Maintenance Manual

EDACS®
MASTR®II STATION

ComNet Ericsson
CRITICAL RADIO SYSTEMS

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NOTICE!

Repairs to this equipment should be made only by an authorized service technician or facility designated by the supplier. Any repairs, alterations or substitution of recommended parts made by the user to this equipment not approved by the manufacturer could void the user's authority to operate the equipment in addition to the manufacturer's warranty.

NOTICE!!

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ILLUSTRATIONS

SPECIFICATIONS*

DIMENSIONS (H x W x D)	69"x 23" x 21"
WEIGHT	305 pounds
INPUT VOLTAGES	121/242 Vac, 60 Hz (50 Hz optional)
TEMPERATURE	-30°C TO +60°C (-22°F to +140°F)

* These specifications are intended primarily for use during servicing. Refer to the appropriate Specification Sheet for the complete specifications.

INTRODUCTION

This manual presents an overview of the **MASTR II** station combination as used in trunked system applications. Information is provided on the interconnection of station components and adjustment/ alignment procedures. Detailed information on the assemblies making up the MASTR II combination can be found in the following manuals:

- GETC Maintenance Manual
- Station Receiver Maintenance Manual
- Transmitter Maintenance Manual
- MASTR II Tone Remote Station Control Shelf Maintenance Manual
- Telephone Interconnect Manual
- Station Power Supply Manual

MASTR II STATION DESCRIPTION

The MASTR II station, used in trunked system applications, is a complete two-way radio station designed for receiving and transmitting within the public Service band. The station (see Figure 1) is a continuous duty combination capable of being operated locally or with tone remote control.

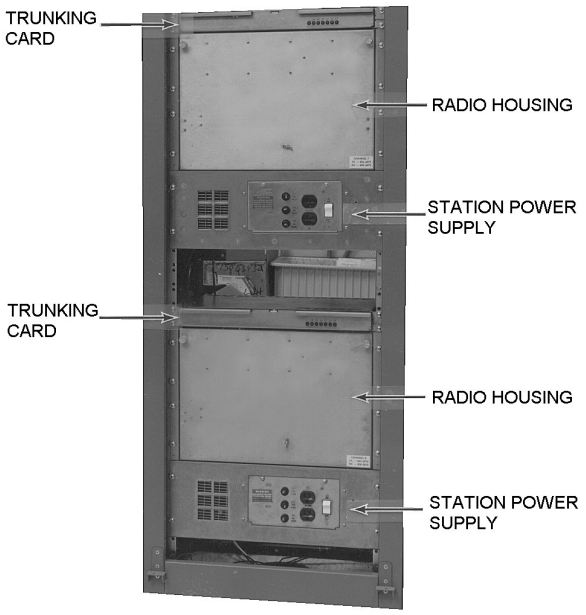


Figure 1 - Typical Station Front View

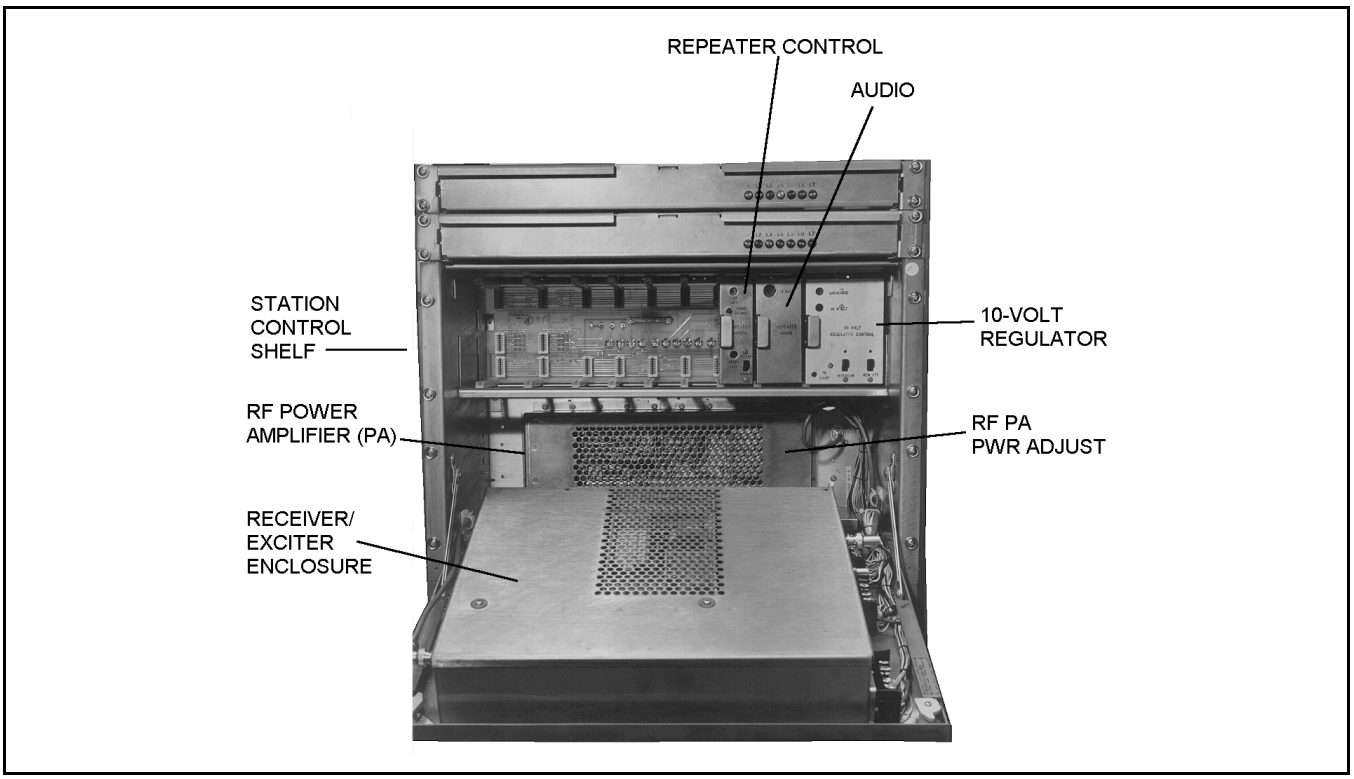


Figure 2 - Typical Radio Housing (800 MHz Shown)

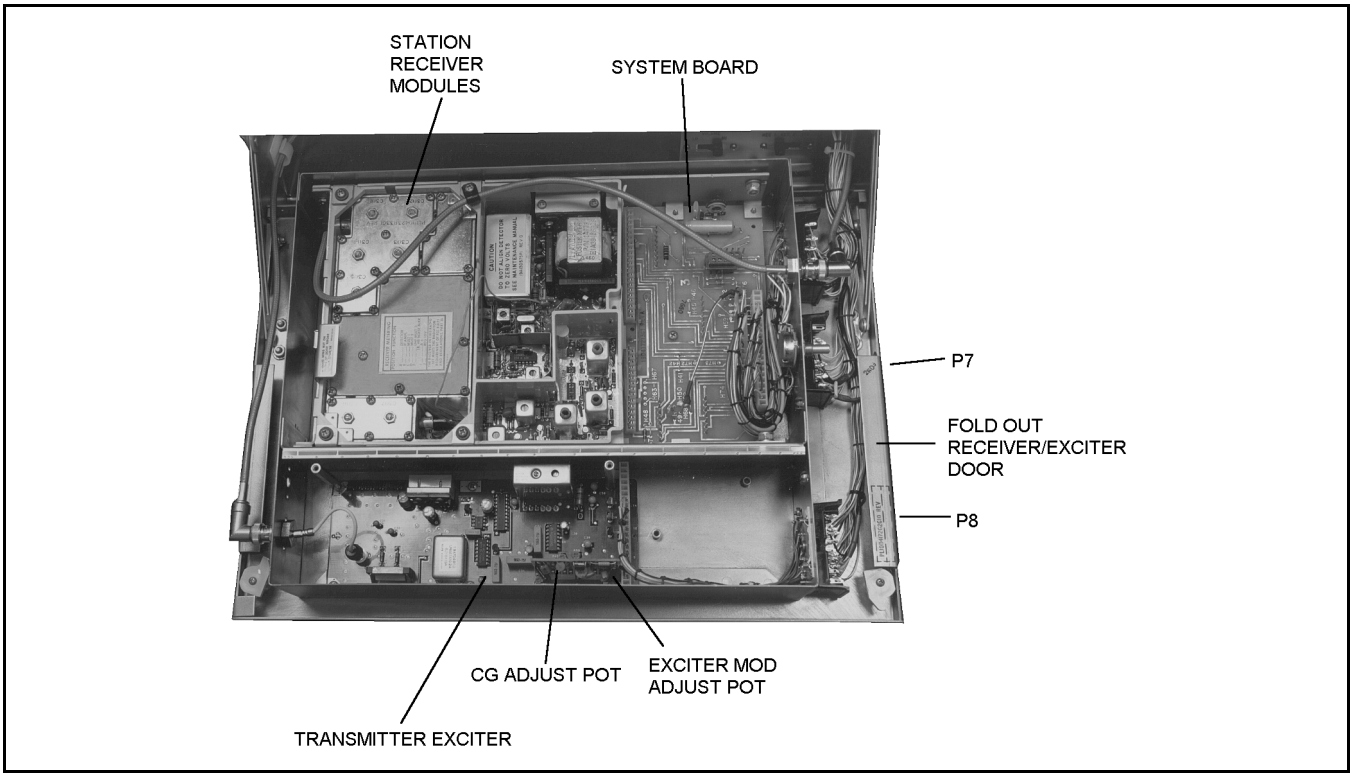


Figure 3 - Station Receiver and Exciter

NOTE

Rack configurations may vary with system requirements.

The station transmitter exciter is located in a shielded compartment in the radio housing front door (see Figure 2), along with the station receiver and system board (see Figure 3). The system board accommodates an optional Channel Guard board. Jacks are provided on the system board to interface with options and control functions.

The **P**ower **A**mplifier **(PA)** hinges from the bottom of the radio housing. The PA consists of a frame mounted to a heat sink. A cover snaps into the frame to form an RF tight enclosure for the PA board assembly (see Figure 2).

Directly above the PA assembly is the station control shelf. A mother board is mounted to this control shelf which accommodates 10-volt regulator, Audio Control, Repeater Control and Tone Remote Control modules. See the separate Control Shelf manual for additional information.

A station power supply is located below each radio housing (see Figure 1). The front panel of the power supply has a power switch, three fuses and a duplex AC outlet. A high-current fuse is located on the back panel of the power supply.

RECEIVER

The station receiver consists of an Oscillator/Multiplier **(OSC/MULT)** assembly, RF assembly, IF Detector and an IF-Audio and Squelch **(IFAS)** assembly. Refer to the receiver maintenance manual for a complete description of the station receiver.

TRANSMITTER

The station transmitter consists of an exciter board assembly and a power amplifier assembly. The transmitter is a crystal-controlled, phase modulated design for single frequency operation. Refer to the transmitter maintenance manual for a complete description.

SYSTEM BOARD A901

The station System Board is located on the radio panel front door. Receiver modules plug directly into the board and along the edge of the board are connectors for the Repeater Control, Repeater Audio and power supply modules. Jacks are provided for Channel Guard and other options, as well as a connection for the **4EXA11** Test Set. Volume control R3 is located on the System Board and squelch control R901 is located on the receiver/exciter door.

The **VOLUME/SQUELCH** line from the receiver Audio pre-amplifier is connected through connector J904, Pin 12 to **VOLUME** (R3) and **SQUELCH** (R901) controls. The **VOLUME** arm is returned to the receiver IFAS board, where the audio is amplified by the receiver audio power amplifier circuit. The audio output of the PA is then connect to the speaker leads at J904, Pins 18 and 19. The station **VOLUME** control (R3) is normally adjusted for one watt output and the station speaker level is controlled by the service speaker **VOLUME** control

TONE REMOTE CONTROL

A maximum of twelve different functions can be performed in the Tone Remote Control system. This is accomplished by applying two or three tones in sequence at the prescribed level to the transmission medium at a remote control console for detection at the control modules in the control shelf. Refer to the MASTR II Tone Remote Station Control Shelf maintenance manual for a complete description of this system.

CHANNEL GUARD

In stations equipped with **C**hannel **G**uard **(CG)**, Channel Guard board 19D417261 is plugged into the System Board at P908 and P909. Each MASTR II receiver is equipped with a tone-reject filter to prevent the CG tone from being heard in the speaker. In addition, all transmitters have a Channel Guard Modulation control to adjust for proper deviation.

Channel Guard is a continuous tone-controlled-squelch-system that provides communications control in accordance with EIA standard RS-220. The system utilizes standard tone frequencies from 71.9 to 203.5 Hertz with both the encoder and decoder operating on the same frequency. The **S**quelch **T**ail **E**liminator **(STE)** circuit employs a phase shift to approximately 180° in the encode function to eliminate undesirable noise burst after each transmission.

The decoder operates in conjunction with the receiver to inhibit all calls that are not coded with the proper Channel Guard tone frequency. The **VOLUME/SQUELCH** output of the receiver is applied to the Channel Guard decoder at P908, Pin 1. As long as no signal is received properly coded with the CG tone, a ground is supplied through P908, Pin 5 to mute the receiver. When a properly coded signal is received, the receiver unsquelches and the desired signal is heard. A channel Guard Filter is used on the Remote Audio Board to

attenuate frequencies below 203.5 Hz preventing the Channel Guard tone from being applied to the remote audio pair.

A repeater will not key in Channel Guard systems unless the received signal is coded with the proper Channel Guard tone. The CG monitor function, when selected at the Local Controller in Local/Repeater stations, will not allow the repeater to key on an uncoded signal, but will allow the operator to hear all channel activity.

TRUNKING CARD (GETC)

The Trunking Card (GETC) is used in a trunked communication system to provide control and interface to the MASTR II station, site controller, dispatch console and other trunked stations at the same site. The GETC Shelf Assembly consists of the GETC Logic Board, 9600 baud Modem Board and the Regulator Assembly, all mounted on a tray and enclosed in a shelf. The GETC is mounted above the station radio assembly and provides **C**ontrol-**C**hannel **(CC)** and **W**orking-**C**hannel **(WC)** processing.

The **C**ontrol **C**hannel **GETC (CC-GETC)** performs a continuous 9600 bit per second (or 4800 bps) communication to mobiles and portables in the system. Mobile/portable channel request are received by the control channel.

A **W**orking **C**hannel **GETC (WC-GETC)** performs channel handshaking with the mobile/portable units(s) and allows voice/data/**V**oice **G**uard **(VG)** communication to other units in the system. The working channel also allows communication between mobile/portable units(s) and the dispatch console.

INSTALLATION CONSIDERATIONS

The MASTR II station used in trunked applications is usually shipped and installed under the direction of Com-Net Ericsson. The following paragraphs will familiarize you with some of the installation requirements. This information is useful during site planning.

CABINET INSTALLATION

Allow sufficient space in front of and behind the cabinets to permit front and rear doors to open completely. Either door may be removed or inverted and hinged on the opposite side if desired.

Three knockouts are located along the rear bottom edge of the cabinet for cable entry. It is normally desirable to bring the cables up through the floor and place the cabinet over power receptacles or cable holes on the floor.

Conduit may be extended into the cabinet through one of the two 7x7 inch base plate openings in the cabinet bottom. Holes are located on the bottom of the cabinet for bolting the cabinet securely to the floor with 1/2-inch bolts. A cable entry hole (2x1 inch) is located at the top rear of the cabinet to bring in the antenna cables or conduit from above the station. The front and back sides of the station must always be accessible for servicing.

POWER AND GROUND CONNECTIONS

A 15-foot power cord, equipped with a standard three-prong plug, is supplied with the station. One of the prongs grounds the station to protect personnel. Check to be sure the power outlet complies with local ordinances.

If a 240-volt source is used for station power, the power supply must be configured properly. Refer to the power supply maintenance manual for details. The plug on the power cable must also be obtained and changed to mate with the 240 Vac outlet. A power cord plug is not supplied with the 50 Hz power supply.

The station should be connected to a good earth ground using a ground wire of adequate size. A ground stud is provided on all cabinets for a separate cabinet ground. Use No. 14 gauge or larger wire (depending on local ordinances and system requirements) for connecting the cabinet to a good building ground. After the ground lead from the power cable is connected to the building ground, check continuity between building ground and the cabinet.

ANTENNA AND INTERFACE CABLE INSTALLATION

A typical installation will require connections to the receiver(multicoupler) and transmit (combiner) antennas, revote audio connections and serial interface connections to GETC shelves. Connections for your installation may differ depending on system requirements. Refer to Figure 4 and the interconnection diagram for station connection locations.

RECEIVER AND TRANSMITTER ANTENNA CONNECTIONS

Transmit and receive antenna connections are required for each channel (receiver/transmitter combination) in the equipment rack. Typically the antenna cables are routed through holes in the top of the equipment cabinet.

Connect the receiver antenna for the channel to connector J945. Connect the transmitter antenna for the channel to the transmitter connector.

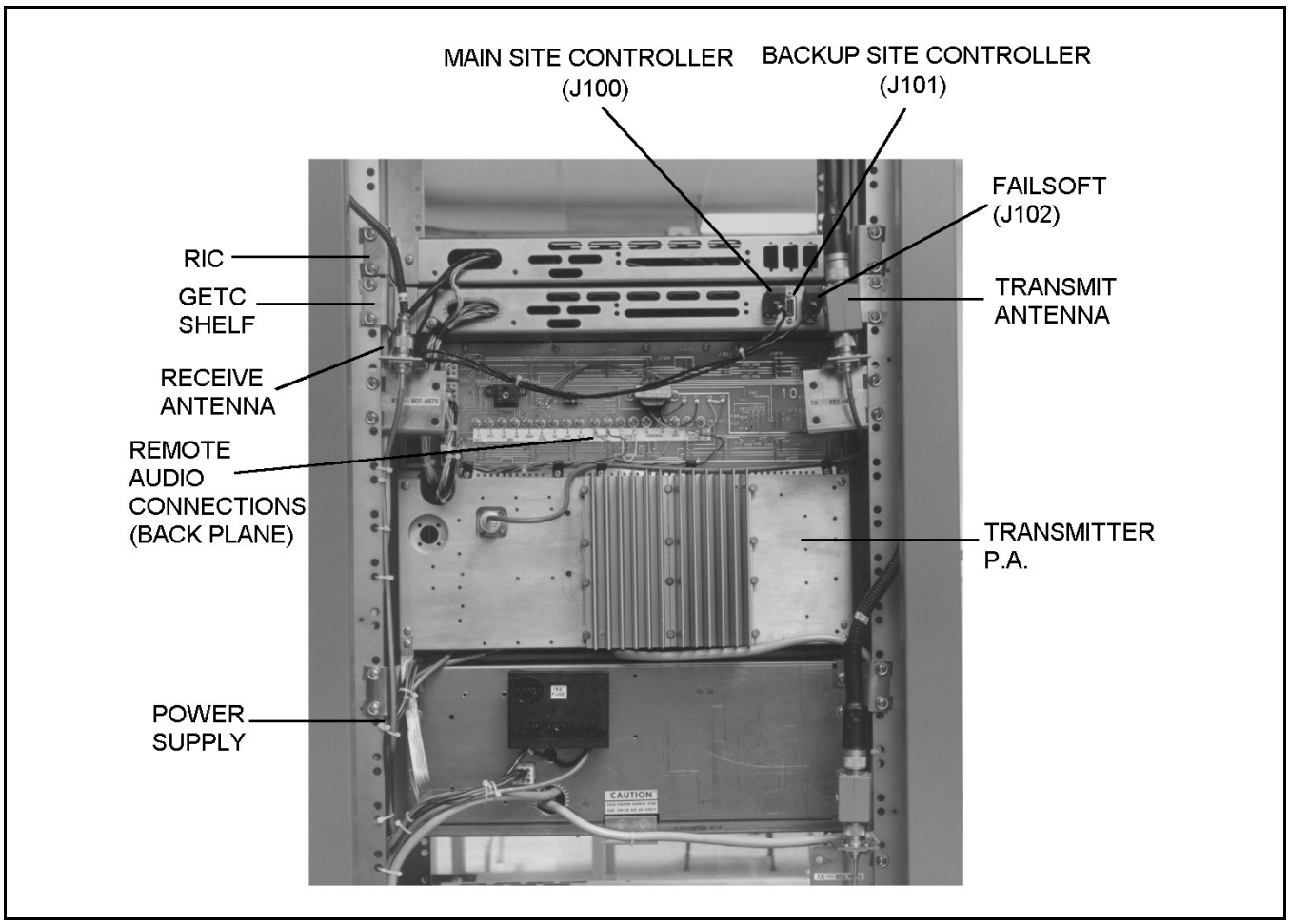


Figure 4 - Sample Station Connections

REMOTE AUDIO INPUT

If stations are controlled from a dispatch center, remote audio input connections will be required. Connections are made at terminal block TB1201 on backplane assembly 19D417214. Receive audio connections are made to terminals 10 and 11, typically marked AUDIO. Transmit audio connections are made at terminals 17 and 18, typically marked DUPLEX AUDIO. Refer to Figure 4 and the interconnection diagram for connection points.

REPEATER INTERCONNECT (RIC)

Connections to the RIC are made through cable 19C320811G15. This cable connects to the RIC at connector TB2/P40 and TB1/P41 as shown in the interconnection diagram. Refer to the Telephone Interconnect manual for information on the telephone interconnect option.

INITIAL ADJUSTMENT

After the station has been installed, the transmitter and receiver must be adjusted by a service technician before the station is placed in operation.

TRANSMITTER ADJUSTMENT

Adjustment of the transmitter includes measuring the forward and reflected power and adjusting the antenna for optimum standing wave ratio (s.w.r.). The transmitter is then set to rated power output for the application. Operating frequency and modulation level should be measured and recorded. Complete transmitter adjustments can be found in the applicable station transmitter maintenance manual.

CAUTION

Adjustment of VOLUME control to setting higher than instructed in the adjustment procedure may result in blowing the fuse on the station service speaker or damage to the Local Controller Speaker.

RECEIVER ADJUSTMENT

The initial adjustment for the receiver includes tuning the input circuit to match the antenna. Refer to the applicable receiver maintenance manual for alignment instructions. Use the following procedure to set the station **VOLUME** control (R3 on the System Board):

1. Apply a 1000 microvolt on-frequency test signal to receiver jack J937. The signal should be modulated by 1000 Hz to ±3 kHz deviation.
2. Turn service speaker switch S1 to desired RCVR position.
3. Connect an AC voltmeter across J905 terminals 1 and 2 and adjust R3 for a reading of 6.3 Vrms.
4. Set **VOLUME** switch S2 on the service speaker to the desired listening level.

Adjust the station **SQUELCH** control (R901) on the Receiver/Exciter door) as follows:

1. Turn the **SQUELCH** control clockwise (to the right) as far as possible.
2. Adjust the **VOLUME** control in the service speaker until the noise is at a comfortable listening level.
3. Turn the **SQUELCH** control counterclockwise until the noise just disappears, then advance the control another 20 degrees.

RECEIVER ADJUSTMENT FOR TRUNKED STATIONS

Certain receiver adjustments and fine tuning are necessary before a MASTR II station can be used in a trunked system. The procedure for aligning the receiver IF of the station involves re-peaking the IF adjustments using an RF signal source being modulated with a 9600 baud pseudorandom data signal and using the MASTR II test set for DC meter readings. An oscilloscope is also used to observed the data signal (eye pattern) while making adjustments. Additional information can be found in the receiver maintenance manual.

Equipment Required

The equipment necessary for receiver IF adjustment is listed below. Equipment performing similar functions may also be used.

- Oscilloscope (Tektronix 468 or similar)
- Voice Guard® Digital Test Generator (19A149117P1 or similar)
- RF Signal Generator (HP-8640B or similar)
- MASTR II Test Set (4EX#A12 or similar)

Adjustment Procedure

The following procedure will align the receiver IF for optimum data detection. Refer to the receiver maintenance manual when performing this procedure.

NOTE

Use a signal generator capable of producing RF in the desired receiver frequency range. Insure that the signal generator is capable of direct FM modulation to produce constant deviation with constant input over the frequency range of 10 Hz to 4.8 kHz.

1. Connect a 9600 baud pseudorandom modulation signal (from a VG9600 module or a Voice Guard Digital Test Generator) to the modulation input of the signal generator. Set deviation for 3 kHz.
2. Set the signal generator to the operating frequency of the receiver. Connect the generator RF output to the receiver antenna.
3. Adjust the RF level out of the signal generator to produce a below-limiting reading on the **"B"** position of the MASTR II Test Set.
4. Connect an oscilloscope to **VOL/SQ HI** (IFAS Board terminal 11 in the receiver) and adjust the oscilloscope display to shown an eye pattern as shown in Figure 5.

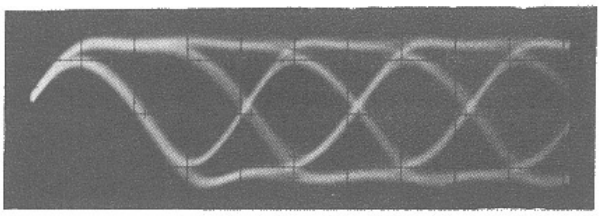


Figure 5 - Eye Pattern at VOL/SQ HI

NOTE

Receiver front-end and local oscillator must be properly aligned before adjusting the IFAS board.

5. Adjust T4 (T604), T3 (T603) and T2 (T602) on the IFAS board for peak output while staying out of limiting.

6. Adjust the MIF (**OSCILLATOR/MULTIPLIER** board) coils and crystal filter for a maximum reading (some peaks are broad) on the **"B"** position of the test set while staying out of limiting.

7. Start with the MIF crystal filter and sightly detune the MIF adjustments (each side of the peak) to find the best eye pattern display on the oscilloscope. Stay near the peak of the **"B"** reading.

8. Remove all test equipment.

REMOTE CONTROL ADJUSTMENTS

The transmitter modulation gain, the remote audio input and line output must be adjusted before placing the station in operation. Refer to the Tone Remote Control Shelf maintenance manual for these adjustment.

REPEATER CONTROL ADJUSTMENT

The repeater drop-out delay tuning and three-minute limit timing must be adjusted before placing the station in operation. Refer to the MASTR II Repeater Station Control Shelf Maintenance Manual for these adjustments.

STATION ALIGNMENT

The complete station alignment procedure for a trunked system is contained in the appendix. This procedure should be performed when the system is first installed and thereafter as necessary when repairs or replacements are made. The procedure may also be used as a test procedure.

PREVENTIVE MAINTENANCE

To insure high operating efficiency and to prevent mechanical and electrical failures from interrupting system operations, routine checks should be made of all mechanical and electrical parts at regular intervals. This preventive maintenance should include the checks as listed in Table 1.

TEST AND TROUBLESHOOTING PROCEDURES

Refer to the individual equipment manuals for detailed information on adjustment and troubleshooting. Interconnection diagram, schematics and parts list are provided in this manual to assist in isolating a problem down to a particular piece of equipment.

Table 1 - Routine Maintenance

MAINTENANCE CHECKS	INTERVAL BETWEEN CHECKS **6 MONTHS**	**AS REQUIRED**
Transmitter Alignment Compare meter readings at transmitter multiplier metering jacks with voltages read during initial tune up. Touch up multiplier tuning. Check power output (see alignment procedure for transmitter).		X
Receiver While receiving an unmodulated signal on the station frequency(ies), adjust **OSC-1** trimmer for a zero discriminator reading (see the receiver alignment procedure).		X
Transmission Line Check for positive indication of pressure of transmission line pressure gauge (if pressurized line is used).	X	
Antenna Check antenna and mast for mechanical stability.	X	
Mechanical Inspection Visually check cables, plugs, sockets, terminal boards and components for good electrical connections. Checks for tightness of nuts, bolts and screws to make sure that nothing is working loose from its mounting.	X	
Cleaning Use a vacuum cleaner to remove dust which has accumulated inside the Cabinet.	X	
Frequency check Check transmitter frequency and deviation as required.	X	

APPENDIX A

SYSTEM ALIGNMENT GUIDE

This document is intended as a guide to aligning a PST system in the field. This procedure may also be used as a test of some of the important parameters associated with the stations and GETCs. Each channel should be taken off line through the use of the system manager as it is aligned if it is required to keep the system operational throughout this procedure.

Make preliminary setups as follows:

1. Turn the DELAY TIMER on the Repeater Control board counter-clockwise to its minimum value.

2. Turn the LIMIT TIMER on the Repeater Control board clockwise to its maximum value.

3. For 800 MHz only. Confirm switches S1-1 thru S1-7 and S2-1 thru S2-4 on the GETC are set properly for the station transmit frequency. See Appendix A of the GETC service manual LBI for the setting of these switches for any transmit frequency.

4. Set switches S3-1 thru S3-5 on the GETC for the proper channel number.

The following tests are to be performed in sequence. It may be useful to record results or simply check off as steps are completed on the data sheets. The following test equipment is required:

Audio Oscillator
H.P. 204D or equiv.

D.M.M. (with dB scale)
Fluke 8050A or equiv.

Signal Generator
H.P. 8640B or equiv.

Communication System Analyzer
IFR FM/AM-1200S or equiv.

1. This test confirms the station microphone circuitry is working and sets the maximum deviation for high speed data and voice signals. Proceed as follows:

   a. Kill the GETC by disconnecting the power connection (P10) from J10.

   b. Inject a 1 kHz tone at 33 mV RMS (through a 22 µF capacitor) into the MIC Preamp input. Connect the + end of the capacitor to TB1201-4. Connect the audio generator to the - side of the capacitor and to TB1201-3. Set the LOCAL MIC control on the 10V Regulator board to maximum (fully clockwise).

   c. Key the transmitter by connecting the PTT lead (TB1201-2 on the backplane board) to ground.

   d. Adjust the audio modulation limiting pot. on the exciter board (R104 for 400 MHz, R52 for 800 MHz) to produce 3750 Hz ±100 Hz deviation. *For NPSPAC, use 3000 Hz ±50 Hz.*

   e. Unkey the transmitter and remove the input audio. Set the LOCAL MIC control on the 10V Regulator board to its mid-range position.

2. This test adjusts the repeater audio, the line output level, and the analog voter levels if applicable. Proceed as follows:

   a. Connect an on-frequency RF signal at a 100 µV level to the receiver antenna jack. Modulate this signal with a 1 kHz tone to produce a deviation of 3000 Hz. *For NPSPAC, use 2400 Hz.*

   b. Verify the transmitted tone is 1000 Hz and adjust the REP TX LEVEL on the Repeater Audio board to produce 3000 ±100 Hz deviation in the transmitted signal (2400 ±50 Hz for NPSPAC). *Note: It may be required to turn the injected RF off and then back on to cause the station to transmit again once the transmitter limit timer has expired.*

c. Establish a max. telephone level. See Appendix A for a discussion of phone lines and max. telephone levels.

d. Terminate the 4-wire receive audio output (TB1201-10 & 11 on the control shelf backplane board with a 600 ohm load paralleled with a high impedance audio level meter. (If attached in the system, this connection may provide a 600 ohm load already.) Adjust the LINE OUTPUT control on the control shelf Audio board for an output level equal to 10 dB below the voice grade telephone lines' max. telephone level.

e. In a voting configuration; verify the presence of the 1000 Hz tone on the front jacks of the analog voter's receiver card. Connect the audio level meter to these front jacks and adjust the pot. To obtain a -20 dBm level.

f. In a voting configuration; connect the audio level meter to the output audio on the analog voters' audio module. Kill the digital portion of the voter by switching off the main power supply to the digital voter. At this time verify that the appropriate analog receiver module's yellow and green lamps are lit. *Note: It may be required to turn the injected RF off and then back on to cause the station to transmit again once the transmitter limit timer has expired*. Set the analog voter output level by adjusting the pot. on the analog voter audio module. The voter output should be equal to 10 dB below the voice grade telephone lines' max. telephone level. Measure the audio level at the station line input (TB1201-17 & 18) in order to discern the line loss to be expected. Reapply power to the voter GETCs.

g. Raise the input deviation to 5.0 kHz. Verify the output deviation is 3500 ±200 Hz. (3000 ±50 Hz for NPSPAC).

h. Remove the signal input and verify that the station unkeys. Insert the signal input and verify that the station keys.

3. With the station keyed, measure the transmitter output frequency. It must be within 500 Hz of the specified frequency or within ±1 ppm; whichever is tighter.

4. With the station keyed, measure the transmitter RF output power level. It must be 100 ±5 watts. If necessary, adjust the power control pot. on the power amplifier assembly. Measure that the power output of the combiner is in line with the combiner specifications. Disconnect the receiver test equipment.

5. This test sets the station transmit compression amplifier and adjusts the transmitter deviation for the station 4-wire audio input. Proceed as follows:

   a. Connect a 1000 Hz tone at a level 4 dB (6.5 dB for NPSPAC) below the voice grade telephone lines' max. telephone level minus the expected line loss to the 4-wire transmit audio input at TB1201-17 & 18 on the control shelf backplane board. *Another alternative is to connect the tone at a level 4 dB (6.5 dB for NPSPAC) below the voice grade lines' max. telephone level at the sending end that eventually connects to the station's 4-wire transmit audio input.*

   b. Connect an audio level meter to pin P8-6 with respect to chassis of the station receiver/exciter door. This point measures the level of the audio being fed to the transmitter.

   c. Set the LINE INPUT level and the REM TX level on the control shelf Audio board to their maximum (fully clockwise) position.

   d. Key the transmitter with the REM PTT switch and note the meter reading. Now, continue to key the transmitter and slowly turn the LINE INPUT pot. in the counter-clockwise direction until the level meter reads 1 dB lower. This sets the threshold level of the compression amplifier to about 5 dB below max. telephone level (7.5 dB for NPSPAC) so that the max. telephone level will be operating at about 5 dB (7.5 dB for NPSPAC) into compression.

   e. Reduce the 1000 Hz tone to a level 10 dB below the voice grade telephone lines' max. telephone level minus the expected line loss. *Or just 10 dB below the alignment level at the sending end.*

f. Turn the REM TX pot. fully counter-clockwise, then, while keying the transmitter, turn it slowly clockwise until the transmitter carrier is deviated 3000 Hz ±100 Hz. (2400 ±50 Hz for NPSPAC).

g. Unkey the transmitter. Disconnect all test equipment, restart the GETC by placing jumper J30 in its normal position from 2-3, and reconnect all cables to their normal connections.

6. This test sets the high speed data output level. Proceed as follows:

   a. Force this channel to transmit high speed data. If the system is capable of dip switch controlled test modes then set the dip switches as necessary to run the test where the transmitter will be keyed, and the high speed data path will be enabled and send continuous 2400 Hz tone (this may be referred to as test "C"). *At the tine of this writing this is accomplished by setting S2-8 to the open position (1) and S3-1 through S3-6 to 010000. Remember to reset the GETC after setting the dip switches.* If the system is not capable of these test modes then one of the following may be used: 1) Force the channel to assume operation as the control channel by turning all other channels off or configuring the channel as the control channel through the use of the system manager; or 2) Make a Voice Guard transmission on this channel.

   b. Confirm the deviation produced by the high speed data is 3000 Hz (±100 Hz). (2400 ±50 Hz for NPSPAC). If necessary, adjust R31 on the GETC board.

7. This test sets the low speed data output level. Proceed as follows:

   a. If the system is capable of dip switch controlled test modes then set the dip switches as necessary to run the test where the transmitter will be keyed, and the repeat audio path will be enabled and send continuous 25 Hz tone (this may be referred to as test "B"). *At the time of this writing this is accomplished by setting S2-8 to the open position (1) and S3-1 through S3-6 to 100000. Remember to reset the GETC after setting the dip switches.* Continue on to step c.

   b. If the system is not capable of dip switch controlled test modes then force this channel to assume operation as a working channel. Key into this channel from a portable or mobile with no modulation. *Hold a finger or hand over the microphone input.*

   c. Confirm the deviation produced by the low speed data is 750 Hz (±100 Hz). If necessary, adjust the LOW SPEED MODULATION LEVEL (R50) (CHANNEL GUARD MODULATION LEVEL) pot. on the receiver/exciter door.

8. This test sets the 1950 Hz tone level if present. This test is for a voting configuration.

   a. Terminate the 4-wire receive audio output (TB12-10 & 11 on the control shelf backplane board) with a 600 ohm load paralleled with a high impedance audio level meter. (If attached in he system, this connection may provide a 600 ohm load already.)

   b. Confirm the presence of a 1950 Hz tone at the voice max. telephone level. If necessary, adjust the level pot. on the top of the 1950 Hz tone card. *See discussion in Appendix A!*

9. This test sets the modem levels for a station remotely located from the voter in a voting configuration.

   a. Adjust R2 (PH TX ADJ), on the GETC, to produce 10 dB below the data grade line max. telephone level on J6-8 and J6-9.

   b. Adjust R2 on the applicable Digital Receiver GETC in the voter in a similar manner.

   c. Adjust R1 (PH RX ADJ), on the GETC, for 0.11 volts RMS measured on U18-1.

   d. Adjust R1 on the applicable Digital Receiver GETC in the voter in a similar manner.

PST STATION TEST

TESTED BY _____ DATE _____

DIVISION _____ SITE _____

CHANNEL # _____

1.	TRANSMITTER LIMITER	(3750 Hz)	_____
2.	B. REP TX LEVEL	(3000Hz)	_____
	C. SYSTEM VOICE ALIGNMENT LEVEL		
	SYSTEM DATA ALIGNMENT LEVEL		
	D. LINE OUTPUT	(voice align.-10)	_____
	E. ANALOG VOTER INPUT	(-20 dBm)	_____
	F. ANALOG VOTER OUTPUT	(align.-10)	_____
	EXPECTED LINE LOSS		_____
	G. REP LIMITING	(3500 Hz)	_____
3.	TRANSMITTER FREQUENCY		_____
4.	CHANNEL POWER OUT	(100 WATTS)	_____
	COMBINER POWER OUT		_____
5.	D. LINE INPUT COMPRESSOR THRESHOLD		_____
	F. REM TX LEVEL	(3000 Hz)	_____
6.	HIGH SPEED DEVIATION	(3000 Hz)	_____
7.	LOW SPEED DEVIATION	(750 Hz)	_____
8.	1950 Hz	(voice sys. align.)	_____
9.	A. STATION R2	(data align. -10 dB)	_____
	B. VOTER R2	(data align. -10 dB)	_____
	C. STATION R1	(0.11 volts RMS)	_____
	D. VOTER R1	(0.11 volts RMS)	_____

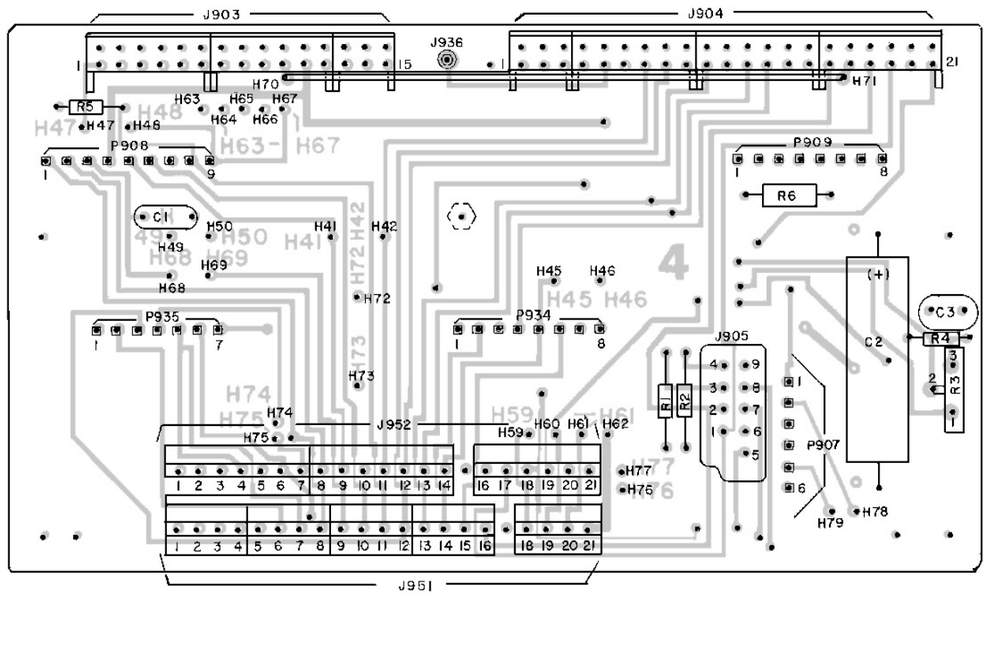
APPENDIX A PHONE LINES AND TEST TONE LEVELS

Max. telephone level. This is the maximum level that can be put through the phone lines without limiting and without interfering with other lines. The telephone company will tell you what the max. telephone level is. They will either give the level to you in Volume Units (VU) or test tone or TLP. VU is average voice which is generally considered to be 10 dB below max. telephone level. Test tone is normally given in dBm and is equal to the max. telephone level. WARNING: Some telephone companies refer to average voice as test tone. These telephone companies have a figure that they call TLP. The TLP level is 3 dB above the max. telephone level referred to in this document. In a number of cases the user will provide wires within his building or his complex of buildings. Normally these are short and involve very little loss. In this case, a max. telephone level of 10 dBm is appropriate.

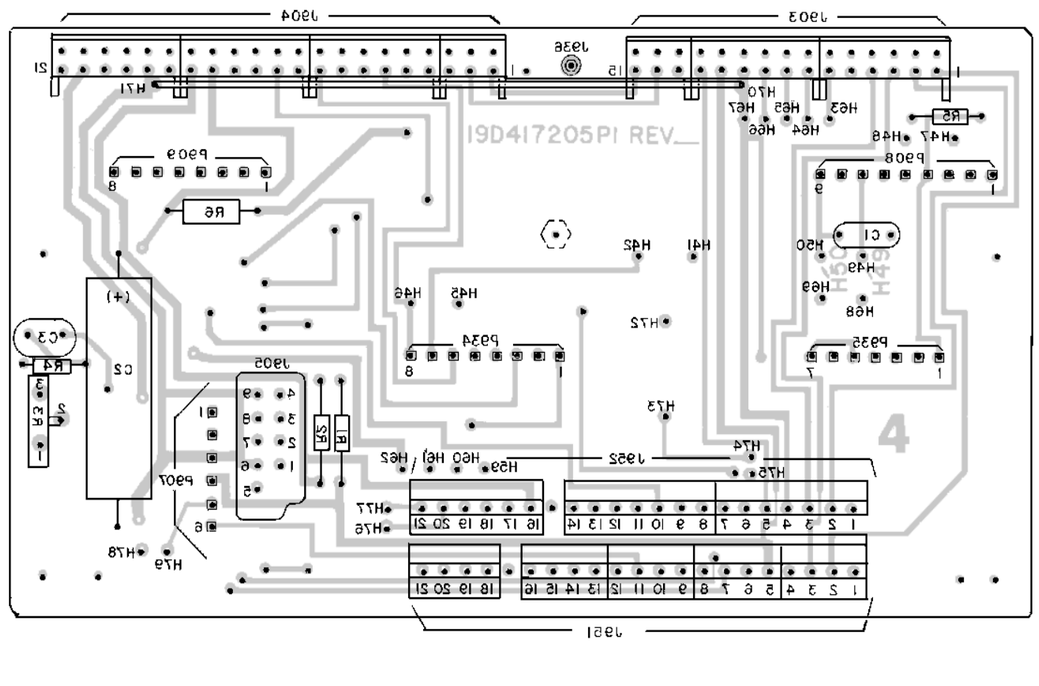
Phone line grades. All phone lines carrying data must be type 3002 data grade lines without additional conditioning. There will be a separate max. telephone level for the data grade lines and the voice grade lines. Type 2000 voice grade lines are sufficient for voice channels with the following exception. The 1950 Hz tone must arrive at the voter at a level not less than -30 dBm. This can cause difficulties. For instance, if you order a voice grade line and don't specify the loss you would normally get a line with 10 dB of loss at 1000 Hz. The 1950 Hz loss will normally be 8 dB or more than at 1000 Hz. By adding the 4 dB long-term variation and the 3 dB short-term variation, the worst case 1950 Hz loss would be 25 dB. It then follows that you cannot send any lower than -5 dBm. If the phone company will not allow you to send continuous tone as high as -5 dBm, then you will have to ask for a lower loss circuit or add conditioning.

In addition. When ordering phone line for a voting system, if possible, get all voice lines of the same type with similar characteristics. This will held to prevent strange changes in pitch and intensity as a signal is voted between sites.

COMPONENT SIDE



SOLDER SIDE

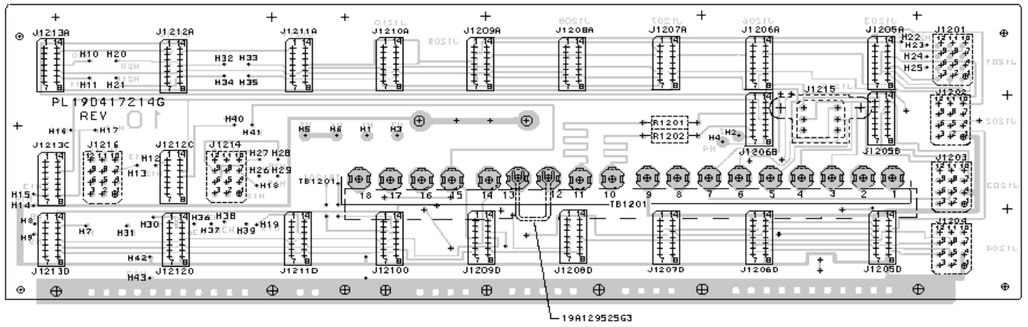


REFER TO WIRING DIAGRAM FOR THE FOLLOWING CONNECTION S	
FROM	TO
H41	H42
H50	H77
H45	H46
H47	H48
H68	H69
H49	H76

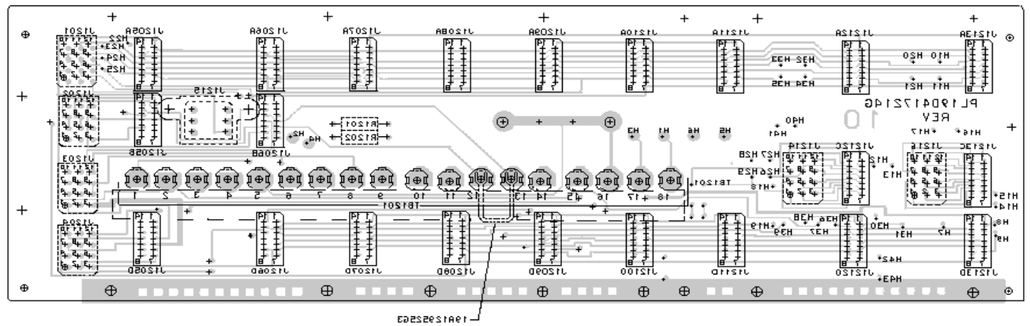
SYSTEM BOARD A901
19D417213G1

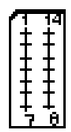
(19D423147, Sh. 1, Rev. 2)
(19D417205, Sh. 3, Rev. 4)
(19D417205, Sh. 2, Rev. 4)

COMPONENT SIDE

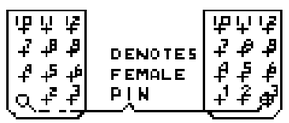


COMPONENT SIDE





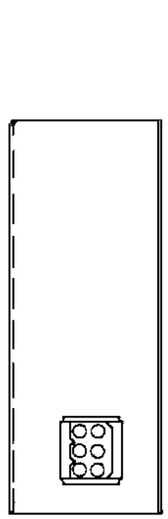
TYP. MOUNTING
FOR J1205 - J1213

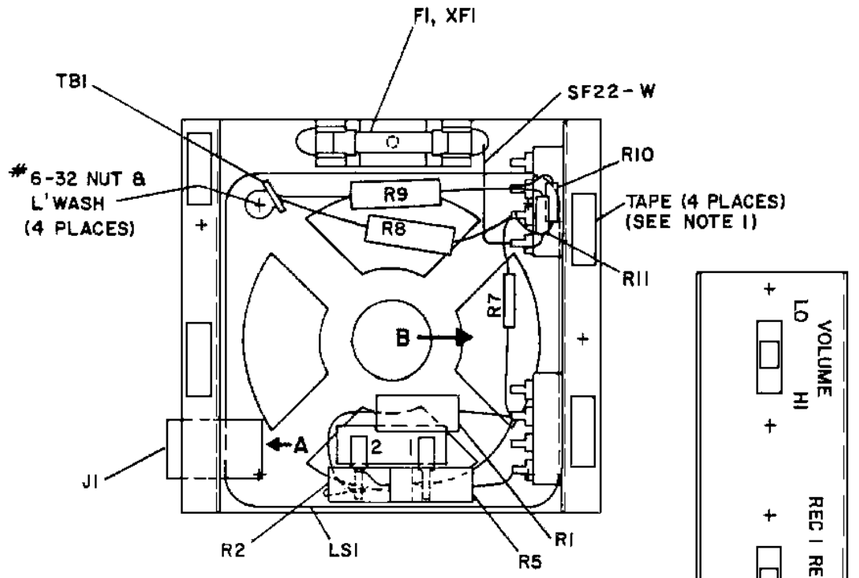


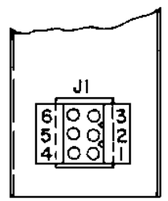
TYP. MOUNTING
FOR J1202 & 1204
FARSIDE VIEW

CONTROL SHELF MOTHER BOARD
19D417214G1

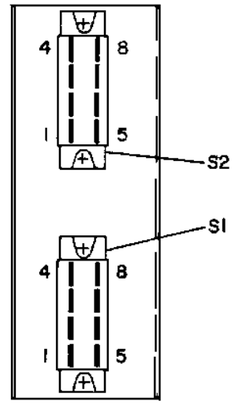
(19D423897, Sh. 1, Rev. 7)
(19D423597, Sh. 1, Rev. 10)
(19D423597, Sh. 2, Rev. 10)







VIEW A

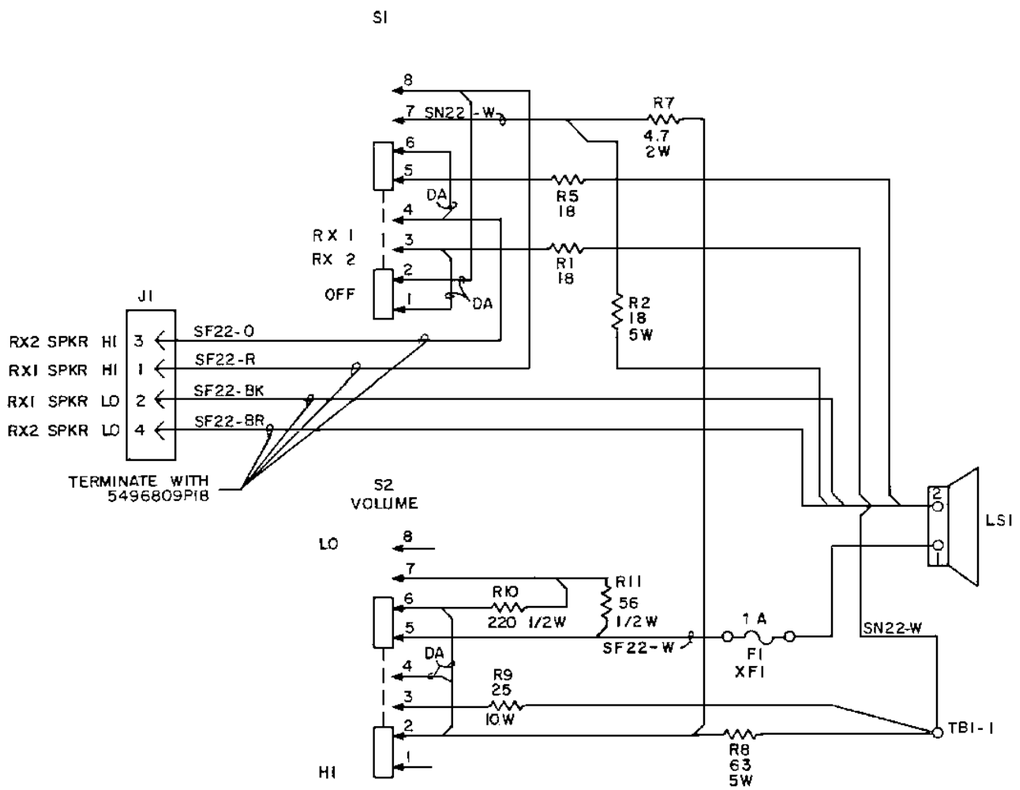


VIEW B

NOTES:
1. INSTALL TAPE ALONG FLANGE, ONE ON EACH SIDE OF MOUNTING HOLES.

SERVICE SPEAKER
19C328482G2

(19D328482, Sh. 1, Rev. 3)



SEE APPLICABLE PRODUCTION CHANGE SHEETS IN INSTRUCTION BOOK SECTION DEALING WITH THIS UNIT, FOR DESCRIPTION OF CHANGES UNDER EACH REVISION LETTER.

THIS ELEM DIAG APPLIES TO:

MODEL NO.	REV LETTER
PL19C320728G2	G

ALL RESISTORS ARE 5 WATT UNLESS OTHERWISE SPECIFIED AND RESISTOR VALUES IN OHMS UNLESS FOLLOWED BY K=1000 OHMS OR MEG=1,000,000 OHMS. CAPACITOR VALUES IN PICOFARADS (EQUAL TO MICROMICROFARADS) UNLESS FOLLOWED BY UF=MICROFARADS. INDUCTANCE VALUES IN MICROHENRYS UNLESS FOLLOWED BY MH=MILLIHENRYS OR H=HENRYS.

SERVICE SPEAKER
19C328482G2

(19C320731, Sh.1, Rev. 9)

LBI4816E
SERVICE SPEAKER
19C320728G2

SYMBOL	PART NO.	DESCRIPTION
		- - - - - - - - - - - - FUSES - - - - - - - - - - - -
F1*	1R16P3	Quick blowing: 1 amp at 250 v; sim to Littelfuse 312001 or Bussmann AGC-1.
		In REV E & earlier:
	1R16P1	Quick blowing: 1/2 amp at 250 v; sim to Littelfuse 312.500 or Bussmann AGC-1/2.
		In REV D:
	1R16P14	Quick blowing: 3/8 amp 250 v; sim to Littelfuse 312.375 or Bussmann AGC-3/8.
		- - - - - - - - JACKS AND RECEPTACLES - - - - - - - -
J1		Connector. Includes:
	19B209288P22	Shell.
	5496809P18	Contact, pin: male, sim to Molex Products 1380-T.
		- - - - - - - - - - LOUDSPEAKERS - - - - - - - -
LS1	19A115964P1	Permanent magnet: 3.5 inch, 18 ohms ±10% imp, 15 to 19 ohms ±20% DC res, resonant frequency 290 Hz; sim to Oaktron S-9847.
		- - - - - - - - - - RESISTORS - - - - - - - - -
R1	5493035P53	Wirewound: 18 ohms ±5%, 5 w.
R2	5493035P3	Wirewound: 2 ohms ±5%, 5 w; sim to Hamilton Hall Type HR. Deleted by REV D.
	5493035P53	Wirewound: 18 ohms ±5%, 5 w. Added by REV F.
R3*	19B209490P1	Variable, wirewound: 35 ohms ±20%, 2.25 w; sim to CTS Type 118. Deleted by REV D.
R4*	5493035P2	Wirewound: 1 ohm ±5%, 5 w. Deleted by REV C.
R5*	5493035P3	Wirewound: 18 ohms ±5%, 5 w; sim to Hamilton Hall Type HR. Added by REV B.
R6*	5493035P27	Wirewound: 10 ohms ±5%, 5 w; sim to Hamilton Hall Type HR. Added by REV C. Deleted by REV D.
R7*	19A700050P21	Wirewound: 4.7 ohms ±10%, 2 w. Added by REV D.
R8*	5493035P17	Wirewound: 63 ohms ±5%, 5 w; sim to Hamilton Hall Type HR.
		In REV D:
	3R78P620J	Composition: 62 ohms ±5%, 1 w. Added by REV D.
R9*	5493035P44	Wirewound: 25 ohms ±5%, 10 w; sim to Hamilton Hall Type HR.
		In REV D:
	19B209022P48	Wirewound: 24 ohms ±5%, 2 w. Added by REV D.
R10*	19A700113P47	Composition: 220 ohms ±5%, 1/2 w. Added by REV D.
R11*	19A700113P33	Composition: 56 ohms ±5%, 1/2 w. Added by REV D.
		- - - - - - - - - - SWITCHES - - - - - - - - -
S1	19B209261P5	Slide: DPDT, sim. to Switchcraft 11D1033B.
S2*	19B209261P5	Slide: DPDT, sim. to Switchcraft 11D1033B. Added by REV D.
		- - - - - - - - - TERMINAL BOARDS - - - - - - - - -
TB1*	7775500P44	Phenolic: 1 insulated, 1 ground. Added by REV D.

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES.

SYMBOL	PART NO.	DESCRIPTION
		- - - - - - - - - - SOCKETS - - - - - - - - - -
XF1*	7141008P1	Fuseholder: 30 amps at 125 v; sim to Bussmann 3998. Added by REV D.
		- - - - - - - - - MISCELLANEOUS - - - - - - - - -
	4032480P1	Nut, sheet spring: sim to Vector Electronic Co. No. 440. (Secures S1, S2).
	19B201074P204	Tap screw, phillips POZIDRIV: No. 4-40 x 1/4. (Secures S1, S2).
	N80P13005C6	Machine screw: No. 6-32 x 5/16. (Secures Service Speaker).
	7141225P3	Hex Nut: No. 6-32. (Secures Service Speaker).
	N404P13C6	Lockwasher, internal tooth: No. 6. (Secures Service Speaker).

```
FIRST RELEASED---------------- DATE: 26 FEB 1992 - APPROVED: DCB
REVISIONS:-------------------------------------------------------------------
REV  1 - RECORD - ADDED PARTS - DATE: 14 APR 1992 - APPROVED: DCB/MH CARWILE
-------------------------------------------------------------------------------
REV  2 - RECORD - ADDED PARTS - DATE:  4 JUN 1992 - APPROVED: DCB/MH CARWILE
added parts 121 & 131
add parts 600 -604
add part 14
modified part45 to make clear
added additional info on part 120-121
modified part 70 to make wiring of pins 19 clearer
changed cable on part 190 & 200
changed part 210 to 3 twisted pair
changes part 232 from 53' to 53"
change part 145 and part 30 to remove shield
add part 650
change part 30-31-32 CORRECTED DESCRIPTION OF CONNECTOR
-------------------------------------------------------------------------------
REV  3 - AN-17147            - DATE: 12 JUN 1992 - APPROVED: DCB/MH CARWILE
add parts 122, 123
add parts 710-810
add parts 15, 24, 25
add parts 900, 901,902
add parts 162
change part 160-161 for connection to 1-1 & 6-6
changed part 601-604 to add connection to pins 1 & 6
changed part 31 length to 44"
changed part 70-71-72 length
changed part 190 and 200 connections at P1
-------------------------------------------------------------------------------
REV  4 - AN-17318            - DATE: 28 SEP 1992 - APPROVED: DCB/MH CARWILE
part 720 removed ref to universal syn shelf
part 780-789 add power cable for univ syn shelf
part 770-779 changed P01-10 TO P01-11
part 730 changed wire size of jumper
part 740 changed length to ref dwg and female pin number from p13 to p3
part 900 and 901 changed wire size to #14
part 600 added ref to figure 1
part 190 add black to color code
part 61,81,91,101 new parts for vax site cntl with RJ-45 connector
part 710 added dimension for length of stripped wire
part 760 changed to delete connector and add spade rings
-------------------------------------------------------------------------------
REV  5 - RECORD              - DATE: 28 OCT 1992 - APPROVED: DCB/MH CARWILE
added part 33
added part 903,905-907
added part 124-129
added part 132-138
-------------------------------------------------------------------------------
REV  6 - RECORD              - DATE: 11 JAN 1993 - APPROVED: DCB/MH CARWILE
part 120-129 length tolerance revised
part 170 add 12" to length
part 200 add 12" to length
```

(19D903880, Sh. 1, Rev 8)

```
REV  7 - AN-17673            - DATE: 28 JAN 1993 - APPROVED:DCB/MH CARWILE
         changed part 71 to add jumpers
-------------------------------------------------------------------------------
REV  8 - RECORD - added parts - DATE: __ ___ ____ - APPROVED:_________________
-------------------------------------------------------------------------------

REQUIREMENTS FOR ALL PARTS:
   (UNLESS OTHERWISE SPECIFIED IN PART DESCRIPTION)
               (OR CABLE ASSEMBLY GUIDE 344A4278)

1. CABLE LENGTH IS IN INCHES.

2. LENGTH IS MEASURED OVER CONNECTORS.

3. ALL CONNECTORS SHALL PROVIDE STRAIN RELIEF.

4. ALL DB CONNECTORS TO BE FULLY LOADED WITH PINS

5. CABLE SHALL BE MARKED WITH EGE DRAWING AND PART NUMBER.

6. ALL CONNECTORS TO HAVE GOLD FLASH OVER NICKEL ON ENTIRE
   CONTACT WITH AN ADDITIONAL .00030 ON MATING END

7. CABLE ASSEMBLY OPERATING TEMPERATURE RANGE -20 TO +80 DEG C.

8. ALL CONDUCTORS SHALL BE #24 STRANDED WIRE, EXCEPT WHERE NOTED

9. REFER TO CABLE ASSEMBLY GUIDE 344A4278 FOR ADDITIONAL INFORMATION.
```

(19D903880, Sh. 2, Rev 8)

```
CABLE FOR SYSTEM INTERCONNECTION
CABLE # IS 19D903880P---

P01 MODULAR PLUG (RJ12) SIX POSITION FOUR LOADED
       P01-2 AND P01-3 ARE A PAIR
       P01-4 AND P01-5 ARE A PAIR
          CABLE HAS 2 TWISTED PAIRS (ROUND OR OVAL)

CABLE #10  STATION AUDIO (STN CAB)
           MODEM DATA (STN CAB)
           E/M KEYING (STN CAB SPECIAL)
           CTIS AUDIO (CTIS RIC CAB)
             (SPADE LUG TO BE 4" BEYOND JACKET)     LENGTH OF CABLES (INCHES)
P01-2     SPADE LUG #6 SCREW (BLUE /WHITE)    CABLE 10   11   12   13   14   15
P01-3     SPADE LUG #6 SCREW (WHITE /BLUE)          36"  54"  60"  76   87"  97"
P01-4     SPADE LUG #6 SCREW (ORANGE /WHITE)
P01-5     SPADE LUG #6 SCREW (WHITE /ORANGE)


CABLE #20   GETC DATA TO SITE CONTROLLER (STN CAB)   CABLE 20  21  22  23  24  25
            GETC DATA TO SERIAL LINK (STN CAB)             20" 44" 60" 76" 87" 97"
            DOWNLINK TO SERIAL LINK (SITE CNTL CAB)
       DB-9 IS A MALE CONNECTOR
P01-2     DB-9 PIN 3
P01-3     DB-9 PIN 1
P01-4     DB-9 PIN 2
P01-5     DB-9 PIN 1 (TWO WIRE TO PIN 1)


CABLE #30   POWER MONITOR TO SENSOR (STN CAB)        CABLE 30  31  32   33
     PHONO CONNECTOR--                                    20" 44" 60"  76"
        --  VOLTREX 5-005 (MATES WITH SWITCHCRAFT 3501FP)
     ONE JACKETED TWISTED PAIR
P01-2    PHONO CENTER PIN
P01-3    PHONO CASE
P01-4
P01-5


CABLE #4O RIC TO LIX (STN CAB)                       CABLE 40  41  42  43
         CTIS RIC AUDIO TO LIX (CTIS CAB)                  20" 44" 60" 76"
        DB-9 IS A MALE CONNECTOR
P01-2     DB-9 PIN 3
P01-3     DB-9 PIN 2
P01-4
P01-5
```

(19D903880, Sh. 3, Rev 8)

```
CABLE #45  SITE CONTROLLER TO LIX (SITE CNTL CAB)     CABLE 45
   P02 IS A PIN MOLEX CONNECTOR (FEMALE TIN PLATED)         54"
        HOUSING  22-01-3037
        CONTACTS 08-50-0113
P01-2     P02-1
P01-3     P02-3
P01-4
P01-5

DO NOT USE  REPLACE BY CABLE 210
CABLE #50  RIC TO SERIAL LINK (STN CAB)              CABLE 50  51  52
       P02 IS A DB-9 CONNECTOR MALE                         20" 44" 60"
       P03 IS A DB-9 CONNECTOR MALE
        CABLE HAS 8 WIRES WITH SHIELD
P02-1         P03-1 DRAIN
P02-2         P03-2   A
P02-3         P03-3   B
P02-4         P03-4   C
P02-5         P03-5   D
P02-6         P03-6   E
P02-7         P03-7   F
P02-8         P03-8   G
P02-9         P03-9   H


CABLE #60 SITE CONTROLLER GETC DATA (SITE CNTL CAB)      CABLE 60
       DB-25 IS A FEMALE CONNECTOR                             54"
P01-2    DB-25 PIN 3
P01-3    DB-25 PIN 7
P01-4    DB-25 PIN 2
P01-5    DB-25 PIN 7


CABLE #61 SITE CONTROLLER GETC DATA (VAX SITE CNTL)          CABLE 61
       P01 AND PO2 ARE SHIELD 8 POSITION MODULAR CONNECTOR       54"
           AMP 5-555178-3 -----CABLE IS C&M 10217
        THESE ARE SHIELDED CONNECTORS SHIELD CONNECTS TO CASE AT BOTH ENDS
           SHILED OF MODULAR CONNECTOR CONNECTS TO FOIL OF CABLE
P01-1    P01-1  DRAIN
P01-2    P01-2
P01-3    P01-3
P01-4    P01-4
P01-5    P01-5
P01-6    P01-6
P01-7    P01-7
P01-8    P01-8
```

(19D903880, Sh. 4, Rev 8)

```
CABLE #70   POWER MONITOR TO CC (SITE CNTL CAB)                CABLE 70
      P02 IS A DB-37 CONNECTOR MALE                                36"
      HOUSING FOR P02 MUST NOT EXCEED THICKNESS OF .620 SIMILAR
        TO AMP PART 747100-1
      P03 IS A DB-37 CONNECTOR FEMALE
       CABLE HAS 9 TWISTED PAIRS WITH SHIELD
       (SHIELD CONNECTS TO CASE AT P03)
P02-01           P03-01     TX01 HI
                 P03-02     A
P02-03           P03-03     TX02 HI
                 P03-04     B
P02-05           P03-05     TX03 HI
                 P03-06     C
P02-07           P03-07     TX04 HI
                 P03-08     D
P02-09           P03-09     TX05 HI
                 P03-10     E
P02-11           P03-11     TX06 HI
                 P03-12     F
P02-13           P03-13     TX07 HI
                 P03-14     G
P02-15           P03-15     TX08 HI
                 P03-16     H
P02-17           P03-17     TX09 HI
                 P03-18     I
P02-19
                 P03-19
P02-20           P03-20     TX01 LO
                 P03-21     A
P02-22           P03-22     TX02 LO
                 P03-23     B
P02-24           P03-24     TX03 LO
                 P03-25     C
P02-26           P03-26     TX04 LO
                 P03-27     D
P02-28           P03-28     TX05 LO
                 P03-29     E
P02-30           P03-30     TX06 LO
                 P03-31     F
P02-32           P03-32     TX07 LO
                 P03-33     G
P02-34           P03-34     TX08 LO
                 P03-35     H
P02-36           P03-36     TX09 LO
                 P03-37     I
P02-ALL OTHER PINS ARE NOT CONNECTED
```

(19D903880, Sh. 5, Rev 8)

```
CABLE #71  POWER MONITOR TO CC (SITE CNTRL CAB)        CABLE 71
      P02 IS A DB-9 CONNECTOR MALE                          36"
      P03 IS A DB-15 CONNECTOR FEMALE
     HOUSING FOR P02 MUST NOT EXCEED THICKNESS OF .620
    CABLE HAS 4 TWISTED PAIRS WITH SHIELD
     (SHIELD CONNECTS TO CASE AT P03)
       JUMPER
P02-01           P03-01     ANT01F HI
P02-02           P03-02     ANT01R HI
P02-03           P03-03     ANT02F HI
P02-04           P03-04     ANT02R HI
          A      P03-05     ANT03F HI
          B      P03-06     ANT03R HI
          C      P03-07     ANT04F HI
          D      P03-08     ANT04R HI
P02-06           P03-09     ANT01F LO
P02-07           P03-10     ANT01R LO
P02-08           P03-11     ANT02F LO
P02-09           P03-12     ANT02R LO
          A      P03-13     ANT03F LO
          B & D  P03-14     ANT03R LO ANT04R LO
          C      P03-15     ANT04F LO
P02-05
```

(19D903880, Sh. 6, Rev 8)

```
CABLE #72  POWER MONITOR TO CC (SITE CNTL CAB)          CABLE 72
    P02 IS A DB-9  CONNECTOR MALE                          36"
    P03 IS A DB-25 CONNECTOR FEMALE
      HOUSING FOR P02 MUST NOT EXCEED THICKNESS OF .620
              CABLE HAS 2 TWISTED PAIRS WITH SHIELD
              (SHIELD CONNECTS TO CASE AT P03)
P02-01          P03-01     TX19  HI
                P03-02     AA
P02-03          P03-03     TX20 HI
                P03-04     BB
                P03-05
                P03-06
                P03-07
                P03-08
                P03-09
                P03-10
                P03-11
                P03-12
                P03-13
P02-06          P03-14     TX19 LO
                P03-15     AA
P02-08          P03-16     TX20 LO
                P03-17     BB
                P03-18
                P03-19
                P03-20
                P03-21
                P03-22
                P03-23
                P03-24
                P03-25
P02-ALL OTHER PINS ARE NOT USED
```

(19D903880, Sh. 7, Rev 8)

```
CABLE 80 LIX TO SITE CONTROLLER (SITE CNT CAB)      CABLE 80
    P01 DB-9 MALE                                     54"
    P02 DB-25 FEMALE
P01-01      P02-01      SHIELD
P01-02      P02-07      SIGNAL GND
P01-03
P01-04
P01-05
P01-06
P01-07      P02-02      RX DATA
P01-08
P01-09      P02-03      TX DATA
            P02-04
            P02-05
            P02-06
            P02-08
            P02-09
            P02-10
            P02-11
            P02-12
            P02-13
            P02-14
            P02-15
            P02-16
            P02-17
            P02-18
            P02-19
            P02-20
            P02-21
            P02-22
            P02-23
            P02-24
            P02-25

CABLE 81 LIX TO SITE CONTROLLER (VAX SITE CNT CAB)      CABLE 81
    P01 DB-9 MALE                                         54"
    PO2 IS A SHIELD 8 POSITION MODULAR CONNECTOR
          AMP 5-555178-3 -----CABLE IS C&M 10217
          SHILED OF MODULAR CONNECTOR CONNECTS TO FOIL OF CABLE
P01-01      P02-01      SHIELD  (DRAIN WIRE)
P01-07      P02-02      RX DATA
P01-09      P02-03      TX DATA
            P02-04
            P02-05
            P02-06
P01-02      P02-07      SIGNAL GND
            P02-08
P01-03
P01-04
P01-05
P01-06
P01-08
```

(19D903880, Sh. 8, Rev 8)

```
CABLE #90 GETC  TO EMULEX PANEL                        CABLE 90
      P01 DB-9    MALE              (SITE CNTL CAB)     54"
      P02 DB-25 FEMALE
                P02-01     SHIELD
P01-01          P02-07     SIGNAL GND
P01-02          P02-02     RX DATA
P01-03          P02-03     TX DATA
P01-04
P01-05
P01-06
P01-07
P01-08
P01-09

                P02-04
                P02-05
                P02-06
                P02-08
                P02-09
                P02-10
                P02-11
                P02-12
                P02-13
                P02-14
                P02-15
                P02-16
                P02-17
                P02-18
                P02-19
                P02-20
                P02-21
                P02-22
                P02-23
                P02-24
                P02-25
```

(19D903880, Sh. 9, Rev 8)

```
CABLE #91 GETC  TO EMULEX PANEL                        CABLE 91
      P01 DB-9    MALE           (VAX SITE CNTL CAB)     54"
      PO2 IS A SHIELD 8 POSITION MODULAR CONNECTOR
           AMP 5-555178-3 -----CABLE IS C&M 10217
           SHILED OF MODULAR CONNECTOR CONNECTS TO FOIL OF CABLE
                P02-01     SHIELD
P01-02          P02-02     RX DATA
P01-03          P02-03     TX DATA
                P02-04
                P02-05
                P02-06
P01-01          P02-07     SIGNAL GND
                P02-08

P01-04
P01-05
P01-06
P01-07
P01-08
P01-09
```

(19D903880, Sh. 10, Rev 8)

CABLE # 100 POWER MONITOR TO SITE CONTROLLER CABLE 100
TU TO SITE CONTROLLER (SITE CNTL CAB) 54"
ACU TO SITE CONTROLLER
P01 DB-25 MALE
P02 DB-25 FEMALE

P01-01	P02-01	SHIELD	
P01-03	P02-02	TX DATA	
P01-02	P02-03	RX DATA	
P01-04		JUMPER A	
P01-05		JUMPER A	
P01-06		JUMPER B	
P01-07	P02-07	SIGNAL GND	
P01-08			
P01-09			
P01-10			
P01-11			
P01-12			
P01-13			
P01-14			
P01-15			
P01-16			
P01-17			
P01-18			
P01-19			
P01-20		JUMPER B	
P01-21			
P01-22			
P01-23			
P01-24			
P01-25			
	P02-04		
	P02-05		
	P02-06		
	P02-08		
	P02-09		
	P02-10		
	P02-11		
	P02-12		
	P02-13		
	P02-14		
	P02-15		
	P02-16		
	P02-17		
	P02-18		
	P02-19		
	P02-20		
	P02-21		
	P02-22		
	P02-23		
	P02-24		
	P02-25		

(19D903880, Sh. 11, Rev 8)

CABLE # 101 POWER MONITOR TO SITE CONTROLLER CABLE 101
TU TO SITE CONTROLLER (VAX SITE CNTL CAB) 54"
ACU TO SITE CONTROLLER
P01 DB-25 MALE
PO2 IS A SHIELD 8 POSITION MODULAR CONNECTOR
AMP 5-555178-3 -----CABLE IS C&M 10217
SHILED OF MODULAR CONNECTOR CONNECTS TO FOIL OF CABLE

P01-01	P02-01	SHIELD	
P01-03	P02-02	TX DATA	
P01-02	P02-03	RX DATA	
	P02-04		
	P02-05		
	P02-06		
P01-07	P02-07	SIGNAL GND	
	P02-08		
P01-04		JUMPER A	
P01-05		JUMPER A	
P01-06		JUMPER B	
P01-08			
P01-09			
P01-10			
P01-11			
P01-12			
P01-13			
P01-14			
P01-15			
P01-16			
P01-17			
P01-18			
P01-19			
P01-20		JUMPER B	
P01-21			
P01-22			
P01-23			
P01-24			
P01-25			

(19D903880, Sh. 12, Rev 8)

CABLE #110 MODEM TO SITE CONTROLLER (SITE CNTL CAB) CABLE 110
P01 DB-25 MALE 54"
P02 DB-25 FEMALE

P01-01	P02-01	SHIELD
P01-02	P02-02	TX DATA
P01-03	P02-03	RX DATA
P01-04	P02-04	RTS
P01-05	P02-05	CTS
P01-06	P02-06	DSR
P01-07	P02-07	SIGNAL GND
P01-08	P02-08	DCD
P01-09		
P01-10		
P01-11		
P01-12		
P01-13		
P01-14		
P01-15		
P01-16		
P01-17		
P01-18		
P01-19		
P01-20	P02-20	DTR
P01-21		
P01-22		
P01-23		
P01-24		
P01-25		
	P02-09	
	P02-10	
	P02-11	
	P02-12	
	P02-13	
	P02-14	
	P02-15	
	P02-16	
	P02-17	
	P02-18	
	P02-19	
	P02-21	
	P02-22	
	P02-23	
	P02-24	
	P02-25	

(19D903880, Sh. 13, Rev 8)

CABLE #120 CABINET TO CABINET CABLE 120 121 122 123 124 125 126
TELCO CONNECTOR 25 TWISTED PAIR SHEILDED 5FT 15FT 7FT 10FT 20FT 25FT
30FT
AMP # 5-555012-1 OR 5-555012-2
(RT ANGLE CASE, WITH BAIL LOCK MATING 127 128 129
CABLE TO EXIT ON PIN 1/26 END) 35FT 40FT 50FT
P01 AND P02 MALE CONNECTOR
WIRE SIZE #28 STRANDED
STRAIGHT THROUGH CONNECTION 1-1, 2-2 ETC.
SHIELD CONNECT TO CASE BOTH ENDS
CABLE TO MARKED WITH COM-NET ERICSSON NUMBER 19D903880P120 FOR 5’ OR
19D903880P121 FOR 15’ CABLE

CABLE #130 SERIAL LINK CABINET TO CABINET CABLE 130 131 132 133 134 135
P01 ABD P02 DB-15 MALE CONNECTOR 5FT 15 FT 20FT 25FT 30FT 35FT
STRAIGHT THROUGH CONNECTION 1-1, 2-2 ETC.
SHIELD CONNECT TO CASE BOTH ENDS 136 137 138
40FT 45FT 50FT

NOT USED ON NEW DESIGN CABLE 140
CABLE #140 RIC TO SITE CONTROLLER (SITE CNTL CAB) CABLE 140
P01 DB-9 MALE 54"
P02 DB-25 FEMALE

P01-01	P02-01	SHIELD
P01-02		
P01-03		
P01-04	P02-07	SIGNAL GND
P01-05		
P01-06		
P01-07	P02-02	RX DATA
P01-08		
P01-09	P02-03	TX DATA
	P02-04	
	P02-05	
	P02-06	
	P02-08	
	P02-09	
	P02-10	
	P02-11	
	P02-12	
	P02-13	
	P02-14	
	P02-15	
	P02-16	
	P02-17	
	P02-18	
	P02-19	
	P02-20	
	P02-21	
	P02-22	
	P02-23	
	P02-24	
	P02-25	

(19D903880, Sh. 14, Rev 8)

```
CABLE #145 RIC TO SITE CONTROLLER (SITE CNTL CAB)    CABLE 145
           NEW SERIAL MODULE WITH RJ-11 REPLACING DB-9      54"
       P01 RD-11 SIX CIRCUIT FOUR LOADED
       P02 DB-25 FEMALE
                 P02-01
P01-04           P02-03     TX DATA
P01-05           P02-02     RX DATA
P01-03           P02-07     SIGNAL GND
P01-01
P01-02
P01-06
                 P02-04
                 P02-05
                 P02-06
                 P02-08
                 P02-09
                 P02-10
                 P02-11
                 P02-12
                 P02-13
                 P02-14
                 P02-15
                 P02-16
                 P02-17
                 P02-18
                 P02-19
                 P02-20
                 P02-21
                 P02-22
                 P02-23
                 P02-24
                 P02-25
```

```
CABLE # 150 POWER CONNECTOR TO BACKUP DOWNLINK GETC      CABLE 150
      1 PAIR #16 RED/BLACK                              60"
        TERMINATED BOTH ENDS WITH SPADE LUGS FOR #6 SCREW

CABLE #160 SIMULCAST TX SITE RESET                       CABLE 160  161  162
  P01/P02 MODULAR PLUG (RJ11) SIX POSITION FOUR LOADED          20"   72"  10FEET
        P01-1 AND P01-6 ARE A PAIR
        P01-2 AND P01-3 ARE A PAIR
        P01-4 AND P01-5 ARE A PAIR
           CABLE HAS 3 TWISTED PAIRS (ROUND OR OVAL)
P01-1         P02-1
P01-2         P02-2
P01-3         P02-3
P01-4         P02-4
P01-5         P02-5
P01-6         P02-6
```



```
CABLE #170 SIMULCAST TX SITE (TUAI GETC)
  P01 MODULAR PLUG (RJ11) SIX POSITION SIX LOADED
  P02 IS A DB-9 MALE
           CABLE HAS 6 WIRES (ROUND OR OVAL)
P01-1         P02-1                                  CABLE 170
P01-2         P02-2                                        72"
P01-3         P02-3
P01-4         P02-4
P01-5         P02-5
P01-6         P02-9


CABLE #180 SITE CONTROLLER (DOWNLINK TO DIST PANEL)
  P01 DB-9 MALE      (OLD SYSTEM)
  P02 DB-9 MALE (MARK THIS CONNECTOR P02)
           CABLE HAS 2 PAIR CABLE (ROUND OR OVAL)
       DRAIN WIRE P02-1                               CABLE 180
P01-2             P02-2                                    48"
P01-3             P02-3
                  P02-4
                  P02-5
                  P02-6
P01-1             P02-7
                  P02-8
                  P02-9
P01-4
P01-5
P01-6
P01-7
P01-8
P01-9
```

```
CABLE #190 SIMULCAT TX SITE (TEST UNIT)                  CABLE 190
  P01 19A700041P29 CONNECTOR HOUSING (MOLEX 22-01-2035)        24"
      19A704779P25 CONTACT          (MOLEX 08-55-0102)
      19B209260P103 TERMINAL (#6 SCREW SPADE LUG) (AMP 60445-2)
  CABLE 1 TWISTED PAIR (19A115377P5)

P1-01  ORANGE TERMINATED WITH SPADE LUG
P1-03  BROWN or BLACK TERMINATED WITH SPADE LUG
```

```
CABLE #200 SIMULCAT TX SITE (CONTROL CHANNEL MONITOR)          CABLE 200
  P01 19A700041P29 CONNECTOR HOUSING (MOLEX 22-01-2035)             60"
      19A704779P25 CONTACT          (MOLEX 08-55-0102)
  P02 RJ-11 SIX CIRCUIT FOUR LOADED
  CABLE 1 TWISTED PAIR (19A115377P5)
P1-01       P2-03  SIGNAL GND
P1-03       P2-02  BACK-UP LINK
P1-02              NOT USED
            P2-04  NOT USED
            P2-05  NOT USED


CABLE #210 CTIS RIC SERIAL LINK (CTIS CAB)          CABLE 210  211
           STN RIC TO SERIAL LINK (STN CAB)                48"  76"
       P01 IS A RJ-11 SIX CIRCUIT ALL LOADED
       P02 IS A DB-9 CONNECTOR MALE
        CABLE HAS 3 TWISTED PAIRS
          1/2 3/4 5/6 ARE PAIRS
              P02-1
              P02-2
              P02-3
P01-3         P02-4   SIG GND MASTER
P01-1         P02-5   SIG GND BACKUP
P01-6         P02-6   REC BACKUP
P01-5         P02-7   REC MASTER
P01-2         P02-8   XMIT BACKUP
P01-4         P02-9   XMIT MASTER


CABLE #220   EURO CABINET
             (SPADE LUG TO BE 4" BEYOND JACKET)     LENGTH OF CABLES (INCHES)
           P01 IS A DB-9  MALE                             CABLE 220
            CABLE HAS 4 TWISTED PAIRS                      48"
            1-2, 3-4, 5-6, 7-8 ARE PAIRS
P01-1     SPADE LUG #6 SCREW (BLUE /WHITE)
P01-2     SPADE LUG #6 SCREW (WHITE /BLUE)
P01-3     SPADE LUG #6 SCREW (ORANGE /WHITE)
P01-4     SPADE LUG #6 SCREW (WHITE /ORANGE)
P01-5     SPADE LUG #6 SCREW
P01-6     SPADE LUG #6 SCREW    VENDOR TO SPECIFY COLOR
P01-7     SPADE LUG #6 SCREW    THEN DRAWING WILL BE CHANGED
P01-8     SPADE LUG #6 SCREW
P01-9     NOT USED
```

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```
CABLE # 230 TUAI JUMNPER CABLE                          230  231  232  233
      1 WIRE #22 SUPER FLEX ORANGE                      6"   40"   53"  72"
        TERMINATE BOTH ENDS WITH SPADE LUGS FOR #6 SCREW

CABLE #240 TUAI RESET CABLE                                  CABLE 240
       P01 DB-15 MALE                                              60"
P01-8     TERMINATED WITH A #6 SPADE LUG
ALL OTHER PINS NOT USED

CABLE # 300 POWER SUPPLY TO FUSE PANEL (CTIS)                300  301
  4 WIRE #14 STRANDED                                        36"   36"
    TERMINATE ONE ENDS WITH SPADE LUGS FOR #6 SCREW
    TERMINATE ONE WITH CONNECTOR PIN 344A3805P1 (AMP 350650-1) NO HOUSING
  PART 300   RED   (4 SPADE LUGS - 1 CONNECTOR PIN)
     SPADE LUG      WIRE #1     ALL 4 WIRES CONNECT TO SINGLE
     SPADE LUG      WIRE #2     CONNECTOR PIN
     SPADE LUG      WIRE #3
     SPADE LUG      WIRE #4
  PART 301   BLACK (4 SPADE LUGS - 1 CONNECTOR PIN)
     SPADE LUG      WIRE #1     ALL 4 WIRES CONNECT TO SINGLE
     SPADE LUG      WIRE #2     CONNECTOR PIN
     SPADE LUG      WIRE #3
     SPADE LUG      WIRE #4


CABLE #400  DOWNLINK GETC TO SERIAL LINK (STN CAB)           CABLE 400
            (ONLY USED ON BASIC EDACS)                             24"
        P01 DB-15 MALE
        P02 DB-9  MALE
P01-01    P02-3
P01-09    P02-1
P01-02    P02-2
P01-10    P02-1  PIN 1 (TWO WIRE TO PIN 1)
ALL OTHER PINS NOT USED

CABLE #500  GSC MONITOR CABLE                                CABLE 500
        P01 DB-9  MALE                                             72"
        P02 DB-9  FEMALE
P01-02    P02-3
P01-03    P02-2
P01-05    P02-5
ALL OTHER PINS NOT USED
```

(19D903880, Sh. 18, Rev 8)

```
CABLE #600 AUX RECEIVERS                          CABLE 600  601  602  603  604
  P01 19A700041P29 CONN H (MOLEX 22-01-2035)              36"  54"  60"  76"  87"
      19A704779P25 CONTACT FEMALE (MOLEX 08-55-0102)
      SEE FIGURE 1 OF 344A4278
  CABLE 2 TWISTED PAIR  (CUT OFF WHITE/BLUE)
P01-1     SPADE LUG #6 SCREW (BLUE /WHITE)
P01-2     SPADE LUG #6 SCREW (ORANGE/WHITE)
P01-3     SPADE LUG #6 SCREW (WHITE/ORANGE)

CABLE #650 AUX RECEIVERS (BUFFER #1 TO BUFFER #2)            CABLE 650
  P01 & P02 19A700041P29 CONN H (MOLEX 22-01-2035)                72"
            19A704779P25 CONTACT FEMALE (MOLEX 08-55-0102)
  CABLE 2 TWISTED PAIR  (CUT OFF WHITE/BLUE)
P01-1     P02-1  (BLUE /WHITE)
P01-2     P02-2O (ORANGE/WHITE)
P01-3     P02-3O (WHITE/ORANGE)



POWER CABLES FOR CONTROL POINT SIMULCAST--DIGITAL RACKS
-------------------------------------------------------------------------------
                                P710 P711 P712 P713 P714 P715 P716 P717 P718 P719
                                  9"  18"  24"  30"  36"  42"  48"  54"  60" 120"
CABLE FOR MODEM SHELF
P710     AMP   350735-1 PLUG                  -    CONNECT TO TERMINAL BOARD TB1
               MALE PIN 350873-3 OR 350918-3
               MALE PIN 350654-1 OR 350669-1 (GND PIN)
               STRIPPED END TO BE .250 INCHES
         WIRES CONNECTED TO +5 AND GND ARE #14 STRANDED--ALL OTHERS #16
         P01-01  YELLOW        +5             -    TB1-01 STRIP AND TIN LEADS 1/2"
         P01-04  YELLOW        +5             -    TB1-02 STRIP AND TIN LEADS 1/2"
         P01-07  YELLOW        +5             -    TB1-03 STRIP AND TIN LEADS 1/2"
         P01-10  YELLOW        +5             -    TB1-04 STRIP AND TIN LEADS 1/2"
         P01-02  BLACK         GND            -    TB1-05 STRIP AND TIN LEADS 1/2"
         P01-05  BLACK         GND            -    TB1-06 STRIP AND TIN LEADS 1/2"
         P01-08  BLACK         GND            -    TB1-09 STRIP AND TIN LEADS 1/2"
         P01-11  BLACK         GND            -    TB1-12 STRIP AND TIN LEADS 1/2"
         P01-03  ORANGE        +12            -    TB1-07 STRIP AND TIN LEADS 1/2"
         P01-06  ORANGE        +12            -    TB1-08 STRIP AND TIN LEADS 1/2"
         P01-09  BLUE          -12            -    TB1-10 STRIP AND TIN LEADS 1/2"
         P01-12  BLUE          -12            -    TB1-11 STRIP AND TIN LEADS 1/2"
-------------------------------------------------------------------------------
```

(19D903880, Sh. 19, Rev 8)

```
                                P720 P721 P722 P723 P724 P725 P726 P727 P728 P729
                                  9"  18"  24"  30"  36"  42"  48"  54"  60" 15feet
CABLE FOR ANALOG DELAY--DIGITAL DELAY SHELF
P720     AMP   PLUG 350779-1           P01-- 19A116659P21--MOLEX 03-50-312
   MALE PIN 350873-3 OR 350918-3        FEMALE PIN --19A116781P13--MOLEX 08-50-0105
   MALE PIN 350654-1 OR 350669-1 (GND PIN)
          ALL WIRES #16
         P05-01  YELLOW        +5       -      P01-1
         P05-02  YELLOW        +5       -      P01-2
         P05-03  BLACK         GND      -      P01-5
         P05-04  BLACK         GND      -      P01-6
                                        -      P01-OTHER PINS NOT USED
-------------------------------------------------------------------------------
                                P730 P731 P732 P733 P734 P735 P736 P737 P738 P739
                                  9"  18"  24"  30"  36"  42"  48"  54"  60" 120"
CABLE FOR ANALOG SHELF #2
P730     AMP   PLUG 350766-1            -  J16/J17- 19A116659P21--MOLEX 03-50-312
 MALE PIN 350873-3 OR 350918-3         FEMALE PIN --19A116781P13--MOLEX 08-50-0105
 MALE PIN 350654-1 OR 350669-1 (GND PIN)
         P08-01  YELLOW        +5       -      P16-06    WIRE SIZE #16
         P08-02  GREEN         -24      -      P16-01    WIRE SIZE #16
         P08-03  BLACK         GND      -      P17-02*   WIRE SIZE #16
         P17-02                GND      -      P17-01    WIRE SIZE #20
             * NOTE PIN 02 ALSO TIES TO PIN 01
-------------------------------------------------------------------------------
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P740
SEE 344A4278 FIGURE 3 FOR LENGTH

CABLE FOR MASTER ALARM SHELF

P740	AMP PLUG 350720-1 (9 CIRCUIT)			P01 -19B209288P38--MOLEX 03-09-1094		
	MALE PIN 350873-3 OR 350918-3			FEMALE PINS 19B209288P1--MOLEX 02-09-1101		
	MALE PIN 350654-1 OR 350669-1 (GND PIN)			J16/J17-- 19A116659P21--MOLEX 03-50-312		
	ALL WIRES #16			FEMALE PIN --19A116781P3--MOLEX 08-50-0105		
	P09-01	YELLOW	+5	-	P01-01	
	P09-02	BLACK	GND	-	P01-02	
	P09-03	BLUE	-12	-	P01-04	
	P09-04	ORANGE	+12	-	P01-07	
	P09-05	BLACK	GND	-	P01-09	
					P01-3/5/6/8 NOT USED	
	P09-07	ORANGE	+12	-	J16-01	
	J16-01		+12	-	J16-02	#24 RED WIRE
	J16-02		+12	-	J16-03	#24 RED WIRE
	J16-03		+12	-	J16-04	#24 RED WIRE
	J16-04		+12	-	J16-05	#24 RED WIRE
	J16-05		+12	-	J16-06	#24 RED WIRE
	J16-06		+12	-	J16-07	#24 RED WIRE
	J16-07		+12	-	J16-08	#24 RED WIRE
	J16-08		+12	-	J16-09	#24 RED WIRE
	J16-09		+12	-	J16-10	#24 RED WIRE
	J16-10		+12	-	J16-11	#24 RED WIRE
	J16-11		+12	-	J16-12	#24 RED WIRE
	P09-06	BLACK	GND	-	J17-01	
	J17-01		GND	-	J17-02	#24 BLACK WIRE
	J17-02		GND	-	J17-03	#24 BLACK WIRE
	J17-03		GND	-	J17-04	#24 BLACK WIRE
	J17-04		GND	-	J17-05	#24 BLACK WIRE
	J17-05		GND	-	J17-06	#24 BLACK WIRE
	J17-06		GND	-	J17-07	#24 BLACK WIRE
	J17-07		GND	-	J17-08	#24 BLACK WIRE
	J17-08		GND	-	J17-09	#24 BLACK WIRE
	J17-09		GND	-	J17-10	#24 BLACK WIRE
	J17-10		GND	-	J17-11	#24 BLACK WIRE
	J17-11		GND	-	J17-12	#24 BLACK WIRE
	P09-08/9 NOT USED					

* TWO WIRES IN ONE TERMINAL

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P750
12 FEET

CABLE TO -12/-24 VOLT POWER SUPPLY PANEL — ANALOG POWER PANEL--
CABLE TO DIGITAL POWER PANEL/ OTHER ANALOG RACKS

P750	AMP PLUG 350715-1				P14 AMP PLUG 350715-1	
	FEMALE PIN 350874-3 OR 350919-3				MALE PIN 350873-1 OR 350918-3	
	ALL WIRES #16					
	P10-01	BLUE	-12	-	P14-01	
	P10-02	BLUE	-12	-	P14-02	
	P10-03	BLACK	GND	-	P14-03	
	P10-04	BLACK	GND	-	P14-04	
	P10-05	GREEN	-24	-	P14-05	
	P10-06	GREEN	-24	-	P14-06	

P760 P761 P762 P763 P764 P765 P766 P767 P768 P769
9" 18" 24" 30" 36" 42" 48" 54" 60" 120"

CABLE FROM 5/ -12/ +12 POWER SUPPLY TO DIST. PANEL

P760

ALL SPADE LUGS 1-18 FOR #8 SCREW
ALL SPADE RING 19-22 FOR 1/4 BOLT
ALL SPADE RING 23-26 FOR 8 SCREW
WIRES CONNECTED TO +5 AND GND ARE #14 STRANDED--ALL OTHERS #16

SPADE RING #19 YELLOW	+5	TB1-01	SPADE LUG 1		BUS+5
SPADE RING #19 YELLOW	+5	TB1-02	SPADE LUG 2		BUS+5
SPADE RING #19 YELLOW	+5	TB1-03	SPADE LUG 3		BUS+5
SPADE RING #20 YELLOW	+5	TB1-04	SPADE LUG 4		BUS+5
SPADE RING #20 YELLOW	+5	TB1-05	SPADE LUG 5		BUS+5
SPADE RING #20 YELLOW	+5	TB1-06	SPADE LUG 6		BUS+5
SPADE RING #21 BLACK	GND	TB1-07	SPADE LUG 7		BUSGD
SPADE RING #21 BLACK	GND	TB1-08	SPADE LUG 8		BUSGD
SPADE RING #21 BLACK	GND	TB1-09	SPADE LUG 9		BUSGD
SPADE RING #22 BLACK	GND	TB1-10	SPADE LUG 10		BUSGD
SPADE RING #22 BLACK	GND	TB1-11	SPADE LUG 11		BUSGD
SPADE RING #22 BLACK	GND	TB1-12	SPADE LUG 12		BUSGD
SPADE RING #25 ORANGE	+12	TB1-13	SPADE LUG 13		
SPADE RING #26 BLUE	-12	TB1-14	SPADE LUG 14		
SPADE RING #27 BLUE	-12	TB1-14	SPADE LUG 15		
SPADE RING #28 BLACK	GND	TB1-15	SPADE LUG 16		
SPADE RING #23 BROWN	+5 SENS	TB1-16	SPADE LUG 17		BUS+5
SPADE RING #24 WHITE	-5 SENS	TB1-17	SPADE LUG 18		BUSGD

(19D903880, Sh. 122 Rev 8)

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                                        P770 P771 P772 P773 P774 P775 P776 P777 P778 P779
                                           9"  18"  24"  30"  36"  42"  48"  54"  60" 120"
CABLE FOR ANALOG PROCESSING SHELF #1
P770     AMP   350766-1 PLUG   3 CIRCUITS          P01-- 19A116659P21--MOLEX 03-50-3121
         MALE PIN 350873-3 OR 350918-3             FEMALE PIN --19A116781P13--MOLEX 08-50-0105
         MALE PIN 350654-1 OR 350669-1 (GND PIN)
          ALL WIRES #16
         P01-01  GREEN          -24           -     P01-11
         P01-03  BLACK          GND           -     P01-07
                                                    P01-OTHER PINS NOT USED
         P01-02  NOT USED

-------------------------------------------------------------------------------------------
                                       P780 P781 P782 P783 P784 P785 P786 P787 P788 P789
                                          9"  18"  24"  30"  36"  42"  48"  54"  60" 15feet
CABLE FOR  UNIV SYN  SHELF
P780     AMP   PLUG 350779-1                P01-- 19A116659P21--MOLEX 03-50-312
           MALE PIN 350873-3 OR 350918-3    FEMALE PIN --19A116781P13--MOLEX 08-50-0105
           MALE PIN 350654-1 OR 350669-1 (GND PIN)
          ALL WIRES #16
         P05-01  YELLOW         +5            -      P01-9
         P05-03  BLACK          GND           -      P01-10

-------------------------------------------------------------------------------------------
                                       P790
                                         16 FEET


P790      TO ANALOG RACKS #3--POWER PANELS
         AMP  PLUG 350715-1                  P16  AMP   PLUG 350715-1
          MALE PIN 350873-3 OR 350918-3      FEMALE PIN 350873-1 OR 350918-3
          MALE PIN 350654-1 OR 350669-1 (GND PIN)
          ALL WIRES #16
         P16-01  BLUE           -12      -   P16-01
         P16-02  BLUE           -12      -   P16-02
         P16-03  BLACK          GND      -   P16-03
         P16-04  BLACK          GND      -   P16-04
         P16-05  GREEN          -24      -   P16-05
         P16-06  GREEN          -24      -   P16-06
-------------------------------------------------------------------------------------------
                                       P800 P801 P802 P803 P804 P805 P806 P807 P808 P809
                                          9"  18"  24"  30"  36"  42"  48"  54"  60" 120"


CABLE TO -12/-24 VOLT POWER SUPPLY
P800     AMP   PLUG 350715-1   6 CIRCUITS       -    ALL SPADE LUG FOR #8 SCREW
             FEMALE PIN 350874-3 OR 350919-3   -
          ALL WIRES #16
         P13-01  BLUE           -12           -      SPADE LUG #1
         P13-02  BLUE           -12           -      SPADE LUG #2
         P13-03  BLACK          GND           -      SPADE LUG #3
         P13-04  BLACK          GND           -      SPADE LUG #4
         P13-05  GREEN          -24           -      SPADE LUG #5
         P13-06  GREEN          -24           -      SPADE LUG #6
```

(19D903880, Sh. 23, Rev 8)

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-------------------------------------------------------------------------------------------
                                       P810 P811 P812 P813 P814 P815 P816 P817 P818 P819
                                          9"  18"  24"  30"  36"  42"  48"  54"  60" 120"

CABLE  -12/-24 VOLT POWER SUPPLY TO REDUNDANT -12/-24 VOLT POWER SUPPLY
P810        -    ALL SPADE LUG FOR #8 SCREW
          ALL WIRES #16 -PACKAGE 6 WIRES--DO NOT TIE
    SPADE LUG #1    BLUE          -12           -      SPADE LUG #1
    SPADE LUG #2    BLUE          -12           -      SPADE LUG #2
    SPADE LUG #3    BLACK         GND           -      SPADE LUG #3
    SPADE LUG #4    BLACK         GND           -      SPADE LUG #4
    SPADE LUG #5    GREEN         -24           -      SPADE LUG #5
    SPADE LUG #6    GREEN         -24           -      SPADE LUG #6

-------------------------------------------------------------------------------------------
                                                 P820 P821 P822 P823
                                                    9"  18"  24" 30"
  CONNECTION TO  EURO CABINET WITH FILTER
P820     P1-- RJ-45 (8 PINS)
         P2-- DB-9 (MALE PINS)
           FLAT OR ROUND CABLE-WIRE DO NOT HAVE TO BE PAIRED

         P01-01          P02-01
         P01-02          P02-06
         P01-03          P02-02
         P01-04          P02-07
         P01-05          P02-03
         P01-06          P02-08
         P01-07          P02-04
         P01-08          P02-09
                         P02-05   NOT USED
-------------------------------------------------------------------------------------------
                                                 P830
                                                   3"
  CTIS TELEPHONE INTERCONNECT ADAPTER
P830     P1-- FEMALE RJ-45 (SIMILAR TO STEWART CONNECTOR #SS-800810-040-250)
         P2-- FEMALE RJ-45 (SIMILAR TO STEWART CONNECTOR #SS-800810-040-250)
           CABLE BELDEN 9538
         MARK CABLE ENDS (P1--P2)

         P01-01          P02-01
         P01-02          P02-03
         P01-03          P02-02
         P01-04          P02-04
         P01-05          P02-05
         P01-06          P02-06
         P01-07          P02-07
         P01-08          P02-08
         ALL OTHER PIN UNUSED
-------------------------------------------------------------------------------------------
```

(19D903880, Sh. 24, Rev 8)

```
                                        P900
                                         12FEET

P900      TO ANALOG RACKS #3--POWER PANELS
         AMP  PLUG 350715-1      6 CIRCUIT
          MALE PIN 350873-3 OR 350918-3
          MALE PIN 350654-1 OR 350669-1 (GND PIN)
          ALL WIRES #16
         P16-01
         P16-02
         P16-03
         P16-04  BLACK          GND      -   SPADE LUG #6
         P16-05  GREEN          -24      -   SPADE LUG #6
         P16-06
-------------------------------------------------------------------------------------------
CABLE 901  POWER SUPPLY TO FUSE PANEL (CTIS)                 901
  4 WIRE #14 STRANDED -RED                                    48"
    TERMINATE ONE ENDS WITH SPADE LUGS FOR #6 SCREW
    TERMINATE ONE WITH CONNECTOR PIN 344A3805P1 (AMP 350650-1) NO HOUSING
-------------------------------------------------------------------------------------------
CABLE 902  POWER SUPPLY TO FUSE PANEL (CTIS)                 902
  4 WIRE #14 STRANDED -BLACK                                  48"
    TERMINATE ONE ENDS WITH SPADE LUGS FOR #6 SCREW
    TERMINATE ONE WITH CONNECTOR PIN 344A3805P1 (AMP 350650-1) NO HOUSING
-------------------------------------------------------------------------------------------
CABLE 903  DEC VAX SITE CONTROLLER APAPTOR CABLE (SEE 344A4278 FIGURE 6)     903
    PO1 IS A  8 POSITION SHIELDED MODULAR CONNECTOR-AMP 5-555178-3           30"
           SHILED OF MODULAR CONNECTOR CONNECTS TO FOIL OF CABLE
    P02 DB-25 MALE CONNECTOR HOUSING WITH FEMALE SCREW LOCKS (AMP 745563-1)
           HOUSING AMP 750078-2 OR MOLDED BY VENDOR
      (ALL PINS LOADED IN DB-25)
P02-01       P01-01       SHIELD  (DRAIN WIRE)
P02-02       P01-02       RX DATA
P02-03       P01-03       TX DATA
             P01-04
             P01-05
             P01-06
P02-07       P01-07       SIGNAL GND
             P01-08
P02-ALL OTHER PINS ARE UNUSED
-------------------------------------------------------------------------------------------
```

(19D903880, Sh. 25, Rev 8)

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CABLE 905  DEC VAX SITE CONTROLLER MODEM (SEE 344A4278 FIGURE 7)              905--54"
      906  DEC VAX SITE CONTROLLER TO STATION ONE ADAPTER CABLE                 906--30"
    PO1 DB-25 CONNECTOR -MALE CONTACTS-HOUSING AMP 750078-2 OR MOLDED BY VENDOR
        PART 905 HAS SCREW LOCKS--PART 906 HAS  FEMALE SCREW LOCKS (AMP 745563-1)
    P02 DB-25 RIGHT ANGLE FEMALE CONTACTS-HOUSING AMP 745653-5 (SLIDE LOCK)
          PINS 01 & 14 ARE NEXT TO THE CABLE EXIT
P01-01           P02-01    SHIELD
P01-02           P02-02    TX DATA
P01-03           P02-03    RX DATA
P01-04           P02-04    RTS
P01-05           P02-05    CTS
P01-06           P02-06    DSR
P01-07           P02-07    SIGNAL GND
P01-08           P02-08    DCD
P01-09
P01-10
P01-11
P01-12
P01-13
P01-14
P01-15
P01-16
P01-17
P01-18
P01-19
P01-20           P02-20    DTR
P01-21
P01-22           P02-22    RING INDICATOR
P01-23
P01-24
P01-25
                 P02-09
                 P02-10
                 P02-11
                 P02-12
                 P02-13
                 P02-14
                 P02-15
                 P02-16
                 P02-17
                 P02-18
                 P02-19
                 P02-21
                 P02-23
                 P02-24
                 P02-25
```

(19D903880, Sh. 26 Rev 8)

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-------------------------------------------------------------------------------------------------
CABLE 907  DEC VAX SITE CONTROLLER FIRST STATION GETC (SEE 344A4278 FIGURE 8)      907
    PO1 IS A  8 POSITION MODULAR CONNECTOR AMP 5-554739-2                          54"
          UNSHIELED  MODULAR CONNECTOR
    P02 DB-25 RIGHT ANGLE FEMALE CONTACTS-HOUSING AMP 745653-5-SLIDE LOCK
           PINS 01 & 14 ARE NEXT TO THE CABLE EXIT
P02-01       P01-01       SHIELD  (DRAIN WIRE)
P02-02       P01-02       RX DATA
P02-03       P01-03       TX DATA
             P01-04
             P01-05
             P01-06
P02-07       P01-07       SIGNAL GND
             P01-08
P02-ALL OTHER PINS ARE UNUSED
-------------------------------------------------------------------------------------------------


          *************** END OF TEXT ***************
```

FOR ALL PARTS UNLESS OTHERWISE SPECIFIED IN FIGURE DETAIL OR ON PURCHASE DRAWING.

1. CABLE LENGTH IS IN INCHES.
2. LENGTH IS MEASURED OVER CONNECTORS
3. ALL CONNECTORS SHALL PROVIDE STRAIN RELIEF.
4. ALL 'DB' CONNECTORS SHALL BE FULLY LOADED WITH PINS.
5. CABLE SHALL BE MARKED WITH COM-NET ERICSSON DRAWING AND PART NUMBER.
6. ALL CONNECTORS SHALL HAVE GOLD FLASH OVER NICKEL ON ENTIRE CONTACT WITH AN ADDITIONAL .000030 ON MATING END.
7. CABLE ASSEMBLY OPERATING TEMPERATURE RANGE -20 TO +80 DEG C.
8. ALL CONDUCTORS SHALL BE #24 STRANDED WIRE, EXCEPT WHERE NOTED

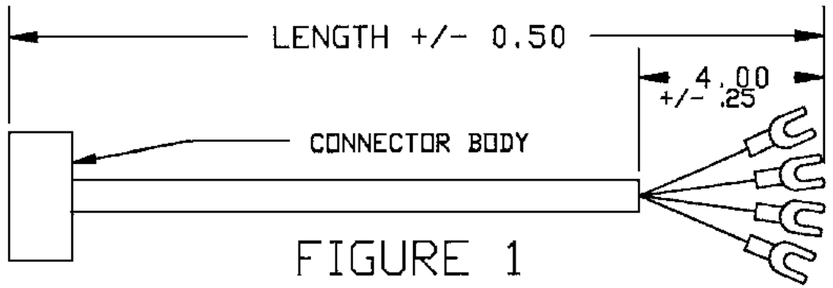


FIGURE 1

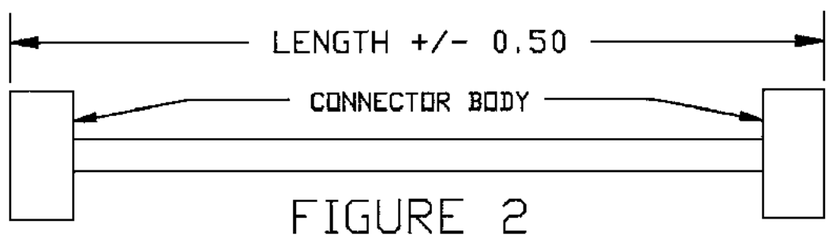


FIGURE 2

(19D903880, Sh. 27, Rev 8)

(344A4278, Sh. 1, Rev. 3)

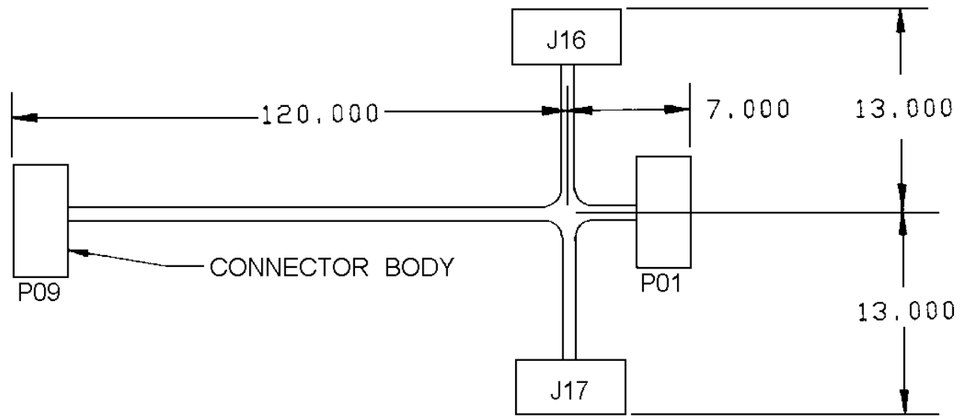


FIGURE 3

(FOR PART 740)

TOLERANCE FOR ALL
DIMENSIONS IS +/- .50

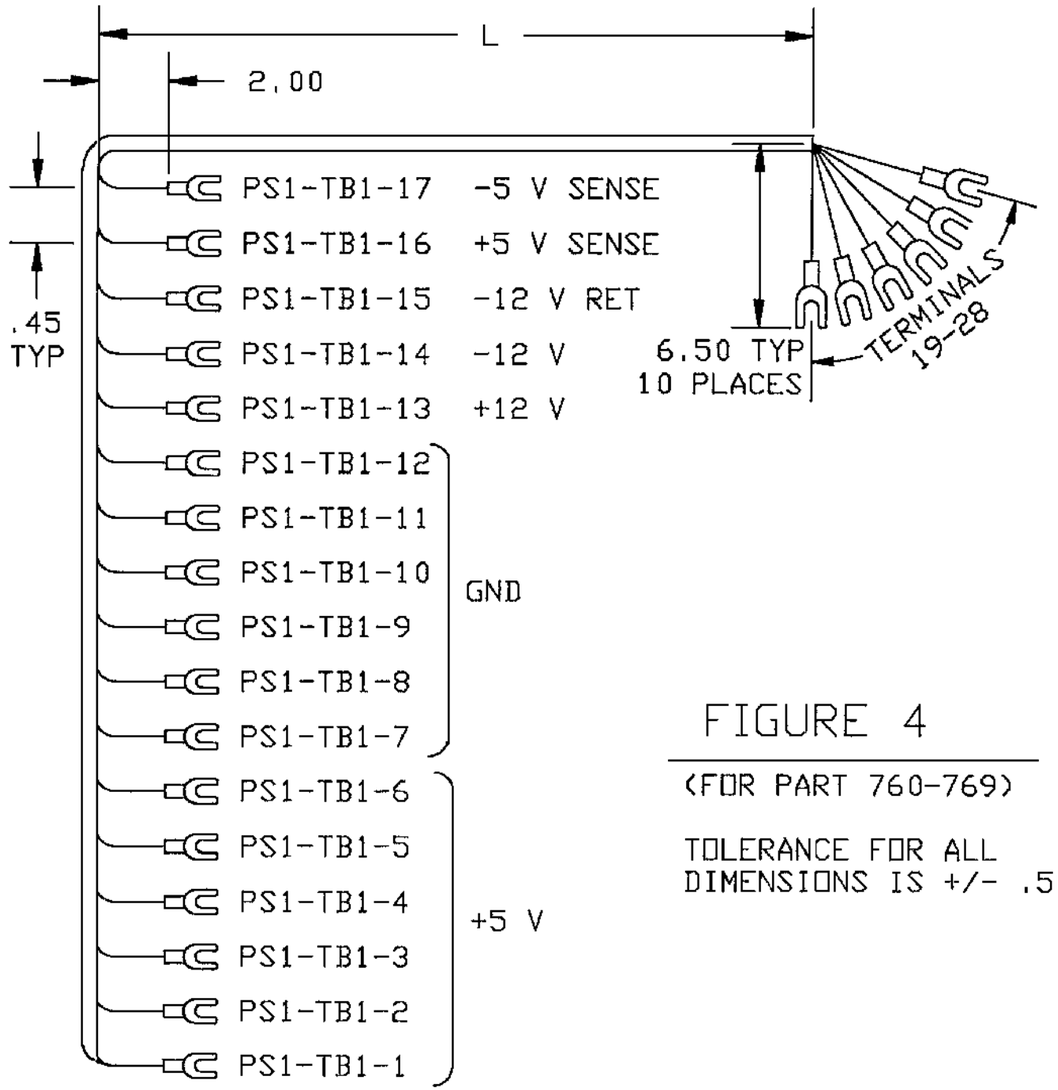


FIGURE 4

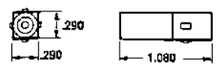
(FOR PART 760-769)

TOLERANCE FOR ALL
DIMENSIONS IS +/- .50

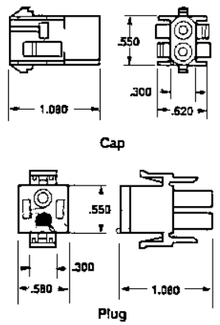
(344A4278, Sh. 3, Rev. 3)

Housings

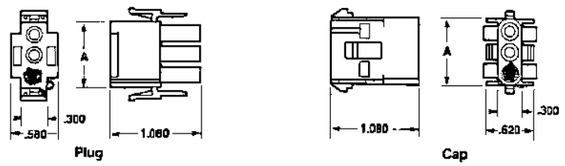
† Circuit Free-Hanging



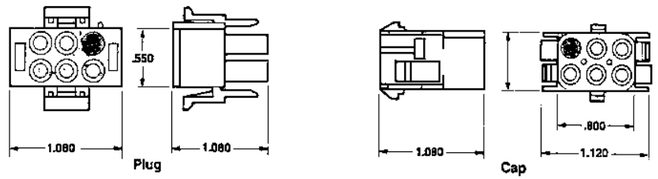
2 Circuit Panel Mount, In-Line



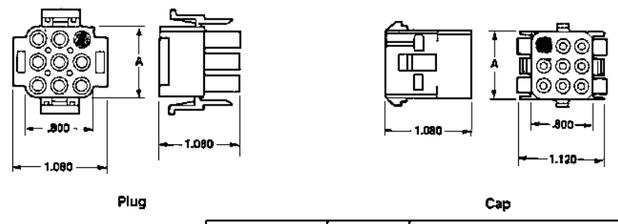
3, 4, 5, 6, 8 and 10 Circuit Panel Mount, In-Line



6 Circuit Panel Mount, Matrix



9, 12 and 15 Circuit Panel Mount, Matrix



Related Product Data

Panel-Cutout Recommendations-pg. 2142
Keying Plug-pg 2142
Strain Reliefs-pg. 2142 & 2143
Technical Documents-pg. 2169

NUMBER OF CIRCUITS	'A' DIM	AMP HOUSING PART NUMBERS	
		PLUG 94V-0 NYLON	CAP 94V-0 NYLON
1	-	350865-1	350866-1
2	-	350777-1*	350778-1*
3	.800	350766-1*	350767-1*
4	1.050	350779-1*	350780-1*
5	1.300	350809-1*	350810-1*
6	1.550	640581-1* 350715-1	926307-3* 350781-1
8	2.050	640582-1*	926308-3*
9	.800	350720-1	350782-1
10	.925	926302-3*	926309-3*
12	1.050	350735-1	830783-1
15	1.300	350736-1	350784-1

NOTES:
1. 94V-0 NYLON MATERIAL IS BRICK RED COLOR
2. CONTACTS ARE ON .250 CENTERLINES
3. ● IDENTIFIES PIN 1 IN WIRING SIDE VIEW

* IN-LINE VERSION

(344A4278, Sh. 4, Rev. 3)

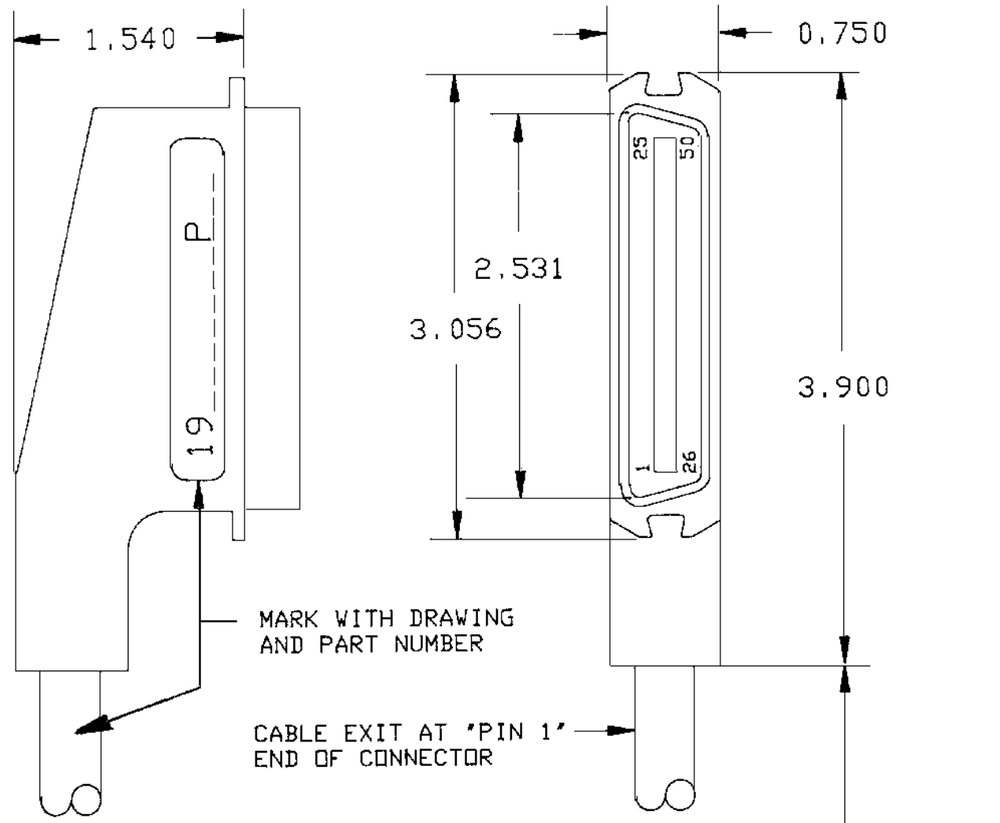


FIGURE 5

(FOR PARTS 120-129)

(344A4278, Sh. 5, Rev. 3)

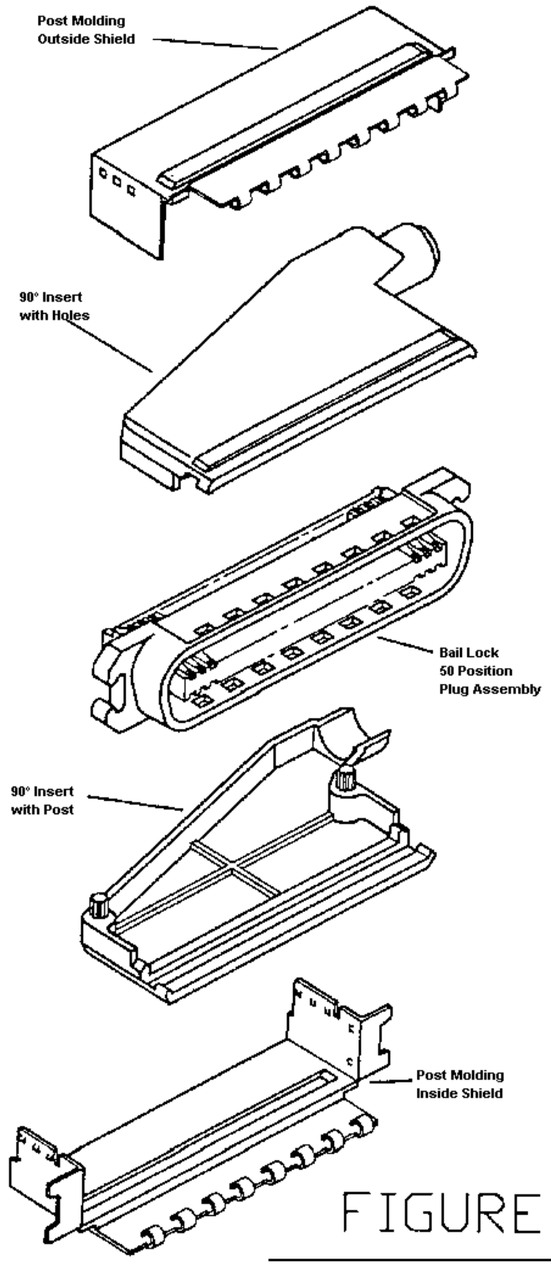
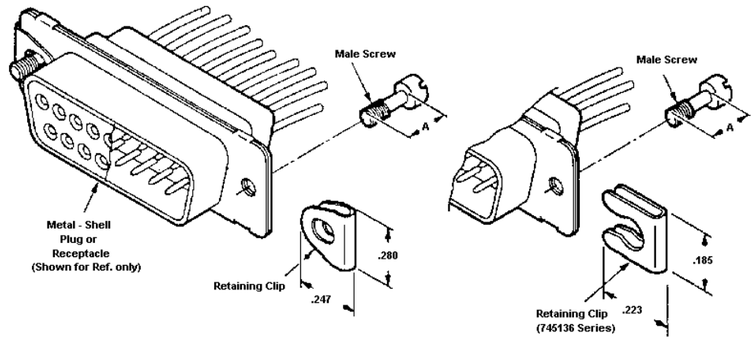


FIGURE 5-A

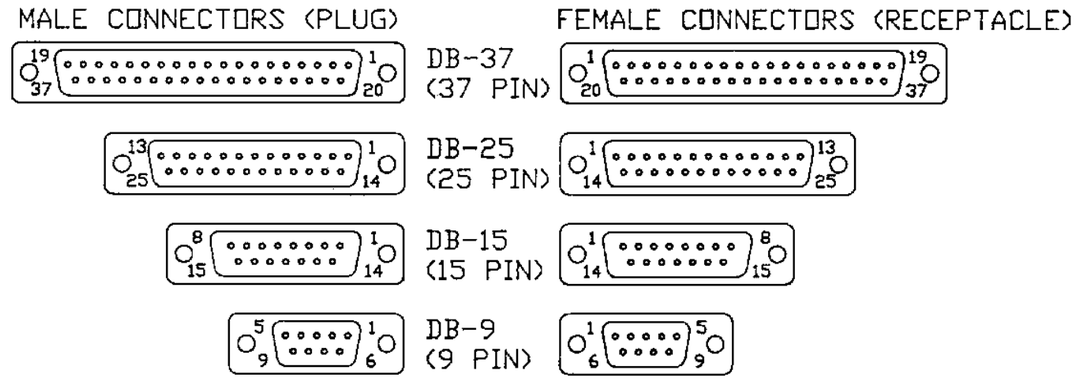
(FOR PARTS 120-129)

(344A4278, Sh. 6, Rev. 3)

RETAINER SCREW FOR DB CONNECTORS
MATERIAL AND FINISH
4-40 SCREW-STEEL, ZINC PLATED CLEAR OR YELLOW CHROMATE
RETAINING CLIP-.012 STEEL, ZINC PLATED OR STAINLESS STEEL
AMP 205980-1 INDIVIDUAL PACKED OR
AMP 205980-3 BULK PACKED
"A" DIMENSION = .220

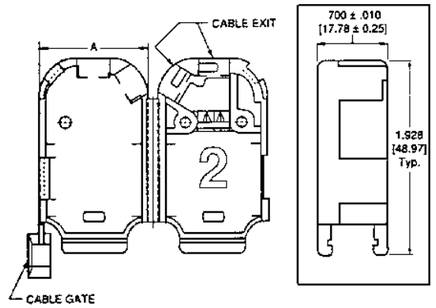


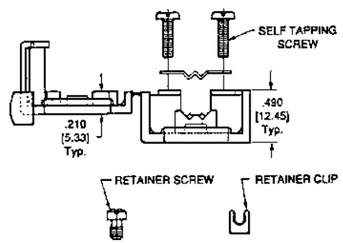
CONTACT ARRANGEMENT FOR DB CONNECTORS
(WIRING SIDE SHOWN FOR ALL CONNECTORS)



(344A4278, Sh. 7, Rev. 3)

HOUSING FOR DB CONNECTORS *

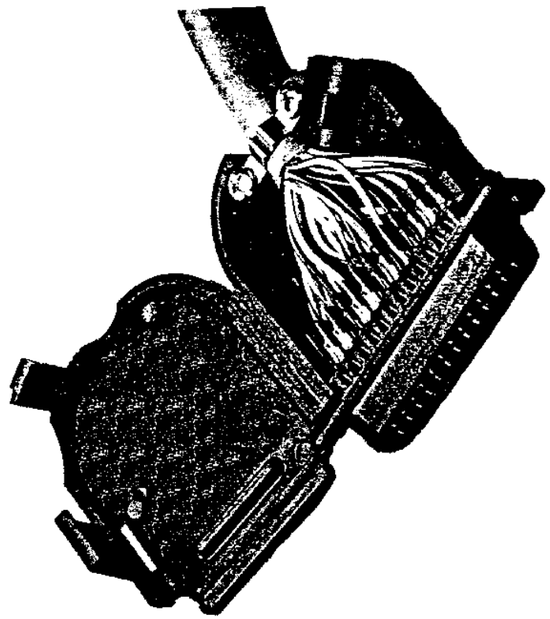




Materials and Finishes

Cover - Polypropylene, black
Strain Relief Clip - Stainless steel
Retainer Clip - Stainless steel
Screws - Carbon steel, zinc plated

Shell Size	No. of Positions	Dim. A
1	9	.785 19.94
2	15	1.110 28.19
3	25	1.650 41.91
4	37	2.296 58.32



* MOLDED CONNECTOR CAN BE USED IF IN PLACE OF THIS ASSEMBLY (MECHANICAL DIMENSION WILL NOT EXCEED THOSE SHOWN ABOVE)

(344A4278, Sh. 8, Rev. 3)

MODULAR PLUG

- Listed by Underwriters Laboratories Inc., File No. E81956
- Certified by Canadian Standards Association File No. LR82669

Specifications

Electrical:

UL Applications—150 volts ac max., at 1.5 amps

Dielectric Withstanding Voltage—1000 volts ac

Insulation Resistance—500 megohms

Mechanical:

Cable-to-Plug Tensile Strength—17 lbs [76 N] min.

Latch must be in postion as shown after terminating

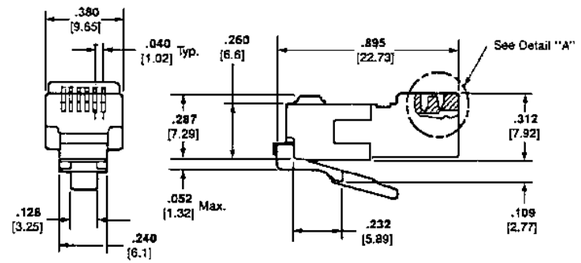
Detail "A"

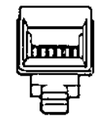
Material and Finish:

Housing—Polycarbonate, UL 94V-0 rated

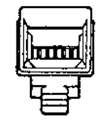
Contact—.014 [0.36] thk. phosphor bronze; plated .000050 [0.00127] gold in contact area and gold flash on remainder of contact, over .000100 [0.00254] nickel underplate

6-Position Plug Assemblies (Long Body)





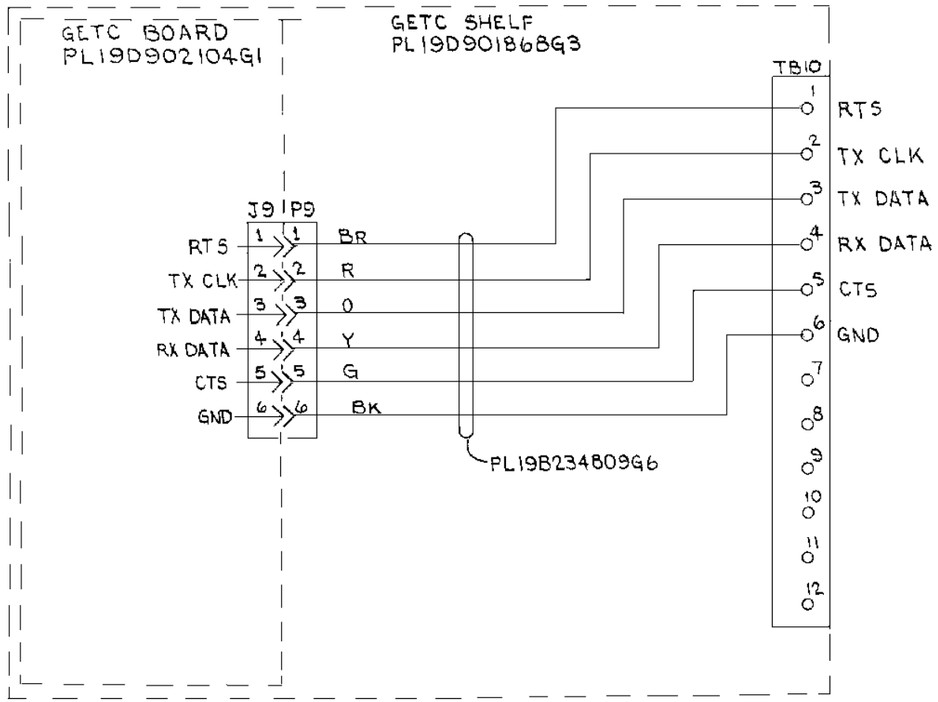
Flat Oval Cable



Round Cable

Note: On any modular plug, Terminal No. 1 is the terminal to the extreme left as you face the cable opening, tab down.

(344A4278, Sh. 9, Rev. 3)



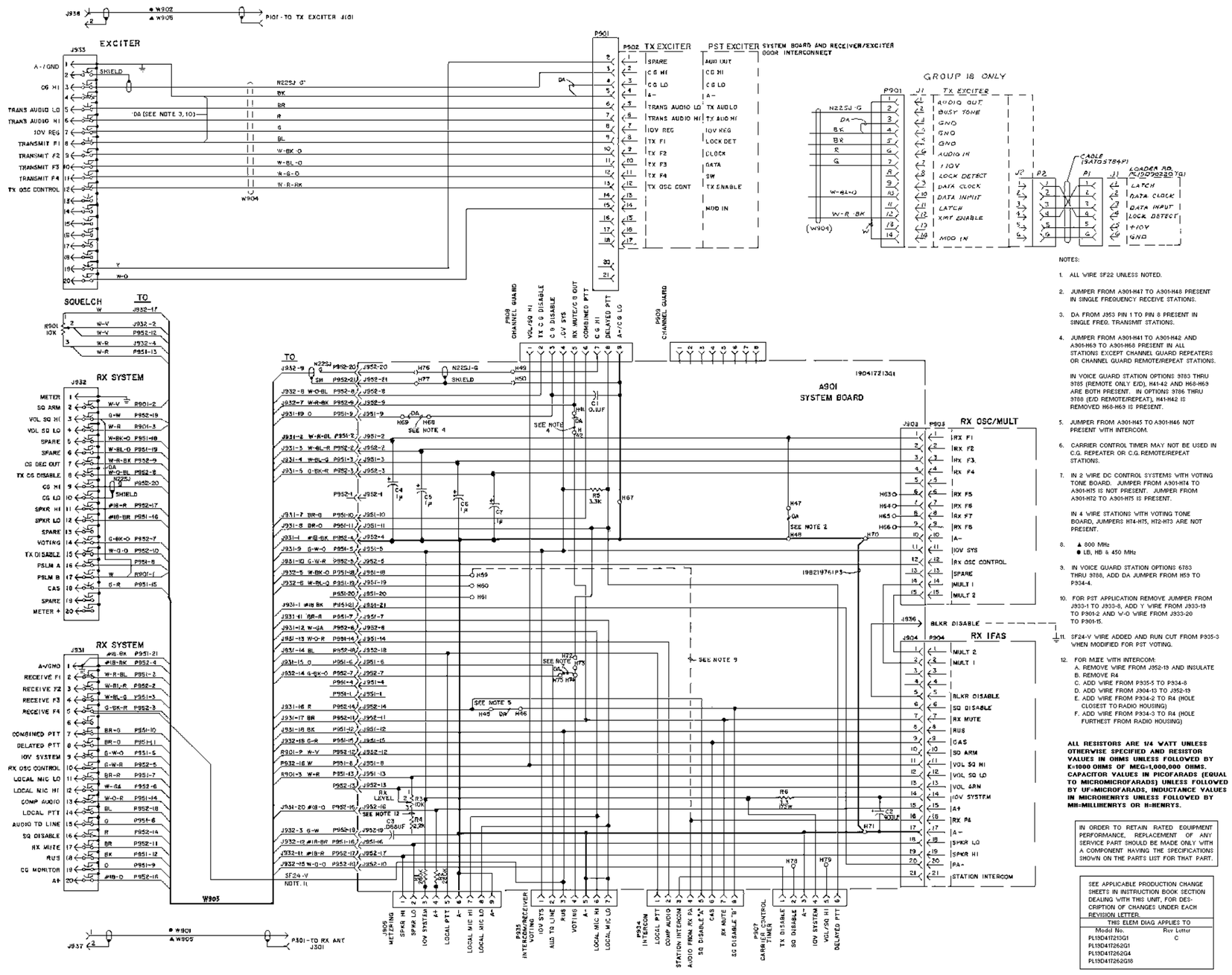
NOTE: ALL WIRES SF24 UNLESS OTHERWISE SPECIFIED

(19B235064, Sh. 1, Rev. 0)

LBI-38271
MASTR II
ASSOCIATED ASSEMBLIES

SYMBOL	PART NO.	DESCRIPTION
		MODIFICATION KIT 19A149572G1 VOTER CO-LOCATED 19A149572G2 VOTER NOT CO-LOCATED 19A149572G3 SATELLITE RECEIVER 19A149572G4 MAIN SITE RS232 COMM 19A149572G5 MAIN SITE 9600 BAUD MODEM
		- - - - - - - - - TERMINAL BOARDS - - - - - - - - -
TB10 *	19C301086P1	Terminal board. (Used in G5).
		- - - - - - - - - MISCELLANEOUS - - - - - - - - -
	7143066P12	Wire. (Specify length). (Used in G1 and G2).
	19A700136P3	Insulative Sleeving, Electrical: sim to 19C301208. (Used in G2).
	19A705726G1	Connector. (Used in G1).
	19A705726G2	Connector. (Used in G4 and G5).
	H212CRF256C	Deposited carbon: 5.6K ohms + or -5%, 1/4 w. (Used in G3, G4 and G5).
	19B234814G9	Jumper cable. (Used in G4).
	19A115871P29	Wire, stranded, orange. (Used in G3).
	N80P13004B6	Machine screw: No. 6-32 x 1/4. (Used in G5).
	N403P13B6	Lockwasher: No. 6. (Used in G5).
	N210P13B6	Nut, steel: No. 6-32. (Used in G5).
	19J706152P5	Retainer strap: sim to Panduit Corp. SST-1. (Used in G5).
		HARNESS ASSEMBLY 19B234809G1 VG VOTER RECEIVER 19B234809G2 VG VOTER SELECTOR 19B234809G3 PST SITE CONTROLLER GETC 19B234809G4 PST VOTER RECEIVER GETC 19B234809G5 PST VOTER SELECTOR SHELF 19B234809G6 PST VOTER MAIN SITE
		- - - - - - - - - - - JACKS - - - - - - - - - - -
J100	19B209727P18	Connector: 9 contacts; sim to AMP 205203-1. (Used in G5)
		- - - - - - - - - - - PLUGS - - - - - - - - - - -
P2	19A700041P28	Shell. (Used in G4 and G5).
P6	19A700041P42	Connector. (Used in G1, G2 and G3).
P7	19A700041P42	Connector. (Used in G2 and G5).
P8	19A700041P32	Shell. (Used in G1, G2, G4 and G5).
P9	19A700041P32	Shell. (Used in G1, G2, G5 and G6).
P10	19A116659P190	Connector. (Used in G1, G2 and G3).
P10	19A116659P17	Connector, printed wiring: sim to Molex 09-50-3-41. (Used in G4 and G5).
P19	19A700041P32	Shell. (Used in G4 and G5).
P26	19A700041P42	Connector. (Used in G4 and G5).
		- - - - - - - - - TERMINAL BOARDS - - - - - - - - -
TB10	19C301086P8	Feed thru: 12 terminals rated 15 amps at 1200 VRMS; sim to GE CR151B75412AA.
		- - - - - - - - - MISCELLANEOUS - - - - - - - - -
	N80P13004B6	Machine screw: No. 6-32 x 1/4.
	N80P13007B6	Machine screw, panhead: No. 6-32 x 7/16.
	19A700041P26	Contact: sim to Molex 08-50-0113. (Used in G1, G2 and G3).
	19A116781P3	Contact, electrical: wire range No. 16-20 AWG; sim to Molex 08-50-0105. (Used in G1, G2, G3, G4 and G5).
	N403P13B6	Lockwasher: -No. 6.
	7160508P2	Nut, sheet spring: sim to Tinnerman C1356-632-24.
	19J706152P5	Retainer strap: sim to Panduit Corp. SST-1. (Used in G1, G2 and G3).
	19A115871P1	Wire, stranded, white-orange. (Used in G1, G2 and G4).
	19J706152P5	Retainer strap: sim to Panduit Corp. SST-1. (Used in G4, G5 and G6).
	19A149502P3	Sleeving.
	19A115871P3	Wire, stranded, white-brown. (Used in G1 and G2).
	19A115871P4	Wire, stranded. (Used in G1 and G4).
	19A115871P5	Wire, stranded, white-green. (Used in G1, G2, G3, G4 and G5).
	19A115871P6	Wire, stranded. (Used in G4 and G5).
	19A115871P9	Wire, stranded, white-orange-red. (Used in G4).
	19A115871P10	Wire, stranded. (Used in G2 and G5).
	19A115871P19	Wire, stranded. (Used in G5).
	19A115871P20	Wire, stranded. (Used in G5).
	19A700134P12	Wire, stranded. (Used in G3).
	19A115871P35	Wire, stranded. (Used in G6).
	19A115871P29	Wire, stranded, orange.
	19A115871P30	Wire, stranded, black. (Used in G1, G2, G4, G5 and G6).
	19A115871P31	Wire, stranded. (Used in G2 and G6).
	19A115871P32	Wire, stranded. (Used in G1, G2, G3, G4 and G5).
	19A115871P33	Wire, stranded. (Used in G1, G2, G4, G5 and G6).
	19A115871P34	Wire, stranded. (Used in G5).
	19A115871P36	Wire, stranded. (Used in G3 and G5).
	19A116889P2	Wire, stranded. (Used in G1, G2, G3, G4 and G5).
	19A116889P10	Wire, stranded. (Used in G1, G2, G3, G4 and G5).
	19A115871P22	Wire, stranded. (Used in G5).
	19A704779P26	Connector, printed wiring: sim to Molex 08-55-0101. (Used in G4, G5 and G6).
	19B209727P11	Contact, electrical: sim to AMP 1-66504-0. (Used in G5).
	19B209727P10	Screwlock; female, sim to Amp 205817-1. (Used in G5).
	19A702405P32	Connector, Receptacle: sim to Dupont 48051. (Used in G5).

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES



NOTES:

1. ALL WIRE SF22 UNLESS NOTED.
2. JUMPER FROM A901-H47 TO A901-H48 PRESENT IN SINGLE FREQUENCY RECEIVE STATIONS.
3. DA FROM J953 PIN 1 TO PIN 8 PRESENT IN SINGLE FREQ. TRANSMIT STATIONS.
4. JUMPER FROM A901-H41 TO A901-H42 AND A901-H63 TO A901-H68 PRESENT IN ALL STATIONS EXCEPT CHANNEL GUARD REPEATERS OR CHANNEL GUARD REMOTE/REPEAT STATIONS.

   IN VOICE GUARD STATION OPTIONS 3783 THRU 3785 (REMOTE ONLY E/D), H41-42 AND H66-H69 ARE BOTH PRESENT. IN OPTIONS 3786 THRU 3788 (E/D REMOTE/REPEAT), H41-H42 IS REMOVED H68-H69 IS PRESENT.
5. JUMPER FROM A901-H45 TO A901-H46 NOT PRESENT WITH INTERCOM.
6. CARRIER CONTROL TIMER MAY NOT BE USED IN C.G. REPEATER OR C.G. REMOTE/REPEAT STATIONS.
7. IN 2 WIRE DC CONTROL SYSTEMS WITH VOTING TONE BOARD, JUMPER FROM A901-H74 TO A901-H75 IS NOT PRESENT. JUMPER FROM A901-H72 TO A901-H75 IS PRESENT.

   IN 4 WIRE STATIONS WITH VOTING TONE BOARD, JUMPERS H74-H75, H72-H73 ARE NOT PRESENT.
8. ▲ 800 MHz
   ● LB, HB & 450 MHz
9. IN VOICE GUARD STATION OPTIONS 6783 THRU 8788, ADD DA JUMPER FROM H59 TO P934-4.
10. FOR PST APPLICATION REMOVE JUMPER FROM J933-1 TO J933-8, ADD Y WIRE FROM J933-19 TO P301-2 AND W-O WIRE FROM J933-20 TO P301-15.
11. SF24-V WIRE ADDED AND RUN CUT FROM P935-3 WHEN MODIFIED FOR PST VOTING.
12. FOR MIXE WITH INTERCOM:
    A. REMOVE WIRE FROM J952-13 AND INSULATE
    B. REMOVE R4
    C. ADD WIRE FROM P935-5 TO P934-8
    D. ADD WIRE FROM J904-13 TO J952-13
    E. ADD WIRE FROM P934-2 TO R4 (HOLE CLOSEST TO RADIO HOUSING)
    F. ADD WIRE FROM P934-3 TO R4 (HOLE FURTHEST FROM RADIO HOUSING)

ALL RESISTORS ARE 1/4 WATT UNLESS OTHERWISE SPECIFIED AND RESISTOR VALUES IN OHMS UNLESS FOLLOWED BY K=1000 OHMS OF MEG=1,000,000 OHMS. CAPACITOR VALUES IN PICOFARADS (EQUAL TO MICROMICROFARADS) UNLESS FOLLOWED BY UF=MICROFARADS. INDUCTANCE VALUES IN MICROHENRYS UNLESS FOLLOWED BY MH=MILLIHENRYS OR H=HENRYS.

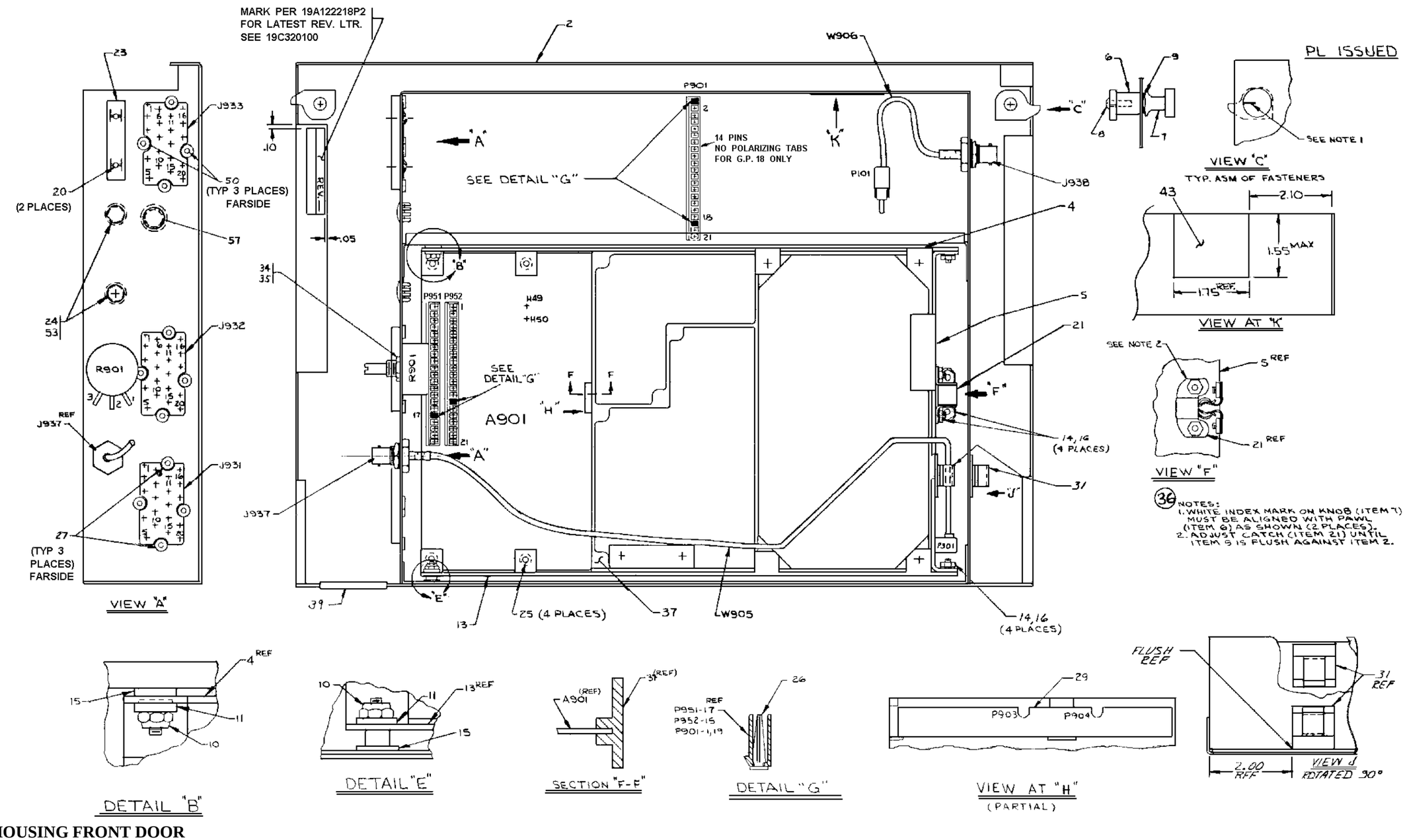
IN ORDER TO RETAIN RATED EQUIPMENT PERFORMANCE, REPLACEMENT OF ANY SERVICE PART SHOULD BE MADE ONLY WITH A COMPONENT HAVING THE SPECIFICATIONS SHOWN ON THE PARTS LIST FOR THAT PART.

SEE APPLICABLE PRODUCTION CHANGE SHEETS IN INSTRUCTION BOOK SECTION DEALING WITH THIS UNIT, FOR DESCRIPTION OF CHANGES UNDER EACH REVISION LETTER.

THIS ELEM DIAG APPLIES TO	
Model No.	Rev Letter
PLI19D417215G1	C
PLI19D417262G1	
PLI19D417262G4	
PLI19D417262G16	

RADIO HOUSING FRONT DOOR 19C417262G4

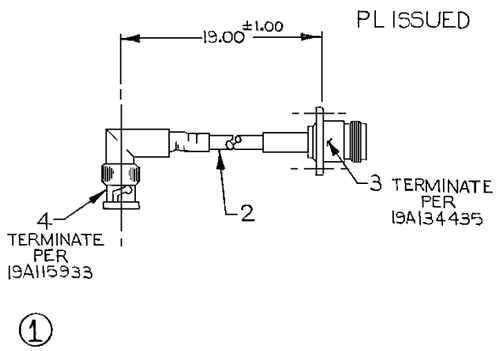
(19E501154, Sh.1, Rev. 24)



RADIO HOUSING FRONT DOOR
19D417262G4

(19D417262, Sh. 2, Rev. 13)

MASTR II 800 MHz STATION RADIO PANEL
FRONT DOOR ASSEMBLY
19D417262G4



SYMBOL	PART NUMBER	DESCRIPTION
		DOOR ASSEMBLY 19D417262G4
A901		**COMPONENT BOARD 19D417213G1**
		——————CAPACITORS ————
C1	19A116080P107	Polyester: 0.1 µF ±20%, 50 VDCW.
C2	19A115680P24	Electrolytic: 400 µF +150% -10%, 18 VDCW; sim to Mallory Type TTX.
C3	19A116080P106	Polyester: 0.068 µF ±10%, 50 VDCW.
C4 thru C7	19A704534P	Tantalum: 1 µF ± 20%, 35 VDCW.
		—— JACKS AND RECEPTACLES ——
J903		Connector. Includes:
	19A116659P1	Connector, printed wiring: 3 contact rated at 5 amps; sim to Molex 09-52-3032. (Quantity 1).
	19A116659P	Connector, printed wiring: 6 contact rated at 5 amps; sim to Molex 09-52-3062. (Quantity 4).
J904		Connector. Includes:
	19A116659P1	Connector, printed wiring: 3 contact rated at 5 amps; sim to Molex 09-52-3032. (Quantity 1).
	19A116659P4	Connector, printed wiring: 6 contact rated at 5 amps; sim to Molex 09-52-3062. (Quantity 3).
J905		Connector: 9 contacts.
J936	4033513P4	Contact, electrical: sim to Bead Chain L93-3.
J951		Connector. Includes:
	19A116659P13	Connector, printed wiring: 4 contact rated at 5 amps; sim to Molex 09-64-1041. (Quantity 5).
J952		Connector. Includes:
	19A116659P11	Connector, printed wiring: 7 contact rated at 5 amps; sim to Molex 09-64-1071. (Quantity 2).
	19A116659P12	Connector, printed wiring: 6 contacts rated @ 5 amps; sim to Molex 09-64-1061. (Quantity 1).
		———————— PLUGS ————————
P907	19A701785P1	Contact, electrical; sim to Molex 08-50-0404. (Quantity 6).
P908	19A701785P1	Contact, electrical; sim to Molex 08-50-0404. (Quantity 9).
P909	19A701785P1	Contact, electrical; sim to Molex 08-50-0404. (Quantity 8).
P934	19A701785P1	Contact, electrical; sim to Molex 08-50-0404. (Quantity 8).
P935	19A701785P1	Contact, electrical; sim to Molex 08-50-0404. (Quantity 7).
		——————— RESISTORS ———————
R1 and R2	19A701250P444	Metal film: 280K ohms ± 1%, 1/4 w
R3	19B209358P106	Variable, carbon film: approx 300 to 10K ohms ±10%, 1/4 w; sim to CTS Type X-201
R4	19A700106P71	Composition: 2.2K ohms ±5%, 1/4 w.
R5	19A700106P75	Composition: 3.3K ohms ± 5%, 1/4 w.
R6	19A700113P3	Composition: 3.3 ohms ± 5%, 1/2 w.
		———————CABLES ———————
W903		**CABLE ASSEMBLY 19D417262G2**
		—— JACKS AND RECEPTACLES ——
J931 and J932	19C303426G1	Connector: 20 pin contacts.

SYMBOL	PART NUMBER	DESCRIPTION
		———————— PLUGS ————————
P951 and P952		Connector. Includes:
	19A116659P25	Shell.
	19A116781P5	Contact, electrical: wire range No. 18-24 AWG; sim to Molex 08-50-0106.
	19A116781P6	Contact, electrical: wire range No. 22-26 AWG; sim to Molex 08-50-0108.
		———————— RESISTORS ————
R901	5496870P3	Variable, carbon film: 10K ohms ±20%, sim to Mallory LC(25K).
W904		**EXCITER CABLE 19D417262G3**
		—— JACKS AND RECEPTACLES ——
J933	19C303426G1	Connector: 20 pin contacts.
		———————— PLUGS ————————
P901		Connector. Includes:
	19A116659P25	Shell.
	19A116781P6	Contact, electrical: wire range No. 22-26 AWG; sim to Molex 08-50-0108.
W905		**CABLE ASSEMBLY 19A136930G2**
J937	19A115938P12	Connector, coaxial: (BNC Series); sim to Amephenol 31-324.
		———————— PLUGS ————————
P30	119A134357P8	Cable, RF: approx 21 inches long.
W906		**CABLE ASSEMBLY 19A136930G1**
		—— JACKS AND RECEPTACLES ——
J938	19A115938P1	Connector, coaxial: (BNC Series); sim to Amphenol 31-318.
		———————— PLUGS ————————
P101	19A134357P6	Cable, RF: approx 6 inches long.
	esa	———————— MISCELLANEOUS ————
	19C320679G1	Door.
	19B234589P1	Pawl. (Part of door latch).
	19C336435P1	Knob. (Part of door latch).
	N193P1208	C6Tao screw, phillips head: No. 6-20 x 1/2. (Part of door latch).
	5493361P6	Washer, spring tension. (Part of door latch).
	19A121676P1	Guide pin. (Used with J931-J933).
	19B209519P1	Polarity tab. (Used with P901, P951, P952).
	7115130P9	Lockwasher, interal tooth: No. 3/8. (Used with R901 mounting).
	7165075P2	Hex nut, brass: thd. size No. 3/8-32 (Used with R901 mounting).
	19A115874P1	Catch, friction.(Latches A901).

PRODUCTION CHANGES

Changes in the equipment to improve performance or to simplify circuits are identified by a Revision Letter which is stamped after the model number of the unit. The revision stamped on the unit includes all previous revisions. Refer to the Parts List for the descriptions of parts affected by these revisions.

REV. A - COMPONENT BOARD 19D417213G1

To provide carrier control alarm tone access holes to provide alarm tone capability, added holes H78 and H79 at P907 pin 2 and 5.

REV. B - COMPONENT BOARD 19D417213G1

To improve adjacent channel selectivity and to isolate audio PA power return from common ground. Disconnected J904-20 from J904-17 and all other connections. Connected J904-20 to J951-21.

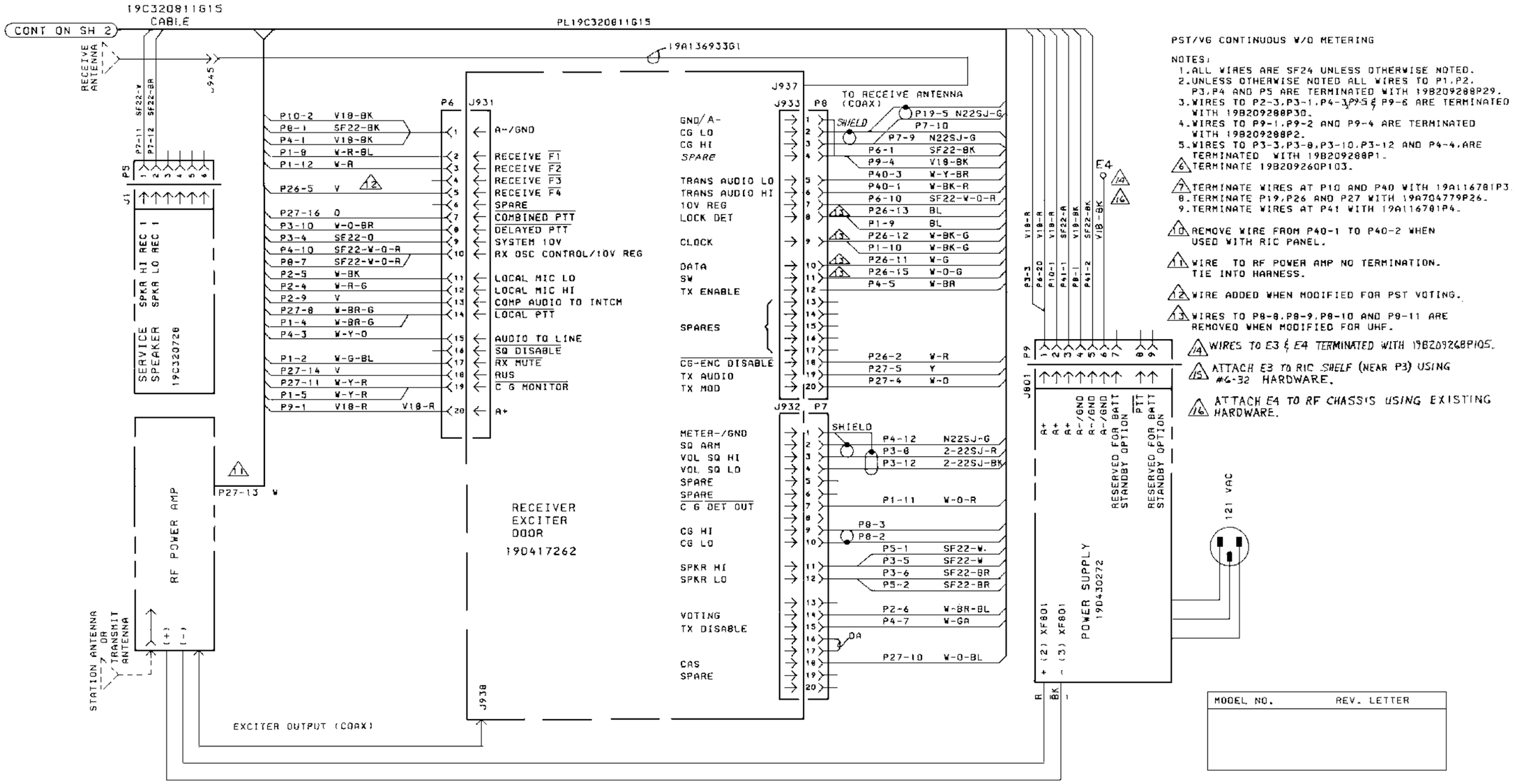
REV. C - COMPONENT BOARD 19D417213G1

To improve adjacent channel sensitivity when used with a MASTR IIe Control Shelf. Added 1 µf capacitors C4 through C7 (19A704534P4).

RX CABLE
(From Antenna Input to Receiver)

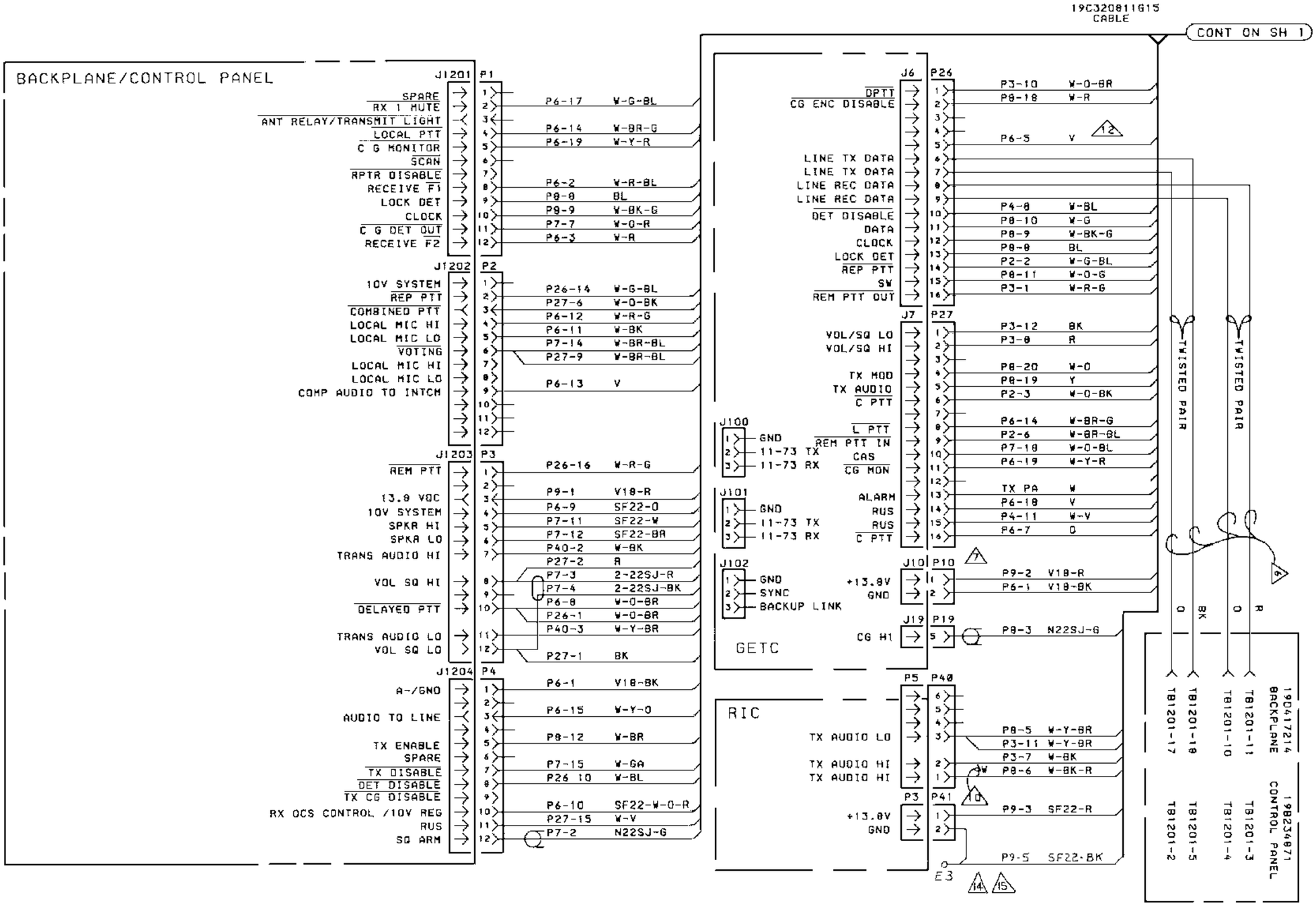
(19A136933, Sh. 1, Rev. 0)

* COMPONENTS, ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES



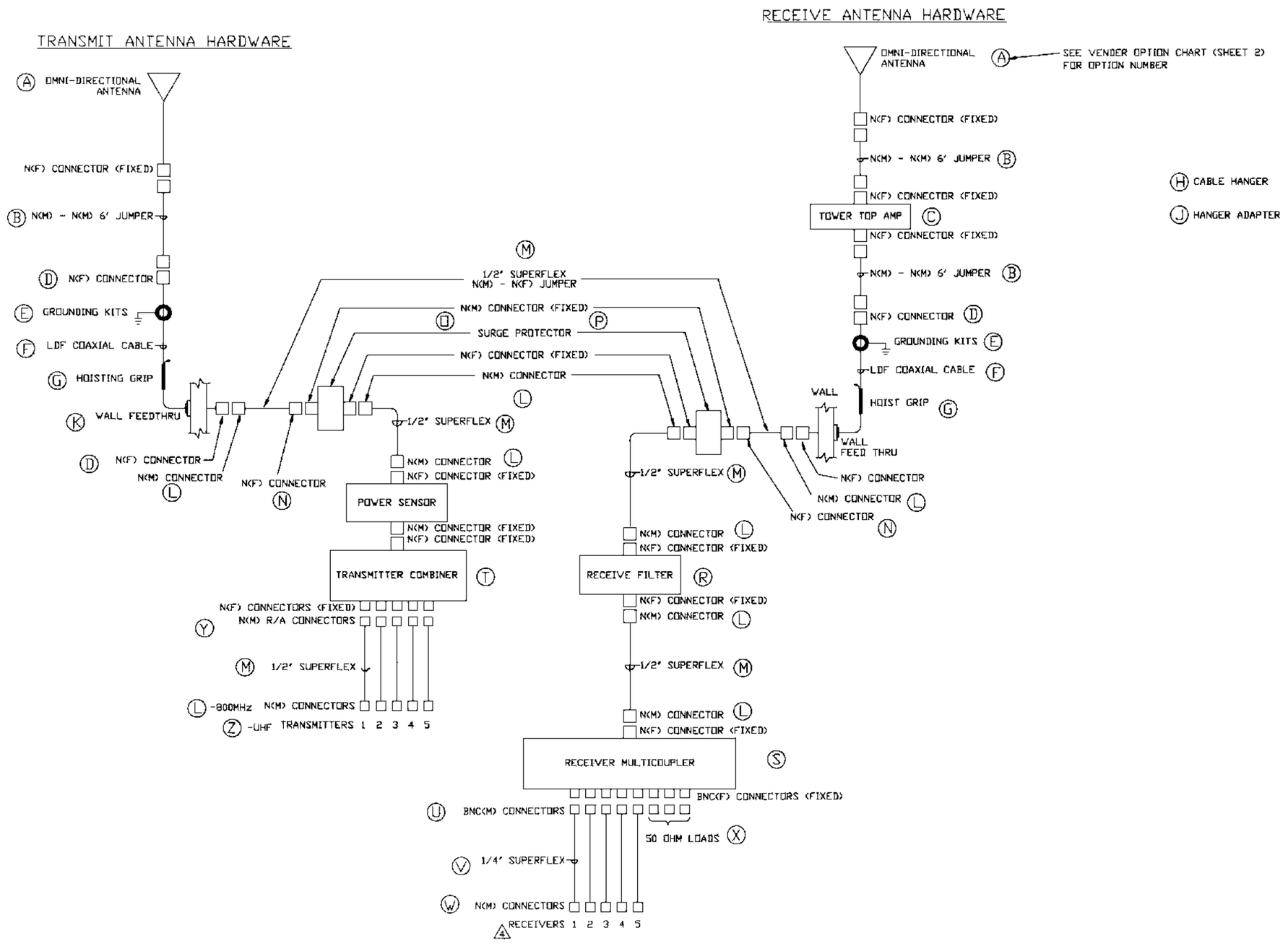
MASTR II STATION

(19D438278, Sh 1, Rev. 8)

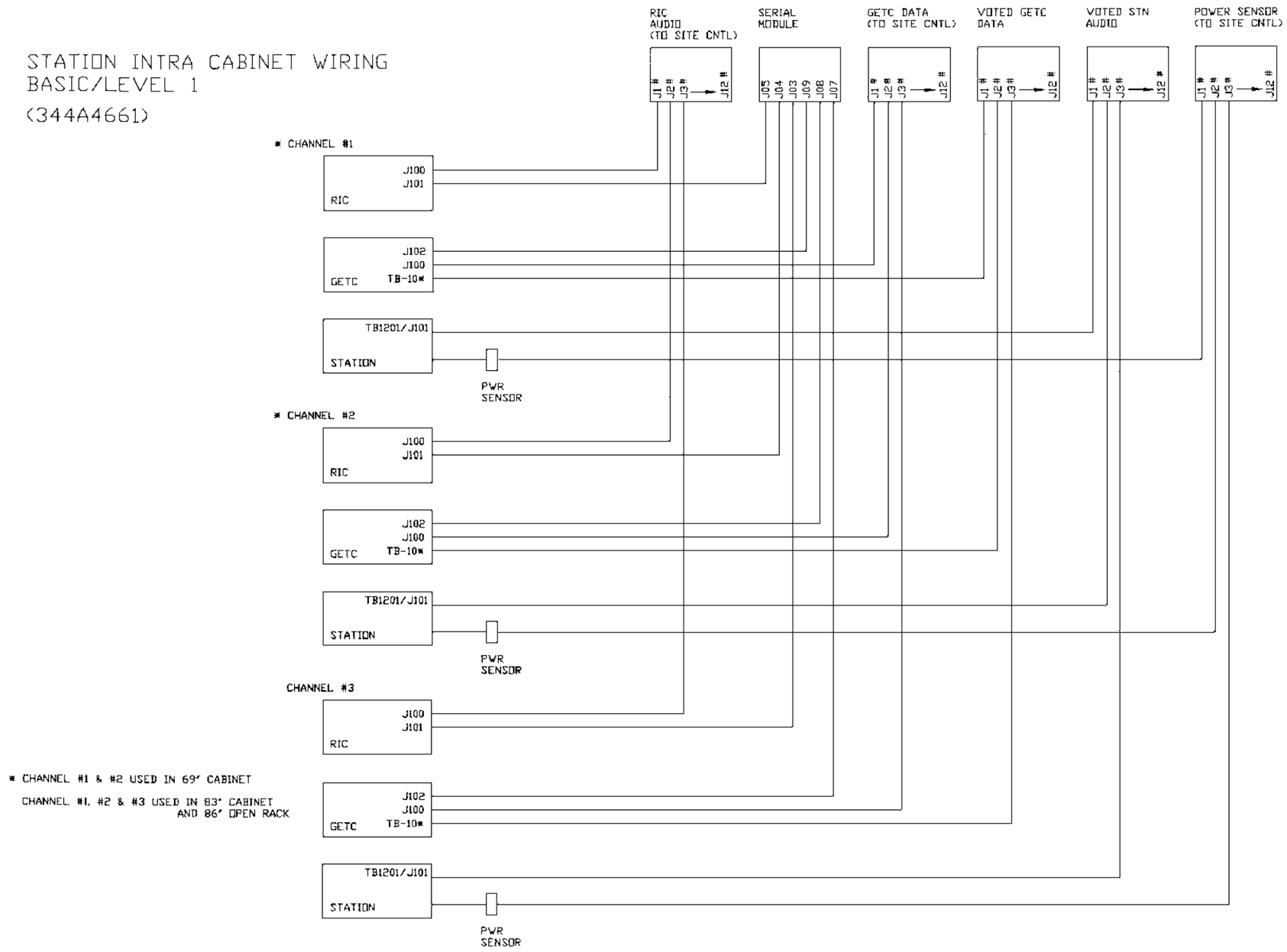


MASTR II STATION

(19D438278, Sh 2, Rev. 5)



(19D904223, Rev. 0)



CONNECTIONS TO POWER SENSOR MODULE
CHANNEL NUMBERING START IS CABINET 1 BOTTOM OF THE CABINET
J# CONNECTION TO CONCENTRATOR MODULES ARE AS SHOWN BELOW
FOR EXAMPLE
STATION 1 CHANNEL ONE CONNECTS TO J1 ON ALL MODULES

69" CABINET

STN CABINET #1		STN CABINET #6	
J1	STATION #1	J1	STATION #11
J2	STATION #2	J2	STATION #12
STN CABINET #2		STN CABINET #7	
J3	STATION #3	J3	STATION #13
J4	STATION #4	J4	STATION #14
STN CABINET #3		STN CABINET #8	
J5	STATION #5	J5	STATION #15
J6	STATION #6	J6	STATION #16
STN CABINET #4		STN CABINET #9	
J7	STATION #7	J7	STATION #17
J8	STATION #8	J8	STATION #18
STN CABINET #5		STN CABINET #10	
J9	STATION #9	J9	STATION #19
J10	STATION #10	J10	STATION #20

83" CABINET OR 86" OPEN RACK

STN CABINET #1		STN CABINET #5	
J1	STATION #1	J1	STATION #13
J2	STATION #2	J2	STATION #14
J3	STATION #3	J3	STATION #15
STN CABINET #2		STN CABINET #6	
J4	STATION #4	J4	STATION #16
J5	STATION #5	J5	STATION #17
J6	STATION #6	J6	STATION #18
STN CABINET #3		STN CABINET #7	
J7	STATION #7	J7	STATION #19
J8	STATION #8	J8	STATION #20
J9	STATION #9		
STN CABINET #4			
J10	STATION #10		
J11	STATION #11		
J12	STATION #12		

STATION INTRA CABINET WIRING BASIC/LEVEL 1 (19D904013P1)

(19D904229, Rev. 1)

PART (1) CABLE CONNECTION TO EDACS STATION

83" CABINET OR 86 OPEN RACK

FROM		TO	CABLE
POWER MODULE			
CHANNEL 01/13	J01	POWER SENSOR PHONO	19D903880P32
CHANNEL 02/14	J02	POWER SENSOR PHONO	19D903880P31
CHANNEL 03/15	J03	POWER SENSOR PHONO	19D903880P30
CHANNEL 04/16	J04	POWER SENSOR PHONO	19D903880P32
CHANNEL 05/17	J05	POWER SENSOR PHONO	19D903880P31
CHANNEL 06/18	J06	POWER SENSOR PHONO	19D903880P30
CHANNEL 07/19	J07	POWER SENSOR PHONO	19D903880P32
CHANNEL 08/20	J08	POWER SENSOR PHONO	19D903880P31
CHANNEL 09	J09	POWER SENSOR PHONO	19D903880P30
CHANNEL 10	J10	POWER SENSOR PHONO	19D903880P32
CHANNEL 11	J11	POWER SENSOR PHONO	19D903880P31
CHANNEL 12	J12	POWER SENSOR PHONO	19D903880P30
GETC DATA MODULE			
CHANNEL 01/13	J01	GETC J100	19D903880P23
CHANNEL 02/14	J02	GETC J100	19D903880P21
CHANNEL 03/15	J03	GETC J100	19D903880P20
CHANNEL 04/16	J04	GETC J100	19D903880P23
CHANNEL 05/17	J05	GETC J100	19D903880P21
CHANNEL 06/18	J06	GETC J100	19D903880P20
CHANNEL 07/19	J07	GETC J100	19D903880P23
CHANNEL 08/20	J08	GETC J100	19D903880P21
CHANNEL 09	J09	GETC J100	19D903880P20
CHANNEL 10	J10	GETC J100	19D903880P23
CHANNEL 11	J11	GETC J100	19D903880P21
CHANNEL 12	J12	GETC J100	19D903880P20
SERIAL MODULE			
CHANNEL XX	J07	GETC J102	19D903880P23
CHANNEL XX	J08	GETC J102	19D903880P22
CHANNEL XX	J09	GETC J102	19D903880P21
CHANNEL XX	J03	RIC J101	19D903880P211
CHANNEL XX	J04	RIC J101	19D903880P210
CHANNEL XX	J05	RIC J101	19D903880P210
RIC AUDIO			
CHANNEL 01/13	J01	RIC J100	19D903880P42
CHANNEL 02/14	J02	RIC J100	19D903880P41
CHANNEL 03/15	J03	RIC J100	19D903880P40
CHANNEL 04/16	J04	RIC J100	19D903880P42
CHANNEL 05/17	J05	RIC J100	19D903880P41
CHANNEL 06/18	J06	RIC J100	19D903880P40
CHANNEL 07/19	J07	RIC J100	19D903880P42
CHANNEL 08/20	J08	RIC J100	19D903880P41
CHANNEL 09	J09	RIC J100	19D903880P40
CHANNEL 10	J10	RIC J100	19D903880P42
CHANNEL 11	J11	RIC J100	19D903880P41
CHANNEL 12	J12	RIC J100	19D903880P40
STATION AUDIO			
CHANNEL 01/13	J01	TB1201-10/11/17/18	19D903880P13
CHANNEL 02/14	J02	TB1201-10/11/17/18	19D903880P12
CHANNEL 03/15	J03	TB1201-10/11/17/18	19D903880P11
CHANNEL 04/16	J04	TB1201-10/11/17/18	19D903880P13
CHANNEL 05/17	J05	TB1201-10/11/17/18	19D903880P12
CHANNEL 06/18	J06	TB1201-10/11/17/18	19D903880P11
CHANNEL 07/19	J07	TB1201-10/11/17/18	19D903880P13
CHANNEL 08/20	J08	TB1201-10/11/17/18	19D903880P12
CHANNEL 09	J09	TB1201-10/11/17/18	19D903880P11
CHANNEL 10	J10	TB1201-10/11/17/18	19D903880P13
CHANNEL 11	J11	TB1201-10/11/17/18	19D903880P12
CHANNEL 12	J12	TB1201-10/11/17/18	19D903880P11
GETC DATA-MODEM (USE THIS CONNECTION IF GETC HAS MODEM INSTALLED)			
CHANNEL 01/13	J01	GETC TB10-7/8/9/10	19D903880P13
CHANNEL 02/14	J02	GETC TB10-7/8/9/10	19D903880P12
CHANNEL 03/15	J03	GETC TB10-7/8/9/10	19D903880P11
CHANNEL 04/16	J04	GETC TB10-7/8/9/10	19D903880P13
CHANNEL 05/17	J05	GETC TB10-7/8/9/10	19D903880P12
CHANNEL 06/18	J06	GETC TB10-7/8/9/10	19D903880P11
CHANNEL 07/19	J07	GETC TB10-7/8/9/10	19D903880P13
CHANNEL 08/20	J08	GETC TB10-7/8/9/10	19D903880P12
CHANNEL 09	J09	GETC TB10-7/8/9/10	19D903880P11
CHANNEL 10	J10	GETC TB10-7/8/9/10	19D903880P13
CHANNEL 11	J11	GETC TB10-7/8/9/10	19D903880P12
CHANNEL 12	J12	GETC TB10-7/8/9/10	19D903880P11
GETC DATA-RS232 (USE THIS CONNECTION IF GETC DOES NOT HAVE MODEM INSTALLED)			
CHANNEL 01/13	J01	GETC TB10-4/6/3/6	19D903880P13
CHANNEL 02/14	J02	GETC TB10-4/6/3/6	19D903880P12
CHANNEL 03/15	J03	GETC TB10-4/6/3/6	19D903880P11
CHANNEL 04/16	J04	GETC TB10-4/6/3/6	19D903880P13
CHANNEL 05/17	J05	GETC TB10-4/6/3/6	19D903880P12
CHANNEL 06/18	J06	GETC TB10-4/6/3/6	19D903880P11
CHANNEL 07/19	J07	GETC TB10-4/6/3/6	19D903880P13
CHANNEL 08/20	J08	GETC TB10-4/6/3/6	19D903880P12
CHANNEL 09	J09	GETC TB10-4/6/3/6	19D903880P11
CHANNEL 10	J10	GETC TB10-4/6/3/6	19D903880P13
CHANNEL 11	J11	GETC TB10-4/6/3/6	19D903880P12
CHANNEL 12	J12	GETC TB10-4/6/3/6	19D903880P11

69" CABINET

FROM		TO	CABLE
POWER MODULE			
CHANNEL 01/11	J01	POWER SENSOR PHONO	19D903880P32
CHANNEL 02/12	J02	POWER SENSOR PHONO	19D903880P31
CHANNEL 03/13	J03	POWER SENSOR PHONO	19D903880P32
CHANNEL 04/14	J04	POWER SENSOR PHONO	19D903880P31
CHANNEL 05/15	J05	POWER SENSOR PHONO	19D903880P31
CHANNEL 06/16	J06	POWER SENSOR PHONO	19D903880P31
CHANNEL 07/17	J07	POWER SENSOR PHONO	19D903880P31
CHANNEL 08/18	J08	POWER SENSOR PHONO	19D903880P31
CHANNEL 09/19	J09	POWER SENSOR PHONO	19D903880P32
CHANNEL 10/20	J10	POWER SENSOR PHONO	19D903880P31
	J11		
	J12		
GETC DATA MODULE			
CHANNEL 01/11	J01	GETC J100	19D903880P22
CHANNEL 02/12	J02	GETC J100	19D903880P21
CHANNEL 03/13	J03	GETC J100	19D903880P21
CHANNEL 04/14	J04	GETC J100	19D903880P21
CHANNEL 05/15	J05	GETC J100	19D903880P21
CHANNEL 06/16	J06	GETC J100	19D903880P21
CHANNEL 07/17	J07	GETC J100	19D903880P21
CHANNEL 08/18	J08	GETC J100	19D903880P21
CHANNEL 09/19	J09	GETC J100	19D903880P22
CHANNEL 10/20	J10	GETC J100	19D903880P21
	J11		
	J12		
SERIAL MODULE			
CHANNEL XX	J07	GETC J102	19D903880P22
CHANNEL XX	J08	GETC J102	19D903880P22
CHANNEL XX	J03	RIC J101	19D903880P211
CHANNEL XX	J04	RIC J101	19D903880P210
RIC AUDIO			
CHANNEL 01/11	J01	RIC J100	19D903880P41
CHANNEL 02/12	J02	RIC J100	19D903880P40
CHANNEL 03/13	J03	RIC J100	19D903880P41
CHANNEL 04/14	J04	RIC J100	19D903880P40
CHANNEL 05/15	J05	RIC J100	19D903880P41
CHANNEL 06/16	J06	RIC J100	19D903880P40
CHANNEL 07/17	J07	RIC J100	19D903880P41
CHANNEL 08/18	J08	RIC J100	19D903880P40
CHANNEL 09/19	J09	RIC J100	19D903880P41
CHANNEL 10/20	J10	RIC J100	19D903880P40
	J11		
	J12		
STATION AUDIO			
CHANNEL 01/11	J01	TB1201-10/11/17/18	19D903880P12
CHANNEL 02/12	J02	TB1201-10/11/17/18	19D903880P11
CHANNEL 03/13	J03	TB1201-10/11/17/18	19D903880P12
CHANNEL 04/14	J04	TB1201-10/11/17/18	19D903880P11
CHANNEL 05/15	J05	TB1201-10/11/17/18	19D903880P12
CHANNEL 06/16	J06	TB1201-10/11/17/18	19D903880P11
CHANNEL 07/17	J07	TB1201-10/11/17/18	19D903880P12
CHANNEL 08/18	J08	TB1201-10/11/17/18	19D903880P11
CHANNEL 09/19	J09	TB1201-10/11/17/18	19D903880P12
CHANNEL 10/20	J10	TB1201-10/11/17/18	19D903880P11
	J11		
	J12		
GETC DATA-MODEM (USE THIS CONNECTION IF GETC HAS MODEM INSTALLED)			
CHANNEL 01/11	J01	GETC TB10-7/8/9/10	19D903880P12
CHANNEL 02/12	J02	GETC TB10-7/8/9/10	19D903880P11
CHANNEL 03/13	J03	GETC TB10-7/8/9/10	19D903880P12
CHANNEL 04/14	J04	GETC TB10-7/8/9/10	19D903880P11
CHANNEL 05/15	J05	GETC TB10-7/8/9/10	19D903880P12
CHANNEL 06/16	J06	GETC TB10-7/8/9/10	19D903880P11
CHANNEL 07/17	J07	GETC TB10-7/8/9/10	19D903880P12
CHANNEL 08/18	J08	GETC TB10-7/8/9/10	19D903880P11
CHANNEL 09/19	J09	GETC TB10-7/8/9/10	19D903880P12
CHANNEL 10/20	J10	GETC TB10-7/8/9/10	19D903880P11
	J11		
	J12		
GETC DATA-RS232 (USE THIS CONNECTION IF GETC DOES NOT HAVE MODEM INSTALLED)			
CHANNEL 01/11	J01	GETC TB10-4/6/3/6	19D903880P12
CHANNEL 02/12	J02	GETC TB10-4/6/3/6	19D903880P11
CHANNEL 03/13	J03	GETC TB10-4/6/3/6	19D903880P12
CHANNEL 04/14	J04	GETC TB10-4/6/3/6	19D903880P11
CHANNEL 05/15	J05	GETC TB10-4/6/3/6	19D903880P12
CHANNEL 06/16	J06	GETC TB10-4/6/3/6	19D903880P11
CHANNEL 07/17	J07	GETC TB10-4/6/3/6	19D903880P12
CHANNEL 08/18	J08	GETC TB10-4/6/3/6	19D903880P11
CHANNEL 09/19	J09	GETC TB10-4/6/3/6	19D903880P12
CHANNEL 10/20	J10	GETC TB10-4/6/3/6	19D903880P11
	J11		
	J12		

STATION CONNECTION
- TB1201-10 BLUE/WHITE
- TB1201-11 WHITE/BLUE
- TB1201-17 ORANGE/WHITE
- TB1201-18 WHITE/ORANGE

GETC DATE-MODEM CONNECTION
- TB10-7 BLUE/WHITE
- TB10-8 WHITE/BLUE
- TB10-9 ORANGE/WHITE
- TB10-10 WHITE/ORANGE

GETC DATE-RS232 CONNECTION
- TB10-4 BLUE/WHITE
- TB10-6 WHITE/BLUE
- TB10-3 ORANGE/WHITE
- TB10-6 WHITE/ORANGE

CHANNEL XX --ALL CHANNELS IN A CABINET MUST CONNECT TO EITHER J7/J8/J9 FOR GETC (SERIAL BUS) AND J3/J4/J5 FOR GETC

SEE BLOCK DIAGRAM 19D904229

PART (2) CABLE CONNECTION TO SIMULCAST EDACS STATION

83" CABINET OR 86 OPEN RACK

FROM		TO	CABLE
POWER MODULE			
CHANNEL 01/13	J01	POWER SENSOR PHONO	19D903880P32
CHANNEL 02/14	J02	POWER SENSOR PHONO	19D903880P31
CHANNEL 03/15	J03	POWER SENSOR PHONO	19D903880P30
CHANNEL 04/16	J04	POWER SENSOR PHONO	19D903880P32
CHANNEL 05/17	J05	POWER SENSOR PHONO	19D903880P31
CHANNEL 06/18	J06	POWER SENSOR PHONO	19D903880P30
CHANNEL 07/19	J07	POWER SENSOR PHONO	19D903880P32
CHANNEL 08/20	J08	POWER SENSOR PHONO	19D903880P31
CHANNEL 09	J09	POWER SENSOR PHONO	19D903880P30
CHANNEL 10	J10	POWER SENSOR PHONO	19D903880P32
CHANNEL 11	J11	POWER SENSOR PHONO	19D903880P31
CHANNEL 12	J12	POWER SENSOR PHONO	19D903880P30
SERIAL MODULE			
CHANNEL XX	J07	GETC J102	19D903880P23
CHANNEL XX	J08	GETC J102	19D903880P22
CHANNEL XX	J09	GETC J102	19D903880P21
RESET	J06	GETC #1 TB10-1	19D903880P13**
GETC #1	TB10-1	GETC #2 TB10-1	19D903880P231
GETC #2	TB10-1	GETC #3 TB10-1	19D903880P231
RESET	J06	GETC #4 TB10-1	19D903880P13**
GETC #4	TB10-1	GETC #5 TB10-1	19D903880P231
GETC #5	TB10-1	GETC #6 TB10-1	19D903880P231
RESET	J06	GETC #7 TB10-1	19D903880P13**
GETC #7	TB10-1	GETC #8 TB10-1	19D903880P231
GETC #8	TB10-1	GETC #9 TB10-1	19D903880P231
RESET	J06	GETC #10 TB10-1	19D903880P13**
GETC #11	TB10-1	GETC #11 TB10-1	19D903880P231
GETC #12	TB10-1	GETC #12 TB10-1	19D903880P231
RESET	J06	GETC #13 TB10-1	19D903880P13**
GETC #13	TB10-1	GETC #14 TB10-1	19D903880P231
GETC #14	TB10-1	GETC #15 TB10-1	19D903880P231
RESET	J06	GETC #16 TB10-1	19D903880P13**
GETC #16	TB10-1	GETC #17 TB10-1	19D903880P231
GETC #17	TB10-1	GETC #18 TB10-1	19D903880P231
RESET	J06	GETC #19 TB10-1	19D903880P13**
GETC #18	TB10-1	GETC #20 TB10-1	19D903880P231
STATION GETC TO TUAI GETC			
CHANNEL 01/02	J01	GETC #01 TB10-6/3/7/3	19D903880P13*
CHANNEL 03	J02	GETC #04 TB10-6/3	19D903880P13*—⊠
CHANNEL 04	J02	GETC #05 TB10-6/3	19D903880P12*
CHANNEL 05	J03	GETC #06 TB10-6/3	19D903880P12*
CHANNEL 06	J04	GETC #07 TB10-6/3	19D903880P13*—⊠
CHANNEL 07	J04	GETC #08 TB10-6/3/7/3	19D903880P12*
CHANNEL 08/09	J05	GETC #10 TB10-6/3	19D903880P13*
CHANNEL 10	J06	GETC #11 TB10-6/3/7/3	19D903880P12*
CHANNEL 11/12	J07	GETC #13 TB10-6/3/7/3	19D903880P13*
CHANNEL 13/14	J08	GETC #15 TB10-6/3	19D903880P12*
CHANNEL 15	J09	GETC #16 TB10-6/3/7/3	19D903880P13*
CHANNEL 16/17	J10	GETC #18 TB10-6/3	19D903880P12*
CHANNEL 18	J11	GETC #19 TB10-6/3	19D903880P13*—⊠
CHANNEL 19	J11	GETC #20 TB10-6/3	19D903880P12*
CHANNEL 20	J12		

CHANNEL 01 GETC TB10-7 — CHANNEL 02 GETC TB10-6 — 19D903880P231
CHANNEL 08 GETC TB10-7 — CHANNEL 09 GETC TB10-6 — 19D903880P231
CHANNEL 11 GETC TB10-7 — CHANNEL 12 GETC TB10-6 — 19D903880P231
CHANNEL 13 GETC TB10-7 — CHANNEL 14 GETC TB10-6 — 19D903880P231
CHANNEL 16 GETC TB10-7 — CHANNEL 17 GETC TB10-6 — 19D903880P231

CONNECTION TO GETC'S —⊠
- TB10-6 BLUE WHITE — TB10-6 ORANGE WHITE
- TB10-3 WHITE BLUE — TB10-3 WHITE ORANGE
- TB10-7 ORANGE WHITE
- TB10-3 WHITE ORANGE

* CUT-OFF UNSED LEADS
** CONNECT BLUE/WHITE TO TB10-1 CUT-OFF UNSED WIRES

69" CABINET

FROM		TO	CABLE
POWER MODULE			
CHANNEL 01/11	J01	POWER SENSOR PHONO	19D903880P32
CHANNEL 02/12	J02	POWER SENSOR PHONO	19D903880P31
CHANNEL 03/13	J03	POWER SENSOR PHONO	19D903880P31
CHANNEL 04/14	J04	POWER SENSOR PHONO	19D903880P31
CHANNEL 05/15	J05	POWER SENSOR PHONO	19D903880P31
CHANNEL 06/16	J06	POWER SENSOR PHONO	19D903880P31
CHANNEL 07/17	J07	POWER SENSOR PHONO	19D903880P31
CHANNEL 08/18	J08	POWER SENSOR PHONO	19D903880P31
CHANNEL 09/19	J09	POWER SENSOR PHONO	19D903880P32
CHANNEL 10/20	J10	POWER SENSOR PHONO	19D903880P31
	J11		
	J12		
SERIAL MODULE			
CHANNEL XX	J08	GETC J102	19D903880P22
CHANNEL XX	J09	GETC J102	19D903880P21
RESET	J06	GETC #1 TB10-1	19D903880P13**
GETC #1	TB10-1	GETC #2 TB10-1	19D903880P231
RESET	J06	GETC #3 TB10-1	19D903880P13**
GETC #3	TB10-1	GETC #4 TB10-1	19D903880P231
RESET	J06	GETC #5 TB10-1	19D903880P13**
GETC #5	TB10-1	GETC #6 TB10-1	19D903880P231
RESET	J06	GETC #7 TB10-1	19D903880P13**
GETC #7	TB10-1	GETC #8 TB10-1	19D903880P231
RESET	J06	GETC #9 TB10-1	19D903880P13**
GETC #9	TB10-1	GETC #10 TB10-1	19D903880P231
RESET	J06	GETC #11 TB10-1	19D903880P13**
GETC #11	TB10-1	GETC #12 TB10-1	19D903880P231
RESET	J06	GETC #13 TB10-1	19D903880P13**
GETC #13	TB10-1	GETC #14 TB10-1	19D903880P231
RESET	J06	GETC #15 TB10-1	19D903880P13**
GETC #15	TB10-1	GETC #16 TB10-1	19D903880P231
RESET	J06	GETC #17 TB10-1	19D903880P13**
GETC #17	TB10-1	GETC #18 TB10-1	19D903880P231
RESET	J06	GETC #19 TB10-1	19D903880P13**
GETC #19	TB10-1	GETC #20 TB10-1	19D903880P231
STATION GETC TO TUAI GETC			
CHANNEL 01/02	J01	GETC #01 TB10-6/3/7/3	19D903880P13*
CHANNEL 03/04	J02	GETC #03 TB10-6/3/7/3	19D903880P12*
CHANNEL 05	J03	GETC #05 TB10-6/3	19D903880P13*
CHANNEL 06	J04	GETC #06 TB10-6/3	19D903880P12*
CHANNEL 07	J04	GETC #07 TB10-6/3	19D903880P12*—⊠
CHANNEL 08	J05	GETC #08 TB10-6/3	19D903880P13*
CHANNEL 09	J05	GETC #09 TB10-6/3	19D903880P13*—⊠
CHANNEL 10	J06	GETC #10 TB10-6/3	19D903880P12*
CHANNEL 11/12	J07	GETC #11 TB11-6/3/7/3	19D903880P13*
CHANNEL 13/14	J08	GETC #13 TB10-6/3/7/3	19D903880P12*
CHANNEL 15	J09	GETC #15 TB10-6/3	19D903880P13*
CHANNEL 16	J10	GETC #16 TB10-6/3	19D903880P12*
CHANNEL 17	J10	GETC #17 TB10-6/3	19D903880P13*—⊠
CHANNEL 18	J11	GETC #18 TB10-6/3	19D903880P12*
CHANNEL 19	J11	GETC #19 TB10-6/3	19D903880P13*—⊠
CHANNEL 20	J12	GETC #20 TB10-6/3	19D903880P13*

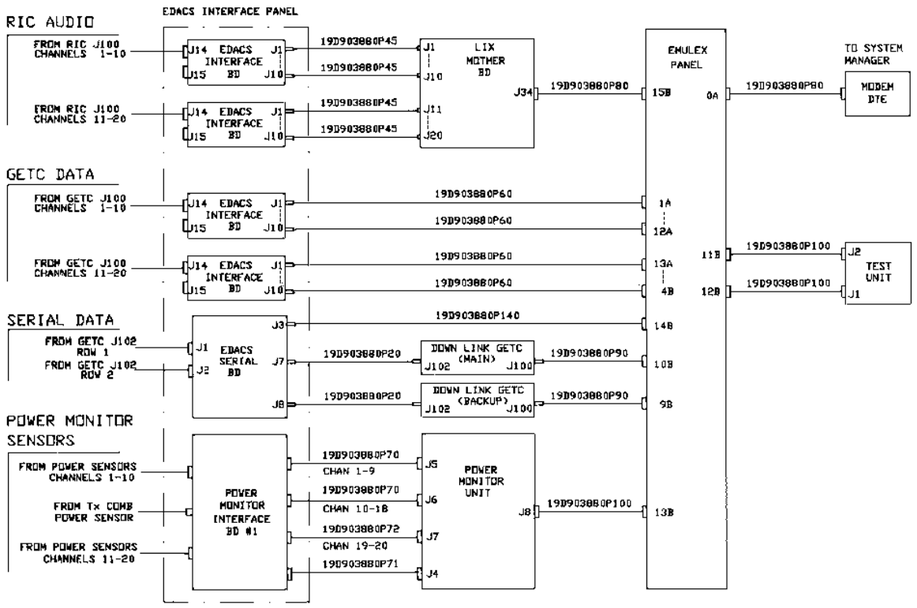
CHANNEL 01 GETC TB10-7 — CHANNEL 02 GETC TB10-6 — 19D903880P231
CHANNEL 03 GETC TB10-7 — CHANNEL 04 GETC TB10-6 — 19D903880P231
CHANNEL 11 GETC TB10-7 — CHANNEL 12 GETC TB10-6 — 19D903880P231
CHANNEL 13 GETC TB10-7 — CHANNEL 14 GETC TB10-6 — 19D903880P231

CONNECTION TO GETC'S —⊠
- TB10-6 BLUE WHITE — TB10-6 ORANGE WHITE
- TB10-3 WHITE BLUE — TB10-3 WHITE ORANGE
- TB10-7 ORANGE WHITE
- TB10-3 WHITE ORANGE

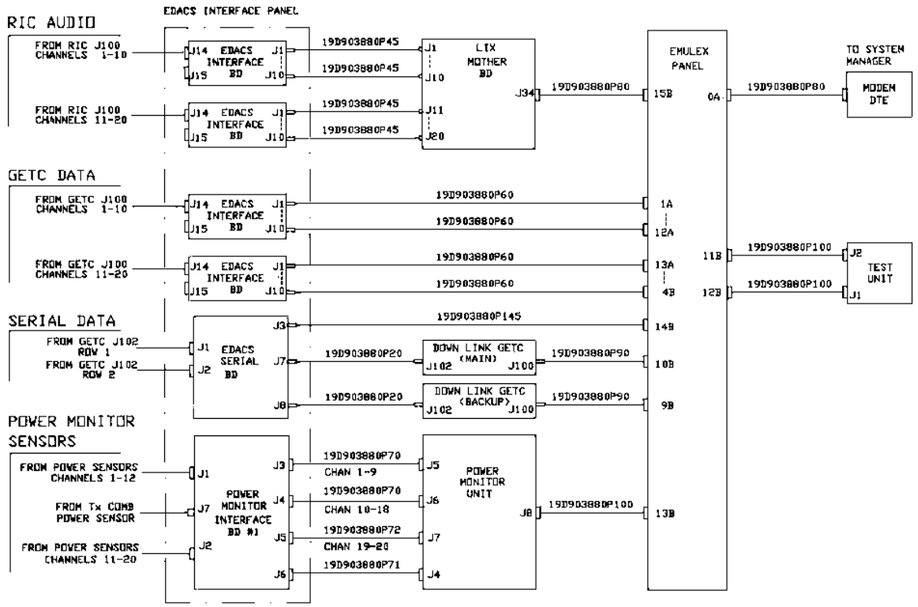
* CUT-OFF UNSED LEADS
** CONNECT BLUE/WHITE TO TB10-1 CUT-OFF UNSED WIRES

SEE BLOCK DIAGRAM 19D904230 & 19D903997

(19D904013, Sheet 1, Rev. 2)



EDACS SITE CONTROLLER INTERCONNECT FOR 69' CABINETS



EDACS SITE CONTROLLER INTERCONNECT FOR 83' CABINETS
EDACS SITE CONTROLLER INTERCONNECT FOR 86' OPEN RACK

PART 3 CABLE CONNECTION TO EDACS SITE CONTROLLER

SITE CONTROLLER CONNECT TO STATION WITH 3 IN A CABINET

FROM		TO	CABLE
POWER MODULE J03		POWER MONITOR P5	19D903880P70
POWER MODULE J04		POWER MONITOR P6	19D903880P70
POWER MODULE J05		POWER MONITOR P7	19D903880P72
POWER MODULE J06		POWER MONITOR P4	19D903880P71
GETC DATA MODULE #1			
CHANNEL 01	J01	EMULEX 1A	19D903880P60
CHANNEL 02	J02	EMULEX 2A	19D903880P60
CHANNEL 03	J03	EMULEX 3A	19D903880P60
CHANNEL 04	J04	EMULEX 4A	19D903880P60
CHANNEL 05	J05	EMULEX 5A	19D903880P60
CHANNEL 06	J06	EMULEX 6A	19D903880P60
CHANNEL 07	J07	EMULEX 7A	19D903880P60
CHANNEL 08	J08	EMULEX 8A	19D903880P60
CHANNEL 09	J09	EMULEX 9A	19D903880P60
CHANNEL 10	J10	EMULEX 10A	19D903880P60
CHANNEL 11	J11	EMULEX 11A	19D903880P60
CHANNEL 12	J12	EMULEX 12A	19D903880P60
GETC DATA MODULE #2			
CHANNEL 13	J01	EMULEX 13A	19D903880P60
CHANNEL 14	J02	EMULEX 14A	19D903880P60
CHANNEL 15	J03	EMULEX 15A	19D903880P60
CHANNEL 16	J04	EMULEX 0B	19D903880P60
CHANNEL 17	J05	EMULEX 1B	19D903880P60
CHANNEL 18	J06	EMULEX 2B	19D903880P60
CHANNEL 19	J07	EMULEX 3B	19D903880P60
CHANNEL 20	J08	EMULEX 4B	19D903880P60
SERIAL MODULE			
RIC SERIAL	J03	EMULEX 14B	19D903880P145
GETC SERIAL	J07	DOWN LINK GETC J102	19D903880P21
GETC SERIAL	J08	RDN DWN LINK GETC J102	19D903880P21
RIC AUDIO MODULE #1			
CHANNEL 01	J01	RIC LIX J01	19D903880P45
CHANNEL 02	J02	RIC LIX J02	19D903880P45
CHANNEL 03	J03	RIC LIX J03	19D903880P45
CHANNEL 04	J04	RIC LIX J04	19D903880P45
CHANNEL 05	J05	RIC LIX J05	19D903880P45
CHANNEL 06	J06	RIC LIX J06	19D903880P45
CHANNEL 07	J07	RIC LIX J07	19D903880P45
CHANNEL 08	J08	RIC LIX J08	19D903880P45
CHANNEL 09	J09	RIC LIX J09	19D903880P45
CHANNEL 10	J10	RIC LIX J10	19D903880P45
RIC AUDIO MODULE #2			
CHANNEL 11	J01	RIC LIX J11	19D903880P45
CHANNEL 12	J02	RIC LIX J12	19D903880P45
CHANNEL 13	J03	RIC LIX J13	19D903880P45
CHANNEL 14	J04	RIC LIX J14	19D903880P45
CHANNEL 15	J05	RIC LIX J15	19D903880P45
CHANNEL 16	J06	RIC LIX J16	19D903880P45
CHANNEL 17	J07	RIC LIX J17	19D903880P45
CHANNEL 18	J08	RIC LIX J18	19D903880P45
CHANNEL 19	J09	RIC LIX J19	19D903880P45
CHANNEL 20	J08	RIC LIX J20	19D903880P45

SITE CONTROLLER CONNECT TO STATION WITH 2 IN A CABINET (69 INCH CABINETS)

FROM		TO	CABLE
POWER MODULE J03		POWER MONITOR P5	19D903880P70
POWER MODULE J04		POWER MONITOR P6	19D903880P70
POWER MODULE J05		POWER MONITOR P8	19D903880P72
POWER MODULE J06		POWER MONITOR P4	19D903880P71
GETC DATA MODULE #1			
CHANNEL 01	J01	EMULEX 1A	19D903880P60
CHANNEL 02	J02	EMULEX 2A	19D903880P60
CHANNEL 03	J03	EMULEX 3A	19D903880P60
CHANNEL 04	J04	EMULEX 4A	19D903880P60
CHANNEL 05	J05	EMULEX 5A	19D903880P60
CHANNEL 06	J06	EMULEX 6A	19D903880P60
CHANNEL 07	J07	EMULEX 7A	19D903880P60
CHANNEL 08	J08	EMULEX 8A	19D903880P60
CHANNEL 09	J09	EMULEX 9A	19D903880P60
CHANNEL 10	J10	EMULEX 10A	19D903880P60
GETC DATA MODULE #2			
CHANNEL 11	J01	EMULEX 11A	19D903880P60
CHANNEL 12	J02	EMULEX 12A	19D903880P60
CHANNEL 13	J03	EMULEX 13A	19D903880P60
CHANNEL 14	J04	EMULEX 14A	19D903880P60
CHANNEL 15	J05	EMULEX 15A	19D903880P60
CHANNEL 16	J06	EMULEX 0B	19D903880P60
CHANNEL 17	J07	EMULEX 1B	19D903880P60
CHANNEL 18	J08	EMULEX 2B	19D903880P60
CHANNEL 19	J09	EMULEX 3B	19D903880P60
CHANNEL 20	J10	EMULEX 4B	19D903880P60
SERIAL MODULE			
RIC SERIAL	J03	EMULEX 14B	19D903880P145
GETC SERIAL	J07	DOWN LINK GETC J102	19D903880P21
GETC SERIAL	J08	RDN DWN LINK GETC J102	19D903880P21
RIC AUDIO MODULE #1			
CHANNEL 01	J01	RIC LIX J01	19D903880P45
CHANNEL 02	J02	RIC LIX J02	19D903880P45
CHANNEL 03	J03	RIC LIX J03	19D903880P45
CHANNEL 04	J04	RIC LIX J04	19D903880P45
CHANNEL 05	J05	RIC LIX J05	19D903880P45
CHANNEL 06	J06	RIC LIX J06	19D903880P45
CHANNEL 07	J07	RIC LIX J07	19D903880P45
CHANNEL 08	J08	RIC LIX J08	19D903880P45
CHANNEL 09	J09	RIC LIX J09	19D903880P45
CHANNEL 10	J10	RIC LIX J10	19D903880P45
RIC AUDIO MODULE #2			
CHANNEL 11	J01	RIC LIX J11	19D903880P45
CHANNEL 12	J02	RIC LIX J12	19D903880P45
CHANNEL 13	J03	RIC LIX J13	19D903880P45
CHANNEL 14	J04	RIC LIX J14	19D903880P45
CHANNEL 15	J05	RIC LIX J15	19D903880P45
CHANNEL 16	J06	RIC LIX J16	19D903880P45
CHANNEL 17	J07	RIC LIX J17	19D903880P45
CHANNEL 18	J08	RIC LIX J18	19D903880P45
CHANNEL 19	J09	RIC LIX J19	19D903880P45
CHANNEL 20	J10	RIC LIX J20	19D903880P45

(19D904013, Sheet 2, Rev. 1)

PART 4 CONNECTION TO CTIS COMPUTER CABINET

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RIC AUDIO MODULE #1
     CHANNEL 01    J01          RIC LIX J01          19D903880P45
     CHANNEL 02    J02          RIC LIX J02          19D903880P45
     CHANNEL 03    J03          RIC LIX J03          19D903880P45
     CHANNEL 04    J04          RIC LIX J04          19D903880P45
     CHANNEL 05    J05          RIC LIX J05          19D903880P45
     CHANNEL 06    J06          RIC LIX J06          19D903880P45
     CHANNEL 07    J07          RIC LIX J07          19D903880P45
     CHANNEL 08    J08          RIC LIX J08          19D903880P45
     CHANNEL 09    J09          RIC LIX J09          19D903880P45
     CHANNEL 10    J10          RIC LIX J10          19D903880P45
     CHANNEL 11    J11          RIC LIX J11          19D903880P45
     CHANNEL 12    J12          RIC LIX J12          19D903880P45
RIC AUDIO MODULE #2
     CHANNEL 13    J01          RIC LIX J13          19D903880P45
     CHANNEL 14    J02          RIC LIX J14          19D903880P45
     CHANNEL 15    J03          RIC LIX J15          19D903880P45
     CHANNEL 16    J04          RIC LIX J16          19D903880P45
     CHANNEL 17    J05          RIC LIX J17          19D903880P45
     CHANNEL 18    J06          RIC LIX J18          19D903880P45
     CHANNEL 19    J07          RIC LIX J19          19D903880P45
     CHANNEL 20    J08          RIC LIX J20          19D903880P45
SERIAL MODULE
     RIC SERIAL    J03          EMULEX PANEL 14B     19D903880P145
DATA LINK MODULE  (MSCII CONTROLLER TO CTIS COMPUTER)
     DATA LINK ( MAIN) J01      EMULEX PANEL  15B    19D903880P60
     DATA LINK ( RDN ) J02      EMULEX PANEL  15B    19D903880P60
```

EXTERNAL CONNECTION TO CTIS CABINET AND RIC CABINET

FROM CTIS CABINET (SERIAL MODULE J4) TO RIC CABINET (SERIAL MODULE 'B'-J24)
USE CABLE 19D903880P161

FROM CTIS CABINET (RIC MODULE #1 J14) TO RIC CABINET (RIC MODULE #1-J124)
USE CABLE 19D903880P120

FROM CTIS CABINET (RIC MODULE #2 J14) TO RIC CABINET (RIC MODULE #2-J124)
USE CABLE 19D903880P120

FROM RIC CABINET (AUDIO IN #1 J14) CONNECT TO MSCII SWITCH
USE CABLE 19D903880P120

FROM RIC CABINET (AUDIO IN #2 J14) CONNECT TO MSCII SWITCH
USE CABLE 19D903880P120

PART 5

INSTALLATION INSTRUCTION FOR DOWNLINK GETC FOR BASIC EDACS
(CONNECTION OF A BASIC EDACS SYSTEM TO MSCII)

MOUNT GETC IN TOP OF STATION CABINET

```
CONNECT CABLE 19D903880P150    (POWER CABLE)
   DOWNLINK GETC              FIRST GETC OR RIC MOUNTING BELOW UNIT
     TB10-7                    TB10-7     RED LEAD
     TB10-6                    TB10-6     BLACK LEAD
CONNECT CABLE 19D903880P400  (SERIAL LINK)
     J102                       SERIAL INTERFACE MODULE J1
```

PART 6

SIMULCAST REMOTE ALARM SYSTEM --- 19D902821P1 --- (TX SITE LOCATION)
SEE SCHEMATIC 19D903997
MODULE LOCATION IN CARD CAGE

```
        SLOT 01         DIGITAL INPUT MODULE
        SLOT 02         CPU
        SLOT 03         A/D #1
        SLOT 04
        SLOT 05         A/D #2
        SLOT 06
        SLOT 07         A/D #3
        SLOT 08
        SLOT 09         A/D #4
        SLOT 10
        SLOT 11         2400 BAUD MODEM
        SLOT 12         DIGITAL OUTPUT MODULE
        HORZ POSITION   HYBRID
```

MODULE	FROM	TO	CABLE
DIGITAL INPUT MODULE	P01	ALARM CC J14	PART OF CARD CAGE
	P02	ALARM CC J15	PART OF CARD CAGE
CPU	P03	ALARM CC J22	19C337513P2
	P04	ALARM CC J21	19C337513P2
A/D #1	P01	ALARM CC J16	19C336513P3
A/D #2	P01	ALARM CC J17	19C336513P3
A/D #3	P01	ALARM CC J18	19C336513P3
A/D #4	P01	ALARM CC J19	19C336513P3
2400 BAUD MODEM	P01	ALARM CC J23	19D904880P160
DIGITAL OUTPUT MODULE	P01	ALARM CC J20	PART OF CARD CAGE
HYBRID	PXX	ALARM CC J44	PART OF CARD CAGE

SET DIP SWITCH (S1) ON ALARM CC TO SITE NUMBER

CONTROL POINT	00000000
SITE #01	10000000
SITE #02	01000000
SITE #03	11000000
SITE #04	00100000
SITE #05	10100000
SITE #06	01100000
SITE #07	11100000
SITE #08	00010000
SITE #09	10010000
SITE #10	01010000

MODIFICATION TO MODULE IN ALARM SYSTEM -- SEE APPLICATION ASM 19D902831
SET JUMPERS ON ALL MODULES

```
  19C337515P1  CPU MODULE  ------------  INSTALL U11 & U12
  19C337515P2  A/D MODULE  ------------  INSTALL R15 & R16
  19C337515P3  DIGITAL INPUT MODULE
  19C337515P4  DIGITAL OUTPUT MODULE
  19C337515P6  2400 MODEM  ------------  INSTALL U4E
  19C337515P7  HYBRID MODULE
```

PART 7

SIMULCAST MASTER ALARM SYSTEM --- 19D902821P2 --- (CONTROL POINT)
SEE SCHEMATIC 19D902831
MODULE LOCATION IN CARD CAGE

```
        SLOT 01         DIGITAL INPUT MODULE
        SLOT 02         CPU
        SLOT 03
        SLOT 04         DIGITAL OUTPUT MODULE #4
        SLOT 05
        SLOT 06         DIGITAL OUTPUT MODULE #3
        SLOT 07
        SLOT 08         DIGITAL OUTPUT MODULE #2
        SLOT 09
        SLOT 10
        SLOT 11         MODEM SITE #01
        SLOT 12         MODEM SITE #02
        SLOT 13         MODEM SITE #03
        SLOT 14         MODEM SITE #04
        SLOT 15         MODEM SITE #05
        SLOT 16         MODEM SITE #06
        SLOT 17         MODEM SITE #07
        SLOT 18         MODEM SITE #08
        SLOT 19         MODEM SITE #09
        SLOT 20         MODEM SITE #10
        SLOT 21         DIGITAL OUTPUT MODULE #1
```

MODULE	FROM	TO	CABLE
DIGITAL INPUT MODULE	P01	ALARM CC J14	PART OF CARD CAGE
	P02	ALARM CC J15	PART OF CARD CAGE
CPU	P03	ALARM CC J22	19C337513P3
	P04	ALARM CC J21	19C337513P3
DIGITAL OUTPUT MODULE #4	P01	CONNECTOR PANEL P04	19D337513P4
DIGITAL OUTPUT MODULE #3	P01	CONNECTOR PANEL P03	19D337513P4
DIGITAL OUTPUT MODULE #2	P01	CONNECTOR PANEL P02	19D337513P4
MODEM SITE #01	P01	ALARM CC J23	19D903880P160
MODEM SITE #02	P01	ALARM CC J24	19D903880P160
MODEM SITE #03	P01	ALARM CC J25	19D903880P160
MODEM SITE #04	P01	ALARM CC J26	19D903880P160
MODEM SITE #05	P01	ALARM CC J27	19D903880P160
MODEM SITE #06	P01	ALARM CC J28	19D903880P160
MODEM SITE #07	P01	ALARM CC J29	19D903880P160
MODEM SITE #08	P01	ALARM CC J30	19D903880P160
MODEM SITE #09	P01	ALARM CC J31	19D903880P160
MODEM SITE #10	P01	ALARM CC J32	19D903880P160
DIGITAL OUTPUT MODULE #1	P01	ALARM CC J20	PART OF CARD CAGE

SET DIP SWITCH (S1) ON ALARM CC TO SITE NUMBER

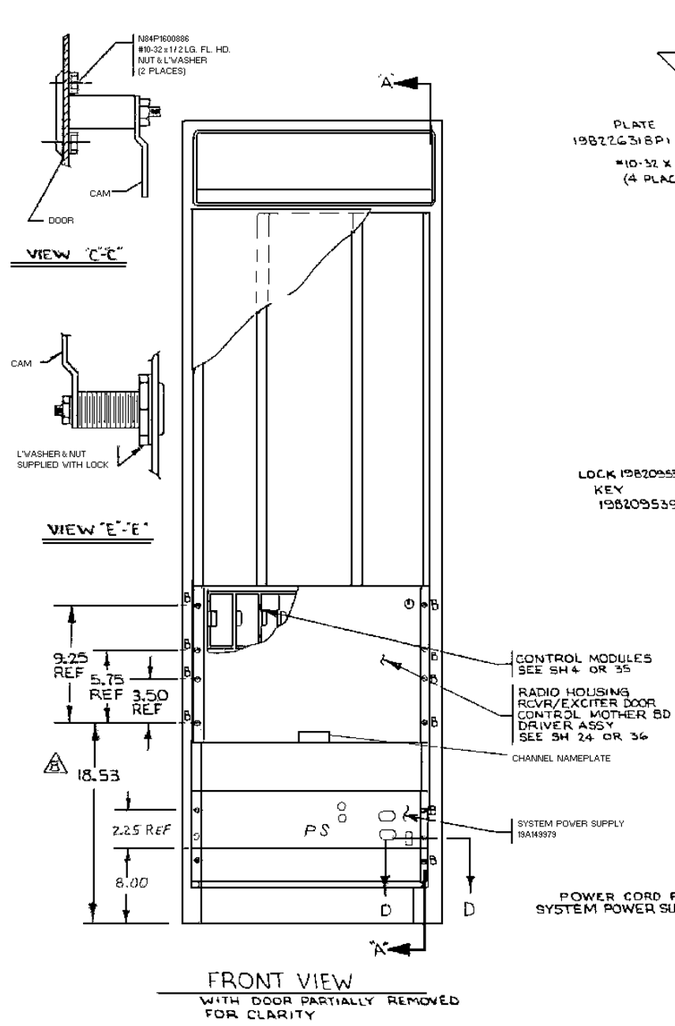
CONTROL POINT	000000

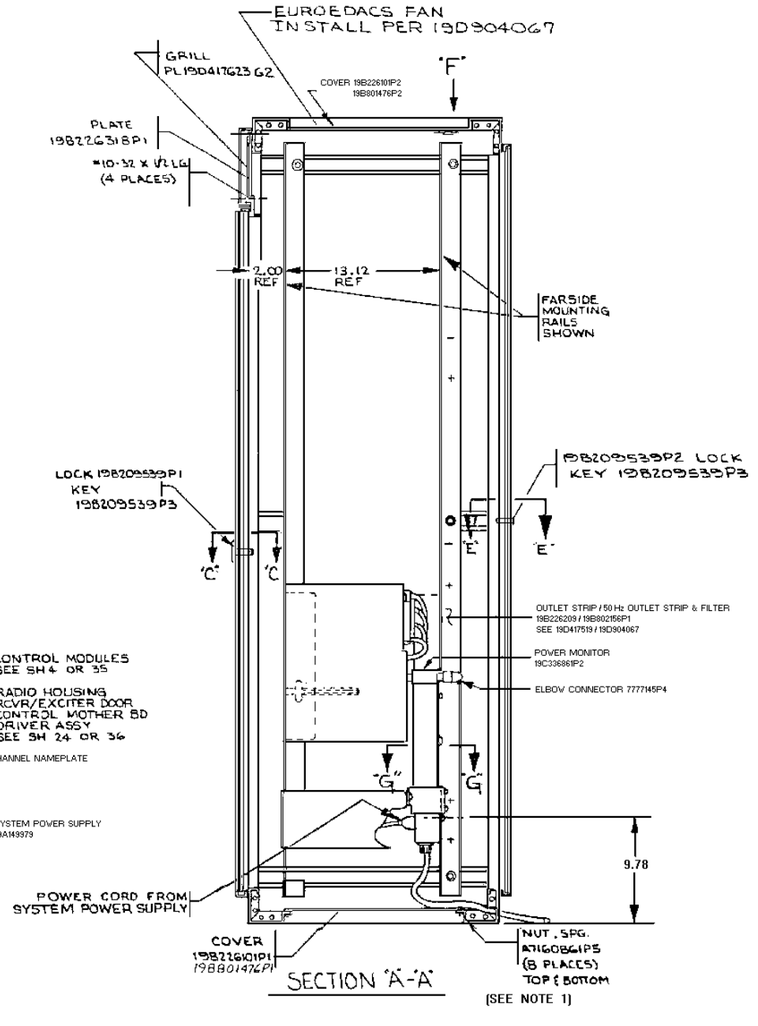
MODIFICATION TO MODULE IN ALARM SYSTEM -- SEE APPLICATION ASM 19D902831
SET JUMPERS ON ALL MODULES

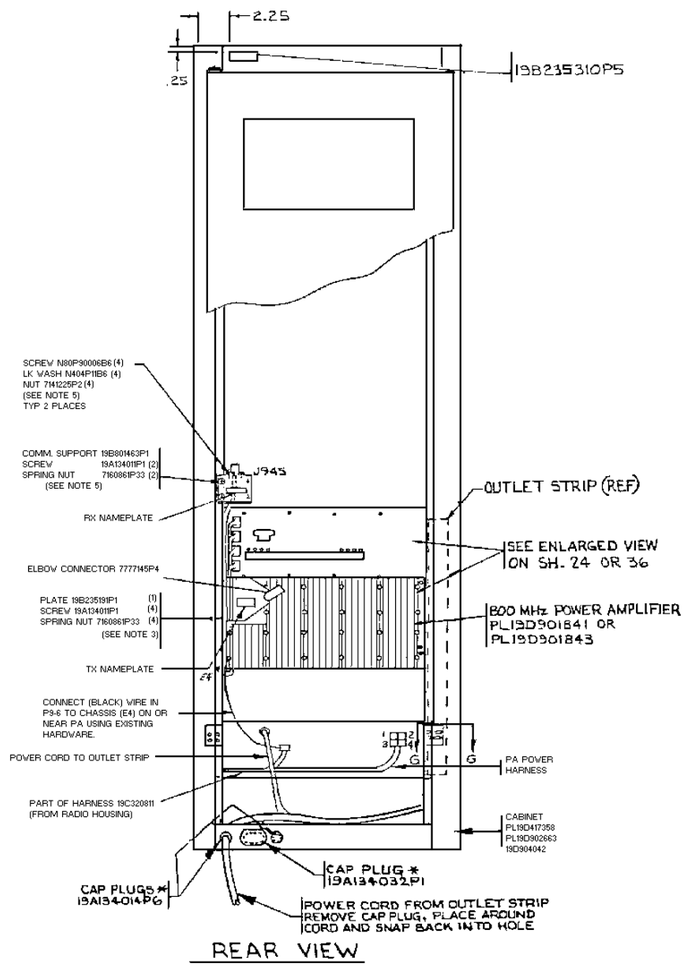
```
  19C337515P1  CPU MODULE  ------------  INSTALL U11 & U12
  19C337515P3  DIGITAL INPUT MODULE
  19C337515P4  DIGITAL OUTPUT MODULE
  19C337515P6  2400 MODEM  ------------  INSTALL U4E
```

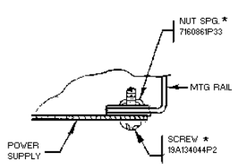
ON ALARM CC INSTALL JUMPER FROM SW01-6 TO HOLE H02

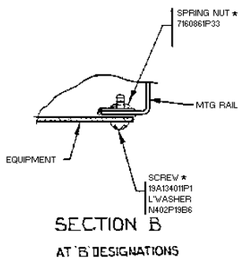
(19D904013, Sheet 3, Rev. 2)

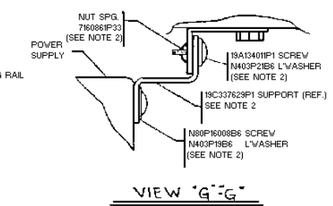












NOTES: 800 MHZ V.M. CABINET

1. ITEMS WHICH REFERENCE AN (*) ARE PART OF HDV. KIT PL 19A130031G24.
2. PART OF POWER SUPPLY KIT PL19A149326G8
3. PART OF CONNECTOR SUPPORT KIT PL19A705186G2.
4. SEE INTR. DIAG. 19R622600 FOR G-MARC V APPLICATION OR 19D438279 INTR. DIAG. FOR NON G-MARC APPLICATION.
5. PART OF CONNECTOR SUPPORT KIT PL19A705186G1

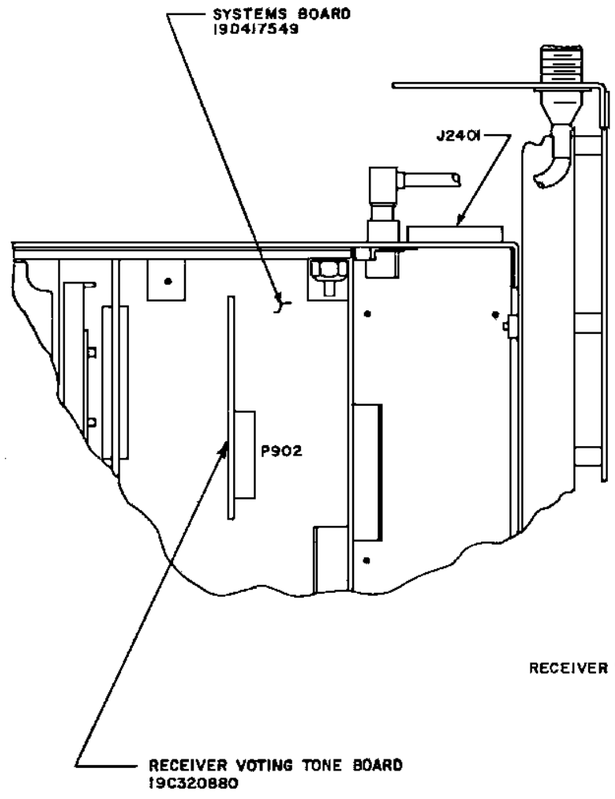
(A) IN SIMPLEX APPLICATIONS REMOVE P12 OF 19C320811-STRIP THE W-BL WIRE & TERMINATE TOGETHER IN SPLICE AT END OF BLUE WIRE FROM RELAY. SPOT TIE PER DETAIL N.

(B) MOUNT RADIO HOUSING IMMEDIATELY ABOVE POWER SUPPLY FOR PST.

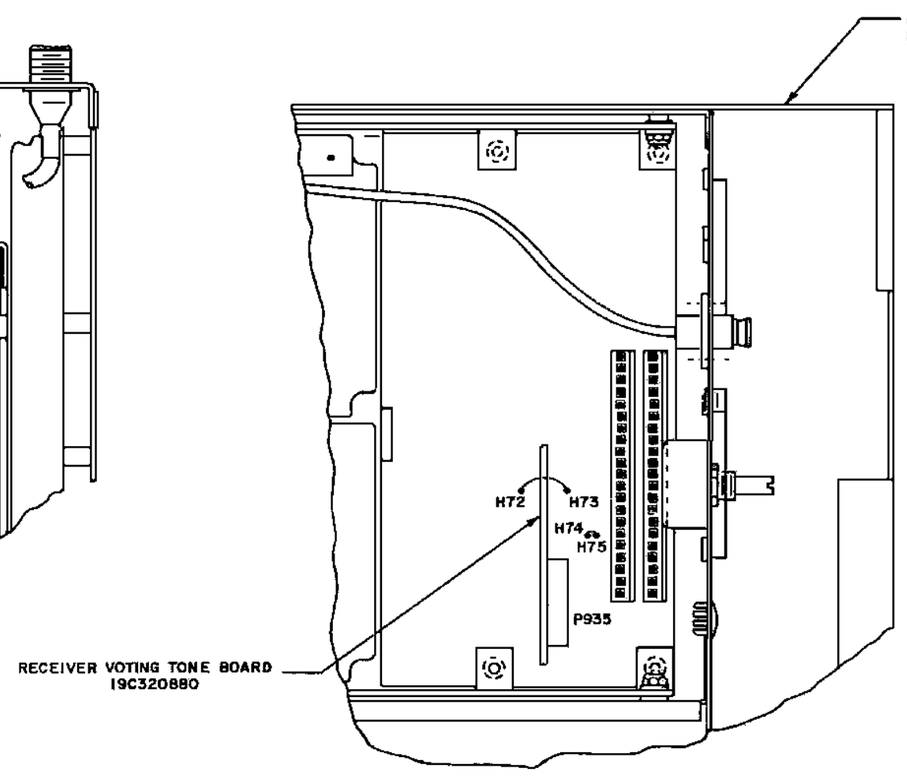
MASTR II STATION

(19D424565, Sh. 25, Rev.11)

THESE INSTRUCTIONS COVER THE INSTALLATION OF THE RECEIVER VOTING TONE BOARD (19C320800 OR 19C336900) IN THE MAIN RECEIVER CHASSIS (19D417262) AND ON THE SYSTEMS BOARD (19D417549) LOCATED IN THE AUX RECEIVER CHASSIS (19D417546).



(1) FIG. 1
(AUX RECEIVER)



(2) FIG. 2
(MAIN RECEIVER)

NOTES:

1) INTERCON AND RCVR VOTING TONE BOARD ARE NOT COMPATIBLE.

2) EACH VOTED RECEIVER REQUIRES A SEPARATE LINE. WHEN AN AUXILIARY RECEIVER IS PRESENT IN A STATION COMBINATION WITH VOTING, THE AUDIO MAY NOT BE COMBINED EITHER THROUGH 2ND RCVR 600 OHMS HI OR BY PARALLELING THE OUTPUT LINES.

(1) INSTRUCTIONS FOR INSTALLING RECEIVER VOTING TONE BOARD (19C320880 OR 19C336900).

1) REMOVE THE COVER (IF PRESENT).

2) AUX RECEIVER
PLUG RECEIVER VOTING TONE BOARD ON SYSTEMS BOARD (19D417549) AT P902 AS SHOWN IN FIG. 1.

3) MAIN RECEIVER (FIRST DIGIT NOT S)
MODIFY 19D417213 SYSTEM BOARD AS FOLLOWS:

A) IN 2-WIRE DC CONTROL (STATIONS WITH FIFTH DIGIT R,U AND SEVENTH DIGIT G,N,P,S,U,W). REMOVE JUMPER A901. H74 TO A901-H75. INSTALL JUMPER A901-H72 TO A901-H73.

B) IN 4-WIRE DC OR TONE CONTROL WITH SEVENTH DIGIT D,L OR WHEN OPTION 9507 OR OPTION 9601 IS PRESENT. REMOVE JUMPER A901-H74 TO A901-H75.

C) PLUG IN RECEIVER VOTING TONE BOARD AT P935 AS SHOWN IN FIG. 2.

4. MAIN RECEIVER (FIRST DIGIT OF S)
MODIFY 19D317213 SYSTEM BOARD AS FOLLOWS:

A) IN 2-WIRE DC CONTROL (STATIONS WITH SEVENTH DIGIT R,U AND NINTH DIGIT G,N,P,S,U,W). REMOVE JUMPER A901. H74 TO A901-H75. INSTALL JUMPER A901-H72 TO A901-H73.

B) IN 4-WIRE DC OR TONE CONTROL WITH NINTH DIGIT D,L OR WHEN OPTION 9507 OR OPTION 9601 IS PRESENT, REMOVE JUMPER A901-H74 TO A901-H75.

C) PLUG IN RECEIVER VOTING TONE BOARD AT P935 AS SHOWN IN FIG. 2.

5) REPLACE THE COVER.

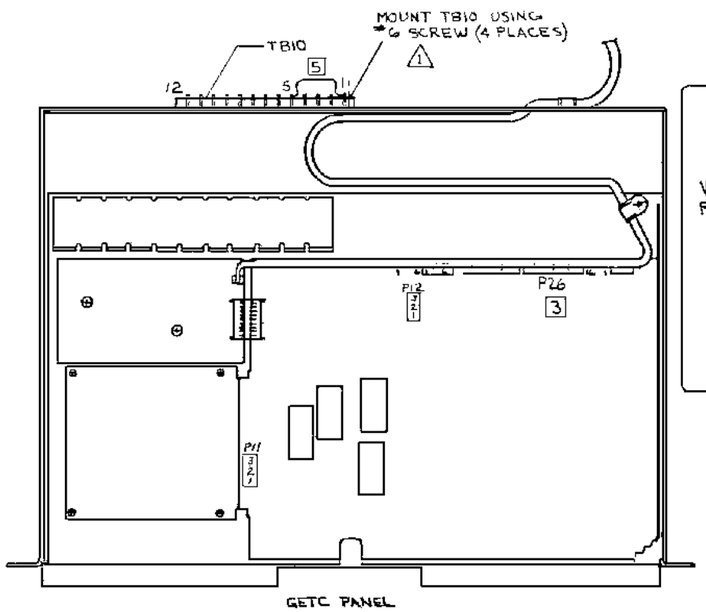
CONNECTIONS:

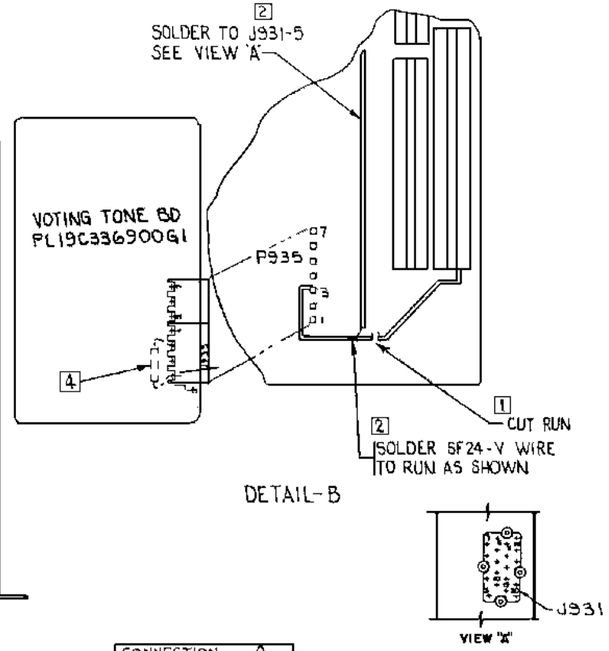
1. IN 2-WIRE DC CONTROL SYSTEMS WITH VOTING TONE BOARD, JUMPER FROM A901-H74 TO A901-H75 IS NOT PRESENT. JUMPER FROM A901-H72 TO A901-H73 IS PRESENT.

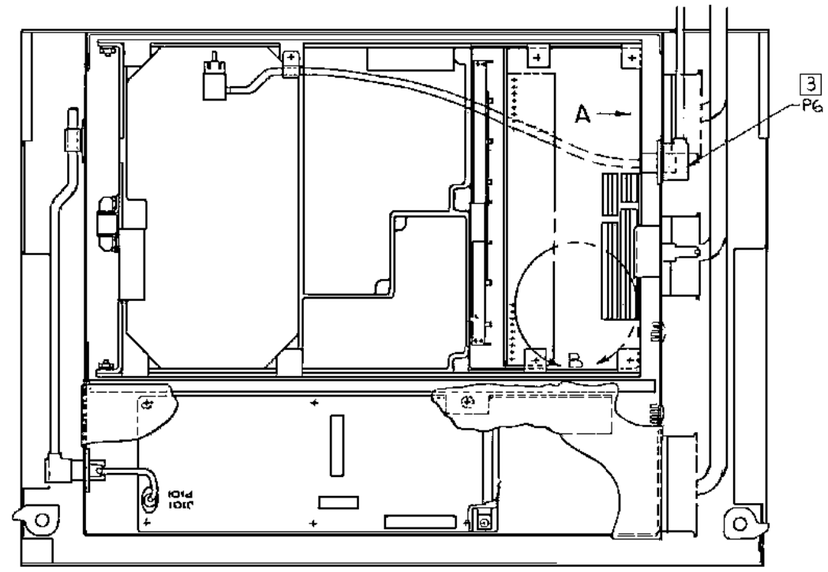
IN 4-WIRE STATIONS WITH VOTING TONE BOARD, JUMPER H74-H75; H72-H73 ARE NOT PRESENT.

RECEIVER VOTING TONE BOARD

(9D417633, Sh. 1, Rev. 9)







(1) MOD. PST STATION RECEIVER FOR VOTING (RS232)

1. CUT RUN ON STATION CONTROL BOARD 19D417213 (SEE DETAIL B)
2. SOLDER VIOLET WIRE TO RUN (SEE DETAIL B) & OTHER END TO J931-5 (SEE VIEW A).
3. SOLDER VIOLET WIRE TO P6-5. INSERT TERMINATED END INTO P26-5 ON GETC SHELF, LACING WIRE INTO EXISTING HARNESS.
4. SOLDER A 5.6K, 1/4W RESISTOR BETWEEN J935-1 & J935-3 ON SOLDER SIDE OF VOTING TONE BOARD 19C336900G1 AS SHOWN IN DETAIL B. J935 (TONE BD.) PLUGS INTO P935 AS SHOWN IN DETAIL B.
5. CONNECT WHITE JUMPER FROM TB10-1 TO TB10-5 ON REAR OF GETC.
6. REMOVE SN22-BR WIRE FROM H8-H9 ON 19D424051G1 SECUR-IT BOARD (SEE DETAIL-C).
7. CONNECT J11 TO P11-2 & 3, AND J12 TO P12-2 & 3.

CONNECTION CHART (3)	
O TO	TB10-10
R TO	TB10-9
O TO	TB10-8
BK TO	TB10-7

(2) MOD. PST STATION RECEIVER FOR VOTING (9600 BAUD MODEM)

(1) MOUNT TB10 AS SHOWN. INSTALL 2 SCREWS & L'WASHERS IN EACH TB10-7,8,9 & 10.

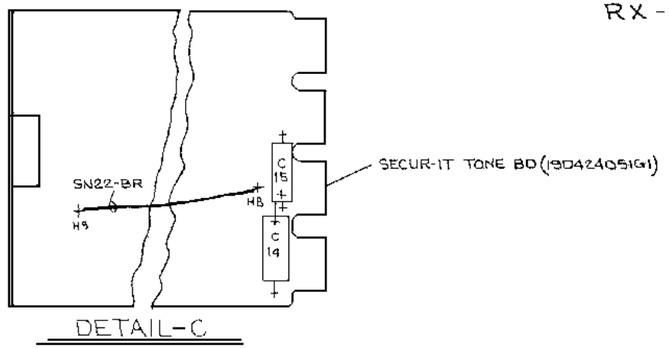
2. PERFORM STEPS 1 THRU 4 OF PART 1.

(3) CLIP WIRE TIES AS NECESSARY IN 19C320811 HARNESS TO REMOVE R-O AND O-BK TWISTED PAIRS BACK FAR ENOUGH TO NEATLY DRESS TO TB10. RETIE 19C320811 HARNESS WITH TIES PROVIDED. CONNECT TWISTED PAIR PER CONNECTION CHART.

4. REMOVE SN22-BR WIRE FROM H8-H9 ON 19D424051G1 SECUR-IT BOARD (SEE DETAIL-C).

(3) MOD. PST STATION FOR C.I.U.

1. PERFORM STEPS 1 AND 3 OF PART 2.



RX - EXC. DOOR

STATION RECEIVER MODIFICATIONS FOR VOTING

(19D438441, Sh. 1, Rev. 5)

APPENDIX B

DRAWINGS AND PARTS LIST

TABLE OF CONTENTS

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Printed in U.S.A.