling the radio informs the System Manager; the System Manager indicates the new status in the Current Status field and informs all other sites to cancel the request.

Current State - Displays the current operating state (enabled or disabled) of the radio.

Desired State - Displays the operating state desired. If the desired state is flashing, the state change is being sent to all sites. If the desired state is steady, the change has been completed or the system was unable to contact all sites (see Sites not reached).

Requested by - The requested by entry identifies the user making the change if the Current State is not the same as the Desired State.

Sites not reached - When one or more of the sites fail to acknowledge receipt of the state change request, the System Manager will indicate the number of sites not reached. It will also will continue attempts to contact these sites.

Selecting a Unit for Enable/Disable

The first step in enabling or disabling a radio unit is to identify or select the unit. When the Unit State Enable/Disable panel appears, the cursor is at the Unit Number prompt. By entering the Unit Number followed by the **Return** key, the System Manager will display the unit's identity (physical ID, Type, etc.) in the Selected Unit panel and the unit's current status in the Current State panel.

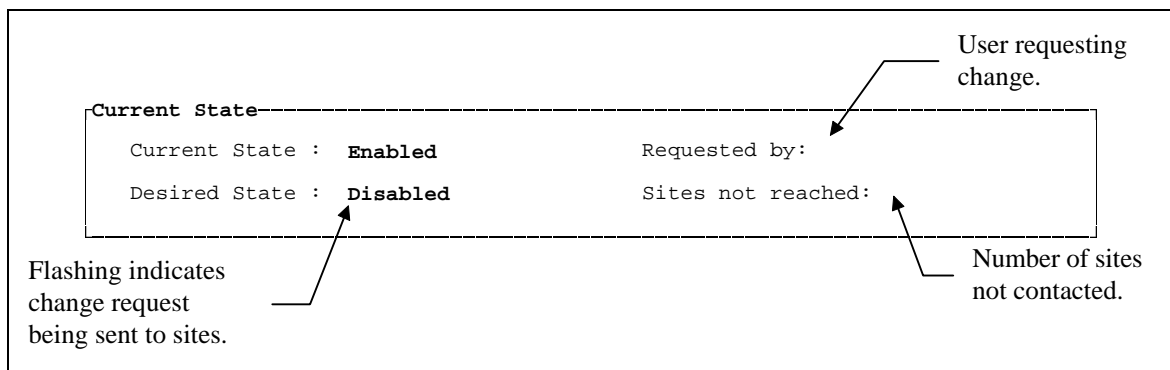


Figure 9-4. Current State Panel

If the Unit's Number is not known, the unit may also be selected by entering the Physical ID, Unit Name, or Serial Number.

NOTE

If the user tries to select a unit outside of their A/F/S range, an error message will be displayed.

Disabling A Radio

Radio Units can be temporarily disabled through the System Manager to prevent their unauthorized use. For the disable command to be effective, the radio unit must be operational and within range of a site. Use the following procedure to remotely disable a radio unit:

1. Select the desired radio unit.
2. Press **F12** to submit the disable request to all Site Controllers, as indicated by the flashing "Disabled" message as the Desired State.

The Site Controller will attempt to disable the radio unit. If the radio unit is successfully disabled, a confirmation message, "Unit (*selected ID*) has been disabled," will be displayed at the message location and the Current State will change to "Disabled."

If the radio is not operational at the site, the System Manager sends the request to the next site, if the change is still not successful after contacting all sites, the Desired State, "Disabled," will cease flashing. However, all sites have the disable request, thus the next time the radio unit logs onto the network - the request will be implemented.

If the system was unable to contact one or more sites and was unsuccessful in making the change, the panel will indicate the number of sites not contacted.

Enabling A Radio

Radio Units that have been temporarily disabled can be returned to service (enabled) by the System Manager. For the enable command to be effective, the radio unit must be operational and within range of a site. Use the following procedure to remotely enable a radio unit:

1. Select the desired radio unit.
2. Press **F7** to submit the enable request to all Site Controllers, as indicated by the flashing "Enabled" message as the Desired State.

The Site Controller will attempt to enable the radio unit. If the radio unit is successfully enabled, a confirmation message, "Unit (*selected unit number*) has been enabled," will be displayed at the message location and the Current State will change to "Enabled."

If the radio is not operational at the site, the System Manager sends the request to the next site, if the change is still not successful after contacting all sites, the Desired State, "Enabled," will cease flashing. However, all sites have the enable request, thus the next time the radio unit logs onto the network - the request will be implemented.

If the system was unable to contact one or more sites and was unsuccessful in making the change, the panel will indicate the number of sites not contacted.

Canceling a Remote Enable/Disable Request

You can cancel an enable or disable request through the System Manager. However, if the change action has been confirmed, then the cancel request will be ignored and have no effect on the radio unit.

Press **F8** to submit the Cancel request to the Site Controller. If the Cancel command is successful, the Desired State will revert to its previous condition.

51) DYNAMIC REGROUP (Full)

Dynamic Regrouping is a Full-level feature that allows radios to be remotely programmed with up to eight new communication groups.

This feature is particularly useful for reassigning a radio unit(s) to a new talk group(s) while the unit is in service or is unable to return to the shop for reprogramming.

Regrouping could also be used to reassign a stolen radio to a new special talk group instead of disabling the unit. This permits continued communication with the stolen unit, while possibly preventing it from monitoring or interfering with other communications.

During the regrouping process, the System Manager directs the individual units to operate in one of the following modes:

- Radio is forced to regroup and not permitted to change group selection.
- Radio is forced to regroup, however it has the option to change group selection.
- Radio is not forced to regroup, but the radio operator can manually select the new group or change that selection.

The individual radio units are selected, one radio at a time, and are given their regrouping instructions.

NOTE

No A/F/S restrictions apply. Units and groups can be selected / used without regard to restrictions.

Select the Dynamic Regroup function (User Menu item #51) by highlighting “Dynamic Regroup” in the Radio Control panel or enter “51” for the Selected Menu Item and press the **Select** or **Return** key. The System Manager will display the Dynamic Regroup screen as shown in Figure 9-5.

Selected Unit Panel

The Selected Unit panel identifies the radio selected for the regrouping process. The System Manager validates the Unit Number or Unit Name (whichever is entered) against the Logical Database (screen #11), and provides the other parameter. The System Manager will ignore any name or number entered which is not in the database.

Unit Number - Enter the Unit Number or Logical ID (1-16382) of the radio to be regrouped. When a Unit Number is validated, the Unit Name associated with it is displayed in the Unit Name field.

Unit Name - Enter the Unit Name (up to 8 characters) of the radio selected for regrouping. Like the Unit Number, when a Unit Name is validated, the Unit Number associated with it is displayed in the Unit Number field.

EDACS System Manager
Dynamic Regroup
[SMGTGT] EGESYSMGR

Selected Unit

Unit Number : 2310

Unit Name : RESCUE2

Regroup Settings

Group Set	Group Number	Forced	Captive	Current Radio Status
1	03	N	N	Not Regrouped
2	04	Y	Y	Not Regrouped
3	05	N	N	Not Regrouped
4	06	N	N	Not Regrouped
5		N	N	Not Regrouped
6		N	N	Not Regrouped
7		N	N	Not Regrouped
8		N	N	Not Regrouped

(F6 = Exit) (F7 = Clear Pending) (F8 = Cancel Regroup) (Do = Regroup Radio)
(F10 = Clear Field)

Radio #2310 for RESCUE2 is NOT regrouped.

Figure 9-5. Dynamic Regroup (Function #51)

Regroup Settings Panel

The Regroup Settings panel is used to identify the new talk groups and the operating parameters.

Group Number - Enter the Group Number (Group ID) (0-2047) of the talk group to program into the radio. The Group ID entered is validated against the Group ID Database (screen #12) and any numbers not defined in the Group ID Database are ignored.

After validating the number, the Group ID and the Group Name are displayed in a message identifying it as the current group for this setting. If a setting is not to be regrouped, the Group Number field should be left blank.

Forced - When Group ID's entered on this screen are fully programmed into the radio, the radio can be "forced" (changed) to one of the new groups.

Y - Forces to radio into the new group when Regrouped.

N - (default) Allows the radio to remain in its current group setting and the radio operator selects when to regroup.

NOTE

Since it does not make sense for more than one Group ID to be forced, only one Group ID can be designated "Y" in the forced column. If a Group ID is already forced (set "Y") and you attempt to force a second group, the original forced setting is deleted (reset to "N").

Captive - This field is used in conjunction with the forced field. The captive field determines if the radio operator will be allowed to switch from the forced group to another group.

Y - Radio operator will not be allowed to switch away from a forced group.

N - (Default) Forced Group ID (if any) may be deselected by the radio operator.

NOTE

A Group ID can only be captive if it is forced. If a non-forced Group ID is selected as Captive, the forced field is set to "Y" and any other forced field is reset to "N".

It also makes sense to have one regroup group for a radio if a captive regroup is desired.

Current Radio Status - This field displays radio Regroup status information. Valid radio states are:

- Not Regrouped
- Regrouped
- Regroup Pending
- Cancel Pending

When a radio is Regrouped or an existing Regroup is canceled, the radio acknowledges the completed action. A "Pending" status indicates that radio acknowledgment has not been received. A "Regrouped" or "Not Regrouped" status indicates that this action has been acknowledged by the radio and was successful or that no action has been attempted.

Dynamic Regroup Function Keys:

F6 Exit - pressing this key returns you to the User Menu of the System Manager.

F7 Clear Pending - pressing this key will cause the System manager to attempt to clear any pending regroup actions. However, even though the screen indicates pending, the regroup information may have already been transmitted to the unit.

NOTE

This key should only be used to clear a requested regroup or cancel regroup operation for a unit which the user knows will not respond. For example, certain software groups for the MPA and MRK radios do not support regroup fully or at all. This key can clear those regroup requests sent to such units.

F8 Cancel Regroup - A fully Regrouped radio can be returned to its normal (not Regrouped) state by pressing this key. If any statuses are still pending, this key has no effect.

NOTE

A radio must be fully Regrouped or not Regrouped before it can be canceled. Canceling an unregrouped radio doesn't really make sense, but it has no effect so it is allowed.

Do Regroup Radio - Press this key to regroup a radio with the Group IDs on the screen. A radio with Regroup settings already in it may be

Regrouped again; the old Regroup settings are merely overwritten with the new ones.

If any statuses are still pending, this key has no effect. A radio must complete the regrouping, clear pending, or cancel regroup before it can be regrouped again.

- F10 Clear Field** - This key clears a data entry field. It is provided as a convenience to the operator, saving the operator from excessive delete use.

Selecting a Unit for Regrouping

Select the unit for regrouping by entering either the unit's number in the Unit Number field or by entering the unit's name in the Unit Name field. Entering a valid Unit Number causes the unit name to appear. Entering a valid Unit Name causes the Unit's number to appear.

Regrouping a Radio

Use the following procedure to identify new talk groups and send the regrouping request to a radio unit in the field:

1. Select the radio unit for regrouping.
2. Move the cursor to the Group Number field for Group Set 1.
3. Enter the group number to be programmed into the radio. If a valid group is entered, a message is displayed indicating "*Group Number - Group Name* is the current group for this setting."

Repeat this step for each Group Set. If a Group Number is not going to be assigned, leave the Group Number field blank.

4. Determine if the radio will be forced into one of the new group(s). Enter a "Y" in the Forced field,

for the applicable Group Set, if the radio will be forced. Remember, the radio may only be forced into one (1) regroup setting.

5. If the radio is to be forced, determine if it will also be captive (unable to change group settings). Enter a "Y" in the Captive field, for the applicable Group Set, if the radio will not be allowed to change groups.
6. Complete the regrouping by pressing the **DO** key. The Regrouping request is sent to the Site Controllers which in-turn reprogram the radio. During this process, a message will be displayed indicating the radio's number and name, and the Current Radio Status (i.e., "*Radio Unit Number for Unit Name* Regroup Pending").

When the radio acknowledges the regrouping, the Regroup Pending status changes to "Regrouped."

Canceling the Regrouping

To cancel a regrouping, perform the following steps:

NOTE

Only radios fully Regrouped (i.e., not pending) can have the regrouping canceled and the radio unit returned to its normal (unregrouped) state.

1. Select the radio unit for regrouping.
2. Press the F8 key to initiate the action. The message "*Radio Unit Number for Unit Name* Cancel Pending" will be displayed.
3. After the radio unit acknowledges the cancellation the Current Radio Status will indicate "Not Regrouped."

52) MULTISITE UNIT LOCATION (Full)

The Multisite Unit Location is a Full-level feature which allows the user to locate the site and group into which a unit is logged.

Whenever a radio unit logs in after locking into a new Control Channel or changes groups, the Site Controller immediately transmits the unit's Logical ID and Group setting to the multisite controller. This information and site data is stored in the controller's database and is made available to the System Manager on request. Since all logins are recorded in the database, the System Manager is able query the multisite controller and obtain the current location (current site and current group) of any radio unit logged into the multisite network.

Select the Multisite Unit Location function (menu item #52) by highlighting "Multisite Unit Location" in the Radio Control panel or enter "52" for the Selected Menu Item and press the **Select** or **Return** key. The System Manager will display the Unit Location Display screen as shown in Figure 9-6.

Selected MSC Panel

The Selected MSC panel identifies the Console Electronics Controller (CEC) and Integrated Multisite and Console Controller (IMC), referred to as the EGE Switch, from which the System Manager will seek location information on the selected unit. The System Manager validates the EGE Switch Number or Name (whichever is entered) against the Device numbers contained in the Site/Device Database (screen #10).

MSC Number - Enter the number (33 to 64) assigned to the EGE Switch that contains the units to be tracked. The System Manager verifies the number is in the database and any invalid number is ignored. When the number is accepted, the corresponding name will be displayed.

If the number is unknown, use the **Find** key to display the Device Select panel, Figure 9-7, and highlight the EGE Switch of interest. Press the **F6** key to select the EGE Switch.

```

33 MSC2-B
35 TEST_MSC
39 REG2
40 EGE_SWIT
41 R2
42 T2

(F6 = Select and Exit)

```

Figure 9-7. Device Select Panel

MSC Name - The EGE Switch name field is automatically supplied by the external device database. The user cannot make inputs in this field. This field is for display purposes only.

EDACS System Manager		Unit Location Display		[SMGTGT] EGESYSMGR	
Selected MSC					
MSC Number :		33		MSC Name : MSC2-B	
Selected Unit					
Unit Number :		23		Unit Name : TEST UNIT	
Physical Id :		23		Serial Number : 23	
Unit Type :		MOBILE		Asset Number : 23	
Current Location					
Located on site :		/		Active in group : /	
(F6 = Exit) (F8 = Cancel Request) (F10 = Clear Record) (F11 = Next Record) (F14 = Toggle Search Key) (Find = Find Unit) Obtaining location from MSC; press F8 to cancel...					

Figure 9-6. Unit Location Display (Function #52)

Selected Unit			
Unit Number :	23	Unit Name :	TEST UNIT
Physical Id :	23	Serial Number :	23
Unit Type :	MOBILE	Asset Number :	23

Figure 9-8. Selected Unit Panel

Selected Unit Panel**NOTE**

No A/F/S restrictions apply.

Activating the Unit Location function is made by entering valid data in any field in the Selected Unit panel. The **F14** key moves the cursor between fields. After entering valid data, press the **Return** key to initiate the search.

Unit Number - Enter a valid Unit number, or Logical ID, for the radio to be located. The range of valid unit numbers is between 0 and 16383 (inclusive). Press the **Return** key to initiate the search.

The System Manager verifies the Unit Number and fills in the remaining Selected Unit panel fields with data from the Unit ID database. It then attempts to obtain the unit's location from the selected EGE SWITCH.

When the search is complete, the System Manager provides the Current Location or indicates why the unit was not located.

Physical ID - Provide the Physical ID number by using the **F14** key to position the entry cursor at the Physical ID field. Enter the unique number (0-9999999999) that identifies the radio unit. This is a 10 digit field.

To initiate the Unit Location function, press the **Return** key. The System Manager fills in the remaining Selected Unit panel fields with data from the Unit ID database and asks the selected EGE SWITCH for the Unit's location.

When the search is complete, the System Manager provides the Current Location or indicates why the unit was not located.

Unit Type - A unit may be located by entering its description (mobile, portable, desktop). Use the **F14** key to position the entry cursor at the Unit Type field.

Enter the unit type or press the **Find** for a list of valid unit types, highlight the desired unit type and press the **Select**

key. The Selected Unit panel will display the first unit in the database matching the selected unit type. Repeatedly press the **F11** (next record) key until the desired unit is displayed in the Selected Unit panel.

When the search is complete, the System Manager provides the Current Location or indicates why the unit was not located.

Unit Name - A unit may be located by entering its assigned name. Press the **F14** key until the entry cursor is at the Unit Name field.

Enter the unique eight-character alphanumeric name identifying the radio unit and press the **Return** key to initiate the search.

The System Manager fills in the remaining Selected Unit panel fields with data from the Unit ID database and asks the selected EGE SWITCH for the unit's location.

When the search is complete, the System Manager provides the Current Location or indicates why the unit was not located.

Serial Number - To locate a unit by entering its serial number, press the **F14** key until the entry cursor is at the Serial Number field. Enter the unit's serial identification number (may be up to 16 alphanumeric characters) and press the **Return** key to initiate the search.

The System Manager fills in the remaining Selected Unit panel fields with data from the Unit ID database and asks the selected EGE SWITCH for the unit's location.

When the search is complete, the System Manager displays the Current Location or indicates why the unit was not located.

Asset Number - To locate a unit by entering the Asset Number, press the **F14** key until the entry cursor is at the Asset Number field. Enter the unit's Asset Number (may be up to 16 alphanumeric characters) and press the **Return** key to initiate the search.

The System Manager fills in the remaining Selected Unit panel fields with data from the Unit ID database and asks the selected EGE SWITCH for the unit's location.

When the search is complete, the System Manager displays the Current Location or indicates why the unit was not located.

Current Location Panel

When the System Manager receives the site location and active group data from the selected EGE SWITCH, it displays this information in the Current Location panel. The information is provided in the following format.

Located on site - This field indicates the radio unit's current logged site (by number and name). This field is updated every 5 seconds to track the current logged site location for the radio unit.

Active in group - This field indicates the latest talk group (by number and name) used for communication by the radio unit. This field is updated every 5 seconds to track the groups used when the radio unit talks or changes group settings.

Unit Location Function Keys:

The following function keys are active with this display:

- F6 Exit** - Exits the screen and returns to the main menu of the System Manager.
- F8 Cancel Request** - Cancels a current unit location request session. After making a unit location request, the screen is updated every 5 seconds with the current unit location.
- F10 Clear Record** - Used to clear the current unit record on the screen.
- F11 Next Record** - Used to get the next radio ID and do a unit location on that radio.
- F14 Toggle Search Key** - Moves the entry cursor from field to field in the Selected Unit panel of the Unit Location Display screen.
- Find Find Unit** - Initiates the search for the unit identified in the Selected Unit panel.

Locating a Radio Unit

Use the following procedure when attempting to locate a radio unit using the Multisite Unit Location function:

1. Select the Multisite Unit Location function (User Menu item #52) from the User Menu. The System Manager will display the Unit Location Display screen (see Figure 9-6).
2. Enter the identification (number or name) of the EGE Switch linked to the sites where you expect to find the radio unit. Use the **Return** key or arrow keys and move to the Selected Unit panel (Figure 9-8).
3. Select the radio unit (subject of the search) by using **F14** key to move the entry cursor to the appropriate field and enter one of the following:
 - Unit Number (0 to 16383),
 - Physical ID (0 to 9999999999),
 - Unit Name (up to 8-characters),
 - Serial Number (up to 16-characters), or
 - Asset Number (up to 16-characters)

You may also move to the Unit Type field, select the radio type and scroll through a unit list, using the **F11** (next record) key to identify the radio unit.
4. After entering a data item, press the **Return** key. The System Manager will validate the entry against the Logical ID database and for valid entries, will fill in all the other data fields.

Press the **Find** key, the System Manager initiates the search by linking with the EGE Switch. The EGE SWITCH searches its database, and provides the System Manager with the location data for the radio unit in question.
5. Upon receiving the location data from the EGE SWITCH, the System Manager displays in the Current Location panel, the Site's number and name and the Group ID of the last group call performed by the unit.
6. Data in the Current Location panel is continuously updated every five (5) seconds. This will allow you to track the radio unit if it switches sites or talk groups.
7. To quit the operation press the **F8** (cancel) key or enter another radio unit.
8. To quit and exit the Multisite Unit Location function, press **F6**.


```

Select Group Type
[ * ] Agency
[   ] Fleet
[   ] Subfleet
[   ] Patch
[   ] Simulselect
[   ] Other
  
```

Figure 9-11. Select Group Type

The System Manager verifies the Group Number and fills in the remaining Selected Group panel fields with data from the Group ID database. It then attempts to obtain the group location from the selected MSC.

When the search is complete, the System Manager provides the Current Location information or indicates why the data was not obtained.

A/F/S - A set of three fields (one for agency number, one for fleet number and one for subfleet number). Use the **F14** key to position the entry cursor at the Agency field and enter the Agency number (1-7) followed by the **Return** key. Enter the Fleet number (0-15) and press **Return**, and enter the Subfleet number (0-15).

Pressing the **Return** key after entering the Subfleet number activates the Group Location Display - Current Location panel.

Group Name - You may use the Group Name field to activate the Current Location panel by pressing the **F14** key to position the entry cursor at the Group Name field.

Enter the Group Name (up to eight alphanumeric characters) identifying the desired group and press the **Return** key.

The System Manager validates the Group Name in the GID database and activates the Group Location Display - Current Location panel.

Group Type - You may use the Group Type field to activate the Current Location panel by pressing the **F14** key to position the entry cursor at the Group Type field.

Enter the Group Type description (up to eight alphanumeric characters), such as Agency, Fleet, Subfleet, Patch, SimulSelect, or Other. If the Group Type is unknown, use the **Select** key to display the Group Type panel, Figure 9-11, and mark the Group Type of interest. Press the **Select** key to make the selection.

After entering the Group Type and using the **F11** key to identify the desired group, press the **Return** key.

The System Manager validates the Group Name in the GID database and activates the Group Location Display - Current Location panel.

Current Location Panel

When the System Manager receives the group and site information from the selected MSC, it displays this information in the Current Location panel, Figure 9-12. The information presented includes all the site numbers and names and the count of radios in the talk group:

Site/Name - The Current Location panel lists all sites defined in the site/device database

Sites at which the selected group is active will display their number and name in bold type.

Count - The number of radios in the group on the site. This column is to the right of the Site/Name.

Group Location Function Keys

- F6 Exit** - Exits the screen and returns to the System Manager User Menu
- F8 Cancel Request** - Cancels the current Group Location request session. After a user has initiated a Group Location request the screen is updated every 5 seconds with the current group information.
- F10 Clear Record** - Clears the current group record on the screen.
- F11 Next Record** - Gets the next group ID and does a Group Location on that group.
- F14 Toggle Search Key** - Used to toggle the cursor between entry fields while in the Selected Group panel.
- Find Find MSC** - Lists the EGE Switch ID's when in the Selected MSC panel.
- Find Find Group** - In the Selected Group panel, it is used to select the subject group.

2. Enter the multisite system identification (number only) of the EGE Switch linked to the sites. Use the **Return** key and move to the Selected Group panel.
3. Select the Group (subject of the search) by using the **F14** key to move the entry cursor to the appropriate field and enter one of the following:

- Group ID (0 to 2047)
- A/F/S (Agency/Fleet/Subfleet) (customer specific),
- Group Name (up to 8-characters), or
- Group Type (up to 8-characters), or

If you are locating a Group based on the Group Type, use the **Select** key to view the Group Type list. Move the asterisk to the desired Group Type and press the **Select** key again. Next, select the specific Group by scrolling through the Group ID database using the **F11** (next record) key.

4. After entering a data item, press the **Return** key. The System Manager will validate the entry against the Group ID database and for valid entries, will fill in all the other data fields.

The System Manager then initiates the search by linking with the EGE Switch. The EGE Switch searches its database, and provides the System Manager with the location data for the group and radio units.

Using the Group Location Function

The following procedure may be used to review the active groups at each site and the distribution of radio units logged into the group at each site.

1. Select the Multisite Group Location function (item #53) from the User Menu. The System Manager will display the Group Location Display screen (see Figure 9-9).

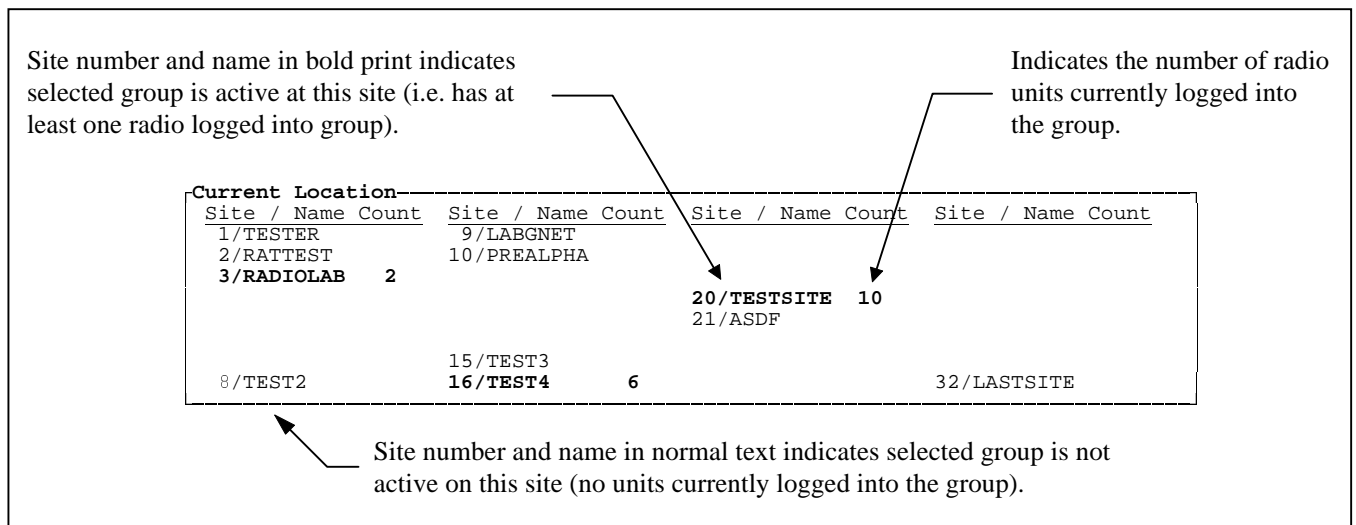


Figure 9-13. Current Location Panel

5. Upon receiving the location data from the EGE Switch, the System Manager displays, in the Current Location panel, the number and name for all sites defined in the Site/Device Database (screen #10), the sites where the Group is active, and the number of radios currently logged into the Group.
6. Location data displayed in the Current Location panel is continuously updated every five (5) seconds. This will allow you monitor group usage as required for troubleshooting.
7. To quit the operation press the **F8** (cancel) key or enter another radio unit.
8. To exit the Multisite Unit Location function, press **F6**.

CHAPTER 10 - REPORTS

The Reports category allows the System Manager to generate reports, display the event log, and view or print generated reports.

Using the appropriate function in the Reports category directs the System Manager to generate the following types of reports:

- Site and Device Reports
- Logical Unit Reports
- Group Reports
- Activity Detail Reports
- Activity Summary Reports
- Alarm Reports
- Channel Statistics Report
- Site Statistics Report

The eight report functions are listed in the Reports panel as menu item 0 thru 7. Item 8 is the Event Log Display and Item 9 is the Reports Manager.

The ten Report functions are described as follows:

60) Device Report - The Device Report function generates a report listing the configuration and parameters for each site or device. This data is defined and stored in

the Site/Device database using User Menu item #10. The report also lists the Rotary, Line, Toll Call, and ACU database data for each site. These databases are defined using User Menu items 13, 14, 15, and 16 respectively.

61) Logical Unit - The Logical Unit function generates a report listing the description and parameters for each logical unit (Portable, mobile, desktop, or console) assigned. This data is defined and stored in the Logical ID database using User Menu item #11. Use of this function is restricted by the A/F/S authorization of the user.

62) Group - The Group function generates a report listing the description and operating parameters of each radio talk group assigned. This data is defined and stored in the Group ID database using User Menu item #12. Use of this function is restricted by the A/F/S authorization of the user.

63) Activity Detail - The Activity Detail function generates a complete report of all site activity. This information is periodically or manually downloaded from the Site Controller to the System Manager.

64) Activity Summary - The Activity Summary function generates a report summarizing the site activity by type and number of calls.

65) Alarm - The Alarm function generates a detailed alarm report for each site. This report identifies the alarm type, the time the alarm occurred, and its cause.

The screenshot shows the EDACS System Manager V6.00 User Menu interface. At the top, the title bar reads "EDACS System Manager V6.00" and "User Menu" with a user identifier "[SMGTGT] EGESYSMGR". Below the title bar, a dashed box labeled "Selected Menu Item" contains the text "Enter Menu Item : 60". Below this, another dashed box labeled "Menu Selections" is divided into two columns. The left column, titled "Main Categories", lists: 1) Database Maintenance, 2) Site Reconfiguration, 3) Device Communication, 4) Alarm Control, 5) Radio Control, 6) Reports (highlighted), and 7) System Maintenance. The right column, titled "Reports", lists: 0) Device Report, 1) Logical Unit, 2) Group, 3) Activity Detail, 4) Activity Summary, 5) Alarm, 6) Channel Statistics, 7) Site Statistics, 8) Event Log Display, and 9) Reports Manager. At the bottom of the interface, a legend indicates: (F7 = Exit from System Manager), (F10 = Clear Menu Item), and (Select = Submit Current Menu Item).

Figure 10-1. User Menu - Reports

66) Channel Statistics - The Channel Statistics function generates a report, indicating hour-by-hour, the percentage of time available and percentage of time used for call activity for each channel at a site.

67) Site Statistics - The Site Statistics function generates a report, indicating hour-by-hour, the total number of calls processed by the site and the processing statistics for the calls.

68) Event Log Display - The Event Log Display is used to review all activity involving the System Manager. This information includes the User account name, date and time, and function performed.

69) Reports Manager - The Reports Manager function allows you to review the reports generated using functions 60 thru 67. These reports may be either printed out or viewed at the user's terminal, or deleted.

When selecting one of the functions, highlight the desired function in the Reports panel or enter the function's number as the User Menu Item number. Press the **Return** or **Select** key. The System Manager will display the data entry screen for the selected function.

NOTE

When generating reports, the System manager is only able to process (generate) ten (10) reports simultaneously per user. If it is necessary to generate additional reports, wait until the System Manager indicates it has completed generating one or more reports, bringing the number in process below ten.

NOTE

When viewing the list of reports in Reports Manager screen, be advised that reports still being generated will not be listed. When the System Manager displays the banner indicating the generation is complete, it will be necessary to exit the Reports Manager function and then reenter the function before the report will be listed.

NOTE

No more than four (4) reports of the same type for the same site (such as Activity Reports for Site 1) can exist at one time.

Trying to create a fifth (5th) such report will automatically delete the oldest report of that type for the site. Trying to create more than four (4) reports of the same type for the same site, **simultaneously**, is not recommended and will result in reports being deleted or not even started.

60) DEVICE REPORT

The Device Report function allows you to document the channel configurations and operating parameters for each site or device. You may use the function to generate any or all of the following reports:

- Site Database Report
- Toll Call Restriction Report
- Alarm Control Unit Report
- Interconnect Line Report
- Interconnect Rotary Report
- EGE Switch Report
- Radio Status Monitor Report
- Computer Aided Dispatch Report
- Remote System Manager Report

NOTE

The Reports Manager (User Menu item #69) refers to these reports as "Site Assignments."

The information for these reports is extracted from the following databases, set up using the User Menu functions indicated:

<u>Function</u>	<u>User Menu Function</u>
Site / Device Definition	10
Rotary Definition	13
Line Definition	14
Toll Call Restrictions	15
ACU Parameters	16

Select the Device Report function (User Menu item #60) by highlighting "Device Report" in the Reports panel or enter "60" as the Selected Menu Item and press the Return or Select key. The System Manager will display the Site/Device Report Menu as shown in Figure 10-2. Initially the screen contains three panels, the report selection panel, the Device Select Menu panel and the Report Contents Menu panel.

The report selection panel allows you to indicate if the report will be generated for all sites (ALL SITES), for individually selected sites (BY NAME), or for devices present in the system (OTHERS). Choose the report subject by highlighting one of the options and press the Select key.

When generating site reports the Device Select panel and the Report Contents Menu, shown in Figures 10-2 and 10-3 allow you to generate any or all of the reports for the selected site(s).

When generating device reports (OTHERS), the System Manager will display the Other Devices Selection Menu panel, as shown in Figure 10-10. This menu allows you to generate a report containing the communication parameters for any or all devices present in the system.

EDACS System Manager
Site/Device Report Menu
[SMGTGT] EGESYSMGR

BY NAME
ALL SITES
OTHERS

Device Select Menu

*** DEFAULT ***

Generate reports on all sites.

Report Contents Menu

1. Include All reports for selected Site(s).
- Specific Report Information**
2. Include Site Report.
3. Include Toll Report.
4. Include ACU Parameters Report.
5. Include Line Report.
6. Include Rotary Report.

Messages

(F6 = Exit)(F10 = Re-enter Defaults)(DO = Generate Report)

Use "Select" to choose reports on all sites.

Figure 10-2. Site/Device Report Menu - All Sites (Function #60)

Device Select Menu

When the System Manager displays the initial Site/Device Report Menu, by default, it highlights the "ALL SITES" option and the Device Select Menu indicates "***DEFAULT*** Generate reports on all sites," as shown in Figure 10-2. In this mode, the System Manager will generate the selected database reports for all sites in the system.

To generate reports for an individual site or sites, use the arrow keys to highlight the "BY NAME" option and press the **Select** key. The System Manager will display a pop-up window listing all sites assigned to the system, as shown in Figure 10-3. Use the arrow keys to highlight the desired site and press the **Select** key to tag [*] the site to be included in the report.

Report Contents Menu

The Report Contents Menu, shown in Figures 10-2 and 10-3, allows you to select which reports will be generated for the selected site(s). Select the desired report(s) by highlighting the report name and number and press the **Select** key. You may choose item 1 (default) which will include all reports (items 2 thru 6) or you may choose any or all of the specific reports. However, selecting any specific report will deselect item 1 - All reports and selecting item 1 will deselect any specific report.

Other Devices Selection Menu

The Other Devices Selection Menu, shown in Figure 10-10, allows you to generate a report containing the communication parameters for any or all devices present in the system. To select a device, use the arrow keys and highlight the desired device. You may choose item 1 (default) which will generate a report on all devices present in the system or select any or all of items 2 thru 5 to select specific device types. However, selecting any specific device type will deselect item 1 - All Devices and selecting item 1 will deselect any specific device types.

Generating a Site Database Report

Use the following procedure to generate a site database report:

1. Select the Device Report function from the User Menu by selecting Reports (User Menu item #60). Press the **Return** or **Select** key. The System Manager will display the Site/Device Report Menu.
2. Use the arrow keys and highlight "ALL SITES" (default) if the report will include all sites or "BY NAME" to include only a selected site and press the **Select** key. If "ALL SITES" is selected, skip to step 4.
3. If "BY NAME" is selected, the System Manager will display the Select Device pop-up window. Use the arrow keys to highlight the desired site and press the **Select** key.

EDACS System Manager Site/Device Report Menu [SMGTGT] EGESYSMGR

BY NAME ALL SITES OTHERS

Select Device

- [] 3 · RADIOLAB
- [] 5 · MSDS 3
- [] 6 · MSDS 4
- [] 7 · MODMTEST
- [] 9 · LABGNET
- [] 13 · DIGNIM
- [] 16 · PSTCIC
- [] 21 · ASDF

Report Contents Menu

1. Include All reports for selected Site(s).
- Specific Report Information
2. Include Site Report.
3. Include Toll Report.
4. Include ACU Parameters Report.
5. Include Line Report.
6. Include Rotary Report.

Messages

(F6 = Exit)(F10 = Re-enter Defaults)(DO = Generate Report)
Use "Select" to choose reports on all sites.

Figure 10-3. Site/Device Report Menu - By Name (Function #60)

4. Move the cursor to the Report Contents Menu.
5. Use the arrow keys to highlight the desired report type and press the **Select** key to complete the selection.
6. Repeat step 5 for each type of report to be included with the database report.
7. Press the **Do** key to generate the report. The System manager will issue the message "The system is processing your request. Please stand by."
8. When the system is ready, the System Manager will display the banner message "Site/Device report generation starting." When the report generation is finished the System Manager will report via the banner message "Site/Device report generation complete."
9. Exit the Device Report function by pressing **F6**.
10. Use the Reports Manager (User Menu item #69) to view and/or print the report. The Reports Manager will refer to this report as "Site Assignments."

Examples of the various site reports are shown in Figures 10-5 thru 10-9. Each field in the report corresponds to the same fields defined in the applicable database, except as noted.

When viewing the report(s), the System Manager will provide a cover page, as shown in Figure 10-4, indicating the type of report, the selected site or device, and the selected contents of the report.

References made in Figure 10-5, the Site/Device Database Report, correspond to the numbered configuration and parameter panels for function #10 - Site/Device Definition.

The Poll Failure level indicates the number of unacknowledged Polling messages sent to a device before the Site Controller removes the device from service and issues an alarm to the System Manager.

The Poll Recovery level indicates the number of consecutive polling messages a device must respond to before the Site Controller determines the device has returned to normal service.

Ericsson/GE EDACS		5-DEC-1994
Site/Devices Database Report		
All Sites	->By Name	Other Devices
Device Selected	Report Contents	
Name =SIM_SITE	1. Include reports on all other devices present in system.	
	---- Specific Device Reports ----	
	->2. Include Site Report.	
	3. Include Toll Report.	
	4. Include ACU Report.	
	5. Include Line Report.	
	6. Include Rotary Report	

Figure 10-4. Site/Device Database Report Cover Page

Ericsson/GE EDACS		5-DEC-1994	
Site Database Report		Page : 1	
Site 1			
Refer to function #10, 1:4	Site Number/Name	: 1 / SIM_SITE	
		1 2 2	
	Channel Configuration	: 1234567890123456789012345	
	RF	: NCNNNNNNNNNNNNNNNNNNNNNNNN	
	Interconnect	: NNNNNNNNNNNNNNNNNNNNNNNNN	
	Digital Voice	: NNNNNNNNNNNNNNNNNNNNNNNNN	
	Data	: NNNNNNNNNNNNNNNNNNNNNNNNN	
	Test	: NNNNNNNNNNNNNNNNNNNNNNNNN	
	Allowed Control Channels	: NYNNNNNNNNNNNNNNNNNNNNNNNN	
	Wide Area	: NNNNNNNNNNNNNNNNNNNNNNNNN	
Refer to function #10, 2:4	Downlink ports	: NNNNNNNNNNNNNNNNNNNNNNNNY	
	MC Partition	: 0111122223331111111111	
	Relay	: NNNNNNNN	
	MC Partitioning Enabled	: N	
	Trns Conversation Lmt-1s	: 600	Msg Conversation Limit-1s : 400
	Interconnect Hang Time-1s	: 30	Emergency Hang Time-1s : 2
	Morse Code Id Interval-1m	: 30	Recent Call Queue Int-1ms : 5000
	Scramble Data Call Int-1s	: 5	
	Rotate Assignments	: Y	
	Refer to function #10, 2:4 and 3:4	Max # Concurrent Intercent	: 2
Max # Concurrent Individual		: 20	
PMU Power Level		: 40	
PMU On?		: Y	
Activity Dump Threshold		: 1000	
Test Unit on?		: Y	
Test Unit Type		: LOCAL	
Background Testcall Int-1m		: 5	Respond to Carrier Failure : N
Respond to Ph. Line Failure		: N	Respond to Aux. Alarms : Y
Assign Channels Ascending		: N	Assign Non-Adjacent Channel : N
Refer to function #10, 4:4	Device Password	: XXX	Message Retry Attempts : 3
	Device Internal Id.	: 1	Dial Retry Attempts : 3
	Prime Line Phone No.	:	Attach Time Interval : 15
	Prime Line Port Name	: TTA3:	Acknowledgment Timeout : 5
	Prime Line Baud Rate	: 19200	Disconnect Hang Time : 10
			Sanity Poll Interval : 5
			Carrier Timeout : 60

Figure 10-5. Site Database Report Example

Ericsson/GE EDACS														8-AUG-1994			
Toll Call Restriction Report														Page : 2			
Site 1																	
Toll Call	Digits	Restriction Codes															
Restr. #		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
2	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
3	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
5	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
6	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
7	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
8	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
9	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
11	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
12	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
13	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
14	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
15	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
16	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

Figure 10-6. Toll Call Restrictions Report Example

Toll Call Restrictions defined in Function #15.

Ericsson/GE EDACS				8-AUG-1994			
Alarm Control Unit Report				Page : 3			
Site 1							
Alarm No/Name	Enable	Active High	Major Alarm	Alarm No/Name	Enable	Active High	Major Alarm
1/	N	N	N	2/	N	N	N
3/	N	N	N	4/	N	N	N
5/	N	N	N	6/	N	N	N
7/	N	N	N	8/	N	N	N
9/	N	N	N	10/	N	N	N
11/	N	N	N	12/	N	N	N
13/	N	N	N	14/	N	N	N
15/	N	N	N	16/	N	N	N
17/	N	N	N	18/	N	N	N
19/	N	N	N	20/	N	N	N
21/	N	N	N	22/	N	N	N
23/	N	N	N	24/	N	N	N
25/	N	N	N	26/	N	N	N
27/	N	N	N	28/	N	N	N
29/	N	N	N	30/	N	N	N
31/	N	N	N	32/	N	N	N

Figure 10-7. Alarm Control Unit Report Example

Alarm Control Unit entries defined in Function #16.

Ericsson/GE EDACS Interconnect Line Report								8-AUG-1994 Page : 4			
Site 1											
Line No	Pulse Dial	Line Avai	Line Dedic	Line No	Pulse Dial	Line Avai	Line Dedic	Line No	Pulse Dial	Line Avai	Line Dedic
1	N	N	0	2	N	N	0	3	N	N	0
4	N	N	0	5	N	N	0	6	N	N	0
7	N	N	0	8	N	N	0	9	N	N	0
10	N	N	0	11	N	N	0	12	N	N	0
13	N	N	0	14	N	N	0	15	N	N	0
16	N	N	0	17	N	N	0	18	N	N	0
19	N	N	0	20	N	N	0	21	N	N	0
22	N	N	0	23	N	N	0	24	N	N	0
25	N	N	0	26	N	N	0	27	N	N	0
28	N	N	0	29	N	N	0	30	N	N	0
31	N	N	0	32	N	N	0	33	N	N	0
34	N	N	0	35	N	N	0	36	N	N	0
37	N	N	0	38	N	N	0	39	N	N	0
40	N	N	0	41	N	N	0	42	N	N	0
43	N	N	0	44	N	N	0	45	N	N	0
46	N	N	0	47	N	N	0	48	N	N	0
49	N	N	0	50	N	N	0	51	N	N	0
52	N	N	0	53	N	N	0	54	N	N	0
55	N	N	0	56	N	N	0	57	N	N	0
58	N	N	0	59	N	N	0	60	N	N	0
61	N	N	0	62	N	N	0	63	N	N	0
64	N	N	0	65	N	N	0	66	N	N	0
67	N	N	0	68	N	N	0	69	N	N	0
70	N	N	0	71	N	N	0	72	N	N	0
73	N	N	0	74	N	N	0	75	N	N	0
76	N	N	0	77	N	N	0	78	N	N	0
79	N	N	0	80	N	N	0	81	N	N	0
82	N	N	0	83	N	N	0	84	N	N	0
85	N	N	0	86	N	N	0	87	N	N	0
88	N	N	0	89	N	N	0	90	N	N	0
91	N	N	0	92	N	N	0	93	N	N	0
94	N	N	0	95	N	N	0	96	N	N	0
97	N	N	0	98	N	N	0	99	N	N	0
100	N	N	0	101	N	N	0	102	N	N	0
103	N	N	0	104	N	N	0	105	N	N	0
106	N	N	0	107	N	N	0	108	N	N	0
109	N	N	0	110	N	N	0	111	N	N	0
112	N	N	0	113	N	N	0	114	N	N	0
115	N	N	0	116	N	N	0	117	N	N	0
118	N	N	0	119	N	N	0	120	N	N	0
121	N	N	0	122	N	N	0	123	N	N	0
124	N	N	0	125	N	N	0	126	N	N	0
127	N	N	0	128	N	N	0	129	N	N	0
130	N	N	0	131	N	N	0	132	N	N	0
133	N	N	0	134	N	N	0	135	N	N	0
136	N	N	0	137	N	N	0	138	N	N	0
139	N	N	0	140	N	N	0	141	N	N	0
142	N	N	0	143	N	N	0	144	N	N	0
145	N	N	0	146	N	N	0	147	N	N	0
148	N	N	0	149	N	N	0	150	N	N	0

Figure 10-8. Interconnect Line Report Example

Interconnect Line parameters defined in Function #14.

The Interconnect Line Report is continued on a second page for lines numbered 151 thru 255.

Ericsson/GE EDACS															
Interconnect Rotary Report															
Site 1															
Rotary Number	Line Selection														
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	6	0	0	8	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Figure 10-9. Interconnect Rotary Report Example

The Interconnect Rotary parameters are defined in Function #13.

Generating a Device Report

Use the following procedure to generate a device database report:

1. Select the Device Report function from the User Menu by selecting Reports (User Menu item #60). Press the **Return** or **Select** key. The System Manager will display the Site/Device Report Menu.
2. Use the arrow keys and highlight the "OTHERS" option and press the **Select** key. The System Manager will display the Other Devices Selection Menu.
3. Use the arrow keys to highlight the desired device type and press the **Select** key to complete the selection.
4. Repeat step 3 for each device type to be included in the report.
5. Press the **Do** key to generate the report. The System manager will issue the message "The system is processing your request. Please stand by."

6. When the system is ready, the System Manager will display the banner message "Site/Device report generation starting." When the report generation is finished the System Manager will report via the banner message "Site/Device report generation complete."
7. Exit the Device Report function by pressing **F6**.
8. Use the Reports Manager (User Menu item #69) to view and/or print the report. The Reports Manager will refer to this report as "Site Assignments."

Examples of the various device reports are shown in Figures 10-11 thru 10-13. The fields in each report correspond to the same fields defined in the applicable device database, except as noted.

To review the field descriptions, refer to the Site/Device Definition function (User Menu item #10). The field descriptions are contained in the sections for the Device Definitions, EGE Switch Definition, and Remote System Manager Definition.

EDACS System Manager		Site/Device Report Menu		[SMGTGT] EGESYSMGR
BY NAME		ALL SITES		OTHERS
Other Devices Selection Menu				
1. Include reports on All other device types present in system.				
Specific Device Reports				
2. Include EGE SWITCH reports. 3. Include RSM reports (Radio Status Monitor). 4. Include CAD reports (Computer Aided Dispatch). 5. Include REMOTE SYSTEM MANAGER reports.				
Messages (F6 = Exit)(F10 = Re-enter Defaults)(DO = Generate Report)				

Figure 10-10. Site/Device Report Menu - Others (Function #60)

```

Ericsson/GE EDACS                               11-JUL-1994
Site/Devices Database Report

All Sites      By Name    ->Other Devices

Other Devices Selection

->1. Include reports on all other devices present in system.

    ---- Specific Device Reports ----
    2. Include reports on EGE SWITCH.
    3. Include reports on RSM (Radio Status Monitor ).
    4. Include reports on CAD (Computer Aided Dispatch).
    5. Include reports on Remote System Managers.

Ericsson/GE EDACS                               11-JUL-1994
EGE Switch Report                               Page :    1

Device 33/TESTMSC2

Device Password      :                               Message Retry Attempts      : 3
Device Internal Id.  : 33                           Dial Retry Attempts      : 3
Prime Line Phone No. :                               Attach Time Interval      : 15
Prime Line Port Name :                               Acknowledgement Timeout   : 5
Prime Line Baud Rate : 19200                         Disconnect Hang Time      : 10
                                                Sanity Poll Interval      : 5
                                                Carrier Timeout           : 60

Communications Services

Time Source          : N
  
```

Figure 10-11. EGE Switch Report Example

```

Ericsson/GE EDACS                               11-JUL-1994
Computer Aided Dispatch Report                   Page :    2

Device 60/CADTEST

Device Password      : DFDTEST                       Message Retry Attempts      : 3
Device Internal Id.  : 64                           Dial Retry Attempts      : 3
Prime Line Phone No. :                               Attach Time Interval      : 15
Prime Line Port Name : LTA11:                       Acknowledgement Timeout   : 5
Prime Line Baud Rate : 19200                         Disconnect Hang Time      : 10
                                                Sanity Poll Interval      : 5
                                                Carrier Timeout           : 60

Device 63/STEVECAD

Device Password      : XXX                           Message Retry Attempts      : 3
Device Internal Id.  : 63                           Dial Retry Attempts      : 3
Prime Line Phone No. :                               Attach Time Interval      : 15
Prime Line Port Name : TTA3:                         Acknowledgement Timeout   : 5
Prime Line Baud Rate : 19200                         Disconnect Hang Time      : 10
                                                Sanity Poll Interval      : 5
                                                Carrier Timeout           : 60
  
```

Figure 10-12. Computer Aided Dispatch Report Example

Ericsson/GE EDACS	11-JUL-1994
Remote System Manager Report	Page : 3
Device 34/SMGTGTG2	
DECNET Node Name	: SMGTGT Remote Password: NEVERUSED
DECNET Address	: 44.498
Remote System Manager Group	: 2

Figure 10-13. Remote System Manager Report Example

61) LOGICAL UNIT

The Logical Unit report function allows you to generate reports containing the description and parameters for each logical unit (Portable, mobile, desktop, or console) defined. The source of this information is stored in the Logical ID database using User Menu item #11. The report provides information on the Logical Units according to the type of report selected, the range definition, and sort keys identified.

Select the Logical Unit report function (User Menu item #61) from the User Menu by highlighting "Logical Unit" in the Reports panel or enter "61" as the Selected Menu Item and press the **Return** or **Select** key. The System Manager will display the Logical Report Menu, as shown in Figure 10-14.

The Logical Report Menu screen consists of three panels; the Report Format panel, the Quick Select Menu panel, and the Quick Sort Menu panel. The Report Format panel allows you to generate a brief or full report.

The Quick Select Menu panel allows you to define the selection criteria of the report including the type of logical units contained in the report.

The Quick Sort Menu allows you to define the sort criteria or in what sequence the units will be listed. In example, sort by Unit Name, ID, Agency Name, etc.

Movement between the various fields may be made by using the arrow or Tab keys.

Report Format

Use the Report Format panel to indicate if the system will generate a brief or full logical unit report. A brief report contains only what is considered the more pertinent data, while a full report will contain all database information on the selected units.

To select the type of report, highlight either "BRIEF" (default) or "FULL" and press the **Select** key.

Quick Select Menu

The Quick Select Menu allows you to narrow the scope of the report by altering the range or number of Logical Units included in the report. For example, if you only need data for a specific set of units, then you could enter the lowest Unit ID Number and the Highest Unit ID Number to be included in the report. If the report is only concerned with one unit, then enter the Unit ID number as both the from and to numbers. The Range Definition section permits you to limit the scope of the report by entering the report limits based on Unit Name, Unit ID, Home Groups, Unit Type, etc., as defined below.

The entries made in these fields are based on the field definition entries made in the Unit Identification and Description fields in the Logical Unit Definition function (User Menu item #11).

Unit Name - The Unit Name field is based on the eight character, alphanumeric field in the LID database.

To report on a specific set of units by name, enter the range start alphanumeric, press the **Return** or **Tab** key

The screenshot shows the 'Logical Report Menu' window with a title bar containing 'EDACS System Manager', 'Logical Report Menu', and '[SMGTGT] EGESYSMGR'. The window is divided into three main sections:

- Report Format:** A panel with two buttons, 'BRIEF' (highlighted) and 'FULL'.
- Quick Select Menu:** A panel with the following fields:
 - Unit Name : To
 - Unit Id : 0 To 16383
 - Home Group: 0 To 2047
 - Unit Type : All Mobile Portable
 - Desk Top EGE Console
 - Other
 - Department:
 - Asset # :
 - Comment :
- Quick Sort Menu:** A panel with the following fields:

	Sort	Priority
Unit Name :	N	0
Unit Id :	N	0
Agency Name:	N	0
Serial # :	N	0
Home Group :	N	0
Unit Type :	N	0
Asset # :	N	0
Department :	N	0

Default Sort : Unit Id.

At the bottom, there is a 'Messages' section with the text: (F6 = Exit)(F10 = Re-enter Defaults)(DO = Generate Report) and a note: Use "Select" to choose the BRIEF report format.

Figure 10-14. Logical Report Menu (Function #61)

to jump to the range stop field. Enter the range stop alphanumeric and press the **Return** or **Tab** key to advance to the next range category.

The default range for this category is spaces and are considered by the system to be all inclusive (includes all Unit Names). When comparing characters, the system will follow the rules for ASCII characters.

Unit ID - The Unit ID field is used to identify which units will be included in the report based on the Unit ID defined in function #11, Selected Unit (1:5).

Default setting for the Unit ID range is 0 to 16383. If the range of unit ID numbers to be included in the report differs from the default setting, enter the desired start and stop ID numbers followed by the **Return** or **Tab** key.

Home Group - The Home group field is used to identify which units will be included in the report based on the Home Group assignments defined using function #11, Wide Area Parameters (3:5).

The default range for this field is 0 to 2047. If the report is to include only a specific Home Group or set of Home Groups, enter the appropriate start and stop group numbers and press the **Return** or **Tab** key.

Unit Type - A report may be generated based on the type of unit. The menu displays the various types of units including ALL types or one of the following:

- Mbl - Mobile units
- Port - Portable Units
- Dsktop - Desktop Units
- EGE Con - EGE Consoles
- Other

NOTE

CSI Consoles and Audio units are not currently supported.

The default selection is ALL. To generate a report for a specific unit type, highlight the desired type and press the **Select** key. Any type previously selected will be automatically deselected.

Department - The Department field is used to generate a report on a specific group of Logical Units assigned to a department or departments. The department assignments

are made using the Logical Unit Definition function (#11), Description (1:5).

By default this field is blank. To generate a report based on a department, enter the starting Department name associated with the radio units in the first field. Enter the ending Department name in the indented field below.

Asset # - The Asset number field is used to identify which units will be included in the report based on the assigned Asset Number defined in function #11, Selected Unit (1:5).

By default this field is blank. To generate a report based on the Asset Number, enter the alphanumeric starting Asset Number in the first field and enter the ending Asset Number in the indented field below.

Comment - The System Manager will allow you to generate a report based on first 16 characters entered in the Additional Comments field defined using the Logical Unit Definition function #11, Description (1:5)

By default this field is blank. To generate a report based on the Additional Comment, enter the alphanumeric starting Additional Comment (up to 16 characters) in the first field and enter the ending comment in the indented field below.

Quick Sort Menu

The Quick Sort Menu allows you to define the hierarchical structure of the report. This is accomplished by indicating which field the sort routine will key on and the priority (or structure) level of the selected sort key.

In other words, the Sort column allows you to select sort keys or items by which the data file is sorted, and the Priority column indicates the order in which they are selected.

The System Manager assigns the priority levels automatically in Sort field selection order. In other words, if the Unit Name is the first sort field selected (Y), then the Priority for the Unit Name field will be "1." If Unit ID is the second field chosen as a sort field, then the priority for the Unit ID field will be "2," the third field selected will be "3," and so on.

As an example, if the agencies in a system are to receive a report listing the units within each group assigned, the report structure might appear as follows:

Agency 1

Group 1

Unit 1

Unit 3

Group 2

Unit 2

Unit 4

Agency 2

Group 1

Unit 5

Unit 6

Then the quick sort selections would be as follows:

	Sort	Priority
Unit Name : N		0
Unit Id : Y		3
Agency Name: Y		1
Serial # : N		0
Home Group : Y		2
Unit Type : N		0
Asset # : N		0
Department : N		0
Default Sort :		

In this example, the first level in the report is by Agency, enter a **Y** next to Agency in the Sort column and press the **Return** or **Select** key. A "1" will appear in the Priority column for Agency, indicating the first level. The second level is by Home Group, enter a **Y** next to Home Group in the Sort column and press the **Return** or **Select** key. A "2" will appear in the Priority column for Home Group, etc.

If an error is made when selecting the sort fields, just enter "N" to deselect the field. The priority column for the selected item will automatically change to zero and the System Manager will renumber the remaining sort fields in the order selected.

The default for the Sort column is No (N), and the default for the Priority column is zero (0). By default, the reports are generated in Unit ID sequence.

Unit Database Report Generation

After determining the selection and sort criteria, it will be necessary to generate the report.

To generate the report, press the **Do** key. The System manager will issue the message "The system is processing your request. Please stand by."

When the system is ready, the System Manager will display the banner message "Unit Database report generation starting." When the report generation is finished, the System Manager will report via the banner message "Unit Database report generation complete."

To view the report, it will be necessary to exit this function and select the Reports Manager function (User Menu item #69). Look for reports named "Logical Units."

When viewing the Unit Database report, both Full and Brief reports, the System Manager will provide a cover page indicating the report selection and sort criteria as shown in Figure 10-15.

Figure 10-16 is an example of a Unit Database Full Report and Figure 10-17 is an example of a Unit Database Brief Report.

Ericsson/GE EDACS				8-AUG-1994	
Unit Database Report					
Full Report					
Selection Criteria			Sort Criteria		
Range			Sort Priority		
Unit Name :	-----	To -----	Unit Name :	N	0
Unit Id :		0 To 50	Unit Id. :	Y	3
Home Group :	-----	To -----	Agency Name :	Y	1
Unit Type :	->All Mbl Port DskTop		Serial Num :	N	0
	EGE Con Other		Home Group :	Y	2
Department :	-----	To -----	Department :	N	0
Comment :	-----	To -----	Asset :	N	0

Figure 10-15. Unit Database Full Report Cover Page

		Ericsson/GE EDACS		8-AUG-1994	
		Unit Database Report		Page : 23	
35	Unit Id/Name : 44	/ DEV CONS	Analog Voice Priority : 0		1
34	Physical ID : 44		Digital Voice Priority: 0	2	
33	Serial Number : 44		Data Priority : 0		3
32	Radio Asset : 44		Interconnect Priority : 0	4	
31	Home Group : 273	/ TEST 1	Inbound Interconnect : Y		5
30	Agency :		Channel Test : N	6	
29	Department :				
28	Prop. Asset :		Hang Time : 0	7	
27	Operator :				
26	Unit Type : PORTABLE				
25	Equip Asset :				
24	Home Site : 1	/ SIM_SITE	Toll Call Restriction : 0		8
23	Wide Area : Y		Rotary Number : 0	9	
22	MS Tracking : Y		Dedicated Line Number : 1		10
21	MS Confirm : N		Ext. Network : Y	11	
20	Home Switch : 33				
19	ID Partitionable: N		Primary Partition : 0	12	
18	Backup Condition	MC			
	Partition For Use	Partition			
	First Not Used				
	Second Not Used				
	Third Not Used				
		1 2 3			
17	Active Sites :	12345678901234567890123456789012	Current : ENABLED		13
16	MS Forced Sites:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN	Desired : ENABLED	14	
15	Comments :				

Figure 10-16. Unit Database Full Report Example

- Analog Voice Priority** - queued call level 0 (lowest) to 7 (highest), refer to function #11 - Radio Parameters panel (2:5).
- Digital Voice Priority** - queued call level 0 to 7, refer to function #11 - Radio Parameters panel (2:5).
- Data Priority** - queued call level 0 to 7, refer to function #11 - Radio Parameters panel (2:5).
- Interconnect Priority** - queued call level 0 to 7, refer to function #11 - Radio Parameters panel (2:5).
- Inbound Interconnect** - Unit allowed to receive inbound interconnect calls (Yes/No), refer to function #11, Radio Parameters panel (2:5).
- Channel Test** - Test channel partition enabled (Yes/No) (formerly referred to as Secondary Partition), refer to function #11, Radio Parameters panel (2:5).
- Hang Time** - Time between unkey and channel drop (seconds), refer to function #11, Radio Parameters (2:5).
- Toll Call Restriction** - Identifies Toll Call Restriction level (0 to 15) refer to function #11, Radio Parameters (2:5) and function #15 - Toll Call Restrictions defined.
- Rotary Number** - Specifies the phone line rotary hunt sequence (0 to 15), refer to function #11, Radio Parameters (2:5) and function #13 - Rotary Definition.
- Dedicated Line Number** - Outgoing call line restriction (0 to 255), refer to function #11, Radio Parameters (2:5) and function #14 - Line Definition.
- Ext. Network** - Indicates unit is enabled (Yes) or disabled (No) for operation with extended networks, refer to function #11 - Wide Area (3:5).
- Primary Partition** - Indicates partition to which unit is assigned, refer to function #11, MCP (4:5).
- Current** - Indicates the unit's current operating state (Enabled/Disabled), refer to function #50 - Unit Enable/Disable, Current State panel.
- Desired** - Indicates the unit's desired operating state, refer to function #50 - Unit Enable/Disable, Current State panel.
- Comments** - Additional descriptive information, refer to function #11, Description (1:5).
- MS Forced Sites** - Sites to which the CEC/IMC will unconditionally route individual calls (sites 1 to 32 - Yes/No), refer to function #11, Wide Area (3:5).

17. **Active Sites** - Sites available to the unit for wide area communications, refer to function #11, Wide Area (3:5).
18. **Backup Partition** - Identifies the three backup partitions, their condition for use, and which Multi Channel partition the backup partition is supposed to use. Refer to function #11, Multiple Channel Partitioning (4:5).
19. **ID Partitionable** - Indicates if the unit will be given active control channel assignments (at MCP enabled sites) based on the MCP backup partitions (Yes/No). Refer to function #11, Multiple Channel Partitioning (4:5).
20. **Home Switch** - Indicates the home CEC/IMC switch for unit's enabled for extended network, refer to function #11, Wide Area (3:5) and function #10, Device Definition.
21. **MS Confirm** - Indicates Confirmed Call Enabled (Yes). If unit is also wide area enabled, all calls to and from this unit must be confirmed. Refer to function #11, Wide Area (3:5).
22. **MS Tracking** - Indicates the Automatic Tracking feature is enabled (Yes) and IMC will route calls to unit at any site. Refer to function #11, Wide Area (3:5).
23. **Wide Area** - Indicates unit is enabled (Yes) for wide area communications. Refer to function #11, Wide Area (3:5).
24. **Home Site** - Indicate the Unit's home site and site's number and name (alias), refer to function #11, Wide Area (3:5).
25. **Equip Asset** - Indicates the information entered for Equipment Type, refer to function #11 - Description panel (1:5).
26. **Unit Type** - Identifies the Unit Type entered in the Selected unit panel, refer to function #11 - Unit Identification.
27. **Operator** - Name or code assigned to the unit's user, refer to function #11 - Description panel (1:5).
28. **Prop. Asset** - Property or inventory number or responsible individual, refer to function #11 - Description panel (1:5).
29. **Department** - Department or division to which unit is assigned, refer to function #11 - Description panel (1:5).
30. **Agency** - Agency to which unit is assigned, refer to function #11 - Description panel (1:5).
31. **Home Group** - Initial group assignment when wide area enabled, indicates GID and name (alias), refer to function #11, Wide Area (3:5).
32. **Radio Asset** - Indicates unit's unique Asset Number, refer to function #11 - Selected Unit panel.
33. **Serial Number** - indicates unit's serial number, refer to function #11, Selected Unit panel.
34. **Physical ID** - Indicates the unit's physical ID number for identifying the unit, refer to function #11, Selected Unit panel.
35. **Unit Id/Name** - Indicates the Unit's ID number (LID) and the Unit Name as defined in the Logical Unit Definition function #11.

Figure 10-17. Unit Database Brief Report Example

- 10-18**

62) GROUP

The Group report function allows you to generate reports containing the description and parameters for each Group defined in the System Manager GID database. This information is stored in the Group ID database using User Menu item #12 - Group Definition. The report is formatted according to the type of report selected (brief or full), the range definition, and sort keys identified.

Select the Group report function (User Menu item #62) from the User Menu by highlighting "Group" in the Reports panel or enter "62" as the Selected Menu Item and press the **Return** or **Select** key. The System Manager will display the Group Report Menu, as shown in Figure 10-18.

The Group Report Menu screen consists of three main panels; the Report Format panel, the Quick Select Menu panel, and the Quick Sort Menu panel. The Report Format panel allows you to select the which type of Group report, Full or Brief, will be generated.

The Quick Select Menu panel allows you to define the selection criteria of the report including the Group ID (GID), Group Name, and Group Type contained in the report.

The Quick Sort Menu allows you to define the sort criteria or in what sequence the units will be listed. In example, sort by Group Name, ID, Type, etc.

Movement between the various fields may be made by using the arrow or Tab keys.

Report Format

Use the Report Format panel to indicate if the system will generate a brief or full Group report. A brief report contains only what is considered the most pertinent data, while a full report will contain all database information on the selected groups.

To select the type of report, highlight either "BRIEF" (default) or "FULL" and press the **Select** key.

Quick Select Menu

The Quick Select Menu allows you to narrow the scope of the report by limiting the number of Groups included in the report. In example, if you only need data for a specific group or groups, then you could enter the lowest Group ID Number and the Highest Group ID Number to be included in the report. If the report is only concerned with one group, then enter the same number as both the from and to numbers. The Range Definition section permits you to limit the scope of the report by entering the limits based on Group Name, Group ID, Group Type, etc., as defined below.

The entries made in these fields are based on the field definition entries made in the Group Identification and Description fields in the Group Definition function (User Menu item #12).

Group ID - The Group ID field is used to identify which groups will be included in the report based on the Group ID defined in function #12, Selected Group (1:4).

Report Format	
BRIEF	FULL

Quick Select Menu	
Group Id :	Range Definition 0 To 2047
Group Name:	To
Group Type:	All Agency Fleet
Division :	Subfleet SAID Other

Quick Sort Menu		
Group Id :	Sort N	Priority 0
Group Name :	N	0
Agency Name:	N	0
Group Type :	N	0
Division :	N	0

Default Sort : Group Id.

Messages
 (F6 = Exit)(F10 = Re-enter Defaults)(DO = Generate Report)
 Use "Select" to choose the BRIEF report format.

Figure 10-18. Group Report Menu (Function #62)

Default range is 0 to 2047. If the range of group ID's to be included in the report differs from the default setting, enter the desired start to stop GID numbers followed by the **Return** or **Tab** key.

Group Name - The Group Name field defines which group(s) will be included in the report based on Group Name criteria. The Group Name is based on the eight character, alphanumeric names defined in the Group ID definition function #12, Selected Group (1:4).

Default range is blank and the report will not be limited by Group Names. If the report will be limited to specific group(s) based on names, then enter the starting and ending name to be included in the report followed by the **Return** or **Tab** key.

Group Type - Identify the specific type of group to be included in the report. The menu displays the type of groups available. The list includes ALL types or one of the following:

- Agn - Agencies
- Fleet - Fleets
- Subfl - Subfleets
- SAID - System Assigned ID
- Other

The default for this field is All (all groups). To generate a report for a specific group type, highlight the desired type and press the **Select** key. Any type previously selected will automatically be deselected.

Division - The Division field is used to generate a report on a specific Group assigned to a division(s). The Divisions assignments are made using the Group Definition function (#12), Description panel (1:4).

By default the field is blank. To generate a report based on the division, enter the starting division name in the first field and the ending Division name in the indented field below.

Quick Sort Menu

The Quick Sort Menu allows you to define the hierarchical structure of the report. This is accomplished

by indicating which field the sort routine will key on and the priority (or structure) level of the selected sort key.

In other words, the Sort column allows you to select sort keys or items by which the data file is sorted, and the Priority column indicates the order in which they are selected.

The System Manager assigns the priority levels automatically in Sort field selection order. In other words, if the Group Name is the first sort field selected (Y), then the Priority for the Group Name field will be "1." If Group ID is the second field chosen as a sort field, then the priority for the Group ID field will be "2," the third field selected will be "3," and so on.

If an error is made when selecting the sort fields, just enter "N" to deselect the field. The priority column for the selected item will automatically change to zero and the System Manager will renumber the remaining sort fields in the order selected.

The default for the Sort column is No (N), and the default for the Priority column is zero (0). By default, the report will be generated in Group ID sequence.

Group Database Report Generation

After determining the selection and sort criteria, it will be necessary to generate the report.

To generate the report, press the **Do** key. The System manager will issue the message "The system is processing your request. Please stand by."

When the system is ready, the System Manager will display the banner message "Group Database report generation starting." When the report generation is finished, the System Manager will report via the banner message "Group Database report generation complete."

To view the report, it will be necessary to exit this function and select the Reports Manager function (User Menu item #69). Look for reports named "Groups."

When viewing the Group Database report, the System Manager will provide a cover page indicating the report selection and sort criteria as shown in Figure 10-19.

Figure 10-21 is an example of a Group Database Brief Report and Figure 10-20 is an example of a Group Database Full Report.

Ericsson/GE EDACS				1-AUG-1994	
Group Database Report					
Brief Report					
Selection Criteria			Sort Criteria		
Range			Sort Priority		
Group Id :	0 To 2047		Group Id. :	N	0
Group Name :	----- To -----		Group Name :	N	0
Group Type :	->All	Agn Fleet Subfl	Agency Name :	N	0
Division :	----- To -----		Group Type :	N	0
			Division :	N	0
Flag Legend					
A	Agency				
F	Fleet				
S	Subfleet				
D	System Assigned ID (SAID)				
O	Other				

Figure 10-19. Group Database Brief Report Cover Page



- 10-22

7. **Channel Test** - Test channel partition enabled (Yes/No) (formerly referred to as Secondary Partition), refer to function #12, Group Parameters panel (2:4).
8. **Home Switch ID** - Identifies the Group's home Multisite Controller (CEC/IMC) ID Number, refer to function #12, Wide Area Parameters (3:4) and function #10 - External Device Definition.
9. **Primary Partition** - Indicates partition to which the Group is assigned, refer to function #12, MCP (4:4).
10. **Forced Sites** - Sites to which the CEC/IMC will unconditionally route group calls (sites 1 to 32 - Yes/No), refer to function #12, Wide Area (3:4).
11. **Active Sites** - Sites available to the group for wide area communications, refer to function #12, Wide Area (3:4).
12. **Backup Partition** - Identifies the three backup partitions, their condition for use, and which Multi Channel partition the backup partition is supposed to use. Refer to function #12, Multiple Channel Partitioning (4:4).
13. **ID Partitionable** - Indicates if the group will be given active control channel assignments (at MCP enabled sites) based on the MCP backup partitions (Yes/No). Refer to function #12, Multiple Channel Partitioning (4:4).
14. **Confirm** - Indicates Confirmed Call Enabled (Yes) and if group is also wide area enabled, all calls to and from this group must be confirmed. Refer to function #12, Wide Area (3:4).
15. **Tracking** - Indicates the Automatic Tracking feature is enabled (Yes) and IMC will route calls to groups at active site. Refer to function #12, Wide Area (3:4).
16. **Wide Area** - Indicates group is enabled (Yes) for wide area communications. Refer to function #12, Wide Area (3:4).
17. **Ext. Network** - Indicates group is enabled (Yes) or disabled (No) for operation with extended networks, refer to function #12 - Wide Area (3:4).
18. **Address** - Indicates the address of the person or agency responsible for the group, refer to function #12 - Description panel (1:4).
19. **Division** - Division to which group is assigned, refer to function #12 - Description panel (1:4).
20. **Agency** - Agency to which group is assigned, refer to function #12 - Description panel (1:4).
21. **Group ID** - Indicates the Group's ID number (GID) as defined in the Group Definition function #12).
22. **Group Name** - Indicates the Group's Name or alias for identifying the group, refer to function #12, Selected Group panel.
23. **Group Type** - Identifies the Group Type entered in the Selected Group panel, refer to function #12 - Unit Identification.
 - Agency
 - Fleet
 - Subfleet
 - SAID
 - Other

63) ACTIVITY DETAIL (Mid)

The Activity Detail Report is a Mid-level function for generating a report that provides a chronological listing of all calls made at a site during a specific period.

During the normal course of events, the Site Controllers periodically download site activity data to the System Manager. This occurs when the number of activity records stored at each Site Controller reaches the Activity Dump Threshold (refer to function #10, 2:4) for the site. The User may also direct the site to download all activity records currently in memory (refer to function 31, Activity Download). The information contained in this database is used when generating the Activity Detail report.

Select the Activity Detail report function (User Menu item #63) by highlighting "Activity Detail" in the Report panel or enter "63" as the Selected Menu Item and press the **Return** or **Select** key. The System Manager will Display the Activity Details Report menu as shown in Figure 10-22.

The Activity Details Report screen consists of three main panels; the site selection panel, the Select Criteria panel, and the Sort Criteria panel. The Site Selection panel allows you to identify the site by number and the reporting period (start and stop date and time).

The Select Criteria panel allows you to define the selection criteria of the report including the types of calls, call classes, or the specific LID's or GID's.

The Sort Criteria panel allows you to define the hierarchical structure of the report. This is accomplished

by indicating which field the sort routine will key on and the priority (or structure) level of the selected sort key.

To Move between the various fields, use the arrow, **Return**, or **Tab** keys.

Site Selection

When the Activity Detail Report menu screen is displayed the cursor will prompt you to enter the site's number. The Site Number is defined using function #10, Site Definition and must be between 1 and 32.

The next step is to enter the start and stop date and time. The date is in the dd-mmm-yyyy format and the time is in military time 00:00 - 23:59. The start and stop time will be the period during which the System Manager will extract data for the report.

NOTE

When attempting to generate a report ending on today's date, you must request a site activity download (User Menu item #31) and then wait for the System Manager to complete the download request. Once the latest activity data is downloaded, you may generate the activity report. This process ensures the latest data is transferred to the System Manager.

Select Criteria

The Select Criteria panel is used to identify the report limitations. This allows you to narrow the scope of the report and isolate specific data as required.

EDACS System Manager		Activity Details Report		[SMGTGT] EGESYSMGR																																							
Site:03	Start : 01-Jul-1994 08:00	Stop : 01-Jul-1994 08:12																																									
<div> <div> Select Criteria <p>Activity Types : All Types/Login</p> <p>Caller LID : 0 To 16383</p> <p>Callee LID : 0 To 16383</p> <p>Callee GID : 0 To 2047</p> <p>Channel Number : 1 To 31</p> <p>Call Class : All Classes</p> <p>Queue Priority : 0 To 15</p> <p>Queue Delay : 0 To 6540</p> <p>Duration : 0 To 6540</p> </div> <div> Sort Criteria <table border="1"> <thead> <tr> <th></th> <th>Sort</th> <th>Priority</th> </tr> </thead> <tbody> <tr><td>Activity Types</td><td>N</td><td>0</td></tr> <tr><td>Caller LID</td><td>N</td><td>0</td></tr> <tr><td>Caller LID Name</td><td>N</td><td>0</td></tr> <tr><td>Callee LID</td><td>N</td><td>0</td></tr> <tr><td>Callee LID Name</td><td>N</td><td>0</td></tr> <tr><td>Callee GID</td><td>N</td><td>0</td></tr> <tr><td>Callee GID Name</td><td>N</td><td>0</td></tr> <tr><td>Call Class</td><td>N</td><td>0</td></tr> <tr><td>Channel Number</td><td>N</td><td>0</td></tr> <tr><td>Queue Priority</td><td>N</td><td>0</td></tr> <tr><td>Queue Delay</td><td>N</td><td>0</td></tr> <tr><td>Duration</td><td>N</td><td>0</td></tr> </tbody> </table> </div> </div>						Sort	Priority	Activity Types	N	0	Caller LID	N	0	Caller LID Name	N	0	Callee LID	N	0	Callee LID Name	N	0	Callee GID	N	0	Callee GID Name	N	0	Call Class	N	0	Channel Number	N	0	Queue Priority	N	0	Queue Delay	N	0	Duration	N	0
	Sort	Priority																																									
Activity Types	N	0																																									
Caller LID	N	0																																									
Caller LID Name	N	0																																									
Callee LID	N	0																																									
Callee LID Name	N	0																																									
Callee GID	N	0																																									
Callee GID Name	N	0																																									
Call Class	N	0																																									
Channel Number	N	0																																									
Queue Priority	N	0																																									
Queue Delay	N	0																																									
Duration	N	0																																									
Messages (F6 = Exit)(F10 = Re-enter Defaults)(DO = Generate Report) Enter in order of your priorities "Y" to select Sort Criteria.																																											

Figure 10-22. Activity Details Report Menu (Function #63)

The following fields define the scope of the report:

Call Types - This field allows you to report on all call types or any of the following call types:

- Individual Calls
- Special Calls
- Emergency Calls
- Group Calls
- System All Calls
- Data Calls
- Radio Logins

The default for this field is All Types (all calls). To select a specific type(s), press the **Select** key. A pop-up menu listing the call types will be displayed and all types will be highlighted (default) for inclusion in the report. Use the up and down arrow keys to move to the desired type and press the **Select** key to toggle between including (highlighted with asterisk) or excluding (normal text, no asterisk) the call type from the report. In the example below, Data Calls will not be included in the report. To return to the Activity Detail Report menu, press the **Do** key.

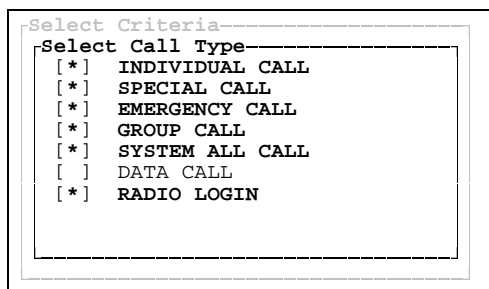


Figure 10-23. Select Call Type

NOTE

You must press the **Do** key to return to the Activity Details Report menu.

Caller LID - The report will include calls initiated by units meeting the Logical ID criteria.

The default setting is 0 to 16383 and the report will include all units with LID's in this range. If a different range of LID's is desired, enter the appropriate starting and ending LID's.

Callee LID - The report will include calls received by individual units within the range of LID's listed in this field.

The default setting is 0 to 16383 and the report will include all units with LID's in this range. If a different range of LID's is desired, enter the appropriate starting and ending LID's.

Callee GID - The report will include calls received by talk group(s) within the range of GID's listed in this field.

The default setting is 0 to 2047 and the report will include all units with GID's in this range. If a different range of GID's is desired, enter the appropriate starting and ending GID's.

Chanl Num - The report will include call data for all channels listed in this field.

The default setting is 1 to 31. If a different range of channels is desired, enter the appropriate starting and ending channel numbers (1-31) to be included in the report.

NOTE

Meaning for channel assignments:

Channel Number

<u>Value</u>	<u>Purpose</u>
Channels 1 to 25	Good channel assignments.
Channel 26	Caller's database out of synch.
Channel 27	Caller has already confirmed on channel.
Channel 28	Caller told to convert-to-callee.
Channel 29	Caller issued queued assignment.
Channel 30	Caller informed system is busy.
Channel 31	Caller informed request is denied.

Call Class - This field allows you to include in the report all calls regardless of the communication mode (All Classes) or only calls made using one or more of the following classes:

- Analog Voice Calls (Clear Voice)
- Digital Voice Calls
- Digital Voice Interconnect Calls
- Analog Voice Interconnect Calls
- Data Calls

The default for this field is All Classes (all communication modes). To select a specific class(s), press the **Select** key. A pop-up menu listing the call classes will be displayed and

all classes will be highlighted (default) for inclusion in the report. Use the up and down arrow keys to move to the desired class and press the **Select** key to toggle between including (highlighted with asterisk) or excluding (normal text, no asterisk) the call class from the report. In the example shown in Figure 10-24, Interconnect Analog Voice Calls will not be included in the report. To return to the Activity Detail Report menu, press the **Do** key.

```

Select Criteria-----
Select Call Classes-----
[*] ANALOG VOICE
[*] DIGITAL VOICE
[*] DIGITAL VOICE INTERCONNECT
[ ] ANALOG VOICE NTERCONNECT
[*] DATA CALL
  
```

Figure 10-24. Select Call Class

NOTE

You must press the **Do** key to return to the Activity Details Report menu.

Q Priority - This field allows you to include only those calls which are included in the Queue Priority range.

The actual priority of a call is determined by taking the highest base priority of all the ID's involved, or the default base priority for the type of call, and then doubling it. Then, based on the Recent Priority Increment, the call will have zero (0) or one (1) levels of priority added to its actual priority. This gives a normal call priority range of from 0 to 15. This is the range which will be displayed on the activity reports.

The default setting is 0 to 15. Enter the Queue Priority range (0-15) for calls to be included in the report

Q Delay - This field allows you to include only those calls which queued for the period indicated by the Queue Delay range.

The default setting is 0 to 6540 seconds. Enter the Queue Delay range (0-6540) for calls to be included in the report

NOTE

Q Priority and **Q Delay** only pertain to queued calls Channel #29.

Duration - This field allows you to include calls which lasted for the period indicated by the Duration range.

The default setting is 0 to 6540 seconds. Enter the activity duration range (0-6540) for calls to be included in the report

Sort Criteria

The Sort Criteria Menu allows you to define the hierarchical structure of the report. This is accomplished by indicating which field the sort routine will key on and the priority (or structure) level of the selected sort key.

In other words, the Sort column allows you to select sort keys or items by which the data file is sorted, and the Priority column indicates the order in which they are selected.

The System Manager assigns the priority levels automatically according to the order of Sort field selection. Use the **Select** key to toggle selection of sort criterion. In other words, if the Call Type is the first sort field selected (Y), then the Priority for the Call Type field will be "1." If Group ID is the second field chosen as a sort field, then the priority for the Group ID field will be "2," the third field selected will be "3," and so on.

If an error is made when selecting the sort fields, just press the **Select** key with the cursor on the field. The priority column for the selected item will automatically change to zero and the System Manager will renumber the remaining sort fields in the order selected.

The default for the Sort column is No (N), and the default for the Priority column is zero (0). By default, the report will be generated in chronological order only.

Activity Detail Report Generation

After determining the selection and sort criteria, it will be necessary to generate the report.

To generate the report, press the **Do** key. The System manager will issue the message "The system is processing your request. Please stand by."

When the system is ready, the System Manager will display the banner message "Activity report generation starting." When the report generation is finished, the System Manager will report via the banner message "Activity report generation complete."

To view the report, it will be necessary to exit this function and select the Reports Manager function. In the Reports Manager function (User Menu item #69), you may

view the report or print out a hard copy of the report. Look for reports listed as "Activity Detail."

When viewing the Activity Detail report, the System Manager will provide a cover page indicating the report selection and sort criteria as shown in Figure 10-25. It also provides meanings for the channel assignments and flags.

Figure 10-26 shows an example of the Activity Detail Report.

Ericsson/GE EDACS				13-JUL-1994	
Activity Detail Report					
Site Number : 5					
Activity summary report for :					
period beginning : 26-MAY-1994 00:00:00.00					
period ending : 26-MAY-1994 23:59:00.00					
Selection Criteria			Sort Criteria		
Call Types :	->All	Indv	Spcl	Emer	
	Grp	Sys	Data	RLog	
Callers Id :		0	To 16383		
Callees Id :		----	To ----		
Group Id :		----	To ----		
Chanl Num :		----	To ----		
Call Class :	->All	AV	DV	DVI	
Call Class :	AVI	DATA			
Q Priority :		---	To ---		
Q Delay :		----	To ----		
Duration :	-----	To	-----		
			Activity Types :	Sort	Prtty
			Caller LID :	Y	1
			Caller LID Name :	Y	2
			Callee LID :	Y	3
			Callee LID Name :	Y	4
			Callee LID Name :	Y	5
			Callee LID Name :	N	0
			Callee LID Name :	N	0
			Call Class :	N	0
			Channel Number :	N	0
			Queue Priority :	N	0
			Queue Delay :	N	0
			Duration :	N	0
Meaning for channel assignments					
channel number value	Purpose				
Channels 1 to 25	Good channel assignments				
Channel 26	Caller's database out of synch				
Channel 27	Caller has already confirmed on channel				
Channel 28	Caller told to convert-to-callee				
Channel 29	Caller issued queued assignment				
Channel 30	Caller informed system is busy				
Channel 31	Caller informed request is denied				
Flag Legend					
Flag	Purpose				
C	Console Preempt (normally only group calls; starts a new call)				
M	Missed drop record or a request retry				
MT	Message trunked call				

Figure 10-25. Activity Detail Cover Page

Ericsson/GE EDACS
Activity Detail Report
Site Number : 5

13-JUL-1994
Page : 17

Calls Date : 26-MAY-1994

Time	Call Type	Caller	Callee	Ch No	Call Class	Queue Pr/Dp	Duration/ Q Delay	Flg
20:19:13.41	Group	16383	2047	5	AV	N/A	00:00:04.19	
20:37:13.47	Group	16383	2047	5	AV	N/A	00:00:04.18	
22:16:26.01	Group	16383	2047	5	AV	N/A	00:00:04.20	
09:21:55.13	Emer	902	273	3	AV	N/A	00:00:02.74	C
09:21:55.13	Emer	902	273	3	AV	N/A	00:00:00.60	
09:21:48.50	Emer	902	273	3	AV	N/A	00:00:06.63	C
09:21:48.50	Emer	902	273	3	AV	N/A	00:00:03.56	
09:23:38.97	Emer	902	273	4	AV	N/A	00:00:00.81	C
09:23:38.97	Emer	902	273	4	AV	N/A	00:00:00.41	
16:55:06.56	Emer	3067	1184	3	DV	N/A	00:00:03.28	
11:20:49.16	Indiv	902	4072	4	AV	N/A	00:00:00.10	MT
11:20:49.16	Indiv	902	4072	4	AV	N/A	00:00:00.22	C MT
15:33:09.05	Indiv	16383	6439	3	Intc	N/A	00:04:03.51	
15:29:05.54	Indiv	16383	6439	3	Intc	N/A	00:00:04.39	
15:40:44.11	Indiv	16383	6439	4	Intc	N/A	00:01:02.03	
09:59:20.04	Special	6135	16383	3	Intc	N/A	00:00:11.60	MT
10:27:00.07	Special	6135	16383	3	Intc	N/A	00:00:07.94	MT
16:02:49.43	Special	6439	16383	29	Intc	0/1	00:00:18.42	
16:02:36.08	Special	6439	16383	29	Intc	0/2	00:00:13.35	
16:01:33.69	Special	6439	16383	29	Intc	1/1	00:01:02.39	
10:28:29.10	Special	6439	16383	29	Intc	1/1	00:00:06.59	

Figure 10-26. Activity Detail Report Example

- Calls Date** - This is the date on which the calls were made. Each page is limited to one date (24 hour period).
- Site Number** - Site number entered in the Activity Details Report menu.
- Date** - Date report was generated.
- Page** - Page number of report.
- Time** - Indicates the time the call was initiated. Format is hh:mm:ss.ff.
- Call Type** - Indicates the type of call
 - Individual Calls (Indiv)
 - Special Calls (Special)
 - Emergency Calls (Emer)
 - Group Calls (Group)
 - System All Calls (System)
 - Data Calls (Ind Data)
 - Radio Logins (R Login)
- Caller** - ID number of unit initiating the call. (Could be data port/host ID for data call.)
- Callee** - ID number of unit or group receiving the call; could also be data port/host ID.
- Ch No** - Indicates Working Channel assigned to call if channels 1 thru 25. If channels number is 26 thru 31 see below:
 - Ch. 26 - Caller's database out of synch.
 - Ch. 27 - Caller has already confirmed on channel.
 - Ch. 28 - Caller told to convert-to-callee.
 - Ch. 29 - Caller issued queued assignment.
 - Ch. 30 - Caller informed system is busy.
 - Ch. 31 - Caller informed request is denied.

NOTE

The report header also contains this information.

10. **Call Class** - This field contains the call class of the activity. The Call Class will be one of the following:

- Analog Voice Calls (AV)
- Digital Voice Calls (DV)
- Digital Voice Interconnect Calls (DIV)
- Analog Voice Interconnect Calls (AVI)
- Data Calls (Data)

11. **Queue Pr/Dp** - The queue priority (Pr) is calculated based on the type and class of the call, the queue depth (Dp) indicates the depth or total number of calls in the queue at the time of this call, including this call.

NOTE

These fields are only relevant for queued calls (channel assigned to 29).

12. **Duration/Q Delay** - This field indicates the duration of the call, unless the call was queued, in which case the time represents the length of time the call was queued before being assigned a working channel.

13. **Flg** - The flag field is normally blank unless one of the following events takes place:

- C Console Preempt (normally only group calls; starts a new call).
- M Missed drop record or a request retry.
- MT Message trunked call.

64) ACTIVITY SUMMARY (Mid)

The Activity Summary Report is a Mid-level function used for generating a report summarizing the call activity for a selected site.

The function extracts and compiles the data from the site activity database downloaded from each site. When generating the report, the System Manager totals the call activity and number of calls queued and the accumulated time for both. This information may then be viewed in an hierarchical arrangement set up by the user.

Select the Activity Detail report function (User Menu item #64) by highlighting "Activity Summary" in the Report panel or enter "64" as the Selected Menu Item and press the **Return** or **Select** key. The System Manager will Display the Activity Summary Report menu as shown in Figure 10-27.

The Activity Summary Report screen consists of three panels; the site selection panel; the Select Criteria panel, and the Sort Criteria panel. The Site Selection panel allows you to identify the site by number and the reporting period (start and stop date and time).

The Select Criteria panel allows you to define the selection criteria of the report including the types of calls, call classes, or the specific LID's or GID's.

The Sort Criteria panel allows you to define hierarchical structure of the report. This is accomplished by indicating which field the sort routine will key on and the priority (or structure) level of the selected sort key.

To Move between the various fields, use the arrow, **Return**, or **Tab** keys.

Site Selection

When the Activity Summary Report menu screen is displayed the cursor will prompt you to enter the site's number. The Site Number is defined using function #10, Site Definition and must be between 1 and 32.

The next step is to enter the start and stop date and time. The date is in the dd-mmm-yyyy format and the time is in military time 00:00 - 23:59. The start and stop time will be the period during which the System Manager will extract data for the report.

NOTE

When attempting to generate a report ending on today's date, you must request a site activity download (User Menu item #31) and then wait for the System Manager to complete the download request. Once the latest activity data is downloaded, you may generate the activity report. This process ensures the latest data is transferred to the System Manager.

Select Criteria

The Select Criteria panel allows you to enter the selection parameters used for generating the report. This allows you to narrow the scope of the report and isolate specific data as required.

EDACS System Manager		Activity Summary Report		[SMGTGT] EGESYSMG																																							
Site:03	Start : 17-Aug-1994 08:00	Stop : 17-Aug-1994 16:02																																									
Select Criteria Activity Types : All Types/Login Caller LID : 0 To 16383 Callee LID : 0 To 16383 Callee GID : 0 To 2047 Channel Number : 1 To 31 Call Class : All Classes Queue Priority : 0 To 15 Queue Delay : 0 To 6540 Duration : 0 To 6540		Sort Criteria <table border="1"> <thead> <tr> <th></th> <th>Sort</th> <th>Priority</th> </tr> </thead> <tbody> <tr><td>Activity Types</td><td>N</td><td>0</td></tr> <tr><td>Caller LID</td><td>N</td><td>0</td></tr> <tr><td>Caller LID Name</td><td>N</td><td>0</td></tr> <tr><td>Callee LID</td><td>N</td><td>0</td></tr> <tr><td>Callee LID Name</td><td>N</td><td>0</td></tr> <tr><td>Callee GID</td><td>N</td><td>0</td></tr> <tr><td>Callee GID Name</td><td>N</td><td>0</td></tr> <tr><td>Call Class</td><td>N</td><td>0</td></tr> <tr><td>Channel Number</td><td>N</td><td>0</td></tr> <tr><td>Queue Priority</td><td>N</td><td>0</td></tr> <tr><td>Queue Delay</td><td>N</td><td>0</td></tr> <tr><td>Duration</td><td>N</td><td>0</td></tr> </tbody> </table>				Sort	Priority	Activity Types	N	0	Caller LID	N	0	Caller LID Name	N	0	Callee LID	N	0	Callee LID Name	N	0	Callee GID	N	0	Callee GID Name	N	0	Call Class	N	0	Channel Number	N	0	Queue Priority	N	0	Queue Delay	N	0	Duration	N	0
	Sort	Priority																																									
Activity Types	N	0																																									
Caller LID	N	0																																									
Caller LID Name	N	0																																									
Callee LID	N	0																																									
Callee LID Name	N	0																																									
Callee GID	N	0																																									
Callee GID Name	N	0																																									
Call Class	N	0																																									
Channel Number	N	0																																									
Queue Priority	N	0																																									
Queue Delay	N	0																																									
Duration	N	0																																									
Messages (F6 = Exit)(F10 = Re-enter Defaults)(DO = Generate Report) Enter in order of your priorities "Y" to select Sort Criteria.																																											

Figure 10-27. Activity Summary Report Menu (Function #64)

The following fields define the scope of the report:

Call Types - This field allows you to report on all call types or any of the following call types:

- Individual Calls
- Special Calls
- Emergency Calls
- Group Calls
- System All Calls
- Data Calls
- Radio Logins

The default for this field is All Types (all calls). To select a specific type(s), press the **Select** key. A pop-up menu listing the call types will be displayed and all types will be highlighted (default) for inclusion in the report. Use the up and down arrow keys to move to the desired type and press the **Select** key to toggle between including (highlighted with asterisk) or excluding (normal text, no asterisk) the call type from the report. In the example shown in Figure 10-28, Data Calls will not be included in the report.

To return to the Activity Summary Report menu, press the **Do** key.

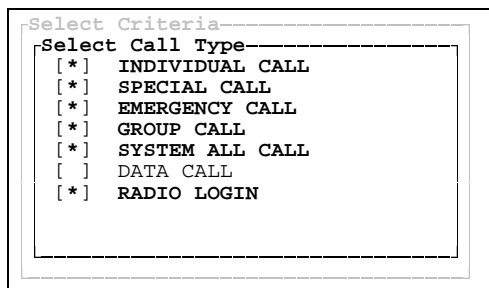


Figure 10-28. Select Call Type

NOTE

You must press the Do key to return to the Activity Summary Report menu.

Caller LID - The report will include calls initiated by units meeting the Logical ID criteria.

The default setting is 0 to 16383 and the report will include all units with LID's in this range. If a different range of LID's is desired, enter the appropriate starting and ending LID's.

Callee LID - The report will include calls received by individual units within the range of LID's listed in this field.

The default setting is 0 to 16383 and the report will include all units with LID's in this range. If a different range of LID's is desired, enter the appropriate starting and ending LID's.

Callee GID - The report will include calls received by talk group(s) within the range of GID's listed in this field.

The default setting is 0 to 2047 and the report will include all units with GID's in this range. If a different range of GID's is desired, enter the appropriate starting and ending GID's.

Chanl Num - The report will include call data for all channels listed in this field.

The default setting is 1 to 31. If a different range of channels is desired, enter the appropriate starting and ending channel numbers (1-31) to be included in the report

NOTE

Meaning for channel assignments:

Channel Number

<u>Value</u>	<u>Purpose</u>
Channels 1 to 25	Good channel assignments.
Channel 26	Caller's database out of synch.
Channel 27	Caller has already confirmed on channel.
Channel 28	Caller told to convert-to-callee.
Channel 29	Caller issued queued assignment.
Channel 30	Caller informed system is busy.
Channel 31	Caller informed request is denied.

Call Class - This field allows you to include in the report all calls regardless of the communication mode (All Classes) or only calls made using one or more of the following classes:

- Analog Voice Calls (Clear Voice)
- Digital Voice Calls
- Digital Voice Interconnect Calls
- Analog Voice Interconnect Calls
- Data Calls

The default for this field is All Classes (all communication modes). To select a specific class(s), press the **Select** key. A pop-up menu listing the call classes will be displayed and all classes will be highlighted (default) for inclusion in the report. Use the up and down arrow keys to move to the desired class and press the **Select** key to toggle between including (highlighted with asterisk) or excluding (normal text, no asterisk) the call class from the report. In the example shown in Figure 10-29, Interconnect Analog Voice Calls will not be included in the report. To return to the Activity Summary Report menu, press the **Do** key.

```

Select Criteria-----
Select Call Classes-----
[*] ANALOG VOICE
[*] DIGITAL VOICE
[*] DIGITAL VOICE INTERCONNECT
[ ] ANALOG VOICE INTERCONNECT
[*] DATA CALL
  
```

Figure 10-29. Select Call Class

NOTE

You must press the **Do** key to return to the Activity Summary Report menu.

Q Priority - This field allows you to include only those calls which are included in the Queue Priority range.

The actual priority of a call is determined by taking the highest base priority of all the ID's involved, or the default base priority for the type of call, and then doubling it. Then, based on the Recent Priority Increment, the call will have zero (0) or one (1) levels of priority added to its actual priority. This gives a normal call priority range of from 0 to 15. This is the range which will be displayed on the activity reports.

The default setting is 0 to 15. Enter the Queue Priority range (0-15) for calls to be included in the report

Q Delay - This field allows you to include only those calls which queued for the period indicated by the Queue Delay range.

The default setting is 0 to 6540 seconds. Enter the Queue Delay range (0-6540) for calls to be included in the report

NOTE

Q Priority and **Q Delay** only pertain to queued calls.

Duration - This field allows you to include calls which lasted for the period indicated by the Duration range.

The default setting is 0 to 6540 seconds. Enter the activity duration range (0-6540) for calls to be included in the report

Sort Criteria

The Sort Criteria Menu allows you to define the hierarchical structure of the report. This is accomplished by indicating which field the sort routine will key on and the priority (or structure) level of the selected sort key.

Sorting the Activity Summary report produces a summary report for each item in the sorted range. Each LID, GID, or channel, for instance, over the time range specified.

In other words, the Sort column allows you to select sort keys or items by which the data file is sorted, and the Priority column indicates the order in which they are selected.

NOTE

Only select one (1) Sort Criteria, selections other than the first selection will be ignored.

The System Manager assigns the priority levels automatically according to the order of Sort field selection. Use the **Select** key to toggle selection of a sort criterion. In other words, if the Call Type is the first sort field selected (Y), then the Priority for the Call Type field will be "1." If Group ID is the second field chosen as a sort field, then the priority for the Group ID field will be "2," the third field selected will be "3," and so on.

If an error is made when selecting the sort fields, just press the **Select** key with the cursor on the field. The priority column for the selected item will automatically change to zero and the System Manager will renumber the remaining sort fields in the order selected.

The default for the Sort column is No (N), and the default for the Priority column is zero (0). By default, the report will be generated in as one total over the time range specified.

Activity Summary Report Generation

After determining the selection and sort criteria, it will be necessary to generate the report.

To generate the report, press the **Do** key. The System manager will issue the message "The system is processing your request. Please stand by."

Figure 10-31 shows an example of the Activity Summary Report sorted by Caller Logical ID.

Figure 10-30. Activity Summary Report Cover Page

Ericsson/GE EDACS				17-AUG-1994
Activity Summary Report				Page : 1
Site Number : 6				
Caller Logical Id. : 801				
Activity Type	Total Calls	Total Duration days hh:mm:ss.ff	# Calls Queued	Total Queue Delay days hh:mm:ss.ff
-----	-----	-----	-----	-----
Group Calls	1	0 00:00:00.10	0	0 00:00:00.00
Emergency Calls	0	0 00:00:00.00	0	0 00:00:00.00
Individual Calls	0	0 00:00:00.00	0	0 00:00:00.00
Special Calls	0	0 00:00:00.00	0	0 00:00:00.00
System All Calls	0	0 00:00:00.00	0	0 00:00:00.00
Indiv Data Calls	0	0 00:00:00.00	0	0 00:00:00.00
Radio Logins	10	0 00:00:00.00	0	0 00:00:00.00
-----	-----	-----	-----	-----
All Call Types	11	0 00:00:00.10	0	0 00:00:00.00
Caller Logical Id. : 902				
Activity Type	Total Calls	Total Duration days hh:mm:ss.ff	# Calls Queued	Total Queue Delay days hh:mm:ss.ff
-----	-----	-----	-----	-----
Group Calls	6	0 00:00:01.88	0	0 00:00:00.00
Emergency Calls	0	0 00:00:00.00	0	0 00:00:00.00
Individual Calls	0	0 00:00:00.00	0	0 00:00:00.00
Special Calls	0	0 00:00:00.00	0	0 00:00:00.00
System All Calls	0	0 00:00:00.00	0	0 00:00:00.00
Indiv Data Calls	0	0 00:00:00.00	0	0 00:00:00.00
Radio Logins	120	0 00:00:00.00	0	0 00:00:00.00
-----	-----	-----	-----	-----
All Call Types	126	0 00:00:01.88	0	0 00:00:00.00
Caller Logical Id. : 6439				
Activity Type	Total Calls	Total Duration days hh:mm:ss.ff	# Calls Queued	Total Queue Delay days hh:mm:ss.ff
-----	-----	-----	-----	-----
Group Calls	184	0 00:12:25.18	0	0 00:00:00.00
Emergency Calls	0	0 00:00:00.00	0	0 00:00:00.00
Individual Calls	0	0 00:00:00.00	0	0 00:00:00.00
Special Calls	1	0 00:00:00.00	0	0 00:00:00.00
System All Calls	0	0 00:00:00.00	0	0 00:00:00.00
Indiv Data Calls	0	0 00:00:00.00	0	0 00:00:00.00
Radio Logins	20	0 00:00:00.00	0	0 00:00:00.00
-----	-----	-----	-----	-----
All Call Types	205	0 00:12:25.18	0	0 00:00:00.00

Figure 10-31. Activity Summary Report Example

65) ALARM (Mid)

The Alarm Report is a Mid-level function that provides a detailed description of alarm events at a selected site during a specified period. In addition, Alarm Types and channel numbers may also be specified for the report.

The report allows you to identify specific causes of alarms observed on the Alarm Display and Acknowledge screen (User Menu item #40).

Select the Alarm report function (User Menu item #65) by highlighting "Alarm" in the Report panel or enter "65" as the Selected Menu Item and press the **Return** or **Select** key. The System Manager will Display the Alarm Report menu as shown in Figure 10-32.

The Alarm Report screen contains of three main panels; the Site Selection panel; the Select Alarm panel, and the Channel Selection panel. The Site Selection panel allows you to identify the site by number and the reporting period (start and stop date and time).

The Select Alarm panel allows you to select which Alarm Types will be included in the report.

The Channel Selection panel allows you to select which channels will be included in the report.

To Move between the various fields, use the arrow, **Return**, or **Tab** keys.

Site Selection

When the Alarm Report menu screen is displayed the cursor will prompt you to enter the site's number. The Site Number is defined using function #10, Site Definition and must be between 1 and 32.

The next step is to enter the start and stop date and time. The date is in the dd-mmm-yyyy format and the time is in military time 00:00 - 23:59. The start and stop time will be the period during which the System Manager will extract data for the report.

NOTE

When attempting to generate a report ending on today's date, you must request a site activity download (User Menu item #31) and then wait for the System Manager to complete the download request. Once the latest activity data is downloaded, you may generate the activity report. This process ensures the latest data is transferred to the System Manager.

Select Alarm

The Select Alarm panel allows you to flag the Alarm Types to be included in the report. This allows you to narrow the scope of the report and isolate specific alarms as required.

This panel defaults to failure types most often selected.

Any or all of the following Alarm Types may be selected (bold text indicates default selections):

1. **External Device**
2. **Minor Alarm**

Figure 10-32. Alarm Report (Function #65)

Ericsson/GE EDACS Alarm Report Site Number : 5	11-JUL-1994
--	-------------

Selected Alarm Types:

- [*] External Device
- [*] Minor Alarm
- [*] Major Alarm
- [*] Test Calls
- [*] TU CC Fail
- [] Background Test Call
- [] Channel Diagnostics
- [*] Power Monitor Unit
- [*] Poller State Change
- [*] Carrier State Change
- [*] Auxiliary Alarm
- [] Channel Record
- [*] System Mgr Reconfig
- [*] Swich Audio
- [*] RIC Status
- [*] Frame Sync Link
- [*] Phone Line
- [*] GETC Synth Fail
- [*] GETC Power Fail
- [] System Mgr Login
- [*] GETC Comm Error
- [*] Turbo Board Fail
- [*] Voted Channel Fail

Selected channel Range: 1 to 31

Figure 10-33. Alarm Report Cover Page

3. **Major Alarm**
4. **Test Calls**
5. **TU CC Fail**
6. Background Test Call
7. Channel Diagnostics
8. **Power Monitor Unit**
9. **Poller State Change**
10. **Carrier State Change**
11. **Auxiliary Alarm**
12. Channel Record
13. **System Mgr Reconfig**
14. **SW Audio**
15. **RIC Status**
16. **Frame Sync Link**
17. **Phone Line**
18. **GETC Synth Fail**
19. **GETC Power Fail**
20. System Mgr Login
21. **GETC Comm Error**
22. **Turbo Board Fail**
23. **Voted Channel Fail**

To select [*] or deselect [] an alarm, highlight the alarm and press the **Select** key. To select [*] or deselect [] all Alarm Types, toggle the **F8** key. The Alarm Report menu shown in Figure 10-32 shows alarms 1 thru 5 and 8 selected.

Channel Selection

The Channel Selection panel allows you to select which channels at the selected site will be checked for alarms. This allows you to narrow the scope of the report to reflect the alarms on a single channel or range of channels, if required. Alarms which are not channel-specific will be included if selected.

Enter the channel number range. If you only need data for one channel, enter the same number as the starting and ending number.

Alarm Report Generation

After determining the Alarm Types and site channels, it will be necessary to generate the report.

To generate the report, press the **Do** key. The System manager will issue the message "The system is processing your request. Please stand by."

When the system is ready, the System Manager will display the banner message "Alarm report generation starting." When the report generation is finished, the System Manager will report via the banner message "Alarm report generation complete."

To view the report, it will be necessary to exit this function and select the Reports Manager function. In the Reports Manager function (User Menu item #69), you may view the report or print out a hard copy of the report. Each report will start with a cover page, as shown in Figure 10-33, identifying the selected site's alarm types and Channels selected for the Alarm Report.

Figure 10-34 shows an example of the Alarm Report for all channels at Site 5. The report is automatically formatted in chronological order.

Reading Alarm Reports

Each alarm event is identified by the time the alarm occurred, the Type of Alarm, and a description of the alarm. The time of the alarm and the type of alarm are straight forward and easily understood. However, when it comes to the alarm descriptions, the type of alarm determines the meaning of the descriptive information.

To begin with, it is important to understand that an alarm event is recorded whenever one of the selected alarm types changes states. This happens, for example, if a channel fails to respond to polling or if the channel starts responding to polling. In each case, a change of state is recorded.

The Description section of each report identifies the changing state or problem by providing a code for each channel (Channel Bits), providing a code for each ACU output lead (Alarm Bits), or identifying the event in plain English.

The following information will help you analyze alarm reports. Additional definitions and information may be found in Appendix D.

Channel Bits

Alarms associated with individual channels generally use Channel Bits to identify channels changing states. The meaning of the Channel Bits is as follows:

<u>Character</u>	<u>Meaning</u>
C	Indicates the control channel GETC.
D	Indicates the primary downlink position.
W	Working GETC; this is either a Downlink or an RF GETC. Indicates that for the alarm type given the channel is considered OK. (Console audio failure in "Console RF/IF".)
0 to 9	This is used as a place holder. It indicates one of two things:

- 1) An alarm that is not used due to configuration of the system or limits on the alarm type's reporting abilities, or
- 2) a failure indication.

Alarms which use Channel Bits include the following:

- Test Calls
- Background Test Call
- Channel Diagnostics
- Poller State Change
- Carrier State Change
- Auxiliary Alarm
- Channel Record
- System Manager Reconfiguration
- Phone Line
- GETC Synth Fail
- GETC Power Fail
- Turbo Board Fail
- Voted Channel Fail

In addition to the Channel Bit, the specific channel causing the condition may also be identified. For example, Changed Chan: 3 or Channel 3 Tested.

Alarm Bits

Alarms Bits are generally used with the 32 ACU alarms. In example, Major or Minor Alarms which indicate a change state using a 32 bit format (0 to 31).

When using an Alarm Bit, the presence or absence of a "W" identifies the ACU alarm output mask bit changing states. A unique feature of the Alarm Bits is that if an alarm changes state (i.e., bit 3 changes to "W") and later another bit changes state (say bit 6) then both bits, 3 and 6, will be identified with a "W."

To determine the actually cause of the alarm, you must reference the ACU database. The actual meaning of these alarms are unique for each installation, since the customer defines what the alarm lead is connected to.

Audio Switch

The Console RF/IF alarm indicates an audio failure from console switches. A failure is indicated with a "W".

Ericsson/GE EDACS		11-JUL-1994
Alarm Report		Page : 1
Site Number : 5		
Alarms Date : 26-MAY-1994		
Time	Alarm	Description
08:00:33.41	SM_LOGIN	Login was successful
08:09:47.41	GETC_COMM_ERROR	Checksum err count: 4 Framing err count : 2495 Overrun err count : 0 Parity err count : 0 Last err comm port: 4
08:09:49.60	MINOR_ALARM	Alarm Bits: 01234567W9012W4567890123456W8901
08:09:59.27	MINOR_ALARM	Alarm Bits: 0123456789012W4567890123456W8901
08:09:59.85	POLLER_STATE_CHANGE	Changed Chan: 4, Channel Bits: C2W4W67890123456789012345DW8901
08:10:25.50	SM_RECONFIGURATION	Test Calls Are On, Channel Bits: C2WW5678WWW23456789012345D7890
08:11:26.11	POLLER_STATE_CHANGE	Changed Chan: 4, Channel Bits: C2WWW67890123456789012345DW8901
08:11:36.01	RIC_STATUS	Changed Chan: 4, Channel Bits: D1WWW5678901234567890123456W8901
08:11:37.54	POLLER_STATE_CHANGE	Changed Chan: 1, Channel Bits: 12CWW67890123456789012345DW8901
08:11:41.47	GETC_COMM_ERROR	Checksum err count: 4 Framing err count : 2498 Overrun err count : 0 Parity err count : 0 Last err comm port: 3
08:11:42.23	TU_CC_FAIL	Failed CC: 3 Downlink Error Code: 26 4 Invalid Consecutive Voted Msgs
08:11:42.23	POLLER_STATE_CHANGE	Changed Chan: 3, Channel Bits: C23WW67890123456789012345DW8901
08:11:42.23	POLLER_STATE_CHANGE	Changed Chan: 1, Channel Bits: C23WW67890123456789012345DW8901
08:12:55.50	SM_RECONFIGURATION	Test Calls Are On, Channel Bits: C2WW5678WWW23456789012345D7890
08:12:55.52	CHANNEL_RECORD	Channel Bits: C2W4567890123456789012345D78901
08:12:56.26	TEST_CALL	Channel 4 tested. Channel Bits: C2WW567890123456789012345678901 No Working Chan High Speed
08:12:56.76	POLLER_STATE_CHANGE	Changed Chan: 4, Channel Bits: C2W4567890123456789012345D78901
08:15:24.70	EXTERNAL_DEVICE_ACT	Device Dead Normal Failure LIC
08:15:24.70	RIC_STATUS	Changed Chan: 3, Channel Bits: D1W3W5678901234567890123456W8901
08:15:27.91	RIC_STATUS	Changed Chan: 2, Channel Bits: D123W5678901234567890123456W8901
09:42:29.98	POLLER_STATE_CHANGE	Changed Chan: 3, Channel Bits: C2W4567890123456789012345D78901
09:42:34.19	TEST_CALL	Channel 3 tested. Channel Bits: C2W4567890123456789012345678901
09:57:57.78	POLLER_STATE_CHANGE	Changed Chan: 3, Channel Bits: C2W4567890123456789012345D78901
09:57:58.52	TEST_CALL	Channel 3 tested. Channel Bits: C2W4567890123456789012345678901 No Working Chan High Speed
16:55:34.00	SM_RECONFIGURATION	Test Calls Are Off, Channel Bits: CWWWW67890123456789012345D7890

Figure 10-34. Alarm Report Example

The External Device alarm indicates a change in the state of equipment or externally provided alarm sources, like Failsoft. The alarm message is in plain text as shown in the following example:

```
EXTERNAL_DEVICE_ACT    Device Not Dead
                        Normal Recovery
                        Failsoft
```

GETC Comm Error

The GETC Communication Error indicates a communication problem between the site Controller and GETC. Typically these errors are detected by the RS-232C serial multiplexers in the Site Controller. Communications ports listed, "Last err comm port," are not always GETC ports. All 32 communication ports could appear in this message. Communication port mapping of Site Controllers is specified in the Site Controller drawing and should be similar to the following:

<u>Port Number</u>	<u>Connected Device</u>
0	System Manager Port
1 to 26	GETC ports - primary downlink
27	Test Unit (TU) if locally connected
28	Alarm Control Unit (ACU)
29	Power Monitor Unit (PMU)
30	Line Interface Controller (LIC)
31	Repeater Interface Controller (RIC)

Power Monitor Unit

This record indicates a change in state of a PMU power alarm (bits 1-20) on an RF channel or an antenna (bits 21 and 22). The display of alarms indicates power alarms with a W at this time.

RIC Status

This indicates the current state of the system's Repeater Interface Cards (RICs). The record is posted only when there is a state change on one of the RICs; however, to determine which RIC changed state, a previous RIC record or the system's RIC configuration must be known. In the following example, the RIC at channel 2 has changed to an operative state ("2" changing to a "W" at the channel 2 position). Note, the "D" in bit 0 is meaningless.

```
RIC_STATUS    Changed Chan: 2, Channel Bits:
              D12WW5678901234567890123456W8901
RIC_STATUS    Changed Chan: 2, Channel Bits:
              D1WWW5678901234567890123456W8901
```

Test Calls

This record is used to indicate a Test Call on a RF channel that failed in the past, and is now trying to come back into service. This record is preceded by a Poller Alarm indicating the channel has passed the polling test of the Site Controller, or by a System Manager Reconfiguration request specifying that the channel tested is to be turned **ON**. This record does not appear in Simulcast systems using remote Test Units.

TU CC Fail

This record indicates the control channel listed has failed due to a problem detected by the Test Unit.

NOTE

This record does not appear in Simulcast Systems using remote Test Units.

66) CHANNEL STATISTICS (Mid)

The Channel Statistics report is a Mid-level function which provides you with channel availability and channel activity information for each channel (1 to 25) at a selected site. This information is useful in determining system loading.

Select the Channel Statistics report function (User Menu item #66) by highlighting "Channel Statistics" in the Report panel or enter "66" as the Selected Menu Item and press the **Return** or **Select** key. The System Manager will Display the Channel Statistics Report menu as shown in Figure 10-35.

The Channel Statistics Report screen contains only one panel, the site selection panel. This panel allows you to identify the site by number and the reporting period (start and stop date and time).

Site Selection

When the Channel Statistics Report menu screen is displayed the cursor will prompt you to enter the site's number. The Site Number is defined using function #10, Site Definition and must be between 1 and 32.

The next step is to enter the start and stop date and time. The date is in the dd-mmm-yyyy format and the time is in military time 00:00 - 23:59. The start and stop time will be the period during which the System Manager will extract data for the report.

NOTE

When attempting to generate a report ending on today's date, you must request a site activity download (User Menu item #31) and then wait for the System Manager to complete the download request. Once the latest activity data is downloaded, you may generate the activity report. This process ensures the latest data is transferred to the System Manager.

Channel Statistics Report Generation

After selecting the site and the reporting period, it will be necessary to generate the report.

To generate the report, press the **Do** key. The System manager will issue the message "The system is processing your request. Please stand by."

When the system is ready, the System Manager will display the banner message "Channel Statistics report generation starting." When the report generation is finished, the System Manager will report via the banner message "Channel Statistics report generation complete."

To view the report, it will be necessary to exit this function and select the Reports Manager function. In the Reports Manager function (User Menu item #69), you may view the report on the screen or print out a hard copy.

Figure 10-37 shows an example of the Channel Statistics Report for Site 5.

EDACS System Manager		Channel Statistics		[SMGTGT] EGESYSMGR
Site:05	Start : 26-May-1994 05:00	Stop : 26-May-1994 10:00		
Messages (F6 = Exit)(Do = Generate Report)				

Figure 10-35. Channel Statistics Report (Function #66)

The report is automatically formatted in chronological order from 00:00 hours to the stop time for the date indicated.

Reading the Channel Statistics Report

The following information will assist you in interpreting the Channel Statistics report:

Period beginning - Indicates the start date and time entered in the Channel Statistics menu.

Period ending - Indicates the stop date and time entered in the Channel Statistics menu.

Site Number - Selected Site Number entered in the Channel Statistics menu.

Statistics Date - The Statistics Date represents the date covered by this section of the report.

If the report is for part of one day only, then the Statistics Date will match the start and end date, and the report will cover the period from 00:00 hours to the ending time. However, even though the report starts at 00:00 hours, only data for the requested period will be displayed.

If the report spans two dates, then the System Manager will format the report by date. In example, if the report start date is 15-Aug-1994 @ 08:00 and the stop date 16-Aug-

Reporting Hour					Channel Usage				
07:00	-	5.6	8.9	7.1	0.1				
	100.	100.	100.	100.	100.				
									Channel Availability

Figure 10-36. Report Fields

1994 @ 08:00, page 1 will reflect Statistics Date 15-Aug-1994 starting at 00:00 hours. However, only data from the start of the requested period (08:00) to 24:00 hours will be displayed. Page 2 of the report will have a Statistics Date of 16-Aug-1994 and will display data for 00:00 to 08:00 hours, the end of the requested period.

Channels - The channels covered by the report are listed at the top of each column. These are not changeable and the report always lists all 25 channels.

Reporting Hour - The Reporting Hour indicated on the left side of the report, as shown in Figure 10-36 indicates the start hour for the statistical data. This period covers 60 minutes, unless only part of an hour is requested (i.e., a start or stop time other than hh:00 hours causes first or last period to be less than an hour).

Channel Availability - This field indicates the percentage of time the channel is available for call activity during the

Ericsson/GE EDACS										11-JUL-1994															
Channel Statistics										Page : 1															
Period beginning : 26-MAY-1994 05:00:00.00																									
Period ending : 26-MAY-1994 10:00:00.00																									
Site Number : 5																									
Statistics Date : 26-MAY-1994																									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
00:00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00	-	25.7	23.3	17.2	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00	100.	100.	100.	100.	100.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00	-	15.4	10.5	10.3	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00	100.	100.	100.	100.	100.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00	-	5.6	8.9	7.1	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00	100.	100.	100.	100.	100.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00	23.3	25.7	-	17.2	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00	98.2	99.4	100.	100.	100.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13:00	09:00	-	5.4	3.4	2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14:00	100.	-	99.6	99.7	100.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Figure 10-37. Channel Statistics Report Example

reporting hour. In other words, 100% indicates the channel was available for the full 60 minutes. If the report indicates 50 (50%), then the channel was only available for call activity half the time or 30 minutes.

Channel Usage - Channel Usage indicates what percentage of the reporting hour was actually used for call activity. In other words, if the report indicates 8.9 %, then 8.9% of the

available time was used for call activity. If the channel availability was 100% and call usage is 8.9% then call activity is 8.9% of 60 minutes or 5.30 minutes.

NOTE

Channel Availability for Control Channels will indicate 100% available with no usage.

67) SITE STATISTICS (Mid)

The Site Statistics report is a Mid-level function which provides a statistical analysis of the call activity for the selected site. The report breaks down the total number of calls into hour-by-hour groupings. The report analyzes the calls and indicates the following:

- Percentage of calls that are valid.
- Percentage of calls denied.
- Percentage of calls that were busy.
- Percentage of calls queued.
- Percentage of calls converted to callee.
- Percentage of calls resulting from Console Preempts.
- Percentage left to other types of calls (none of the above).

The summary section at the bottom of the report indicates the maximum Call Duration, Queue Depth, and Queue Delay during the reporting period. It also averages the Call Duration, Queue Depth, and Queue Delay for all calls during the period.

If the report is continued on multiple pages (multiple days), then the maximum and average levels are calculated per day/page

Select the Site Statistics report function (User Menu item #67) by highlighting "Site Statistics" in the Report panel or enter "67" as the Selected Menu Item and press the **Return** or **Select** key. The System Manager will

Display the Site Statistics Report menu as shown in Figure 10-38.

The Site Statistics Report screen contains only one panel; the Site Selection panel. This panel allows you to identify the site by number and select period covered by the report (start and stop date and time).

Site Selection

When the Site Statistics Report menu screen is displayed the cursor will prompt you to enter the site's number. The Site Number is defined using function #10, Site Definition and must be between 1 and 32.

The next step is to enter the start and stop date and time. The date is in the dd-mmm-yyyy format and the time is in military time 00:00 - 23:59. The start and stop time will be the period during which the System Manager will extract data for the report.

NOTE

When attempting to generate a report ending on today's date, you must request a site activity download (User Menu item #31) and then wait for the System Manager to complete the download request. Once the latest activity data is downloaded, you may generate the activity report. This process ensures the latest data is transferred to the System Manager.

EDACS System Manager		Site Statistics		[SMGTGT] EGESYSMGR
Site:03	Start : 01-Jul-1994 08:20	Stop : 01-Jul-1994 08:20		
Messages (F6 = Exit)(Do = Generate Report)				

Figure 10-38. Site Statistics Report (Function #67)

Site Statistics Report Generation

After selecting the site and the reporting period, it will be necessary to generate the report.

To generate the report, press the **Do** key. The System manager will issue the message "The system is processing your request. Please stand by."

When the system is ready, the System Manager will display the banner message "Site Statistics report generation starting." When the report generation is finished, the System Manager will report via the banner message "Site Statistics report generation complete."

To view the report, it will be necessary to exit this function and select the Reports Manager function. In the

Reports Manager function (User Menu item #69), you may view the report on the screen or print out a hard copy.

Figure 10-39 shows an example of the Site Statistics Report for Site 5. The report is automatically formatted in chronological order from 00:00 hours to the period ending date and time.

NOTE

Duration of calls versus Transmission or Message Conversation Limits may vary by up to 15 seconds (up to \approx 2 seconds when using GETC Group 4 merge code or later). Refer to Site/Device Definition in Chapter 5 for details.

Ericsson/GE EDACS						11-JUL-1994		
Site Statistics						Page : 1		
Period beginning : 26-MAY-1994 08:00:00.00								
Period ending : 26-MAY-1994 24:00:00.00								
Site Number : 5								
Statistics Date : 26-MAY-1994								
	Total Calls	%Calls Valid	%Calls Denied	%Calls Busy	%Calls Queued	%Cnvr Callee	% Cons Preempt	%Other Types
	-----	-----	-----	-----	-----	-----	-----	-----
00:00:00.00	0							
01:00:00.00	0							
02:00:00.00	0							
03:00:00.00	0							
04:00:00.00	0							
05:00:00.00	0							
06:00:00.00	0							
07:00:00.00	0							
08:00:00.00	19	94.7	5.3	0.0	0.0	0.0	0.0	0.0
09:00:00.00	21	61.9	0.0	38.1	0.0	0.0	0.0	0.0
10:00:00.00	22	63.6	0.0	36.4	0.0	0.0	0.0	0.0
11:00:00.00	25	60.0	28.0	12.0	0.0	0.0	0.0	0.0
12:00:00.00	144	24.3	0.0	75.0	0.7	0.0	0.0	0.0
13:00:00.00	7	100.0	0.0	0.0	0.0	0.0	0.0	0.0
14:00:00.00	243	63.0	0.0	24.7	11.5	0.0	9.9	0.8
15:00:00.00	298	49.0	0.0	45.3	5.7	0.0	0.3	0.0
16:00:00.00	430	95.3	0.0	0.0	4.7	0.0	0.5	0.0
17:00:00.00	31	96.8	0.0	0.0	3.2	0.0	0.0	0.0
18:00:00.00	0							
19:00:00.00	0							
20:00:00.00	1	100.0	0.0	0.0	0.0	0.0	0.0	0.0
21:00:00.00	0							
22:00:00.00	0							
23:00:00.00	0							

Maximum Call Duration: 50.049999
Average Call Duration: 1.980000
Maximum Queue Depth: 1
Average Queue Depth: 1.000000
Maximum Queue Delay: 9201.599609
Average Queue Delay: 0.220000

NOTE

These values are calculated from data for this date only.

Figure 10-39. Site Statistics Report Example

68) EVENT LOG DISPLAY (Mid)

The Event Log Display is a Mid-level feature that allows you to examine System Manager operational events for a particular date.

The display is typically used for verifying completion of events, such as report generation, when the System Manager is not being monitored continuously. It is also used as a historical event log to determine the sequence of events. Some of the activity recorded by the Event log includes:

- Logging all entry and exit of menu items.
- Logging significant action within a function, such as generating a report, activity download, viewing reports, etc. However, although it will log entering a LID or GID definition screen, it will not indicate if a LID or GID was added or deleted from the database.
- Logging alarm acknowledgments.
- Logging Disk Space Manager activity, such as deleting files.
- Logging most errors that the System Manager's Site and Device programs detect.

Select the Event Log Display function (User Menu item #68) by highlighting “Event Log Display” in the

Report panel or enter “68” as the Selected Menu Item and press the **Return** or **Select** key. The System Manager will Display the Event Log Display menu as shown in Figure 10-40.

The Event Log Display screen contains only one panel, the Selected Date panel. This panel allows you to select period covered by the report (full 24 hour period for the date selected).

Examining the Event Log

In the Event Log Display, enter the desired date using the dd-mmm-yyyy format in the Selected date panel.

Press the **Do** key. to examine the Event Log for the date indicated. The System Manager will display the events starting at 00:00 hours for the selected date as shown in Figure 10-41.

The various function keys, described at the bottom of the display, allow you to move through the log display.

NOTE

You can not print out this report, other than by initiating a screen print.

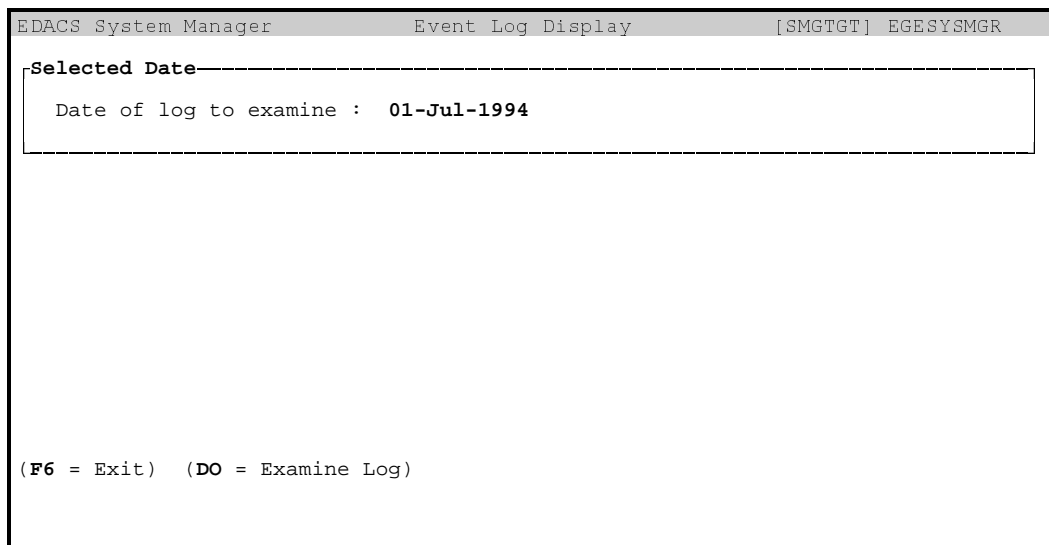


Figure 10-40. Event Log Display (Function #68)

Date	Time	Type of message	Program reporting event	Node Name	User Account Name	Information message
EDACS System Manager Event Log Display						
01-JUL-1994	01:00:31.17	INFORM	ACT_HANDLE	SMGTGT		Activity in progress for site 3
01-JUL-1994	01:00:31.22	INFORM	ACT_HANDLE	SMGTGT		Activity in progress for site 3
01-JUL-1994	01:00:31.28	INFORM	ACT_HANDLE	SMGTGT		Activity in progress for site 3
01-JUL-1994	01:00:31.33	INFORM	ACT_HANDLE	SMGTGT		Activity in progress for site 3
01-JUL-1994	01:01:43.41	WARNIN	EIO	SMGTGT		Modem comm fail
01-JUL-1994	01:02:56.36	INFORM	USR_MENU_2	SMGTGT	TXA6:	Exiting item 52
01-JUL-1994	01:03:57.63	INFORM	ACT_HANDLE	SMGTGT	EGESYSMGR	Activity download completed on site 3
01-JUL-1994	01:04:09.31	INFORM	USR_MENU_2	SMGTGT	TXA6:	Entering item 51
01-JUL-1994	01:05:34.28	INFORM	USR_MENU_2	SMGTGT	TXA6:	Regrouping unit 9202
01-JUL-1994	01:06:58.77	INFORM	USR_MENU_2	SMGTGT	TXA6:	Exiting item 51
01-JUL-1994	01:08:11.25	INFORM	USR_MENU_2	SMGTGT	TXA6:	Entering item 32
01-JUL-1994	01:09:23.81	WARNIN	USR_MENU_2	SMGTGT	TXA6:	Exiting item 32
01-JUL-1994	01:10:36.67	INFORM	USR_MENU_2	SMGTGT	Dialout	Entering item 69
01-JUL-1994	01:12:01.24	INFORM	USR_MENU_2	SMGTGT	TXA6:	Report ACT_STATS_05.txt;6 Viewed
01-JUL-1994	01:13:13.73	INFORM	USR_MENU_2	SMGTGT	Dialout	Exiting item 69
01-JUL-1994	01:14:26.28	INFORM	USR_MENU_2	SMGTGT	TXA6:	Entering item 66
01-JUL-1994	01:15:50.76	INFORM	USR_MENU_2	SMGTGT	TXA6:	Exiting item 66
01-JUL-1994	01:17:15.25	INFORM	USR_MENU_2	SMGTGT	Dialout	Entering item 40
01-JUL-1994	01:18:28.36	INFORM	USR_MENU_2	SMGTGT	Dialout	Alm ACK St 6 Poll 0123#56789012345#78901
01-JUL-1994	01:19:40.83	INFORM	USR_MENU_2	SMGTGT	Dialout	Alm ACK St 6 TU 012##56789012345678901
01-JUL-1994	01:20:54.43	INFORM	USR_MENU_2	SMGTGT	Dialout	Alm ACK St 6 Equi 0###4#6789012345678901
(F6 = Exit) (UP = Up Line) (DOWN = Down Line) (PF1-UP = Log Top) (PF1-DOWN = Log Bottom) (PREV = Up Page) (NEXT = Down Page) (FIND = Find Specified Text) (PF2 = Find Previous Text) (PF3 = Find Next Text) There are 436 event records for the specified day.						

Figure 10-41. Event Log Display Example

69) REPORTS MANAGER

The Reports Manager allows you to print, view, or delete reports generated by report functions 60 thru 67. It also allows you to verify database information stored by the System Manager.

Select the Reports Manager function (User Menu item #69) by highlighting "Reports Manager" in the Report panel or enter "69" as the Selected Menu Item and press the **Return** or **Select** key. The System Manager will Display the Reports Manager screen listing reports generated as shown in Figure 10-42.

The reports are grouped together in Report Type, Site Number, Creation Date sequence. Table 10-1 shows the relationship between the Report Type and its description in the Reports Manager. If the report list fills the page, use the **Next Screen** and **Previous Screen** keys to view reports on the next page. Use the **Up** and **Down** arrow keys to highlight the desired report.

The size of the report is measured in kilobytes. In the example shown in Figure 10-42, the Channel Statistics report highlighted uses 13K of memory.

WARNING

Not attempt to view or print any report which is larger than 8 megabytes (8,000K). Failure to heed this warning may result in corrupting the interface and causing the System Manager to log out your terminal. If that should happen, log back in.

Table 10-1. Types of Reports

Type of report	Report Manager displayed type
Activity Detail	Activity Detail Site: xx
Activity summary	Activity Summary Site: xx
Alarm report	Alarm Activity Site: xx
Channel Statistics	Channel Stats Site: xx
Site Statistics	Site Stats Site: xx
Group Database (brief or full)	Groups
Logical Database (brief or full)	Logical Units
Site/Device Report (sites or devices, any option)	Site Assignments

Stopping System Print

The **F20** function key can be used to stop the currently active print job on the system printer of the System Manager. It will stop the printout no matter who submitted the print job; no A/F/S restrictions apply. The user cannot select which report to stop, if there are several queued to the printer at once; it always stops the currently active (i.e., printing) print job. If there is no print job being processed on the printer, or some other error occurs, a message will be displayed on the user's terminal stating that there was a problem and the VMS error code will be given. If the

EDACS System Manager		Reports Manager		[SMGTGT] EGESYSMGR	
Select Report					
Report	Type	Site	Number	Creation Date	Size Kbytes
Alarm Activity		Site:	06	Mon Jun 6 15:50:47 1994	27
Channel Stats		Site:	05	Thu Jun 23 09:08:52 1994	1
Channel Stats		Site:	05	Tue Jun 14 09:04:26 1994	6
Channel Stats		Site:	05	Tue Jun 14 08:17:27 1994	13
Channel Stats		Site:	05	Tue Jun 14 08:15:21 1994	13
Channel Stats		Site:	31	Mon May 16 11:04:16 1994	1
Activity Detail		Site:	03	Fri Jul 1 08:14:38 1994	5
Activity Detail		Site:	05	Thu Jun 30 11:51:31 1994	58
Activity Detail		Site:	05	Thu Jun 9 17:15:45 1994	8
Activity Detail		Site:	09	Mon Jun 20 15:39:23 1994	5
Activity Detail		Site:	09	Mon Jun 20 15:36:21 1994	5
Activity Detail		Site:	09	Mon Jun 20 15:35:36 1994	5
Activity Detail		Site:	09	Mon Jun 20 15:35:26 1994	5
Site Stats		Site:	05	Thu Jun 30 10:06:03 1994	9
Site Stats		Site:	05	Tue Jun 14 08:18:58 1994	4
Site Stats		Site:	05	Thu Jun 9 16:55:01 1994	3

(F6 = Exit) (F10 = Print) (F11 = View) (F12 = Delete)
(F20 = Stop System Print)

Figure 10-42. Reports Manager (Function #69)

function completed successfully, then a message will be displayed indicating that the printout was stopped.

The printer will continue to print the remaining text in the printer's buffer, so it might not stop immediately. Normally, the LA424 DEC printer sold with the system has 8 kilobytes of buffer memory, which will typically hold 2 to 10 pages of text. This means that the printer might continue to print for that number of pages after the message informing the user that the print job is stopped.

Viewing a Report

To view a report, perform the following steps:

1. Select the Print Manager function (User Menu item #69).
2. Using the **Up** and **Down** arrow keys, highlight the desired report.
3. Press the **F11** key, the System Manager will display the report. Use the function keys listed at the bottom of the screen to move through the report.

Printing a Report

To print a hard copy of a report, perform the following steps:

1. Select the Print Manager function (User Menu item #69).
2. Using the **Up** and **Down** arrow keys, highlight the desired report.

3. Press the **F10** key, the System Manager will display a pop-up menu allowing you to select either the System Printer or a Terminal Printer.

NOTE

When using the System Manager (version 5.01) with a VT220 terminal and possibly PC terminal emulators, it is possible for banners to be printed when using a terminal printer. Therefore, it is recommended that you acknowledge all alarms prior to printing a report. Refer to the Release Notes SRN-1001 for additional details.

4. Highlight the desired printer and press the **Select** key. The System Manager will send the report to the printer.

Deleting a Report

Periodically it will be necessary to remove old reports from the system to free up disk space. To remove an old report, perform the following steps:

1. Select the Report Manager function (User Menu item #69).
2. Using the **Up** and **Down** arrow keys, highlight the desired report.
3. Press the **F12** key to delete the report. The System Manager will request you press the **F12** key again to confirm that you really want to delete this report.
4. Press the **F12** key again to confirm the delete action.

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CHAPTER 11 - SYSTEM MAINTENANCE

The System Maintenance category is used by the System Manager to perform the following functions:

- Define a group structure for the trunking system.
- Define authorized System Manager users.
- Archive the database files.
- Restore archived database files.
- Archive the activity files.
- Restore archived activity files.
- Backup the system disk.
- Define disk space usage, maximums and warnings.

These functions are listed in the System Maintenance panel as 0 thru 7 as shown in Figure 11-1. The eight functions are described as follows:

70) Agency Partition Table - The Agency Partition Table establishes the structured trunking scheme used by the System Manager to set up group communication parameters. Within this function, the user defines the agency, fleet, and subfleet parameters.

71) User Account Maintenance - The User Account Function is used by the System Manager to identify authorized system users. It also provides security control

by selectively assigning the functions accessible by the account user.

72) Database Archive - The Database Archive function allows the user to archive or backup database records created or modified using the Database Maintenance category.

73) Database Retrieval - The Database Retrieval function is used to restore files archived using the Database Archive function.

74) Activity Archive - The Activity Archive function is used to save activity data downloaded from the Site Controller to the System Manager.

75) Activity Retrieval - The Activity Retrieval function allows the user to restore activity data previously archived using the Activity Archive function.

76) System Backup - This screen provides instructions for backing up the VMS operating system disk.

77) Disk Space Manager - The Disk Space Manager function is used to define the limitations of activity data storage. This includes identifying the points where the System Manager will remind the user to archive activity data and the point where the System Manager will automatically begin deleting data.

EDACS System Manager V6.00		User Menu	[SMGTGT] EGESYSMGR		
<div style="border: 1px dashed black; padding: 5px; margin-bottom: 10px;"> Selected Menu Item Enter Menu Item : 70 </div>					
<div style="border: 1px dashed black; padding: 5px;"> Menu Selections <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; vertical-align: top; padding: 5px;"> <div style="border: 1px dashed black; padding: 5px; margin-bottom: 5px;"> Main Categories <ul style="list-style-type: none"> 1) Database Maintenance 2) Site Reconfiguration 3) Device Communication 4) Alarm Control 5) Radio Control 6) Reports 7) System Maintenance </div> </td> <td style="width: 50%; vertical-align: top; padding: 5px;"> <div style="border: 1px dashed black; padding: 5px;"> System Maintenance <ul style="list-style-type: none"> 0) Agency Partition Table 1) User Account Maintenance 2) Database Archive 3) Database Retrieval 4) Activity Archive 5) Activity Retrieval 6) System Backup 7) Disk Space Manager </div> </td> </tr> </table> </div>				<div style="border: 1px dashed black; padding: 5px; margin-bottom: 5px;"> Main Categories <ul style="list-style-type: none"> 1) Database Maintenance 2) Site Reconfiguration 3) Device Communication 4) Alarm Control 5) Radio Control 6) Reports 7) System Maintenance </div>	<div style="border: 1px dashed black; padding: 5px;"> System Maintenance <ul style="list-style-type: none"> 0) Agency Partition Table 1) User Account Maintenance 2) Database Archive 3) Database Retrieval 4) Activity Archive 5) Activity Retrieval 6) System Backup 7) Disk Space Manager </div>
<div style="border: 1px dashed black; padding: 5px; margin-bottom: 5px;"> Main Categories <ul style="list-style-type: none"> 1) Database Maintenance 2) Site Reconfiguration 3) Device Communication 4) Alarm Control 5) Radio Control 6) Reports 7) System Maintenance </div>	<div style="border: 1px dashed black; padding: 5px;"> System Maintenance <ul style="list-style-type: none"> 0) Agency Partition Table 1) User Account Maintenance 2) Database Archive 3) Database Retrieval 4) Activity Archive 5) Activity Retrieval 6) System Backup 7) Disk Space Manager </div>				
(F7 = Exit from System Manager) (F10 = Clear Menu Item) (Select = Submit Current Menu Item)					

Figure 11-1. User Menu - System Maintenance

70) AGENCY PARTITION TABLE

The Agency Partition Table function allows you to develop a structured trunking system which combines radio units into groups so that radio users with common communication requirements can communicate with each other (group communications).

In this hierarchical arrangement of groups, all radio units (individual ID's or LID's) within a given subfleet have the same address. The address, also referred to as the Group ID (GID) represents the particular combination of agency, fleet and subfleet.

The elements of a structured trunking system can be defined as follows:

- **Agency** - A specific group of fleets and their associated subfleets. For example, in a municipal trunked system, examples of agencies could be fire, police, public works, and administration.
- **Fleet** - A specific group of subfleets which incorporate the individual units. In the police agency, examples of fleets could be patrol, detective, traffic, and special operations.
- **Subfleet** - A specific group of individual units. In the patrol fleet, examples of subfleets could be North Patrol, South Patrol, and K9 Patrol.

The previous examples may be diagrammed as shown in the System Addressing Diagram example, Figure 11-2.

The system may support up to 16,382 individual radios. Each radio unit may be programmed to work with only one subfleet or group, be able to switch between subfleets, or "Scan" (receive two or more subfleets simultaneously). Units which communicate with a subfleet inherently receive Fleet Calls and Agency Calls addressed to the related fleet/agency.

Fleet "All Calls" are made when a call is addressed to subfleet "0" within a fleet. (All radio units within the fleet will respond to a subfleet "0" call.) An Agency "All Call" to all fleets within an agency is accomplished by addressing fleet "0," subfleet "0" in a given agency.

Fleet Mapping

Setting up the fleet map structure or Agency/Fleet/Subfleet (A/F/S) determines the maximum number of agencies, fleets, and subfleets which can be assigned. Table 11-1 defines the number of fleets allowed per agency, depending on the number of agencies selected.

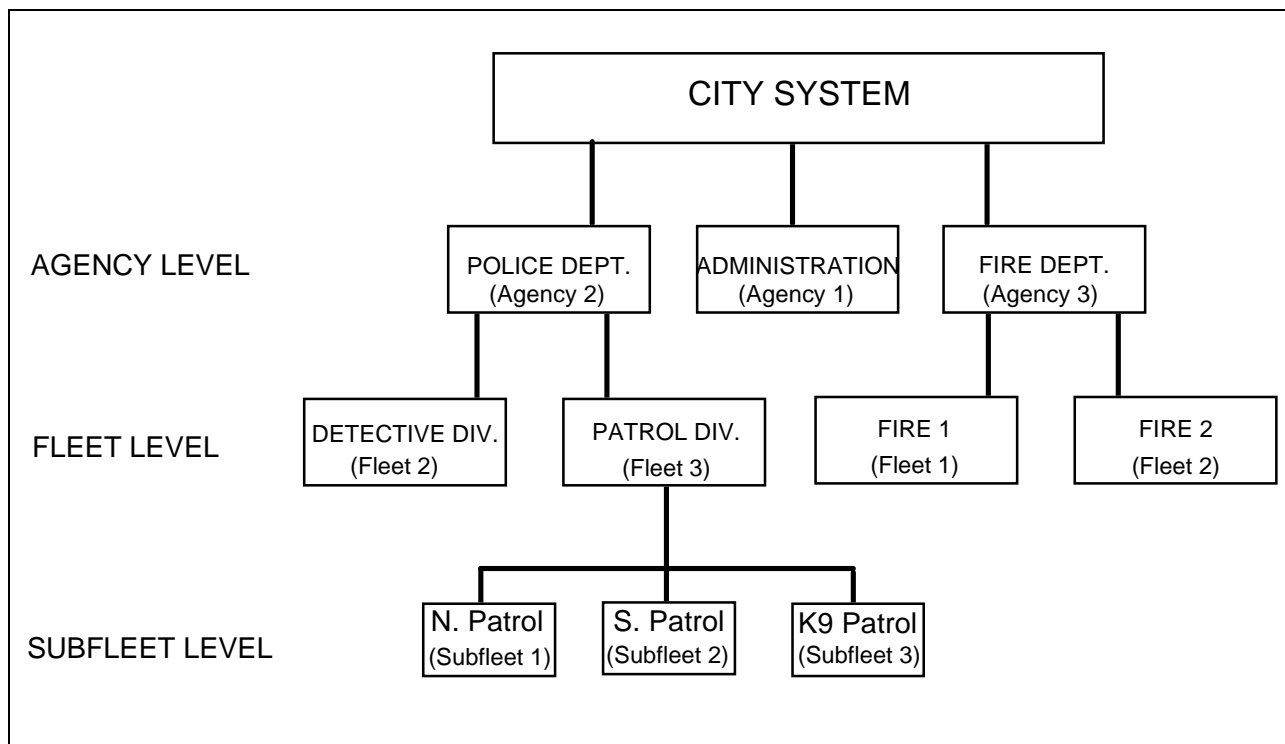


Figure 11-2. System Addressing Diagram Example

Table 11-1. Number of Fleets Allowed

Number of Agencies Selected	Number of Fleets Allowed per Agency (Can vary by Agency.)
0	N/A (non-structured system)
2	2, 4, 8, 16, 32, 64, 128, 256
4	2, 4, 8, 16, 32, 64, 128
8	2, 4, 8, 16, 32, 64
16	2, 4, 8, 16, 32
32	2, 4, 8, 16

The greater number of agencies chosen, the fewer number of fleets allowed. The number of agencies and fleets chosen, in turn, determines the number of subfleets allowed. A GID is composed of 11 bits to define a total of 2048 Groups (subfleets) in any one System. The following formula provides a way to calculate the number of subfleets per fleet in a given agency/fleet structure:

$$\text{Number of Subfleets} = \frac{(2048 / \# \text{ of Agencies})}{\# \text{ of Fleets}} - 1$$

In other words, the number of subfleets per fleet is equal to the total number of Groups per System (2048), divided by the number of agencies, divided by the number of fleets, less one. This calculation takes into account the one subfleet reserved per fleet for Fleet "All Call" (subfleet "0").

The most common fleet map used by EDACS customers is 8 (3 bits) agencies, 16 (4 bits) fleets per agency, and 16 (4 bits) subfleets.

Using the 3/4/4 structure, partitioning of the 11 bit Group ID or GID is as follows:

<u>AGENCY</u>	<u>FLEET</u>	<u>SUBFLEET</u>
0 0 0	0 0 0 0	0 0 0 0

Using the addressing example shown in Figure 11-2, the A/F/S assignment for the K9 Patrol would be 2/3/3. This address is defined in the 3/4/4, 11 bit structure as follows:

<u>AGENCY</u>	<u>FLEET</u>	<u>SUBFLEET</u>	
0 1 0	0 0 1 1	0 0 1 1	GID = 563 ₁₀
2	3	3	Agency 2, Fleet 3, Subfleet 3

Converting the binary A/F/S code (01000110011₂) to decimal, provides the Group ID code (563₁₀). As a result all calls to Group ID #563 will be received by units assigned to the K9 Patrol.

With the structured system, a "0" in the subfleet field will summon all the subfleets within the fleet to the Working Channel. In our sample system, a group call for units assigned to the Patrol Division will be diagrammed as shown below. Note, the Group ID #560 is reserved for Agency 2, Fleet 3 All Call.

<u>AGENCY</u>	<u>FLEET</u>	<u>SUBFLEET</u>	
0 1 0	0 0 1 1	0 0 0 0	GID = 560 ₁₀
2	3	0	Agency 2, Fleet 3, - All Call

Similarly, a "0" in both the fleet and subfleet fields will summon all radio units assigned to the Police Department (i.e., "All Points Bulletin"). The group assignment to all fleets and subfleets assigned to the Police Department (Agency 2) would be:

<u>AGENCY</u>	<u>FLEET</u>	<u>SUBFLEET</u>	
0 1 0	0 0 0 0	0 0 0 0	GID = 512 ₁₀
2	0	0	Agency 2 - All Call

Group ID #512 is reserved for the Agency 2, All Call.

NOTE

It is extremely important to plan a structured system carefully in advance to accommodate and compliment the organizational structure of the system's users. Any decision to change the A/F/S structure later will require a universal bench reprogramming of all radio units in the system and a purging of the GID and LID databases.

To enhance each agency's flexibility, you can have different fleet and subfleet structures for each agency to suit their specific requirements.

Agency Partition Definition

After developing the system structure, it will be necessary to define the addressing scheme in the System Manager's Agency Partition Table.

Through the Agency Partition Definition function of the System Maintenance Menu, the number of agencies, fleets, and subfleets on the system are defined.

NOTE

When setting up any system, the agency partition table must be created first. No user, unit, or group records can be created until this table is defined.

Select the Agency Partition Table function (User Menu item #70) by highlighting "Agency Partition Table" in the System maintenance panel or by entering "70" for the Selected Menu Item and press the **Return** or **Select** key. The System Manager will display the Agency Partition Table screen as shown in Figure 11-3.

It is advisable to make up a chart showing the desired agency, fleet, and subfleet groupings for your communication system before making entries in this table. Once entries are made and units have been assigned to groups, it is more difficult to make changes.

Entries made to the Agency Partition Table are defined as follows:

Agency Count - Enter the Agency Count Number (1 - 32). This is the total number of agencies to be defined in your system.

Agency - The agency section lists the sequence number (0-31) based on the total number entered for the Agency Count.

Fleet - Enter the number of fleets to be defined for the associated agency. Repeat for each agency listed.

Subfleet - This field indicates the maximum number of subfleets. This number is automatically calculated by the System Manager based on the number of agencies and fleets.

Setting Up the Agency Partition

Use the following steps to define the Agency Partition Table:

1. Select the Agency Partition Table from the User Menu. In the Agency Count field, enter the total number of agencies.
2. Move the cursor to the Fleet field of the first Agency (Agency 0) and enter the number of fleets defined under this agency. Repeat this step for each agency listed on the screen.
3. Press the **Do** key to save the Agency Partition Table information.

NOTE

You may not change the A/F/S structure when units or groups exist.

EDACS System Manager Agency Partition Table [SMGTGT] EGESYSMGR		
Agency Count : 8		
<u>Agency</u>	<u>Fleet</u>	<u>Subfleet</u>
0	16	16
1	16	16
2	16	16
3	16	16
4	16	16
5	16	16
6	4	64
7	16	16
(F6 = Exit) (F10 = Reset APT to Original Set of Values) (Do = Save APT) (F7 = Create Master SAID Pool) You may not change the A-F-S structure when units or groups exist		

Figure 11-3. Agency Partition Table (Function #70)

Creating A Master SAID Pool

Use the following procedure to create the Master SAID pool:

1. Select the Agency Partition Table (item #70) from the User Menu.
2. Press the **F7** key to create the Mastger SAID Pool. The System Manager will dispaly the message “Working ...” during the process.

This will create SAIDs for any nonexistant GIDs corresponding to Fleet = 0, Subfleet ≠ 0 criteria.

71) USER ACCOUNT MAINTENANCE

The User Account Maintenance function allows the System Administrator to provide security management for the System Manager. The function may be used for the following purposes:

- Create or modify a User Account.
- Assign or change Password protection.
- Set up user privileges.
- Enable Extended Network access.

Select the User Account Maintenance function (User Menu item #71) by highlighting “User Account Maintenance” in the System Maintenance panel or enter “71” as the Selected Menu Item and press the **Return** or **Select** key. The System Manager will display the Selected User panel of the User Definition screen.

Enter the default user “EGESYSMGR.” The System Manager will display the first User Definition screen (1:8) which contains the Selected User and the User Parameters panels, as shown in Figure 11-4.

The Selected User panel allows the System Administrator to create new or modify existing User Accounts. The User Parameters panel is used for setting up or modifying system access controls, including password, and Extended Network access.

Initially the System Manager is programmed with the default user name “EGESYSMGR” and default password “EGESYSMGR.” The associated default values are used when the system is first powered up, and remain in effect until changed.

The remaining screens (2:8 thru 8:8) contain the Menu Options panels. These panels are used to identify which functions the user will be allowed to access. By default, the System Manager allows access to all functions.

NOTE

The only thing that can be changed in the EGESYSMGR Account is the password.

Selected User

New user accounts may be created at any time. Existing accounts may be modified or deleted to accommodate changes in system operation. Modifications to existing accounts and new accounts become effective the next time the user logs in.

NOTE

Only EGESYSMGR Account can change another accounts password. Other users with access to User Menu item #71 can change their own passwords, and create new users.

The number of User Accounts is limited only by the available amount of disk space on the system.

NOTE

There is a limit on the number of simultaneous users (varies).

```

EDACS System Manager      User Definition      [SMGTGT] EGESYSMGR

Selected User-----MODIFY
Enter User Name :  EGESYSMGR

User Parameters-----1:8

Password          :
Password Verification :
A/F/S Access :    0/  0/   0 -  7/ 15/  15

Extended Network Access : Y
Default Site : 03

Device Access  (1 - 32) : 12345678901234567890123456789012
                   (33 - 64) : NNYNNYNNYNNYNNNNNNNNNNNNNNNNNNNNY
                               YYYYNNNNYNNNNYNNNNNNNNNNNNNNNNNNY

(F6 = Exit)  (F8 = Delete Record)  (F10 = Clear Record)  (F11 = Next Record)
(Do = Save Record)

```

Figure 11-4. User Definition (Function #71)

User Name - The User Name is a unique name assigned to each User Account. There is space for 12-characters.

For New User Accounts - Enter a unique 12-character user name. The System Manager will display the message "User name does not exist, new user will be entered." It will also indicate you are creating a new record. Proceed to enter the restrictions assigned to this account and then save the record.

For Existing Accounts - Enter the User Account Name. The System Manager will locate the record and will indicate "MODIFY." If the System Manager cannot find the record, it will assume this is a new account and you are identifying a new user. Be sure to save the changes before selecting another account record.

You may also use the **F11** (Next Record) key to scroll thru the User Account list.

User Definition

The User Definition panel allows the System Administrator to set up the users password and identify system privileges.

Users logged into the EGESYSMGR account can assign or change the user password and privileges for any User Account.

Users who do not have access to the EGESYSMGR account can change only their own password. Any attempt to change another accounts password (or modify user privileges) will cause the System Manager to issue the following message "You can only modify your account password."

Password - The password field allows you to assign a unique name which prevents unauthorized users from accessing your account.

Enter the account user password (6-32 characters) in the password field.

NOTE

It is recommended that the System Administrator change the password to the EGESYSMGR account to prevent unauthorized access to the User Account records.

Password Verification - Re-enter the same password. If the password is not duplicated correctly in three attempts, the System Manager will move the cursor back to the Password field.

A/F/S Access - A set of three fields (agency/fleet/subfleet). When an agency number is specified, the user has access to all records pertaining to radio units in the associated fleets and subfleets. When an agency and fleet number are specified, the user has access to all records pertaining to radio units in the associated subfleets.

Enter the A/F/S the account user is allowed to access.

NOTE

The users A/F/S restrictions limits the user's access to the LID and GID Definition screens (11 and 12), LID and GID Reports (screen 61 and 62), and Unit Enable/Disable (screen 50).

Extended Network Access - The Extended Network Access field is used to identify account users who are authorized to create or modify Unit or Group ID's that are Extended Network enabled.

N (default) - The account user is not authorized to create or modify LID's or GID's that are Extended Network enabled.

Y - The account user is allowed to create or modify LID's and GID's that are Extended Network enabled.

Default Site - This field identifies the default site selected when the account user selects the Site Monitor or Site Reconfiguration functions. (Not currently used.)

Enter the two digit Site Number (for sites 1 thru 9, proceed the site number with a zero).

NOTE

This feature is not functional in the System Manager version 6.xx or earlier software.

Device Access - This field identifies the site and device databases to which the account user will be permitted access. This prevents unauthorized access to selected site or device databases. (Not currently used.)

N (default) - Access to the selected site or device database is not authorized. Enter a No in the 1-32 row under the restricted site number or in the 33-64 row for the restricted device number.

Y - Entering a Yes under the site or device number will allow the account user access to the site or device's database.

NOTE

This feature is not functional in the System Manager version 6.xx or earlier software.

Menu Options

User Definition screens 2:8 thru 8:8 identify System Manager functions the account user will be allowed to access. Each screen consists of the Selected User panel and the Menu Options panel.

NOTE

No user can be granted more access than the EGESYSMGR Account. This account's privileges are maximized to the level of System Manager software installed (Core, Mid, or Full feature configuration).

Each Menu Option panel contains two sections, the Screen Access section and an associated list of functions. See Figure 11-5. The function list mirrors the sub-function panels shown for each category in the User Menu screen.

Select the desired Menu Option screen by pressing the **Next Screen** or **Previous Screen** keys. The System Manager will move from screen to screen displaying the function restrictions (Screen Access) for the each Selected Menu Item, category by category as listed below:

- 2:8 Database Maintenance
- 3:8 Site Reconfiguration
- 4:8 Device Communications
- 5:8 Alarm Control
- 6:8 Radio Control
- 7:8 Reports
- 8:8 System Maintenance

Screen Access - Indicate if the account user is authorized access to the associated function listed on the right.

Y (default) - Entering a Yes allows the user access to the designated function.

N - Entering a No in this field will deny the account user access to the indicated Database Maintenance function(s).

Saving User Account Records

This record must be saved before selecting another user name or exiting the function. Perform the following steps to save a User Account Record:

1. Press the **Do** key to save a User Account record. The System Manager will indicate the "User Record is being saved..."
2. When the System Manager has finished saving the record, it will display the message "Record has been successfully saved."

Deleting User Account Records

Use the following procedure to delete a User Account record:

1. Enter the User Name. If the name is valid, the System Manager will indicate it has located the record.
2. Press the **F8** key to delete the record.
3. The System Manager will respond "You have requested a delete. Press F8 again to complete action."
4. Respond to the prompt by pressing F8 a second time to verify you are actually deleting the record. Pressing any other key will abort the process.
5. The System Manager will indicate "User (*User's Name*) has been deleted."

Menu Options-----	2:8
<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> Screen Access Y Y Y Y Y Y Y </div>	<div style="border: 1px solid black; padding: 5px;"> Database Maintenance----- 0) Site / Device Definition 1) Logical Unit Definition 2) Group Definition 3) Rotary Definition 4) Line Definition 5) Toll Call Restrictions 6) ACU Parameters 7) Said Database </div>

Figure 11-5. Menu Options - Database Maintenance (2:8)

72) DATABASE ARCHIVE

The Database Archive function is used to backup or archive the database records created or modified using the Database Maintenance functions. This procedure allows you to save the databases' data to a tape cartridge. System Manager's with a TK50 tape drive can store up to 95MB of data. System Manager's with TLZ07 tape drives can store up to 4GB of data.

Archiving the database records is a manual operation. In other words, you cannot set the system up to automatically archive the data records. The System Administrator or designated individual must select this function, install the tape cartridge and start the archive process. The total process will take approximately 30 minutes. In addition, all other users must be logged out.

The databases should be archived periodically. The frequency of these archives depends on how many records have been modified. We recommend archiving the databases every 50 - 100 LID and GID entries or changes.

Select the Database Archive function (User Menu item #72) by highlighting "Database Archive" in the System Maintenance panel or enter "72" as the Selected Menu Item and press the **Return** or **Select** key. The System Manager will display the Database Archive Display, as shown in Figure 11-6, and indicate the last archive date and today's date.

To archive the database, perform the following steps:

1. Ensure all users are logged off the system.

NOTE

Since this procedure shuts down all other System Manager software, please make sure that this is the only terminal on the system running the application software package.

2. Insert a write enabled tape cartridge into the tape drive. Refer to the tape loading procedures in Chapter 2, *System Manager Basics*, in this manual.
3. Start the archive procedure by pressing the **Do** key.

CAUTION

This procedure will overwrite the contents of whatever data tape is inserted into the tape drive. Once this procedure starts, you may not exit until it completes (5 to 15 minutes, depending on the file sizes).

4. After the System Manager archives the database it will restart (or boot) the system.
5. Depending on the number of sites, the restart procedure may take up to 10 minutes. If you attempt to access a site before completion of the restart procedure, the System Manager will respond immediately with the message "Unable to connect to Site."

EDACS System Manager Database Archive Display [SMGTGT] EGESYSMGR	
Date Selection	
Last Archive Date: 29-SEP-1993	Present Date: 01-Jul-1994
<p>Caution:</p> <p>This procedure will overwrite the contents of whatever TK50 tape is inserted into the tape drive. Once this procedure starts, you may not exit until it completes (5 to 15 minutes depending on file sizes). Since this procedure shuts down all other System Manager software, please make sure that this is the the only terminal on the system running the application software package.</p>	
(F6 = Exit) (DO = Start Archive)	

Figure 11-6. Database Archive Display (Function #72)

6. After the archive is complete, remove and label the tape. Label the tape "Database Archive" and the date in DD-MM-YYYY format, where the date matches the date entered as the Present Date.

73) DATABASE RETRIEVAL

The Database Retrieval function allows you to retrieve (restore) data saved to tape using the Database Archive function (User Menu item #72)

Select the Database Retrieval function (User Menu item #73) by highlighting "Database Retrieval" in the System Maintenance panel or enter "73" as the Selected Menu Item and press the **Return** or **Select** key. The System Manager will display the Database Archive Display screen as shown in Figure 11-7.

To retrieve an archived database, perform the following steps:

1. Ensure all users are logged off the system.

CAUTION

Since this procedure shuts down all other System Manager software, please make sure that this is the only terminal on the system running the application software package.

2. Insert the archived tape cartridge into the tape drive. Refer to the tape loading procedures in the Introduction chapter of this manual.
3. Enter the Last Archive Date. This is the date on the tape cartridge label. The function default is

the date the System Manager stored when the last archive was made.

NOTE

The System Manager stored the date of the last archive (Database Archive - Present Date) on the system disk and it will compare this date to the date entered to ensure the correct tape is being loaded.

4. Start the retrieval procedure by pressing the **Do** key.

CAUTION

Once this procedure starts, you may not exit until it completes (5 to 15 minutes, depending on the file sizes).

5. After the System Manager retrieves the database it will restart (or boot) the system.
6. Depending on the number of sites, the restart procedure may take up to 10 minutes. If you attempt to access a site before completion of the restart procedure, the System Manager will respond immediately with the message "Unable to connect to Site."

EDACS System Manager	Database Retrieval Display	[SMGTGT] EGESYSMGR
----------------------	----------------------------	--------------------

Date Selection

First Archive Date: **21-JAN-1993** Last Archive Date: **29-SEP-1993**

Caution:

Since this procedure shuts down all other System Manager software, please make sure that this is the the only terminal on the system running the application software package.

Once the retrieval procedure starts, you may not exit until it completes (5 to 15 minutes depending on file sizes).

(F6 = Exit) (DO = Start retrieval)

Figure 11-7. Database Retrieval Display (Function #73)

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74) ACTIVITY ARCHIVE (Mid)

The Activity Archive function is a Mid-level feature that allows you to save activity data, downloaded from the Site Controller, to a tape cartridge or cartridges.

During normal operation, you should regularly archive activity data which is temporarily stored on the system disk. This is necessary to prevent the System Manager from automatically deleting the activity records whenever the preset storage capacity is exceeded.

NOTE

This does depend on what the Disk Space Manager screen has been configured to do. If the user of the system does not need to store the Call Data from the sites, then the Disk Space Manager can be set to delete data automatically, and this function will most likely not be used.

Periodically the System Manager checks the amount of storage space used for unarchived activity data. If it determines the amount of activity data has exceeded the Warning Threshold, setup using the Disk Space Manager (User Menu item #77), it will issue the message "Perform Backup: n bytes to data loss."

If the warnings to perform the Activity Data Archive are ignored and the amount of disk space used exceeds the Deletion Threshold (also setup using the Disk Space Manager), the System Manager will begin deleting files. When it starts deleting unarchived files, it will notify users that "Unarchived files being deleted ***DATA LOSS**.)

Select the Activity Archive function (User Menu item #74) by highlighting "Activity Archive" in the System Maintenance panel or enter "74" as the Selected Menu Item and press the **Return** or **Select** key. The System Manager will display the Activity Archive Display screen as shown in Figure 11-8.

The Activity Archive process may be completed while the system is in use. However, once the procedure starts, you may not stop the process until it completes (duration will depend on the size in megabytes of activity files within the selected time range).

NOTE

The time required to archive the activity data may be lengthy and depends on the amount of data. The system transfers data at a rate of 62.5k bytes/sec. For example, to transfer 150 MB of data will require two 95 MB (TK50) tape cartridges and take about an hour and a half. Systems with the TLZ07 tape drive are much faster and can store up to 4 GB of data.

The system will write the data and perform a complete data verification.

CAUTION

This procedure will overwrite the contents of any write enabled data tape that is inserted into the tape drive.

The following procedure provides instructions for periodically archiving activity data. Performing this

EDACS System Manager		Activity Archive Display		[SMGTGT] EGESYSMGR
Date Selection				
Date of last archive:	30-SEP-1993	Ending date of		
Last archive end date:	30-SEP-1993	today's archive:	1-JUL-1994	
Caution:				
<p>This procedure will overwrite the contents of any write enabled TK50 tape that is inserted into the tape drive. Once this procedure starts, you may not exit until it completes (duration will depend on the number of activity files).</p> <p>Upon completion you must physically label the archive tape as: 'LABEL=DD-MMM-YYYY'. Where DD-MMM-YYYY matches the date entered for the 'Ending date of today's archive'. Failure to do this will impair the retrieval process. You should also maintain an archive log book.</p>				
(F6 = Exit) (DO = Start Archive)				

Figure 11-8. Activity Archive Display (Function #74)

operation will allow the Disk Space Manager to free up vital disk space and prevent the System Manager from automatically deleting unarchived activity data when the preset storage capacity is exceeded.

1. Insert a write enabled tape cartridge into the tape drive. Refer to the tape loading procedures in the Introduction chapter of this manual.
2. Enter the ending date for the Archive process. This may be today's date (default) or any date after the last archive end date.

NOTE

The System Manager will archive all activity data between the end of the last archive, and the entered End Date for this archive.

3. Press the **Do** key to start the process.

CAUTION

Once this procedure starts, you may not exit until it is complete.

4. Upon completion of the archive process, remove and label the tape cartridge(s).

NOTE

Label the archive tape as: "Label=dd-mmm-yyyy." Where dd-mmm-yyy matches the date entered for the "Ending date of today's archive." Failure to do this will impair the retrieval process. You should also maintain an archive log book.

5. Store the archived activity data tape cartridges in accordance with the guidelines given in the Introduction chapter of this manual.

75) ACTIVITY RETRIEVAL (Mid)

The Activity Retrieval is a Mid-level feature which compliments the Activity Archive process (User Menu item #74). This procedure allows you to restore the archived activity files from the tape cartridges to the System Manager disk file.

Select the Activity Retrieval function (User Menu item #75) by highlighting "Activity Retrieval" in the System Maintenance panel or enter "75" as the Selected Menu Item and press the **Return** or **Select** key. The System Manager will display the Activity Retrieval Display screen as shown in Figure 11-9.

Use the following procedures to retrieve the activity data for a particular period:

1. Enter the beginning date for the activity you wish to retrieve. Use the DD-MMM-YYYY format.

NOTE

The default dates are the last dates recorded for archiving activity files stored in the System Manager.

2. Enter the ending date for the activity data you wish to retrieve. Use the DD-MMM-YYYY format. The default value is the most recently archived activity file date on record in the System Manager.
3. Press the **Return** key. The System Manager will display the required Archive tape (the tape is identified by the date label) and will indicate (Yes/No) if more than one tape will be needed.

4. Insert the selected tape cartridge into the tape drive. Refer to the tape loading procedures in the Introduction chapter of this manual.
5. Press the **Do** key to start the retrieval process.

CAUTION

Once this procedure starts, you may not exit until it is complete.

6. Upon completion of the retrieval process, remove the tape cartridge(s).

Activity Retrieval Procedure

This procedure explains the process for retrieving archived activity files. Once retrieved, you can generate the necessary reports using report menus and the retrieved data.

WARNING

This procedure will take a variable amount of time to complete, depending on the amount of archived data; several minutes is quite possible.

1. Select the Activity Retrieval function (User Menu item #75), and proceed with the activity retrieval.
2. You may now generate the desired reports on the retrieved data.

```

EDACS System Manager      Activity retrieval Display      [SMGTGT] EGESYSMGR

--Date Selection-----
Beginning Date:  8-JUL-1993      Ending Date: 30-SEP-1993

Required Archive tape:

Additional tape(s):

Caution: Once the retrieval procedure starts, you may not exit.

(F6 = Exit)  (RETURN = Enter dates to display the Required archive tape)
              (DO = Start retrieval)
  
```

Figure 11-9. Activity Retrieval Display (Function #75)

3. If desired, this procedure can be repeated, in order to restore the newer archived data files to the System Manager. Otherwise, the files that were retrieved will be deleted over time as usual.

76) SYSTEM BACKUP

The System Backup procedure allows you to make a copy (backup) of the entire system disk. The system backup provides a secure copy of all system parameters and software that can be quickly re-installed to restart the System Manager in the event of a catastrophic equipment outage resulting from a fire, flood, etc.

Select the System Backup function (User Menu item #76) by highlighting "System Backup" in the System maintenance panel or enter "76" as the Selected Menu Item and press the **Return** or **Select** key. The System Manager will display the System Disk Backup Display screen as shown in Figure 11-10.

NOTE

Additional information for back up and retrieval of the VMS operating system disk may be found in LBI-38703. Chapter 5, *VMS Operating System Maintenance Tasks*.

Backup the System Disk using the following procedure:

NOTE

This procedure will shut down the System Manager for the duration of the backup. This can be a long time.

1. Shut down the computer by logging into the shutdown account as follows:

```
Username:  SHUTDOWN<cr>
Password:  SHUTDOWN<cr>
```

2. Depress the Halt/restart switch at the rear of the MicroVax 3100 computer.

NOTE

The following commands must be entered at the console terminal. All occurrences of ddmmyyyy should be replaced by the current date.

3. At the >>> prompt, enter: **B/E0000000**
4. Load the desired TK50 tape in the tape drive.
5. In a few moments the \$ prompt will appear, enter:

```
BACKUP/REW/VER/IMAGE/LABEL=SYSDMMYYYY -
DKA300: MKA500:ddmmyyyy.SAV
```

NOTE

The backup will take approximately 80 min./tape and can take several tapes. The system will inform you when to replace the tapes.

Carefully label all tapes as 'sysddmmyyyy Vol # of #', where the "Vol #" is the number of the tape (1, 2, 3, etc.) and the "of #" is the total number of tapes used.

```
EDACS System Manager      System Disk Backup Display      [SMGTGT] EGESYSMGR

-----Procedure description-----Date of last backup: 27-JUN-1994
This procedure is the only proper way to backup the system disk.
1) Shut down the computer by logging into the shutdown account as follows:
    Username: SHUTDOWN, Password: SHUTDOWN
2) Depress the Halt/Restart switch at the rear of the CPU.
    Note: The following commands must be entered at the console terminal.
        All occurrences of ddmmyyyy should be replaced by the current date.
3) At the >>> prompt, enter:
    B/E0000000
4) Load the desired TK50 tape in the tape drive.
5) In a few moments the $ prompt will appear, enter:
    BACKUP/REW/VER/IMAGE/LABEL=SYSDMMYYYY DKA300: MKA500:ddmmyyyy.SAV
    Note: The backup will take approx. 80 min./tape and can take several
        tapes. The system will inform you when to replace the tapes.
        Carefully label all tapes as 'sysddmmyyyy Vol # of #'
6) Upon completion, depress the restart button and at the >>> prompt, enter:
    BOOT
    The System Manager will restart momentarily.

(F6 = Exit) (DO = Today's date will be entered in the backup log.)
```

Figure 11-10. System Disk Backup Display (Function #76)

6. Upon completion, depress the Halt/Restart button and at the >>> prompt, enter:

BOOT

The System Manager will restart momentarily.

77) DISK SPACE MANAGER

Activity data is downloaded periodically from the sites and stored on disk in the System Manager computer. Unchecked, this data and the Event Logs, created daily, will eventually fill the disk. The System Manager solves this problem via the Disk Space Manager, by maintaining activity disk space at a user-defined level.

When the amount of activity data and Event Logs stored on the disk reaches the Warning Threshold, the System Manager notifies the user to archive the activity data (Event Logs are not archived and are deleted automatically without warning). If the data is archived as a result of this message, the System Manager will indicate when conditions have returned to normal by displaying the message "Disk Usage returned to safe limits."

NOTE

When activity data is archived it is not removed from the disk. Data is erased from the disk only when the amount of data reaches the Deletion Threshold.

If the user fails to archive the data, the System Manager will continue to issue the warning until the stored data reaches the Deletion Limit. When the amount of unarchived activity data exceeds the deletion threshold, the System Manager will begin deleting unarchived data files.

Under normal conditions, all activity data should be archived upon reaching the Warning Threshold. If the data is properly archived, then the activity data stored on the disk will automatically be deleted when it exceeds the Deletion Threshold. When this happens, the user will not

be notified. However, the deletion activity may be viewed in the Event log.

Select the Disk Space Manager function (User Menu item #77) by highlighting "Disk Space Manager" in the System maintenance panel or enter "77" as the Selected Menu Item and press the **Return** or **Select** key. The System Manager will display the System Disk Backup Display screen as shown in Figure 11-11.

Revised Operation Using G6 (or later) Software

System Manager Release 6 software revised the Disk Space Manager screen and some of the background functionality.

The new implementation for the screen interface has several notable changes:

1. The data disk thresholds are expressed in percent of disk capacity, rather than bytes.
2. The system disk has a warning threshold of 10,000 blocks and a critical threshold of 5,000 blocks.
3. The ability to enable/disable the delete function has been added.
4. Field validation has been included.

The new implementation for the background process and logging has several significant changes:

1. More and better event log messages have been included. Messages include current disk usage levels.
2. The program itself has separate consideration for

```

EDACS System Manager      Disk Space Manager      [SMGTGT] EGESYSMGR
-----
Control Parameters-----
Deletion Threshold      98.00 % of Disk Capacity
Warning Threshold      96.00 % of Disk Capacity
Disk Checking Interval  600      Seconds
File Deletion Enabled   N

(F6 = Exit) (Do = Save Parameters)
Enter disk space deletion threshold, % of disk capacity.
  
```

Figure 11-11. Disk Space Manager Display (Function #77)

system and data disks. (on a two disk system, these are separate; on a one disk system, they are the same disk).

On the data disk, when the disk usage reaches the deletion threshold, files are selectively deleted in one pass until disk usage drops below the warning threshold. Files are deleted in the following order:

	FILE	COMMENT
1.	Report temporary files, oldest first	(orphaned files) SMRPT:*.DMP;*
2.	Archived files, oldest first; activity files; raw activity files; event logs	(can be restored) SMACT:ACT_*.%;255 SMACT:R% % % %.%;255 SMLOG:EVENTLOG_*.%;255
3.	Report files, oldest first	(can be regenerated) SMRPT:*.TXT;*
4.	Unarchived files, oldest first; activity files; raw activity files; event logs	(data loss) SMACT:ACT_*.%;1 SMACT:R% % % %.%;1 SMLOG:EVENTLOG_*.%;1

On the system disk, when disk usage reaches the deletion threshold, all files are first purged (oldest versions deleted) except for the most recent two versions. If disk usage is still above the warning threshold, the disk is again purged and only the most recent version of each file is retained.

NOTE

Files for the current date will not be deleted.

Control Parameters

Use the following guidelines when setting up the Disk Space Manager limitations:

Deletion Threshold - The Deletion Threshold is the level of disk space used before the System Manager may begin deleting files. The Disk Space Manager periodically compares the amount of disk space used against the Deletion Threshold. Eventually, the amount of activity data stored will exceed the deletion level. When this level is reached, the System Manager will start deleting the oldest activity files until the amount of disk space used drops below the Deletion Threshold. The Deletion Threshold value ranges from 81.00% to 99.00%.

If System Manager deletes unarchived activity data, it will notify the user that unarchived data is being lost. ("Unarchived files being deleted **DATA LOSS**").

All Disk Space Manager activity is posted to the Event Log. Therefore, if files are deleted, information regarding the deleted file is still available in the Event Log.

Warning Threshold - The Warning Threshold is the level of disk space used before the System Manager issues a message advising you to archive the activity data. The System Manager will continue to update this message ("Perform backup: n bytes to data loss") until the amount of unarchived activity data exceeds the Deletion Threshold. When the activity is archived, the System Manager indicates conditions have returned to normal ("Disk usage returned to safe limits"). The Warning Threshold value ranges from 80.00% to 98.00%.

Disk Checking Interval - The amount of time (in seconds) between disk space checks by the VMS task. The user defined "sleep time" time ranges from 60 to 32767 seconds with a default value of 600 seconds (10 minutes).

NOTE

The maximum (32767) is almost 23 days between Disk Manager iterations. We highly recommend using a value closer to the minimum interval. The default value of 600 seconds (10 minutes) provides a good balance between CPU usage and responsiveness to changing disk usage for most customers.

File Deletion Enabled - This field allows you to enable or disable the file deletion function of the Disk Manager.

Recommended Settings:

When setting up the Disk Space Manager, observe the following recommendations:

1. Set the Deletion Threshold to 95%.
2. Set the Warning Threshold to 85%. This gives a safe time margin between initial warning and loss of data.
3. If you want to disable the file deletion feature, set the File Deletion Enabled field to "N".

NOTE

With the File Definition Enabled field set to "N", it is possible to fill the disk and lockup the system.

CHAPTER 12 - EDACS OPTIONAL SUBSYSTEMS

INTRODUCTION

The EDACS Optional Subsystems chapter provides additional database definition information for optional network products. These products include:

- Network Manager
- Jessica PBX Gateway
- Enhanced Local Interconnect (ELI)
- Centralized Activity Logger (CAL)
- StarGate Controller

The information presented in this chapter takes precedence over generic field definitions given in the previous chapters. However, only those fields specifically mentioned are affected and other fields should be defined using default values or values necessary to meet user requirements.

NOTE

If there should be a conflict between this chapter and manuals written specifically for the described equipment, the information presented in the specific equipment manuals takes precedence. The information presented in this chapter is for guidance only and may not cover all operating conditions.

NETWORK MANAGEMENT SYSTEM

The EDACS Network Manager (NM) provides a central point of control for the EDACS Network management system. However, not all EDACS elements in the system are accessed directly by the Network Manager. In some cases, an EDACS device, such as the System Manager, acts as a proxy for other EDACS devices. In Figure 12-1, the System Manager connected to the TCP/IP LAN has an SNMP agent which proxies for the devices connected to it, such as the SIM or Site Controller.

In a typical Network Management system, the system is divided into a central subnet and a Site subnet. Each subnet has its own unique needs for network management.

In the diagram, the Central subnet consists of the EDACS NM, CEC/IMC Manager, EDACS Data Gateway (EDG), PI, BCU/CAL, and MD110. This subnet is focused on linking dispatch, data, and telephone calls. The EDACS NM provides full management services to the CEC/IMC Manager, PI, and BCU/CAL Network Elements (NEs).

The Site subnet consists of a System Manager attached to many different kinds of EDACS sites. In this role, the EDACS Network Manager is mainly focused on Faults and Performance. Configuration is accomplished via Telnet sessions to the System Manager.

Figure 12-2 shows one node of an EDACS network. This figure demonstrates the advantages of centralized network management with the numerous possible links and devices composing even one node in a network.

The System Manager uses the Multinet SNMP agent to forward fault data to the Network Manager. When the System Manager is part of a Network Management system, it will be necessary to set the Network Manager Communication - Node Number field (Screen #10, 4:4). This field contains the node number of the CEC/IMC associated with the System Manager.

Additional information on setting up the System Manager for use in a Network Management system is provided in LBI-39171.

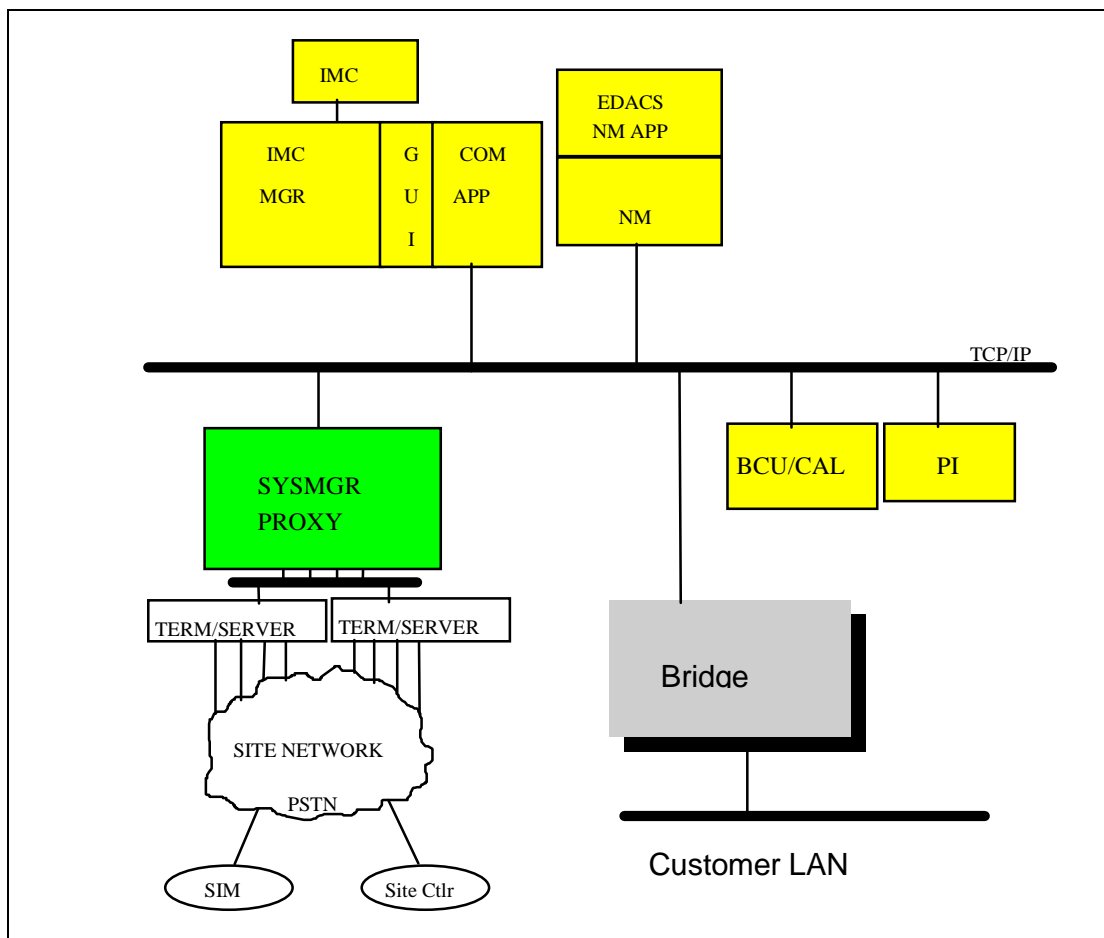


Figure 12-1. High-level Network Management System Block Diagram

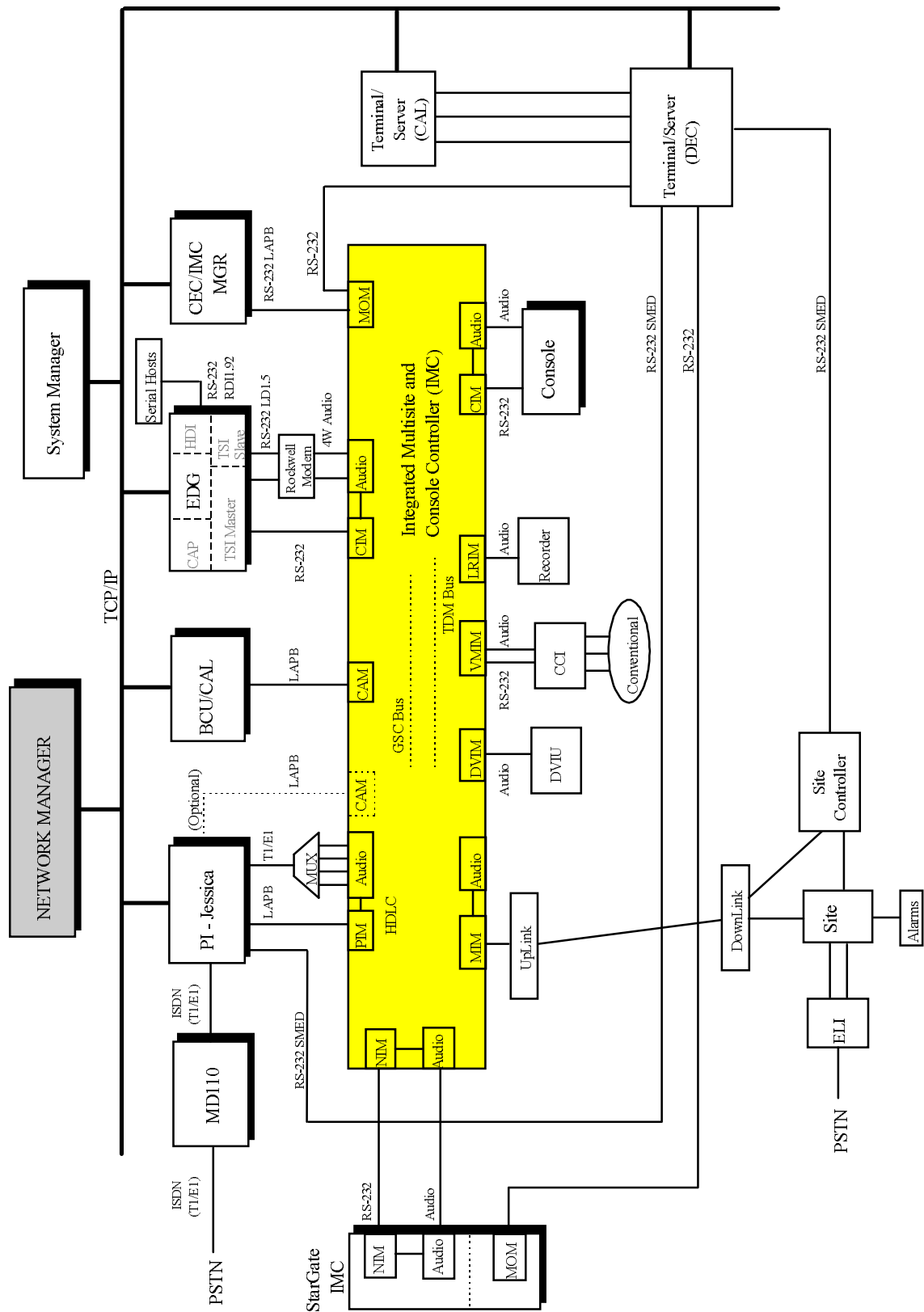


Figure 12-2. EDACS Detailed Network Block Diagram

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JESSICA PBX GATEWAY

The Jessica Private Branch Exchange (PBX) Gateway, known simply as Jessica, is a centralized telephone interconnect system that connects an EDACS multisite network to the local public switched telephone network (PSTN) or another PBX. For calls originating from a telephone, Jessica represents a single point of entry to every site in an EDACS network. Detailed information about the Jessica PBX may be found in LBI-39000, Jessica Systems Manual and associated documents.

Channels, LIDs and GIDs must be wide area enabled via the System Manager and valid at the Jessica Site in order to make inbound or outbound calls.

Jessica interfaces directly with the System Manager via an RS-232 serial connection. Jessica supports a direct connection. However, if a dial-up modem is used, it must be provided externally.

When the Jessica is interfaced with the System Manager, it can provide individual call restrictions and line assignment privileges. The System Manager treats the Jessica as a site, thus new parameter values may be sent to Jessica at any time using the Site Reconfiguration function.

The Jessica system initializes itself with the parameter values found in its **CONFIG.DAT** file or with the default settings until the new parameters are downloaded from the System Manager.

Databases Defined for Jessica

Jessica looks like a site to the System Manager and is operational with System Manager version 3.04 or later. When setting up the System Manager for use with Jessica, it will be necessary to redefine the usage of the Interconnect functions. It will also be necessary to ensure the site, LID, and GID databases are set up for Jessica compatibility.

The functions affected by Jessica are as follows:

- Function #10 - External Device Definition
- Function #11 - Logical Unit Definition
- Function #12 - Group Definition
- Function #14 - Line Definition

External Device Definition (Function #10)

Table 12-2 lists the necessary site definitions for interfacing with Jessica. When creating a site record defining Jessica, only those fields listed need to be changed. Fields not listed in this table should remain at their default settings. The Jessica column lists the Jessica default values.

Channel Assignments

When a request for telephone interconnect is made, the Jessica PBX connects the caller to a telephone line in much the same way a site controller assigns a working channel. If the caller has interconnect privileges, as defined in the LID Radio Parameters, then Jessica will assign a telephone line (channel) based on the caller's Interconnect Call Priority.

If no logical channels are available for its priority level, the next lower priority level is checked. Regardless of the priority allocation level, channels are assigned according to the Rotary Assignments and Assignment Order parameters. For a complete description of the Priority Channel Allocation scheme refer to the Jessica PBX Interface System Manual LBI-39000.

Rotating Assignments - Rotating Assignments determines if the channel (telephone line) assignments are balance loaded or assigned using the first available line. By default, Jessica defines the Rotating Assignment as False or First Available Channel.

Assignment Order - The Assignment Order specifies whether the search for a free channel will be made in ascending or descending sequence. By default, Jessica searches in ascending sequence.

When the assignment parameters are determined, use the field definitions in Table 12-1 to select the Site Parameters panel (2:4) Rotate Assignments and Assign Channel Ascending data.

After defining the Jessica PBX (site), use the Site Reconfiguration Channel (function #20) and Call Parameters (function #21) procedures to upload the database to the Jessica PBX.

Table 12-1. Channel Assignments

Channel	Rotate Assignments	Assign Channel Ascending
First Available Channel Ascending Assignment	N (default)	Y (default)
First Available Channel Descending Assignment	Not an option	Not an option
Rotating Channel Ascending Assignment	Y	Y
Rotating Channel Descending Assignment	Y	N

Table 12-2. External Device Definition for Jessica

FUNCTION	JESSICA
Selected Device	
Device Number :	16
Device Type :	SITE
Device Name :	JESSICA
Channel Configuration 1:4	N/A
Site Parameters 2:4	
Channel Assignment Parameters	
Message Conv Limit: (sec.)	300
Transmission Conv Limit: (sec.)	N/A
Interconnect Hang Time: (sec.)	30
Emergency Hang Time : (sec.)	N/A
Rotate Assignments : (Y/N)	N
Assign Chan Ascending : (Y/N)	Y
Recent Call Queue Int: (ms.)	N/A
Max # Concurrent Intcon: (calls)	N/A
Max # Concurrent Indiv: (calls)	N/A
System Manager Communications Parameters for Sites 4:4	
Communication Parameters	
Device Password:	Jessica
Device Internal Id:	16
Prim Line Phone No.:	N/A
Prim Line Port Name:	Note ¹
Prim Line Baud Rate:	19200

NOTE

The Channel Configuration screen is not used by the Jessica because it can only operate on 24 of the 30 bit positions.

¹ Enter name of VAX port connected to Jessica (refer to LBI-38703).

Interconnect Line Definition (Function #14)**NOTE**

When interfacing with a Jessica PBX used in a multi-Jessica network, each PI channel (telephone line) must be assigned a LID. These LIDs must be valid in the system and not assigned to any radio units. The LIDs need to be enabled before defining the lines. LIDs must be below 512 for BCU/CAL compatibility.

This database is not required in single Jessica configurations.

Define each of the telephone lines (PI Channels) connected to the Jessica PBX (site) using the following criteria:

Line Active - Set the Live Active variable for each line connected to Jessica to “Y.”

Pulse Dial - Set the Pulse Dial variable to “N,” the default setting for systems using DTMF signaling.

Dedicated To Unit - Enter the LID number defined for each line. If the LID exists, then the name for it will appear.

Logical ID and Group Definition (Function #11 & 12)

The LID definition function serves two purposes. The first is ensuring the radio unit's LID fields are properly set up for use with the Jessica PBX. Secondly, it will be necessary to create LID records for each of the PI channels (interconnect lines) in a multi-Jessica configuration (see NOTE above).

When defining a LID record for use with Jessica, ensure the fields listed in Table 12-3 are properly set up. These apply to both channel LIDs and radio units. Fields not listed in this table should be left at the default settings, defined as noted, or defined according to the user's operational requirements. Group definitions for use with Jessica are listed in Table 12-4.

Call Priority - Interconnect - Up to eight (8) priority levels (0-7) are supported, with 0 having the lowest priority. This field is used for two functions. It serves the traditional site function of assigning outbound call priority for RF channel access in queuing situations. It is also used by Jessica to determine inbound and outbound telephone line channel access.

Within Jessica, available telephone lines channels are divided among a maximum of eight (8) “priority” levels. Each line can appear in only one (1) priority level grouping.

Table 12-3. Unit Definition for Jessica

FUNCTION	JESSICA
Radio Parameters 2:4	
Call Priority	
Voice: (0-7)	N/A
Data: (0-7)	N/A
Interconnect: (0-7)	0-7 (Refer to Call Priority - Interconnect text.)
Digital Voice: (0-7)	N/A
Radio Features	
Inb Interconnect : (Y/N)	Y
Channel Test : (Y/N)	N/A
Hang Time : (sec.)	N/A
Interconnect	
Toll Call Rest :	0-15 (Refer to Toll Call Restriction text.)
Dedicated Line :	non zero ²
Rotary Number :	non zero ²
Wide Area 3:4	
Wide Area Enable : (Y/N)	Y
Home Site :	N/A
Home Group :	N/A
Extended Network: (Y/N)	N/A
Automatic Tracking: (Y/N)	N/A
Confirmed Call Enable: (Y/N)	N/A
Home Switch Id :	N/A
Extended Network: (Y/N)	N/A
Valid Sites: (Y/N)	Identify Jessica (Site Number) as a Valid Site.
Forced Sites : (Y/N)	N/A

² If either the Dedicated Line or the Rotary Number are non-zero, then the unit is enabled for outbound calls.

At the System Manager, individuals (groups) are assigned a priority level from 0 to 7 that corresponds to a group of telephone lines in the Jessica table.

Interconnect calls are allocated channels based on the LIDs priority. If no channels are available in its priority level, the next lower priority level is checked.

Enter the Priority level (0-7) in the Unit Identification Radio Parameters panel (2:5), Call Priority Interconnect field. Default is zero (0).

NOTE

If the LID/GID database has been received and stored in by Jessica, the priority found in the database will be used.

If the LID/GID database has not been received and stored by Jessica, priority level 7 will be used.

Toll Call Restriction - There are 16 classes of users (0-15). Class 15 has unrestricted telephone privileges. Toll Classes 0-14 are defined at Jessica using an “allow file” and a corresponding “disallow file.” Refer to LBI-39040 for a description of the Allow and Disallow Files.

Users assigned Classes 0-14 must be validated by Jessica, using the allow and disallow tables, before they will be permitted to make a call.

Enter the User Class (0-15) in the Unit Identification Radio Parameters panel (2:5), Toll Call Restriction field. Default is zero (0), no restrictions is 15.

NOTE

When the call restrictions feature is enabled, any number called by the user must be explicitly permitted in the allow file and must not be denied in the disallow file.

Note the System Manager’s Toll Call Restriction database, Screen 15 (Toll Call Restriction Definition), is not used for Jessica.

Inbound Calls - Enable the Inbound Interconnect field for units allowed to receive inbound interconnect calls.

Y - Indicates unit allowed to receive interconnect calls. Enter “Y” for channel LIDs.

Outbound Calls - Enable outbound calls by setting Dedicated Line or Rotary fields to non zero. A zero (0) in both fields disables outbound interconnect. A non-zero in either field means outbound interconnect is enabled.

Enter a non-zero number in the Dedicated Line or Rotary fields to enable outbound interconnect. This is the required condition for channel LIDs.

NOTE

Outbound Group calls are not possible.

Table 12-4. Group Definition for Jessica

FUNCTION	JESSICA
Group Parameters 2:4	
Call Priority	
Voice : (0-7)	N/A
Data : (0-7)	N/A
Interconnect : (0-7)	0-7 (Refer to Call Priority - Interconnect text.)
Digital Voice : (0-7)	N/A
Features	
Inb Interconnect : (Y/N)	Y
Channel Test : (Y/N)	N/A
Hang Time : (sec.)	N/A
Wide Area 3:4	
Wide Area Enable : (Y/N)	Y
Automatic Tracking : (Y/N)	N/A
Extended Network: (Y/N)	N/A
Confirmed Call Enable: (Y/N)	N/A
Home Switch Number:	N/A
Valid Sites : (Y/N)	Identify Jessica (Site Number) as a Valid Site.
Forced Sites : (Y/N)	N/A

ENHANCED LOCAL INTERCONNECT

The Enhanced Local Interconnect (ELI) is an advanced local telephone switching system controlled by a Site Controller. The system allows authorized radio users to initiate and receive telephone calls using their EDACS radios. It is capable of connecting any one of up to 20 EDACS repeater channels to any one of up to 32 telephone circuits at an EDACS site.

The ELI system components include the following equipment:

- Global Telephone Interconnect (GTI)
- Global Telephone Interconnect Interface (Master GTI)
- Interconnect Accounting Manager (IAM)

The Site Controller directs up to 16 levels of Toll Call Restrictions, up to 15 Rotary Hunt sequences, 8 dequeuing priority levels, and inbound interconnect enable/disable assignments for each ID number. It also accumulates interconnect call activity data.

The ELI hardware replaces the basic local interconnect system (IDA's RIC, LIC, and LIX devices), however it maintains operational equivalency.

Setting up the System Manager databases for use with ELI are basically the same as the current IDA local telephone interconnect system with the following exceptions:

- Assignment of GTI's to channel numbers.
- Line Numbers and GTI channel numbers must match.

Table 12-5 summarizes those database fields which differ from the generic telephone interconnect settings.

External Device Definition (Function #10)

Channel Configuration (1:4)

Interconnect - Defines if a channel is equipped to handle telephone interconnect calls - default is no (N) for all channels.

Site/Device Definition (menu selection 10)

NOTE

GTI units are usually placed on the highest available channel numbers.

Table 12-5. Database Definitions for ELI

FUNCTION	IDA	ELI
SITE DEFINITION (Function #10)		
Channel Configuration Panel (1:4)		
Interconnect	Y	See text
Channel Assignment Parameters Panel (2:4)		
Message Conversation Limit (sec.)	300.	300
Interconnect Hang Time (sec.)	30	60 max.
LOGICAL UNIT DEFINITION (Function #11)		
Radio Parameters Panel (2:3) -		
Interconnect Call Priority	0	0
Inbound Interconnect	N	N
Toll Call Restrictions	0	0
Dedicated Line	1	See text
Rotary Number	0	See text
GROUP DEFINITION (Function #12)		
Group Parameters (2:4)		
Interconnect call priority	0	0
Inbound Interconnect	N	N
ROTARY DEFINITION (Function #13)		
Rotary Definition	0	See text
LINE DEFINITION (Function #14)		
Line Active	N	See text
Pulse Dial	N	See text

Site Parameters (2:4)

Message Conv Limit - Defines the conversation time limit for message trunked conversations and interconnect call conversations, in multiples of 10 seconds - default is 30 (300 seconds or 5 minutes).

Interconnect Hang Time - Defines the time between an unkey command and channel drop - default is 30 seconds.

NOTE

Although the Interconnect Hang Time (IHT) can be set higher than 60 seconds, the GTI unit will wait no more than 60 seconds for a telephone-originated call to be answered. Therefore, setting the IHT to more than 60 seconds will not allow more than 60 seconds for the call to be answered.

Max # Concurrent Intercon - Defines the maximum number of simultaneous telephone interconnect calls permitted for the site - default is 2.

Logical ID definition (Function #11)**Radio Parameters (2:5)**

Interconnect Call Priority - Defines which of eight dequeuing priority levels (from 0 to 7) is to be applied to this specific logical unit ID - default is lowest priority (0).

Inb Interconnect - Defines if inbound interconnect calls are allowed for this specific logical unit ID - default is no (N).

Toll Call Restrictions - Defines which of 16 toll call restriction levels (from 0 to 15) is to be applied to this specific logical unit ID for interconnect calls - default is zero (0). Refer to Toll Call Restrictions database for this site to determine access.

Dedicated Line - Defines the line number (0 is a denial) to be dedicated to outgoing interconnect calls for this specific logical unit ID - default is 1.

NOTE

EGE recommends that dedicated line assignments be set up by using the **Rotary Number** and **Interconnect Rotary Definition** parameters, not the **Dedicated Line** parameter. Set the **Dedicated Line** parameter to zero (0), and assign a unique **Rotary Number** and a single unique line number to the corresponding **Interconnect Rotary Definition**.

Existing telephone interconnect systems that currently have dedicated lines configured by using non-zero values for the **Dedicated Line** parameter, can continue to use this method with the ELI system. However, because the line numbers correspond to channel numbers, and only the highest available channel numbers are equipped in a typical ELI system, some reconfiguring of the line numbers will probably be necessary.

Rotary Number - Defines which rotary hunt sequence number (from 0 to 15) is to be applied to this specific logical unit ID - default is none (0).

NOTE

In an ELI system, line number 1 (the default value for Dedicated Line) will typically not exist. If the default values for Dedicated Line and Rotary Number are used, radio units will be unable to access the telephone interconnect system. To enable LIDs for outbound calls, enter a Rotary Number and one or more existing line numbers for each corresponding Interconnect Rotary Definition, or assign an existing line number to each Dedicated Line parameter.

Group Definition (Function #12)**Group Parameters (2:4)**

Interconnect - Defines which of eight de-queuing priority levels (from 0 to 7) is to be applied to this specific group ID for interconnect calls - default is lowest priority (0).

Inb Interconnect - Defines if inbound interconnect calls are allowed for this specific group ID - default is no (N).

Rotary Definition (Function #13)

Interconnect Rotary Definition - Defines up to 15 rotary hunt sequences (from 1 to 15), each containing up to 16 line numbers in any order - default is none (0 for each line number in each sequence).

NOTE

The telephone line number and GTI channel number must match, and GTIs are placed on the highest available channel numbers first.

Line Definition (Function #14)**Line Parameters**

Line Active - Defines if a line is available for interconnect calls - default is no (N) for all lines.

NOTE

The telephone line number and GTI channel number must match, and GTIs are placed on the highest available channel numbers first.

Pulse Dial - Selects pulse or DTMF signaling - default is DTMF (N) for all lines.

NOTE

The ELI system GTI Configurator automatically selects the proper line type. Leave the Pulse Dial setting at its default value.

CENTRALIZED ACTIVITY LOGGER

The Centralized Activity Logger (CAL) allows the System Manager to monitor and download activity for sites that do not have a Site Controller, but are connected to the EGE Switch. The CAL must also be attached to the same EGE Switch.

Site Monitor - Allows the System Manager to monitor site activity with a real-time display of the calls in progress on the RF channels at the selected trunked system using the Site Monitor function (User Menu item #32).

Activity Download - Call activity and system status information are collected by the CAL and buffered in internal memory. Once the buffer content threshold is exceeded, the CAL downloads its buffer contents to the System Manager. The downloaded information is used to prepare traffic reports on system usage. This information may also be downloaded manually by requesting an Activity Download (User Menu item #31).

At level 1 EDACS systems, the System Manager communicates with a Site Controller using modems and dial-up or leased line connections, routed through a DECServer terminal server. A communications session is set up via a DECServer port between the System Manager and the Site Controller. The System Manager associates the DECServer physical port number with the Site Controller's identity.

For RF systems without a Site Controller, such as Basic EDACS, SCAT and CNI, the Downlink GETC passes operating information to the CEC/IMC. Thus, the CEC/IMC receives much of the data that individual Site Controllers normally output to the System Manager. The CAL interfaces between the CEC/IMC and the System Manager. It demultiplexes incoming Raw Activity Records (RAR) into activity download data and site monitor data. This data is sent to the System Manager using Site Controller protocol.

CAL Interface Connections

System Manager Interface

The CAL interfaces to the System Manager's DECServer(s) via one or two terminal servers capable of supporting up to 32 independent asynchronous RS-232 serial connections. The ports on the CALs terminal servers

are connected to the ports on the System Manager's DECServers via RS-232 cables. Refer to Figure 12-3 for the CAL architecture.

CAL Operation

As new RARs enter the system, they are dispatched to an appropriate site handler which reformats and queues the data. When the number of activity records queued exceeds a threshold value, the activity data is downloaded to the System Manager. At any point, the System Manager may log in to a site emulated by the CAL and request it to purge its queue of activity messages, start/stop download of activity messages, or start/stop the transmission of monitoring messages.

System Manager Database Definitions

When interfacing with the CAL, it is necessary to define the non-Site Controller RF systems the same as any other site. Although this database information is not sent to the sites, it is used by the CAL to define the CALs **CAL.DAT** configuration file (refer to LBI-38965 for details).

CAL.DAT Configuration File

The **CAL.DAT** is a mandatory file for execution of the CAL software features. It defines the interface parameters between the CAL and the System Manager.

EDACS CAL site password entries are specified in the following form:

SITE.ss.PASSWD - Specifies the System Manager password to be used for logins to/from this site. *system_manager_password* must match the associated value programmed in the System Manager (User Menu item #10, Communication Parameters 4:4) for the site specified by *ss*. The variable, *ss* designates the associated site number, ranging from 01 to 32 (inclusive).

NOTE

The System Manager *must* be properly configured to recognize the sites that the CAL is simulating. Be sure that these sites have been defined and the passwords are correct prior to linking the System Manager to the CAL.

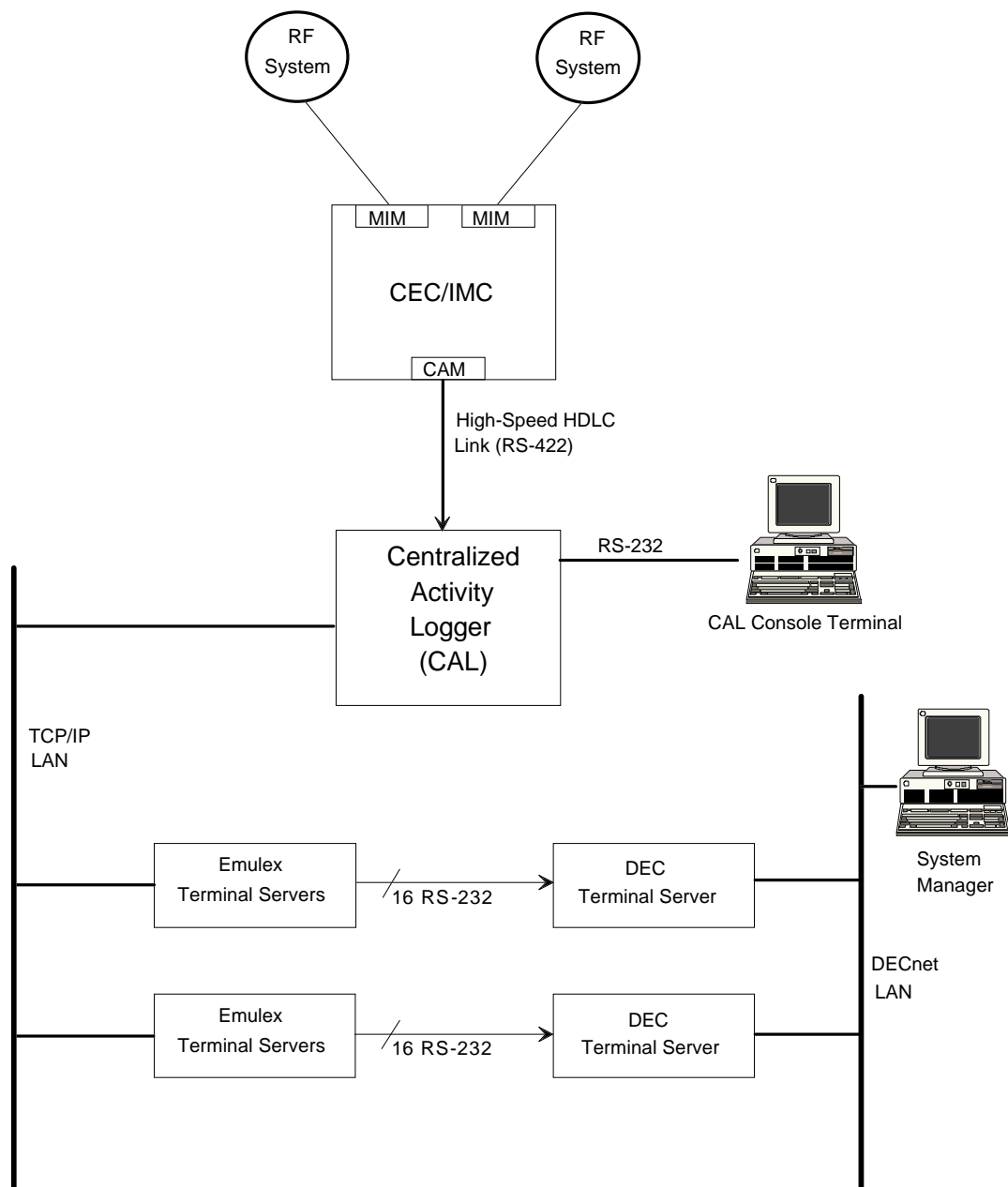


Figure 12-3. CAL Architecture

STARGATE CONTROLLER

The StarGate Controller is used to network multiple CEC/IMC systems into a single system. Each CEC/IMC connects to the StarGate Controller via a Network Interface Module (NIM).

StarGate users must be “Extended Network Enabled” at all System Managers in the StarGate network before calls can be routed between multisite systems. In addition, both the caller and callee must be enabled for extended network operation and the IMCs must be tracking both units before StarGate communication can occur.

Connecting a System Manager directly to the StarGate Controller allows you to monitor StarGate channel assignments using the System Manager’s “Site Monitor” function (User Menu item #32).

StarGate Interface Connections

The System Manager interfaces with the StarGate Controller through an RS-232 serial connection. StarGate Controllers using software V2.x must be connected to a System Manager. However, connecting a System Manager directly to the StarGate Controller is optional if the controller is using software V3.0 (and later).

If the System Manager is not collocated with the StarGate Controller, then a dedicated full duplex modem may be used.

StarGate Controller Database Definition

The NIM installed in the StarGate Controller is a “site” type interface. This requires defining the StarGate Controller as a site using the External Device Definition function (User Menu item #10).

The StarGate Controller site assignment uses one of the available site assignments (1-32) and must not conflict with any other site or “site” type interface assignment.

Use the default settings for the “System Manager Communications Parameters” when defining the NIM “site.” The NIM supports a direct connection at 9600 baud. The password and internal device ID fields must be “GE Multisite” and “1” respectively.

LID/GID Extended Network Enable

The StarGate network will only route calls to units or groups that are enabled for multisite and extended network (distributed multisite) operation. For an individual call, BOTH the caller and callee unit IDs must be Extended Network enabled. This ensures the called unit will be able

to key back to the caller. In addition the IMC must be tracking both units.

Logical IDs and Group IDs enabled for extended network must not be duplicated throughout the StarGate network.

LIDs and GIDs that are not Extended Network enabled cannot place distributed multisite calls. If necessary, these LIDs and GIDs may be reused (duplicated) at each IMC within the StarGate network.

A Unit or Group is enabled for StarGate (extended network) operation by using the “Forced Site” method or the Extended Network method depending on the StarGate software version.

NOTE

This version of the System Manager (V5.0) supports both methods.

Forced Site Method

For StarGate Controllers using software prior to V3.0, a unit or group is enabled for Extended Network operation by setting the forced site mask bit corresponding to the StarGate (site assignment). Any unit or group that has the forced site bit set is marked as Extended Network enabled. Since the forced site mask is used to enable Extended Network operation you cannot actually force calls to a unit/group across StarGate. Calls are only sent across nodes when units are being tracked by the IMC.

Enter the following data in the LID and GID Definition database, Wide Area panels.

Wide Area Enable - “Y” to enable multisite operation.

Automatic Tracking - “Y” allows the IMC to track units from site to site.

Home Site - Required for LIDs only.

Home Group - Required for LIDs only.

Extended Network Enable - This flag has no affect when the StarGate uses software prior to V4.0.

Valid Sites - Enter “Y” to enable valid wide area sites.

Forced Sites - Enter “Y” to indicate forced sites and the site number assigned to the StarGate Controller.

With these settings, units can roam freely between any of the CEC/IMC systems and communicate on the group or with individual calls.

The “Home Site”, “Home Group” and “Valid Sites” fields do not affect StarGate operation. However, they are required for multisite operation.

Extended Network Method

When StarGate Controllers use software V4.0 (or later) and the System Manager uses V5.0 (or later) software, a unit or group may be enabled for Extended Network operation by enabling the Extended Network feature.

NOTE

StarGate Controllers using V4.0 (or later) software will still allow using the “Forced Site Method” for special situations.

The following is an example of how a unit/group can be Extended Network enabled for use in a StarGate system.

In this example (shown in Figure 12-4) the StarGate System consists of 3 IMC nodes (A, B, C) connected via a StarGate controller. All nodes share a single System Manager (all nodes receive the same unit/group database) running V5.0 Software, and the NIM interfaces have the listed site assignments (in the IMC and in the StarGate controller).

Enter the following for LID/GID definitions using the appropriate Wide Area panels to enable Extended Network operation

Wide Area Enable - “Y” to enable multisite operation.

Automatic Tracking - “Y” allows the IMC to track units from site to site.

Home Site - Not Required with IMC V3.0 (and later).

Home Group - Not Required with IMC V3.0 (and later).

Extended Network Enable - “Y” enables units and groups for extended network operation.

Home Switch Number - Enter home IMC (switch) number.

Valid Sites - Enter “Y” to enable valid wide area sites.

Forced Sites - Enter “Y” to indicate forced sites and the site number assigned to the StarGate Controller.

In the example, Forced flag is “Y” for sites 30, 31, or 32 causes calls to the unit/group to be routed over the corresponding NIM interface regardless of tracking.

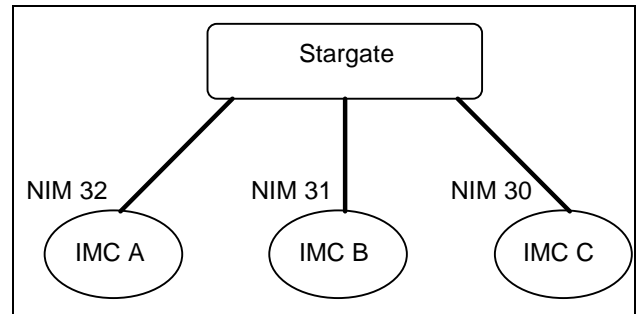


Figure 12-4. System Manager Database vs. NIM Site Assignment

Monitoring StarGate

The StarGate (NIM) controller supports a direct RS-232 serial connection to a System Manager. This allows the System Manager to monitor NIM channel assignments using the “Site Monitor” function (User Menu item #32). Refer to the StarGate LBI-39031 for information on the NIM serial port connections. When the System Manager is connected to the NIM, channel assignments can be monitored by entering the NIM site assignment as the Selected Site.

NOTE

StarGate software (V3.0 and later) can support up to 32 audio channels, while the System Manager site monitor screen only displays up to 25 channels. The NIM, therefore, will not send any site monitor messages for channels 26 to 32. The assignment activity on these channels will simply not be displayed.

NOTE

The NIM can route two separate trunked calls on a channel at the same time (Simplex Channel Assignment). The NIM sends site monitor data only for the **most recent** call on the channel since only one call per channel can be displayed.

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CHAPTER 13 - DATABASE IMPORT/EXPORT UTILITY

INTRODUCTION

The System Manager Database Import/Export (SMIX) utility software allows you to import or export System Manager databases for use with a DOS based spreadsheet or database management program running on a PC platform.

This feature allows you to:

- Download Logical, Group, and External Device (Site/Device) databases from the VAX to a PC as ASCII comma delimited files.
- Upload Logical, Group, and External Device (Site/Device) databases from a PC to the VAX as ASCII comma delimited files.
- Optionally uploads Logical, Group, and External Device databases to all sites after successfully uploading databases to the System Manager.

The SMIX software uses the CAD protocol and can communicate with the System Manager via an RS-232 hardware circuit (9600 bps or 19200 bps), a dedicated (leased line) modem, or a dial-up modem.

This chapter provides details on installing and using the SMIX Utility software. Full details on the CAD feature's message contents are provided in Appendix H.

PC REQUIREMENTS

When using the PC-based SMIX utility, we recommend the following hardware and software elements:

- IBM Compatible 286 or higher with mouse.
- Hard Drive and a 3-1/2 inch floppy diskette drive.
- 8 MB of RAM memory.
- DOS 3.2 or later, DOS 6.0 recommended.
- Windows 3.1.
- Modified PC to VAX serial cable (not provided).
- RS-232 Port Switch (not provided)

SMIX PROGRAM FILES

There are two main files that work together to enable the uploading and downloading of GID, LID, and SITE databases:

SMIX.EXE - This is the executable program for the utility.

SMIX.CFG - This is the configuration file for the utility. This is an ASCII text file which can be edited by the user to meet the needs of the equipment being used.

SMIX Executable File

The executable program has the following command line format. The command line parameters are not case or order sensitive.

SMIX <filename> <mode> <database> <options> ...

Where:

SMIX.EXE Executable for System Manager Import eXport

filename Complete path of file on PC to use.

mode \R Get database file from System Manager.

\S Put database file back on System Manager.

database \L Logical database

\G Group database

\D Site (External Device) database

Options The following options are supported.

\U Automatic upload to all sites. Only valid with \S mode. A full upload of all records will begin as soon as the transfer completes successfully.

Examples:

SMIX TEMP.DAT \R \L

Get the LID database and place database in file temp.dat.

SMIX \L \R TEMP.DAT

Same as above. This demonstrates that the parameters for SMIX are not order sensitive.

```
smix \l temp.dat \r
```

Same as above. This demonstrates that the parameters for SMIX are not order sensitive or case sensitive.

```
smix a:\gid.db \r \g
```

Get the GID database and place database in file a:\gid.db.

```
smix a:\gid.db \s \g
```

Send the GID database to System Manager using database in file a:\gid.db

```
smix a:\gid.db \s \g \u
```

Send the GID database to System Manager using database in file a:\gid.db. At completion of upload of GID database to System Manager, automatically upload to all sites.

```
smix site.db \r \d
```

Get the SITE (External Device) database and place database in file site.db

SMIX Configuration File

The configuration file contains the following parameters:

- PORT
- BAUD
- DEVICE
- MODEMINIT
- PASSWORD
- PHONE
- TIMEOUT

These parameters may be either uppercase or lowercase in the configuration file. They are followed by an equals sign (=) and then the actual parameter. The equal sign may be immediately following the keyword (PORT, BAUD, etc.) or there may be a space in between the last letter of the keyword and the equal sign. There may also be a space in between the equal sign and the parameter or the first character of the parameter may immediately follow the equal sign.

NOTE

In the case of the PASSWORD keyword, a tilde "~" character must immediately precede the first character of the password parameter! This is how the system determines if there are spaces contained in the password parameter. The password is 12 characters long and is the password for the device stored in the System Manager which is being used to set up this connection between the System Manager and the PC.

PORT - This is the communications port being used by the PC to communicate with the System Manager. Acceptable values are 1 - 4 and coincide with COM1 - COM4.

BAUD - This is the communication speed between the PC and the System Manager. Typically, the baud rate is 9600 bps, but values of 4800 and 19200 bps are also acceptable, depending on your PC's COM port capabilities. The device data, stored in the System Manager, must be set to the same baud rate as this parameter.

DEVICE - This is the device number assigned to the PC using the SMIX utility. Valid numbers are 33 - 64. The Device and PASSWORD parameters are used to log into the System Manager. Therefore, the DEVICE and PASSWORD parameters must match exactly those stored in the System Manager device database.

MODEMINIT - This is the initialization string (AT command set) for the modem that is being used. This software can handle an 80 character string, however, most modems only allow an AT command string of 40 characters. If your string is greater than 40 characters, you could get rid of lesser important commands like the ones used for speaker control, etc.

NOTE

This field provides a means to set up a modem for dialup access for SMIX. Consult your modem's manual for the binary communication settings.

The SMIX utility has been tested with internal and external modems as well as PCMCIA modems for laptop PC's. The trick is getting the proper initialization string for the particular modem which you are using. The following are some examples:

- The initialization string for a **ZOOM** internal model VFP28.8 is:

MODEMINIT = AT&F&C1&D2F8W2S95=44M1L1S0=0S7=90

- The initialization string for a **US ROBOTICS COURIER** external modem is:

MODEMINIT = AT&C1&D2%B6&M0&K0S7=90

- The initialization string for a **MEGAHERTZ** Model XJ1144 PCMCIA is:

MODEMINIT = AT&F&C1&D2F8W2S7=90

PASSWORD - This is the password for the device specified above. The actual password may begin after the equal sign, with or without a space in between, but **MUST** BE preceded by a tilde “~” character. The tilde character **is not** part of the password. It is used as a delimiter to show the start of the password in case there are spaces within it.

NOTE

The password is case sensitive and must exactly match the password for this device stored in the System Manager.

PHONE - This is the phone number for the modem that is connected to the System Manager. If a number is supplied with this parameter, the software will use a modem connected to the port defined by the **PORT** parameter. If there is no number supplied with this parameter, the software will make a direct line (RS-232 cable) connection using the port specified by the **PORT** parameter.

NOTE

There must be at least two digits supplied to be valid. This will allow the support of “inside” extension calls and “outside” calls where the digit “9” is required to gain access to an “outside” line.

TIMEOUT - This is the amount of time the modem will wait for carrier. This value is in seconds.

EXAMPLES:

The following are examples of the parameters in **SMIX.CFG**:

PORT=1 **COM**1
BAUD=9600 Speed is 9600 baud.
DEVICE=64 Device number is 64.
MODEMINIT = AT&F&C1&D2F8W2S7=90

Consult an AT command set reference.

PASSWORD=~ABCD Password is "ABCD ".
 The **SMIX** utility appends spaces to make the password 12 characters!

PHONE=9555-1212 “9” may be necessary to access an outside line.

TIMEOUT = 90 Wait up to 90 seconds for a carrier.

Port = 2 **COM**2

baud = 9600 Speed is 9600 baud.

DEVICE = 64 Device number is 64.

modeminit = AT&C1&D2%B6&M0&K0S7=90

Consult an AT command set reference.

password = ~123456 Password is "123456 ".

phone = 91804555-1212 Phone # is (804)555-1212

timeout = 60 Wait up to 60 seconds for a carrier.

INSTALLATION

The **SMIX** utility software is located on the **VAX** System Manager’s tape (or installed on the hard disk). In order to use the software, it must be transferred from the **VAX** to the **PC**, using **Windows** and the **Window’s** Terminal emulation software. **SMIX** is a **DOS** executable, however, it can be run from a **DOS** window while running **Windows**.

Downloading SMIX Software

Use the following procedures to prepare the **PC** and download the **SMIX** utility from the **VAX** to the **PC**.

1. Connect the direct interface cable (see Figure 13-3) between the **PC** com1 port and the **MicroVAX** Modem Control (Port 2).
2. On the **PC**, create a subdirectory called “c:\smix.”
3. Change to the **SMIX** directory by entering “cd c:\smix” and pressing the <Enter> key.
4. Invoke the **Windows** program by entering “win.”
5. From the **Accessories** group select the **Terminal** icon.
6. From the **Terminal** window, select the **Settings** menu. Select **Binary File Transfer = Kermit** and select **OK**.

7. From the Settings menu, select Communications and set connector = com1 and baud rate = 9600. Select OK.
8. From the Terminal window, press the PC <Enter> key. The PC should establish a communication link with the VAX.
9. At the Username prompt, enter "test2" <Enter>.
10. At the Password prompt, enter "babbage" <Enter>. The PC should display a 3100G2> prompt.
11. At the 3100G2> prompt, enter "run smexe:kermit" <Enter>. The PC will display the kermit> prompt.
12. At the kermit> prompt, enter the following:
 - set line tt: <Enter>.
 - set file type fixed<Enter>.
 - set delay 30<Enter>.
13. Enter "send smexe:smix_zip.exe" <Enter>.

NOTE

You now only have 30 seconds in which to execute steps 14 and 15.

14. Quickly, from the Terminal window select the Transfer menu and select Receive Binary File.
15. In the File Name window, enter "c:\smix\smix_zip.exe" <Enter>.
16. The file transfer should start within a few seconds and will take approximately five (5) minutes.
17. When the transfer process is finished, exit Kermit by entering "exit" <Enter>.
18. Logoff the VMX by entering "lo" <Enter>.
19. From the Terminal window, select the File menu and select "exit."
20. From the Program Manager window, exit to a DOS prompt.
21. Enter "dir" and verify the smix_zip.exe file exists.
22. Unzip the files by entering "smix_zip" <Enter>.
23. The program will unzip the 12 SMIX utility files. Enter "dir" <Enter>. and verify the following 12 files exist in any order:
 - **SMIX.TXT**
 - **SMIX.EXE**
 - **SMIX.CFG**

- **SMLR.BAT**
- **SMLS.BAT**
- **SMLSU.BAT**
- **SMGR.BAT**
- **SMGS.BAT**
- **SMGSU.BAT**
- **SMDR.BAT**
- **SMDS.BAT**
- **SMDSU.BAT**

24. Edit the Autoexec.bat file to add c:\smix to the current working path.
25. Proceed with configuring the SMIX utility for operation.
26. Read the c:\smix\smix.txt file. This file contains important information about this release of the SMIX Utility software.

SMIX Interface and Configuration

Typically SMIX operations would be via a dial-up modem as shown in Figure 13-1, however, on occasion it may be necessary to use SMIX locally at the VAX System Manager. To make this operation simpler, provide an RS-232 Port Switch (A-B switch) at the VAX System Manager and connect an RS-232 cable from the A-B switch **Output** to the VAX System Manager. Connect a modem to the **A**-side of the A-B switch. This is used for dial-up operation. Turn the switch to "**A**" and run the SMIX utility from a remote PC. Additional details are provided below.

When local operation with a local PC is needed, connect the modified RS-232 cable (which has the two jumpers) to the **B**-side of the A-B switch. Turn the switch to "**B**" and run the SMIX utility.

Remote Connection (Typically a Remote PC)

1. Begin by adding a device to the system. Refer to LBI-38703 *EDACS VAX/VMS SYSTEM MANAGER INSTALLATION, SETUP & TROUBLESHOOTING Technical Reference Manual* section 4.1 EDACS Site and Device Management.
2. Install the modem interface cable between the PC (com port) and the PC modem. This is a commonly used PC (DB9) to modem (DB25) RS-232 serial cable. See Figure 13-2 for pinouts.
3. Connect the System Manager modem to the Modem Control Port 2 (via the "A" side of the A-B switch).

- On the PC, edit c:\smix\smix.cfg file. After the "phone=" parameter insert the phone number for the modem connected to the VAX. Save the file and exit the editor.

A typical configuration file for modem connection would be:

Port = 1

Baud = 9600

Device = 64

Password=~CAD

Phone = 9555-1212

Modeminit = AT&C1&D2%B6&M0&K0S7=90

Timeout = 60

NOTE

Ensure DB25 pins 4 (RTS) and 5 (CTS) are jumpered together. Ensure DB25 pins 8 (CD) and 20 (DTR) are jumpered together. These two jumpers must be installed for SMIX to work properly in the hardware communications mode.

You may need to refer to your PC's User's Manual for the cable pinout for your particular computer.

- Use a text editor and set up the configuration file (C:\SMIX\SMIX.CFG) for direct connect operation.

Direct Connection (Typically a Local PC)

- Begin by adding a device to the system. Refer to LBI-38703 *EDACS VAX/VMS SYSTEM MANAGER INSTALLATION, SETUP & TROUBLESHOOTING Technical Reference Manual* section 4.1 EDACS Site and Device Management.
- Install the interface cable between the PC (com1 port) and the VAX Modem Control Port 2 (via the "B" side of the A-B switch). This is the special (locally manufactured) RS-232 serial cable. Refer to Figure 13-3 for proper pinouts.

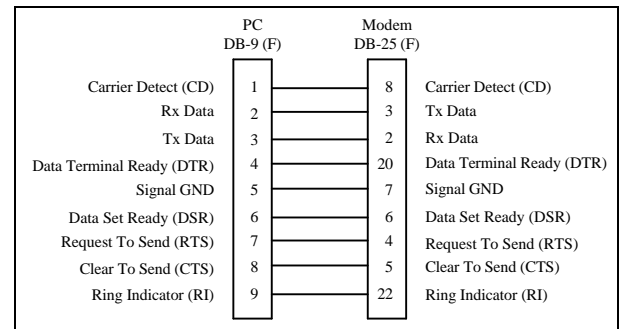


Figure 13-2. PC to Modem Cable

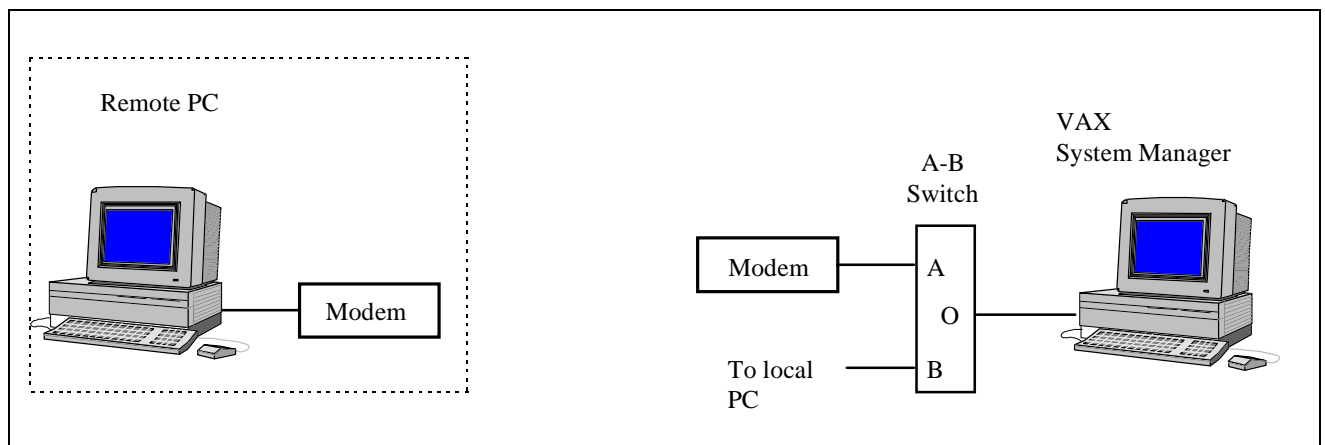


Figure 13-1. Typical PC to System Manager Interface Connections

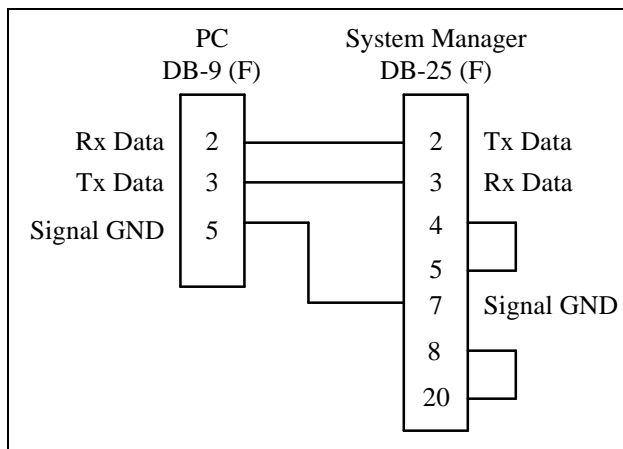


Figure 13-3. System Manager to PC Using Direct Connection

A typical configuration file for direct hardware connection would be:

```
Port = 1
Baud = 9600
Device = 64
Password=~CAD
Phone = (none)
Modeminit = (none)
Timeout = (none)
```

NOTE

Ensure that phone parameter in the SMIX.CFG configuration file does not have a phone number in it.

4. Edit this file (SMIX.CFG) to conform to the settings of your particular system.
5. Save the file and exit. When this is complete you are ready to use the SMIX routines.

USING THE IMPORT/EXPORT UTILITY

Running Batch Files

The user may find it more convenient to use the SMIX utility through the use of Batch files. There are nine (9) Batch files provided with this utility:

SMGR.BAT	SMLR.BAT	SMDR.BAT
SMGS.BAT	SMLS.BAT	SMDS.BAT
SMGSU.BAT	SMLSU.BAT	SMDSU.BAT

SMGR.BAT - This Batch file contains the command to perform a GID database retrieval from the System Manager.

SMLR.BAT - This Batch file contains the command to perform a LID database retrieval from the System Manager.

SMDR.BAT - This Batch file contains the command to perform a SITE database retrieval from the System Manager.

SMGS.BAT - This Batch file contains the command to perform a GID database upload to the System Manager without automatic upload to sites.

SMLS.BAT - This Batch file contains the command to perform a LID database upload to the System Manager without automatic upload to sites.

SMDS.BAT - This Batch file contains the command to perform a SITE database upload to the System Manager without automatic upload to sites.

SMGSU.BAT - This Batch file contains the command to perform a GID database upload to the System Manager with automatic upload to sites.

SMLSU.BAT - This Batch file contains the command to perform a LID database upload to the System Manager with automatic upload to sites.

SMDSU.BAT - This Batch file contains the command to perform a SITE database upload to the System Manager with automatic upload to sites.

To use these Batch files you must provide a filename that will be used to store the database in the event of a database retrieval or as a source of a database to be sent to the System Manager.

Examples:

SMGR GID.DAT

This command gets the GID database from the System Manager and stores it in GID.DAT

SMLSU LID.DAT

This command takes the database in the current directory, stored in the file LID.DAT and sends the records to the System Manager to be stored as the LID database. After successful completion of the transfer, the System Manager will automatically upload the databases to all sites.

SMDS ABC.TXT

This command takes the database in the file ABC.TXT and sends it to the System Manager to be stored as the SITE database without automatic upload after completion of the transfer.

NOTE

Use file extensions consistent with the supporting PC software.

Exporting Databases

The following are examples of exporting databases from the System Manager to a PC.

GID Database Retrieval

1. Read the Group database from the VAX using the batch file as follows (C:\SMIX indicates the DOS prompt):

C:\SMIX> SMGR xxxx.xxx

Where xxxx.xxx is the PC file name (up to 8 characters) where the data will be stored. In example, Group5.DAT.

This command will get the GID database and store it in the c:\SMIX\xxxx.xxx file.

2. The SMIX program should indicate the number of records received.
3. To view the file using a spreadsheet or database program, open the file. Note, the file is ASCII text in a comma delimited format.
4. Make any changes, additions, or deletions required.
5. Save the file as ASCII text and ensure the file type is a CSV (comma separated value) or comma delimited.

LID Database Retrieval

1. Read the Logical Unit ID database from the VAX using the batch file as follows (C:\SMIX indicates the DOS prompt):

C:\SMIX> SMLR xxxx.xxx

Where xxxx.xxx is the PC file name (up to 8 characters) where the data will be stored. In example, newlid1.db.

This command will get the LID database and store it in the c:\SMIX\xxxx.xxx file.

2. The SMIX program should indicate the number of records received.
3. To view the file using a spreadsheet or database program, open the file. Note, the file is ASCII text in a comma delimited format.
4. Make any changes, additions, or deletions required.

5. Save the file as ASCII text and ensure the file type is a CSV (comma separated value) or comma delimited.

Site Database Retrieval

1. Read the External Device database from the VAX using the batch file as follows (C:\SMIX indicates the DOS prompt):

C:\SMIX> SMDR xxxx.xxx

Where xxxx.xxx is the PC file name (up to 8 characters) where the data will be stored. In example Site_ABC.TXT.

This command will get the device database and store it in the c:\SMIX\xxxx.xxx file.

2. The SMIX program should indicate the number of records received.
3. To view the file using a spreadsheet or database program, open the file. Note, the file is ASCII text in a comma delimited format.
4. Make any changes, additions, or deletions required.
5. Save the file as ASCII text and ensure the file type is a CSV (comma separated value) or comma delimited.

Importing Databases

The following are examples of importing databases from the PC to the System Manager.

GID Database Upload

1. Upload the Group database from the PC to the VAX System Manager using the batch file as follows (C:\SMIX indicates the DOS prompt):

C:\SMIX> SMGS xxxx.xxx

Where xxxx.xxx is the name of the PC file containing the data.

This command will send the GID database to the System Manager without automatically uploading the sites.

2. The SMIX program should indicate the number of records sent.
3. To verify the upload was successful, log into the System Manager account.
4. From the User Menu, select function #12, Database Maintenance - Group Definition.
5. Enter the desired group in the Group ID field.

6. The key fields should fill in.
7. Verify the group data matches the modified data created using the PC software.
8. Exit the function (F6) and the account (F7).

GID Database Upload with Automatic Site Upload

1. Upload the Group database from the PC to the VAX System Manager using the batch file as follows (C:\SMIX indicates the DOS prompt):

C:\SMIX> SMGSU xxxx.xxx

Where xxxx.xxx is the name of the PC file containing the data.

This command will send the GID database to the System Manager. After successfully transferring the new or revised database, the System Manager will automatically upload the databases to all sites.

2. The SMIX program should indicate the number of records sent.
3. To verify the upload was successful, log into the System Manager account.
4. From the User Menu, select function #12, Database Maintenance - Group Definition.
5. Enter the desired group in the Group ID field.
6. The key fields should fill in.
7. Verify the group data matches the modified data created using the PC software.
8. Exit the function (F6)
9. To confirm the database was uploaded to the site, select User Menu item #68, Event Log Display.
The Selected Date panel appears.
10. Press the **Return** key to accept today's date as the desired date to examine.
The Event Log Display will appear with the most recent time at the bottom.
11. Using the cursor keys, examine the log and verify the System Manager has initiated uploading the group database to the sites.
12. Exit the function (F6) and the account (F7).

LID Database Upload

1. Upload the LID database from the PC to the VAX System Manager using the batch file as follows (C:\SMIX indicates the DOS prompt):

C:\SMIX> SMLS xxxx.xxx

Where xxxx.xxx is the name of the PC file containing the data.

This command will send the LID database to the System Manager without automatically uploading the sites.

2. The SMIX program should indicate the number of records sent.
3. To verify the upload was successful, log into the System Manager account.
4. From the User Menu, select function #11, Database Maintenance - Logical Unit Definition.
5. Enter the desired LID in the Logical Number field.
6. The key fields should fill in.
7. Verify the LID data matches the modified data created using the PC software.
8. Exit the function (F6) and the account (F7).

LID Database Upload with Automatic Site Upload

1. Upload the LID database from the PC to the VAX System Manager using the batch file as follows (C:\SMIX indicates the DOS prompt):

C:\SMIX> SMLSU xxxx.xxx

Where xxxx.xxx is the name of the PC file containing the data.

This command will send the LID database to the System Manager. After successfully transferring the new or revised database, the System Manager will automatically upload the databases to all sites.

2. The SMIX program should indicate the number of records sent.
3. To verify the upload was successful, log into the System Manager account.
4. From the User Menu, select function #11, Database Maintenance - Logical Unit Definition.
5. Enter the desired LID in the Unit Number field.
6. The key fields should fill in.
7. Verify the LID data matches the modified data created using the PC software.
8. Exit the function (F6)
9. To confirm the database was uploaded to the site, select User Menu item #68, Event Log Display.
The Selected Date panel appears.

10. Press the **Return** key to accept today's date as the desired date to examine.

The Event Log Display will appear with the most recent time at the bottom.

11. Using the cursor keys, examine the log and verify the System Manager has initiated uploading the LID database to the sites.
12. Exit the function (**F6**) and the account (**F7**).

Site Database Upload

1. Upload the Site database from the PC to the VAX System Manager using the batch file as follows (C:\SMIX indicates the DOS prompt):

C:\SMIX> SMDS xxxx.xxx

Where xxxx.xxx is the name of the PC file containing the data.

This command will send the Site (Device) database to the System Manager without automatically uploading the sites.

2. The SMIX program should indicate the number of records sent.
3. To verify the upload was successful, log into the System Manager account.
4. From the User Menu, select function #10, Database Maintenance - Site/Device Definition.
5. Enter the desired Site number in the Device Number field.
6. The key fields should fill in.
7. Verify the Site data matches the modified data created using the PC software.
8. Exit the function (**F6**) and the account (**F7**).

Site Database Upload with Automatic Site Upload

1. Upload the Site database from the PC to the VAX System Manager using the batch file as follows (C:\SMIX indicates the DOS prompt):

C:\SMIX> SMDSU xxxx.xxx

Where xxxx.xxx is the name of the PC file containing the data.

This command will send the Site (Device) database to the System Manager. After successfully transferring the new or revised database, the System Manager will automatically upload the databases to all sites.

2. The SMIX program should indicate the number of records sent.
3. To verify the upload was successful, log into the System Manager account.
4. From the User Menu, select function #10, Database Maintenance - Site/Device Definition.
5. Enter the desired Site number in the Device Number field.
6. The key fields should fill in.
7. Verify the Site data matches the modified data created using the PC software.
8. Exit the function (**F6**)
9. To confirm the database was uploaded to the site, select User Menu item #68, Event Log Display.
The Selected Date panel appears.
10. Press the **Return** key to accept today's date as the desired date to examine.
The Event Log Display will appear with the most recent time at the bottom.
11. Using the cursor keys, examine the log and verify the System Manager has initiated uploading the Site database to the sites.
12. Exit the function (**F6**) and the account (**F7**).

RECORD FIELDS AND RANGES

GID File Record

Note: Each field is followed by a comma with the exception of the last field in the record (MS FORCED SITES).

FIELD NAME	RANGE OF VALUES	DEFAULT VALUE
GROUP ID	0 - 2047	
NAME	TEXT	8 spaces
GROUP TYPE	1 - AGENCY 2 - FLEET 3 - SUBFLEET 4 - PATCH 5 - SIMULSELECT 6 - OTHER 7 - RESERVED	3
SPARE	0	0
AGENCY NAME	TEXT	16 spaces
DIVISION NAME	TEXT	16 spaces
ADDRESS	TEXT	48 spaces
VOICE PRIORITY	0 - 7	0
DIGITAL VOICE PRIORITY	0 - 7	0
DATA PRIORITY	0 - 7	0
INTERCONNECT PRIORITY	0 - 7	0
HANG TIME	0 - 255	0
INBOUND INTERCONNECT ENABLE	0 - 1	1 (Y)
CHANNEL TEST ENABLE	0 - 1	0 (N)
MS TRACK	0 - 1	1 (Y)
MS WIDE AREA	0 - 1	0 (N)
SPARE	0 - 1	0 (N)
CONFIRM	0 - 1	0 (N)
SPARE	0 - 1	0 (N)
VALID SITES	Y/N string (channel 1 on left; 32 channels)	
MS FORCED_SITES	Y/N string (channel 1 on left; 32 channels)	
Number of fields	21	
Delimiting commas	20	

LID File Record

Note: Each field is followed by a comma with the exception of the last field in the record (SPARE).

FIELD NAME	RANGE OF VALUES	DEFAULT VALUE
UNIT NUMBER	0 - 16383	
PHYSICAL ID	0 - 9999999999	0
NAME	TEXT	8 spaces
ASSET	TEXT	16 spaces
SERIAL	TEXT	0
HOME GROUP	0 - 2047	
UNIT TYPE	0 - NULL	
	1 - MOBILE	
	2 - PORTABLE	
	3 - DESKTOP	
	4 - EGECONSOLE	
	5 - CSICONSOLE	
	6 - AUDIO	
	7 - OTHER	
SPARE	0 - 1	0
SPARE	0 - 1	0
AGENCY NAME	TEXT	16 spaces
DEPARTMENT NAME	TEXT	16 spaces
PROPERTY	TEXT	16 spaces
OPERATOR	TEXT	16 spaces
EQUIPMENT TYPE	TEXT	16 spaces
COMMENTS	TEXT	40 spaces
VOICE PRIORITY	0 - 7	0
DIGITAL VOICE PRIORITY	0 - 7	0
DATA PRIORITY	0 - 7	0
INTERCONNECT PRIORITY	0 - 7	0
TOLL CALL	0 - 15	0
ROTARY	0 - 15	0
DEDICATED PHONE LINE	0 - 255	1
HANG TIME	0 - 255	0
VALID SITES	Y/N string (channel 1 on left; 32 channels)	
MS FORCED SITES	Y/N string (channel 1 on left; 32 channels)	
MS HOME SITE	1 - 32	1st SITE
MS WIDE AREA	0 - 1	0 (N)
MS TRACK	0 - 1	1 (Y)
INBOUND INTERCONNECT ENABLE	0 - 1	1 (Y)
CHANNEL TEST ENABLE	0 - 1	0 (N)
SPARE	0 - 1	1 (Y)
SPARE	0 - 1	1 (Y)
CONFIRMED CALL ENABLE	0 - 1	0 (N)
SPARE	0 - 1	0 (N)
Number of fields	34	
Delimiting commas	33	

External Device File Record

Note: Each field is followed by a comma with the exception of the last field in the record (SPARE_DATA[1]).

FIELD NAME	RANGE OF VALUES	DEFAULT VALUE
DEVICE NUMBER	1 - 64	
DEVICE NAME	TEXT	8 spaces
DEVICE TYPE	48 - NULL 49 - SITE 50 - MSC 51 - CAD 52 - GESW 53 - RSM 54 - CSI	
PASSWORD	TEXT	padded w/ spaces
SPARE	TEXT	32 spaces
MESSAGE RETRY ATTEMPTS	0 - 10	3
DIAL RETRY ATTEMPTS	0 - 10	3
ATTACH TIME INTERVAL	10 - 60	15
ACKNOWLEDGE TIMEOUT	5 - 60	5
DISCONNECT HANG TIME	10 - 60	10
SANITY POLL INTERVAL	2 - 60	5
CARRIER TIMEOUT	5 - 60	60
LINE[0].PHONE	TEXT (phone # for communicating w/ device	
LINE[0].NAME	TEXT (VMS dev. name; LTAx:, TXAx:, TTAx:) (x is port number)	
LINE[0].SPEED	8 - 1200 11 - 2400 13 - 4800 14 - 7200 15 - 9600 16 - 19200	15 (9600)
LINE[1].PHONE	TEXT (phone # for communicating w/ device	
LINE[1].NAME	TEXT (VMS dev. name; LTAx:, TXAx:, TTAx:) (x is port number)	
LINE[1].SPEED	8 - 1200 11 - 2400 13 - 4800 15 - 9600 14 - 7200 16 - 19200	14 (7200)

CONTROL CHANNEL	1 - 24	2
INTERNAL ID	0 - 255	same as DEVNO
RF	Y/N string (channel 1 on left; 32 channels)	
NOT USED	Y/N string (channel 1 on left; 32 channels)	
INTERCONNECT	Y/N string (channel 1 on left; 32 channels)	
DIGITAL VOICE	Y/N string (channel 1 on left; 32 channels)	
DATA	Y/N string (channel 1 on left; 32 channels)	
CHANNEL TEST	Y/N string (channel 1 on left; 32 channels)	
DOWNLINK	Y/N string (channel 1 on left; 32 channels)	
ALLOWED CC	Y/N string (channel 1 on left; 32 channels)	
WIDE AREA	Y/N string (channel 1 on left; 32 channels)	
NOT USED	Y/N string (channel 1 on left; 32 channels)	
MESSAGE CONV	1 - 255 (10 second intervals)	def. 30
TRANS CONV	1 - 255 (10 second intervals)	def. 30
INTERCONNECT HANG TIME	1 - 255	30
EMERGENCY HANG TIME	0 - 255	2
MORSE CODE ID INTERVAL	1 - 30	30
RELAY ON	0 - 255	0
BACKGROUND TESTCALL INTERVAL	1 - 255	5
SCRAMBLE DATA CALL INTERVAL	0 - 32767	5
RECENT CALL QUEUE INTERVAL	0 - 30000	5000
ACTIVITY DUMP THRESHOLD	0 - 16383	1000
MAX INTERCONNECT CALLS	0 - 30	2
MAX INDIVIDUAL CALLS	0 - 30	20
PMU_POWER_LEVEL	1 - 255	40
GETC_FAIL	1 - 255	2
GETC_RECOVER	1 - 255	4
GETC_REC_MOD	1 - 255	6
TU_FAIL	1 - 255	2
TU_RECOVER	1 - 255	4
RIC_FAIL	1 - 255	2
RIC_RECOVER	1 - 255	4
LIC_FAIL	1 - 255	2
LIC_RECOVER	1 - 255	4
SPARE	0	0
SPARE	0	0
ROTATE_ASSIGN	0 - 1	1 (Y)
ASSIGN CHAN ASCENDING	0 - 1	0 (N)
LOCAL TEST UNIT	0 - 1	1 (Y)
POWER MONITOR UNIT ENABLE	0 - 1	1 (Y)
RPT_CARRIER_FAIL	0 - 1	0 (N)
RPT_PHONE_FAIL	0 - 1	1 (Y)
RPT_AUX_ALARMS	0 - 1	1 (Y)

RPT_FSL_FAIL	0 - 1	0 (N)	
ASSIGN_900MHZ	0 - 1	0 (N)	
SPARE	0 - 1	0 (N)	
SPARE	0 - 1	0 (N)	
SPARE	0 - 1	0 (N)	
TEST UNIT ENABLE	0 - 1	1 (Y)	
SPARE	0 - 1	0 (N)	
SPARE	0	0	NOTE: THERE ARE 18
SPARE	0	0	OF THESE
SPARE	0	0	
SPARE	0	0	
SPARE	0	0	
SPARE	0	0	
SPARE	0	0	
SPARE	0	0	
SPARE	0	0	
SPARE	0	0	
SPARE	0	0	
SPARE	0	0	
SPARE	0	0	
SPARE	0	0	
SPARE	0	0	
MCP.PARTITIONS[0].NUM1	0 - 15	0 (chan 0)	NOTE: THERE ARE 16
MCP.PARTITIONS[0].NUM2	0 - 15	0 (chan 1)	PAIRS OF THESE
MCP.PARTITIONS[1].NUM1	0 - 15	1 (chan 2)	
MCP.PARTITIONS[1].NUM2	0 - 15	0 (chan 3)	
MCP.PARTITIONS[2].NUM1	0 - 15	1 (chan 4)	
MCP.PARTITIONS[2].NUM2	0 - 15	0 (chan 5)	
MCP.PARTITIONS[3].NUM1	0 - 15	1 (chan 6)	
MCP.PARTITIONS[3].NUM2	0 - 15	0 (chan 7)	
MCP.PARTITIONS[4].NUM1	0 - 15	1 (chan 8)	
MCP.PARTITIONS[4].NUM2	0 - 15	0 (chan 9)	
MCP.PARTITIONS[5].NUM1	0 - 15	1 (chan 10)	
MCP.PARTITIONS[5].NUM2	0 - 15	0 (chan 11)	
MCP.PARTITIONS[6].NUM1	0 - 15	1 (chan 12)	
MCP.PARTITIONS[6].NUM2	0 - 15	0 (chan 13)	
MCP.PARTITIONS[7].NUM1	0 - 15	1 (chan 14)	
MCP.PARTITIONS[7].NUM2	0 - 15	0 (chan 15)	
MCP.PARTITIONS[8].NUM1	0 - 15	1 (chan 16)	
MCP.PARTITIONS[8].NUM2	0 - 15	0 (chan 17)	

MCP.PARTITIONS[9].NUM1	0 - 15	1 (chan 18)
MCP.PARTITIONS[9].NUM2	0 - 15	0 (chan 19)
MCP.PARTITIONS[10].NUM1	0 - 15	1 (chan 20)
MCP.PARTITIONS[10].NUM2	0 - 15	0 (chan 21)
MCP.PARTITIONS[11].NUM1	0 - 15	1 (chan 22)
MCP.PARTITIONS[11].NUM2	0 - 15	0 (chan 23)
MCP.PARTITIONS[12].NUM1	0 - 15	1 (chan 24)
MCP.PARTITIONS[12].NUM2	0 - 15	0 (chan 25)
MCP.PARTITIONS[13].NUM1	0 - 15	0 (chan 26)
MCP.PARTITIONS[13].NUM2	0 - 15	0 (chan 27)
MCP.PARTITIONS[14].NUM1	0 - 15	0 (chan 28)
MCP.PARTITIONS[14].NUM2	0 - 15	0 (chan 29)
MCP.PARTITIONS[15].NUM1	0 - 15	0 (chan 30)
MCP.PARTITIONS[15].NUM2	0 - 15	0 (chan 31)
DECNET ADDRESS AREA	0 - 63	1
DECNET ADDRESS NODE	0 - 1023	1
DECNET NODE NAME	TEXT	10 spaces
DECNET SM GROUP	2 - 16383	2
SPARE	0	0
SPARE	0	0
SPARE	0	0

Number of fields	125
Delimiting commas	124

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APPENDIX A - CHANNEL MONITOR DISPLAY - CHANNEL STATUS and ACTIVITY MESSAGES

The following is a list of messages and status calls that may appear on the Channel Monitor display selected by the Site Monitor Function #32.

CHANNEL STATUS

BUSY	Indicates channel in use.
BUSY	Indicates channel busy with an emergency call.
FAIL	GETC is configured to be present, but appears to be inoperative.
FREE	Indicates channel is available for use
OFF	No GETC defined for this channel.

CHANNEL ACTIVITY MESSAGES

4 BAD VOTED MSGS	Four bad voted messages detected by the test unit.
CALL DENIED	Caller has requested a service which cannot be performed.
CALL QUEUED	System fully loaded (all resources for this call are in use), call has been queued.
CARRIER PRESENT	A carrier has been detected on the working channel. This usually indicates the presence of interference or intermodulation (intermod).
CC POLL FAILURE	The Control-Channel GETC failed to respond to its poll from the Site Controller.
CC POWER FAILURE	This channel was the control channel, but the power monitor unit (PMU) has reported a power failure.
CC SYNTH LOCK	The test unit could not lock its synthesizer on the control channel.
CHNL DIAGNOSTICS	This channel is out of service for a background test call.
CONSOLE ALARM	The console has declared an RF/IF card failure for this channel.
CONTROL CHANNEL	This channel is the control channel.
CONVERT TO CALLEE	Caller placed a call to a group which was already on channel.
DOWNLINK CHANNEL	This channel is a Downlink trunking card (GETC).
DROP WITH CARRIER	The working channel has dropped after its last call and a carrier has been detected (see CARRIER PRESENT).

EMERGENCY CALL	A radio unit has declared an emergency call and an emergency group call is in progress.
GETC COMM ERROR	A communications error has been detected by the Site Controller communication driver.
GROUP CALL	A group call is in progress.
GROUP DATA CALL	A group data call is in progress.
HIGH SPEED FAILED	The test unit detected bad high-speed data on the working channel.
INDIV DATA CALL	An individual data call is in progress.
INDIVIDUAL CALL	An individual call is in progress.
INTERCONNECT CALL	A radio-to-telephone interconnect call is in progress.
LOST CC SYNCH	The test unit could not remain synchronized with the control unit.
LOW SPEED FAILED	The test unit detected bad low-speed data on the working channel.
MORSE CODE ID	A Morse code identification message (repeater ID) is being broadcast over this channel.
NO CC FOUND	The test unit could not find a control channel for its request.
NO CC HIGH SPEED	Control channel high-speed data is bad or nonexistent.
NO CHNL ASSIGNED	The test unit received no channel assignment when it requested a channel.
NO DROP SEEN	The test unit did not see the channel broadcast a drop sequence.
NO SITE ID SEEN	No site identification message has been seen.
REPEAT MESSAGES	The test unit has detected repeat messages on the control channel.
SYSTEM ALL-CALL	A system all-call is in progress.
SYSTEM BUSY	The system cannot handle the call request at this time.
TELEPHONE CALL	A telephone-to-radio call is in progress.
TEST CALL	A test call originated by the Test Unit (TU) is in progress.
WC SYNTH LOCK	The test unit could not lock its synthesizer on the working channel.
WRONG SITE ID	The site number in the site identification message is incorrect.

APPENDIX B - SYSTEM MANAGER MESSAGES

Use the following procedure to display the text message which corresponds to a returned error number.

- 1) Write down the error number(s) for which the text message is desired.
- 2) Log into an account with access to VMS (this is usually the TEST2 account, default password of BABBAGE) by entering:

```
username:"test2<cr>"
password:"babbage<cr>"
```

- 3) At the operating system prompt, type in the following:

```
write sys$output f$message('message_number')<cr>
```

Where '*message_number*' is replaced by the error number.

- 4) The operating system will then display a text message in the form

facility-severity-ident, text

where:

- 'facility' is the VMS software generating the error for example:
"RMS" for the database files of the System Manager.
- 'severity' is a single letter code indicating the type of message:

I	-	for Information
W	-	for Warning
E	-	for Error
F	-	for Fatal (or severe) error
S	-	for successful completion
- 'ident' is an abbreviation for the message text
- 'text' is a short English (or whatever language the System Manager is running) description of the message code.

Example:

An example of an error reported in the Event Log Display:

Unable to connect to site 1 (8340)

The user notes that the error code is 8340.

Logging into the VMS operating system level on the System Manager, the user then types:

```
write sys$output f$message(8340) <cr>
```

which returns:

%SYSTEM-F-UNREACHABLE, remote node is not currently reachable

5) When finished decoding error numbers, enter "**lo<cr>**" to log off the account.

The following messages are responses from the System Manager that may appear on the screen during normal operation.

Activity Report Being Generated Please Wait	The system is preparing the activity report.
Activity Report Submitted	Report request has been accepted and sent to the printer.
Activity for Site/Date Not Found	The activity file for the designated site and date could not be found.
Activity Transfer initiated	A transfer of the activity data from the designated site has been initiated.
Agency Partition Table Not Found; Must Be Defined By Supervisor	The Supervisor has not defined the Agency Partition table.
Invalid Date	Date requested is not within a reportable range.
Invalid Fleet Number	Reenter a valid fleet number.
Invalid Home Group	Home group does not exist.
Multiple Control Channels Indicated; Please Reenter	More than one control channel has been designated.
No Activity Available For This Site	Site is defined on the system but activity is not available.
No Control Channel Indicated; Please Reenter	One channel must be designated the control channel.
Operation Permitted On Latched Alarm State Only	You are trying to alter the Current alarm state. Press F11 to get to the Latched state.
Spooling Activity Report To Printer	The requested activity report file is being spooled to the printer.
SUPERVISOR Access Not Permitted	This is a supervisor function and cannot be accessed by a general operator.
Translating Activity To Report File; Please Wait	The raw activity data is being translated into a user readable form.
Unable To Modify Value	Changing this entry would affect related records. Associated records must be changed (deleted) before this value can be changed.

Unable To Read Site Channel Configuration	The System Manager is unable to communicate with the Site Controller. Check the communications link to the Site Controller. Also, check that the Site Controller is running (system not in Failsoft).
Unable To Read Site Parameters Configuration	The System Manager is unable to send the new configuration data to the Site Controller. Check the communications link to the Site Controller. Also, check that the Site Controller is running (system not in Failsoft).
Unable To Reconfigure Site Channels	The System Manager is unable to send the new configuration data to the Site Controller. Check communications link to the Site Controller. Also, check that the Site Controller is running (system not in Failsoft).
Unable To Reconfigure Site Parameters	The System Manager is unable to send the new configuration data to the Site Controller. Check the communications link to the Site Controller. Also, check that the Site Controller is running (system not in Failsoft).
Undefined Alarm Class Input; Please Reenter	Alarm class must be R (Reset), E (Enable), or D (Disable).
Undefined Site	Site requested is not defined on this system.
Value Out Of Range	Entered value is out of the acceptable range.
You Are Already Sorting On This Field	Sort option chosen has been selected in a prior Sort field.
You Must Fill Previous Sort Field First	Previous Sort field has NO SORT as the selected option. Change the selected option for the previous Sort field and try again.

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APPENDIX C - AUTOMATIC CONTROL CHANNEL ROTATION

This utility provides the customer with the ability to schedule automatic periodic rotations of the control channel on sites with Site Controllers. The utility operates on a time basis, moving the control channel at an interval specified in the activating command. It operates in a manner similar to the PDP System Manager's control channel walker utility.

In order to utilize this feature, the SMSTART.COM file in SMCOM must be edited to include the command line(s) needed to start the program on the site(s) to which the feature is added.

The following procedure is used to add this feature to the system. Note that at any time during execution of the procedure, if you are concerned that something has been modified that is not part of the procedure, you can cancel all changes by pressing and holding **<CTRL>** and then pressing **<Z>**. At the resulting * prompt, type **quit<cr>**.

To get the feature activated, do the following:

STEP ACTION

1. Log into the TEST2 account.
2. Type in the command:

edit/edt smcom:smstart.com<cr>
3. If the * prompt appears, type the following:

C<cr>
4. Press **<FIND>** and type in the following:

untdis_det

then press **<FIND>** again.
5. Using the arrow keys, position the cursor at the next line's dollar sign and press **<cr>**.
6. Press **<UP ARROW>** once to position the cursor at the beginning of the line just opened.
7. Type in the following:

\$set message/notext/nofacility/noidentification/noseverity<cr>
8. Now, type the following line, requesting Automatic Control Channel Rotation. Replace 'site' with the site number for which rotation is requested, 'rotation_rate' with the rotation rate in the form hh:mm:ss.ss, and 'start_time' with the absolute time the job is to start on the current day, in the form hh:mm:ss.ss.

\$@smcom:control_channel_walker 'site' 'rotation_rate' 'start_time'<cr>

As an example of this command line entry:

In this example site 9 is changed to automatic control channel rotation, with a rotation rate of 1 hour, starting at 23:59 hours today. The entry would be:

\$@smcom:control_channel_walker 09 01:00:00.00 23:59:00.00

9. Repeat this entry for each site that is to have the control channel rotation. You should get a new line to fill for each site entered.
10. Finally, type in the following (NOTE: there is no <cr> at the end of this line to prevent the editor from creating another new line):

\$set message/text/facility/identification/severity

11. To save the changes, press the <CTRL> key and while holding it, press the <Z> key. This gets you back to the * prompt.
12. At the * prompt, type:

exit<cr>

13. Log out of the TEST2 account by typing:

logout<cr>

14. Press <cr> once or twice until a VMS Username prompt appears, then type:

SHUTDOWN<cr>

and at the password prompt type (note you will not see anything on the screen when you type it):

SHUTDOWN<cr>

15. Choose the option to reboot the system by typing:

R<cr>

Once the System Manager has rebooted, the additions in the SMSTART.COM file are activated. Verify the actions of the Control Channel Walker by using the Event Log display, screen 68, in the System Manager menu system. The action taken by the Control Channel Walker process should appear at or around the time you specified, and should reappear at or around the end of the time interval you specified in **rotation_rate**.

APPENDIX D - ALARM DEFINITIONS

This Appendix lists the various types of alarms which may be encountered when generating Alarm Reports. It also provides a brief explanation for each type of alarm.

ALARM TYPE DEFINITION

Auxiliary Alarm	This record indicates an auxiliary alarm state change on the channel specified. Auxiliary alarms occur when a GETC issues an alarm report, typically from a simulcasted system. The resulting state can be determined by examining the channels display for the record. If there is a W displayed, the channel is assumed to be OK from the auxiliary alarm perspective.
Background Test Call	This record indicates a normal system event for systems having Test Units connected to the Site Controller locally. This does not actually indicate an alarm unless the channel tested by this call is not displayed as working. This record is always preceded by a Channel Diagnostics record.
Carrier State Change	This record indicates a carrier alarm state change on the channel specified. Carrier alarms occur when a RF GETC detects carrier on the receiver when it should not be there. The resulting state can be determined by examining the channels display for the record. If there is a W displayed, the channel is assumed to be OK from the carrier alarm perspective.
Channel Diagnostics	This record precedes Background Test Call records for locally connected TUs, and Channel Records for remotely connected TUs. It tells when the indicated channel was taken out of service to perform the automated background checks.
Channel Record	This record indicates a change in the state of the working RF GETCs in the system. It is an informational message logged when the channels became active, and is used to report the status of the system channels after a remote Test Calls and System Manager channel reconfigurations.
Console RF/IF	This is used to indicate audio failures from console switches. A failure is indicated with a "W".
External Device	This alarm type indicates a change in the state of equipment or externally provided alarm sources, like failsoft.
Frame Sync Link	This record will appear in the future.
GETC Comm Error	This record logs errors detected by the RS-232C serial multiplexers in the Site Controller. The errors are informational and can indicate a problem with equipment configuration or cabling. Communications ports listed are not always GETC ports. All 32 communication ports could appear in this message. Communication port mapping of Site Controllers is specified in the Site Controller drawing and should be similar to the following:

Port Number	Connected Device
0	System Manager Port
1 to 26	GETC ports - primary downlink
27	Test Unit (TU) if locally connected
28	Alarm Control Unit (ACU)
29	Power Monitor Unit (PMU)
30	Line Interface Controller (LIC)
31	Repeater Interface Controller (RIC)

GETC Power Fail	GETC Power Amplifier (PA) Failure is a MASTR III Alarm support feature (Software release 6.00 or later) - Each station GETC can be configured to monitor its RF power level through a control line driven by the station or power sensor. If the power level drops below a threshold level, and alarm condition exists. This may be caused by a PA failure, antenna failure, or high line Voltage Standing Wave Ratio (VSWR).
GETC Synth Fail	The GETC Synthesizer (Synth) Failure is a MASTR III Alarm support feature (Software release 6.00 or later) - Each station GETC monitors the Base Station synthesizer for locked condition through a control line. If the GETC fails to detect a synthesizer locked condition, an alarm condition exists. This may be caused by a faulty synthesizer or <i>failure of the GETC to load the synthesizer ????? GETCs dont load syn. in MIII stations, only MII stations ?</i> .
Major Alarm	This is an ACU alarm output mask, showing at least one alarm defined in the ACU database as a major alarm. All minor alarms, if any exist, are also displayed in the record. You must reference the ACU database to determine the actual meaning of these alarms as they are defined for each installation.
Minor Alarm	This is an ACU alarm output mask, showing alarms defined in the ACU database as minor alarms. You must reference the ACU database to determine the actual meaning of these alarms as they are defined for each installation.
Phone Line	This record indicates a state change on a phone line on the channel specified. Phone line alarms occur when a channel GETC does not detect data coming from a voter in a voted system. The resulting state can be determined by examining the channels display for the record; if there is a W displayed, the channel is assumed to be OK from the phone line alarm perspective.
Poller State Change	This record indicates a change in state of a GETC with respect to message polling between the Site Controller and the GETC. The GETC identity is indicated. Each record indicates a single channel state change. The state change can be determined by examining the channels display for the record. If there is a W displayed, the channel is assumed to be OK from the polling perspective.
Power Monitor Unit	This record indicates a change in state of a PMU power alarm on a RF channel or an antenna. Multiple alarms can be displayed. The display of alarms indicates power alarms with a W at this time.
RIC Status	This indicates the current state of the system's Repeater Interface Cards (RICs). The record is posted only when there is a state change on one of the RICs; however, to determine which RIC changed state, a previous RIC record or the system's RIC configuration must be known.

System Mgr Login	This is an information record only, indicating a System Manager login attempt. If there was a failure, there could be a communications problem between the System Manager and the Site Controller or someone could be attempting to get into the Site Controller's communication line with an incorrect password.
System Mgr Reconfig	This is used to report the message sent by System Managers to the Site Controller to change the RF channel configuration at the site.
Test Calls	This record is used to indicate a Test Call on a RF channel that failed in the past, and is now trying to come back into service. This record is preceded by a Poller Alarm indicating the channel has passed the polling test of the Site Controller, or by a System Manager Reconfiguration request specifying that the channel tested is to be turned ON . This record does not appear in Simulcast systems using remote Test Units.
TU CC Fail	This record indicates the control channel listed has failed due to a problem detected by the Test Unit.
Turbo Board Fail	Turbo board Failure is a MASTR III Alarm support feature (Software release 6.00 or later) - The main GETC processor and Turbo communicate through a specialized RAM interface. If communication is disrupted then an alarm condition exists. This may be caused by a Turbo Board failure, incorrect software version, or a Turbo Board in the programming mode.
Voted Channel Fail	Voter Failure is a MASTR III Alarm support feature (Software release 6.00 or later) - The GETC monitors the remote data (Rockwell Modem) for error messages from the Voter. If Voter error messages are received an alarm condition exists. This may be caused by any number of Voter failures (refer to Voter protocol specification.).

ALARM LOG TO PRINTER DEFINITIONS

The following is an Alarm output sample from the Alarm Logging to printer feature.

```

27-APR-1994 13:09:57.49 Site 9 Class 10 (FSL ) 0AAC456789012345678902345678901
27-APR-1994 13:10:05.11 Site 9 Class 1 (Poll) 0123A567890123456789012345678901
27-APR-1994 13:10:10.87 Site 9 Class 1 (Poll) 0N23A567890123456789012345678901
27-APR-1994 13:10:15.19 Site 9 Class 10 (FSL ) 0ACN4567890123456789012345678901
27-APR-1994 13:10:17.20 Site 9 Class 1 (Poll) 0AN3A567890123456789012345678901

```

ALARM KEY:

Date/time:	Time of the change of status of the alarm class indicated.
Site:	Gives the site number the event occurred on.
Class:	Gives the class number and description, as defined in the section on Alarm Classes.

Number 0 to 9: No alarm and no change condition.

- A:** (Alarm) Alarm present since last output of this site/class
- C:** (Cleared) Previous alarm which has cleared since last output of this site/class.
- N:** (New alarm) New alarm which has become active since last output of this site/class.

General note: the alarm output is numbered 0 to 31. All alarm classes except the ACU use alarm outputs starting at 1, and ending (usually) at 26.

ALARM CLASS DEFINITIONS

This section describes the alarm class numbers and the internal formats of the alarms generated by the Site Controller.

The maximum number of alarm classes is 16, numbered 0 to 15. Each alarm class has 32 bits available for alarms, defined as an array from 0 to 31. Some alarms do not use all of the bits. Alarm class 0 is not used, and alarm class 15, bit 0 is reserved by the VAX System Manager for internal reporting of lack of site communications.

Alarm Class Name	Alarm Class Number	Remarks
ACUALARM	3	ACU alarms are for both major and minor alarm types, and represent the 32 alarm leads on the ACU. In other words, all 32 bits are used in this message.
PMUALARM	5	The PMU alarms can occur only on channels 1 through 20 and on antennae 1 and 2. The channel alarms use bits 1 to 20; the antennae alarms use bits 21 and 22. All other bits are unused, and set to 0.
RICALARMS	6	The RIC alarms can occur only on channels 1 through 20, so the alarm table uses only bits 1 through 20. All other bits are not used, and are set to 0.
POLLERALARMS	1	
TUALARM	2	
CONSOLE_RFIF_ALARM	4	
CARRIERALARMS	7	
AUXALARMS	8	
FSLALARMS	10	
PHONELINEALARMS	11	
SYNTHFAILALARMS	12	
GETCPOWERALARMS	13	

All of these alarms are channel related, and thus use only part of the 32 bits allowed. Bit 0 is not used and always set to 0. Bits 27 through 31 are also not used and set to 0. Only bits 1 through 26 are used for alarms. Note that the Site Controller code is designed to handle up to 25 RF channels and 1 downlink, even though the PST System Manager is capable of displaying only 20 RF channels and 2 downlinks, maximum.

EXT_EQP_ALARM

15

External equipment alarms are set to 1 when the device, devices, or status is exhibiting the alarm condition; it is reset to 0 when not alarming. The bit assignments are:

- BIT 0 = Site Down (not set by Site Controller! Always Clear).
- BIT 1 = LIC
- BIT 2 = PMU
- BIT 3 = TU
- BIT 4 = ACU
- BIT 5 = FAILSOFT
- BIT 6 = CARRIER STATUS
- BIT 7 = AUX ALARM STATUS
- BIT 8 = PHONE STATUS
- BIT 9 = BILLING RAM STATUS (for B&I)
- BIT 10 = RAM BATTERY STATUS (for B&I)
- BIT 11 through 31 not used

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APPENDIX E - DATABASE SUMMARY AND ACCEPTABLE VALUES

EXTERNAL DEVICE DEFINITION (FUNCTION #10)

Input Field	Acceptable Values	Default Values
Selected Device Panel		
Device Number	1 - 64	Blank
Device Name	Any 8 Alphanumeric character text.	Blank
Device Type	SITE MSC EGE SWITCH CAD RSM	Defaults to "SITE" if Device Number is 1-32.
Channel Configuration Panel		
RF	For Channels 1 to 24 N - none C - Control Channel Y - Working Channel	Channel 2 - C All others - N
Interconnect	For Channels 1 to 24 N - Channel not connected to Interconnect equipment. Y - Channel connected to Interconnect equipment.	All Channels - N
Digital Voice	For Channels 1 to 24 N - Digital Voice Disabled. Y - Digital Voice Enabled.	All Channels - N
Data	For Channels 1 to 24 N - Data Processing Disabled. Y - Data Processing Enabled.	All Channels - N
Channel Test	For Channels 1 to 24 N - Test partition Disabled. Y - Test partition Enabled.	All Channels - N
Allowed CC	For Channels 1 to 24 N - Disabled for use as Control Channel. Y - Enabled for use as backup Control Channel.	All Channels - N
Wide Area	For Channels 1 to 24 N - Disabled for use in multisite network. Y - Enabled for use in multisite network.	All Channels - N

EXTERNAL DEVICE DEFINITION (FUNCTION #10) (Continued)

Input Field	Acceptable Values	Default Values
Downlink	For Channels 1 to 26 N - Disabled for use in multisite network. Y - Enabled for use in multisite network.	Channel 26 - Y All others - N
MCP Partition	For Channels 1 to 24 1 - 9 & A - F (10-15 decimal)	1
MC Partitioning Enabled	N - Site MCP feature disabled. Y - Site MCP feature enabled.	Site dependent
Relay On	For relays 1 - 8 N - Remains in Reset state. Y - Change to set state.	Relay 1 to 8 - N

Site Parameters Panel

Message Conv Limit	10 - 2550 (seconds)	300
Transmission Conv Limit	10 - 2550 (seconds)	300
Interconnect Hang Time	1 - 255 (seconds)	30
Emergency Hang Time	0 - 255 (seconds)	2
Rotate Assignments	N - Disables automatic WC assignment rotation. Y - Enables automatic WC assignment rotation.	Y
Assign Chan Ascending	N - Assigns channels in descending order. Y - Assigns channels in ascending order.	Y
Recent Call Queue Interval	0 - 30000 (milliseconds)	5000
Max # Concurrent Interconnect	0 - 30 (calls)	2
Max # Concurrent Individual	0 - 30 (calls)	20
Morse Code ID Interval	1 - 30 (seconds)	30
Scramble Data Call Interval	0 - 32767 (seconds), 0 inhibits feature.	5
Activity Dump Threshold	0 - 16383 (records), 0 disables download.	1000
Assign Non-Adjacent Channel	N - Disables feature. Y - Enables feature.	N

EXTERNAL DEVICE DEFINITION (FUNCTION #10) (Continued)

Input Field	Acceptable Values	Default Values
Site Test Parameters Panel		
Power Monitor Unit Enabled	N - Disables PMU. Y - Enables PMU if installed.	Y
PMU Power Level	1 - 255 (watts)	40
Test Unit Enabled	Y - Enables Test Unit N - Disables Test Unit.	Y
Local Test Unit	Local or Remote	Local
Background Test Call Interval	0 - 1440 (minutes), 0 disables test calls.	5
Respond to Carrier Failure	N - Disables feature. Y - Enables feature.	N
Respond to Phone Line Failure	N - Disables feature. Y - Enables feature.	Y
Respond to Auxiliary Alarms	N - Disables feature. Y - Enables feature.	Y
System Manager Communications Parameters Panel		
Device Password	Any 12 Alphanumeric character text. Must match password stored in device memory.	Blank
Device Internal ID	0 - 255, Must match ID stored in device memory.	same as Device Number
Primary Line Phone Number	Any 16 Alphanumeric character text. (phone # to device) 32 spaces	Blank
Primary Line Port Name	Text (VMS device name; LTAx:, TXAx:, etc. where x is the port number)	Blank
Primary Line Baud Rate	1200 Baud 2400 Baud 4800 Baud 9600 Baud 19200 Baud	9600
Message Retry Attempts	0 - 10	3
Dial Retry Attempts	0 - 10	3

EXTERNAL DEVICE DEFINITION (FUNCTION #10) (Continued)

Input Field	Acceptable Values	Default Values
Attach Time Interval	10 - 60 (seconds)	15
Acknowledgment Timeout	5 - 60 (seconds)	5
Disconnect Hang Time	10 - 60 (seconds)	10
Sanity Poll Interval	2 - 60 (seconds)	5
Carrier Timeout	5 - 60 (seconds)	25
Time Source	N - UTC option not available Y - UTC option connected to CEC/IMC.	N

Remote System Manager Parameters

DECNET Node Name	Any 6 Alphanumeric character RSM Name	Blank
Remote Password		"NEVERUSED"
DECNET Address	1 - 63, increment in .1 intervals for each node.	1.0001
Remote System Manager Group	2 - 16383	2

LOGICAL UNIT DEFINITION (FUNCTION #11)

Input Field	Acceptable Values	Default Values
Selected Unit Panel		
Unit Number (LID)	0 - 16383	Blank
Physical ID	0 - 999999999, enter LID if not used - Do not leave blank.	Blank
Unit Type	Portable Mobile Desktop EGE Console Other	Portable
Unit Name	Up to 8 digit alphanumeric character name.	Blank
Serial Number	Up to 16 digit alphanumeric characters.	Blank
Asset Number	Up to 16 digit alphanumeric characters. Enter LID if not used - Do not leave blank.	Blank
Description Panel		
Agency	Up to 16 digit alphanumeric character name.	Blank
Department	Up to 16 digit alphanumeric character name.	Blank
Property Asset	Up to 16 digit alphanumeric character name.	Blank
Operator	Up to 16 digit alphanumeric character name.	Blank
Equipment	Up to 16 digit alphanumeric character name.	Blank
Additional Comments	Up to 40 digit alphanumeric character name.	Blank
Radio Parameters Panel		
Call Priority		
Voice	0 - 7	0
Data	0 - 7	0
Interconnect	0 - 7	0
Digital Voice	0 - 7	0

LOGICAL UNIT DEFINITION (FUNCTION #11) (Continued)

Input Field	Acceptable Values	Default Values
Radio Features		
Inb Interconnect	N - No inbound interconnect calls. Y - Unit allowed to receive inbound interconnect calls.	N
Channel Test	N - Not permitted to operate on test channel. Y - Enables unit to operate on channels assigned to Channel Test partition.	N
Hang Time	0 - 255 (seconds)	0
Interconnect		
Toll Call Restrictions	0 - 15 (dependent on type of interconnect equipment)	0
Dedicated Line	0 - 255 (dependent on type of interconnect equipment). Zero in both Dedicated Line and Rotary fields denies access to telephone interconnect equipment.	1
Rotary Number	0 - 15 (dependent on type of interconnect equipment). Zero in both Dedicated Line and Rotary fields denies access to telephone interconnect equipment.	0
Wide Area Panel		
Wide Area Enable	N - Disables Wide Area Capabilities. Y - Enables Wide Area Capabilities.	N
Home Site	0 - 32	Blank
Home Group	0 - 2047	Blank
Extended Network	N - Disables Extended Network feature Y - Enables Extended Network feature.	N
Automatic Tracking	N - Disables Automatic Tracking feature Y - Enables Automatic Tracking feature.	N
Confirmed Call Enable	N - Calls will be unconfirmed. Y - Enables Confirmed Call feature.	N
Home Switch ID	33 - 64, used when Extended Network is enabled.	Blank

LOGICAL UNIT DEFINITION (FUNCTION #11) (Continued)

Input Field	Acceptable Values	Default Values
Valid Site	Sites 1 to 32. N - Sites not normally used by this unit. Y - Sites unit uses for communication.	All Channels - N
Forced Sites	Sites 1 to 32. N - Disables Forced Site feature. Y - Unconditionally routes calls to site.	All Channels - N
Multiple Channel Partitioning Panel		
MCP Available	No Sites Selective Universal	No Sites
ID Subject to Partitioning	N - Unit not given channel assignments per MCP. Y - Unit assigned channels based on MCP plan.	N
Primary Partition	1 - 9 & A - F (10 - 15 decimal)	1
Backup Partitions		
Condition for Use	Not Used Failed/Busy - All Failed/Busy - Emergency Failed Only	Not Used
MC Partition	1 - 9, A - F (10 - 15 decimal), ALL	Blank
Console Selection Panel (Only when Unit Type = Console)		
EGE Switch Attached To	33 - 64	Blank
Console Number	1 - 32	Blank
Console Type	Maestro C3 Desktop Vendor	Blank

GROUP DEFINITION (FUNCTION #12)

Input Field	Acceptable Values	Default Values
Selected Group Panel		
Group ID (GID)	0 - 2047	Blank
A/F/S	0 - 7 / 0 - 15 / 0 - 15	Blank
Group Name	Up to 8 digit alphanumeric character name.	Blank
Group Type	Agency Fleet Subfleet Patch Simulselect Other	Blank
Description Panel		
Agency	Up to 16 alphanumeric characters.	Blank
Division	Up to 16 alphanumeric characters.	Blank
Address	Up to 16 alphanumeric characters.	Blank
Group Parameters Panel		
Call Priority		
Voice	0 - 7	0
Data	0 - 7	0
Interconnect	0 - 7	0
Digital Voice	0 - 7	0
Features		
Inb Interconnect	N - No inbound interconnect calls. Y - Unit allowed to receive inbound interconnect calls.	N
Channel Test	N - Not permitted to operate on test channel. Y - Enables group to operate on channels assigned to Channel Test partition.	N
Hang Time	0 - 255 (seconds)	0

GROUP DEFINITION (FUNCTION #12) (Continued)

Input Field	Acceptable Values	Default Values
Wide Area Panel		
Wide Area Enable	N - Disables Wide Area Capabilities. Y - Enables Wide Area Capabilities.	N
Automatic Tracking	N - Disables Automatic Tracking feature Y - Enables Automatic Tracking feature.	N
Extended Network	N - Disables Extended Network feature Y - Enables Extended Network feature.	N
Confirmed Call Enable	N - Calls will be unconfirmed. Y - Enables Confirmed Call feature.	N
Home Switch ID	33 - 64, used when Extended Network is enabled.	Blank
Valid Site	Sites 1 to 32. N - Sites not normally used by this group. Y - Sites group uses for communication.	All Channels - N
Forced Sites	Sites 1 to 32. N - Disables Forced Site feature. Y - Unconditionally routes calls to site.	All Channels - N
Multiple Channel Partitioning Panel		
MCP Available	No Sites Selective Universal	No Sites
ID Subject to Partitioning	N - Group not given channel assignments per MCP. Y - Group assigned channels based on MCP plan.	N
Primary Partition	1 - 9, A - F (10 - 15 decimal)	1
Backup Partitions		
Condition for Use	Not Used Failed/Busy - All Failed/Busy - Emergency Failed Only	Not Used
MC Partition	1 - 9, A - F (10 - 15 decimal), ALL	Blank

ROTARY DEFINITION (FUNCTION #13)

Input Field	Acceptable Values	Default Values
Line Selection Panel		
Rotary	For 1 to 15 Rotary hunt sequences. Enter phone line numbers (0 - 255) in desired hunt sequence, up to 16 lines may be selected (selected phone lines must be defined in Line Definition).	0

LINE DEFINITION (FUNCTION #14)

Input Field	Acceptable Values	Default Values
Line Parameters Panel		
Line Active	N - Line not available Y - Line connected to telephone service.	N
Pulse Dial	N - Interface for DTMF digital phone systems Y - Telephone service requires Pulse tone dialing.	N
Dedicated to Unit	0 - 16383, must be valid LID.	0

TOLL CALL RESTRICTIONS (FUNCTION #15)

Input Field	Acceptable Values	Default Values
Toll Call Parameters Panel		
Digit Pattern	0 - 9, *, #, X, space, period	Space
Restriction Level	N - No outbound interconnect calls permitted. Y - Outbound interconnect calls permitted.	N

ACU PARAMETERS (FUNCTION #16)

Input Field	Acceptable Values	Default Values
ACU Parameters Panel		
Alarm Name	Up to 8 Alphanumeric characters	Blank
Enabled	N - Indicates alarm is disabled or not in use. Y - Indicates alarm is enabled for reporting.	Y
Active High	N - Alarm triggered by high to low transition. Y - Alarm triggered by low to high transition.	N
Major	N - Indicates ACU minor alarm. Y - Indicates ACU major alarm.	N

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APPENDIX F - CAD INTERFACE MESSAGE DEFINITION

INTRODUCTION

This appendix supplements Chapter 13, *System Manager Import/Export (SMIX)*. It describes the CAD Interface's functionality on a field-by-field basis.

The protocol functions properly over a variety of RS-232 circuits: hardwire (9600 bps or 19200 bps), dedicated (leased line) modem, or dial-up modem. The SMIX Utility described in Chapter 13 is actually a subset of the EDACS VAX System Manager CAD Interface.

Compatibility

This software subsystem is available with the VAX System Manager software Version 5.00 application package. Prior to this release, a CAD interface system

existed which offered a portion of this system's functionality. Complete backward compatibility with the previous version has been maintained.

Conventions

Abbreviations and shorthand notation used throughout this section is standardized. A Boolean is 1 bit (binary digit). A nibble is 4 bits. Bit and nibble descriptions are listed least significant to most significant. A byte is 8 bits. A word is 16 bits. Lower case letters represent field names, uppercase letters and digits represent actual binary byte values, shown in hexadecimal. As an example, `unit_id` denotes a field called "Unit ID" and FF represents the binary value 11111111, or 255 decimal, or FF hex.

Message CAD/LID Create

			Range of Values	Default
dd	unit_id	(1 word)		0 - 16383
	pid	(2 words)		0 - 9999999999 0
	name[8]	(8 Bytes)	TEXT	8 spaces
	asset[16]	(16 Bytes)	TEXT	16 spaces
	serial[16]	(16 Bytes)	TEXT	16 spaces
	group	(1 Word)		0 - 2047 0
	unit_type	(1 Byte)	0 - NULL	1 - MOBILE 2 - PORTABLE 3 - DESKTOP 4 - EGECONSOLE 5 - CSICONSOLE 6 - AUDIO 7 - OTHER
	console_primary:1;	(1 Byte)	0 - 1	0
	console_secondary:1		0 - 1	0
	spare1:6;		0	0
	agency[16]	(16 Bytes)	TEXT	16 spaces
	dept[16]	(16 Bytes)		TEXT 16 spaces
	property[16]	(16 Bytes)	TEXT	16 spaces
	operator[16]	(16 Bytes)	TEXT	16 spaces
	equip[16]	(16 Bytes)	TEXT	16 spaces
	comments[40]	(40 Bytes)	TEXT	16 spaces
	v_prior:4	(1 Word)	0 - 7	0
	vg_prior:4		0 - 7	0
	d_prior:4		0 - 7	0
	i_prior:4		0 - 7	0
	toll_call:4	(1 Byte)	0 - 15	0
	rotary:4			0 - 15 0
	dedc_line	(1 byte)	0 - 255	1
	hang_time	(1 byte)	0 - 255	0
	valid_sites	(2 words)	0 - 4294967295 (FFFF FFFF hex)	
	ms_forced_sites	(2 words)	0 - 4294967295 (FFFF FFFF hex)	
	ms_home_site	(1 word)	1 - 32	1st SITE
	ms_wide_area:1	(1 Byte)	0 - 1	0 (N)
	ms_track:1		0 - 1	1 (Y)
	inb_inconnect:1		0 - 1	1 (Y)
	sec_partition:1		0 - 1	0 (N)
	icall2_enable:1		0 - 1	1 (Y)
	vg_enable:1		0 - 1	1 (Y)
	ms_confirm:1		0 - 1	0 (N)
	spare_bool:1		0	0

Message CAD/LID Modify

			Range of Values	Default
dd	unit_id	(1 word)	0 - 16383	
	pid	(2 words)	0 - 9999999999	0
	name[8]	(8 Bytes)	TEXT	8 spaces
	asset[16]	(16 Bytes)	TEXT	16 spaces
	serial[16]	(16 Bytes)	TEXT	16 spaces
	group	(1 Word)	0 - 2047	0
	unit_type	(1 Byte)	0 - NULL 1 - MOBILE 2 - PORTABLE 3 - DESKTOP 4 - EGECONSOLE 5 - CSICONSOLE 6 - AUDIO 7 - OTHER	
	console_primary:1;	(1 Byte)	0 - 1	0
	console_secondary:1		0 - 1	0
	spare1:6;		0	0
	agency[16]	(16 Bytes)	TEXT	16 spaces
	dept[16] (16 Bytes)		TEXT	16 spaces
	property[16]	(16 Bytes)	TEXT	16 spaces
	operator[16]	(16 Bytes)	TEXT	16 spaces
	equip[16]	(16 Bytes)	TEXT	16 spaces
	comments[40]	(40 Bytes)	TEXT	16 spaces
	v_prior:4	(1 Word)	0 - 7	0
	vg_prior:4		0 - 7	0
	d_prior:4		0 - 7	0
	i_prior:4			0 - 7 0
	toll_call:4	(1 Byte)	0 - 15	0
	rotary:4		0 - 15	0
	dedc_line	(1 byte)	0 - 255	1
	hang_time	(1 byte)	0 - 255	0
	valid_sites	(2 words)	0 - 4294967295 (FFFF FFFF hex)	
	ms_forced_sites	(2 words)	0 - 4294967295 (FFFF FFFF hex)	
	ms_home_site	(1 word)	1 - 32	1st SITE
	ms_wide_area:1	(1 Byte)	0 - 1	0 (N)
	ms_track:1		0 - 1	1 (Y)
	inb_inconnect:1		0 - 1	1 (Y)
	sec_partition:1		0 - 1	0 (N)
	icall2_enable:1		0 - 1	1 (Y)
	vg_enable:1		0 - 1	1 (Y)
	ms_confirm:1		0 - 1	0 (N)
	spare_bool:1		0	0

Message CAD/GID Create

			Range of Values	Default
dd	group_id	(1 Word)	0 - 2047	
	name[8] (8 Bytes)		TEXT	8 spaces
	group_type	(1 Byte)	1 - AGENCY 2 - FLEET 3 - SUBFLEET 4 - PATCH 5 - SIMULSELECT 6 - OTHER 7 - RESERVED	3
	spare1	(1 byte)	0	0
	agency[16]	(16 bytes)	TEXT	16 spaces
	division[16]	(16 bytes)	TEXT	16 spaces
	address[48]	(48 bytes)	TEXT	48 spaces
	v_prior:4	(1 Word)	0 - 7	0
	vg_prior:4		0 - 7	0
	d_prior:4		0 - 7	0
	i_prior:4			0 - 7 0
	hang_time	(1 byte)	0 - 255	0
	inb_inconnect:1	(1 Byte)	0 - 1	1 (Y)
	sec_partition:1		0 - 1	0 (N)
	ms_track:1		0 - 1	1 (Y)
	ms_wide_area:1		0 - 1	0 (N)
	repeater:1		0 - 1	0 (N)
	confirm:1		0 - 1	0 (N)
	said_group:1		0 - 1	0 (N)
	spare_bool:1		0	0
	valid_sites	(2 words)	0 - 4294967295 (FFFF FFFF hex)	
	ms_forced_sites	(2 words)	0 - 4294967295 (FFFF FFFF hex)	

Message CAD/GID Modify

			Range of Values	Default
dd	group_id	(1 Word)	0 - 2047	
	name[8]	(8 Bytes)	TEXT	8 spaces
	group_type	(1 Byte)	1 - AGENCY 2 - FLEET 3 - SUBFLEET 4 - PATCH 5 - SIMULSELECT 6 - OTHER 7 - RESERVED	3
	spare1	(1 byte)	0	0
	agency[16]	(16 bytes)	TEXT	16 spaces
	division[16]	(16 bytes)	TEXT	16 spaces
	address[48]	(48 bytes)	TEXT	48 spaces
	v_prior:4	(1 Word)	0 - 7	0
	vg_prior:4		0 - 7	0
	d_prior:4		0 - 7	0
	i_prior:4			0 - 7 0
	hang_time	(1 byte)	0 - 255	0
	inb_inconnect:1	(1 Byte)	0 - 1	1 (Y)
	sec_partition:1		0 - 1	0 (N)
	ms_track:1		0 - 1	1 (Y)
	ms_wide_area:1		0 - 1	0 (N)
	repeater:1		0 - 1	0 (N)
	confirm:1		0 - 1	0 (N)
	said_group:1		0 - 1	0 (N)
	spare_bool:1		0	0
	valid_sites	(2 words)	0 - 4294967295 (FFFF FFFF hex)	
	ms_forced_sites	(2 words)	0 - 4294967295 (FFFF FFFF hex)	

Message CAD/ - External Device Create

			Range of Values	Default
dd	devno	(1 Word)	1 - 64	
	devname[8]	(8 Bytes)	TEXT	8 spaces
	dev_type	(1 Word)	48 - NULL 49 - SITE 50 - MSC 51 - CAD 52 - GESW 53 - RSM 54 - CSI	
	password	(12 Bytes)	TEXT	padded w/ spaces
	smphone[32]	(32 Bytes)	TEXT	32 spaces
	retries	(1 Word)	0 - 10	3
	dial_retries	(1 Word)	0 - 10	3
	attach_time	(1 Word)	10 - 60	15
	ack_time	(1 Word)	5 - 60	5
	site_hang_time	(1 Word)	10 - 60	10
	sanity_time	(1 Word)	2 - 60	5
	dial_time	(1 Word)	5 - 60	60
	line[0].phone	(32 Bytes)	TEXT (phone # to device)	32 spaces
	line[0].name	(10 Bytes)	TEXT (VMS device name; LTAx:, TXAx:, etc. where x is the port number)	
	line[0].speed	(1 Word)	8 - 1200 Baud 11 - 2400 Baud 13 - 4800 Baud 15 - 9600 Baud 16 - 19200 Baud	15
	line[1].phone	(32 Bytes)	TEXT (not currently used)	32 spaces
	line[1].name	(10 Bytes)	TEXT (not currently used)	10 spaces
	line[1].speed	(1 Word)	8 - 1200 Baud 11 - 2400 Baud 13 - 4800 Baud 14 - 7200 Baud 15 - 9600 Baud 16 - 19200 Baud	14
	cc	(1 Byte)	1 - 24	2
	internal_id	(1 Byte)	0 - 255	same as devno
	rf	(2 Words)	0 - 4294967295 (FFFF FFFF hex)	
	modem	(2 Words)	0 - 4294967295 (FFFF FFFF hex)	
	ric	(2 Words)	0 - 4294967295 (FFFF FFFF hex)	
	voice_guard	(2 Words)	0 - 4294967295 (FFFF FFFF hex)	
	data	(2 Words)	0 - 4294967295 (FFFF FFFF hex)	
	test	(2 Words)	0 - 4294967295 (FFFF FFFF hex)	
	dl_ports	(2 Words)	0 - 4294967295 (FFFF FFFF hex)	
	allowed_cc	(2 Words)	0 - 4294967295 (FFFF FFFF hex)	
	wide_area	(2 Words)	0 - 4294967295 (FFFF FFFF hex)	
	pmu	(2 Words)	0 - 4294967295 (FFFF FFFF hex)	
	conv_trans	(1 Byte)	1 - 255 (10 second intervals)	30
	conv_msg	(1 Byte)	1 - 255 (10 second intervals)	30

incnt_hang	(1 Byte)	1 - 255	30
emergency_hang	(1 Byte)	0 - 255	2
morse_int	(1 Byte)	1 - 30	30
relay	(1 Byte)	0 - 255	0
back_test_int	(1 Word)	1 - 255	5
scramble_int	(1 Word)	0 - 32767	5
recent_q_int	(1 Word)	0 - 30000	5000
activ_dmp	(1 Word)	0 - 16383	1000
max_incnt	(1 Byte)	0 - 30	2
max_indiv	(1 Byte)	0 - 30	20
pmu_power_level	(1 Byte)	1 - 255	40
getc_fail	(1 Byte)	1 - 255	2
getc_recover	(1 Byte)	1 - 255	4
getc_rec_mod	(1 Byte)	1 - 255	6
tu_fail	(1 Byte)	1 - 255	2
tu_recover	(1 Byte)	1 - 255	4
ric_fail	(1 Byte)	1 - 255	2
ric_recover	(1 Byte)	1 - 255	4
lic_fail	(1 Byte)	1 - 255	2
lid_recover	(1 Byte)	1 - 255	4
voter_delay	(1 Byte)	0,1,2,3,6	0
spare_byte	(1 Byte)	0	0
rotate_assign:1	(4 Bytes)	0 - 1	1 (Y)
assign_assend:1		0 - 1	0 (N)
tu_local:1		0 - 1	1 (Y)
pmu_on:1		0 - 1	1 (Y)
rpt_carrier_fail:1		0 - 1	0 (N)
rpt_phone_fail:1		0 - 1	1 (Y)
rpt_aux_alarms:1		0 - 1	1 (Y)
rpt_fsl_fail:1		0 - 1	0 (N)
assign_900mhz:1		0 - 1	0 (N)
billing_900mhz:1		0 - 1	0 (N)
console_preempt:1		0 - 1	0 (N)
queue_data:1		0 - 1	0 (N)
tu_on:1		0 - 1	1 (Y)
said_allocated:1		0 - 1	0 (N)
spare_bool:18		0	0
mcp.partition[0].num1	(4 Bits)	0 - 15 (chan 0)	0
mcp.partition[0].num2	(4 Bits)	0 - 15 (chan 1)	0
mcp.partition[1].num1	(4 Bits)	0 - 15 (chan 2)	1
mcp.partition[1].num2	(4 Bits)	0 - 15 (chan 3)	0
mcp.partition[2].num1	(4 Bits)	0 - 15 (chan 4)	1
mcp.partition[2].num2	(4 Bits)	0 - 15 (chan 5)	0
mcp.partition[3].num1	(4 Bits)	0 - 15 (chan 6)	1
mcp.partition[3].num2	(4 Bits)	0 - 15 (chan 7)	0
mcp.partition[4].num1	(4 Bits)	0 - 15 (chan 8)	1
mcp.partition[4].num2	(4 Bits)	0 - 15 (chan 9)	0
mcp.partition[5].num1	(4 Bits)	0 - 15 (chan 10)	1
mcp.partition[5].num2	(4 Bits)	0 - 15 (chan 11)	0
mcp.partition[6].num1	(4 Bits)	0 - 15 (chan 12)	1
mcp.partition[6].num2	(4 Bits)	0 - 15 (chan 13)	0
mcp.partition[7].num1	(4 Bits)	0 - 15 (chan 14)	1
mcp.partition[7].num2	(4 Bits)	0 - 15 (chan 15)	0
mcp.partition[8].num1	(4 Bits)	0 - 15 (chan 16)	1

mcp.partition[8].num2	(4 Bits)	0 - 15 (chan 17)	0
mcp.partition[9].num1	(4 Bits)	0 - 15 (chan 18)	1
mcp.partition[9].num2	(4 Bits)	0 - 15 (chan 19)	0
mcp.partition[10].num1	(4 Bits)	0 - 15 (chan 20)	1
mcp.partition[10].num2	(4 Bits)	0 - 15 (chan 21)	0
mcp.partition[11].num1	(4 Bits)	0 - 15 (chan 22)	1
mcp.partition[11].num2	(4 Bits)	0 - 15 (chan 23)	0
mcp.partition[12].num1	(4 Bits)	0 - 15 (chan 24)	1
mcp.partition[12].num2	(4 Bits)	0 - 15 (chan 25)	0
mcp.partition[13].num1	(4 Bits)	0 - 15 (chan 26)	0
mcp.partition[13].num2	(4 Bits)	0 - 15 (chan 27)	0
mcp.partition[14].num1	(4 Bits)	0 - 15 (chan 28)	0
mcp.partition[14].num2	(4 Bits)	0 - 15 (chan 29)	0
mcp.partition[15].num1	(4 Bits)	0 - 15 (chan 30)	0
mcp.partition[15].num2	(4 Bits)	0 - 15 (chan 31)	0
addr.decnet_area	(1 Byte)	0 - 63	1
addr.decnet_node	(1 Word)	0 - 1023	1
remote_sm_node_name[10]	(10 Bytes)	TEXT	10 spaces
remote_sm_uic_group	(1 Word)	2 - 16383	2
spare_byte1	(1 Byte)	0	0
spare_data[2]	(4 Words)	0	0

-

Message CAD/ - External Device Modify

			Range of Values	Default
dd	devno	(1 Word)	1 - 64	
	devname[8]	(8 Bytes)	TEXT	8 spaces
	dev_type	(1 Word)	48 - NULL 49 - SITE 50 - MSC 51 - CAD 52 - GESW 53 - RSM 54 - CSI	
	password	(12 Bytes)	TEXT	padded w/ spaces
	smphone[32]	(32 Bytes)	TEXT	32 spaces
	retries	(1 Word)	0 - 10	3
	dial_retries	(1 Word)	0 - 10	3
	attach_time	(1 Word)	10 - 60	15
	ack_time	(1 Word)	5 - 60	5
	site_hang_time	(1 Word)	10 - 60	10
	sanity_time	(1 Word)	2 - 60	5
	dial_time	(1 Word)	5 - 60	60
	line[0].phone	(32 Bytes)	TEXT (phone # to device)	32 spaces
	line[0].name	(10 Bytes)	TEXT (VMS device name; LTAx:, TXAx:, etc. where x is the port number)	
	line[0].speed	(1 Word)	8 - 1200 Baud 11 - 2400 Baud 13 - 4800 Baud 15 - 9600 Baud 16 - 19200 Baud	15
	line[1].phone	(32 Bytes)	TEXT (not currently used)	32 spaces
	line[1].name	(10 Bytes)	TEXT (not currently used)	10 spaces
	line[1].speed	(1 Word)	8 - 1200 Baud 11 - 2400 Baud 13 - 4800 Baud 14 - 7200 Baud 15 - 9600 Baud 16 - 19200 Baud	14
	cc	(1 Byte)	1 - 24	2
	internal_id	(1 Byte)	0 - 255	same as devno
	rf	(2 Words)	0 - 4294967295 (FFFF FFFF hex)	
	modem	(2 Words)	0 - 4294967295 (FFFF FFFF hex)	
	ric	(2 Words)	0 - 4294967295 (FFFF FFFF hex)	
	voice_guard	(2 Words)	0 - 4294967295 (FFFF FFFF hex)	
	data	(2 Words)	0 - 4294967295 (FFFF FFFF hex)	
	test	(2 Words)	0 - 4294967295 (FFFF FFFF hex)	
	dl_ports	(2 Words)	0 - 4294967295 (FFFF FFFF hex)	
	allowed_cc	(2 Words)	0 - 4294967295 (FFFF FFFF hex)	
	wide_area	(2 Words)	0 - 4294967295 (FFFF FFFF hex)	
	pmu	(2 Words)	0 - 4294967295 (FFFF FFFF hex)	
	conv_trans	(1 Byte)	1 - 255 (10 second intervals)	30
	conv_msg	(1 Byte)	1 - 255 (10 second intervals)	30

incnt_hang	(1 Byte)	1 - 255	30
emergency_hang	(1 Byte)	0 - 255	2
morse_int	(1 Byte)	1 - 30	30
relay	(1 Byte)	0 - 255	0
back_test_int	(1 Word)	1 - 255	5
scramble_int	(1 Word)	0 - 32767	5
recent_q_int	(1 Word)	0 - 30000	5000
activ_dmp	(1 Word)	0 - 16383	1000
max_incnt	(1 Byte)	0 - 30	2
max_indiv	(1 Byte)	0 - 30	20
pmu_power_level	(1 Byte)	1 - 255	40
getc_fail	(1 Byte)	1 - 255	2
getc_recover	(1 Byte)	1 - 255	4
getc_rec_mod	(1 Byte)	1 - 255	6
tu_fail	(1 Byte)	1 - 255	2
tu_recover	(1 Byte)	1 - 255	4
ric_fail	(1 Byte)	1 - 255	2
ric_recover	(1 Byte)	1 - 255	4
lic_fail	(1 Byte)	1 - 255	2
lid_recover	(1 Byte)	1 - 255	4
voter_delay	(1 Byte)	0,1,2,3,6	0
spare_byte	(1 Byte)	0	0
rotate_assign:1	(4 Bytes)	0 - 1	1 (Y)
assign_assend:1		0 - 1	0 (N)
tu_local:1		0 - 1	1 (Y)
pmu_on:1		0 - 1	1 (Y)
rpt_carrier_fail:1		0 - 1	0 (N)
rpt_phone_fail:1		0 - 1	1 (Y)
rpt_aux_alarms:1		0 - 1	1 (Y)
rpt_fsl_fail:1		0 - 1	0 (N)
assign_900mhz:1		0 - 1	0 (N)
billing_900mhz:1		0 - 1	0 (N)
console_preempt:1		0 - 1	0 (N)
queue_data:1		0 - 1	0 (N)
tu_on:1		0 - 1	1 (Y)
said_allocated:1		0 - 1	0 (N)
spare_bool:18		0	0
mcp.partition[0].num1	(4 Bits)	0 - 15 (chan 0)	0
mcp.partition[0].num2	(4 Bits)	0 - 15 (chan 1)	0
mcp.partition[1].num1	(4 Bits)	0 - 15 (chan 2)	1
mcp.partition[1].num2	(4 Bits)	0 - 15 (chan 3)	0
mcp.partition[2].num1	(4 Bits)	0 - 15 (chan 4)	1
mcp.partition[2].num2	(4 Bits)	0 - 15 (chan 5)	0
mcp.partition[3].num1	(4 Bits)	0 - 15 (chan 6)	1
mcp.partition[3].num2	(4 Bits)	0 - 15 (chan 7)	0
mcp.partition[4].num1	(4 Bits)	0 - 15 (chan 8)	1
mcp.partition[4].num2	(4 Bits)	0 - 15 (chan 9)	0
mcp.partition[5].num1	(4 Bits)	0 - 15 (chan 10)	1
mcp.partition[5].num2	(4 Bits)	0 - 15 (chan 11)	0
mcp.partition[6].num1	(4 Bits)	0 - 15 (chan 12)	1
mcp.partition[6].num2	(4 Bits)	0 - 15 (chan 13)	0
mcp.partition[7].num1	(4 Bits)	0 - 15 (chan 14)	1
mcp.partition[7].num2	(4 Bits)	0 - 15 (chan 15)	0
mcp.partition[8].num1	(4 Bits)	0 - 15 (chan 16)	1

mcp.partition[8].num2	(4 Bits)	0 - 15 (chan 17)	0	
mcp.partition[9].num1	(4 Bits)	0 - 15 (chan 18)	1	
mcp.partition[9].num2	(4 Bits)	0 - 15 (chan 19)	0	
mcp.partition[10].num1	(4 Bits)	0 - 15 (chan 20)	1	
mcp.partition[10].num2	(4 Bits)	0 - 15 (chan 21)	0	
mcp.partition[11].num1	(4 Bits)	0 - 15 (chan 22)	1	
mcp.partition[11].num2	(4 Bits)	0 - 15 (chan 23)	0	
mcp.partition[12].num1	(4 Bits)	0 - 15 (chan 24)	1	
mcp.partition[12].num2	(4 Bits)	0 - 15 (chan 25)	0	
mcp.partition[13].num1	(4 Bits)	0 - 15 (chan 26)	0	
mcp.partition[13].num2	(4 Bits)	0 - 15 (chan 27)	0	
mcp.partition[14].num1	(4 Bits)	0 - 15 (chan 28)	0	
mcp.partition[14].num2	(4 Bits)	0 - 15 (chan 29)	0	
mcp.partition[15].num1	(4 Bits)	0 - 15 (chan 30)	0	
mcp.partition[15].num2	(4 Bits)	0 - 15 (chan 31)	0	
addr.decnet_area	(1 Byte)	0 - 63		1
addr.decnet_node	(1 Word)	0 - 1023		1
remote_sm_node_name[10]	(10 Bytes)	TEXT		10 spaces
remote_sm_uic_group	(1 Word)	2 - 16383		2
spare_byte1	(1 Byte)	0		0
spare_data[2]	(4 Words)	0		0

Message CAD/ - Initiate full database upload

This message is used to initiate a full LID and GID database upload to all sites and devices on the System Manager except the CAD system.

Message CAD/ - Request for an upload of all logical ID records.

This message is used to request an upload of the entire logical ID database from the System Manager to the CAD system only.

Message CAD/ - Request for an upload of all group ID records.

This message is used to request an upload of the entire group ID database from the System Manager.

Message CAD/ - Request for an upload of all external device ID records.

This message is used to request an upload of the entire external device ID database from the System Manager.

SYSTEM MANAGER TO CAD MESSAGES**Message SM/ - Logical ID record (all)**

Message SM/ is used to upload the complete logical ID database. Completion of the upload is signaled by sending a message with a logical ID of 65535 (all bits set).

dd Reference the data structure described in the CAD logical create message.

Message SM/ - Group ID record (all)

Message SM/ is used to upload the complete group ID database. Completion of the upload is signaled by sending a message with a group ID of 65535 (all bits set).

dd Reference the data structure described in the CAD group create message.

Message SM/ - External Device ID record (Individual)

Message SM/ is in response to an External Device ID upload request from the CAD device.

			Range of Values	Default
dd	devno	(1 Word)	1 - 64	
	devname[8]	(8 Bytes)	TEXT	8 spaces
	dev_type	(1 Word)	48 - NULL	
			49 - SITE	
			50 - MSC	
			51 - CAD	
			52 - GESW	
			53 - RSM	
			54 - CSI	
	password	(12 Bytes)	TEXT	padded w/ spaces
	smphone[32]	(32 Bytes)	TEXT	32 spaces
	retries	(1 Word)	0 - 10	3
	dial_retries	(1 Word)	0 - 10	3
	attach_time	(1 Word)	10 - 60	15
	ack_time	(1 Word)	5 - 60	5
	site_hang_time	(1 Word)	10 - 60	10
	sanity_time	(1 Word)	2 - 60	5
	dial_time	(1 Word)	5 - 60	60
	line[0].phone	(32 Bytes)	TEXT (phone # to device)	32 spaces
	line[0].name	(10 Bytes)	TEXT (VMS device name; LTAx:, TXAx:, etc. where x is the port number)	
	line[0].speed	(1 Word)	8 - 1200 Baud	15
			11 - 2400 Baud	
			13 - 4800 Baud	
			15 - 9600 Baud	
			16 - 19200 Baud	
	line[1].phone	(32 Bytes)	TEXT (not currently used)	32 spaces
	line[1].name	(10 Bytes)	TEXT (not currently used)	10 spaces
	line[1].speed	(1 Word)	8 - 1200 Baud	14
			11 - 2400 Baud	
			13 - 4800 Baud	
			14 - 7200 Baud	
			15 - 9600 Baud	
			16 - 19200 Baud	
cc	internal_id	(1 Byte)	1 - 24	2
	rf	(1 Byte)	0 - 255	same as devno
	rf	(2 Words)	0 - 4294967295 (FFFF FFFF hex)	
	modem	(2 Words)	0 - 4294967295 (FFFF FFFF hex)	
	ric	(2 Words)	0 - 4294967295 (FFFF FFFF hex)	
	voice_guard	(2 Words)	0 - 4294967295 (FFFF FFFF hex)	
	data	(2 Words)	0 - 4294967295 (FFFF FFFF hex)	
	test	(2 Words)	0 - 4294967295 (FFFF FFFF hex)	
	dl_ports	(2 Words)	0 - 4294967295 (FFFF FFFF hex)	
	allowed_cc	(2 Words)	0 - 4294967295 (FFFF FFFF hex)	
	wide_area	(2 Words)	0 - 4294967295 (FFFF FFFF hex)	
	pmu	(2 Words)	0 - 4294967295 (FFFF FFFF hex)	
	conv_trans	(1 Byte)	1 - 255 (10 second intervals)	30
	conv_msg	(1 Byte)	1 - 255 (10 second intervals)	30

incnt_hang	(1 Byte)	1 - 255	30
emergency_hang	(1 Byte)	0 - 255	2
morse_int	(1 Byte)	1 - 30	30
relay	(1 Byte)	0 - 255	0
back_test_int	(1 Word)	1 - 255	5
scramble_int	(1 Word)	0 - 32767	5
recent_q_int	(1 Word)	0 - 30000	5000
activ_dmp	(1 Word)	0 - 16383	1000
max_incnt	(1 Byte)	0 - 30	2
max_indiv	(1 Byte)	0 - 30	20
pmu_power_level	(1 Byte)	1 - 255	40
getc_fail	(1 Byte)	1 - 255	2
getc_recover	(1 Byte)	1 - 255	4
getc_rec_mod	(1 Byte)	1 - 255	6
tu_fail	(1 Byte)	1 - 255	2
tu_recover	(1 Byte)	1 - 255	4
ric_fail	(1 Byte)	1 - 255	2
ric_recover	(1 Byte)	1 - 255	4
lic_fail	(1 Byte)	1 - 255	2
lid_recover	(1 Byte)	1 - 255	4
voter_delay	(1 Byte)	0,1,2,3,6	0
spare_byte	(1 Byte)	0	0
rotate_assign:1	(4 Bytes)	0 - 1	1 (Y)
assign_assend:1		0 - 1	0 (N)
tu_local:1		0 - 1	1 (Y)
pmu_on:1		0 - 1	1 (Y)
rpt_carrier_fail:1		0 - 1	0 (N)
rpt_phone_fail:1		0 - 1	1 (Y)
rpt_aux_alarms:1		0 - 1	1 (Y)
rpt_fsl_fail:1		0 - 1	0 (N)
assign_900mhz:1		0 - 1	0 (N)
billing_900mhz:1		0 - 1	0 (N)
console_preempt:1		0 - 1	0 (N)
queue_data:1		0 - 1	0 (N)
tu_on:1		0 - 1	1 (Y)
said_allocated:1		0 - 1	0 (N)
spare_bool:18		0	0
mcp.partition[0].num1	(4 Bits)	0 - 15 (chan 0)	0
mcp.partition[0].num2	(4 Bits)	0 - 15 (chan 1)	0
mcp.partition[1].num1	(4 Bits)	0 - 15 (chan 2)	1
mcp.partition[1].num2	(4 Bits)	0 - 15 (chan 3)	0
mcp.partition[2].num1	(4 Bits)	0 - 15 (chan 4)	1
mcp.partition[2].num2	(4 Bits)	0 - 15 (chan 5)	0
mcp.partition[3].num1	(4 Bits)	0 - 15 (chan 6)	1
mcp.partition[3].num2	(4 Bits)	0 - 15 (chan 7)	0
mcp.partition[4].num1	(4 Bits)	0 - 15 (chan 8)	1
mcp.partition[4].num2	(4 Bits)	0 - 15 (chan 9)	0
mcp.partition[5].num1	(4 Bits)	0 - 15 (chan 10)	1
mcp.partition[5].num2	(4 Bits)	0 - 15 (chan 11)	0
mcp.partition[6].num1	(4 Bits)	0 - 15 (chan 12)	1
mcp.partition[6].num2	(4 Bits)	0 - 15 (chan 13)	0
mcp.partition[7].num1	(4 Bits)	0 - 15 (chan 14)	1
mcp.partition[7].num2	(4 Bits)	0 - 15 (chan 15)	0
mcp.partition[8].num1	(4 Bits)	0 - 15 (chan 16)	1

mcp.partition[8].num2	(4 Bits)	0 - 15 (chan 17)	0
mcp.partition[9].num1	(4 Bits)	0 - 15 (chan 18)	1
mcp.partition[9].num2	(4 Bits)	0 - 15 (chan 19)	0
mcp.partition[10].num1	(4 Bits)	0 - 15 (chan 20)	1
mcp.partition[10].num2	(4 Bits)	0 - 15 (chan 21)	0
mcp.partition[11].num1	(4 Bits)	0 - 15 (chan 22)	1
mcp.partition[11].num2	(4 Bits)	0 - 15 (chan 23)	0
mcp.partition[12].num1	(4 Bits)	0 - 15 (chan 24)	1
mcp.partition[12].num2	(4 Bits)	0 - 15 (chan 25)	0
mcp.partition[13].num1	(4 Bits)	0 - 15 (chan 26)	0
mcp.partition[13].num2	(4 Bits)	0 - 15 (chan 27)	0
mcp.partition[14].num1	(4 Bits)	0 - 15 (chan 28)	0
mcp.partition[14].num2	(4 Bits)	0 - 15 (chan 29)	0
mcp.partition[15].num1	(4 Bits)	0 - 15 (chan 30)	0
mcp.partition[15].num2	(4 Bits)	0 - 15 (chan 31)	0
addr.decnet_area	(1 Byte)	0 - 63	1
addr.decnet_node	(1 Word)	0 - 1023	1
remote_sm_node_name[10] (10 Bytes)		TEXT	10 spaces
remote_sm_uic_group	(1 Word)	2 - 16383	2
spare_byte1	(1 Byte)	0	0
spare_data[2]	(4 Words)	0	0

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APPENDIX G - GLOSSARY

ACU	Alarm and Control Unit, monitors up to 32 user defined alarm inputs, provides up to 8 control relay outputs and displays the status of up to 56 site parameters. Interfaces with the Site Controller.
Aegis™	Aegis™ is Ericsson GE's voice scrambling system that employs advanced Digital Signal Processing (DSP) circuitry. Aegis has two primary modes – "Aegis digital" and "Aegis private". Aegis digital mode offers improved weak signal performance and impedance to unauthorized monitoring. Aegis digital transmissions <u>are not</u> encrypted. Aegis private mode also offers improved weak signal performance. In addition, since Aegis private transmissions <u>are</u> encrypted, Aegis private mode provides very secure communications against unauthorized monitoring.
Agency	"First level of organization in the hierarchy of EDACS." Usually represents an entire organization as in Police or the Fire Department, or a complete set of organizations, such as an Agency for a city.
Agency Call	A type of group call, which when placed on an Agency-level group ID, will bring together all radios set to <u>any</u> fleet or subfleet group of that Agency.
All Call	A broadcast call made to all radio units on one radio site. See also "System All Call."
Alphanumeric Fields	Accepts all characters (symbols, numbers, and characters) available on the keyboard.
Analog Voice	<ol style="list-style-type: none">1. A normal FM voice communication made over a EDACS system.2. A non-digital voice signal.
Automatic Login	A "Login" message that is automatically transmitted from a radio unit when the radio roams into a new system, changes the group selector, or when the radio is turned on. The "Login" message includes the LID and GID for the selected radio. The radio must be programmed to login automatically.
BCU	Billing Correlation Unit. The BCU generates call detail records to be transferred to an external billing system for invoice generation.
C3 Maestro	The C3 Maestro is the CRT-type console that is designed to take advantage of the advanced features of EDACS. It consists of a specialized audio "tower" and an IBM PC compatible computer running custom software developed by Ericsson GE.
CAL	The Centralized Activity Logger , Interfaces with the CEC/IMC and System Manager to allow users to remotely monitor real-time activity information from systems without a Site Controller, such as, Basic EDACS, SCAT, and CNI.
Call Queuing	When all channels on the system are busy, the call request is held in a First-In First-Out (FIFO) queue. The caller and all members of his group are notified that a call request has been queued. Upon channel assignment, the caller is alerted and is allowed to proceed with push-to-talk (PTT).

Callee	The party to whom the call is placed, i.e. an individual or group of radios
Caller	The originating party of the call request, i.e. an individual radio.
CEC	The C onsole E lectronics C ontroller is an advanced radio communications controller incorporating time division multiplex digital audio switching technology. The CEC connects dispatch consoles to EDACS and conventional systems.
CEC/IMC Manager	The CEC/IMC Manager (formerly referred to as the "MOM PC") provides CEC/IMC switch monitoring and configuration functions. This IBM PC compatible computer running custom software developed by Ericsson GE is the window into the CEC/IMC switch for the system administrator and service technicians.
Centralized Telephone Interconnect System (CTIS)	The CTIS provides Public Switch Telephone Network (PSTN) access to individuals and groups operating within an EDACS multisite network. The CTIS connects directly to the CEC/IMC. The CTIS operates with all trunked systems including Basic EDACS, SCAT, and CNI. Note: this product has been superseded by Jessica
Channel Access Time	The time duration between activation of a caller's PTT and the unmuting of the callee's radio(s). Fast access time is one measure of system efficiency.
Channel Drop Time	The time duration between radio unkey and when it is actually available for another call. Fast drop time is another measure of system efficiency.
Channel Number	Defines the last channel number in a channel-number range that is to be included in a System Manager report.
CNI	Conventional Network Interface – A conventional base station can be connected to the CEC/IMC switch via a CNI. The CNI is formed by a GETC shelf located at the conventional station that makes the station appear to a MIM as an EDACS site. In the CNI system, different Channel Guard tones are assigned to different talk groups.
Confirmed Call	The confirmed call function ensures all EDACS radio systems being called have working channels available before the caller is given a channel access (talk permit) tone. This function can be disabled on a per system/group basis.
Control Channel	The repeater channel on which system control information is continually transmitted and channel request/status information is received from the field radio units. Any one EDACS repeater channel may serve as the control channel. The field radios monitor the control channel when not on an active working channel.
Control Channel GETC	A Control Channel GETC is a Station GETC that is at the moment acting as a Control Channel.
Controller	The 32-port computer housed in the EDACS Site Controller cabinet and responsible for directing the Full Featured Trunking at the site.
Controller Application Software	The Site Controller Application Software is the programming instructions read from the Controller's Application Software PROMs. It is used by the Controller to control the operation of the site.

Controller's Personality PROMs	The Controller's Personality PROMs contain certain information about the specific site where the Controller is located, such as Site ID, equipment available at the site, validation tables by feature and priority for each Logical (individual) ID and Group ID, etc.
Cursor	An indicator that shows your current position on the screen.
cursor keys	The cursor keys, normally on the right hand side of the keyboard, are marked with arrows (←, ↑, ↓, →). They are used to control the movement of the cursor.
Date Fields	Accepts dates in the format dd-mmm-yyyy, where: dd = numeric day of the month mmm = first three letters of the month yyyy = four digits of the year. Example: 01-AUG-1993
DEC	Digital Equipment Corporation
default value	The software provides predetermined or default values in a majority of the data entry fields within the program. The default values assume that the program will be used without optional features. Before changing these default values, we recommend that you be familiar with the operational implications of adding a particular feature or option.
distributed multisite	Two or more IMC networks can be linked together for distributed multisite communication. Audio and control data is transferred between the different IMC networks via a NIM at each IMC. (Also see StarGate Controller.)
Downlink GETC	A Downlink GETC is the GETC that is connected to the Downlink to the multisite/console switch. The Downlink GETC provides the communications interface between the Downlink and the Site Controller (or between the Downlink and the Failsoft Data Link to the Station GETCs in the event of a controller failure or lack of a controller).
Download	The process of receiving information from the Site Controller.
Duration	The end time in seconds of an activity duration used with System Manager reports.
Dynamic Regrouping	Over-The-Air-Programming of field radio units. Up to eight talk groups can be added to a radio unit while the radio unit is active in the field. Optionally, field units can be forced to communicate on designated talk groups. Field units are reprogrammed at a maximum rate of 30 units/second.
EDACS	Enhanced Digital Access Communications System. A system which meets the needs of Public Service, Industrial, Commercial, and Utility markets World-Wide.
EDACS radio system	Enhanced Digital Access Communication System radio system – The term "EDACS radio system" refers to RF equipment that may be interfaced to the EDACS CEC/IMC switch. The RF equipment may be located at a single location, such as an EDACS site or it may be located at several locations, such as in a voting system. Other examples of EDACS radio systems include simulcast, CNI, and SCAT systems.

EDACS Site Controller	The EDACS Site Controller is all that standard and optional equipment housed in the single cabinet that houses the Controller (computer).
EDG	EDACS Data Gateway , a controller which allows mobile data terminals to communicate with stationary host computer equipment and other mobile data terminals through the EDACS trunked radio communications system.
Emergency Call	A group call placed over an EDACS system that uses special signaling and gives the caller the highest communications priority.
Failsoft	Failsoft refers to the mode of operation of the trunked system when the Site Controller is not operational.
Failsoft Repeater	An EDACS site repeater consisting of a MASTR II, IIe, or III repeater station and a GETC. The Failsoft repeater operates as a Control Channel or a Working Channel.
Failsoft Trunking	Failsoft Trunking is an EDACS design feature that puts the Control Channel GETC in charge of basic trunking even if the Site Controller(s) fail.
Field	Field refers to the area of the screen which allows data entry. This area is readily identifiable by a reverse video bar when moving the cursor across the screen.
Fleet	The second layer in the organization hierarchy of EDACS - a predefined collection of subfleets.
Fleet Call	A call to all subfleets of the fleet on which the call is made. For example, a "patrol" fleet call would call all north, south, and central patrols if they were subfleets under the patrol fleet.
GETC	Ericsson General Electric Trunking Card – The GETC is a microprocessor-controlled shelf that can be configured to perform many different signal processing tasks for Ericsson GE radio communications equipment. For specific configurations, see: Station GETC Control Channel GETC Working Channel GETC Downlink GETC Redundant Downlink GETC
GID	See Group ID, GID.
Group (Talk Group)	<ol style="list-style-type: none">1. A collection of radio users with a common communications requirement.2. Radio users that are assigned a common group identification number on a EDACS system.
Group Call	When a caller places a call within a group, the system signals to collect all members onto the same working channel. A group call can be placed on the agency, fleet, or subfleet level. All radios in the group can hear the call. Group calls can be telephone originated.
Group ID, GID	A number used by the system to identify a communications group.

Home Group	<ol style="list-style-type: none">1. A default communications group assigned to the radio unit.2. The communications group programmed into a radio or used by the radio when power is first applied.3. The communications group programmed into the radio unit that is used when the HOME key is pressed or when the radio unit declares an emergency.
Identification (ID)	A number associated with a field radio (unit ID) that uniquely identifies the radio. This number, referred to as the Logical ID, is automatically sent anytime the radio transmits. The ID may also refer to a group number, or group ID, which uniquely identifies the talk group in the system.
IMC	Integrated Multisite and Console Controller – The Ericsson GE IMC is a Digital Audio Switch that routes audio/mobile data/Aegis data between EDACS radio systems and dispatch consoles. It is a second generation multisite controller plus a console controller for the C3 series consoles.
Individual Call	A private call on EDACS from one radio to another radio unit (or dispatcher and field radio unit). This call is made possible since all radios have a unique unit ID number. The system assigns a working channel to the caller and callee. A telephone originated interconnect call is a type of individual call.
Individual Data Call	A data call placed to a specific radio unit.
Intercon Voice Guard	A telephone interconnect call placed with a radio unit that is using Voice Guard transmissions.
Interconnect	A type of call that involves the telephone system and the radio system.
Key of reference	<ol style="list-style-type: none">1. The data field (key) the System Manager uses to search through a file.2. The field that must be entered to retrieve a data record from the System Manager database.
Late Entry	If a radio is powered up while its talk group has a call in progress on a working channel, the radio will “Late Enter” into the call even though it missed the original channel assignment. This is achieved through the assignment updates the control channel continually transmits. A radio may “Late Enter” if the radio is turned on, passes through a coverage null, or changes talk groups.
LID	See Logical ID, LID
Logical ID, LID	A number used by the system to identify a radio unit. EDACS uses a 16,384 Individual (Logical) Address scheme. The system reserves ID “0” and ID “16,383.” Each radio is assigned a unique Logical ID ranging from 1 - 16,382.
Menu	A program screen that lists processing choices available to the user.
Message Trunking	A message trunked call, once assigned a working channel, will keep the channel assigned for the duration of the conversation. Keeping the working channel assigned is accomplished by putting a hang time on the repeater for several seconds, users will retain the channel as long as they rekey before the hang time expires.

MOM	MO nitor MO dule – The MOM is a CEC/IMC interface module that provides serial data connections for the CEC/IMC Manager (MOM PC) and the System Manager computers.
MOM PC	(see CEC/IMC Manager)
multisite	A multisite is a network of multiple EDACS radio systems and possibly conventional radio systems all linked together for wide-area communication. In a multisite network, adjacent systems do not use the same radio frequencies.
Network	An intelligent Wide Area Network links systems. Users may roam from one system to another while the network controller, either a MSC or CEC/IMC, automatically tracks location and status.
Numeric Fields	Accepts all whole number (0 thru 9) numeric entries. Fractions or negative numbers are not allowed.
Password	<ol style="list-style-type: none">1. A 12-character word which authorizes the user to access the System Manager.2. A 12-character word which allows a Site/Device to communicate with the System Manager.
Patch	A patch is when two or more talk groups are connected together by a dispatcher. This allows the patched groups to communicate as a single group by assigning a System Assigned ID (SAID).
Power Monitor Unit (PMU)	The Power Monitor Unit is collocated with the Site Controller. It monitors the transmitter power outputs and VSWR for the antenna system. It also provides alarm notification to the Site Controller.
Priority	The ending priority number in a queue-priority range to be included in a System Manager report.
Priority Level	When all working channels are busy, the next call request received is queued. Pre-assigned priority levels for each group and Individual are used to determine which call request is assigned first. Eight priority levels are offered, “0” being the lowest and “7” being the highest and normally reserved for emergency calls. Within the priority level, the call requests are assigned on a First-In First-Out basis. Reports will show this from 0 to 15.
Queue Delay	The end time in seconds of a queue delay used with System Manager reports.
Redundant Downlink GETC	A Redundant Downlink GETC is the GETC that is connected to the Redundant Downlink to the multisite/console switch. The Redundant Downlink GETC provides the communications interface between the Redundant Downlink and the Controller (or between the Redundant Downlink and the Failsoft Data Link to the Station GETCs in the event of a Controller failure or if the controller is not present).
Rotary definition	Defines the rotary hunt sequence used by the telephone equipment when assigning telephone lines. When several lines are used at a site, the telephone equipment will try each line defined in the rotary sequence until a free line (not busy) is found.

RSM	Request Status Monitor – The RSM is an IBM PC compatible computer running custom software developed by Ericsson GE. It allows the system administrator and/or the dispatchers to view status of EDACS units within the CEC/IMC network. Status information is typically initiated (transmitted) by the radio operator to identify the current condition (in route, at scene, etc.) of the unit.
SAID's	System Assigned ID - This is a group ID assigned by the MOM controller when a console initiates a Patch or Simulselect.
Screen	Screen refers to a major or parent data entry process and is used to show position within the program. Each screen is divided into three distinct areas: (1) screen title, (2) screen panels, and (3) active function keys. The title tells you the program function. The screen panels are provided for input of data to the screen. The active function keys provide access to the commands (or actions) available within that screen. The function key commands are labeled along the bottom of the screen.
SimulSelect	Simul (taneous) Select allows a console operator to communicate with two or more talk groups by assigning the groups to a common System Assigned ID (SAID). SimulSelect is primarily used for console-initiated broadcasts to all channels/groups within select areas off an organization.
Single Channel Autonomous Trunking (SCAT)	SCAT is a trunking system consisting of a single Failsoft repeater and a Downlink GETC linked to the CEC/IMC. Operationally, SCAT functions as a control channel when idle or working channel depending on the trunked service required. SCAT sites do not have a Site Controller.
Site	This term normally refers to EDACS radio equipment at a <u>single</u> specific location.
Site Controller	A DEC computer, running Ericsson GE developed application software, which directs the operation of a trunked radio system at the site. The Site Controller communicates with the with the System Manager over a telephone line or other appropriate link.
Site Database	The Site Database is the specific information about the site, such as equipment available at the site, validation tables by feature and priority for each Logical (individual) ID and Group ID, etc. maintained by the System Manager.
Special Call	A EDACS operating mode that includes radio outbound interconnect calls.
StarGate Controller	A StarGate Controller is an IMC switch specifically configured for distributed multisite operation. It is the central point or "hub" for all distributed multisite communications.
Station GETC	A Station GETC is the GETC that is connected to a MASTR II, IIe, or III repeater station to make it an EDACS trunk. The Station GETC provides the communications interface between the repeater station and the Site Controller (or between the repeater station and other Station GETCs in the event of a Controller failure). A Station GETC can more specifically be called a Control Channel GETC or a Working Channel GETC depending upon how it is being used at that moment.

Subfleet	A third and final layer in the Group Address hierarchy. Group communication is specific to the subfleet.
System All Call	A system-wide broadcast call made to all radio units on a radio system. See also "All Call."
System Manager	A software package and DEC multitasking computer system used to manage the databases associated with the EDACS system. The System Manager maintains its own database and communicates with the Site Controller and other specialized devices such as the CEC/IMC.
System Manager Modem	The System Manager Modem is a telephone channel modem serving as the data interface between the Controller and the telephone line used as the data link to the System Manager (through a second modem at the far end).
Telephone Interconnect	Term used to identify the process of interfacing a trunked radio system with a Public Switched Telephone Network. Interconnect equipment may be collocated at the site interfacing with the Site Controller or a Centralized Telephone Interconnect System interfacing with the CEC/IMC.
Test Unit (TU)	Part of the Test and Alarm Unit. The TU continually tests channel operation for faults and provides an alarm notification to the Site controller.
tracking	In a multisite network, all active radios log into their particular system. This login information is databased to allow the CEC/IMC to track individual radio units as they move from system-to-system and/or group-to-group. The CEC/IMC can then route wide area calls based on this database.
Unconfirmed Call	A call on a multisite network that does not require all systems to have an available channel before the call is allowed to proceed. A system late enters (if a channel was not initially available) as the call proceeds.
Unit Disable	A software feature offered with the System Manager. Unit Disable allows the System Manager to disable a lost or stolen radio. Once disabled, the radio cannot transmit or receive. The radio may be reactivated on command from the System Manager (Unit Enable).
Upload	The process of sending information from the System Manager to the Site Controller and Devices.
User Name	An 11-character alphanumeric designation which identifies the operator to the System Manager.
Working Channel	All repeater channels except the single control channel operate as working channels. Radios intercommunicate, either Analog Voice, Digital Voice, or Digital Data, through a working channel.
Working Channel GETC	A Working Channel GETC is a Station GETC that is at the moment acting as a Working Channel.

APPENDIX H - MISCELLANEOUS FUNCTIONS

INTRODUCTION

Instructions for using the following functions are included in this section:

- Obtaining the Site Controller's version number.
- Setting Up a Terminal for Remote Printer support.

HOW TO GET THE SITE CONTROLLER VERSION NUMBER

Starting with the System Manager release 5.xx code, a utility program is provided that allows a user to display the Site Controller's version number string. The following procedure describes the necessary steps for using this utility program.

1. Log into the VMS operation system group containing the System Manager application which talks to the desired Site Controller.

Usually, this is the **TEST2** account. (Default password is **BABBAGE**.)

2. At the operating system prompt, type in the following:

```
gvr:==$smexe:get_site_version_string
```

3. Type in the following to get the version number from the Site Controller at site XX:

```
gvr XX
```

(Replace 'XX' with the site's number, in 1 or 2 digits as needed.)

4. The program will indicate it is starting, and which site number it is attempting to talk to. It

will then pause for a moment, as it gets the information from the site. (Dialup connections may take up to 5 minutes or so to come back with a response.)

5. Once the version string is retrieved, it will be displayed along with a copyright notice from the Site Controller. If the utility returns an error code 8340, then the site could not be reached for some reason and no version number could be retrieved. Other error codes are possible.

NOTE

If the utility returns a version number less than 3.00 it is examining a PDP-11 Site Controller.

If it returns a version number of 3.00 or higher, it is examining a VAX Site Controller.

6. Repeat steps 2 thru 5 for each Site Controller to be examined. When you have issued all version request inquiries, log out by typing:

log

Example session:

```
3100G2> gvr:==$smexe:get_site_version_string  
3100G2> gvr 5  
starting up...  
site number 5  
Version is: V07.00 (c) 1994 by EGE  
3100G2> log
```

SETTING UP A TERMINAL FOR REMOTE PRINTER SUPPORT

NOTE

All terminals should have a User's Guide document from Digital Equipment Corporation, which describes the use of the terminal. This manual will have more information on setting up a printer attached to the terminal.

Also, PC terminal emulator users should consult their software manuals to determine how to properly configure the PC software package to do local printing.

VT420 Terminals:

NOTE

A VT420 being used for two sessions on both communications ports will have to give up the session on comm2 in order to use a printer.

1. Press the **F3** (setup) key.
2. Use the cursor keys and move to the **"Global"** selection.
3. Press the **ENTER** key on the keypad.
4. Use the cursor keys to move to one of the following comm selections:
"S1=comm1" or **"S1=comm2"**
5. Press the **ENTER** key on the keypad until the selection window reads **"S1=comm1"**. (This will also work with the **"Sessions=comm1"** selection, if you're using multisessions on a DECserver).
6. Use the cursor keys to move to one of the following printer session selections:
"Printer session 1" or **"Printer session 2"**
7. Press the **ENTER** key on the keypad until the selection window reads **"Printer shared"**.
8. Use the cursor keys to move to the **"To Directory"** selection.
9. Press the **ENTER** key to take that action.

10. From the directory selection screen, use the cursor keys to move to the **"Printer"** selection.
11. Press the **ENTER** key to select the printer.
12. Use the cursor keys to move to the **"Speed="** selection.
13. Press the **ENTER** key to change the baud rate to one that matches the printer being connected - most DEC printers ship with the baud rate set to 9600 baud. Keep pressing the **ENTER** key until the desired baud rate appears.
14. The other selections should read:
 - 8 bits, no parity
 - Printer to host
 - print normal mode
 - print full page
 - XOFF

Change any values that differ to these values.

15. Use the cursor keys to move to the **"To Directory"** selection.
16. Press the **ENTER** key.
17. From the directory selection screen, use the cursor keys to move to the **"Save"** selection.
18. Press the **ENTER** key to save the new configuration to the terminal's non-volatile memory.
19. Press the **F3** key to return to the normal operations mode.
20. Attach the printer to the comm2 port.
21. Press the **F3** key again.
22. Verify the printer is ready by observing the following statement at the bottom of the screen:
Printer: Ready
23. Press **F3** again to return to the normal operations mode.
24. You can now print reports from the session on comm1, by using the Report Manager screen 69 and the Print function.
25. You can also print the current screen by pressing the **F2** (print) key on the keyboard.

VT200 and VT300 Series Terminals:

1. Press the **F3** (setup) key

2. Using the cursor keys, move to the **"Printer"** selection.
3. Press the **ENTER** key on the keypad to select the option.
4. Make sure the speed (**"Speed=**") is set to 9600 baud. If it is not, then use the following steps to make it so:
 - a) Using the cursor keys, move to the **"Speed=**" selection.
 - b) Press the **ENTER** key on the keypad to until the field indicates **"Speed=9600"**.
5. Use the cursor keys and move to the **"To Directory"** selection.
6. Press the **ENTER** key.
7. From the directory selection screen, use the cursor keys to move to the **"Save"** selection.
8. Press the **ENTER** key to save the new configuration to the terminal's non-volatile memory.
9. Press the **F3** key to return to the normal operations mode.
10. Attach the printer to the comm2 or printer port.
11. Press the **F3** key again.
12. Verify the proper printer connections by observing the following message at the bottom of the screen:

Printer: Ready
13. Press **F3** again to return to the normal operations mode.
14. You can now print reports from the session on the printer port, by using the Report Manager screen 69 and the Print function.
15. You can also print the current screen by pressing the **F2** (print) key on the keyboard.

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