Mobile Communications

EDACS® 900 MHz
75-WATT, TRUNKED REPEATER STATION COMBINATION

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Maintenance Manual

Ericsson GE Mobile Communications Inc.
Mountain View Road•Lynchburg, Virginia 24502

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SPECIFICATIONS*

GENERAL

FCC FILING NUMBER	AXA9MZTR- 161 -A2
TEMPERATURE RANGE (-22°Fto ±140°F)	-30°C to + 60°C
AC INPUT VOLTAGE	124/240 VAC ±20%, 60 Hz (50 Hz Optional)
AC INPUT POWER	
Transmit	540 Watts
Rated Audio	145 Watts
Standby	139 Watts
FREQUENCY RANGE	
Transmit	935 to 940 MHz
Receive	896 to 901 MHz
FREQUENCY STABILITY	0.05 PPM
CABINET DIMENSIONS (H X W X D)	
69-Inch Floor Mount ("V" Type)	69-1/16" x 23-3/16" x 21"
WEIGHT (Net)	
"V" Cabinet	288 pounds
AC POWER CORD (124/240 VAC)	10-foot, three prong (standard)

WARNING

No one should be permitted to handle any portion of the equipment that is supplied with high voltage, or to connect any external apparatus to the units when supplied with power. KEEP AWAY FROM LIVE CIRCUITS!

High level RF energy in the transmitter power amplifier assembly can cause RF burns. Keep away from these circuits when the transmitter is keyed!

*These specifications are intended primarily for use by service personnel. Refer to the appropriate Specification Sheet for complete specifications.

NOTICE!

NOTE

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.

STATION OPTIONS	
OPTION NUMBER	DESCRIPTION
RPIC	20 - channel Master Oscillator
CAID	69-inch single station cabinet.
MRIA	69-inch, dual rack cabinet, single station.
CC7X	One station cable kit; Dual Master oscillator and Distribution panel.
FNIA	69-inch Station Cabinet fan kit.

DESCRIPTION

The station combinations are 75-watt, trunked repeater stations for single frequency operation in the 896 to 940 MHz band. The stations transmit in the 935 to 940 MHz band, and receive in the 896 to 901 MHz band.

The standard trunked repeater station consists of the following assemblies:

- station power supply
- exciter-receiver assembly mounted in the radio front door panel
- 75-watt transmitter power amplifier
- control shelf
- GETC panel
- dual master oscillator panel (one for up to 20 repeaters)

One distribution panel for up to 20 repeaters is also required at the trunked site. The panel is normally located in one of the centrally located repeaters.

EXCITER-RECEIVER DOOR

The exciter-receiver door assembly contains the synthesized transmitter exciter and receiver boards, and the station system board. A layout of the door assembly is shown in Figure 1.

TRANSMITTER

The station transmitter consists of the exciter-synthesizer board, a 75-watt power amplifier, and a power control board. The exciter board is mounted in a shielded compartment on the radio front door.

Exciter

The exciter consists of an exciter synthesizer, a receiver synthesizer, as well as an amplifier section and audio processor. The exciter provides audio limiting, pre-emphasis, low frequency compensation and a summing amplifier for both voice and sub-audible data. The 100-milliwatt exciter output drives the RF power amplifier.

The receiver synthesizer provides one milliwatt of receiver L.O. signal for the receiver 1st IF and mixer.

Reference frequency for both synthesizers is provided by the master oscillator.

Power Amplifier

The transmitter PA assembly consists of a frame mounted to a heatsink with a cover that snaps over the frame to provide RF shielding. A 24-volt DC fan is mounted to the cover to provide cooling for the PA components.

The power amplifier consists of an RF amplifier board and a power control board. The PA board contains the amplifier stages required to provide the 75-watt transmitter output. The power control board provides the feedback control required to maintain a constant 75-watt output. In addition, the power control circuitry senses forward and reflected power at the PA output. The power control circuit sends an alarm to the GETC if the output drops below a preset level, or if the reflected power gets too high. It also sends an alarm if the DC supply to the PA is lost (blown fuse).

RECEIVER

The station receiver assembly is mounted in a shielded enclosure on the radio front door assembly. The receiver consists of a receiver board and an audio board. The receiver board contains the RF front end, IF stages, demodulator and audio amplifiers. The demodulated output is applied to the audio board which contains an audio amplifier, squelch and audio PA stages.

Receiver LO (2nd local oscillator) injection is provided by the receiver synthesizer on the receiver board.

SYSTEM BOARD

System board A901 is mounted in the door assembly with the receiver boards connected directly into the system board connectors.

CONTROL SHELF

The control shelf is mounted directly above the PA assembly.

POWER SUPPLY

The station power supply normally connects to a 124-volt AC power source.

A power switch, primary and secondary fuses, and two AC outlets are located on the front panel. A high current fuse is located on the back panel that provides + 26 volts for the transmitter PA, and master oscillator if present. A 13.8-volt supply is available at the power supply through a 9-pin Molex plug.

GETC SHELF

The GE Trunking Card (GETC) assembly normally mounts above the radio door assembly. The GETC provides primary control of most of the repeater functions in the trunked system. The GETC generates and detects the 4800 baud data used in both the control and voice channel mode. Other functions provided by the GETC include repeater audio control, synthesizer loading and lock detect, RF power amplifier fault detection and test mode operation.

The GETC shelf is interfaced with the control shelf so that the GETC controls the repeater keying function, and can override the repeat audio function.

MASTER OSCILLATOR

The master oscillator panel is normally mounted above the GETC panel. The high stability oscillator supplies the 17.6125 MHz reference frequency to the transmitter and receiver frequency synthesizers. One master oscillator provides outputs for up to 20 trunked repeater stations.

The oscillator panel contains two identical oscillator circuits for high reliability. In case the primary oscillator fails, the standby oscillator is automatically activated to provide continuous operation.

Power for the master oscillator is provided by two separate 24-volt power feeds from different power supplies for additional reliability.

DISTRIBUTION PANEL

A distribution panel is used at each trunking site as a common tie point for all of the GETC panels. Connecting the GETC panels together allows every GETC to communicate on a common data bus in the failsoft mode of operation. The control channel GETC drives the failsoft bus in order to activate other channels for voice communication and to poll for their status.

Service Note: The distribution panel is not normally mounted in the same station as the master oscillator. The panels are mounted apart to prevent cable crowding problems.

The distribution panel interconnect cable is shown in Figure 2.

FAILSOFT TRUNKING

Failsoft trunking is the mode in which the system operates when no site controller is used. The site controller normally provides all control, user validations and telephone interconnect billing functions when used in the system. In the event that a site controller fails, or is not present, the system reverts to the failsoft mode of trunking. In addition, the failsoft mode may be the standard operating mode for a system if basic dispatch trunking is all that is required. Either configuration can be set by the DIP switches on the GETC shelf in each station.

The communication required or failsoft operation is provided by the backup serial connections between each repeater in the system. These connections are made through the distribution panel (one panel for every 20 repeaters). This serial link is a bi-directional data line and a synchronization line. The sync line is driven by the control channel, and is used to determine whether the operating mode is normal (with a site con-

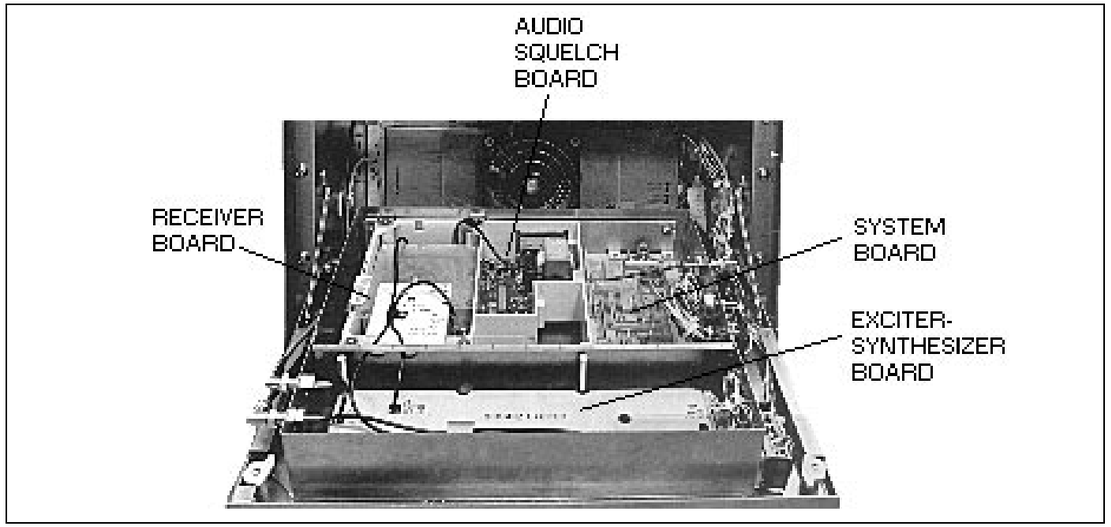


Figure 1 - Exciter-Receiver Door Assembly

troller, or in the failsoft mode). Refer to the Maintenance Manual for the GETC shelf for complete operating details.

INITIAL SETUP

All of the repeater stations have been system tested at the factory, and should be fully operative when power is applied. Should any adjustment be required, refer to the applicable Maintenance Manual.

NOTE

No crystals are required to place the repeaters on frequency. The proper operating channel is selected by DIP switches in the GETC module. Make sure that the DIP switches are set to the correct operating frequency before powering up the station.

MAINTENANCE

To prevent mechanical and electrical failures from interrupting system operations, routine checks should be made of mechanical and electrical assemblies at regular intervals. This preventive maintenance should include the checks listed below.

TRANSMITTER

Check the power output, data and voice modulation, and audio levels. Check the transmitter frequency as required by the FCC. SERVICE NOTE: Normal frequency measuring equipment is not adequate to measure the repeater frequency due to the high stability master oscillator reference signal used in the station.

RECEIVER

Check the receiver sensitivity and squelch levels.

TRANSMISSION LINE

Check for positive indication of pressure on the transmission linsure gauge if a pressurized line is used.

Check the forward and reflected power if an RF system monitor is used.

ANTENNA

Check the antenna and mast for mechanical stability. Make sure that all RF connections are tight.

MECHANICAL

Visually check cables, plugs, sockets, terminal boards and other components for good electrical connections. Check the tightness of nuts, bolts and screws to make sure that nothing is working loose from its mounting.

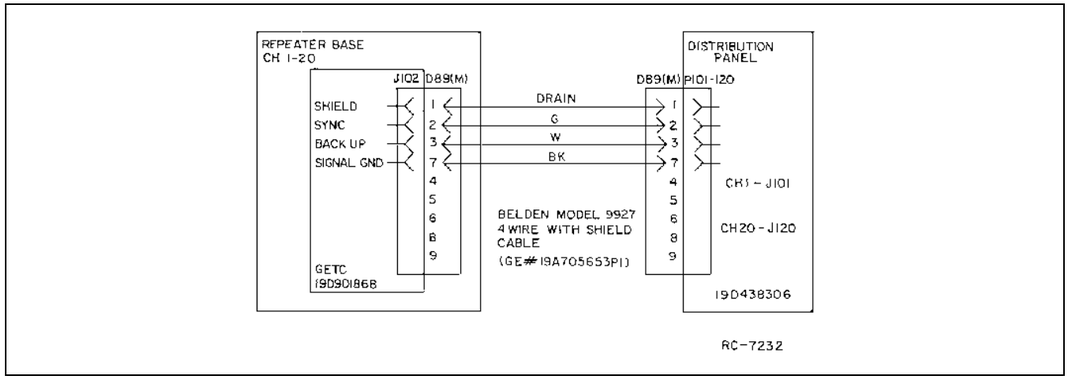


Figure 2 - Distribution Panel Cable Interconnect

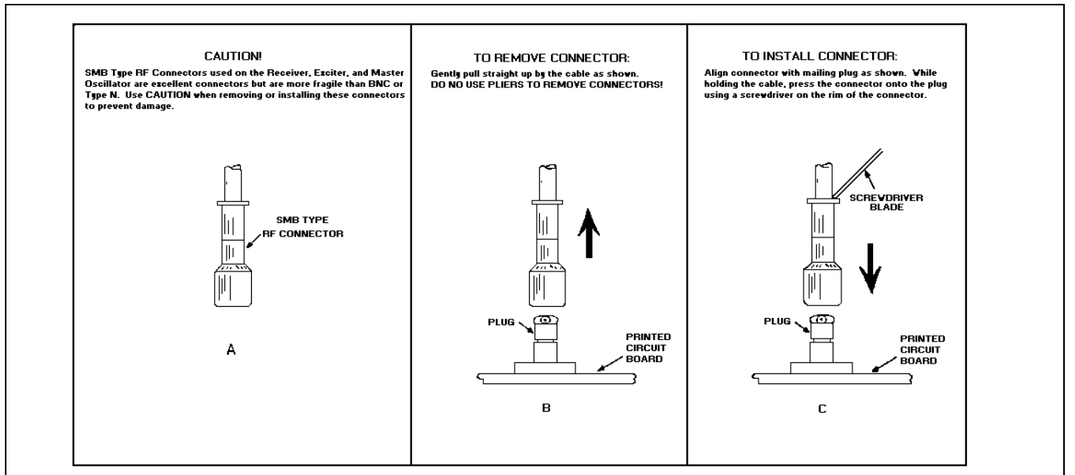


Figure 3 - Installing And Removing SMB Connectors

CLEANING

With the station power turned off, carefully use a vacuum cleaner to remove dust that has accumulated inside the cabinet, and on fans or air filters if present.

TEST AND TROUBLESHOOTING

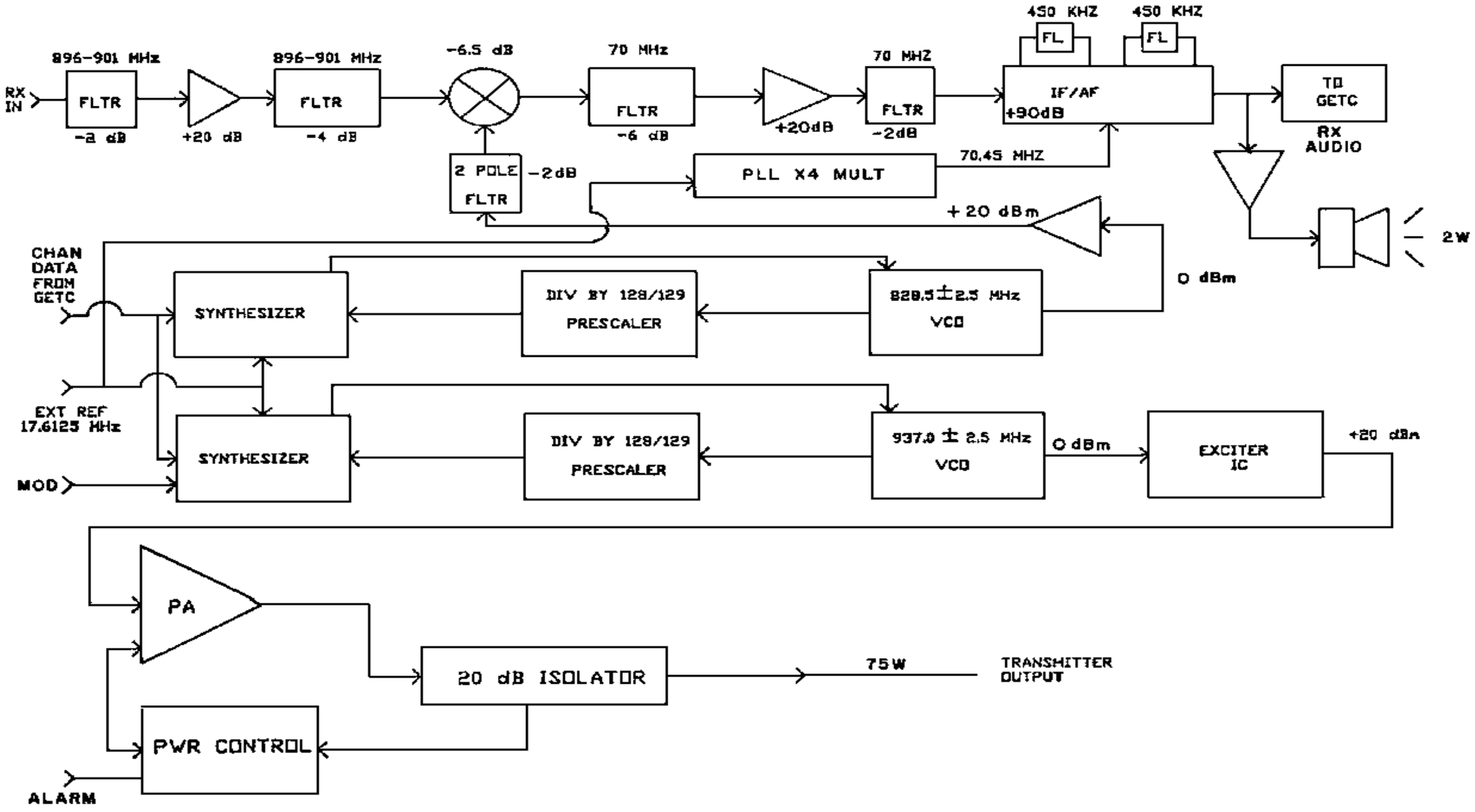
NOTE

Stations with continuous duty fans should have the filters cleaned monthly.

The individual Maintenance Manuals for transmitter and receiver contain test procedures and specific troubleshooting procedures to assist in servicing the transmitter and receiver. Also, a System Block Diagram and a Stage Level Diagram are included in this manual as additional service aids.

Refer to Installation Manual LBI-38160 for the station Mechanical Layout Diagrams.

See Figure 3 for installing and removing the SMB-type RF connectors used on the exciter, receiver, and master oscillator.



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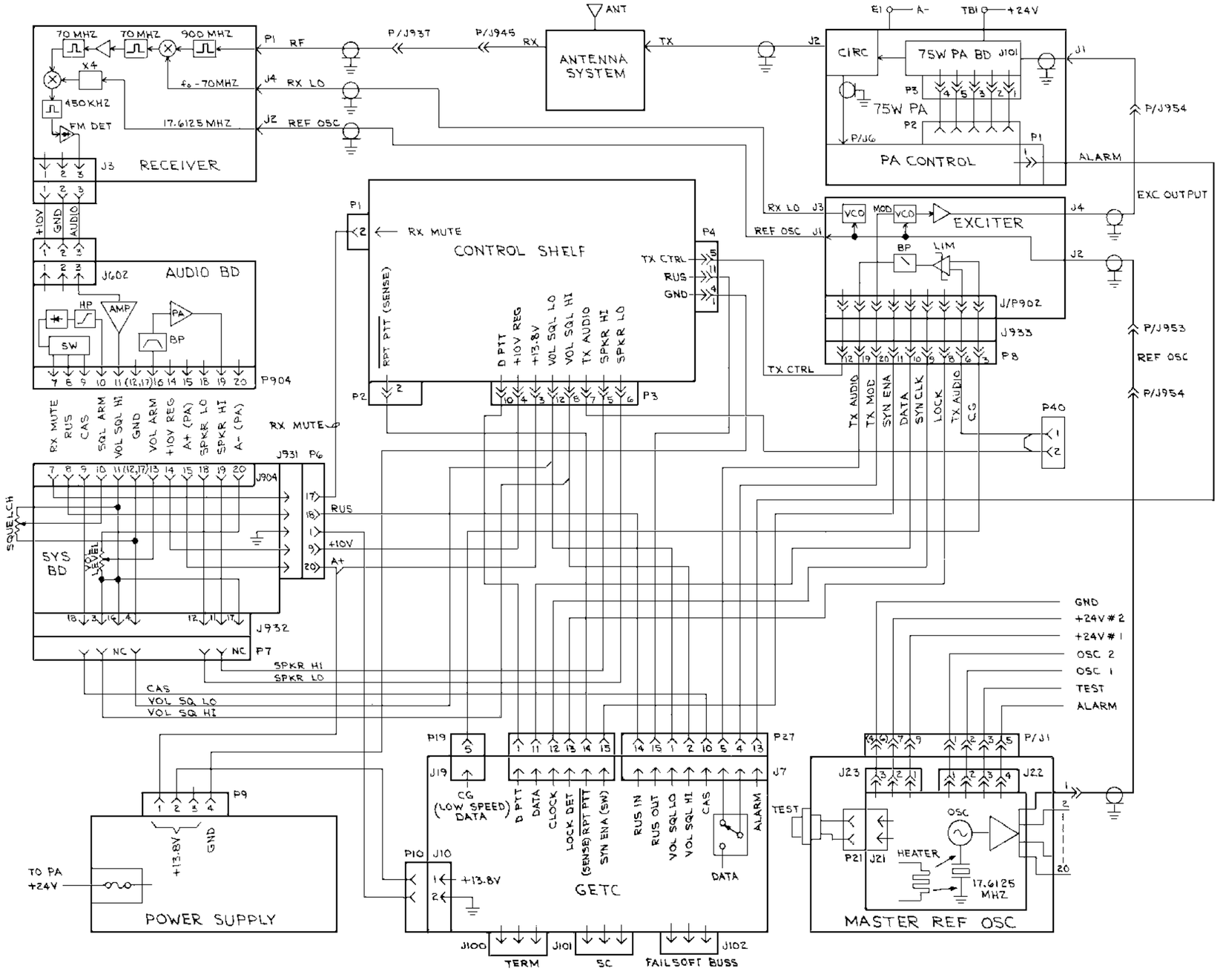
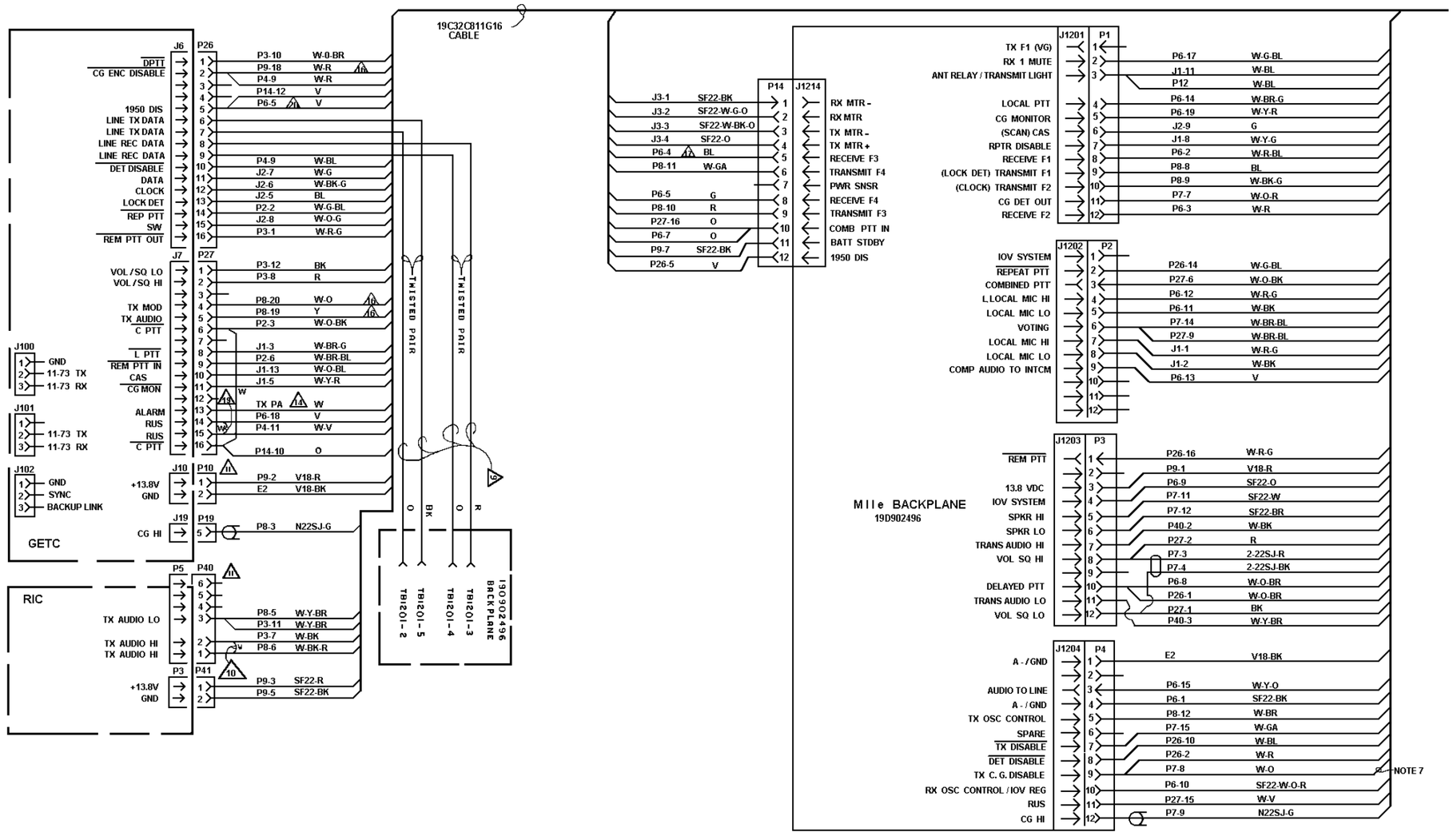

ANT
ANTENNA SYSTEM
TX
RX
P/J937
P/J945
J2
P1 RF
J4 RX LO
J2 REF OSC
70 MHZ
70 MHZ
900 MHZ
X4
fo - 70MHZ
450KHZ
FM DET
17.6125 MHZ
J3 RECEIVER
+10V
GND
AUDIO
J602 AUDIO BD
HP
AMP
PA
SW
BP
P904
RX MUTE
RUS
CAS
SQL ARM
VOL SQL HI
GND
VOL ARM
+10V REG
A+ (PA)
SPKR LO
SPKR HI
A- (PA)
J931 P6
J904
SQUELCH
LEVEL
SYS BD
J932
P7
NC
SPKR HI
SPKR LO
CAS
VOL SQ LO
VOL SQ HI
P1
RX MUTE
CONTROL SHELF
P2
P3
P4
TX CTRL
RUS
GND
RPT PTT (SENSE)
D PTT
+10V REG
+13.8V
VOL SQL LO
VOL SQL HI
TX AUDIO
SPKR HI
SPKR LO
E1 A-
TB1 +24V
CIRC
75W PA BD J101
75W PA
P3
P2
P1
P/J6
PA CONTROL
ALARM
P/J954
EXC OUTPUT
RX LO J3
REF OSC J1
VCO
MOD
VCO
EXCITER
BP
LIM
J4
J2
J/P902
J933
P8
P/J953
REF OSC
P/J954
TX CTRL
TX AUDIO
TX MOD
SYN ENA
DATA
SYN CLK
LOCK
TX AUDIO
CG
P40
GND
+24V #2
+24V #1
OSC 2
OSC 1
TEST
ALARM
P9
+13.8V
GND
TO PA
+24V
POWER SUPPLY
P19
J19
P27
J7
CG
(LOW SPEED) DATA
D PTT
DATA
CLOCK
LOCK DET
(SENSE) RPT PTT
SYN ENA (SW)
RUS IN
RUS OUT
VOL SQL LO
VOL SQL HI
CAS
ALARM
TEST
P10 J10
+13.8V
GETC
DATA
J100
TERM
J101
SC
J102
FAILSOFT BUSS
P/J1
J23
J22
P21 J21
OSC
HEATER
17.6125 MHZ
MASTER REF OSC



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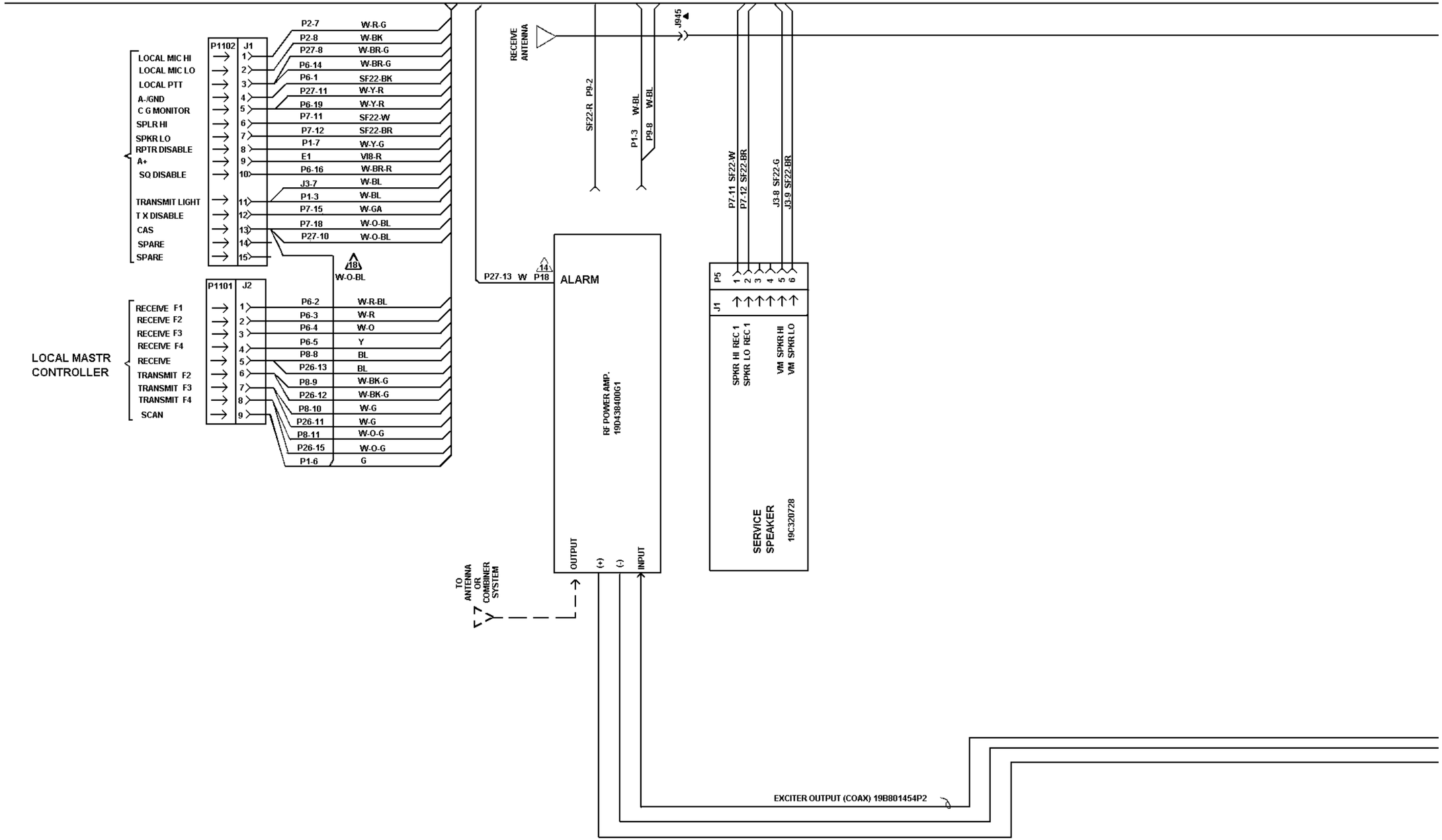

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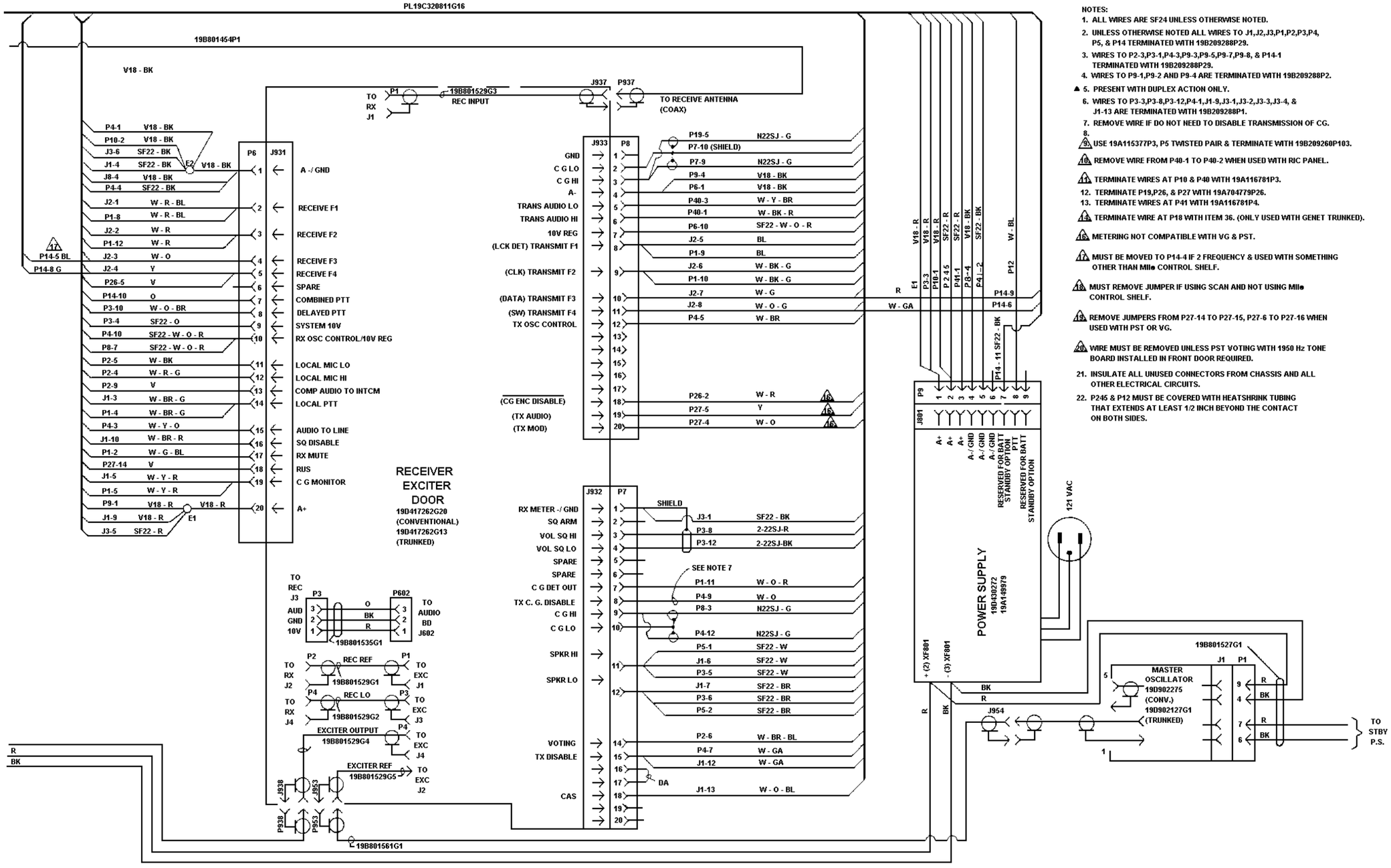

NOTES:

1. ALL WIRES ARE SF24 UNLESS OTHERWISE NOTED.
2. UNLESS OTHERWISE NOTED ALL WIRES TO J1,J2,J3,P1,P2,P3,P4, P5, & P14 TERMINATED WITH 19B209288P29.
3. WIRES TO P2-3,P3-1,P4-3,P9-3,P9-5,P9-7,P9-8, & P14-1 TERMINATED WITH 19B209288P29.
4. WIRES TO P9-1,P9-2 AND P9-4 ARE TERMINATED WITH 19B209288P2.
5. ▲ PRESENT WITH DUPLEX ACTION ONLY.
6. WIRES TO P3-3,P3-8,P3-12,P4-1,J1-9,J3-1,J3-2,J3-3,J3-4, & J1-13 ARE TERMINATED WITH 19B209288P1.
7. REMOVE WIRE IF DO NOT NEED TO DISABLE TRANSMISSION OF CG.
8.
9. USE 19A115377P3, P5 TWISTED PAIR & TERMINATE WITH 19B209260P103.
10. REMOVE WIRE FROM P40-1 TO P40-2 WHEN USED WITH RIC PANEL.
11. TERMINATE WIRES AT P10 & P40 WITH 19A116781P3.
12. TERMINATE P19,P26, & P27 WITH 19A704779P26.
13. TERMINATE WIRES AT P41 WITH 19A116781P4.
14. TERMINATE WIRE AT P18 WITH ITEM 36. (ONLY USED WITH GENET TRUNKED).
15. METERING NOT COMPATIBLE WITH VG & PST.
16. MUST BE MOVED TO P14-4 IF 2 FREQUENCY & USED WITH SOMETHING OTHER THAN MIIe CONTROL SHELF.
17. MUST REMOVE JUMPER IF USING SCAN AND NOT USING MIIe CONTROL SHELF.
18. REMOVE JUMPERS FROM P27-14 TO P27-15, P27-6 TO P27-16 WHEN USED WITH PST OR VG.
19. WIRE MUST BE REMOVED UNLESS PST VOTING WITH 1950 Hz TONE BOARD INSTALLED IN FRONT DOOR REQUIRED.
20. INSULATE ALL UNUSED CONNECTORS FROM CHASSIS AND ALL OTHER ELECTRICAL CIRCUITS.
21. P245 & P12 MUST BE COVERED WITH HEATSHRINK TUBING THAT EXTENDS AT LEAST 1/2 INCH BEYOND THE CONTACT ON BOTH SIDES.
22.

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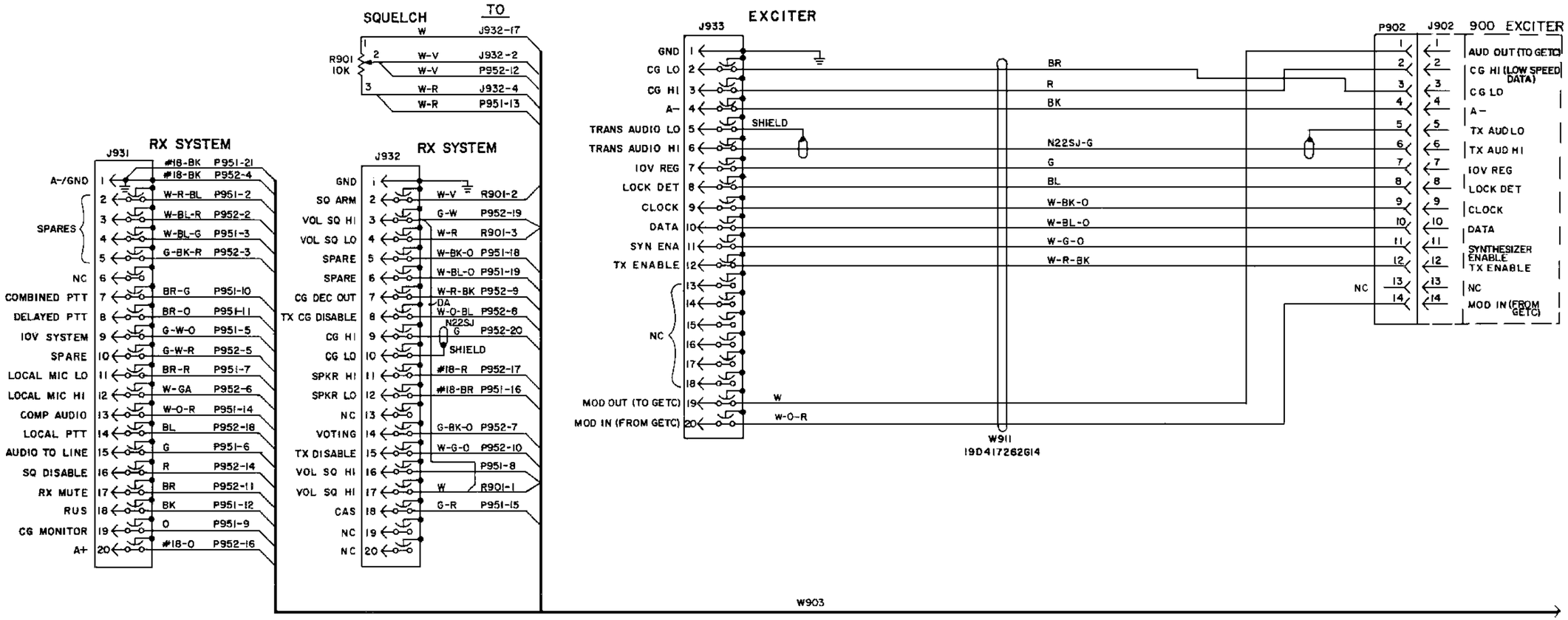
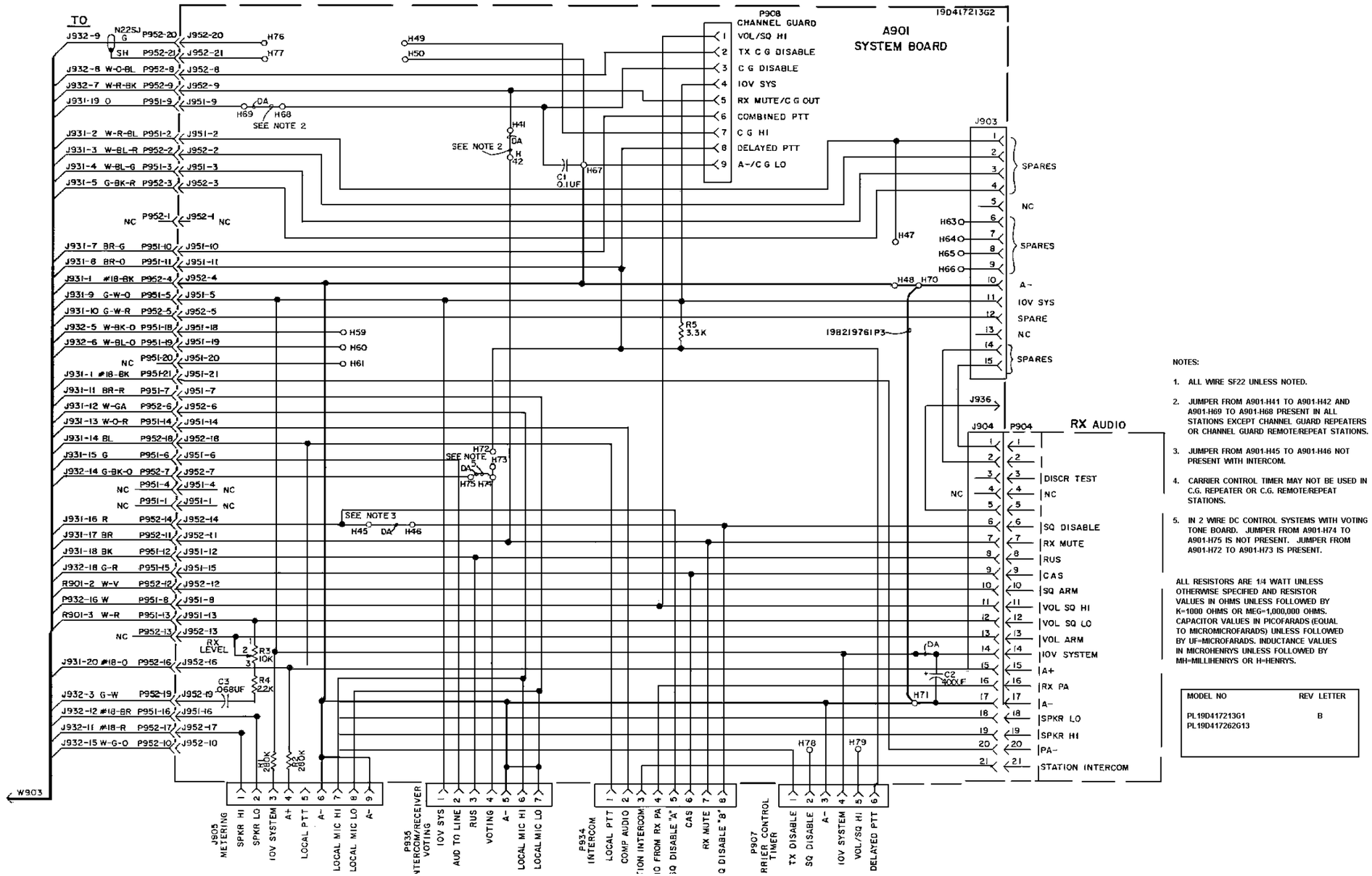


EXCITER-RECEIVER DOOR ASSEMBLY (INCLUDES SYSTEM BOARD)

(19D438424, Sh. 1, Rev. 4)



NOTES:

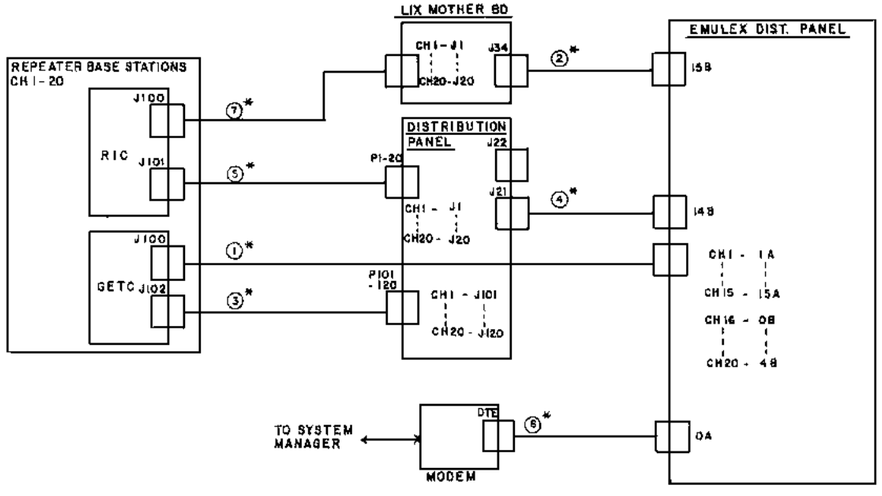
1. ALL WIRE SF22 UNLESS NOTED.
2. JUMPER FROM A901-H41 TO A901-H42 AND A901-H69 TO A901-H68 PRESENT IN ALL STATIONS EXCEPT CHANNEL GUARD REPEATERS OR CHANNEL GUARD REMOTE/REPEAT STATIONS.
3. JUMPER FROM A901-H45 TO A901-H46 NOT PRESENT WITH INTERCOM.
4. CARRIER CONTROL TIMER MAY NOT BE USED IN C.G. REPEATER OR C.G. REMOTE/REPEAT STATIONS.
5. 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.

ALL RESISTORS ARE 1/4 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.

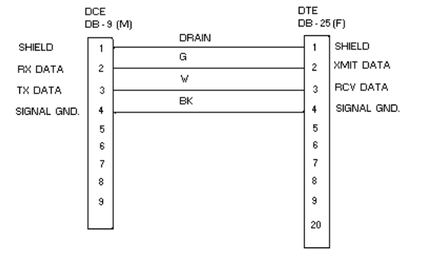
MODEL NO	REV LETTER
PL19D417213G1	B
PL19D417262G13	

EXCITER-RECEIVER DOOR ASSEMBLY (INCLUDES SYSTEM BOARD)

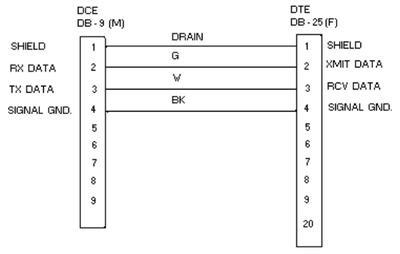
(19D438424, Sh. 2, Rev. 5)



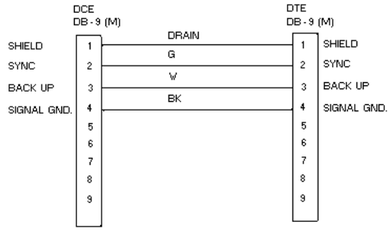
(1) STATION GETC TO SITE CONTROLLER



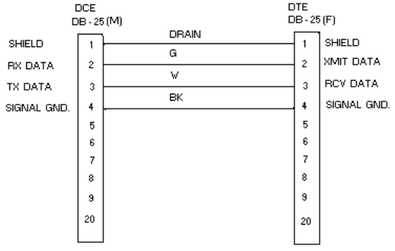
(2) LIX TO SITE CONTROLLER



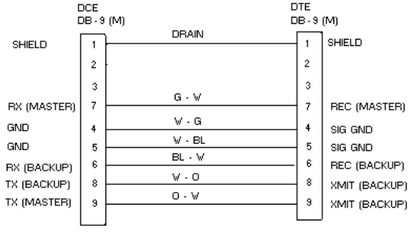
(3) STATION GETC TO DISTRIBUTION PANEL (FAILSOFT GETC)



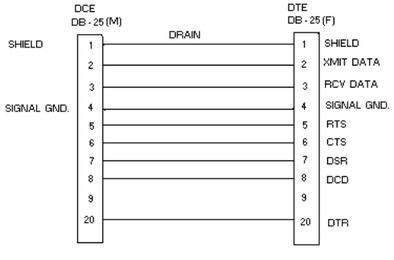
(4) DISTRIBUTION PANEL (RIC) TO SITE CONTROLLER



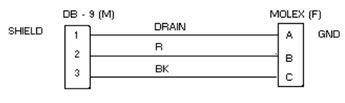
(5)



(6) MODEM TO SITE CONTROLLER



(7) RIC TO LIX



INTERCONNECTION CABLE FOR GE NET 900 REPEATER SITE

NOTES:

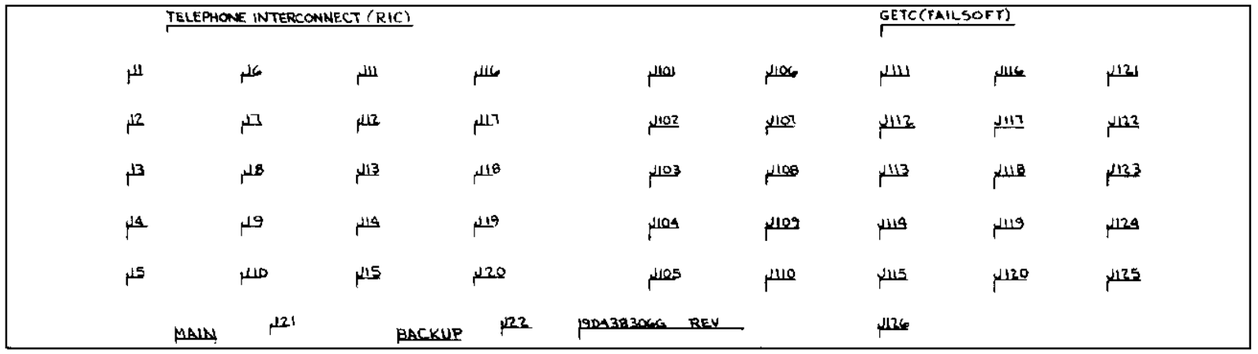
1. Connector ends are defined as Data Terminal Equipment (DTE) and Data Communication Equipment (DCE).

   DTE includes the Site Controller Emulex Panel and the Failsoft Distribution Panel Inputs.

   DCE includes the GETC, RIC, LIX, Failsoft Distribution Panel Output, Power Monitor, Test Unit, ACU and Modem.

   Cable model numbers are:
   Belden model 9927 - 4 wire with shield (Parts 1, 2, 3, 4)
   Belden model 8133 - 6 wire with shield (Part 5)
   Belden model - wire with shield (Part 6)
   GE part 7147255 P1 - 2 wire with shield (Part 7)

RC-7220
MADE FROM 19C336882



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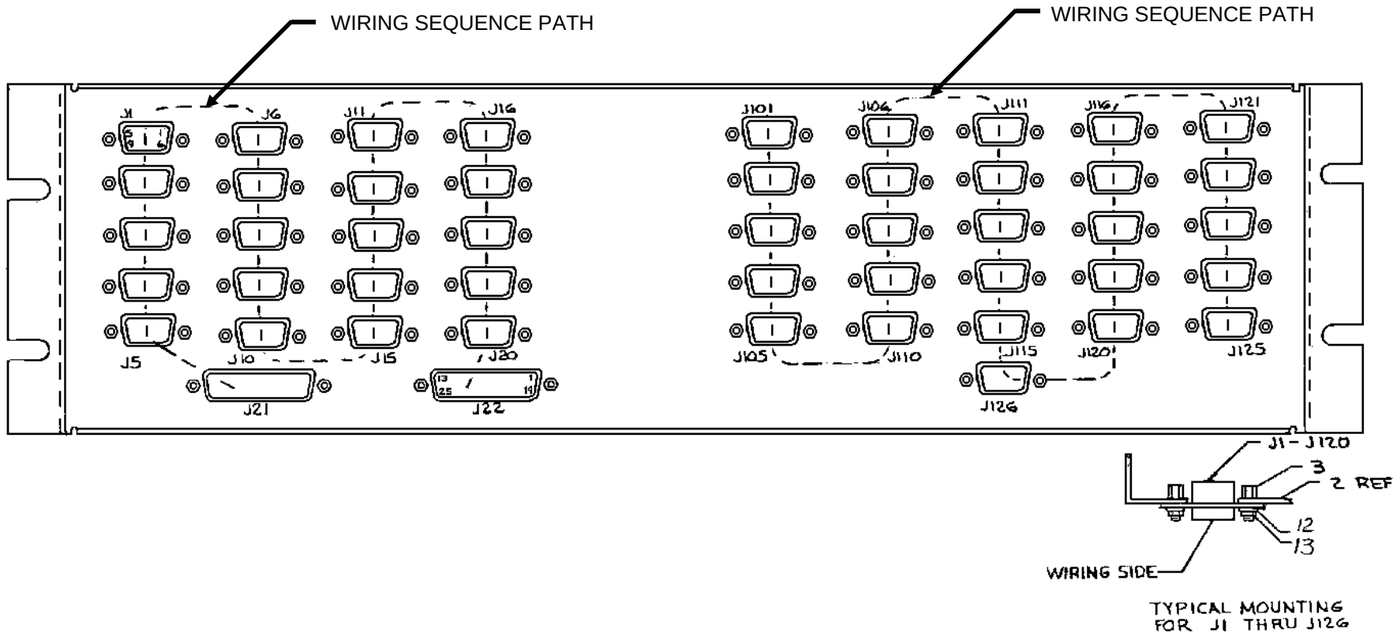


(19D438306 Rev. 1)

PARTS LIST

DISTRIBUTION PANEL
19D438306G2
ISSUE 1

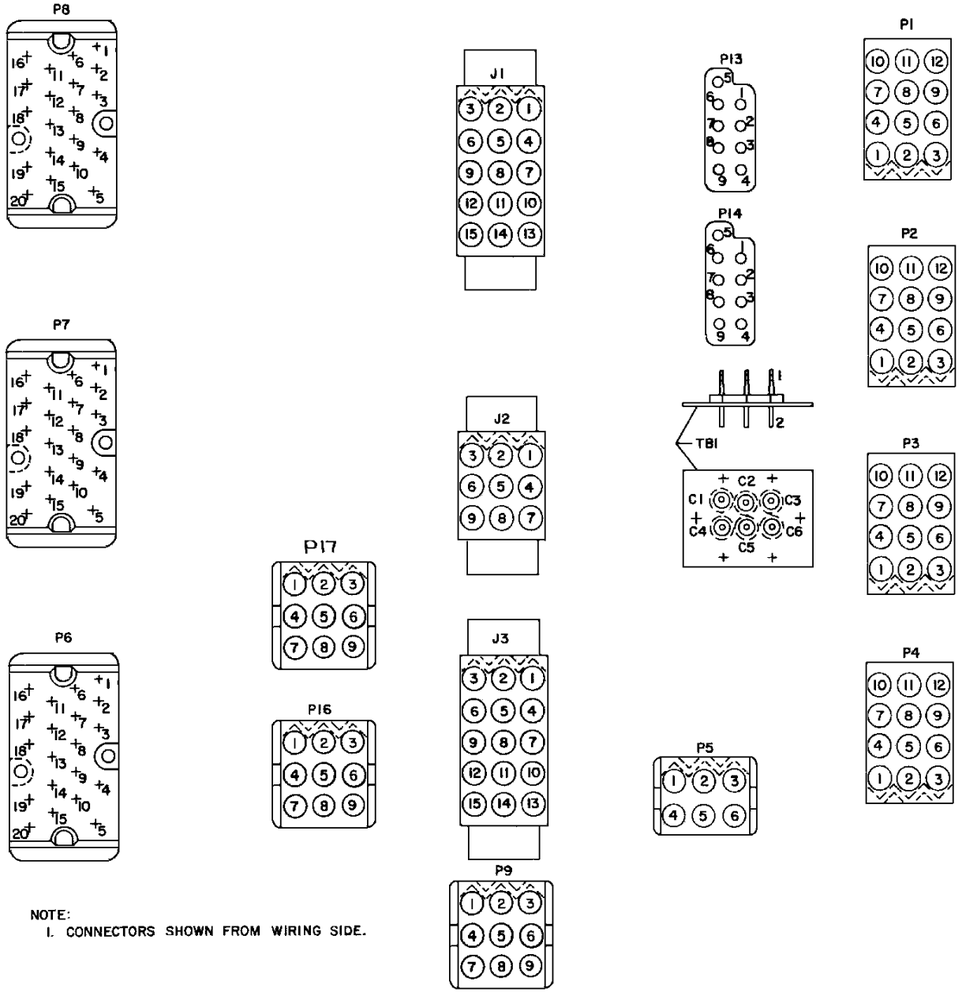
SYMBOL	PART NO.	DESCRIPTION
		- - - - - - - - - - - JACKS - - - - - - - - - - -
J1 thru J20	19B209727P18	Connector, plug, power: contacts 9; sim to AMP 205203-1.
J21 and J22	19B209727P2	Connector, plug, power: contacts 25; sim to AMP 205207-1.
J101 thru J126	19B209727P18	Connector, plug, power: contacts 9; sim to AMP 205203-1.
		- - - - - - - - - - MISCELLANEOUS - - - - - - - - - -
	19B209727P10	Screwlock: female, sim to AMP 205817-1.
	19A115594P2	Grommet.
	19B209727P11	Contact, electrical: sim to AMP 1-66504-0.
	19C336846G3	Panel.

(1)

NOTES:

1. ALL WIRING IS ST24-W.
   USE AMP TOOL NO. 90302 TO CRIMP WIRE TO ITEM 5.
   USE AMP TOOL NO. 91067-2 TO REMOVE CONTACTS FROM HOUSING IF NECESSARY.
2. ALL WIRES TO BE 3 INCHES LONG EXCEPT WIRES TO J21 WHICH ARE 4 INCHES LONG.
3. FOR J1 THRU J20:
   CONNECT ALL PIN 1'S TOGETHER AND CONNECT TO J21-1 AND J22-1.
   CONNECT ALL PIN 4'S TOGETHER AND CONNECT TO J21-7.
   CONNECT ALL PIN 5'S TOGETHER AND CONNECT TO J22-7.
   CONNECT ALL PIN 6'S TOGETHER AND CONNECT TO J22-3.
   CONNECT ALL PIN 7'S TOGETHER AND CONNECT TO J21-3.
   CONNECT ALL PIN 8'S TOGETHER AND CONNECT TO J22-2.
   CONNECT ALL PIN 9'S TOGETHER AND CONNECT TO J21-2.
4. FOR J101 THRU J126:
   CONNECT ALL PIN 1'S TOGETHER.
   CONNECT ALL PIN 2'S TOGETHER.
   CONNECT ALL PIN 3'S TOGETHER.
   CONNECT ALL PIN 7'S TOGETHER.

DISTRIBUTION PANEL



STATION HARNESS CONNECTORS

(19C328112, Rev. 2)

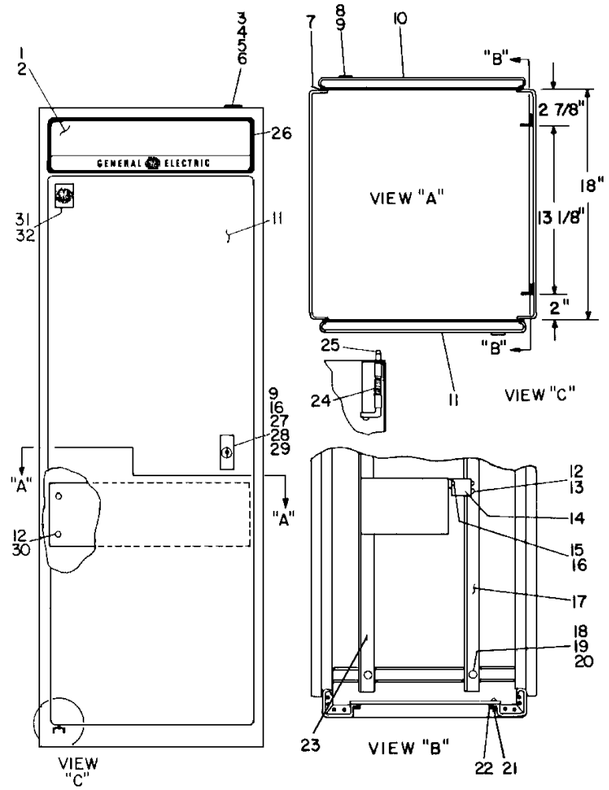
PARTS LIST

EXCITER/RECEIVER DOOR ASSEMBLY
19D417262G13
ISSUE 3

SYMBOL	PART NO.	DESCRIPTION
A901		COMPONENT BOARD 19D417213G2
		- - - - - - - - - CAPACITORS - - - - - - - - -
C1	19A116080P107	Polyester: 0.1 uF + or -10%, 50 VDCW.
C2	19A116080P24	Electrolytic: 400 uF +150% -10%, 18 VDCW; sim to Mallory Type TTX.
C3	19A116080P106	Polyestor: 0.068 uF + or -10%, 50 VDCW.
		- - - - - - - - - - JACKS - - - - - - - - - -
J903		Connector. Includes:
	19A116559P1	Connector, printed wiring: 3 contacts rated at 5 amps; sim to Molex 09-52-3032.
	19A116559P4	Connector, printed wiring: 6 contacts rated at 5 amps; sim to Molex 09-52-3062.
J904		Connector. Includes:
	19A116559P1	Connector, printed wiring: 3 contacts rated at 5 amps; sim to Molex 09-52-3032.
	19A116559P4	Connector, printed wiring: 6 contacts rated at 5 amps; sim to Molex 09-52-3062.
J905	19B219374G2	Connector, 9 contacts.
J936	4033513P4	Contact, electrical: sim to Bead Chain 193-3.
J951		Connector. Includes:
	19A116559P13	Connector, printed wiring: 4 contacts rated at 5 amps; sim to Molex 09-64-1041.
J952		Connector. Includes:
	19A116559P11	Connector, printed wiring: 7 contacts rated at 5 amps; sim to Molex 09-64-1071.
	19A116559P12	Connector, printed wiring: 6 contacts rated at 5 amps; sim to Molex 09-64-1061.
		- - - - - - - - - - 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 + or - 1%, 1/4 w.
R3	19B209358P106	Variable, carbon film: approx 300 to 10K ohms + or -10%, 1/4 w; sim to CTS Type X-201.
R4	19A700106P71	Composition: 2.2K ohms + or -5%, 1/4 w.
R5	19A700106P75	Composition: 3.3K ohms + or - 5%, 1/4 w.
W903		CABLE ASSEMBLY 19D417261G2
		- - - - - - - - - - JACKS - - - - - - - - - -
J931 and J932	19C303426G1	Connector: 20 pin contacts.

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES

SYMBOL	PART NO.	DESCRIPTION
		- - - - - - - - - - PLUGS - - - - - - - - - -
P951 and P952		Connector. Includes:
	19A116659P25	Shell.
	19A116781P3	Contact, electrical: wire range No. 16-20 AWG; sim to Molex 08-50-0105.
	19A116781P4	Contact, electrical: wire range No. 22-26 AWG; sim to Molex 08-50-0107.
	19B209519P1	Polarity Tab.
		- - - - - - - - - RESISTORS - - - - - - - - -
R901	5496870P31	Variable, carbon film: 10K ohms + or -20%, sim to Mallory LC(25K).
W911		EXCITER HARNESS 19D417262G14
		- - - - - - - - - - JACKS - - - - - - - - - -
J933	19C303426G1	Connector: 20 pin contacts.
		- - - - - - - - - - PLUGS - - - - - - - - - -
P902		Connector. Includes:
	19A116659P125	Shell.
	19A116781P4	Contact, electrical: wire range No. 22-26 AWG; sim to Molex 08-50-0107.
		- - - - - - - - - MISCELLANEOUS - - - - - - - - -
	5491541P302	Spacer. (Used with A901).
	19B226035G1	Support. (Secures door).
	19B226105G2	Support. (Secures door).
	19B234589P1	Pawl. (Part of door latch).
	19C338435P1	Knob. (Part of door latch).
	N193P1208B6	Tap screw, phillips head: No. 6-20 x 1/2. (Part of door latch).
	5493361P8	Washer, spring tension. (Part of door latch).
	4035664P8	Nut, self locking. (Used to secure supports).
	19A115161P2	Sleeving. (Located between self locking nuts and supports).
	19B226035G2	Support. (Secures door).
	N402P39B6	Flatwasher: No. 10. (Part of door hinge).
	19A115874P1	Catch, friction. (Latches A901).
	19B201074P305	Tap screw, Phillips POZIDRIV: No. 6-32 x 5/16.
	19A121676P2	Guide pin. (Used with J931-J933).
	19A116496P1	Cable clip. (Secures Exciter to driver cable).
	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).
	4037158P4	Rubber channel. (Located at edge of door).
	19C320675G3	Door.



PARTS LIST

LBI 4977D

FLOOR MOUNT STATION CABINET
19D417358G3
(SEE RC-2804)

SYMBOL	PART NO.	DESCRIPTION
1	19D417623G2	Grille.
2	19B226318P2	Grille plate. (Located under grille).
3	19B219744G2	Strain relief.
4	N80P15008C6	Machine screw: No. 8-32 x 1/2.
5	N210P15C6	Hex nut: No. 8-32.
6	N403P16C6	Lockwasher, external tooth: No. 8.
7	19A126220P1	Gasket, door.
8	19B209539P2	Lock, rear door; sim to Chicago Lock Co. 1703-6T.
9	19B209539P3	Key; sim to Chicago Lock Co. 1000 GE.
10	19C320756G4	Door, rear. 64 inch.
11	19C320756G3	Door, front. 59 inch.
12	19A134011P1	Tap screw: No. 10-16 x 1-1/8. (Quantity 52).
13	7160861P32	Nut, sheet spring; sim to Tinnerman C1794-10%-24. (Quantity 16).
14	19B226160P2	Support.
15	N80P16008C6	Machine screw: No. 10-32 x 1/2.
16	N403P19C6	Lockwasher: No. 10.
17	19B226094P2	Support.
18	N80P21012C6	Machine screw: No. 1/4-20 x 3/4.
19	N403P25C6	Lockwasher: No. 1/4.
20	N402P41C6	Flatwasher: No. 1/4.
21	N80P15006C6	Machine screw: No. 8-32 x 3/8.
22	7160861P5	Nut, sheet spring; sim to Tinnerman C1505-1032-157.
23	19B226094P1	Support.
24	19A129902P1	Spring.
25	19B226088P1	Pin hinge.
26	19B226092G1	Frame.
27	19B209539P1	Lock, front; sim to Chicago Lock Co. 4260-1.
28	N80P16007C6	Machine screw: No. 10-32 x 7/16.
29	N210P16C6	Hex nut: No. 10-32.
30	7160861P31	Nut, sheet spring; sim to Tinnerman C18610-031.
31	NP257660	Nameplate. (GE).
32	4031053P7	Nut, sheet spring; sim to Tinnerman C12046-012-67.

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES.

PARTS LIST

STATION HARDWARE KITS

SYMBOL	PART NO.	DESCRIPTION
		GETC PANEL 19A130031G30
	7160861P33	Nut, sheet spring: sim to Tinnerman C19640-19AB-600.
	19A134011P2	Tap screw: No. 10-16 x 3/4.
	N403P13B6	Lockwasher: No. 6.
	N403P16B6	Lockwasher, internal tooth: No. 8.
	N403P21B6	Lockwasher: No. 10.
	N210P13B6	Nut, steel: No. 6 - 32.
	N80P15008B6	Machine screw, panhead: No. 8 - 32 x 1/2.
	N80P13008B6	Machine screw, panhead: No. 6 - 32 x 1/2.
	N80P13005B6	Machine screw, panhead: No. 6 - 32 x 5/16.
	19A701863P19	Loop clamp: sim to Weckesser 3/8-6.
	N402P37B6	Flatwasher: No. 6.
	19B234899P1	Brace, steel.
	19A702104P2	Connector: gold plated, two position shorting; sim to: Berg 65474-003.
	19B801468P1	Locking plate, left side.
	19B801468P2	Locking plate, right side.
	19B209727P10	Screwlock; female, sim to Amp 205-817-1.
		CONTROL PANEL 19A130031G31
	7160861P33	Nut, sheet spring: sim to Tinnerman C19640-19AB-600.
	19A134011P2	Tap screw: No. 10-16 x 3/4.
	N403P13B6	Lockwasher: No. 6.
	N403P16B6	Lockwasher, internal tooth: No. 8.
	N403P21B6	Lockwasher: No. 10.
	N80P15008B6	Machine screw, panhead: No. 8 - 32 x 1/2.
	N80P13008B6	Machine screw, panhead: No. 6 - 32 x 1/2.
	19A701863P19	Loop clamp: sim to Weckesser 3/8-6.
	N402P37B6	Flatwasher: No. 6.
	19B234899P1	Brace, steel.
	19B801468P1	Locking plate, left side.
	19B801468P2	Locking plate, right side.
	19A115594P2	Grommet.
	19A115729P7	Flatwasher
		GETC FIELD KIT 19A130031G32
	7160861P33	Nut, sheet spring: sim to Tinnerman C19640-19AB-600.
	19A134011P2	Tap screw: No. 10-16 x 3/4.
	N403P13B6	Lockwasher: No. 6.
	N403P16B6	Lockwasher, internal tooth: No. 8.
	N403P21B6	Lockwasher: No. 10.
	N210P13B6	Nut, steel: No. 6 - 32.
	N80P15008B6	Machine screw, panhead: No. 8 - 32 x 1/2.
	N80P13008B6	Machine screw, panhead: No. 6 - 32 x 1/2.
	N80P13005B6	Machine screw, panhead: No. 6 - 32 x 5/16.
	19A701863P19	Loop clamp: sim to Weckesser 3/8-6.
	N402P37B6	Flatwasher: No. 6.

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES

SYMBOL	PART NO.	DESCRIPTION
	19B234899P1	Brace, steel.
	19A702104P2	Connector: gold plated, two position shorting; sim to: Berg 65474-003.
	19B801468P1	Locking plate, left side.
	19B801468P2	Locking plate, right side.
	19B209727P10	Screwlock; female, sim to Amp 205-817-1.
		EXCITER/RECEIVER DOOR 19A130031G33
	19A116773P108	Tap screw, Phillips POZIDRIV: No. 7-19 x 1/2.
	19B201074P306	Tap screw, Phillips POZIDRIV: No. 6-32 x 3/8.
	19B201074P310	Tap screw, Phillips POZIDRIV: No. 6-32 x 5/8.
	7147306P2	Insulator, bushing: No. 6, black pressed fiber; sim to H.H. Smith Inc 2150.
	19B201074P308	Tap screw, Phillips POZIDRIV: No. 6-32 x 1/2.
	19B201074P305	Tap screw, Phillips POZIDRIV: No. 6-32 x 5/16.
	N80P13006B6	Machine screw, phillips head: No. 6-32 x 3/8.
	N402P67B6	Flatwasher, wide: No. 6.
	19B201955P11	Spacer, threaded.
	N80P13007B6	Machine screw, panhead: No. 6 - 32 x 7/16.
	19A701863P13	Cable clip.
	19A115729P7	Flatwasher
		CONTROL PANEL 19A130031G34
	N80P15016B6	Machine screw, panhead: No. 8 - 32 x 1.
	N80P13016B6	Machine screw, panhead: No. 6 - 32 x 1.
	19A115161P2	Sleeving.
	4035664P8	Nut, self locking.
	19B201074P305	Tap screw, Phillips POZIDRIV: No. 6-32 x 5/16.
	N404P13B6	Lockwasher, internal tooth: No. 6.
	7141225P3	Hex Nut: No. 6-32.
		69" CABINET DUAL RACK 19A130031G35
	7160861P33	Nut, sheet spring: sim to Tinnerman C19640-19AB-600.
	19A134011P2	Tap screw: No. 10-16 x 3/4.
	19B209103P506	Tap screw, hex head: No. 10-32 x 3/8.
	7160861P5	Nut, sheet spring: sim to Tinnerman C1505-1032-24D.
	19A134014P6	Bushing, strain relief: sim to Heyco UB-1093.
	19A134032P1	Protective plug.
	N403P13B6	Lockwasher: No. 6.
	N403P16B6	Lockwasher, internal tooth: No. 8.
	N403P21B6	Lockwasher: No. 10.
	19A136621G1	Ground cable: 10 inches long.
	19J706152P8	Retaining strap: sim to Dennison Bar-lok 08470.
	N402P7B6	Flatwasher, narrow: No. 6.
	N402P8B6	Flatwasher, steel: No. 8.
	N80P16008B6	Machine screw, panhead: No. 10 - 32 x 1/2.
	N210P16B6	Nut, steel: No. 10 - 32.
	N84P16008B6	Machine screw, flat head: No. 10 - 32 x 1/2.
	19A115594P2	Grommet.

SYMBOL	PART NO.	DESCRIPTION
		69" CABINET SINGLE RACK 19A130031G37
	7160861P5	Nut, sheet spring: sim to Tinnerman C1505-1032-24D.
	7160861P33	Nut, sheet spring: sim to Tinnerman C19640-19AB-600.
	19A134011P2	Tap screw: No. 10-16 x 3/4.
	19A134014P6	Bushing, strain relief: sim to Heyco UB-1093.
	19A134032P1	Protective plug.
	19B209103P506	Tap screw, hex head: No. 10-32 x 3/8.
	19A136621G1	Ground cable: 10 inches long.
	N403P13B6	Lockwasher: No. 6.
	N403P16B6	Lockwasher, internal tooth: No. 8.
	N403P21B6	Lockwasher: No. 10.
	19J706152P8	Retaining strap: sim to Dennison Bar-lok 08470.
	N402P7B6	Flatwasher, narrow: No. 6.
	N402P8B6	Flatwasher, steel: No. 8.
	N80P16008B6	Machine screw, panhead: No. 10 - 32 x 1/2.
	N80P15008B6	Machine screw, panhead: No. 8 - 32 x 1/2.
	N210P15B6	Nut, hex: No. 8-32.
	N210P16B6	Nut, steel: No. 10 - 32.
	N84P16008B6	Machine screw, flat head: No. 10 - 32 x 1/2.
	19A115594P2	Grommet.
		STATION PANEL 19A149326G1
	19C336811P1	Slide.
	N80P13008B6	Machine screw, panhead: No. 6 - 32 x 1/2.
	N210P13B6	Nut, steel: No. 6 - 32.
	N404P13B6	Lockwasher, internal tooth: No. 6.
	19A149327G1	Ground cable.
	19B201074P305	Tap screw, Phillips POZIDRIV: No. 6-32 x 5/16.
	N80P13004B6	Machine Screw: No. 6-32 x 1/4.
		MASTER OSCILLATOR 19A149537G1
	19A134011P1	Tap screw: No. 10-16 x 3/4.
	N403P19B6	Lockwasher: No. 10.
	7160861P33	Nut, sheet spring: sim to Tinnerman C19640-19AB-600.

PARTS LIST

STATION CABLES

SYMBOL	PART NO.	DESCRIPTION
		MASTER OSCILLATOR CABLE 19B801561G1
J954	19A115938P12	Connector.
	19B209044P24	Cable, radio frequency: sim to Essex 21-316.
P953	19A115938P7	Connector.
		VCO INPUT CABLE 19B801529G1
	19B800560P2	RF Cable, approximately 20 inches long.
	19A705512P3	Connector, RF SMB series: sim to AMP 228213-1.
		LOCAL OSCILLATOR CABLE 19B801529G2
	19B800560P2	RF Cable, approximately 10 inches long.
	19A705512P3	Connector, RF SMB series: sim to AMP 228213-1.
		ANTENNA CABLE 19B801529G3
	19B800560P2	RF Cable, approximately 13 inches long.
	19A705512P3	Connector, RF SMB series: sim to AMP 228213-1.
P953	19A115938P20	Connector, coaxial: (BNC Series); sim to Amphenol 31-318-1001.
		EXCITER OUTPUT CABLE 19B801529G4
	19B800560P2	RF Cable, approximately 4.5 inches long.
	19A705512P3	Connector, RF SMB series: sim to AMP 228213-1.
P953	19A115938P20	Connector, coaxial: (BNC Series); sim to Amphenol 31-318-1001.
		SYNTHESIZER OUTPUT CABLE 19B801529G5
	19B800560P2	RF Cable, approximately 11 inches long.
	19A705512P3	Connector, RF SMB series: sim to AMP 228213-1.
P953	19A115938P20	Connector, coaxial: (BNC Series); sim to Amphenol 31-318-1001.

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES.

SYMBOL	PART NO.	DESCRIPTION
		CABLE (Audio Output) 19B801454P1
		CABLE (Exciter to PA) 19B801454P2
		CABLE ASSEMBLY (Receiver to Audio) 19B801535G1
P3	19A700041P32	Shell, includes:
	19A704779P26	Connector, printed wiring: sim to Molex 08-55-0101.
P602	19A700041P32	Shell, includes:
	19A704779P26	Connector, printed wiring: sim to Molex 08-55-0101.