ERICSSON ⌷ ⌷

Mobile **Communications**

EDACS®
SYSTEM MANAGER HARDWARE

Installation Manual

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INTRODUCTION

This manual describes the hardware installation of the Enhanced Digital Access Communication System (EDACS) System Manager. The System Manager is a DEC MicroPDP- 11/ 53, 11/73, or 11/83 computer (hereinafter referred to as the computer) running a special software package. The System Manager may be configured with one or more terminals, printer, and a modem depending on your system requirements. The physical enclosure and port arrangement differ between systems.

The manual is intended to supplement the computer manufacturer's documentation. Refer to this manual when you move the System Manager installation or make hardware changes. In addition to this manual you may want to refer to the System Manager Software Installation manual.

SYSTEM MANAGER HARDWARE CONFIGURATIONS

System Manager hardware configurations are available to support installations with various numbers of sites and terminals, and varying lengths of cables. There are five standard configurations plus options. Some of these options are "delete options" that delete hardware supplied with the basic system.

The V3572 MicroPDP-11/53, part number 19A149575P1 includes the equipment listed in Table l. This System Manager configuration supports a single-site system with up to three terminals.

The V3573 MicroPDP-11/53+, part number 19A149575P2 includes the equipment listed in Table 2. This System Manager configuration supports systems with from one to three sites with a maximum of seven terminals.

TABLE 1 - 19A149575P1 BASIC CONFIGURATION

DEC P/N	PRODUCT DESCRIPTION
DH-153Q5-AA	PDP-11/53 with 0.5 megabyte memory
	RD32, 42 megabyte hard disk
	RX33 floppy disk drive
	RQDX3 controller
	BA23 pedestal
	Diagnostics and documentation
MSVII-QA	1 megabyte memory board
DZQ11-M	4-line multiplexer
CK-DZQ1 I-DB	Cabinet Kit with modem control
QY800-UZ	Micro/RSX license
LA210-AA	Printer
BC22D-25	Printer Cable
DL-VT320-CA	Monochrome (Amber) Terminal with cable

TABLE 2 - 19A149575P2 BASIC CONFIGURATION

DEC P/N	PRODUCT DESCRIPTION
DH-153Q3-BA	PDP-1 1/53+ with 1.5 megabyte memory
	RD53, 71 megabyte hard disk
	RQDX3 controller
	TK50, 95 Megabyte tape drive and controller
	DHQ11, 8-line multiplexer
	cabinet kit with modem control
	BA23 pedestal
	Diagnostics and documentation
MSVI 1-QA	1 megabyte memory board
QY800-UZ	Micro/RSX license
LA2I0-AA	Printer
BC22D-25	Printer Cable
DL-VT320-CA	Monochrome (Amber) Terminal with cable

The V3574 MicroPDP-1 1/53, part number 19A149575P3 includes the equipment listed in Table 3. This System Manager configuration supports systems with from one to six sites with a maximum of 14 terminals.

TABLE 3 - 19A149575P3 BASIC CONFIGURATION

DEC P/N	PRODUCT DESCRIPTION
173QB-D2	PDP-11/73 with 2 megabyte memory
	BAI23 cabinet
MSVI 1-QA	1 megabyte memory board
RD53A-BA	71 megabyte hard disk (Qty 2)
RQDX3-BA	Disk controller
TK50-AA	95 megabyte tape drive
TQK50-BA	Tape drive controller
DHQI 1-M	8-line multiplexer (Qty 2)
CK-DHQII-AA	Cabinet kit with modem control (Qty 2)
QY800-UZ	Micro/RSX license
ZYAAB-P5	Diagnostics and documentation
LA2I0-AA	Printer
BC22D-25	Printer Cable
DL-VT320-CA	Monochrome (Amber) Terminal with cable
BC22D-10	Terminal cable, 10 foot

The V3575 MicroPDP-1 1/83, part number 19A149575P4 includes the equipment listed in Table 4. This System Manager configuration supports systems with from one to 10 sites with a maximum of 16 terminals.

TABLE 4 - 19AI49575P4 BASIC CONFIGURATION

DEC P/N	PRODUCT DESCRIPTION
183QB-D2	PDP-11/83 with 2 megabyte memory
	BA123 cabinet
MSV11-JD	1 megabyte memory
RD54A-BA	159 megabyte disk drive
RS53A-BA	71 megabyte hard disk
RQDX3-BA	Disk controller
TK50-AA	95 megabyte tape drive
TQK50-BA	Tape drive controller
DHQ11-M	8-line multiplexers (Qty 3)
CK-DHQ1l-AA	Cabinet kit with modem control (Qty 2)
CK-DHQ11-WA	Cabinet kit without modem control
QY800-UZ	Micro/RSX license
ZYAAB-P5	Diagnostics and documentation
LA210-AA	Printer
BC22D-25	Printer Cable
DL-VT320-CA	Monochrome (Amber) Terminal with cable
BC22D-10	Terminal Cable 10 foot

The V3575 MicroPDP-11/83 with 456 megabyte disk drive, part number 19A149575P5 includes the equipment listed in Table 5. This System Manager configuration supports systems with from eight to 16 sites with a maximum of 16 terminals.

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                    ┌─────────── NOTE ───────────┐
                    This configuration is recommended for computer room
                    environments.
                    └────────────────────────────┘
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TABLE 5 - 19A149575P5 BASIC CONFIGURATION

DEC P/N	PRODUCT DESCRIPTION
DH-183Q3-BA	PDP-11/83 with 2 megabyte memory RA8 1, 456 megabyte disk drive KDA50 disk controller TK50, 95 megabyte tape drive and controller 8-line serial multiplexers with modem control BA23 cabinet boxes (Qty 2) Diagnostics and documentation
MSV11-JE	2 megabyte memory
RD53A-AA	71 megabyte hard disk
RQDX3-AA	Disk Controller
DHQ11-M	8-line serial ports (Qty 3)
CK-DHQ11-AF	Cabinet kit with modem control
CK-DHQ11-WF	Cabinet kit without modem control (Qty 2)
QY800-UZ	Micro/RSX license
LA210-AA	Printer
BC22D-25	Printer Cable
DL-VT320-CA	Monochrome (Amber) Terminal with cable
BC22D-10	Terminal Cable, 10 foot

INSTALLATION CONSIDERATIONS

When choosing a location for the System Manager be sure to consider the electricai and environmental requirements for the equipment. The system shouid be installed in a ventilated area where the acceptable environmental ranges are maintalned year-round. Since rapid changes in temperature may affect system performance, do not locate the system near heating or cooling equipment. The following points should be considered when planning an installation:

- Leave space around the computer components to allow air circulation and access for servicing.

- Locate the equipment away from heat sources and direct sunlight.

- Keep the equipment away from high-traffic areas to reduce static.

- Keep relative humidity at a minimum of 40% to minimize static.

- Avoid the use of carpeting (or use antistatic carpeting) around the computer system.

ELECTRICAL REQUIREMENTS

The electrical requirements for the System Manager depend on the type of enclosure the system is installed in and any added options. Tables 6 and 7 list the general electrical requirements for the System Manager for the two available enclosures. Use these specifications as a general aid in planning. Check current requirements in the computer manufacturer's literature or bid proposal.

TABLE 6 - ELECTRICAL REQUIREMENTS FOR SYSTEMS IN BA23 ENCLOSURE

ITEM	SPECIFICATION	
	120Vac Setting	240Vac Setting
Line voltage	120 Vac	240 Vac
Voltage tolerance	88-128 Vac	176-256 Vac
Line voltage frequency	47-63 Hz	47-63 Hz
Operating current (typ.)	4.4 Amps	2.2 Amps
Operating current (max.)	6.0 Amps	3.0 Amps
Power consumption (max.)	345 Watts	345 Watts

TABLE 7 - ELECTRICAL REQUIREMENTS FOR SYSTEMS IN BA123 ENCLOSURE

ITEM	SPECIFICATION	
	120Vac Setting	240Vac Setting
Line voltage	120 Vac	240 Vac
Voltage tolerance	88-128 Vac	176-256 Vac
Line voltage frequency	47-63 Hz	47-63 Hz
Operating current (typ.)	8.8 Amps	4.4 Amps
Operating current (max.)	12.0 Amps	6.0 Amps
Power consumption (max.)	690 Watts	690 Watts

ENVIRONMENTAL REQUIREMENTS

The required environment for the System Manager depends on the type of computer enclosure and any added options. Tables 8 and 9 list the general environmental require-ments for the System Manager for the two available enclosure. Use these specifications as a general aid in plannlng. Check current environmental requirements in the computer manufacturer's literature or bid proposal.

TABLE 8 - ENVIRONMENTAL REQUIREMENTS FOR SYSTEMS IN BA23 ENCLOSURE

ITEM	SPECIFICATION	
	Operating	Nonoperating
Maximum altitude	8000 ft (2400 m)	39400 ft (12 km)
Temperature range*	59 to 90°F (15 to 32°C)	-40 to 140°F (-40 to 60°C)
Temperature change rate (maximum)	36°F/hour (20°C/hour)	------
Relative humidity (noncondensing)	20 to 80%	10 to 95%
Heat dissipation	1177.4 BTU/k	------
*De-rate by 1.8°F (1°C) for each 3250 ft (1000 m) increase in altitude above 3250 ft (1000 m).		

TABLE 9 - ENVIRONMENTAL REQUIREMENTS FOR SYSTEMS IN BA123 ENCLOSURE

ITEM	SPECIFICATION	
	Operating	Nonoperating
Maximum altitude	8000 ft (2400 m)	30000 ft (9100 m)
Temperature range*	59 to 90°F (15 to 32°C)	-40 to 140°F (-40 to 60°C)
Temperature change rate (maximum)	36°F/hour (20°C/hour)	------
Relative humidity (noncondensing)	20 to 80%	10 to 95%
Heat dissipation	2355 BTU/k	------
*De-rate by 1.8°F (1°C) for each 3250 ft (1000 m) increase in altitude above 3250 ft (1000 m).		

OPENING REAR COVER

Access to the communications ports requires that the rear cover to be opened or removed depending on the style of computer cabinet. If your computer is enclosed in a BA23 cabinet, the rear cover must be removed to gain access to the power connector and communication ports. The rear cover is held on by pop fasteners located in each corner as shown in Figure 1.
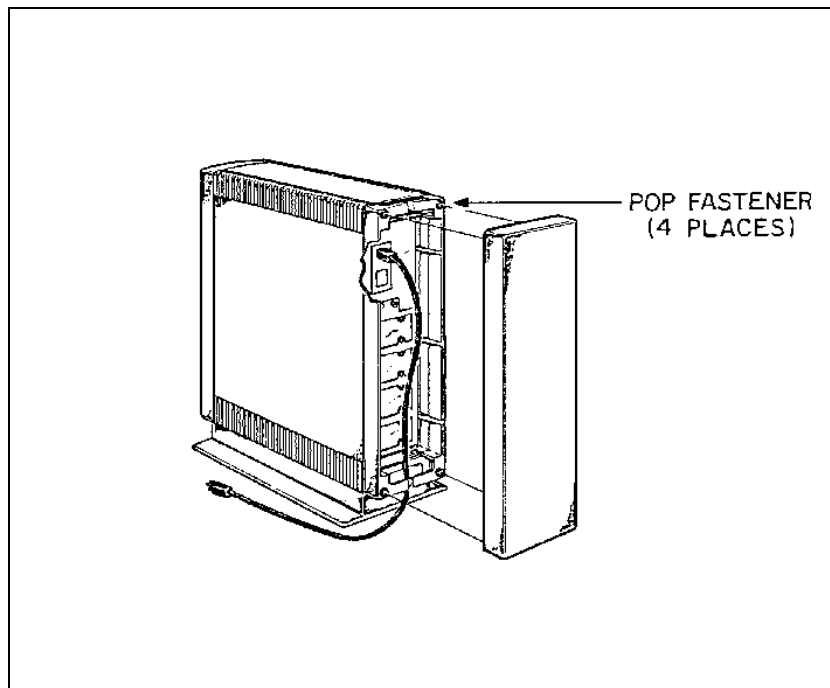

Figure 1 - Removing Rear Cover From BA23 Cabinet

A BA123 cabinet has a hinged rear cover that can be opened as shown in Figure 2.
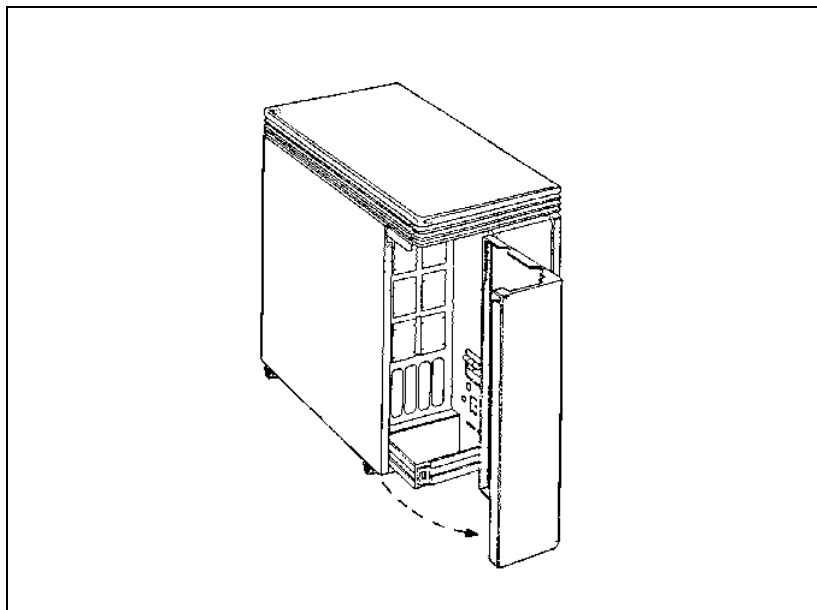
Figsure 2 - Opening Rear Cover Of BA123 Cabinet

BAUD RATE SELECTION

The baud rate must be physically set for some communication ports on the computer. The console terminal port must be set for 9600 baud and the printer port (some mod- els) must be set for 4800 baud. Figures 3 and 4 show the location of the ports and baud rate selector for different models of computers. Use a screwdriver to change the setting of the baud rate selector.
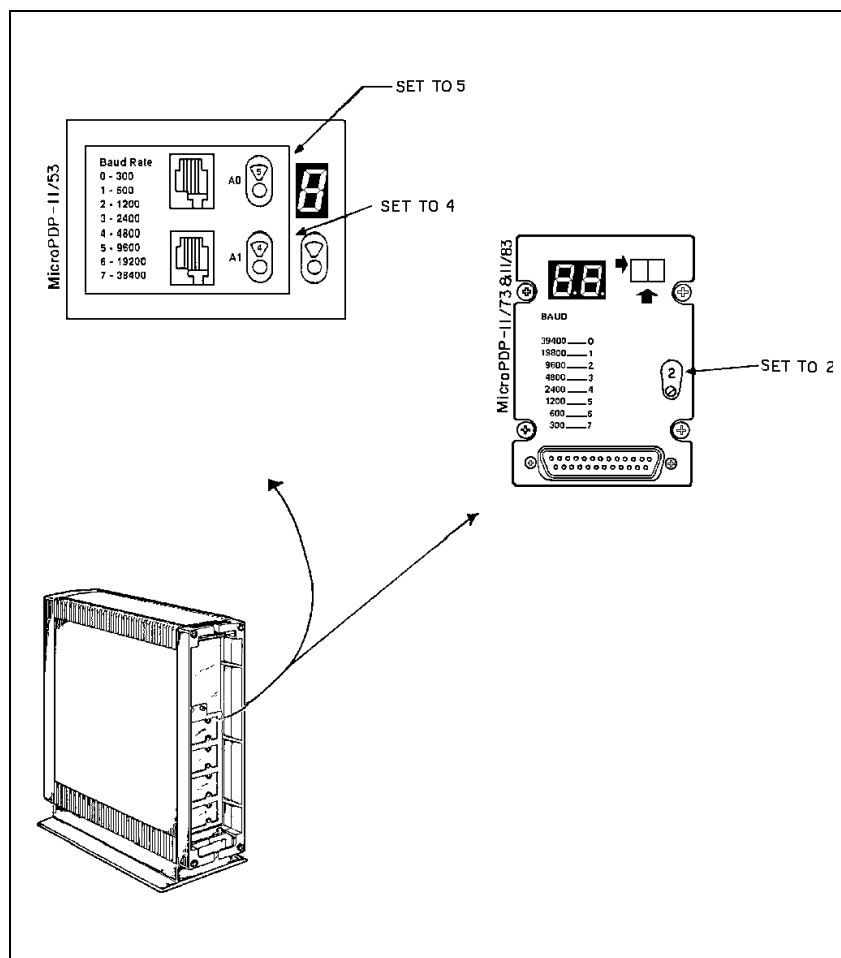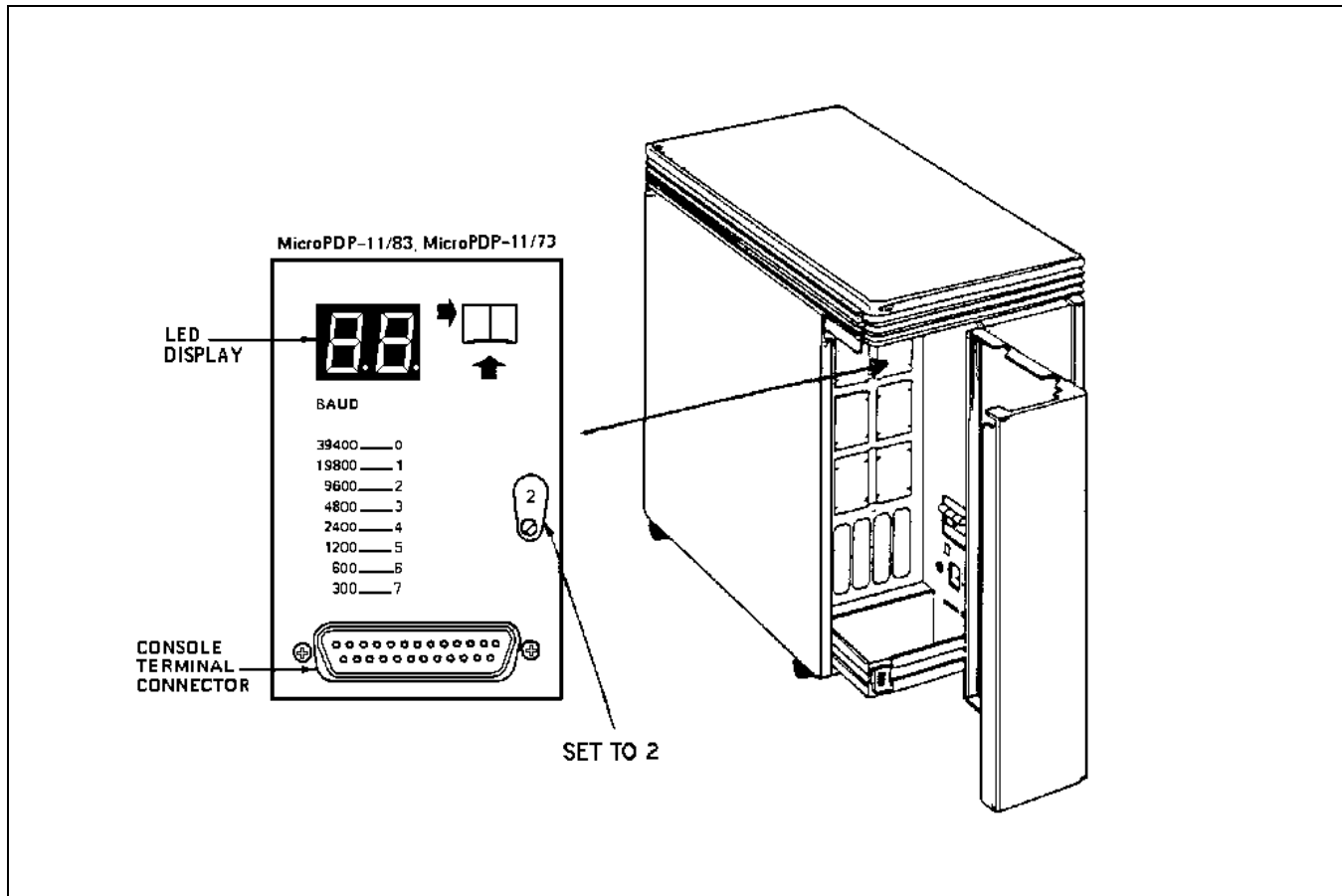

Figure 3 - Baud Rate Selection For Computers In BA23 Cabinets

Figures 4 - Baud Rate Selection For Computers in BA123 Cabinets

CABLE CONNECTIONS

The proper cable connections for the System Manager are shown in Figures 5 thru 7. The console terminal and the printer (if used) are connected as shown in the illustration.

Operating position terminals and modems are connected to the remainlng ports. The physical location of the communlcations ports on your system may differ from the illustration.
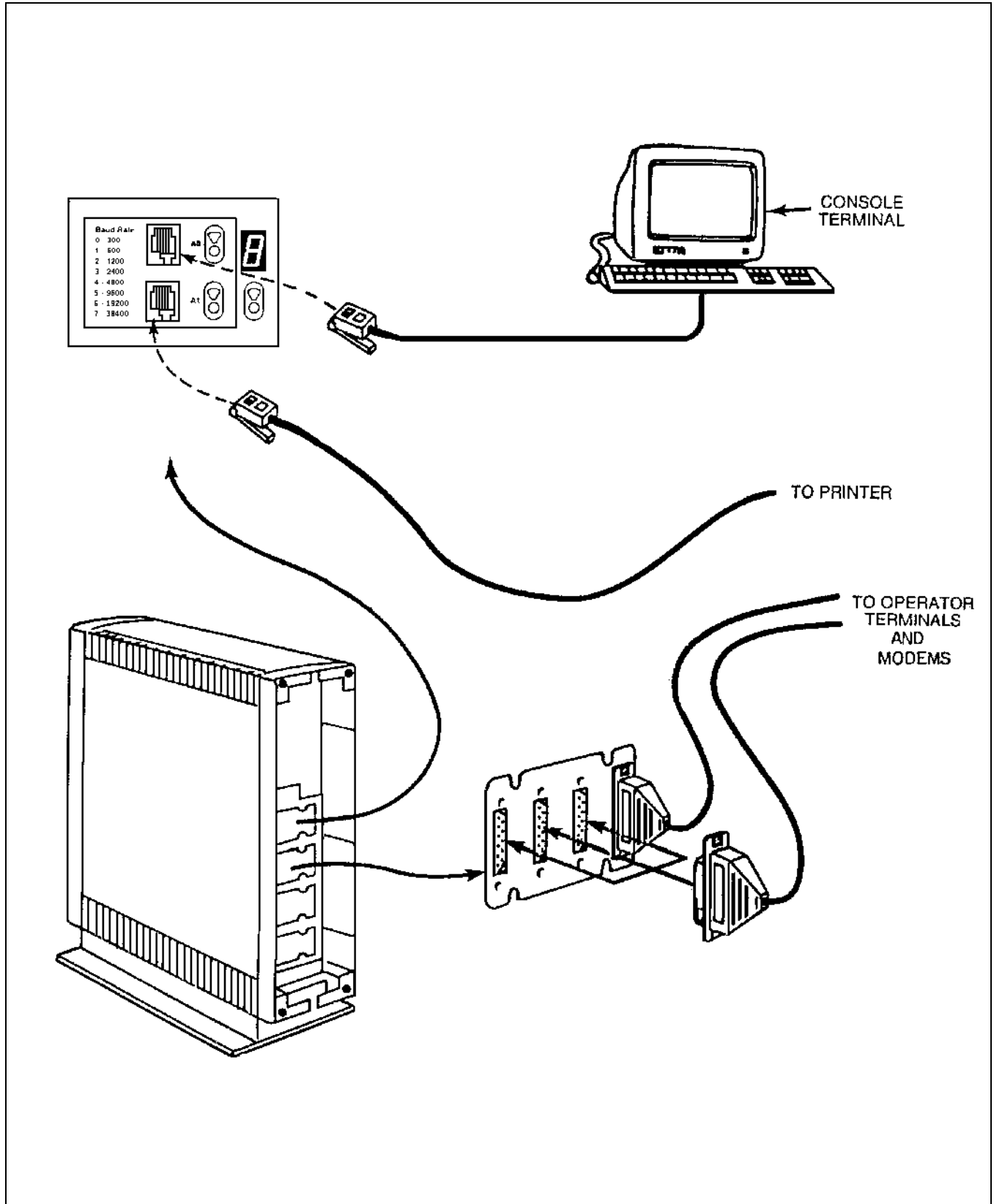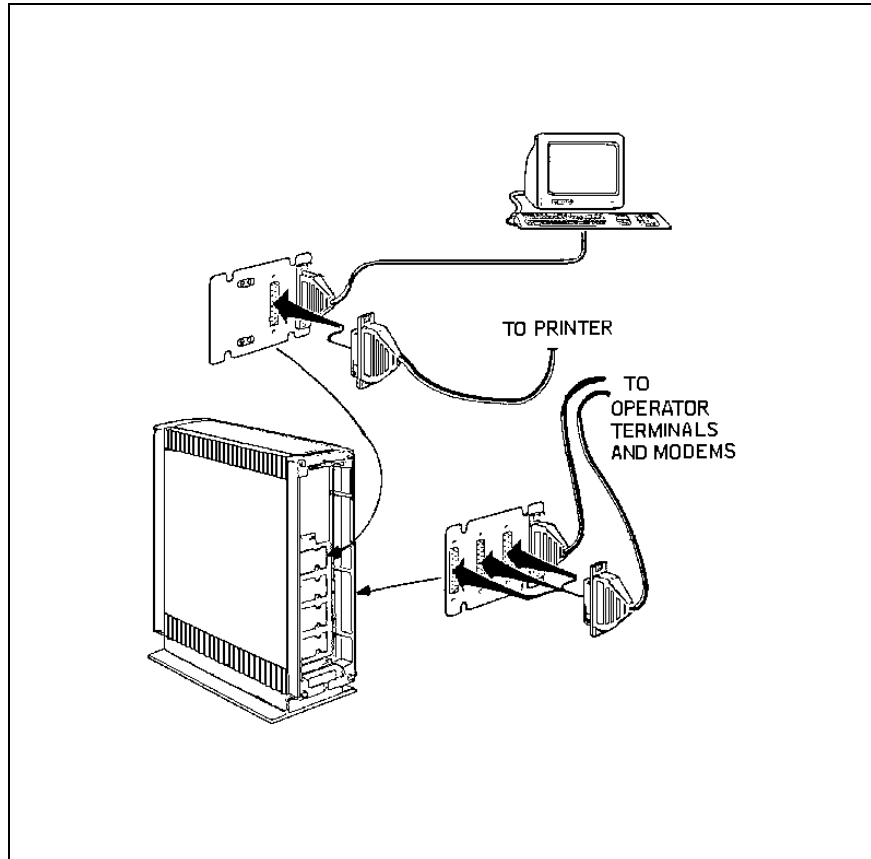
Figure 5 - Cable Connections For 11/53 In BA23 Enclosure

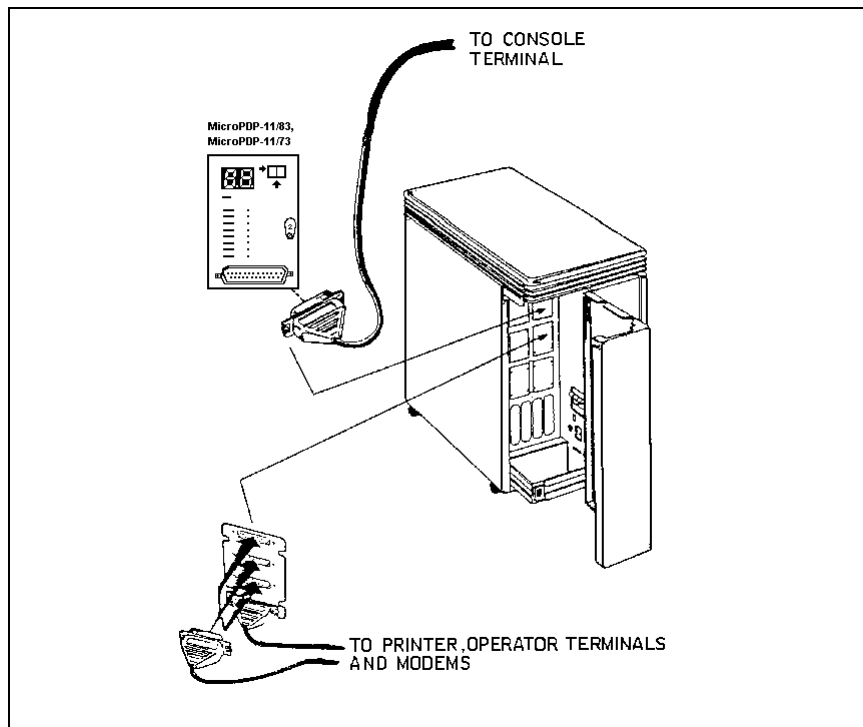Figure 6 - Cable Connections For 11/73 In BA23 Enclosure

Figure 7 - Cable Connections For 11/73 Or 11/83 In BA123 Enclosure

VOLTAGE SW1TCH SETTING

Before applying power to the SystemManager, check the voltage range switch to be sure the proper voltage range is selected for your installation. The voltage switch location for a BA23 cabinet is shown in Figure 8. The BA123 cabinet is shown in Figure 9.

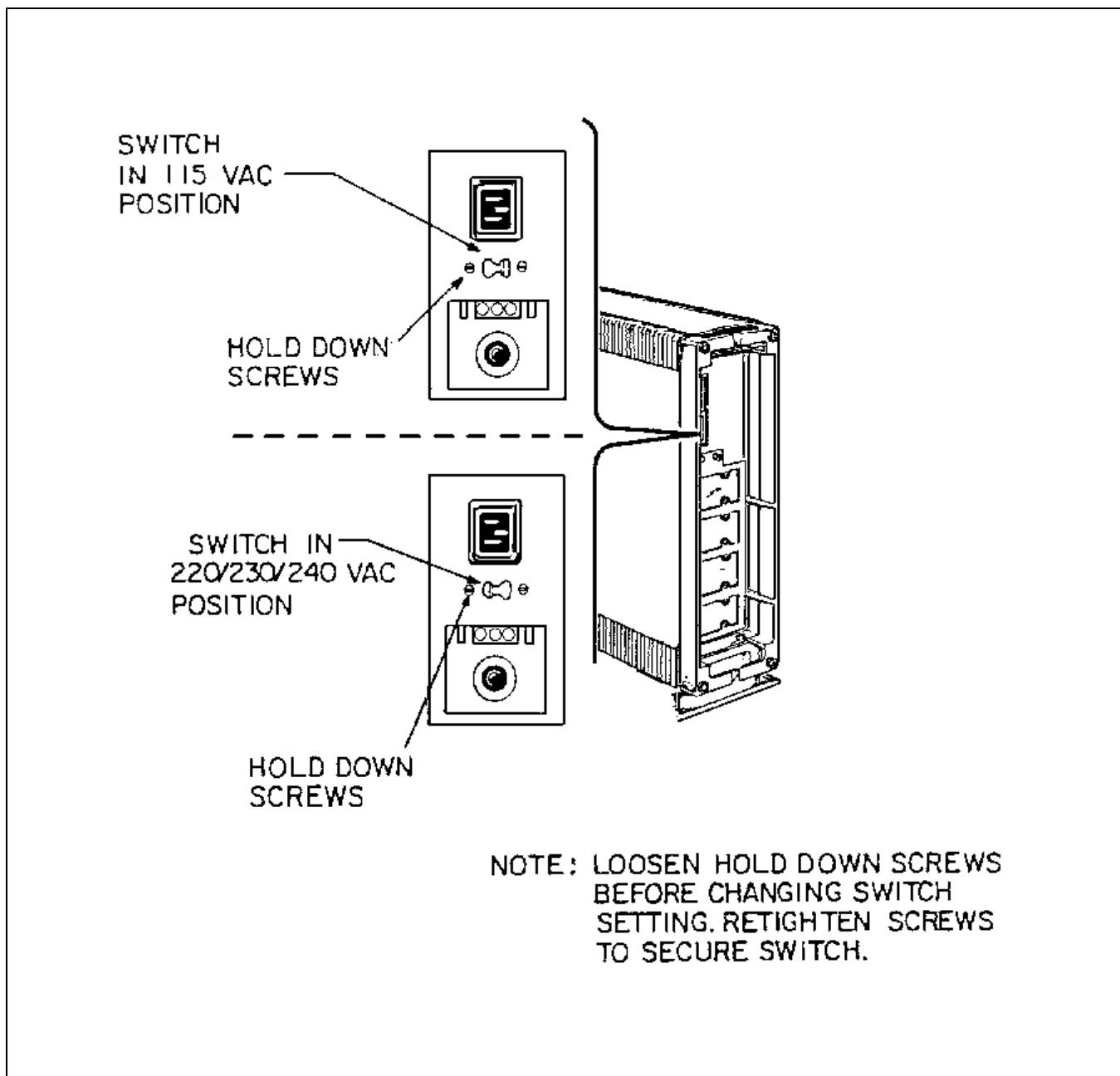| WARNING |
| --- |
| Incorrect voltage switch setting may result in equipment damage. |

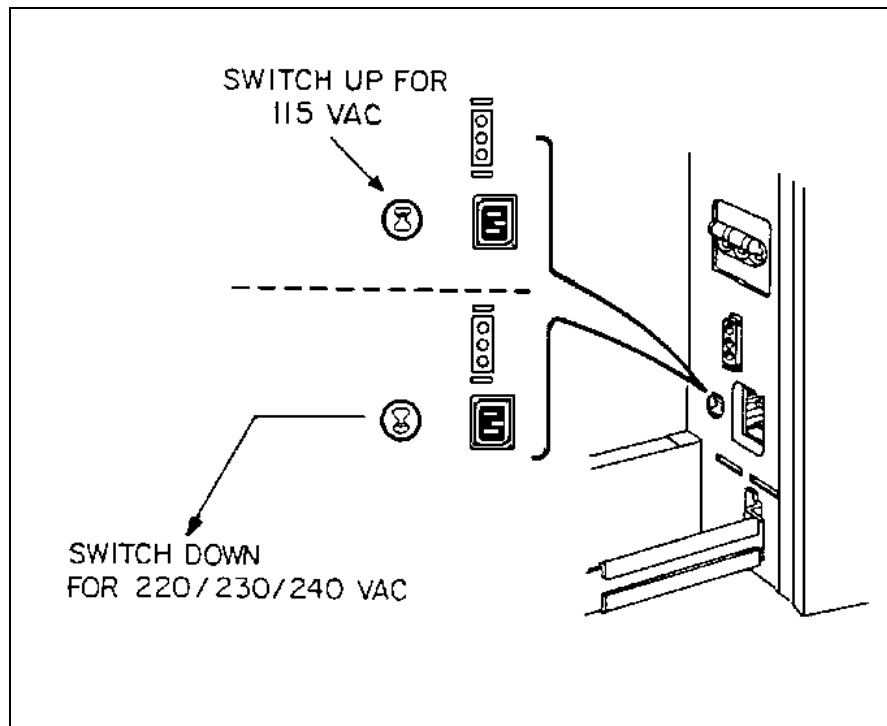Figure 8 - BA23 Voltage Switch Location

Figure 9 - BA123 Voltage Switch Location

TERMINAL SETUP

The video display terminal used with the System Manager stores many of its operating characteristics in memory. These characteristics can be changed through the Set-Up mode. Enter the Set-Up mode by pressing function key F3 (on VT220 terminals). Pressing F3 again will return to normal operation. The Set-Up mode may be entered at any time without loss of any information displayed on the screen.

The arrow (cursor) keys allow you to select fields within the Set-Up screens. The RETURN key is used to toggle through the field values and/or accept an action field. More information on Set-Up can be found in the hardware documentation supplied with your terminal.

NOTE

Use the SAVE command on the Set-Up screen to save any changed values. Failure to use the SAVE command will cause the terminal to return to its default values when the terminal is turned off.

Figures 10 through 16 show the various Set-Up screens and proper settings for a VT-220 terminal. If you are using a different terminal or communications program, your screens may look different. The corresponding Set-Up values should be used.
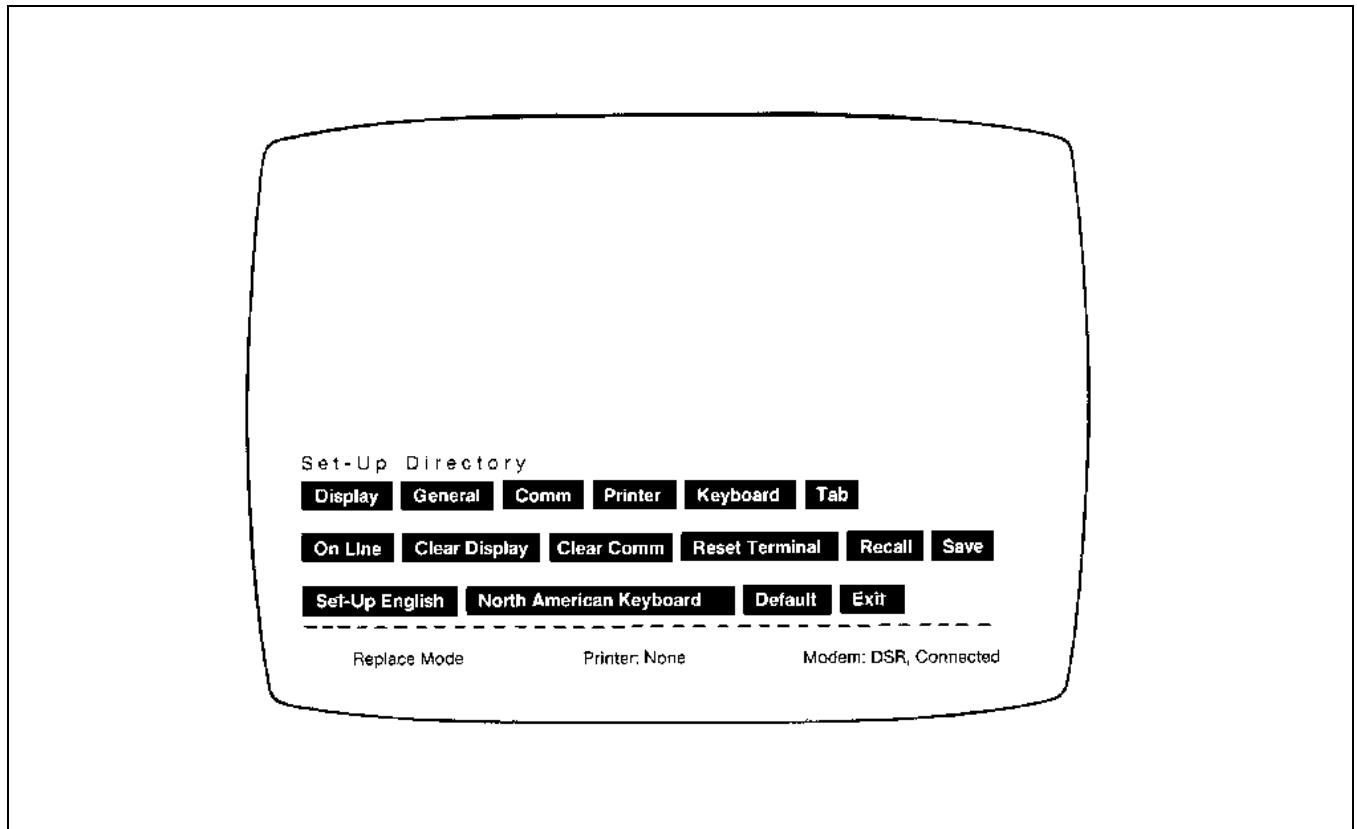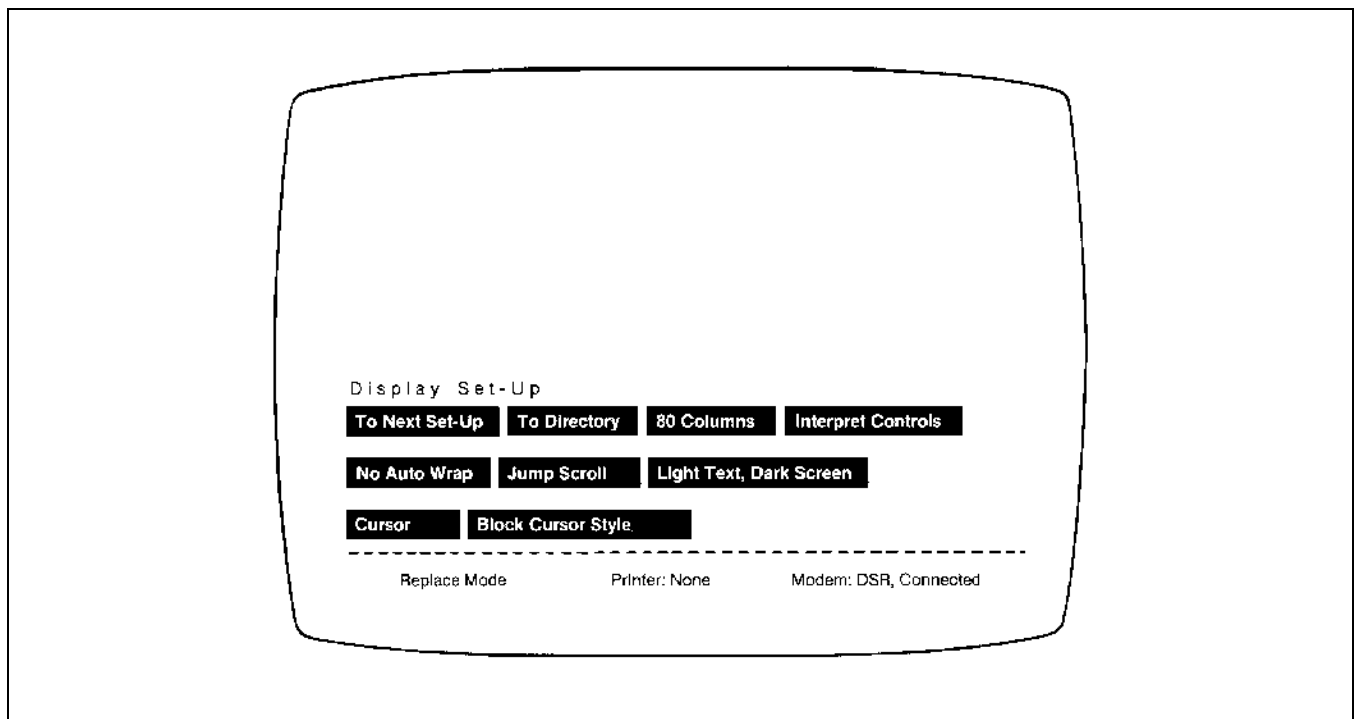
Figure 10 - Set-Up Directory Screen
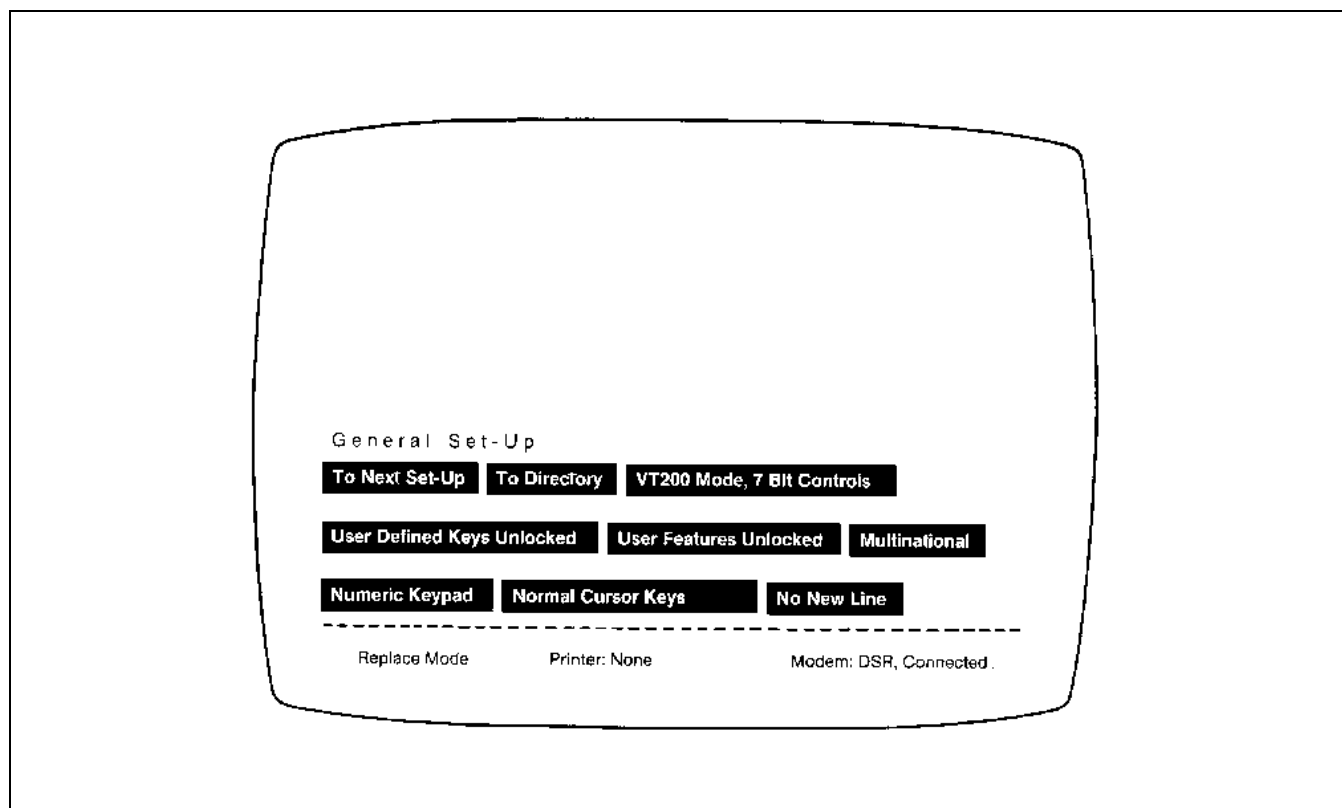

Figure 11 - Display Set-Up Screen

General Set-Up

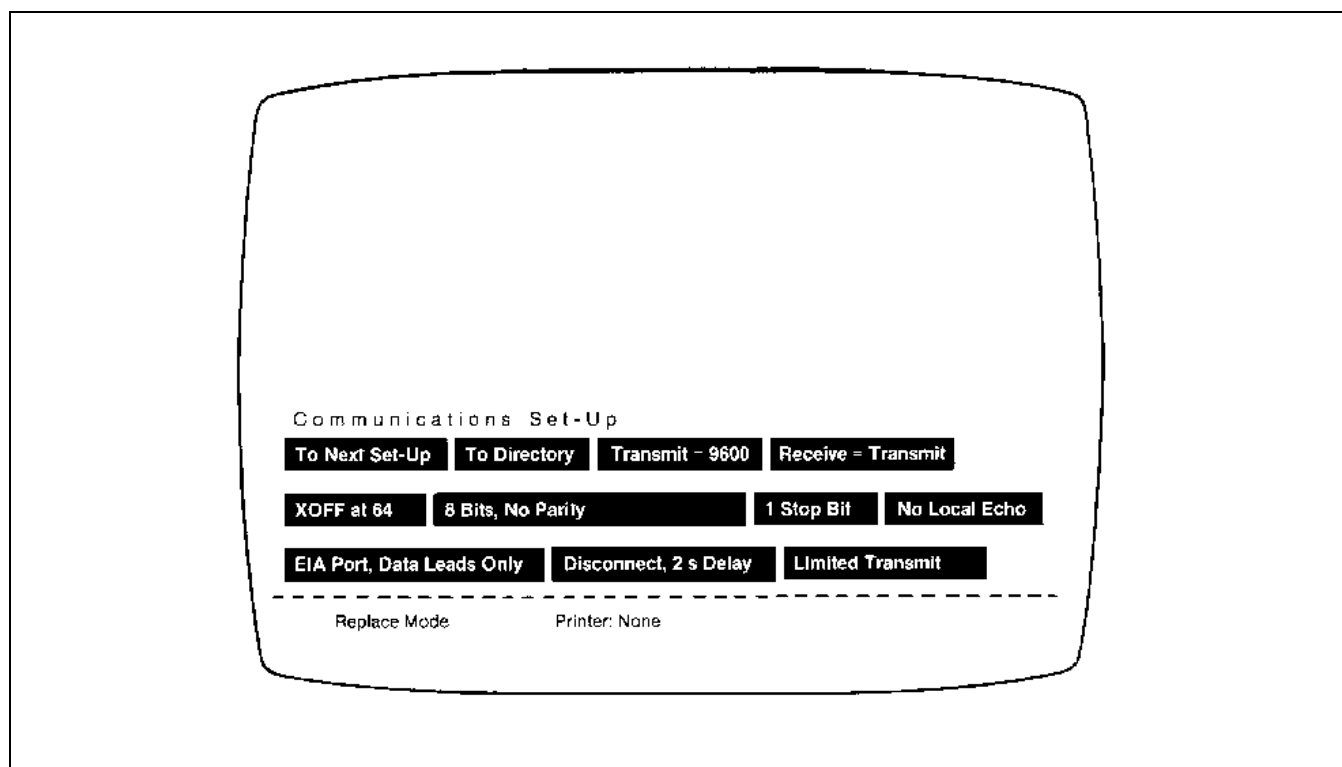| To Next Set-Up | To Directory | VT200 Mode, 7 Bit Controls |

| User Defined Keys Unlocked | User Features Unlocked | Multinational |

| Numeric Keypad | Normal Cursor Keys | No New Line |

Replace Mode   Printer: None   Modem: DSR, Connected.

Figure 12 - General Set-Up Screen

Communications Set-Up

| To Next Set-Up | To Directory | Transmit - 9600 | Receive = Transmit |

| XOFF at 64 | 8 Bits, No Parity | 1 Stop Bit | No Local Echo |

| EIA Port, Data Leads Only | Disconnect, 2 s Delay | Limited Transmit |

Replace Mode   Printer: None

Figure 13- Communications Set-Up Screen

Printer Set-Up

To Next Set-Up   To Directory   Speed – 4800

Normal Print Mode   8 Bits, No Parity   1 Stop Bit

Print Full Page   Print National Only   No Terminator

Replace Mode   Printer: None
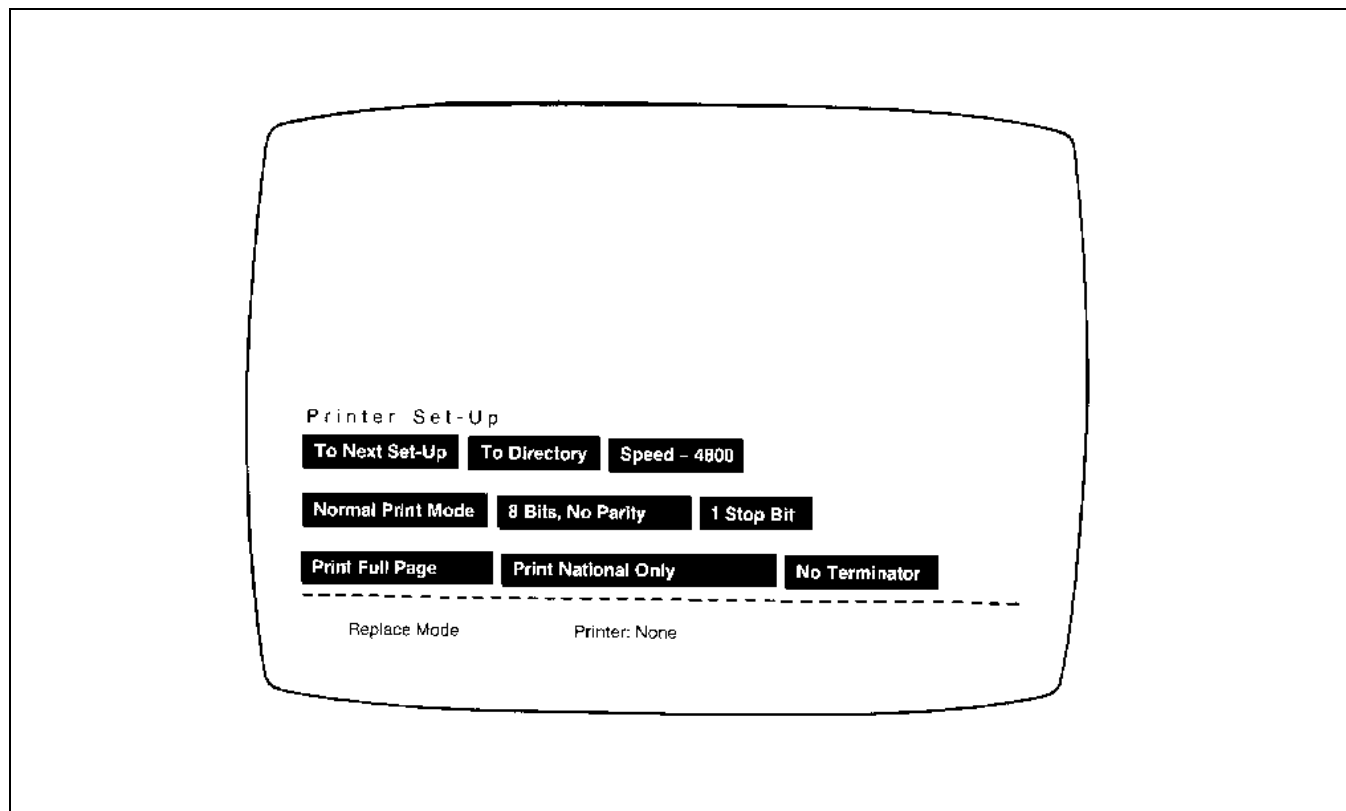
Figure 14 - Printer Set-Up Screen

Keyboard Set-Up

To Next Set-Up   To Directory   Typewriter Keys   Caps Lock

Auto Repeat   Keyclick   No Margin Bell   Warning Bell   No Break

No Auto Answerback   Not Concealed
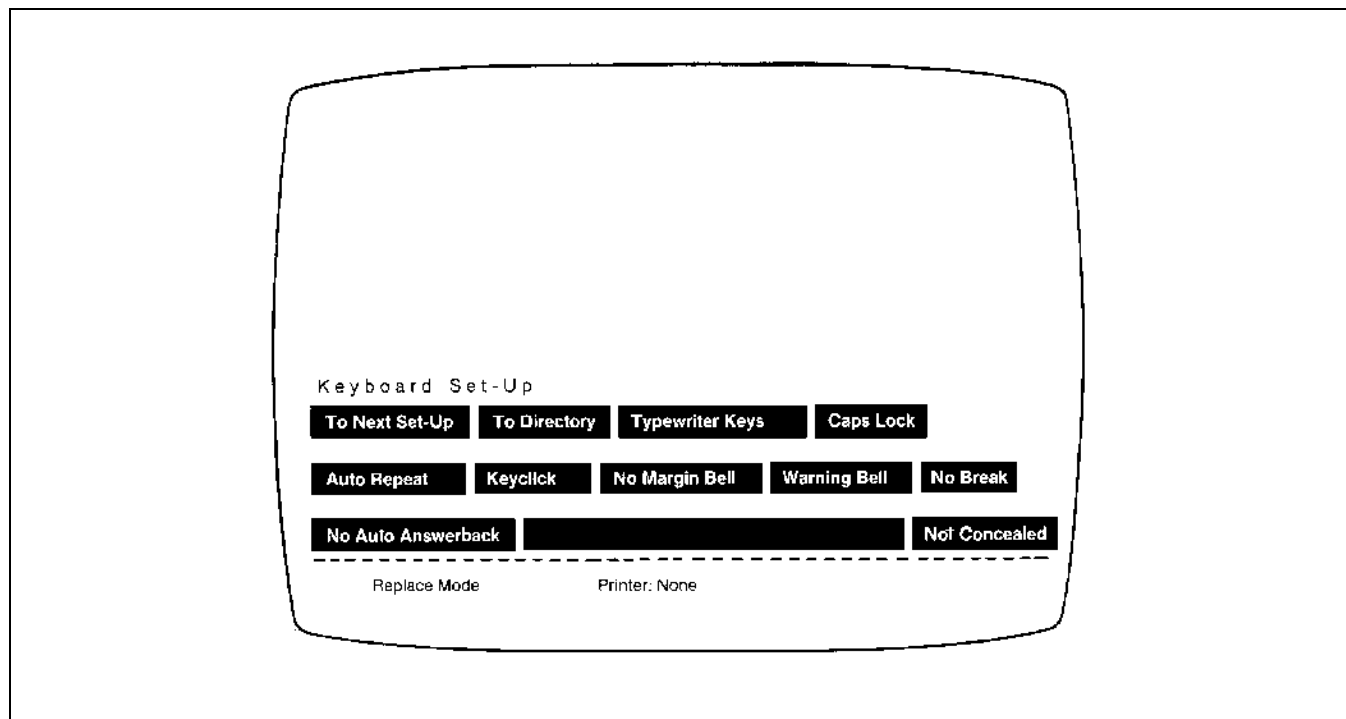
Replace Mode   Printer: None

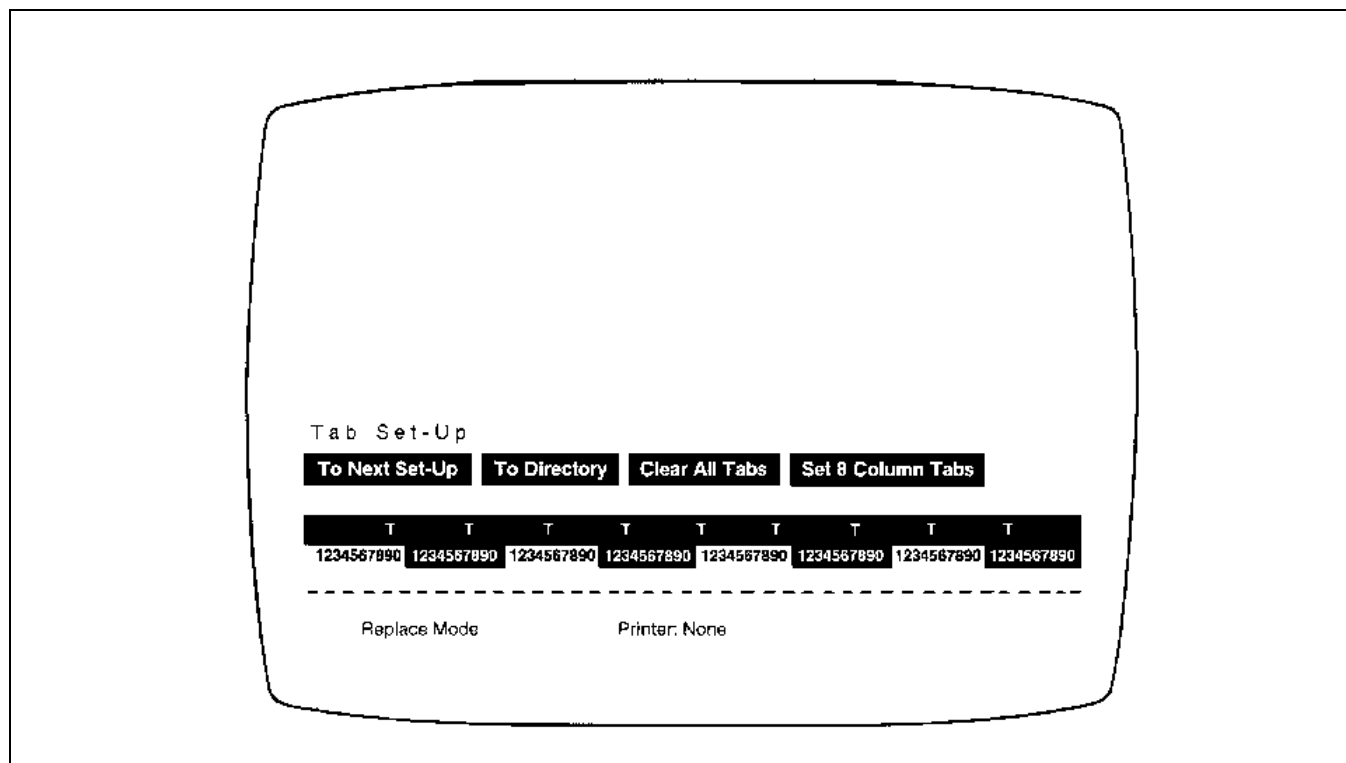Fisgurse 15 - Keyboard Set-Up Screen

Figure 16 - Tab Set-Up Screen

SOFTWARE INSTALLATION

If software must be install on the System Manager, consult the computer manufacturer's documentation for installation instructions. Installation of System Manager software is covered in the System Manager Software Installation manual.