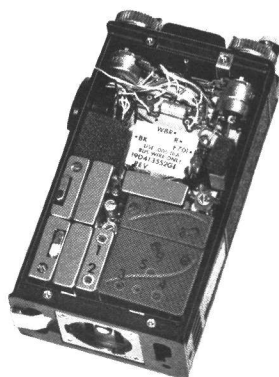


MASTR [®] *Personal Series*

PROGRESS LINE

PE MODELS

SYSTEMS BOARD AND CASE ASSEMBLY 19D413548G1



SPECIFICATIONS *

MODEL NUMBERS

19D413548G1

138 - 174 MHz

CONTROLS:

Volume ON-OFF Switch

Squelch Control

Two-Frequency Selector Switch

PTT Switch

Tone Option Switch

Flexible Antenna

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

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ILLUSTRATIONS

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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 while the units are supplied with power. KEEP AWAY FROM LIVE CIRCUITS.

ADDEMDUM #1
TO
LBI4666, LBI4662, LBI4612 and LBI4693

This addendum adds to LBI4666, LBI4662, LBI4612 and LBI4693 the revision changing PTT switch board A719. It includes the revision letter change, the Outline Diagram, Schematic Diagram and the Parts List for the new PTT switch board.

REVISION LETTER

REV. G - System Board and Case Assembly 19D413548G14
REV. G - System Board and Case Assembly 19D413548G15
REV. H - System Board and Case Assembly 19D413548G16
REV. G - System Board and Case Assembly 19D413548G17
REV. J - System Board and Case Assembly 19D413548G18
REV. A - System Board and Case Assembly 19D413548G21
REV. A - System Board and Case Assembly 19D413548G22

To incorporate a new design PTT switch board.
Changed A719 from 19B232586G2 to 19B233821G1.

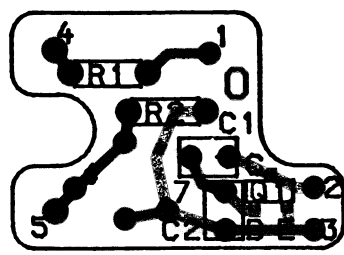
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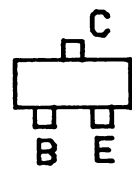
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OUTLINE DIAGRAM

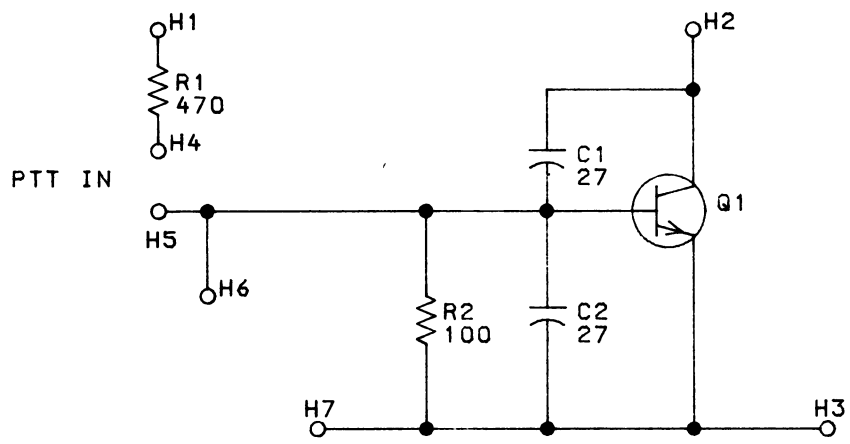


LEAD IDENTIFICATION FOR Q1



(19B233822, Rev. 0)
(19A143811, Sh. 1, Rev. 0)
(19A143811, Sh. 2, Rev. 0)

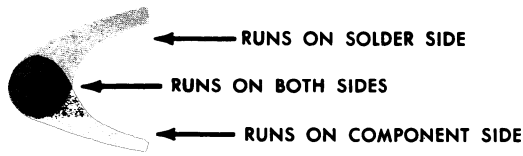
SCHEMATIC DIAGRAM



ALL RESISTORS ARE 1/8 WATT UNLESS OTHERWISE SPECIFIED AND RESISTOR VALUES IN OHMS UNLESS FOLLOWED BY K=1000 OHMS OR MEG=1,000,000 OHMS. CAPACITOR VALUES IN PICO FARADS (EQUAL TO MICROMICROFARADS) UNLESS FOLLOWED BY UF=MICROFARADS. INDUCTANCE VALUES IN MICROHENRYS UNLESS FOLLOWED BY MH=MILLIHENRYS OR H=HENRYS.

(19B233837, Rev. 1)

| SYMBOL | GE PART NO | DESCRIPTION |
|-----------|--------------|--|
| A719 | | PUSH TO TALK SWITCH BOARD 19B233821G1 |
| C1 and C2 | 19A700222P44 | ----- CAPACITORS----- Ceramic: 27pf ±5%, 100VDCW; temp coef -80PPM. |
| Q1 | 19A134739P1 | ----- TRANSISTORS----- Silicon, NPN. |
| R1 | 3R151P471J | ----- RESISTORS----- Composition: 470 ohms ±5%, 1/8 W. |
| R2 | 3R151P101J | Composition: 100 ohms ±5%, 1/8 W. |



DESCRIPTION

System Board A701 provides system interconnections for the transmitter, receiver, tone options and operating controls. In addition to the transmitter modules, the system board contains the system relay and the audio and DC switching circuitry.

Jacks J702 and J703 are connected to the system board and provide contacts for an external antenna, speaker, and microphone. J702 provides contacts for the external antenna and speaker, and J703 provides contacts for an external microphone. Placing the radio into the vehicular charger automatically connects the jack contacts to the external circuitry. The radio is also connected to the external antenna when placed in the desk charger.

CIRCUIT ANALYSIS

AUDIO SWITCHING

Audio switching for local speaker/microphone LS1 is controlled by diode CR5 as shown in Figure 1.

Pressing PTT switch S701 forward biases diode CR5, permitting audio from LS2 to be applied to transmitter audio module A1.

Keying the external microphone directly applies audio to the audio module.

DC SWITCHING

Operation of system relay K1 is controlled by diode CR2 (see Figure 2).

Pressing S701 forward biases CR2, completing the relay path to ground. This energizes relay K1, and switches the battery voltage to the transmitter audio and regulator modules. Energizing K1 also connects the transmitter output to the antenna.

Keying the external microphone directly energizes relay K1.

PTT SWITCH

Solid state PTT switch S701 forward biases diode CR2 to energize relay K1 and key the radio. When S701 is pressed PNP transistor Q1 conducts. Transistor Q1 conducting applies a positive voltage to the base of NPN transistor Q2, causing Q2 to also conduct. Transistor Q2 conducting, provides a conduction path to ground for diode CR2. Relay K1 is energized and the radio is keyed.

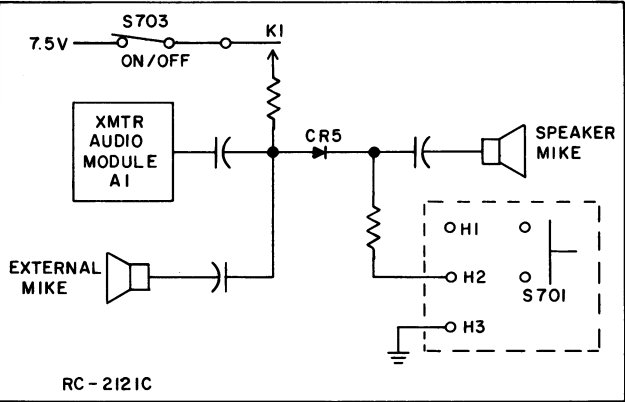


Figure 1 - Audio Switching Circuit

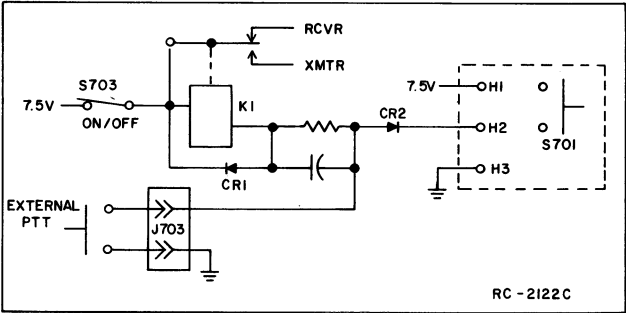
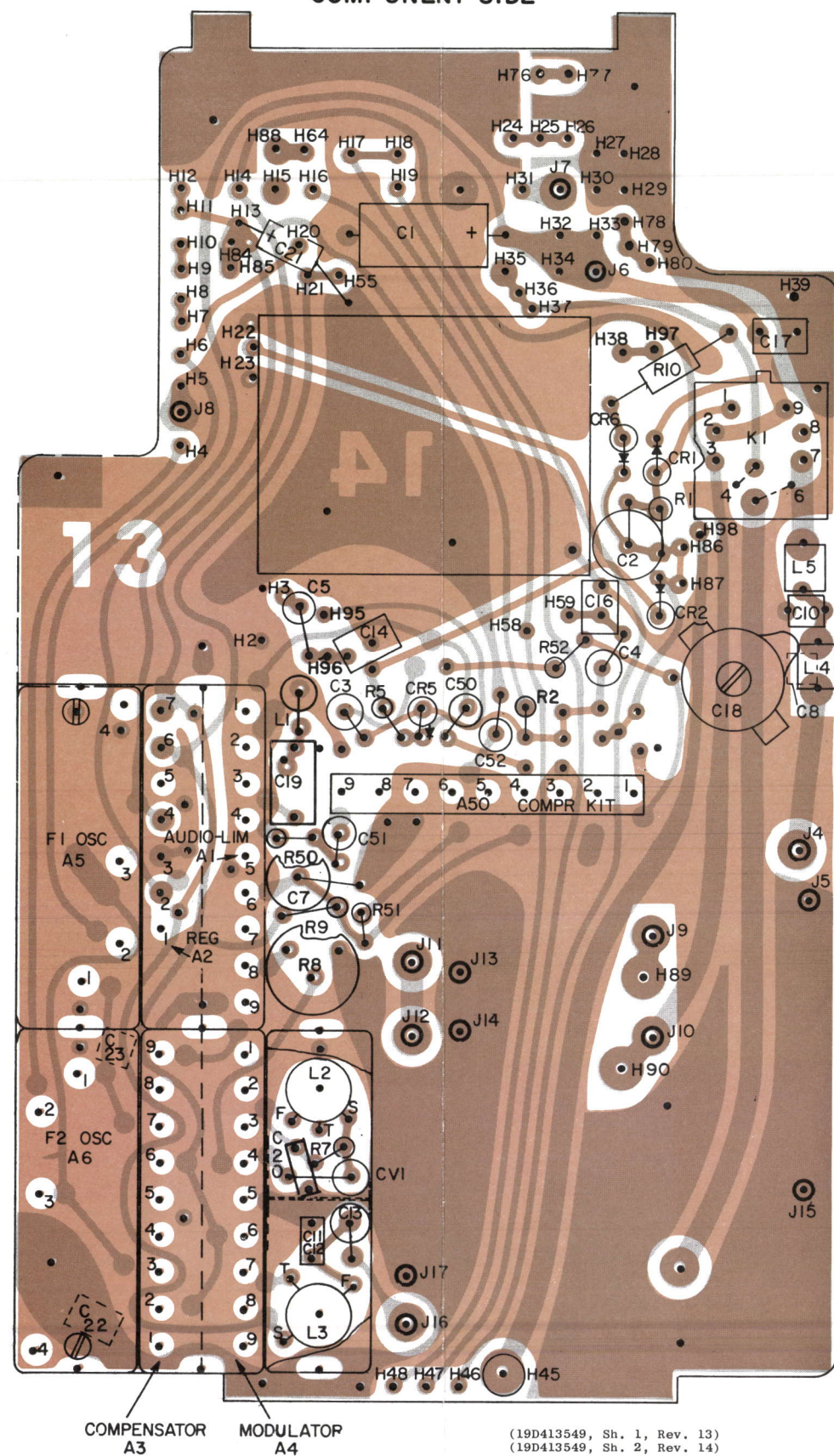


Figure 2 - DC Switching Circuit

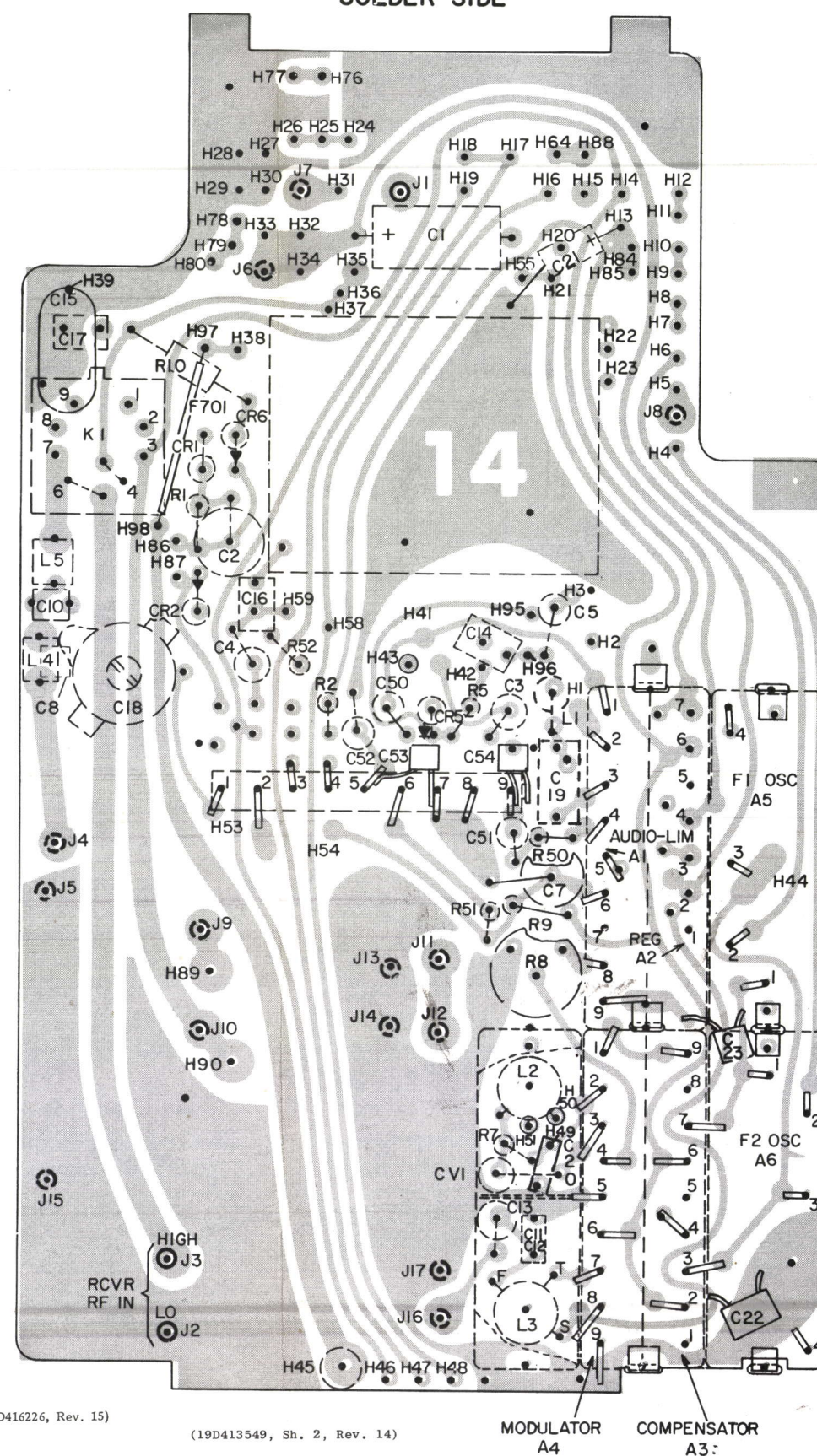
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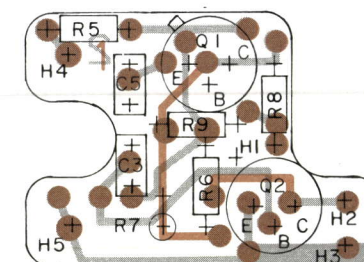
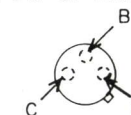
COMPONENT SIDE



SOLDER SIDE

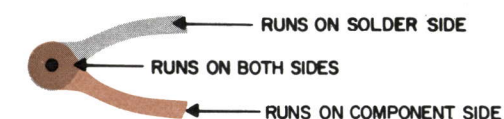


A719

LEAD IDENTIFICATION
FOR Q1 AND Q2

IN-LINE OR
TOP VIEW
NOTE, LEAD ARRANGEMENT, AND NOT
CASE SHAPE, IS DETERMINING
FACTOR FOR LEAD IDENTIFICATION

(19B233296, Rev. 3)
(19B232970, Sh. 1, Rev. 1)
(19B232970, Sh. 2, Rev. 2)



OUTLINE DIAGRAM

138—174 MHz SYSTEM BOARD

| PARTS LIST | | |
|---|--------------|---|
| LBI4234K | | |
| SYSTEM BOARD/CASE ASSEMBLY 19D413548G1 AND ASSOCIATED ASSEMBLIES | | |
| SYMBOL | GE PART NO. | DESCRIPTION |
| A701 | | SYSTEM BOARD 19D413552G1 |
| A1* | 19C320062G1 | Transmitter Audio Module. (Used on boards of REV A and later). |
| | 19C317167G4 | Transmitter Audio Module. (Used on boards of REV 0 only). |
| A2* | 19C328070G1 | Regulator Module. In REV H & earlier: Regulator Module. |
| A3* | 19C311905G2 | Oscillator Compensator Module. (Used on boards of REV A and later). |
| | 19C320060G1 | Oscillator Compensator Module. (Used on boards of REV 0 only). |
| A4* | 19C320084G1 | Modulator Module. (Used on boards of REV A and later). |
| | 19C317388G1 | Modulator Module. (Used on boards of REV 0 only). |
| | | ----- CAPACITORS ----- |
| C1 | 5491674P30 | Tantalum: 49 μ f \pm 20%, 10 VDCW; sim to Sprague Type 162D. |
| C2 | 5491674P42 | Tantalum: 47 μ f \pm 20%, 6 VDCW; sim to Sprague Type 162D. |
| | | ----- |
| C3* | 5491674P1 | Tantalum: 1.0 μ f +40-20%, 10 VDCW; sim to Sprague Type 162D. |
| | | In REV H-L: |
| | 5491674P51 | Tantalum: 0.033 μ f \pm 10%, 35 VDCW; sim to Kemet T376P33K03AS. |
| | | In REV G: |
| | 5491674P49 | Tantalum: 0.068 μ f \pm 10%, 20 VDCW; sim to Sprague Type 162D. |
| | | In REV F & earlier: |
| | 5491674P1 | Tantalum: 1.0 μ f +40-20%, 10 VDCW; sim to Sprague Type 162D. |
| C4* | 5491674P51 | Tantalum: 0.033 μ f \pm 10%, 35 VDCW; sim to Kemet T376P33K03AS. |
| | | In REV L & earlier: |
| | 5491674P1 | Tantalum: 1.0 μ f +40-20%, 10 VDCW; sim to Sprague Type 162D. |
| C5* | 5491674P52 | Tantalum: 0.33 μ f \pm 10%, 20 VDCW; sim to Sprague Kemet T376B33K020AS. |
| | | In REV G: |
| | 5491674P48 | Tantalum: 0.68 \pm 10%, 10 VDCW; sim to Sprague Type 162D. |
| | | In REV B-F: |
| | 19A116244P2 | Ceramic: 0.022 μ f \pm 20%, 50 VDCW. In 19D413552G1 of REV A & earlier: |
| | 5491674P1 | Tantalum: 1.0 μ f +40-20%, 10 VDCW; sim to Sprague Type 162D. |
| C6* | 5491674P26 | Tantalum: 47 μ f \pm 20%, 4 VDCW; sim to Sprague Type 162D. Added by REV A. |
| C7 | 5491674P42 | Tantalum: 47 μ f \pm 20%, 6 VDCW; sim to Sprague Type 162D. |
| C8 | 19A116114P20 | Ceramic: 6 pf \pm 5%, 100 VDCW; temp coef 0 PPM. |
| C10 | 19A116114P20 | Ceramic: 6 pf \pm 5%, 100 VDCW; temp coef 0 PPM. |
| C13 | 19A700013P13 | Phenolic: 1.0 pf \pm 5%, 500 VDCW. |

| SYMBOL | GE PART NO. | DESCRIPTION |
|---------------|-----------------|---|
| C14 | 19A116114P10073 | Ceramic: 180 pf \pm 5%, 100 VDCW; temp coef -3300 PPM. |
| C15 | 5496218P36 | Ceramic disc: 5.0 pf \pm 0.25 pf, 500 VDCW, temp coef 0 PPM. |
| C16 and C17 | 19A116114P10073 | Ceramic: 180 pf \pm 5%, 100 VDCW; temp coef -3300 PPM. |
| C18 | 19A7000012P2 | Variable: 2.5 to 20 pf, 200 VDCW; -250 -700 temp coef Parts/M/C; sim to Panasonic ECV-L2W20X32. |
| C19* | 19C307102P19 | Tantalum: 68 μ f \pm 20%, 4 VDCW. Added by REV A. |
| C20* | 19A116114P8065 | Ceramic: 100 pf \pm 5%, 100 VDCW; temp coef -1500 PPM. Added by REV A. |
| C21* | 5491674P1 | Tantalum: 1.0 μ f +40-20%, 10 VDCW; sim to Sprague Type 162D. Added by REV J. |
| C22* | 19A116114P10073 | Ceramic: 180 pf \pm 5%, 100 VDCW; temp coef -3300 PPM. Added by REV L. |
| C23* | 19A116114P10065 | Ceramic: 100 pf \pm 5%, 100 VDCW; temp coef -3300 PPM. Added by REV L. |
| | | ----- DIODES AND RECTIFIERS ----- |
| CR1* | 19A115100P1 | Silicon: sim to Type 1N458A. In REV C & earlier: |
| | 19A115250P1 | Silicon, fast recovery, 225 mA, 50 PIV. |
| CR2* | 19A115100P1 | Silicon: sim to Type 1N458A. In REV C & earlier: |
| | 5494922P1 | Silicon; sim to Hughes 1N456. |
| CR3* and CR4* | 5494922P1 | Silicon; sim to Hughes 1N456. Deleted by REV D. |
| CR5* | 19A115100P1 | Silicon: sim to Type 1N458A. In REV C & earlier: |
| | 5494922P1 | Silicon; sim to Hughes 1N456. |
| | | ----- |
| CR6 | 19A115250P1 | Silicon, fast recovery, 225 mA, 50 PIV. |
| CV1 | 5495769P9 | Diode, silicon. |
| | | ----- FUSES ----- |
| F701* | 19A127884G1 | Fuse Kit. Added by REV K. |
| | | ----- JACKS AND RECEPTACLES ----- |
| J1* thru J5* | 19A116366P4 | Contact, electrical: sim to Concord 10-891-1. |
| | | In REV D & earlier: |
| | 19A116366P1 | Contact, electrical: sim to Cambion 460-3232-01-03. |
| | 19A116366P2 | Contact, electrical: sim to Cambion 460-3233-01-03. |
| | 19A116366P4 | Contact, electrical: sim to Concord 10-891-1. |
| | | In REV G: |
| | 19A116366P1 | Contact, electrical; sim to Cambion 460-3232-01-03. |
| K1* | 19B209562P2 | Hermetic sealed: between 45-100 ohms , 2 form C contacts, 5.0 VDC nominal, 1.0 w max operating; sim to GE 3SCS1002A2. |
| | 19B209562P1 | Hermetic sealed: 98 ohms \pm 10%, 2 form C contacts, 8.0 VDC nominal, 1.0 w max operating; sim to GE 3SCS1001A2. |
| | | ----- INDUCTORS ----- |
| L1 | 19B209420P114 | Coil, RF: 1.20 μ H \pm 10%, 0.18 ohms DC res max; sim to Jeffers 4436-1K. |
| L2 | 19A127798G1 | Coil: 6.05-6.50 μ H. |
| L3 | 19B216910G1 | Coil. |
| L4 and L5 | 19B216320P3 | Coil. |

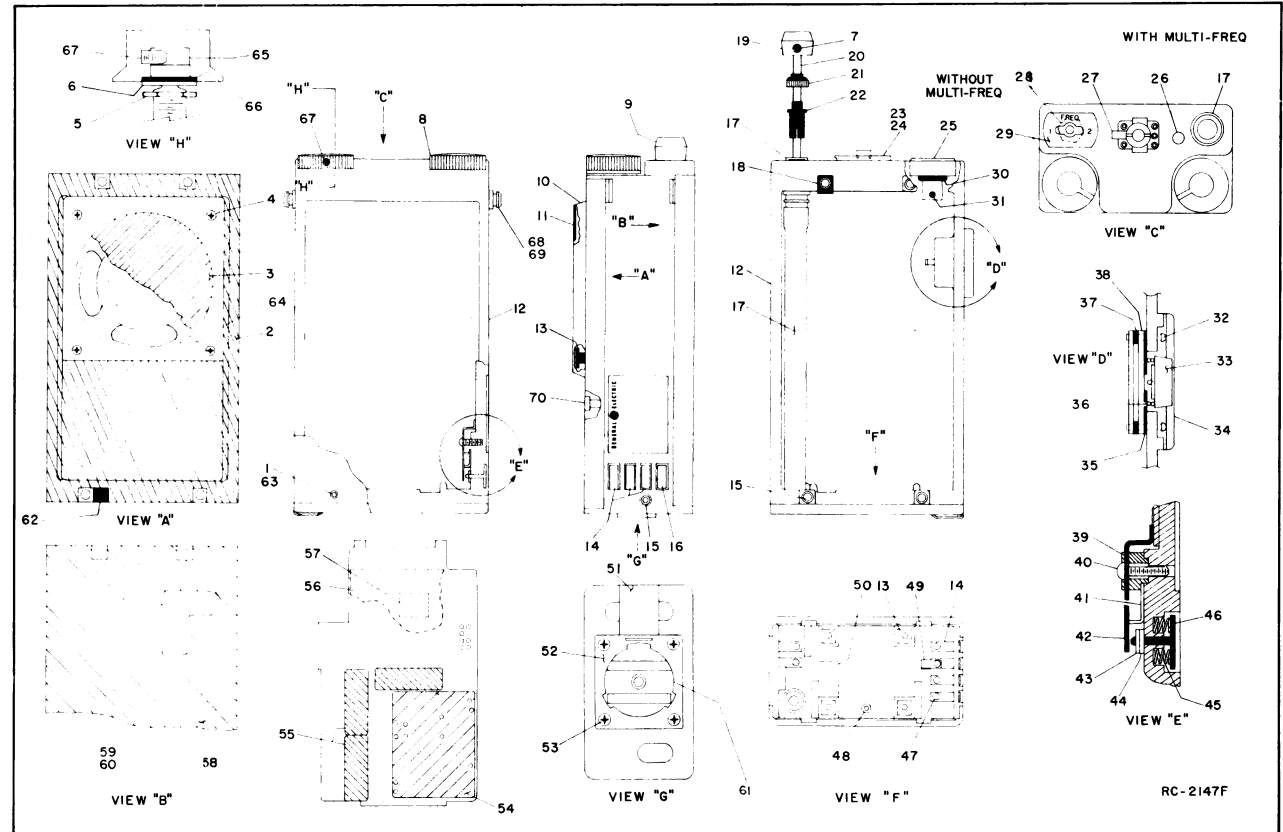
| SYMBOL | GE PART NO. | DESCRIPTION |
|------------|-----------------|--|
| | | ----- MICROPHONES ----- |
| MK1* | 19B201559P1 | Cartridge, controlled magnetic: 2K ohms imp; sim to Shure Bros. MC30. Deleted in 19D413552G1 by REV B. |
| | | ----- RESISTORS ----- |
| R1* | 19A7000106P45 | Composition: 180 ohms \pm 5%, 1/4 w. In REV E: |
| | 3R152P221J | Composition: 220 ohms \pm 5%, 1/4 w. In REV D & earlier: |
| | 3R151P391J | Composition: 390 ohms \pm 5%, 1/8 w. |
| R2* | 3R151P683J | Composition: 68K ohms \pm 5%, 1/8 w. . In REV F & earlier: |
| | 3R151P913J | Composition: 91K ohms \pm 5%, 1/8 w. |
| R3* | 3R151P103J | Composition: 10K ohms \pm 5%, 1/8 w. Deleted by REV D. |
| | 3R151P241J | Composition: 240 ohms \pm 5%, 1/8 w. In REV F & earlier: |
| | 3R151P103J | Composition: 10K ohms \pm 5%, 1/8 w. |
| R6* | 3R151P222J | Composition: 2.2K ohms \pm 5%, 1/8 w. Deleted by REV G. |
| R7 | 3R151P103J | Composition: 10K ohms \pm 5%, 1/8 w. |
| R8 | 19A116412P4 | Variable, cermet: 250K ohms \pm 10%, 1/2 w; sim to Helipot Model 62 PF. |
| R9 and R10 | 3R151P101K | Composition: 100 ohms \pm 10%, 1/8 w. |
| | | ----- SOCKETS ----- |
| XX1* | 19A115834P5 | Contact, electrical: sim to AMP 3-331272-5. (Quantity 7). Deleted by REV E. |
| | | ----- |
| A719* | | PUSH TO TALK SWITCH BOARD 19B232586G2 (Added by REV J) |
| | | ----- CAPACITORS ----- |
| C1* | 19A116114P10073 | Ceramic: 180 pf \pm 10%, 100 VDCW; temp coef -3300 PPM. Deleted by REV A. |
| C3 | 19A116114P10073 | Ceramic: 180 pf \pm 10%, 100 VDCW; temp coef -3300 PPM. |
| C5* | 19A116114P2044 | Ceramic: 27 pf \pm 5%, 100 VDCW; temp coef -80 PPM. Added by REV B. |
| | | ----- TRANSISTORS ----- |
| Q1 | 19A129187P1 | Silicon, PNP. |
| Q2 | 19A116201P3 | Silicon, NPN. |
| | | ----- RESISTORS ----- |
| R5 | 3R151P682J | Composition: 6.8K ohms \pm 5%, 1/8 w. |
| R6 | 3R151P154J | Composition: 1.8K ohms \pm 5%, 1/8 w. |
| R7* | 3R151P731J | Composition: 750 ohms \pm 5%, 1/8 w. Earlier than REV A: |
| | 3R151P102J | Composition: 1K ohms \pm 5%, 1/8 w. |
| R8 | 3R151P154J | Composition: 250K ohms \pm 5%, 1/8 w. |
| R9 | 3R151P122J | Composition: 1.2K ohms \pm 5%, 1/8 w. |
| A719* | | PUSH TO TALK SWITCH BOARD 19B232586G1 (Added by REV H) (Deleted by REV J) |
| | | ----- CAPACITORS ----- |
| C1 | 19A116114P10073 | Ceramic: 180 pf \pm 10%, 100 VDCW; temp coef -3300 PPM. |
| C3 | 19A116114P10073 | Ceramic: 180 pf \pm 10%, 100 VDCW; temp coef -3300 PPM. |
| C4* | 19A116114P10073 | Ceramic: 180 pf \pm 10%, 100 VDCW; temp coef -3300 PPM. Added by REV A. |

| SYMBOL | GE PART NO. | DESCRIPTION |
|---------------|-------------|---|
| Q1 | 19A129187P1 | Silicon, PNP. |
| Q2 | 19A116201P3 | Silicon, NPN. |
| | | ----- RESISTORS ----- |
| R1 | 3R151P103J | Composition: 10K ohms \pm 5%, 1/8 w. |
| R2 | 3R151P332J | Composition: 3.3K ohms \pm 5%, 1/8 w. |
| R3 | 3R151P154J | Composition: 150K ohms \pm 5%, 1/8 w. |
| R4 | 3R151P182J | Composition: 1.8K ohms \pm 5%, 1/8 w. |
| R5 | 3R151P682J | Composition: 6.8K ohms \pm 5%, 1/8 w. |
| R6 | 3R151P182J | Composition: 1.8K ohms \pm 5%, 1/8 w. |
| R7 | 3R151P102J | Composition: 1K ohms \pm 5%, 1/8 w. |
| R8 | 3R151P154J | Composition: 150K ohms \pm 5%, 1/8 w. |
| R9 | 3R151P122J | Composition: 1.2K ohms \pm 5%, 1/8 w. |
| | | ----- JACKS AND RECEPTACLES ----- |
| J701 | 19B216594G2 | Connector, female: 6 contacts. |
| J702 | | See Mechanical Parts RC2147 items 14, 16. |
| J703 | | See Mechanical Parts RC2147 items 14, 47, 49. |
| J704 | | See Mechanical Parts RC2147 items 51-53, 61. |
| K1* | 19A127836G1 | Sensitive: 95 ohms \pm 10%, 2 form C contacts, 5.5 to 9.0 VDC (over the temp range indicated); sim to C.P. Clare MF1401G01. Deleted by REV E. |
| | | ----- INDUCTORS ----- |
| L701 | 19A127815P1 | Coil. |
| | | ----- PLUGS ----- |
| P701 | 19A115834P4 | Contact, electrical: sim to AMP 2-332070-9. |
| P704 and P705 | 19A127569P1 | Plug: 8 contacts. |
| | | ----- RESISTORS ----- |
| R707 | 19A116227P1 | Resistor/Switch: variable, carbon film, 25K ohms \pm 20%, 1/8 w. (Includes S703), SPST, 3 amp at 125 VAC; sim to Mallory Type MZC. |
| R708 | 19A116227P2 | Variable, carbon film: 25K ohms \pm 10%, 1/8 w; sim to Mallory Type MZC. |
| | | ----- SWITCHES ----- |
| S701 | | See Mechanical Parts RC2147, items 32-38. |
| S702 | | See Mechanical Parts RC2147, items 39-46. (Part of R707). |
| S703 | | |
| | | ----- CABLES ----- |
| W1 | 18C330826G1 | Cable. (Includes P704 & P705). |
| | | ----- ASSOCIATED ASSEMBLIES ----- |
| | | FRONT COVER ASSEMBLY 19C317416G1 (STD) 19C317416G4 (HI POWER) |
| | | ----- LOUDSPEAKERS ----- |
| LS1* | 19A134949P1 | Permanent magnet: 2.00 inch, 8 ohms \pm 15% voice coil imp, 500 Hz \pm 10 Hz resonant; sim to Oaktron T6703. |
| | | Earlier than REV A: |
| | 19A116090P1 | Permanent magnet: 2.00 inch, 8 ohms \pm 10% voice coil imp, 450 Hz \pm 112 Hz resonant; freq range 400 to 3000 Hz. |
| | | ----- PLUGS ----- |
| P1 and P2 | 19A115834P4 | Contact, electrical: sim to AMP 2-332070-9. |

| SYMBOL | GE PART NO. | DESCRIPTION |
|---------------|----------------|--|
| | | HI/LOW SPLIT MODIFICATION KIT 19A127836G1 HI SPLIT 19A127836G2 LOW SPLIT |
| | | ----- CAPACITORS ----- |
| C11 | 19A116114P2047 | Ceramic: 33 pf \pm 5%, 100 VDCW; temp coef -80 PPM. |
| C12 | 19A116114P2051 | Ceramic: 43 pf \pm 5%, 100 VDCW; temp coef -80 PPM. |
| | | MULTI-FREQUENCY MODIFICATION KIT 19A127828G1 |
| S1 | 19A127824G1 | Toggle: DPDT, 100 μ a at 5 VDC, 5 amps at 29 VDC, 5 amps at 115 VAC; sim to Arrow-Hart and Hegeman TS-6. |
| | | COMPRESSOR KIT 19A127837G1 |
| A50 | 19C311907G2 | Audio Compressor Board. |
| | | ----- CAPACITORS ----- |
| C50 and C51 | 5491674P1 | Tantalum: 1.0 μ f +40 -20%, 10 VDCW; sim to Sprague Type 162D. |
| C52 | 5491674P36 | Tantalum: 3.3 μ f \pm 20%, 10 VDCW; sim to Sprague Type 162D. |
| C53* and C54* | 19A116192P2 | Ceramic: 470 pf \pm 20%, 50 VDCW; sim to Erie 8111-050-W5R. Added by REV A. |
| | | ----- RESISTORS ----- |
| R50 | 3R151P103J | Composition: 10K ohms \pm 5%, 1/8 w. |
| R51 | 3R151P101J | Composition: 100 ohms \pm 5%, 1/8 w. |
| | | ----- |
| R52 | 3R151P153J | Composition: 15K ohms \pm 5%, 1/8 w. |
| R53 | 3R151P433J | Composition: 43K ohms \pm 5%, 1/8 w. |
| | | ----- MISCELLANEOUS ----- |
| | 19B216897G1 | Rear Cover Assembly. (See RC2147, items 58, 59). |
| | 19B216897G2 | Rear Cover Assembly. Clip type. (See RC2147, items 58, 60). |
| | 19B219953G3 | Antenna Assembly. (See RC2147, items 7, 19-22). |
| | 19D413522G4 | Battery, rechargeable. Nickel Cadmium. |
| | 19A127884G1 | Fuse Kit. |
| | 4038381P4 | Alignment tool. Fork tip. |
| | 19B219079G1 | Alignment tool. Allen tip. |
| | | ASSOCIATED PARTS |
| A5 and A6 | 4EG27A10 | Transmitter Oscillator. |
| | | MECHANICAL PARTS (SEE RC2147) |
| 1 | 19A134425P1 | Machine, screw, hex head: No. 2-56 x 3/16. |
| 2 | 19C317394P3 | Gasket. |
| 3 | 19B204527P2 | Diaphragm: No. 2 inch dia. |
| 4 | N881P5002C6 | Screw, phillips head: No. 2-56 x 1/8. |
| 5 | 19A127319P1 | Nut: No. thd. size 1/4-32. |
| 6 | 4037064P18 | Washer, non-metallic. |
| 7 | N70P703C6 | Set screw: No. 3-48 x 3/16. |

| SYMBOL | GE PART NO. | DESCRIPTION |
|--------|--------------|--|
| 8 | 19B232784G1 | Knob Assembly. (Includes items 65 & 67). |
| 9 | 19B219953G3 | Antenna assembly. (Includes items 7, 19-22). |
| 10 | 19D413531P2 | Grille. (STD). |
| | 19B226502G2 | Grille. (HI POWER). |
| 11 | NP270290P2 | Nameplate. (GE monogram STD). |
| | NP270290P3 | Nameplate. (GE monogram, HI POWER). |
| 12 | 19D413542G11 | Case assembly. (Includes items 14, 15, 18, 26, 49, 68, 69). |
| 13 | 19B216858P1 | Insert. |
| 14 | 19A127753P1 | Contact. (Part of J702 & J703). |
| 15 | 19A134548P1 | Insert, screw thread: No. 2-56; sim to IN-X 860256. |
| 16 | 19B216862P2 | Contact. (Part of J702). |
| 17 | 19A127779G6 | Antenna tube. |
| 18 | 19B216875P1 | Support. |
| 19 | 19A129649P1 | Antenna Cap. (Part of item 9). |
| 20 | 19C320383P2 | Antenna rod. (Part of item 9). |
| 21 | 19A129652P1 | Nut, knurled: thd size 7/16-40. (Part of item 9). |
| 22 | 19C320352P1 | Bushing (Part of item 9). |
| 23 | 19A129390P1 | Disc. (Located inside item 24). |
| 24 | 19C317050P1 | Protective Cover. |
| 25 | 19C317383P1 | Dummy plug. |
| 26 | 19A129723P1 | Rivet. |
| 27 | 19B219540P1 | Support. |
| 28 | 19C320721P1 | Boot, moisture seal. |
| 29 | 19B216926P5 | Decorative cap. |
| | | ----- |
| 30 | 19A115983P3 | Seal, "O" ring: sim to Parker Seal 2-10. |
| 31 | N509P606C | Dowel pin: 1/16 x 3/8. |
| 32 | N55P1006 | Machine screw, steel: No. 0-80 x 3/8. (Part of S701). |
| 33 | 19C328416G1 | Button assembly. (Part of S701). |
| 34 | 19C328407P1 | Collar. (Part of S701). |
| 35 | 19A137621P1 | Plate. (Part of S701). |
| 36 | 19A137620P1 | Spring. (Part of S701). |
| 37 | N207P1C6 | Hex nut. (Part of S701). |
| 38 | 19B209643P2 | Switch, push. (Part of S701). |
| 39 | 19B216865P1 | Insulator (Part of S702). |
| 40 | N647P5004C | Cap screw: 2-56 x 1/4. (Part of S702). |
| 41 | 19B216864P1 | Contact (Part of S702). |
| 42 | 19B216863P1 | Spring contact. (Part of S702). |
| 43 | N910P6C6 | Retaining ring. (Part of S702). |
| 44 | 19A127754P1 | Gasket (Part of S702). |
| 45 | 19A127755P1 | Spring (Part of S702). |
| 46 | 19B216862P1 | Contact (Part of S702). |
| 47 | N330P605F22 | Eyelet, brass: 1/16 x 5/32. |
| 48 | N330P602F22 | Eyelet, brass: 1/16 x 1/16. (Not Used). |
| 49 | 19A127760P1 | Contact (Part of J703). |
| 50 | 19A127762P1 | Bushing. |
| 51 | 19B216891G1 | Spring assembly. (Part of J704). |
| 52 | 19D413467P1 | Fastener (Part of J704). |
| 53 | 19A115794P3 | Flat head screw: 2-56 x 5/16. (Part of J704). |
| 54 | 19B216847P1 | Insulator, pressure sensitive. |
| 55 | 19C311491P3 | Can. (Used with Regulator, Oscillator Compensator, and Compressor Circuits). |

| SYMBOL | GE PART NO. | DESCRIPTION |
|--------|---------------|--|
| 56 | 19B216912P1 | Insulator. (Located between System and Receiver Boards). |
| 57 | 19A116270P1 | Tape, pressure sensitive. |
| 58 | 19C317394P5 | Gasket. |
| 59 | 19B216897G1 | Rear Cover Assembly (without clip). |
| 60 | 19B216897G2 | Rear Cover Assembly (with clip). |
| 61 | 19A130586P1 | Insulator. |
| 62 | 19A130397P1 | Strap. |
| 63 | N40498P8 | Lockwasher, internal tooth: No. 2. (Not Used). |
| 64 | 19A130993P1 | Gasket. |
| 65 | 19A137254P1 | Insert, tapped. |
| 66 | 4035630P1 | Washer: teflon. |
| 67 | N70B703C6 | Set screw: No. 3-48 x 3/16. |
| 68 | 19A116773P805 | Tap screw, Phillips POZIDRIV®: No. 4-24 x 5/16. |
| 69 | 19A127802P1 | Rivet, shield. |
| 70 | N170P9004P2 | Cap screw: No. 4-40 x 1/4. |



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 descriptions of parts affected by these revisions.

REV. A - Case Assembly 19D413548G1

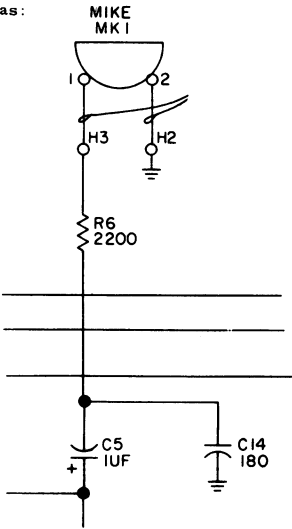
To remove antenna connection wire to Accessory Jack. Deleted White wire from J701-3 to antenna connector.

REV. A - Systems Board A701 (19D413552G1)

To improve symmetry, maximum deviation, power output and modulation limiting at temperature and voltage extremes. Changed Audio Module A1, Compensator Module A3 and Modulator Module A4. Replaced C6 with C19, and added C20.

REV. B - To increase mike sensitivity. Deleted MK1. Changed C5.

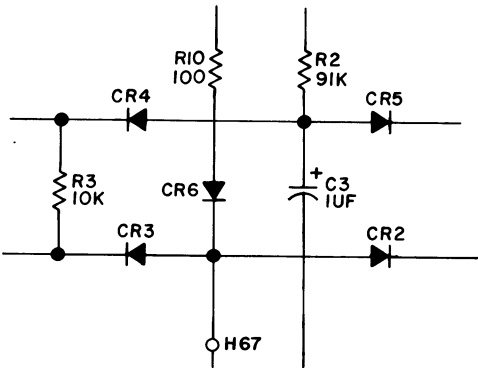
Schematic was:



REV. C - To improve manufacture. Added callouts for Holes H16, H64 and H67 thru H81.

REV. D - To improve FM hum and noise. Deleted CR3, CR4 and R3.

Schematic Diagram was:



REV. A - Compressor Kit 19A127837G1

To reduce audio distortion. Added C53 and C54.

REV. B - Case Assembly 19D413548G1

To improve accessory jack J701. Added disc.

REV. C - To improve case assembly. Incorporated new design.

REV. D - To improve accessory jack J701. Changed J701.

REV. E - System Board A701 (19D413552G1)

To make compatible with more options. Deleted XK1. Changed K1 and R1.

REV. E - Case Assembly 19D413548G1

To make compatible with more options.

REV. F - To improve case assembly design.

REV. G - To incorporate metal nuts for PTT switch mounting screws. Added nuts.

REV. F - System Board A701 (19D413552G1)

To improve PTT relay pick-up. Changed K1 and R1.

REV. G - To increase modulation level and improve frequency response. Changed C3, C5, R2, R5 and R6.

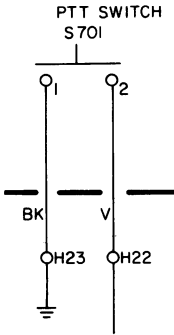
REV. H - To optimize audio frequency response. Changed C3 and C5.

REV. J - To incorporate a new 5.4 volt regulator. Changed A2 and added C21.

REV. H - Case Assembly 19D413548G1

To improve reliability and design. Changed S701 and Knobs. Added A719.

Schematic Diagram was:



REV. J - To make compatible with GE-STAR Option. Changed A719.

Outline Diagram was:

