Mobile Communications

EDACS™
DESK TOP STATION
(LOCAL/REMOTE)

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Maintenance Manual

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

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SYSTEM SPECIFICATIONS*

FREQUENCY RANGE	Refer to the radio Maintenance Manual
INPUT VOLTAGE	121/240 Vac ± 10% (operable up to ± 20%) @ 50-65 Hz (Standby battery 13.8 Vdc, nominal)
INPUT POWER	
Receive	60.5 Watts @ 0.5 amperes
Transmit	847 Watts @ 7 amperes (maximum)
POWER OUTPUT RATINGS	Refer to the radio Maintenance Manual
DUTY CYCLE (EIA)	Receiver 100%, Transmitter 20% TEMPERATURE RANGE -30°C to + 60°C (-22°F to + 140°F), performance specified per EIA
SPEAKER	8 Ohms
DESK MICROPHONE	Transistorized Electret (standard)
DIMENSIONS (H x W x D)	14 x 50 x 43 cm (5-1/2 x 20 x 17 inches)
WEIGHT	20 Kg (44 lbs)

* Refer to the appropriate mobile maintenance manual for detailed transmitter and receiver specifications.

DESCRIPTION

The EDACS™ Desk Top Station (Figure 1) is a fully solid-state station for local and remote control operation. The most advanced manufacturing techniques are used to provide the highest quality and reliability.

The station is housed in an attractively styled cabinet, and operates over a wide range of ac power sources. The basic station consists of a control and indicator panel, a power supply, and a mobile radio unit. Available options include:

- Clock/VU meter
- Remote control card
- Voice Guard®
- Battery Standby

RADIO PACKAGE

The basic radio (Figure 2) consists of five printed wire boards mounted in a cast aluminum frame. The five boards are the System Control board, the Frequency Synthesizer board, the Transmit Exciter board, the Power Amplifier board, and the Receiver board.

The radio is of double-layer construction with tuning adjustments easily accessible from the top of the radio. Test points for the transmitter, receiver, and system functions are provided for simplified alignment and troubleshooting. Refer to the radio maintenance manual for more detailed information.

STATION CIRCUIT BOARDS

In addition to the radio package, there are three keyboard assemblies, a Display board, a System board, power supply module, and Regulator board in the standard Desk Top Station.

OPERATION

Detailed operation of the station can be found in the Desk Top Station Operator's manual. Condensed operating instructions are provided here.

BASIC SETUP

1. Place the power switch (rear panel) in the ON position. The GROUP and SYSTEM displays should light (other indicators may also be on) when the power is turned on. The last selected GROUP and SYSTEM will be displayed unless the station has been programmed for a power-up group and system.

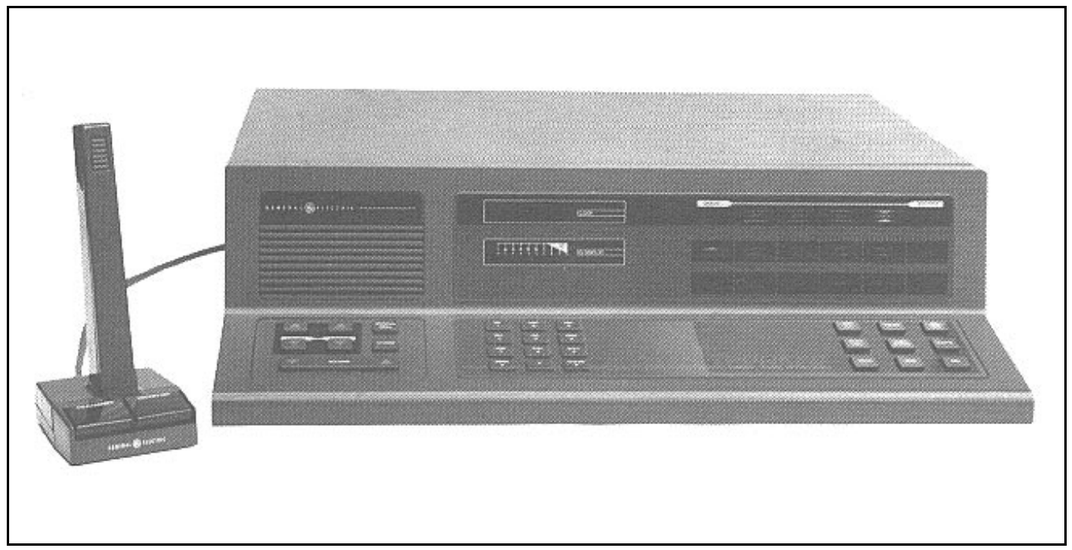
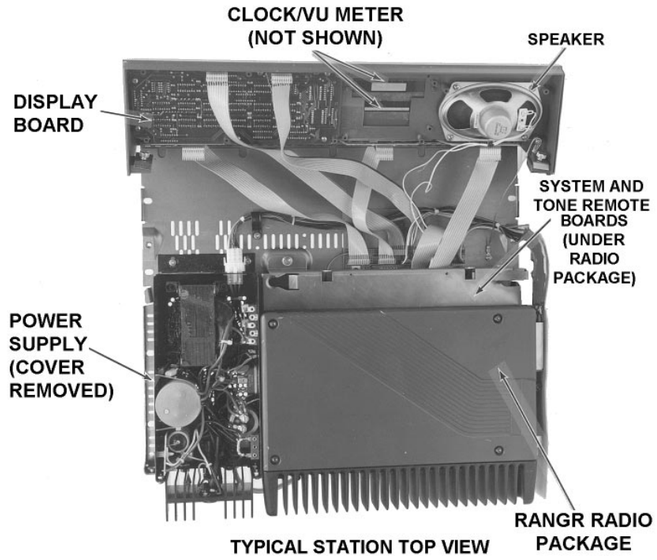


Figure 1 - Desk Top Station

TOP VIEW



STATION REAR PANEL

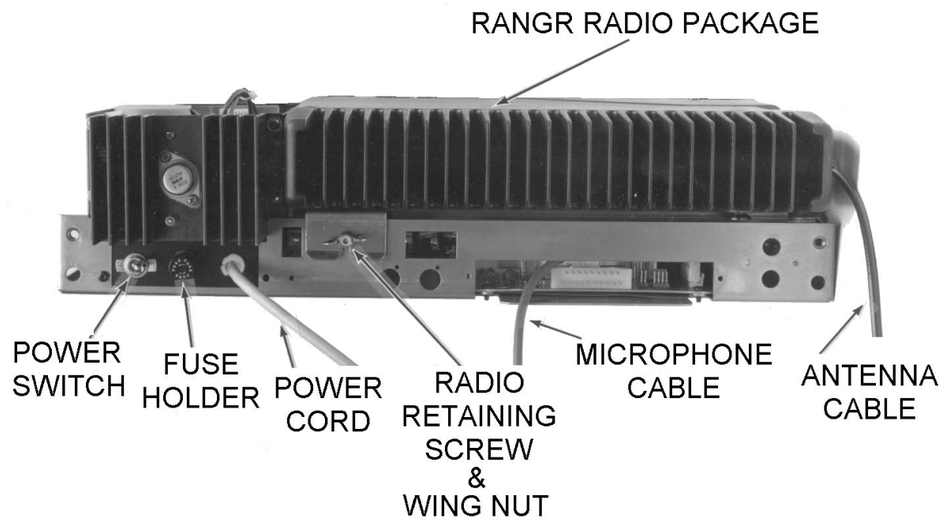


Figure 2 - Desk Top Station Rear And Top Views

2. Press VOLUME ▲ or ▼ until the desired listening level is reached. An audio tone (beep) will be heard to indicate the volume level.

ADJUSTING THE SQUELCH (CONVENTIONAL)

Press and hold the SCAN button. Then press and release SYSTEM ▲ until the BUSY indicator flashes. Press and release SYSTEM ▼ until the BUSY indicator goes off, then press SYSTEM ▼ three more times. Noise may be heard in the speaker during this adjustment.

The station is now set up for basic receive operation. The BUSY indicator will light when a call is received. The CALL indicator will light when an individual call is received. The SPEC CALL indicator flashes when an individual call is received.

SELECTING GROUP/SYSTEM/CHANNEL

Use the GROUP and SYSTEM buttons to select a different Group, System or Channel. If the SPEC CALL indicator is on, you must press the CLEAR (#) button first. The GROUP and SYSTEM buttons ramp up and down. You may press the opposite direction button to return to a selection you passed, or to view additional selections.

Group Selection

To select a different Group:

1. If the SPEC CALL indicator is on, press the CLEAR button.

2. Press the GROUP ▲ or ▼ button until the desired Group number appears in the GROUP display. A tone will be heard each time a Group number changes until you reach the last selection.

NOTE

On units with automatic login for wide-area tracking, the radio will transmit briefly after a group change.

System Selection

To select a different System:

1. If the SPEC CALL indicator is on, press the CLEAR button.

NOTE

The group may change when the system selection is changed. This happens when the selected system does not contain the previously selected group. Make sure the GROUP selection is correct after selecting a SYSTEM.

2. Press the SYSTEM ▲ or ▼ button until the desired System number appears on the SYSTEM display. A tone will be heard each time a System number changes.

NOTE

On units with automatic login for wide-area tracking, the radio will transmit briefly after a system change.

Channel Selection (Conventional System)

When you select a Conventional (non-trunked) system, the CONV indicator will light. Use the GROUP buttons to select your operating channel.

To select a different Channel:

Press the GROUP ▲ or ▼ button until the desired channel number appears in the GROUP display. A tone will be heard each time a channel number changes.

RECEIVING A CALL

Once you have done the BASIC SETUP procedure your radio is set up to receive calls. The next call made on your selected Group/System or channel will be received.

SENDING A MESSAGE

Sending a message on a trunked System is different from sending a message on a conventional (non-trunked) system. The following steps tell you how to transmit a message on both types of Systems.

On A Trunked System

To send a message on a trunked system, proceed as follows:

1. Select the System and Group you wish to transmit on.

2. Press TRANSMIT bar (or PTT button) and wait for the channel-available tone. The XMIT and BUSY indicators will light. If you get the high call-queued tone, wait for the channel-available tone before making your call. A low tone indicates a channel is not available.

3. Speak into the desk microphone in a normal voice.

4. Release TRANSMIT bar (or PTT button) when the transmission is completed, and listen for any reply. The XMIT and BUSY indicators will go out.

NOTES

If the TRANSMIT (PTT) button is released before the channel-available tone, the channel available tone will be extended. The radio will transmit for up to two seconds, allowing time for you to press TRANSMIT (PTT) and talk.

Groups may be programmed as receive-only. If a group is Receive-only, nothing will happen when the TRANSMIT (PTT) button is pressed.

On wide-area calls, if the BUSY light is on but the channel-available tone has not sounded, you may release and press TRANSMIT (PTT) quickly to override the wait period. This will only guarantee communication on your site. Use this method with caution.

Fleet/Agency Call

Your station may be programmed to transmit fleet or agency calls (to the selected group) using the FLEET or AGENCY button.

1. Select the System and Group you wish to transmit on.

2. Press and hold the FLEET (or AGENCY) button and wait for the tone. The XMIT and BUSY indicators will light. If you get the high call queued tone, wait for the channel-available tone before making your call. A low tone indicates a channel is not available.

3. Speak into the desk microphone in a normal voice. Do not press the TRANSMIT bar or PTT button.

4. Release the FLEET (or AGENCY) button when the transmission is completed, and listen for any reply. The XMIT and BUSY indicators will go out.

NOTES

If the TRANSMIT (PTT) button is released before the channel-available tone, the channel-available tone will be extended. The radio will transmit for up to two seconds, allowing time for you to press TRANSMIT (PTT) and talk.

Groups may be programmed as receive-only. If a group is Receive-only, nothing will happen when the TRANSMIT (PTT) button is pressed.

On wide-area calls, if the BUSY light is on but the channel-available tone has not sounded, you may release and press FLEET (or AGENCY) quickly to override the wait period. This will only guarantee communication on your site. Use this method with caution.

On A Conventional (Non-Trunked) System

To send a message on a conventional (non-trunked) system, proceed as follows:

1. Select the channel you wish to transmit on.

2. If you have optional Channel Guard, press the MONITOR bar to make sure the channel is not in use. The CG MONITOR indicator will come on.

3. Press the MONITOR bar again to unlock.

4. When the channel is clear, press TRANSMIT bar or PTT button and wait for the channel-available tone. The XMIT indicator will light.

5. Speak into the desk microphone in a normal voice.

6. Release TRANSMIT bar (or PTT bar) when the transmission is completed, and listen for any reply. The XMIT indicators will go out.

During Conventional Failsoft

In the unlikely event of a failure of the trunked system, communications will take place in the conventional failsoft mode. Your radio will automatically be directed to a communications channel set up for this purpose. During this mode of operation, the CONV indicator will be on and the NC indicator will flash. You will notice increased activity on your channel during conventional failsoft operation, so be careful not to transmit until the channel is clear.

Operation during conventional failsoft will be the same as operation on a conventional system, except that it will not be possible to select a communications channel or use emergency and special call. When trunking is restored, you will be returned to normal operation.

NOTE

Emergency and Special Call are not operational during conventional failsoft. Also, the GROUP control will not operate.

INITIAL ADJUSTMENT

After the Desk Top Station has been installed as described in the Installation Manual, the following adjustments should be made by an authorized electronics technician.

TRANSMITTER ADJUSTMENT

Adjustment of the transmitter includes measuring the forward and reflected power, and adjusting the antenna for an optimum match. The transmitter is then set for rated output power. Transmitter frequency and modulation should be recorded for future reference. Complete transmitter adjustment and alignment procedures can be found in the radio maintenance manual.

RECEIVER ADJUSTMENT

No initial adjustments are required for the receiver. Complete receiver alignment instructions can be found in the radio maintenance manual.

POWER SUPPLY

The power supply is a self-contained module which provides a single output of 13.8 Vdc. Refer to the power supply maintenance manual for detailed information.

DISPLAY BOARD

The display board contains all the indicators and displays, and their interfacing circuitry. Refer to the operator's manual and the Display board maintenance manual for detailed information.

STATION OPTIONS

BATTERY STANDBY OPTION

A station battery standby option is available to permit continued station operation in the event of an ac power failure. This option provides internal switching in the station to a customer-supplied l3.8-Volt battery supply.

NOTE

The battery standby option does not charge the 9-Volt memory backup battery.

Circuit Description

The standby battery option consists of a diode assembly mounted on the station chassis, and a black cable and red fused cable connected from the battery to the Battery Standby board. The output of the battery standby board connects to the station power supply plug PI-8 (+ 13 Volts) and P1-2 (ground).

When the station is powered by an ac source, diode D1 on the Battery Standby board is reverse biased, preventing battery current drain. If the ac power source fails, diode D1 conducts, allowing the battery to power the station. When ac power is again applied, diode D1 prevents battery current drain.

VOICE GUARD

An optional Voice Guard card is available to allow the Desk Top Station to send and receive encrypted communications. This option connects to the system board at J13. Additional information can be found in the Voice Guard option maintenance manual.

EXTERNAL ENCODER AND DECODER

Two cables are available for connecting an optional external encoder or decoder to the System board. The cables are mounted in holes in back of the station chassis, and are connected to J1 (encoder), and J18 and J27 (decoder option).

CLOCK/VU METER

An optional clock and VU meter arc available as options to the Desk Top Station. This option provides a l2-or 24-hour clock display and a LED bar VU meter which gives an indication of transmit modulation level. The option connects to J14 of the System board.

If the clock/VU meter option has been installed in the Desk Top Station, the clock time will have to be set initially.

1. Press and hold switch S2 on the clock/VU meter option.
2. Press S1 until the minute display is set correctly.
3. Press S3 until the hour display is set correctly.
4. Release S2.

REMOTE CONTROL OPTION

The Desk Top Station may be operated from a separate remote-control point. The Remote card option connects to the System board at J9 and J8. Connections are also made to the Remote card for the tone control line. Additional information can be found in the Remote Control Card Maintenance Manual.

MAINTENANCE

This section describes the procedures and checks needed to maintain the desk top station.

DISASSEMBLY

Gain access to the station for servicing as follows:

1. Loosen the two knurled, captive screws at each side of the back of the station.
2. Slide the cover back and lift it off the station.
3. Loosen the captive knob at the right front of the radio unit.
4. Loosen the wing nut at the right rear of the radio unit.
5. Tilt (hinged on left) the radio unit up to expose the System board.

PREVENTIVE MAINTENANCE

Routine checks of all mechanical and electrical parts should be made at regular intervals to ensure high operating efficiency. This preventive maintenance should include the items listed in Table 1.

TEST AND TROUBLESHOOTING

The test procedure is provided as an aid in servicing the Desk Top Station. The Test and Troubleshooting procedure in Table 2 should be performed when a problem is suspected in the Desk Top Station, or when a repair has been completed to verification proper operation. This test and troubleshooting procedure, along with the theory of operation and schematic, should enable quick location of a problem.

Equipment Required

The following equipment is required to test the Desk Top Station:

- EDACS
- Monitor receiver
- Distortion Analyzer
- RF Generator
- 50-ohm rf load
- 600-ohm af load
- 13-volt power supply
- RCN-1000 DACS Remote Controller

Table 1 - Preventive Maintenance Schedule

PREVENTIVE MAINTENANCE	WHEN PERFORMED	
	6 MONTHS	AS REQUIRED
Transmitter Alignment - Compare meter readings with voltages read during initial tune up. Check power output (see radio maintenance manual).		X
Transmission Line - Check for positive indication of pressure (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. Check for tightness of nuts, bolts, and screws.	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

Table 2 - Test & Troubleshooting

PROCEDURE	EXPECTED RESPONSE
Stations Test 1. Press and hold the REM INH, INCOM, and MUTE buttons while turning power on.	a. All indicators except STANDBY POWER and decimal point are on. The GROUP and SYSTEM displays show 88. b. Intercom is operational. c. VU Meter is operational. d. Volume control is operational. e. Mute does not operate.
2. Press and hold the REM INH, INCOM, and MUTE buttons.	Displays are blank. If Tone Remote board is installed, a remote function number may be displayed.
3. Press the control buttons on the Desk Top Station.	a. The corresponding key number will appear in the GROUP display. Key numbers are listed in Table 3. b. Intercom, VU meter, and VOLUME control operate. c. Mute does not operate.
4. Press the REM INH, INCOM, and MUTE buttons.	a. All LEDs and decimal point are off b. SYSTEM display is off and GROUP display shows volume level. c. The intercom, VU meter, and mute operates. The MUTE indicator is on when the MUTE button is pressed.

Table 2 - Test & Troubleshooting (cont.)

PROCEDURE	EXPECTED RESPONSE
5. Press the RMH INH, INCOM, and MUTE buttons.	a. SYSTEM display will show 01. b. There will be a high level 2175 Hz tone on the telephone line (for remote only).
6. Press the REM INH button.	a. SYSTEM display will show 02. b. There should be a low-level 2175 Hz tone on the telephone line. c. Continued pressing of the REM INH button will cause the SYSTEM display to alternate between 01 and 02.
7. Turn power off.	Exits test mode.
RADIO TEST 8. Press VOICE GUARD, ADD, AND DEL while turning power on.	The SYSTEM display will show 1 and the GROUP display will show 01.
9. Apply an on-frequency signal modulated with 1 kHz signal at 3 kHz deviation.	
10. Set VOLUME control to maximum.	
11. Adjust R67.	a. Measure 1.5 watts across speaker (OR 8-ohm test load). b. Measure hum & noise 45 dB below rated power (unsquelched). c. Measure hum & noise 65 dB below rated power (squelched).
12. Measure distortion.	Less than 3% at 1 kHz signal.
13. Measure frequency response.	Within + 2 and -8 dB of standard 6 dB-per-octave de-emphasis curve from 300 to 3000 Hz (1000 Hz reference).
14. Check receiver for sensitivity, critical and maximum squelch, audio output, operation on all frequencies, and modulation acceptance.	
TRANSMITTER TEST 15. Connect 50-ohm rf load to antenna connector.	Measure (adjust) to rated power.
16. Connect a 600-ohm resistor across the mic input.	Measure hum & noise at least 45 dB below reference
17. Remove the 600-ohm resistor from the mic input.	
18. Inject a 1 kHz signal at 120 mV through a 22 pF capacitor to the MIC HI input.	
19. Adjust LINE MIC ADJUST (R22 on System board).	Measure 3 kHz deviation.
20. Adjust LINE MIC GAIN (R28 on System board).	Measure 300 mV rms output at J9-9.
21. Connect desk mic at J7.	
22. Key the transmitter and speak at a distance of 6 inches from the mic.	a. Monitor transmitted signal for distortion, modulation break-up, and other problems. b. Receiver must mute, and remain muted during transmit. No squelch tail should be heard after unkeying.

Table 2 - Test & Troubleshooting (cont.)

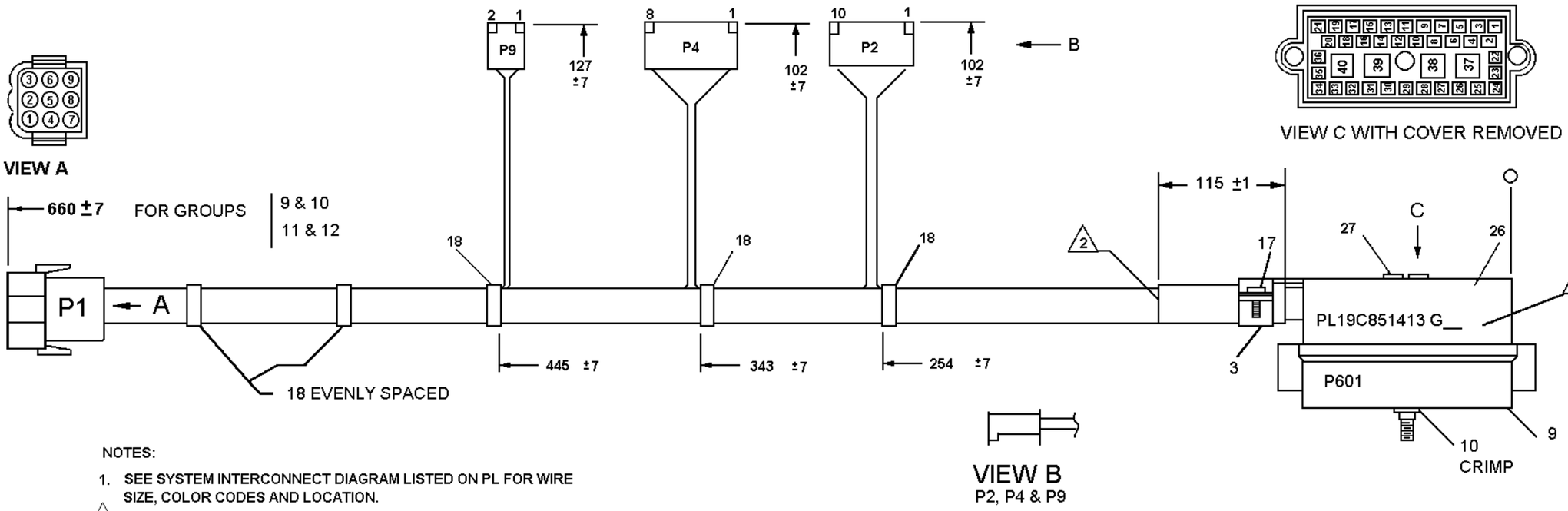
PROCEDURE	EXPECTED RESPONSE
BATTERY STANDBY 23. Connect suitable battery or 13 volt dc supply (with ripple less than or equal to 200 mV rms) to standby connector J4.	
24. Turn off ac power switch.	Station should continue to operate.
CLOCK/VU OPTION 25. Remove standby battery supply.	
26. Turn on ac power switch.	Check that clock display is flashing when station power is turned on.
27. Press and hold S1 and S2.	The minute display should advance at approximately a 60 Hz rate.
28. Release S1 and press S3.	The minute display should advance at approximately a 2 Hz rate.
29. Release S2.	
30. Connect and rf wattmeter to the transmitter output connector.	
31. Key the transmitter and and speak into the microphone.	Observe VU meter bar LEDs come on as voice is transmitted.
TRUNKED & CONVENTIONAL MODE TEST 32. Turn station power off and then on.	
NOTE The remote control is checked via the 600 ohm line input and output terminations on the remote board.	
REMOTE CONTROL SYSTEM TEST 33. Apply standard input signal.	Measure line output level of + 7 dBm at 1 kHz
34. Set reference level on distortion analyzer and remove modulation.	Measure hum & noise at least 45 dB below reference.
35. Reduce deviation of the test signal to 1 kHz and hold constant.	Measure frequency response from 300 to 3000 Hz. Note 6 dB-per-octave de-emphasis (tone units notch -45 dB at 2175 Hz.
36. Squelch the receiver.	Measure hum & noise better than -45 dBm.
37. Connect an EDACS RCN-1000 Controller to the line terminals.	
38. Connect a test load to the station antenna connector.	
39. Apply a 1000 Hz signal at 120 mV through the Remote Controller mic input.	
40. Set the line output of the DACS RCN-1000 to 0 dBm (0.78 Vrms) at 1 kHz (600 ohm).	
41. With transmit function for tone.	
42. Adjust R16 on Remote board.	Measure 80 mV output on TX AUDIO HI (J9-1).

Table 2 - Test & Troubleshooting (cont.)

PROCEDURE	EXPECTED RESPONSE
43. Use a monitor receiver to monitor transmitter distortion.	Measure distortion less than 3% at 1 kHz.
44. Modulate the transmitter using the DACS RCN 1000 Remote Controller.	Monitor proper transmitter modulation at test receiver.
45. Check for proper Channel Guard operation (if equipped with this option).	
CHANNEL GUARD (Conventional Channels Only) 46. Inject an rf signal with the correct Channel Guard frequency with a deviation of 750 Hz ± 50 Hz.	a. Monitor Channel Guard transmission. b. Measure 750 Hz ± 50 Hz deviation. c. Measure distortion less than 5%. d. Monitor transmitted signal and verify good modulation and continuation of Channel Guard tones.
47. Inject a standard rf signal without Channel Guard tones.	
48. Press the MONITOR bar.	Monitor receive signal.
49. Operate station functions in the trunked and conventional modes	Refer to Desk Top Station Operator's Manual for operating information.

Table 3 - Key Numbers For Station Test

KEY NUMBER	KEY NAME
00	GROUP ▲
01	GROUP ▼
02	VOLUME ▼
03	NOT DEFINED
04	SYSTEM ▼
05	SYSTEM ▲
06	VOLUME
07	SCAN
08	SPECIAL CALL
09	REMOTE INHIBIT
10	ADD
11	INTERCOM
12	MUTE
13	AGENCY
14	DELETE
15	EMERGENCY
16	KEYPAD 1
17	KEYPAD 2
18	KEYPAD 3
19	KEYPAD 4
20	KEYPAD 5
21	KEYPAD 6
22	KEYPAD 7
23	KEYPAD 8
24	KEYPAD 9
25	KEYPAD *
26	KEYPAD 0
27	KEYPAD #
28	MIC PTT
29	MIC CHANNEL GUARD DISABLE
30	VOICE GUARD
31	FLEET
If a remote controller is used:	
32	REMOTE CHANNEL GUARD DISABLE
33	REMOTE PTT
34	REMOTE FUNCTION 1
35	REMOTE FUNCTION 2
36	REMOTE FUNCTION 3
37	REMOTE FUNCTION 4
38	REMOTE FUNCTION 5
39	REMOTE FUNCTION 6

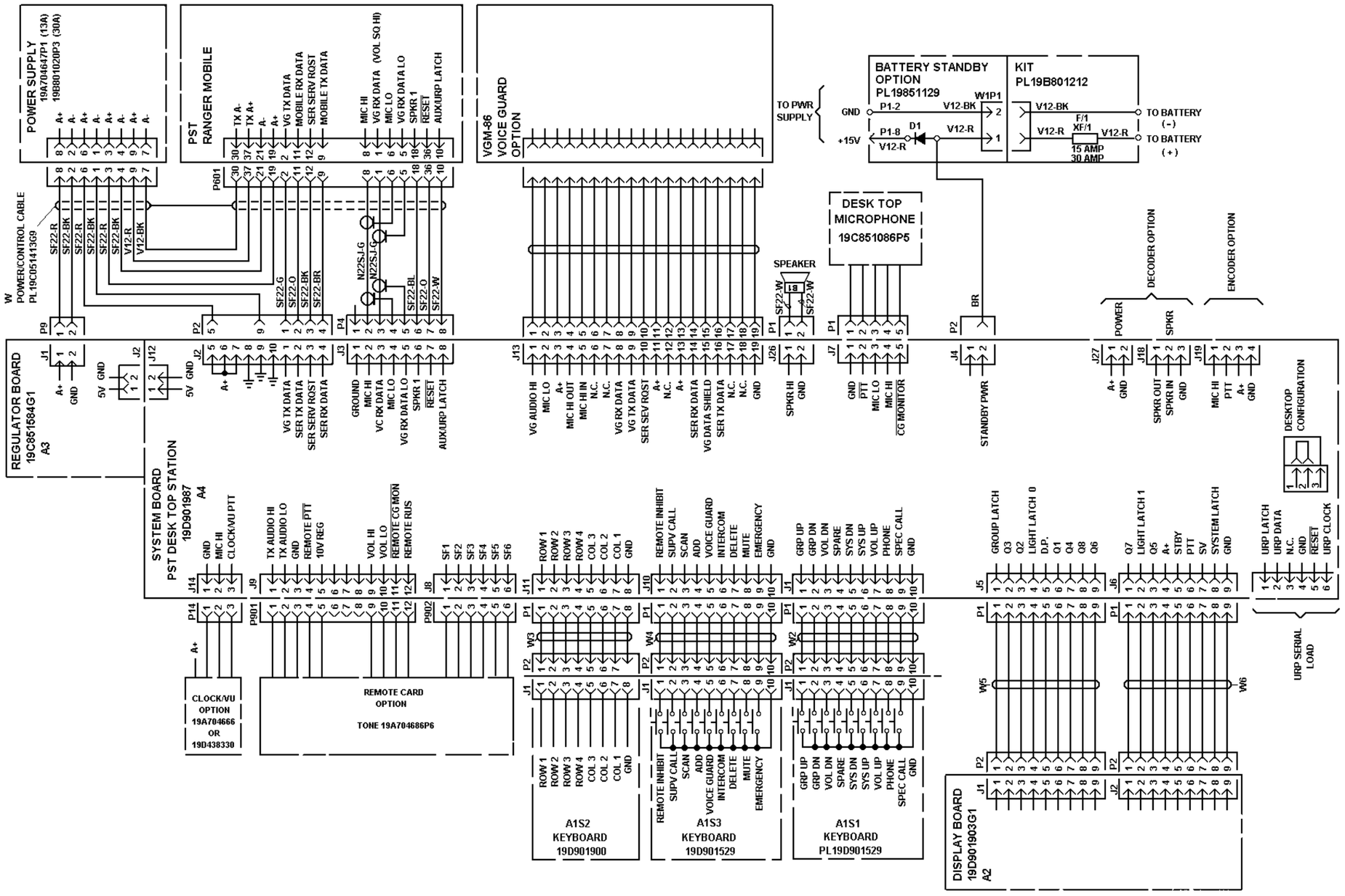


NOTES:

1. SEE SYSTEM INTERCONNECT DIAGRAM LISTED ON PL FOR WIRE SIZE, COLOR CODES AND LOCATION.
2. COVER CABLE WITH SM105° C UL APPROVED TUBING.
3. CABLE MUST CONFORM TO ENGINEERING APPROVAL SAMPLE.
4. MARK AS SHOWN PLUS APPLICABLE GROUP NO., CHARACTERS: 3.2 HIGH, CONTRASTING COLOR PER 19A700154P1.
5. MARK P2, P4 & P9 ON EITHER SIDE OF CONNECTOR BODY. CHARACTERS 1.6 HIGH, CONTRASTING COLOR PER 19A700154P1.

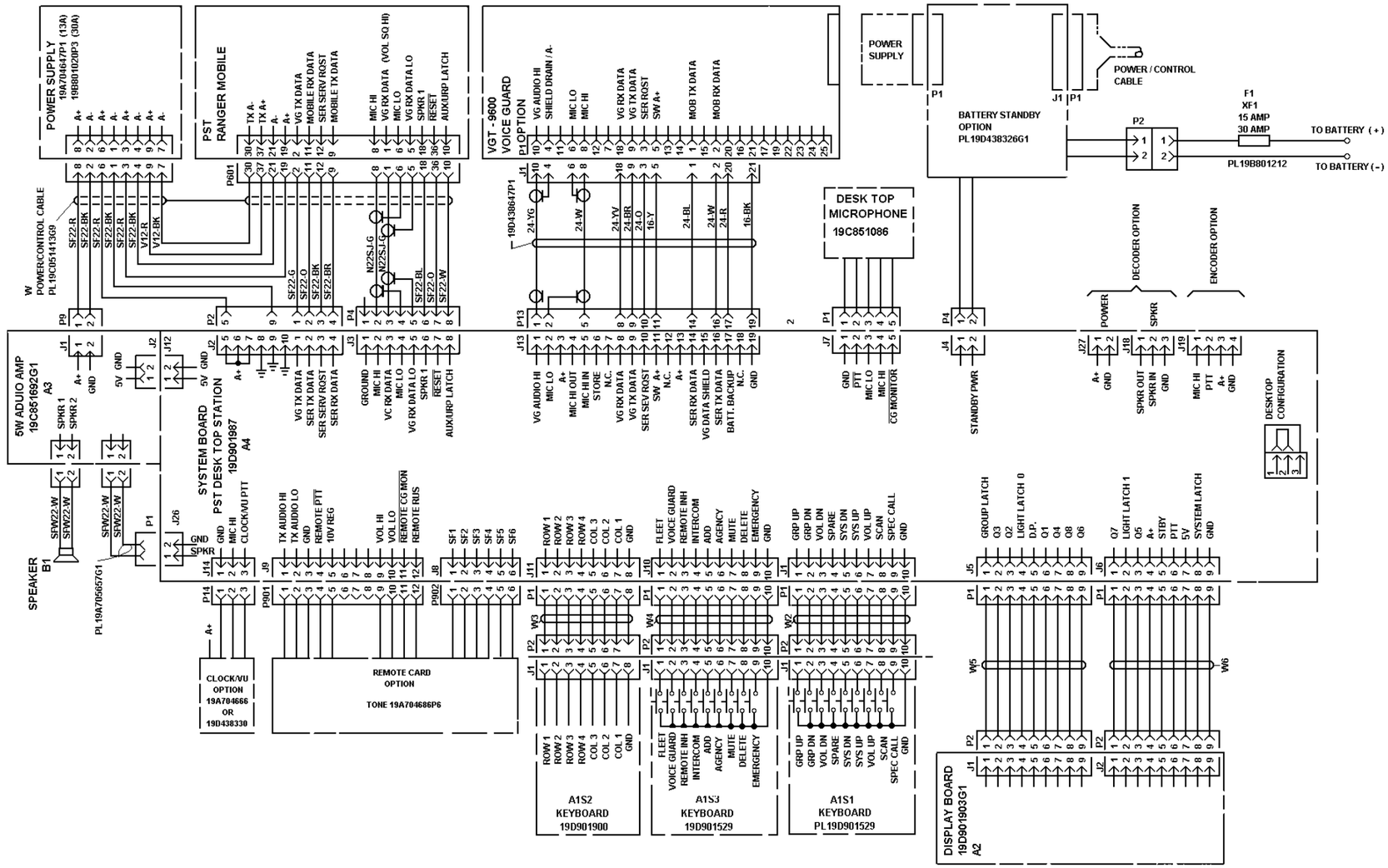
POWER/CONTROL CABLE
19C851413G9 & G11

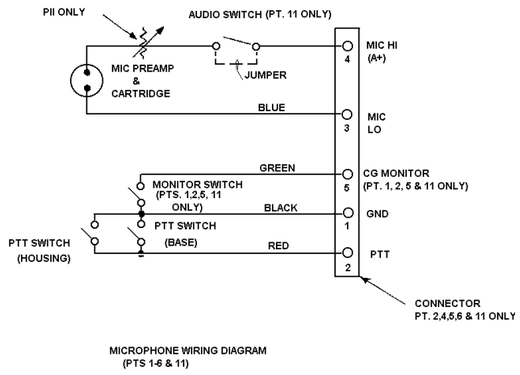
(19C851413, Sh. 3 Rev. 1)



19C851413G9 (EARLIER MODELS)

(19D901856, Sh. 1, Rev. 3)





MICROPHONE WIRING DIAGRAM (PTS 1-6 & 11)

(19C851086, Sh. 2, Rev. 19)

19C851413G11

(19D902086, Sh. 1, Rev. 4)

PARTS LIST

LBI-31884C
RANGR/DELTA PST DESKTOP STATION

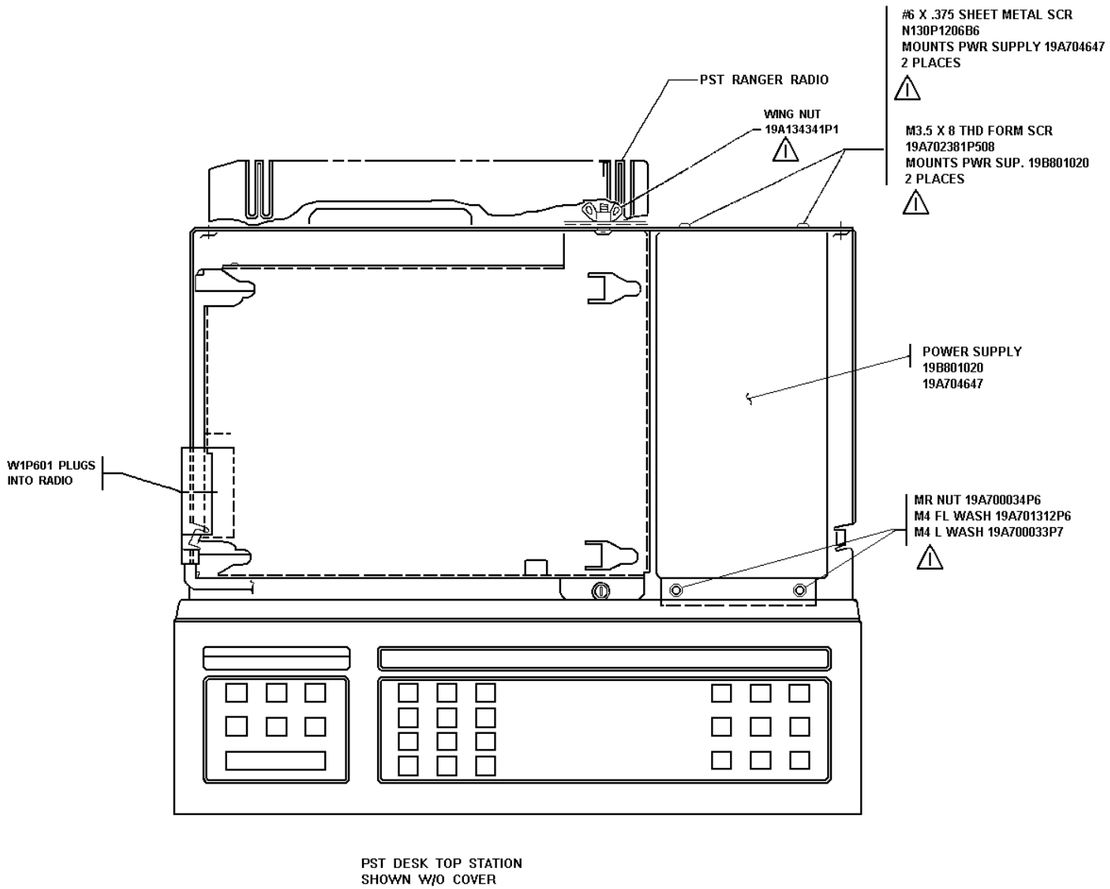
ASSOCIATED PARTS

SYMBOL	GE PART NO.	DESCRIPTION
	19A702032P7	Cable Assembly.
	19B800716P2	Tuning tool.
	19A704463G1	Cable. (Includes solderless terminal 19B209260P12)
	19C851063G2	Cover Assembly.
	19C851085P11	Transistorized Microphone.
	19C851411P2	Insulator.
	19A702032P8	Cable Assembly.
	19A702032P9	Cable Assembly.
	19A702032P10	Cable Assembly.
	19C851411P3	Insulator.
	19C851018G5	Chassis.
		INTERCONNECTION CABLE 19C851413G9 & G11
		- - - - - - - - - - - PLUGS - - - - - - - - - - -
P1		Connector. Includes:
	19A134281P3	Plug.
	19A134282P4	Contact, electrical.
	19A134282P5	Contact, electrical.
P2 and P3		Connector. Includes:
	19A700041P26	Contact: sim to Molex 08-50-0113.
	19A700041P36	Shell.
P4		Connector. Includes:
	19A700041P26	Contact: sim to Molex 08-50-0113.
	19A700041P34	Shell.
P5 thru P8		Connector. Includes:
	19C320257P1	Shell.
	19A116781P4	Contact, electrical: wire range No. 22-26 AWG; sim to Molex 08-50-0107.
P9		Connector. Includes:
	19A700041P26	Shell.
	19A700041P28	Shell.
P601		Connector. Includes:
	19A701376P1	Contact, electrical rated @ 4 amps; sim to AMP 350857-1.
	19A701376P3	Contact, electrical rated @ 35 amps; sim to AMP 350655-1.
	19D900037P1	Shell.
		- - - - - - - - - MISCELLANEOUS - - - - - - - - -
	19A703061P3	Clip. (Used with P601).
	19A701289P1	Retaining ring: 3/16 inches; sim to National Lockwasher WA 510. (Used with P601).
	19A702381P508	Screw, thd. form: No. 3.5-0.6 x 8. (Used with P601).
	19A701192P4	Thumbscrew.
	19B800951G2	Connector cover. (Used with P601).
	19C851413G10	Cable. (Used with G9).
	19C851413G12	Cable. (Used with G11).

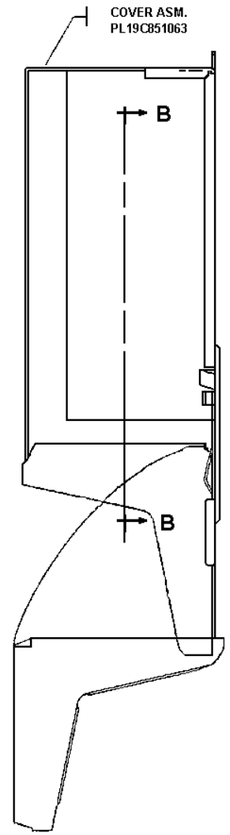
*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES

SYMBOL	GE PART NO.	DESCRIPTION
		HARDWARE KIT 19A704499G5
	N80P13004B6	Machine screw: No. 6-32 x 1/4. (Quantity 2).
	N404P13B6	Lockwasher, internal tooth: No. 6. (Quantity 2).
	19A134341P1	Wing nut. (Quantity 1).
	19A700033P7	Lockwasher, external tooth: #4. (Quantity 7).
	19A700034P6	Hex nut. (Quantity 7).
	19A701312P6	Flatwasher: 1.7 - 1.85 ID. (Quantity 6).
	19A701863P21	Clip loop. (Quantity 1).
	19A702381P508	Screw, thd. form: No. 3.5-0.6 x 8. (Quantity 8).
	N80P13006B6	Machine screw, panhead: No. 6-32 x 5/16. (Quanity 2).
	19J706212P302	Screw. (Quantity 6).
	19J706212P303	Screw. (Quantity 6).
	N130P1206B6	Screw, thread forming: No. 6-20 x 3/8. (Quantity 2).
	19A705657G1	Cable.
		HOUSING 19D901527G2
B1		SPEAKER 19B801336G1
		- - - - - - - - - - - MODULE - - - - - - - - - - -
B1	19C307094P3	Permanent magnet: 8 ohms + or - 15% voice coil imp, 3 x 5 inch speaker; sim to Pioneer Sample SA7106.
		- - - - - - - - - - - PLUGS - - - - - - - - - - -
P1		Connector. Includes:
	19A700041P28	Shell.
	19A700041P26	Contact: sim to Molex 08-50-0113.
		- - - - - - - - - - - SWITCHES - - - - - - - - - -
S1 and S2		Switch. Includes:
	19D901529G1	Component board.
	19C851033P1	Shield.
	19C851010P1	Pad.
S3		Switch. Includes:
	19D901900G1	Component board.
	19C851034P1	Shield.
	19C851009P1	Pad.
		- - - - - - - - - MISCELLANEOUS - - - - - - - - -
	19A121759P1	Thumbscrew.
	19J706212P302___	Screw, thread forming: No 6-19 x 6.35.
	19A704390P1	Plate.
	19D900894P4	Housing.
31	19C850984P11	Pushbutton. (VOLUME DOWN).
31	19C850984P12	Pushbutton. (VOLUME UP).
32	19C850984P13	Pushbutton. (KEYPAD 1).
33	19C850984P14	Pushbutton. (KEYPAD 2).
34	19C850984P15	Pushbutton. (KEYPAD 3).
35	19C850984P16	Pushbutton. (KEYPAD 4).
36	19C850984P17	Pushbutton. (KEYPAD 5).
37	19C850984P18	Pushbutton. (KEYPAD 6).
38	19C850984P19	Pushbutton. (KEYPAD 7).

SYMBOL	GE PART NO.	DESCRIPTION
39	19C850984P20	Pushbutton. (KEYPAD 8).
40	19C850984P21	Pushbutton. (KEYPAD 9).
41	19C850984P22	Pushbutton. (KEYPAD *).
42	19C850984P23	Pushbutton. (KEYPAD 0).
43	19C850984P24	Pushbutton. (KEYPAD #).
44	19C850984P25	Pushbutton. (SPEC CALL).
46	19C850984P27	Pushbutton. (REM INH).
47	19C850984P28	Pushbutton. (INCOM).
48	19C850984P29	Pushbutton. (EMG).
50	19C850984P31	Pushbutton. (VOICE GUARD).
51	19C850984P32	Pushbutton. (MUTE).
52	19C850984P33	Pushbutton. (SCAN).
53	19C850984P34	Pushbutton. (ADD).
54	19C850984P35	Pushbutton. (DEL).
64	19C850984P42	Pushbutton. (AGENCY).
65	19C850984P43	Pushbutton. (FLEET).



PST DESK TOP STATION
SHOWN W/O COVER



PART NO	ASSEMBLY OF
1	DESK TOP STATION
2	
3	DEALER NAMEPLATE
4	REMOTE
5	TONE DECODE CABLE
6	TONE ENCODE CABLE
7	EXTERNAL BATTERY POWERED SUPPLY UNIT
8	
9	
10	CLOCK/VU
11	STATION BATTERY STANDBY (RELAY)
12	VOICE GUARD

⚠1 THESE ITEMS ARE PART OF HARDWARE KIT 19A704499G5.

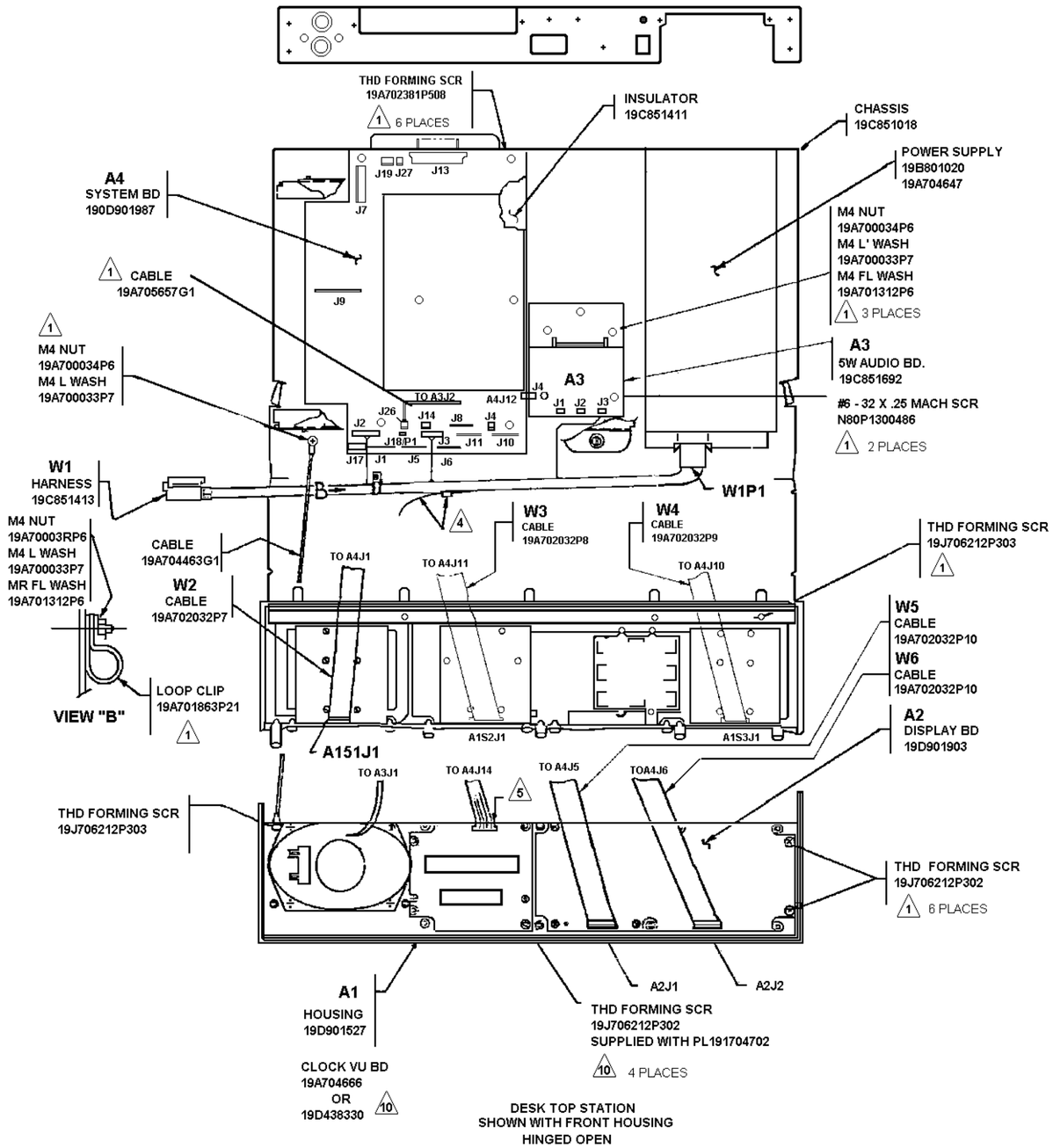
⚠2 REMOVE JUMPER PLUG ON J18-1 AND J18-2 WHEN TONE ENCODER CABLE IS INSTALLED.

⚠3 PLACE HOOK ON MICROPHONE CABLE THROUGH HOLE IN CHASSIS AND CRIMP HOOK.

⚠4 ASSEMBLE THE RELAY ASM 19D438326 TO CHASSIS PER VIEW "K". MAKE THE FOLLOWING PLUG CONNECTIONS: P1 TO POWER SUPPLY, J1 TO P1 OF W1 HARNESS, P2 TO CHASSIS BACK & P4 TO J4 ON SYSTEM BOARD.

DESKTOP STATION
Local/Remote

(19D901940, Sh. 1, Rev. 2)



10 INSTALLATION INSTRUCTIONS
DESK TOP STATION
CLOCK/VU METER BD. OPTION

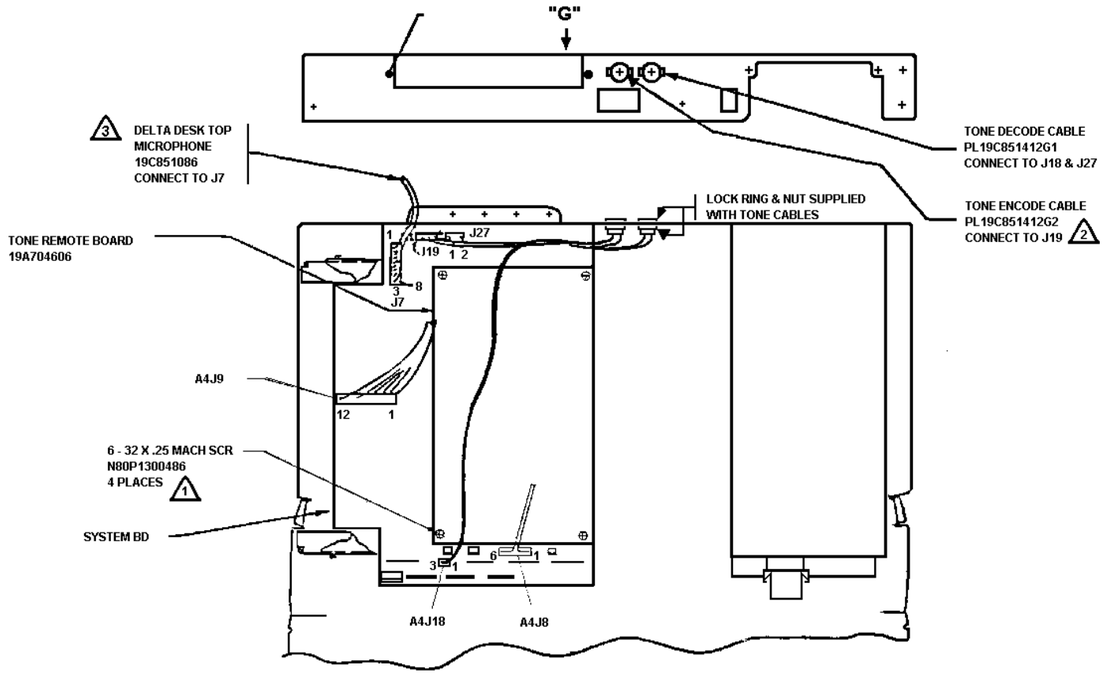
1. MAKE SURE POWER SWITCH IS OFF.
2. MOUNT CLOCK/VU BOARD BESIDE DISPLAY BOARD ON FOLD OUT FRONT PANEL USING FOUR THREAD FORMING SCREWS. 19J706212P302.
3. PLUG 4 PIN PLUG ONTO J1 OF CLOCK/VU METER BD.

4 APPLY WIRE SPLICE 19A116849P11 ONTO WIRE FROM P1-3 (POWER SUPPLY PLUG). AND WIRE 1 (RED) FROM CLOCK/VU METER CABLE. PART OF PL19A704702.

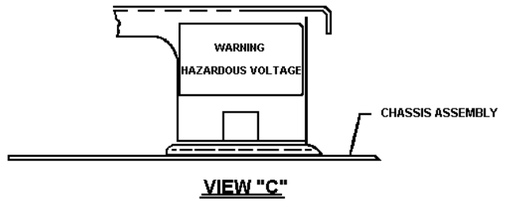
5 PLUG 3 PIN PLUG ONTO J14 OF STATION SYSTEM BD.

DESKTOP STATION
Local/Remote

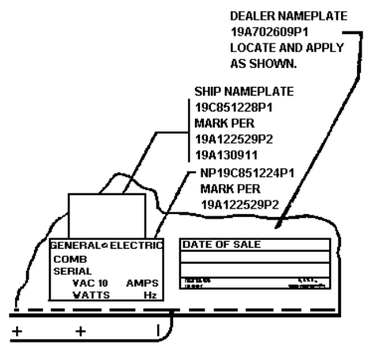
(19D901940, Sh. 2, Rev. 3)



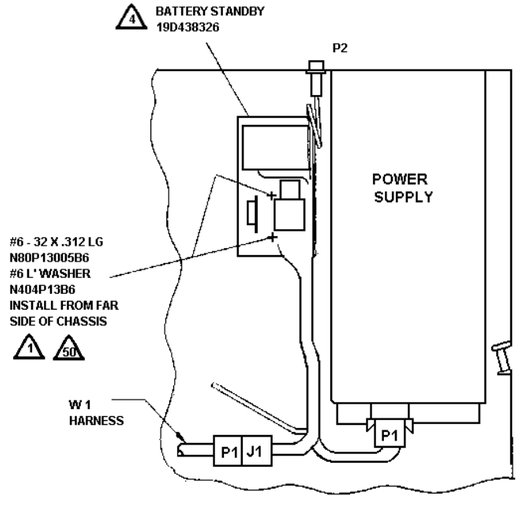
VIEW B - B



VIEW "C"



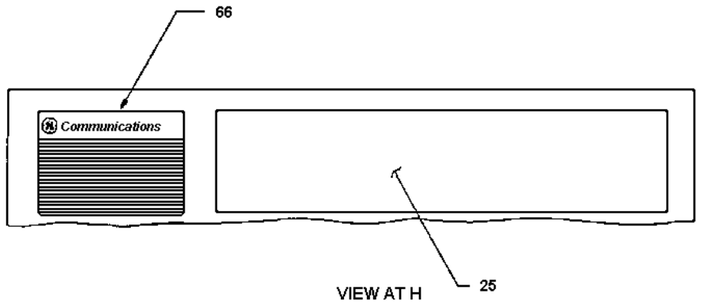
VIEW "G"



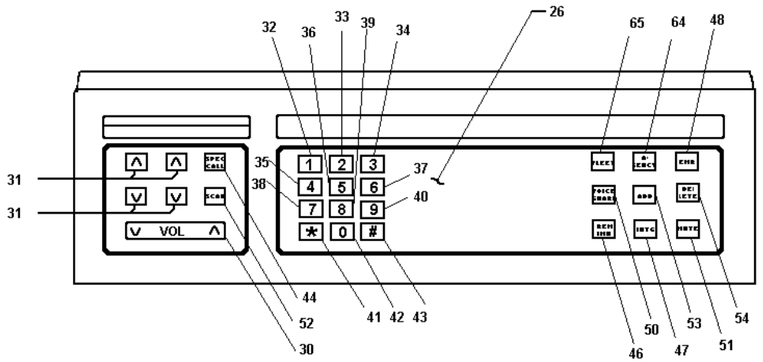
VIEW "K"

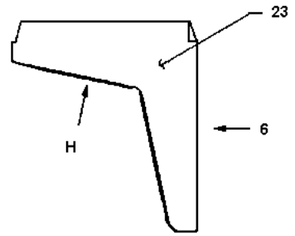
DESKTOP STATION
Local/Remote

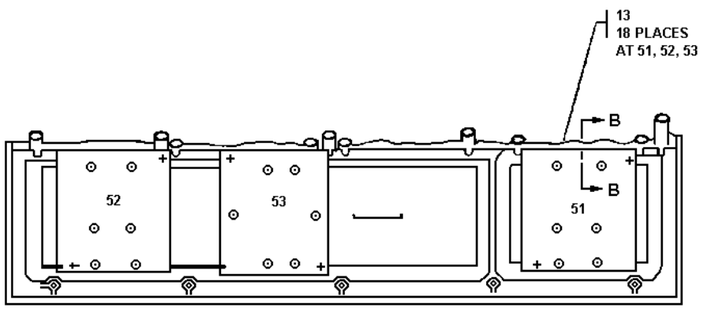
(19D901940, Sh. 3, Rev. 1)



VIEW AT H



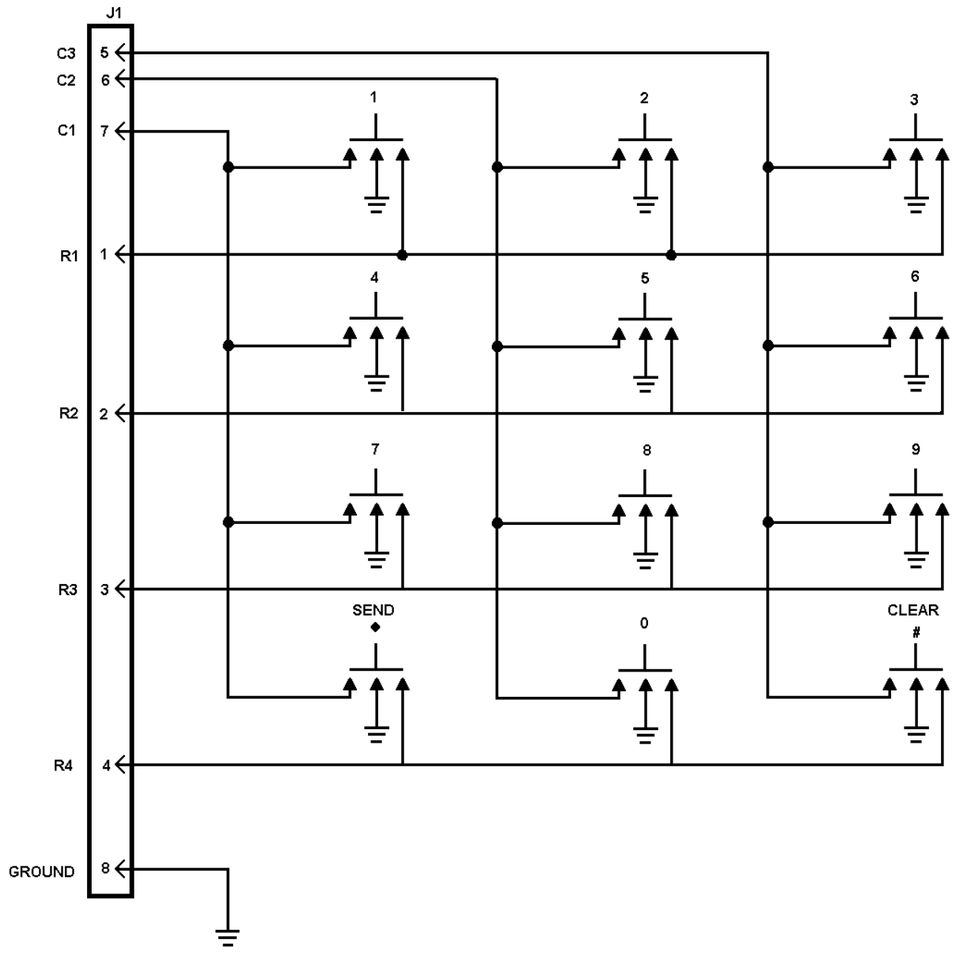




VIEW AT G

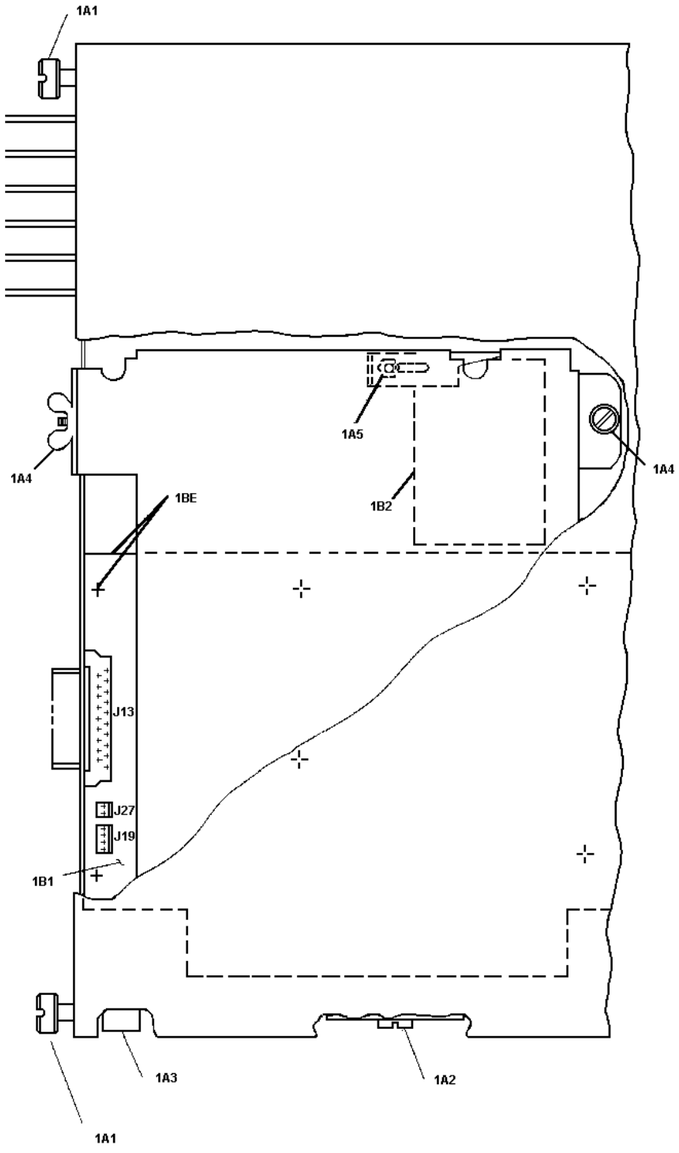
HOUSING
19D901527G2

(19D901527, Sh. 2, Rev. 4)

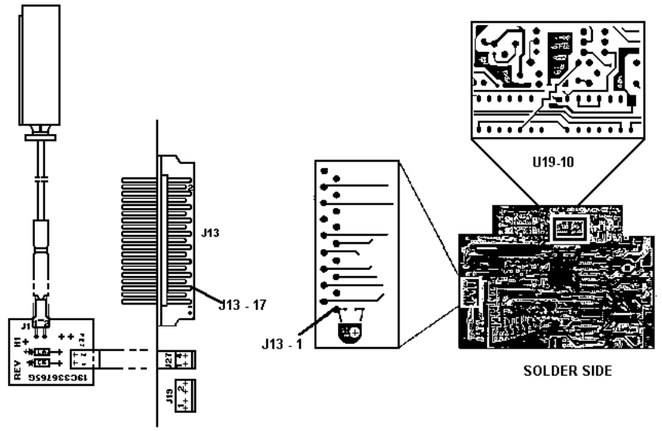


TELEPHONE KEYPAD
19D901900G1

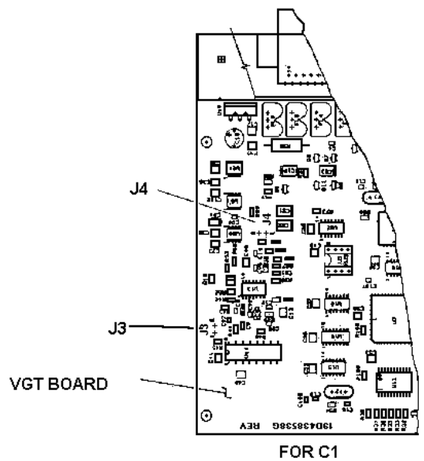
(19C851598, Sh. 1, Rev. 0)



DISASSEMBLY



MODIFICATIONS



MODIFICATIONS TO P.S.T. DESK TOP STATION FOR USE WITH VGT

1. DISASSEMBLY (IF THE SYSTEM BOARD IS ALREADY OUT OF THE STATION, GO TO 2. MODIFICATIONS.)

   A. COVER AND TABLE
   1. LOOSEN THE TWO SLOTTED THUMB-SCREWS LOCATED ON THE BACK OF THE STATION THAT HOLD ON THE COVER. SLIDE THE COVER BACK AND LIFT IT OFF.
   2. DISCONNECT THE LARGE RECTANGULAR END OF THE STATION HARNESS BY LOOSENING THE THUMB-SCREW AND PULLING THE CONNECTOR OUT.
   3. DISCONNECT THE ANTENNA.
   4. LOOSEN THE WING NUT ON THE BACK OF THE STATION AND THE SLOTTED THUMB-SCREW INSIDE TOWARD THE FRONT. LIFT THE RIGHT SIDE OF THE RADIO AND TILT IT AND THE TABLE ALL THE WAY UP.
   5. LOOSEN THE NUT ON THE BOTTOM OF THE TABLE AND SLIDE THE RESTRAINT OUT OF THE WAY. SLIDE THE RADIO OUT AND SET IT ASIDE.

   B. SYSTEM BOARD
   1. DISCONNECT ALL OF THE CABLES FROM THE SYSTEM BOARD 19D901987, LABELING THEM AS THEY ARE REMOVED.
   2. REMOVE THE FOUR PHILLIPS SCREWS HOLDING THE SMALL BOARD IN THE FORWARD, RIGHT CORNER OF THE STATION AND SLIDE IT AWAY FROM THE SYSTEM BOARD TO DISCONNECT IT.
   3. LIFE THE RF SHIELD OFF OF THE SYSTEM BOARD AND USE A #15 TORX SCREWDRIVER TO REMOVE THE SIX SCREWS FASTENING THE BOARD DOWN. REMOVE THE BOARD.

2. MODIFICATIONS

   A. AUDIO BIAS
   1. ON THE SOLDER SIDE OF THE SYSTEM BOARD, CUT A SMALL SECTION OUT OF THE RUN BETWEEN J13-1 AND THE SOLDER-FILLED HOLE 0.25 IN. AWAY.
   2. TRIM THE 1uF TANTALUM CAPACITOR LEADS TO NO MORE THAN 0.5 INCHES LONG. ON THE SOLDER-SIDE OF THE BOARD, ADD THE CAPACITOR IN SERIES WITH THE RUN BY SOLDERING THE NEGATIVE SIDE OF THE CAPACITOR TO J13-1 AND THE POSITIVE SIDE THROUGH THE HOLE ON THE OTHER SIDE OF THE CUT. LAY THE CAPACITOR FLAT ON THE SOLDER-SIDE OF THE BOARD.
   3. INSULATE THE LEADS OF THE 100k RESISTOR. ON THE SOLDER-SIDE OF THE BOARD, ADD THE RESISTOR FROM U19-10 TO R86 AT THE END NEAREST THE FRONT OF THE STATION.
   4. REPLACE THE SYSTEM BOARD AND ITS SCREWS, CABLES AND SHIELD BY PERFORMING STEPS 1B1 TO 1B3 IN REVERSE ORDER. (DO THIS STEP ONLY IF STEP 1B WAS USED EARLIER.)

   B. BATTERY FOR VGT KEY
   1. PLUG P27 ON THE BATTERY BACKUP BOARD 19C336765 ONTO J27 ON THE STATION SYSTEM BOARD.
   2. SOLDER A WIRE FROM H1 ON THE BATTERY BACKUP BOARD TO J13-17 ON THE SYSTEM BOARD.
   3. CONNECT THE BATTERY ASSEMBLY 19B801331 TO J1 ON THE BACKUP BOARD. USE THE DOUBLE-SIDED TAPE ON THE BATTERY TO FASTEN IT IN THE REAR, RIGHT CORNER OF THE STATION.
   4. REASSEMBLE BY FOLLOWING STEPS 1A1 TO 1A5 IN REVERSE ORDER. (DO THIS STEP ONLY IF STEP 1A WAS USED EARLIER.)

   C. MOD TO VGT 9600 UNIT.
   1. MOVE JUMPER P3 FROM J3 TO J4.
   2. PLACE ONE RUBBER BUMPER IN EACH CORNER ON THE BOTTOM OF THE VGT UNIT.

VOICE GUARD MODIFICATION

(19D438795, Sh. 1, Rev. 2)