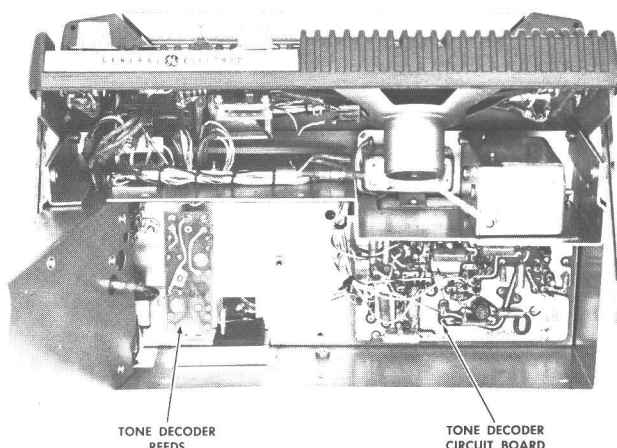




communications

MAINTENANCE MANUAL

PORTA•MOBIL TYPE 99 TONE DECODERS (Models 4EJ13A10 & 11)



SPECIFICATIONS *

POWER REQUIREMENTS:

Decoder will operate over a voltage range of 10.0 volts to 16.6 volts DC. Total current drain at 13.6 VDC is 16 ma. Approximately 1 ma. less is drawn when SCS is turned off (receiver off).

MULTIVIBRATOR TIMING:

Beep sounds in speaker constitute distinctive calling; these tones are approximately 180 ms. long with 180 ms. intervals between beeps. These times may vary ± 20 ms. depending on reed frequency.

OPENING SINAID:

Less than 4 db.

TEMPERATURE:

-30°C to +60°C.

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

GENERAL  ELECTRIC

Maintenance Manual LBI-3606B
DE-5025

EJ-13-A

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INTRODUCTION

PORTA-MOBIL Type 99 Tone Decoders, Models 4EJ13A10 & A11, provide selective paging for PORTA-MOBIL Combinations. The decoders respond to tone dispatchers generating two-tone sequential signaling. These include the General Electric 100 and 900 Call Dispatchers, the Command Terminal and Dial-Paging Terminal.

When a signal modulated by the proper combination of two sequential tones is received, the PORTA-MOBIL receiver audio is turned on and off several times during reception of the second tone. A "beep" tone is reproduced in the speaker of the portable to alert the operator that a call is being received. After completion of the second tone transmission, the PORTA-MOBIL audio circuits are unmuted and the message is received.

To initiate a call, the operator removes the microphone from its bracket on the Control Unit. This action automatically closes the monitor switch, permitting the operator to monitor the channel before placing the call. When Control Unit Models 4EC60A18 and A21 (handset) are used, a special MONITOR-RESET toggle switch (S706) is provided on the control unit. This switch must be moved to the MONITOR position to monitor the channel.

Upon completion of a call, the RESET switch (S707 on Control Unit 4EC60A14, A15, A26, A27; S706 on microphone-equipped Control Units 4EC60A18, A21) must be operated to the RESET position to restore audio muting. On Control Unit Models 4EC66A12, A13, A16, A17, switch S703 must be turned to NORMAL.

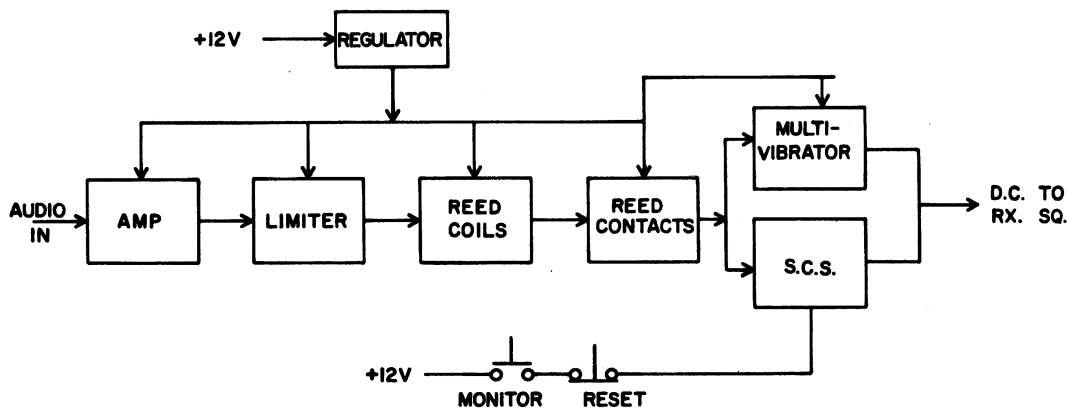
Electromechanical reeds (resonant to the desired tone frequencies) are utilized in the Tone Decoders. Two reeds are used in Model 4EJ13A10 providing Individual Call only. Four reeds are used in Model 4EJ13A11 providing Individual Call and All Call or Group Call. A jumper added to the reed frame socket on Model 4EJ13A11 permits Individual Call, All Call and two Group Calls.

CIRCUIT ANALYSIS

Audio is coupled from the PORTA-MOBIL discriminator to the base of audio amplifier Q651 through coupling capacitor C651. The amplified signal is then RC coupled to amplifier-limiter stage Q652. This stage drives the reed decoders (FL651 and FL652 in Model 4EJ13A10; FL651-FL654 in Model 4EJ13A11). CR652 and CR653 serve to further limit the tone frequencies. Zener diode CR651 provides regulation for the 12-VDC supply voltage applied to the Decoder.

The reed contacts are connected to the gate of silicon-controlled switch Q653. This switch is connected to the noise amplifier in the PORTA-MOBIL receiver, holding the receiver audio circuits off. When the reeds respond to the tones, the switch is fired and unmutes the audio circuits. Q653 continues to conduct until the RESET switch is operated, opening the supply lead to the switch.

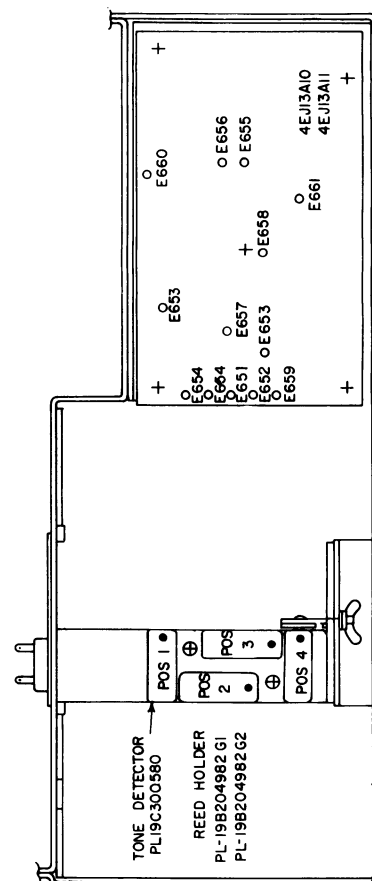
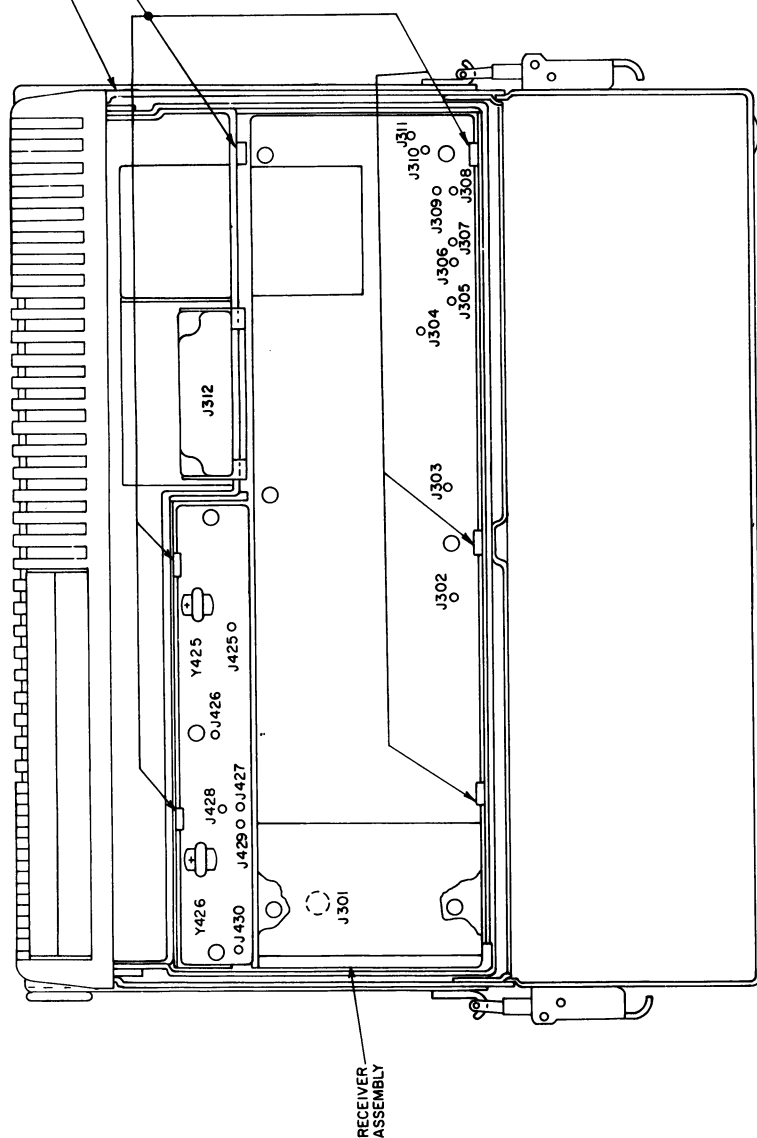
During the reception of the second tone in the two-tone sequence, FL-652 (or FL-654) will operate the multivibrator composed of Q654 and Q655. The square wave output of this circuit turns the receiver audio circuits on and off during this period, resulting in a series of "beep" tones heard in the PORTA-MOBIL speaker. These "beeps" are 180 milliseconds in duration with 180 milliseconds intervals between each beep. Both of these time periods may vary as much as ± 20 milliseconds, depending on the reed frequency. The result is 4 to 6 beeps during the second tone interval. If the VOLUME control is turned all the way down, the operator will still hear a click at the end of each beep.



BLOCK DIAGRAM
PORTA-MOBIL TYPE 99 TONE DECODER
MODELS 4EJ13A10-A11

DISASSEMBLY INSTRUCTIONS

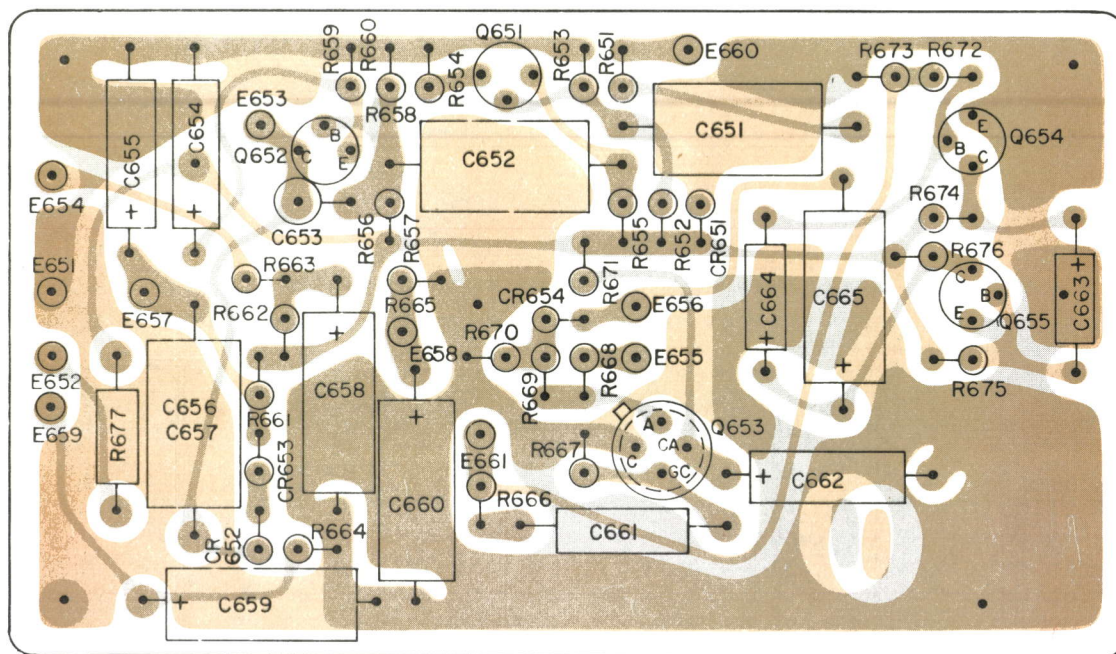
1. REMOVE SCREWS AND HINGE BACK CONTROL UNIT AS INDICATED.
2. REMOVE SIX #6-32 X 1/4 SCREWS & LOCKWASHERS HOLDING RECEIVER ASSEMBLY.
3. DISCONNECT IN-LINE CONNECTORS P304 AND P305 SWING RECEIVER ASSEMBLY TO LEFT, EXPOSING SELECTIVE CALLING COMPONENTS



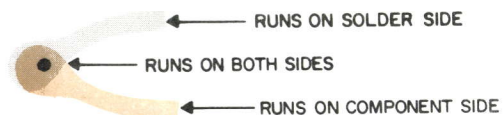
DISASSEMBLY INSTRUCTIONS

TYPE 99 TONE DECODERS
MODELS 4EJ13A10 & 11

OUTLINE DIAGRAM



(19B205114, Rev. 0)
 (19B204942, Sh. 1, Rev. 0)
 (19B204942, Sh. 2, Rev. 0)



SERVICE SHEET

TYPE 99 TONE DECODERS
 MODELS 4EJ13A10 & 11

SCHEMATIC DIAGRAM

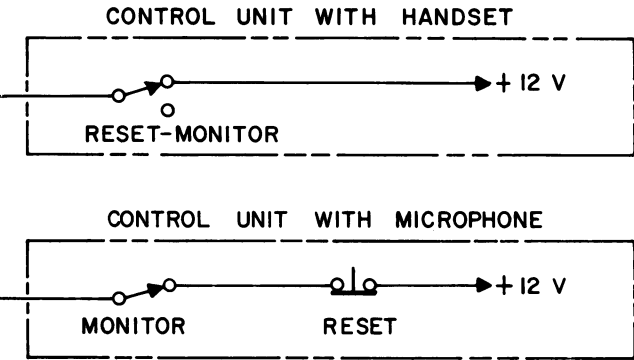
NOTES

1-PARTS MARKED * ARE FOR
INDIVIDUAL CALL ONLY
(4EJ13A10 & PL19B204982G2)

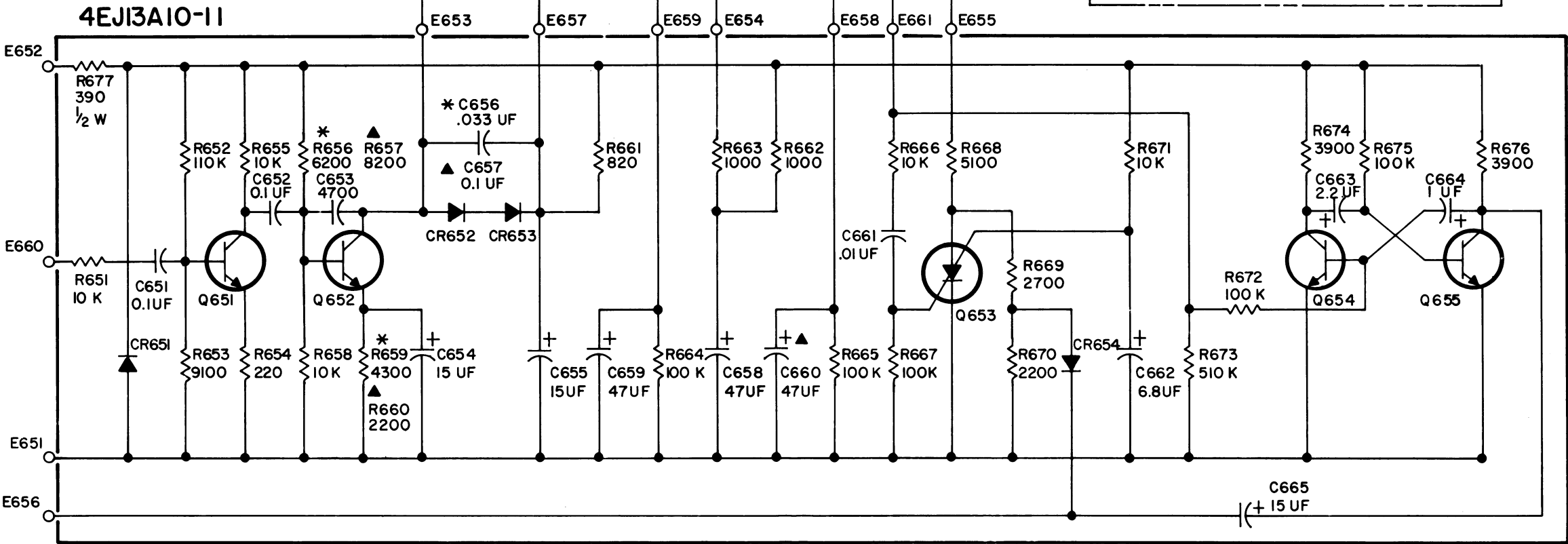
2-PARTS MARKED ▲ ARE FOR
INDIVIDUAL CALL PLUS ALL
CALL OR GROUP CALL
(4EJ13A11 & PL19B204982G1)

ALL RESISTORS ARE 1/2 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.

PL 19B204982



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



SERVICE SHEET

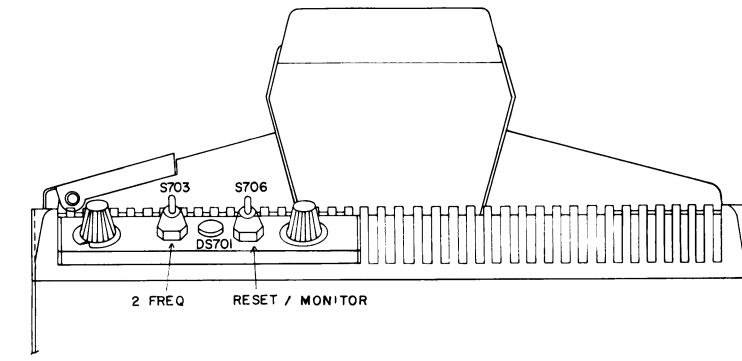
TYPE 99 TONE DECODER
MODELS 4EJ13A10 & 11

SYMBOL	G-E PART NO.	DESCRIPTION
C651 and C652	19C307099-P23	----- CAPACITORS ----- Mylar® dielectric: 0.1 µf ±20%, 200 VDCW; sim to Sprague 192P10402.
	19C307099-P1	Mylar® dielectric: .0047 µf ±20%, 200 VDCW; sim to Sprague 192P47202.
C654 and C655	5496267-P14	Tantalum, dry solid: 15 µf ±20%, 20 VDCW; sim to Sprague 150D156X0020B2.
C656	19C307099-P6	Mylar® dielectric: .033 µf ±20%, 200 VDCW; sim to Sprague 192P33392. (Used in Model 4EJ13A10 only).
C657	19C307099-P23	Mylar® dielectric: 0.1 µf ±20%, 200 VDCW; sim to Sprague 192P10402. (Used in Model 4EJ13A11 only).
C658 thru C660	5496267-P15	Tantalum, dry solid: 47 µf ±20%, 20 VDCW; sim to Sprague 150D476X0020R2.
C661	19C307099-P3	Mylar® dielectric: .01 µf ±20%, 200 VDCW; sim to Sprague 192P10302.
C662	5496267-P18	Tantalum, dry solid: 6.8 µf ±20%, 35 VDCW; sim to Sprague 150D685X0035B2.
C663	5496267-P13	Tantalum, dry solid: 2.2 µf ±20%, 20 VDCW; sim to Sprague 150D225X0020A2.
C664	5496267-P17	Tantalum, dry solid: 1 µf ±20%, 35 VDCW; sim to Sprague 150D105X0035A2.
C665	5496267-P14	Tantalum, dry solid: 15 µf ±20%, 20 VDCW; sim to Sprague 150D156X0020B2.
CR651 CR652 thru CR654	4036887-P7	----- RECTIFIERS ----- Silicon, Zener.
	19A115250-P1	Silicon.
E651 thru E661	4038104-P1	----- MISCELLANEOUS ----- Lug, terminal: brass.
		----- TRANSISTORS -----
Q651 and Q652	19A115123-P1	Silicon, NPN; sim to Type 2N2712.
Q653	19A115198-P1	Silicon; sim to Type 3N60.
Q654 and Q655	19A115123-P1	Silicon, NPN; sim to Type 2N2712.
R651 R652 R653 R654 R655 R656 R657 R658 R659 R660	3R152-P103J	----- RESISTORS ----- Fixed composition: 10,000 ohms ±5%, 1/4 w.
	3R152-P114J	Fixed composition: 0.11 megohm ±5%, 1/4 w.
	3R152-P912J	Fixed composition: 9100 ohms ±5%, 1/4 w.
	3R152-P221J	Fixed composition: 220 ohms ±5%, 1/4 w.
	3R152-P103J	Fixed composition: 10,000 ohms ±5%, 1/4 w.
	3R152-P622J	Fixed composition: 6200 ohms ±5%, 1/4 w. (Used in Model 4EJ13A10 only).
	3R152-P822J	Fixed composition: 8200 ohms ±5%, 1/4 w. (Used in Model 4EJ13A11 only).
	3R152-P103J	Fixed composition: 10,000 ohms ±5%, 1/4 w.
	3R152-P432J	Fixed composition: 4300 ohms ±5%, 1/4 w. (Used in Model 4EJ13A10 only).
	3R152-P222J	Fixed composition: 2200 ohms ±5%, 1/4 w. (Used in Model 4EJ13A11 only).

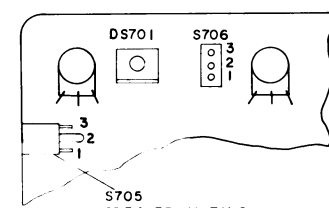
SYMBOL	G-E PART NO	DESCRIPTION
R661	3R152-P821J	----- RESISTORS(Cont'd) ----- Fixed composition: 820 ohms ±5%, 1/4 w.
R662 and R663	3R152-P102J	Fixed composition: 1000 ohms ±5%, 1/4 w.
R664	3R152-P104J	Fixed composition: 0.1 megohm ±5%, 1/4 w.
R665	3R152-P104J	Fixed composition: 0.1 megohm ±5%, 1/4 w. (Used in Model 4EJ13A11 only).
R666	3R152-P103J	Fixed composition: 10,000 ohms ±5%, 1/4 w.
R667	3R152-P104J	Fixed composition: 0.1 megohm ±5%, 1/4 w.
R668	3R152-P512J	Fixed composition: 5100 ohms ±5%, 1/4 w.
R669	3R152-P272J	Fixed composition: 2700 ohms ±5%, 1/4 w.
R670	3R152-P222J	Fixed composition: 2200 ohms ±5%, 1/4 w.
R671	3R152-P103J	Fixed composition: 10,000 ohms ±5%, 1/4 w.
R672	3R152-P104J	Fixed composition: 0.1 megohm ±5%, 1/4 w.
R673	3R152-P514J	Fixed composition: 0.51 megohm ±5%, 1/4 w.
R674	3R152-P392J	Fixed composition: 3900 ohms ±5%, 1/4 w.
R675	3R152-P104J	Fixed composition: 0.1 megohm ±5%, 1/4 w.
R676	3R152-P392J	Fixed composition: 3900 ohms ±5%, 1/4 w.
R677	3R152-P391J	Fixed composition: 390 ohms ±5%, 1/4 w.
		----- MISCELLANEOUS -----
	4036555-P1	Insulator, washer: nylon. (Used with Q653).

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES

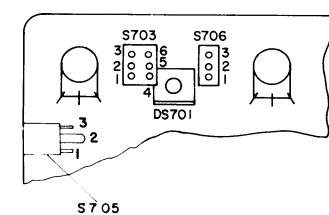
MODELS 4EC60A18 & 4EC60A21
OUTLINE DIAGRAM



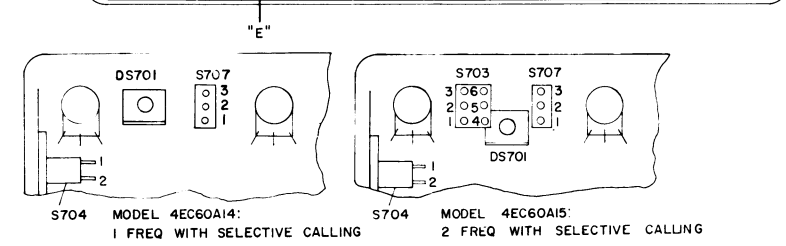
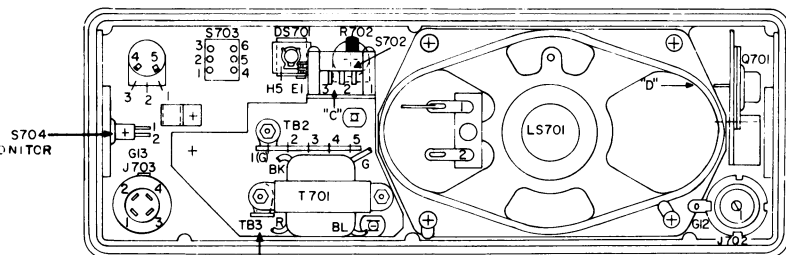
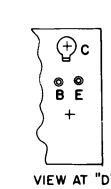
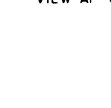
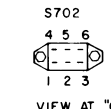
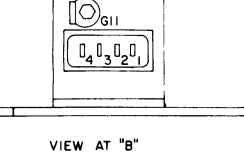
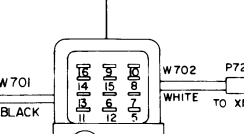
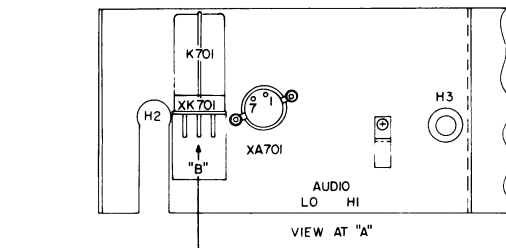
MODEL 4EC60A18 1 FREQ WITH SELECTIVE CALLING



MODEL 4EC60A21 2 FREQ WITH SELECTIVE CALLING

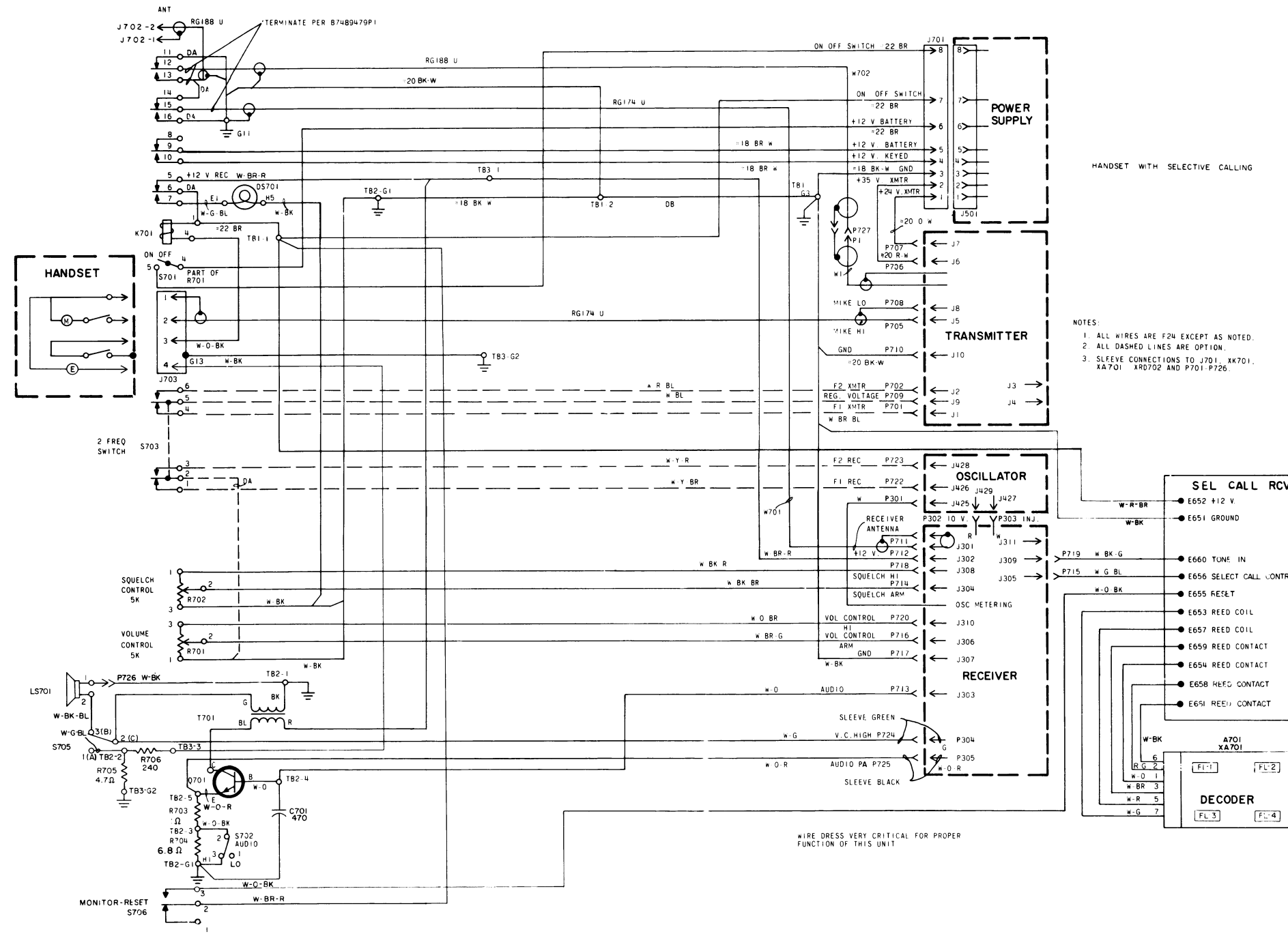


MODELS 4EC60A14 & 4EC60A15
OUTLINE DIAGRAM



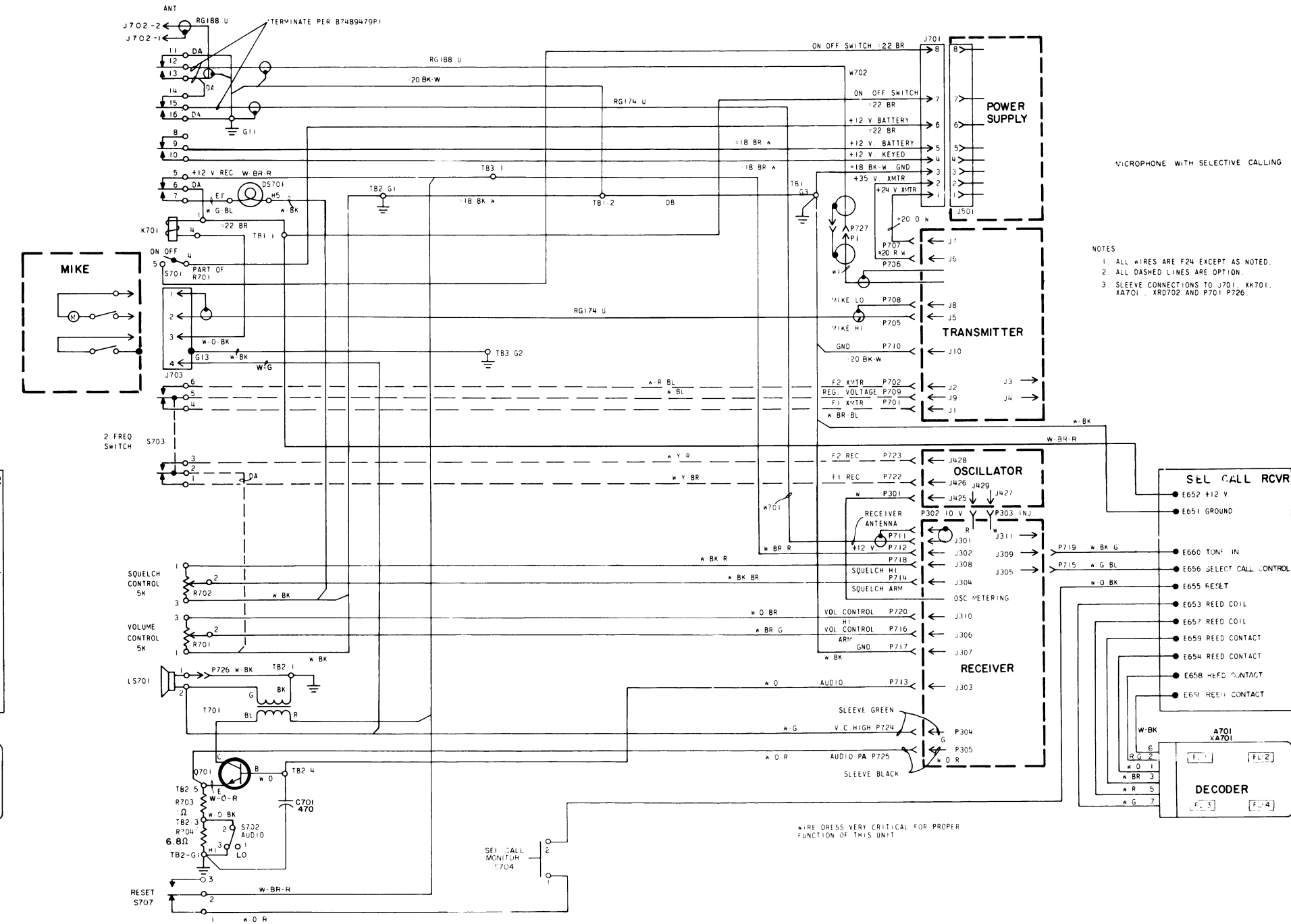
(19D402580, Rev. 1)

MODELS 4EC60A18 & 4EC60A21
SCHEMATIC DIAGRAM



(19D402499, Rev. 10)

MODELS 4EC60A14 & 4EC60A15
SCHEMATIC DIAGRAM



(19D402501, Rev. H)

SERVICE SHEET

CONTROL UNIT
MODELS 4EC60A14, 15, 18 & 21
(RC-1172C)

PARTS LIST		
LBI-3548C CONTROL UNIT		
MODEL 4EC60A14 PL-19D402279-G5 (Single Frequency) (REV B) MODEL 4EC60A15 PL-19D402279-G6 (Two Frequency) (REV B) MODEL 4EC60A18 PL-19D402279-G9 (Single Frequency) (REV C) MODEL 4EC60A21 PL-19D402279-G12 (Two Frequency) (REV C)		
SYMBOL	G-E PART NO.	DESCRIPTION
----- SUBASSEMBLIES -----		
A701		REED HOLDER ASSEMBLY PL-19B204982-G1 (Used in Models 4EC60A15, 21) PL-19B204982-G2 (Used in Models 4EC60A14, 18)
----- FILTERS -----		
FL1 thru FL4		tone DETECTOR (FL1 and FL2 used in PL-19B204982-G1, G2) (FL3 and FL4 used in PL-19B204982-G1)
PL-19C300580-06825	682.5 cps	
PL-19C300580-06975	697.5 cps	
PL-19C300580-07125	712.5 cps	
PL-19C300580-07275	727.5 cps	
PL-19C300580-07425	742.5 cps	
PL-19C300580-07575	757.5 cps	
PL-19C300580-07725	772.5 cps	
PL-19C300580-07875	787.5 cps	
PL-19C300580-08025	802.5 cps	
PL-19C300580-08175	817.5 cps	
PL-19C300580-08325	832.5 cps	
PL-19C300580-08475	847.5 cps	
PL-19C300580-08625	862.5 cps	
PL-19C300580-08775	877.5 cps	
PL-19C300580-08925	892.5 cps	
PL-19C300580-09075	907.5 cps	
PL-19C300580-09225	922.5 cps	
PL-19C300580-09375	937.5 cps	
PL-19C300580-09525	952.5 cps	
PL-19C300580-09675	967.5 cps	
PL-19C300580-09825	982.5 cps	
PL-19C300580-09975	997.5 cps	
----- CAPACITORS -----		
C701*	5494481-P7	Ceramic disc, 470 pf. ±20%, 500 VDCW. Added by Rev. B.

SYMBOL	G-E PART NO	DESCRIPTION
----- INDICATING DEVICES -----		
DS701	4034664-P1	Lamp, incandescent: 28 v, .04 amp; sim to G-E 2148.
----- JACKS AND RECEPTACLES -----		
J701	7473192-P31	Connector: 8 terminals, phenolic; sim to HB Jones 261-31-02-000.
J702	5493632-P2	Connector, coaxial: sim to FXR 33975.
J703	19B209201-P1	Connector: 4 contacts; sim to Switchcraft 3C-1089.
----- RELAYS -----		
K701	19C307010-P5	Armature: 12 VDC nominal, 130 ohms res ±10% at 25°C, 4 form C contacts; sim to Allied Control T154-X-413.
----- LOUDSPEAKERS -----		
LS701	19C307094-P1	Permanent magnet: 5.062 x 3.062 inches, 3.2 ohms ±10% voice coil imp., 3 w input, 325 150 cps resonance, paper dust cap; sim to Oaktron S7473.
----- PLUGS -----		
P701 and P702	4029840-P2	Contact, electrical: taper pin, solder coated brass; sim to Amp 42827-2. (Used in Models 4EC60A15 and 4EC60A21 only).
P705	4029840-P2	Contact, electrical: taper pin, solder coated brass; sim to Amp 42827-2.
P706 thru P708	4029840-P1	Contact, electrical: taper pin, solder coated brass; sim to Amp 41854.
P709	4029840-P2	Contact, electrical: taper pin, solder coated brass; sim to Amp 42827-2.
P710	4029840-P1	Contact, electrical: taper pin, solder coated brass; sim to Amp 41854.
P712 thru P714	4029840-P2	Contact, electrical: taper pin, solder coated brass; sim to Amp 42827-2.
P716 thru P718	4029840-P2	Contact, electrical: taper pin, solder coated brass; sim to Amp 42827-2.
P720	4029840-P2	Contact, electrical: taper pin, solder coated brass; sim to Amp 42827-2.
P722 and P723	4029840-P2	Contact, electrical: taper pin, solder coated brass; sim to Amp 42827-2. (Used in Models 4EC60A15 and 4EC60A21 only).
P724 and P725	7147199-P2	Connector: 1 female contact; sim to Winchester Electronics 21804.
P726	4036634-P1	Receptacle, pin: sim to Amp 42428-2.
----- TRANSISTORS -----		
Q701*	19A115527-P1	Silicon NPN; sim to Type 2N1701
	19A115246-P1	In Models earlier than REV. A: Silicon, NPN; sim to Type 2N1701.
----- RESISTORS -----		
R701	19C300097-P10	Resistor/switch: includes Resistor, variable, carbon film, 5000 ohms ±20%, 1/8 w, mod log taper, 180° rotation; (S701) Switch, 2 amps at 125 VAC; sim to Mallory Type MLC.
R702	19C300097-P9	Variable, carbon film: 5000 ohms ±20%, 1/4 w, linear taper, 180° rotation; sim to Mallory Type MLC.
R703	19B209022-P115	Wirewound, phenolic body: 1 ohm ±10%, 2 w; sim to IRC Type BWH.
R704*	19B209022-P135	Wirewound, phenolic body: 6.8 ohms ±5%, 2 w, sim to IRC Type BWH.
	19B209022-P38	In Models earlier than REV. A: Wirewound, phenolic body: 9.1 ohms ±5%, 2 w; sim to IRC Type BWH.
R705	19B209022-P131	Wirewound, phenolic body: 4.7 ohms ±10%, 2 w; sim to IRC Type BWH. (Used in Models 4EC60A18 and 4EC60A21 only).
R706	3R77-P241J	Fixed composition: 240 ohms ±5%, 1/2 w. (Used in Models 4EC60A18 and 4EC60A21 only).
----- SWITCHES -----		
S701		(Part of R701).
S702	19B209040-P1	Slide: DPDT, 0.5 amp at 125 v; sim to Continental Wirt 125.

SYMBOL	G-E PART NO	DESCRIPTION
----- SWITCHES(Cont'd) -----		
S703	4036949-P2	Toggle: DPDT, 100 µa at 5 VDC; sim to Arrow-Hart and Hegeman TS-6. (Used in Models 4EC60A15 and 4EC60A21 only).
S704	7481654-P6	Pushbutton (red): SPNO, 1/10 amp at 115 VAC or 1/2 amp at 115 VAC; sim to Grayhill 30-1. (Used in Models 4EC60A14 and 4EC60A15 only).
S705	19B209239-P1	Pushbutton (red): SPDT, 250 ma at 115 VAC or 25 VDC; sim to Switchcraft P23. (Used in Models 4EC60A18 and 4EC60A21 only).
S706	4036949-P1	Toggle: SPDT, 100 µa at 5 VDC; sim to Arrow-Hart and Hegeman TS3. (Used in Models 4EC60A18 and 4EC60A21 only).
S707	4036949-P3	Toggle: SPDT, momentary contacts, 100 µa at 5 VDC; sim to Arrow-Hart and Hegeman TM-3. (Used in Models 4EC60A14 and 15 only).
----- TRANSFORMERS -----		
T701	19B209079-P1	Audio freq: freq range 0.3-3 KC, operating 275 MADC. Pri 1: 55 ohms ±10% imp at 1 w, 0.895 ohm ±10% DC res. Sec 1: 3.2 ohms ±10% at 1 w, 0.168 ohm max DC res.
----- TERMINAL BOARDS -----		
TB1	7775500-P8	Phenolic: 4 brass terminals and mountings.
TB2	7775500-P55	Phenolic: 5 brass terminals and mountings.
TB3	7775500-P44	Phenolic: 2 brass terminals and mountings. (Used in Models 4EC60A14 and 4EC60A15 only). Phenolic: 3 brass terminals and mountings. (Used in Models 4EC60A18 and 4EC60A21 only).
----- CABLES -----		
W701		CABLE ASSEMBLY PL-19A121176-G1
----- PLUGS -----		
P711	5496078-P1	Connector, push-on: Teflon; sim to FXR 27-1.
----- MISCELLANEOUS -----		
19B209044-P11		Cable, RF: 5.75 inches long. Type RG-174/U.
----- CABLE ASSEMBLY -----		
W702		CABLE ASSEMBLY PL-19A121176-G2
----- PLUGS -----		
P727	5496078-P2	Connector, push-on: Teflon; sim to FXR 27-2.
----- MISCELLANEOUS -----		
19B209044-P13		Cable, RF: 4 inches long. Type RG-188/U.
----- SOCKETS -----		
XA701	19B209065-P2	Tube: 7 contacts, phenolic; sim to Alcon Metal Products 524M-2.
XK701	5491595-P5	Relay, nylon: 16 contacts; sim to Allied Control 30054-2.
----- DC CHARGING CABLE ASSEMBLY -----		
		PL-19B204993-G1
----- MISCELLANEOUS -----		
7160478-P1		Cable: 2 conductor, 50 inches; sim to Birnbach 789.
4034405-P1		Plug, general purpose: 4 contacts, polarized, 10 amps at 133 VRMS; sim to Cannon XLR-4-11C.
19A115513-P1		Connector, cigarette lighter: 12 VDC; sim to Cole-Hersee 1624.

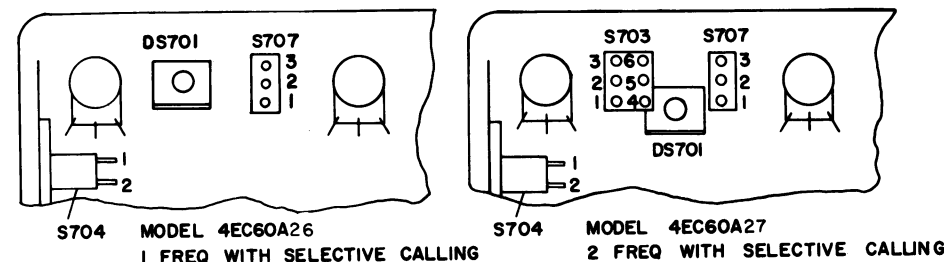
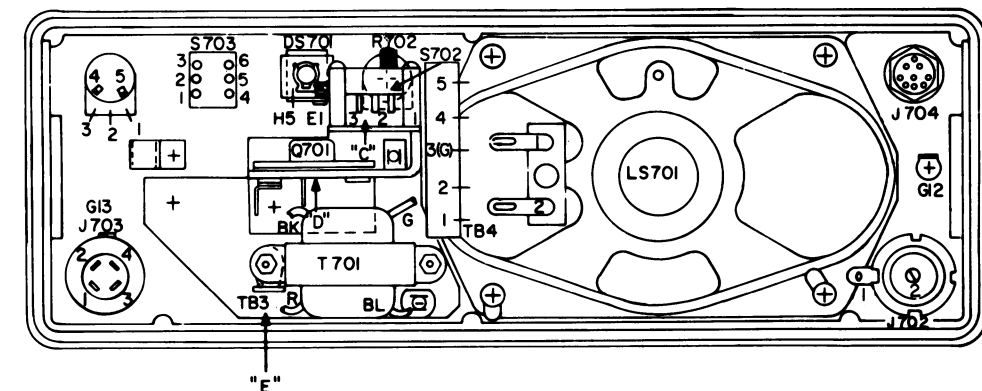
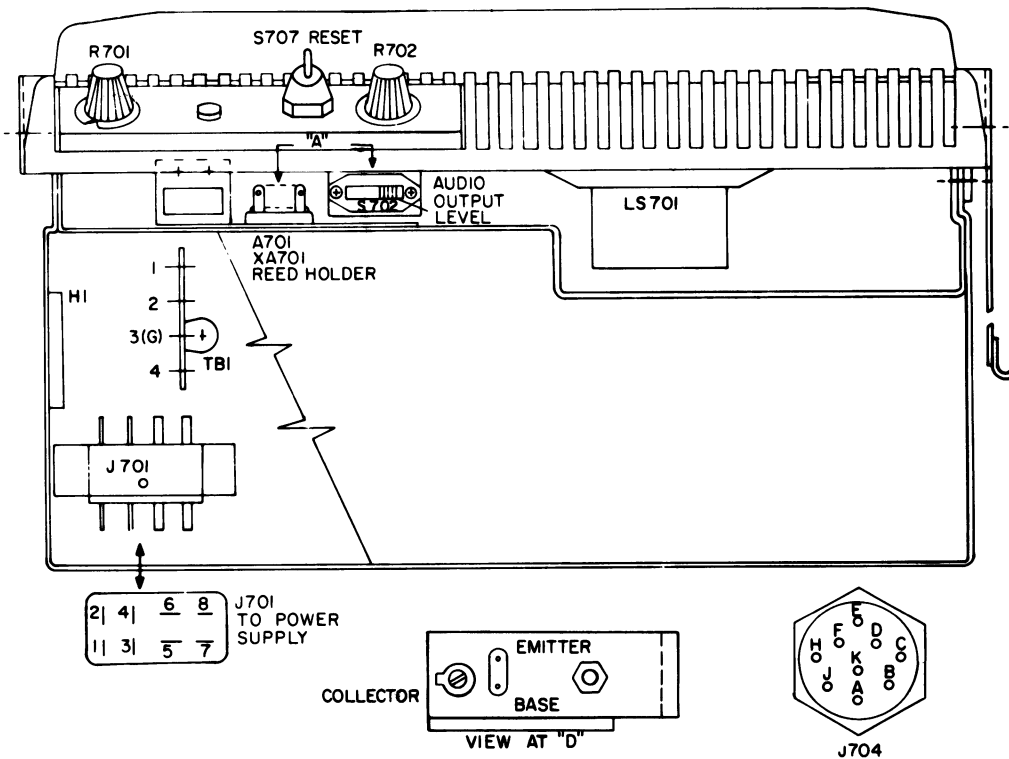
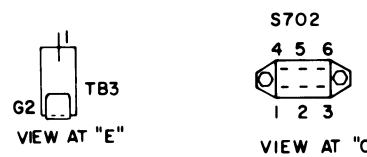
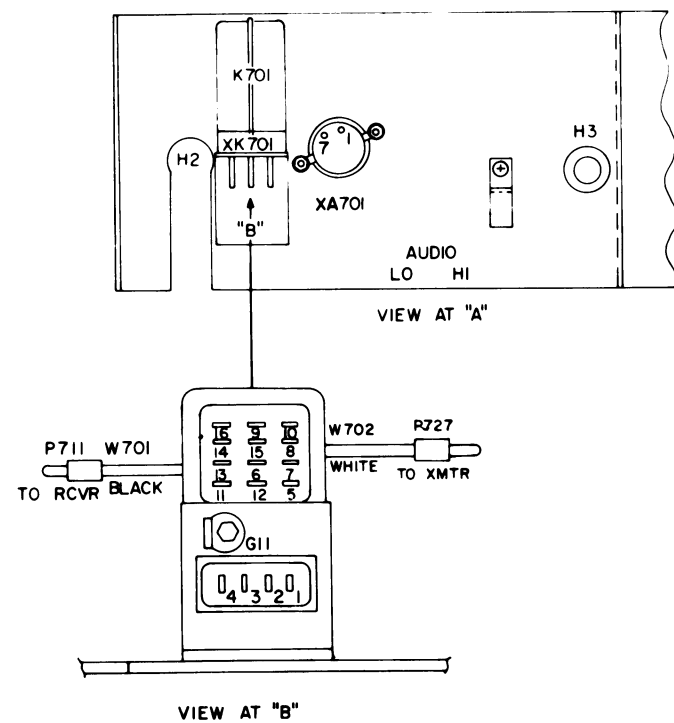
SYMBOL	G-E PART NO	DESCRIPTION
POWER SUPPLY EXTENSION CABLE ASSEMBLY PL-19B204289-G1		
----- MISCELLANEOUS -----		
7473192-P19		Socket, phenolic: 8 terminals, cable clamp in cap; sim to HB Jones 261-32-08-030.
7473192-P26		Plug, phenolic: 8 terminals, cable clamp in cap; sim to HB Jones 261-31-08-030.
7162441-P23		Tubing, flexible, plastic: 3 feet long.
AUTO GUTTER MOUNT ANTENNA MODEL 4EY20A10 (High Band)		
----- MISCELLANEOUS -----		
19C303620-P1		Antenna Assembly. Includes: plastic ball tip; 19.5 ±0.25 inch stainless steel whip; socket; insulators; adapter; RG-58A/U cable; PL-259 plug; clip; 2-set screws; rubber pad; sim to Antenna Specialists ASP157.
19C303620-P2		Replacement Whip Assembly. Includes: plastic ball tip; 19.5 ±0.25 inch stainless steel whip; socket; insulators; sim to Antenna Specialists 19A904-1.
MICROPHONE MODEL 4EM25C10		
PL-19C303707-G1		Cable clamp. Shure Brothers RP21. (Includes parts 3 and 8).
PL-19C303707-G2		Switch. Shure Brothers RP26. Case (back) and mounting button: plastic. Shure Brothers RP21. (Includes parts 1 and 8). Switch button: red plastic. Shure Brothers RP25. Spring. Shure Brothers RP16. (Includes miscellaneous hardware).
PL-19C303707-G3		Shield. Shure Brothers RP23.
PL-19C303707-G4		Cartridge, magnetic controlled.
		Case (front): plastic. Shure Brothers RP21. (Includes parts 1 and 3).
		Cable: approx 6 feet.
PORTABLE ANTENNA MODEL 4EY19A10 (High Band)		
----- MISCELLANEOUS -----		
19C303858-P1		Antenna Assembly. Includes: 6-32 set screw; aluminum ball; 22.05 inch stainless steel rod; sleeve; spring; cap; O-ring; plug; sim to Antenna Specialists ASP-405GE.
MECHANICAL PARTS (SEE RC-1087)		
1	19A121154-P1	Support: 1.91 x 0.9 x 0.46 inches. (Used with R702).
2	PL-19B204532-G1	Chassis Assembly: 9.74 x 4.3 x 3 inches.
3	19B204527-P1	Diaphragm: 5.06 x 3.06 inches.
4		(Used in Models 4EC60A10, 12, 16 and 19 only).
5	7763541-P4	Clip: 0.844 x 0.375 x .063 inches.
6	5491595-P9	Spring, retainer: 1.358 x 1.142 x 0.787 inches, wire; sim to Allied Control 30040-2. (Used with K701).
7	7142162-P98	Spacer: 0.625 x 0.187 x .035 inches. (Used with R702).
8	PL-19A121174-G1	Chassis Assembly: 3.25 x 2.07 x 1.15 inches.
9	19A121178-P1	Support: 1.88 x 0.6 x 0.5 inches. (Uses with J701).
10	19A121199-P1	Clip: 0.781 x 0.375 x 0.188 inches.
11	19A121215-P1	Spring: 1.78 x 0.52 x 0.73 inches. (Used in Models 4EC60A14 and 4EC60A15 only).
12	PL-19B204639-G2	Knob Assembly: 0.825 x 0.45 x 0.438 inches.
13	PL-19C303537-G1	Handle Assembly: (Includes items 15, 26, 27, 28, 29, and 36). (Used in Models 4EC60A14 and 4EC60A15 only).
14	19B204949-P1	Jewel: 0.312 x 0.25 x 0.25 inches, red plastic; sim to Rohm and Haas 2444 Plexiglas.
15	19B204492-P1	Extrusion: 7.525 x 0.604 x 0.75 inches. (Part of Handle Assembly, PL-19C303537-G1).
16		(Used in Model 4EC60A11 only).
17	5490135-P3	Boot, dust and moisture seal: 0.375 x 0.266 x .062 inches, silicon rubber; sim to APM-Hexseal W-6032-B.
18		(Used in Models 4EC60A12, 13 and 19 only).
19	PL-19B204639-G1	Knob Assembly: 0.825 x 0.45 x 0.438 inches. (Used with R702).
20		(Used in Model 4EC60A20 only).
21	NP243618	Nameplate: 4.31 x 0.986 x 0.325 inches, etched aluminum. (Used in Model 4EC60A15 only).

SYMBOL	G-E PART NO	DESCRIPTION
HANDSET MODEL 4E34A10 (19B209198-P1)		
----- MISCELLANEOUS -----		
		Cartridge, transmitter: controlled magnetic. Shure Brothers 99A86.
		Cartridge, receiver: 3 w max power. Shure Brothers 99A562.
		Switch: with mounting plate. Shure Brothers 90A925.
		Cable and Plug Assembly: Includes: 4 conductor tinsel coiled cord, neoprene jacket, extended length approx 5 feet, molded on weather proof 4-pin plug. Shure Brothers 90A1030.
		Handle Assembly. Phenolic, weather proof construction. Shure Brothers 90A971.
		Cap, transmitter: phenolic. Shure Brothers 65A197A.
		Cap, receiver: phenolic. Shure Brothers 65A199A.
PORTABLE ANTENNA MODELS 4EY18A10-13 (Low Band)		
----- MISCELLANEOUS -----		
PL-19C303707-G1		25-31 MC Antenna Assembly. Includes: 0.25 inch dia aluminum ball; 48.25 inch stainless steel rod; tuning screw and locknut, rubber O-ring weather seal; sim to Antenna Specialists ASP-431GE.
PL-19C303707-G2		31-36 MC Antenna Assembly. Includes: 0.25 inch dia aluminum ball; 48.25 inch stainless steel rod; tuning screw and locknut, rubber O-ring weather seal; sim to Antenna Specialists ASP-A431GE.
PL-19C303707-G3		36-42 MC Antenna Assembly. Includes: 0.25 inch dia aluminum ball; 38 inch stainless steel rod; tuning screw and locknut, rubber O-ring weather seal; sim to Antenna Specialists ASP-B431GE.
PL-19C303707-G4		42-50 MC Antenna Assembly. Includes: 0.25 inch dia aluminum ball; 38 inch stainless steel rod; tuning screw and locknut, rubber O-ring weather seal; sim to Antenna Specialists ASP-C431GE.
PORTABLE ANTENNA MODEL 4EY19A10 (High Band)		
----- MISCELLANEOUS -----		
19C303858-P1		Antenna Assembly. Includes: 6-32 set screw; aluminum ball; 22.05 inch stainless steel rod; sleeve; spring; cap; O-ring; plug; sim to Antenna Specialists ASP-405GE.
MECHANICAL PARTS (SEE RC-1087)		
1	19A121154-P1	Support: 1.91 x 0.9 x 0.46 inches. (Used with R701).
2	PL-19B204532-G1	Chassis Assembly: 9.74 x 4.3 x 3 inches.
3	19B204527-P1	Diaphragm: 5.06 x 3.06 inches.
4		(Used in Models 4EC60A10, 12, 16 and 19 only).
5	7763541-P4	Clip: 0.844 x 0.375 x .063 inches.
6	5491595-P9	Spring, retainer: 1.358 x 1.142 x 0.787 inches, wire; sim to Allied Control 30040-2. (Used with K701).
7	7142162-P98	Spacer: 0.625 x 0.187 x .035 inches. (Used with R702).
8	PL-19A121174-G1	Chassis Assembly: 3.25 x 2.07 x 1.15 inches.
9	19A121178-P1	Support: 1.88 x 0.6 x 0.5 inches. (Uses with J701).
10	19A121199-P1	Clip: 0.781 x 0.375 x 0.188 inches.
11	19A121215-P1	Spring: 1.78 x 0.52 x 0.73 inches. (Used in Models 4EC60A14 and 4EC60A15 only).
12	PL-19B204639-G2	Knob Assembly: 0.825 x 0.45 x 0.438 inches.
13	PL-19C303537-G1	Handle Assembly: (Includes items 15, 26, 27, 28, 29, and 36). (Used in Models 4EC60A14 and 4EC60A15 only).
14	19B204949-P1	Jewel: 0.312 x 0.25 x 0.25 inches, red plastic; sim to Rohm and Haas 2444 Plexiglas.
15	19B204492-P1	Extrusion: 7.525 x 0.604 x 0.75 inches. (Part of Handle Assembly, PL-19C303537-G1).
16		(Used in Model 4EC60A11 only).
17	5490135-P3	Boot, dust and moisture seal: 0.375 x 0.266 x .062 inches, silicon rubber; sim to APM-Hexseal W-6032-B.
18		(Used in Models 4EC60A12, 13 and 19 only).
19	PL-19B204639-G1	Knob Assembly: 0.825 x 0.45 x 0.438 inches. (Used with R702).
20		(Used in Model 4EC60A20 only).
21	NP243618	Nameplate: 4.31 x 0.986 x 0.325 inches, etched aluminum. (Used in Model 4EC60A15 only).

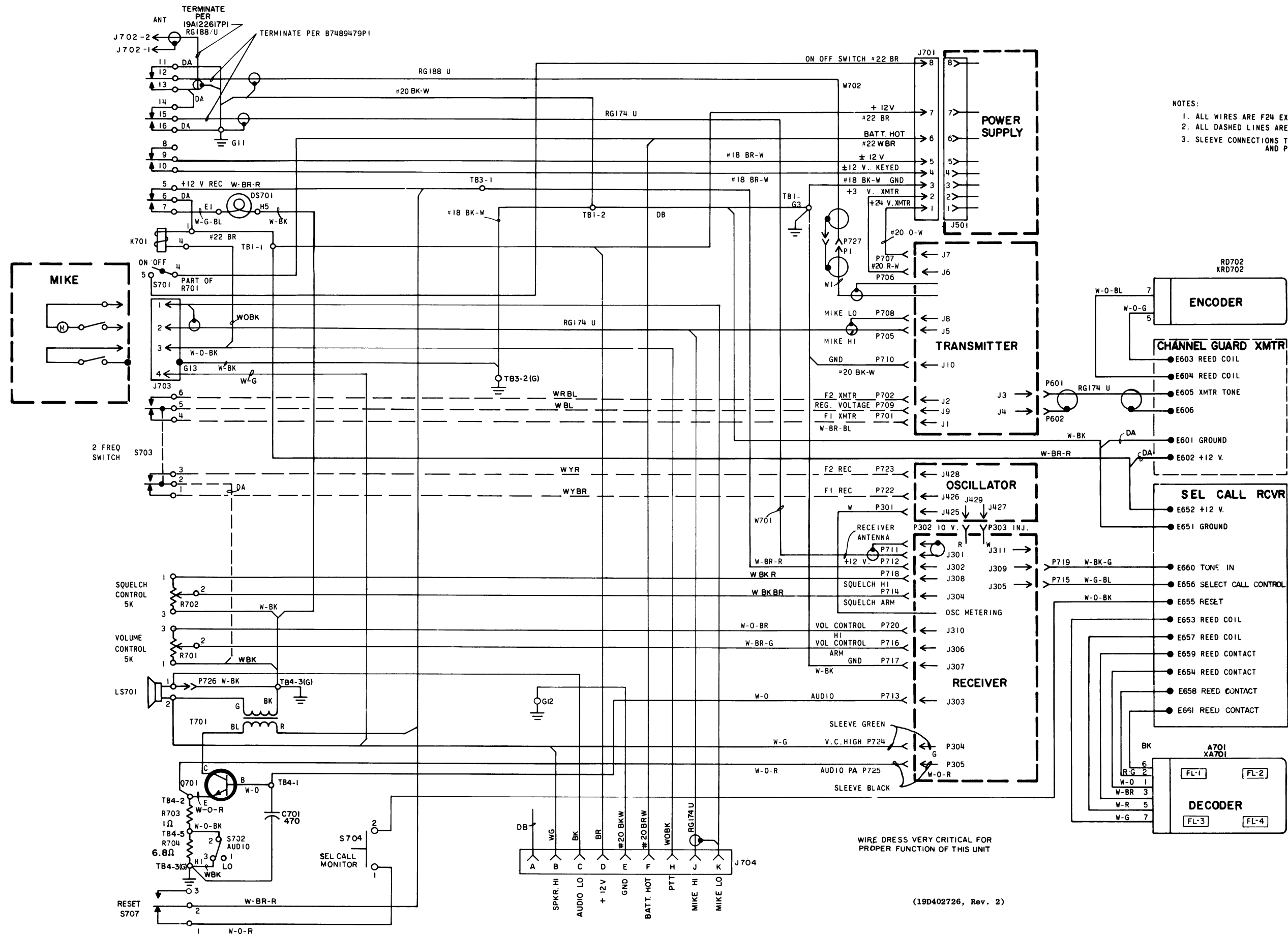
SYMBOL	G-E PART NO	DESCRIPTION
MECHANICAL PARTS(Cont'd)		
22	NP243619	Nameplate: 4.31 x 0.986 x 0.325 inches, etched aluminum. (Used in Model 4EC60A21 only).
23	NP243616	Nameplate: 4.31 x 0.986 x 0.325 inches, etched aluminum. (Used in Model 4EC60A14 only). (Used in Model 4EC60A17 only).
24		Nameplate: 4.31 x 0.986 x 0.325 inches, etched aluminum. (Used in Model 4EC60A18 only).
25	NP243620	Nameplate: 4.31 x 0.986 x 0.325 inches, etched aluminum. (Used in Model 4EC60A15 only).
26	19C303538-P1	Handle: 7.39 x 0.72 x 0.610 inches. (Part of Handle Assembly, PL-19C303537-G1).
27	19A121363-P1	Spring: 2 x .031 inches. (Part of Handle Assembly, PL-19C303537-G1).
28	19A121173-P1	Retainer: 0.45 x 0.5 x 0.13 inches. (Part of Handle Assembly, PL-19C303537-G1).
29	N533P1308	Pin, dowel: 0.5 x 0.135 x .028 inches. (Part of Handle Assembly, PL-19C303537-G1).
30	4031053-P6	Nut, speed: 0.562 x 0.25 x .017 inches; sim to Tinnerman C12004017-67.
31	4035711-P4	Clip, spring tension: 0.319 x 0.257 x 0.187 inches; sim to Augat Brothers 6007-8-CT.
32	7150727-P116	Sleeving, insulation: 30 inches long, 0.198 inch inside dia.
33	19A121730-P1	Bracket: 0.65 x 0.44 x 0.5 inches.
34	4034512-P3	Terminal, feed-thru, insulated: 0.31 x .03 x .06 inches; sim to Sealectro RST-MM-10-TUR.
35	7142162-P96	Spacer: .08 x 0.187 x .035 inches.
36	PL-19A121343-G1	Support Assembly: 2.39 x 0.25 x .088 inches; (Part of Handle Assembly, PL-19C303537-G1).
37	19C303427-P1	Casting: 1.75 x 0.75 x 0.96 x 0.75 inches. (Used in Models 4EC60A14 and 4EC60A15 only).
38		(Used in Model 4EC60A12 only).
39		(Used in Model 4EC60A10 only).
40		(Used in Models 4EC60A11 and 4EC60A16 only).
41	19C303457-P4	Casting: 10.264 x 3.649 x 1.462 inches. (Used in Model 4EC60A14 and 4EC60A16 only).
42	19C303457-P6	Casting: 10.264 x 3.649 x 1.462 inches. (Used in Model 4EC60A15 and 4EC60A21 only).
43	PL-19A121169-G1	Support Assembly: 5.29 x 1.2 x 1 inches.
44	PL-19B204501-G1	Case Assembly: 10.15 x 4.67 x 3.52 inches.
45	4029994-P1	Strike: 0.625 x 0.38 inches, chrome plated steel.
46	N509P1912C	Pin, dowel: 0.75 x 0.199 x 0.182 inches. (Used in Models 4EC60A18 and 4EC60A21 only).
47	19A121741-P1	Spring: 1 x 1 x 0.3 inches. (Used in Models 4EC60A18 and 4EC60A21 only).
48	19B204963-P1	Lever: 1.5 x 0.85 x 0.3 x 0.64 inches. (Used in Models 4EC60A18 and 4EC60A21 only).
49	19C303679-P1	Casting: 3.44 x 1.25 x 1.9 inches. (Used in Models 4EC60A18 and 4EC60A21 only).
50	19B204964-P1	Handle: 3.26 x 1.34 x 0.5 inches. (Used in Models 4EC60A18 and 4EC60A21 only).
51	19A121742-P1	Spacer: 0.5 x 0.128 x 0.188 inches. (Used in Models 4EC60A18 and 4EC60A21 only).
52	19B204965-P1	Spring: 1.75 x 0.66 x 0.64 x 0.75 inches.

SCHEMATIC DIAGRAM

OUTLINE DIAGRAM



(19D402796, Rev. 0)



(19D402726, Rev. 2)

SERVICE SHEET

**CONTROL UNIT WITH
ACCESSORY JACK OPTION
MODELS 4EC60A26 & 27**

(RC-1378)

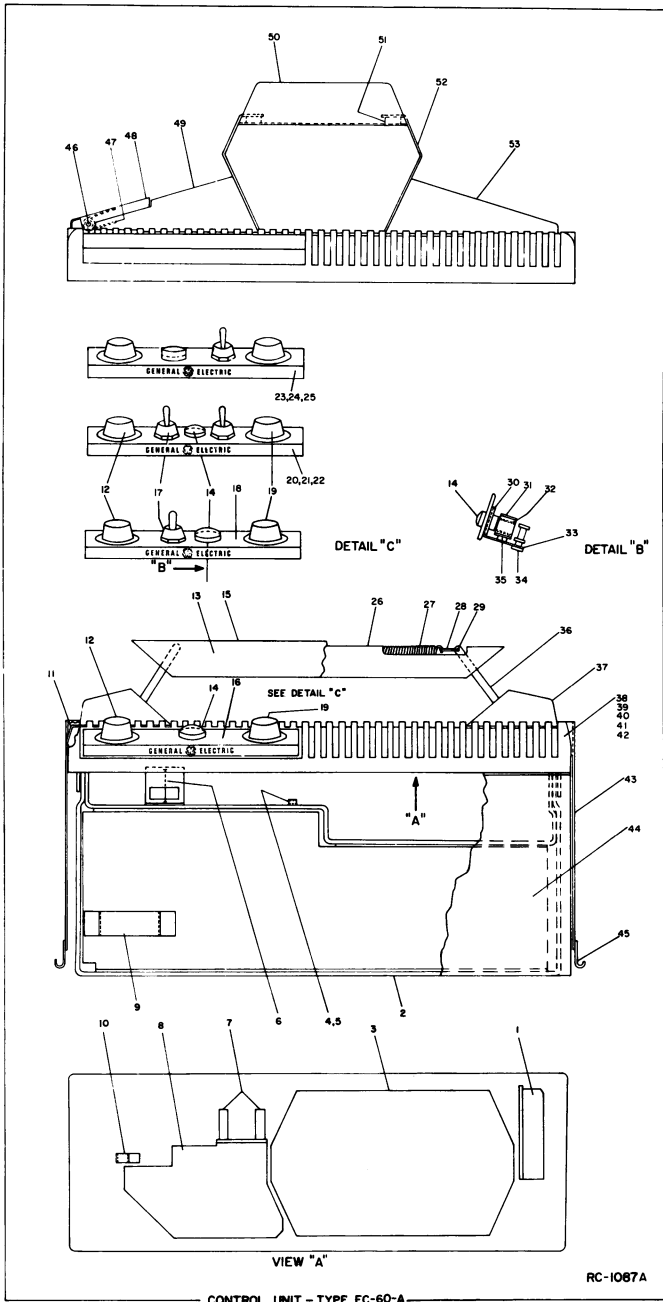
PARTS LIST		
LBI-3730 CONTROL UNIT MODEL 4EC60A26 PL-19D402279-G17 (Single Frequency) MODEL 4EC60A27 PL-19D402279-G18 (Two Frequency)		
SYMBOL	G-E PART NO.	DESCRIPTION
A701	----- SUBASSEMBLIES -----	
	REED HOLDER ASSEMBLY PL-19B204982-G1 (Used with 4EJ13A11 Decoder) PL-19B204982-G2 (Used with 4EJ13A10 Decoder)	
	----- FILTERS -----	
FL1 thru FL4	TONE DETECTOR PL-19C300580 (FL1 and FL2 used in PL-19B204982-G1, G2) (FL3 and FL4 used in PL-19B204982-G1)	
	PL-19C300580-G6825	682.5 cps
	PL-19C300580-G6975	697.5 cps
	PL-19C300580-G7125	712.5 cps
	PL-19C300580-G7252	727.5 cps
	PL-19C300580-G7425	742.5 cps
	PL-19C300580-G7575	757.5 cps
	PL-19C300580-G7725	772.5 cps
	PL-19C300580-G7875	787.5 cps
	PL-19C300580-G8025	802.5 cps
	PL-19C300580-G8175	817.5 cps
	PL-19C300580-G8325	832.5 cps
	PL-19C300580-G8475	847.5 cps
	PL-19C300580-G8625	862.5 cps
	PL-19C300580-G8775	877.5 cps
	PL-19C300580-G8925	892.5 cps
	PL-19C300580-G9075	907.5 cps
	PL-19C300580-G9225	922.5 cps
	PL-19C300580-G9375	937.5 cps
	PL-19C300580-G9525	952.5 cps
	PL-19C300580-G9675	967.5 cps
	PL-19C300580-G9825	982.5 cps
	PL-19C300580-G9975	997.5 cps
	----- CAPACITORS -----	
C701	5494481-P7	Ceramic disc, 470 pf, ±20%, 500 VDCW. Added by REV. B.

SYMBOL	G-E PART NO	DESCRIPTION
DS701	4034664-P1	----- INDICATING DEVICES -----
		Lamp, incandescent: 28 v, .04 amp; sim to G-E 2148.
		----- JACKS AND RECEPTACLES -----
		Connector: 8 terminals, phenolic; sim to HB Jones 261-31-02-000.
J701	7473192-P31	Connector, coaxial: sim to FXR 33975.
J702	5493632-P2	Connector, coaxial: sim to FXR 33975.
J703	19B209201-P1	Connector: 4 contacts; sim to Switchcraft 3C-1088.
J704	7489183-P5	Connector: 9 contacts (Accessory Jack Option).
K701	19C307010-P5	----- RELAYS -----
		Armature: 12 VDC nominal, 130 ohms res ±10% at 25°C, 4 form C contacts; sim to Allied Control T154-K-413.
LS701	19C307094-P1	----- LOUDSPEAKERS -----
		Permanent magnet: 5.062 x 3.062 inches, 3.2 ohms ±10% voice coil imp., 3 w input, 325 ±50 cps resonance, paper dust cap; sim to Oaktron S7473.
P701 and P702	4029840-P2	----- PLUGS -----
		Contact, electrical: taper pin, solder coated brass; sim to Amp 42827-2. (Used in Model 4EC60A27 only).
P705	4029840-P2	Contact, electrical: taper pin, solder coated brass; sim to Amp 42827-2.
P706 thru P708	4029840-P1	Contact, electrical: taper pin, solder coated brass; sim to Amp 41854.
P709	4029840-P2	Contact, electrical: taper pin, solder coated brass; sim to Amp 42827-2.
P710	4029840-P1	Contact, electrical: taper pin, solder coated brass; sim to Amp 41854.
P712 thru P714	4029840-P2	Contact, electrical: taper pin, solder coated brass; sim to Amp 42827-2.
P716 thru P718	4029840-P2	Contact, electrical: taper pin, solder coated brass; sim to Amp 42827-2.
P720	4029840-P2	Contact, electrical: taper pin, solder coated brass; sim to Amp 42827-2.
P722 and P723	4029840-P2	Contact, electrical: taper pin, solder coated brass; sim to Amp 42827-2 (Used in Model 4EC60A27 only).
P724 and P725	7147199-P2	Connector: 1 female contact; sim to Winchester Electronics 21804.
P726	4036634-P1	Receptacle, pin: sim to Amp 42428-2.
Q701	19A115527-P1	----- TRANSISTORS -----
		Silicon NPN; sim to Type 2N1701.
R701	19C300097-P10	----- RESISTORS -----
R702	19C300097-P9	Resistor/switch: Includes Resistor, variable, carbon film, 5000 ohms ±20%, 1/8 w, mod log taper, 180° rotation; (S701) Switch, 2 amps at 125 VAC; sim to Mallory Type MLC.
		Variable, carbon film: 5000 ohms ±20%, 1/4 w, linear taper, 180° rotation; sim to Mallory Type MLC.
R703	19B209022-P115	Wirewound, phenolic body: 1 ohm ±10%, 2 w; sim to IRC Type BWH.
R704	19B209022-P135	Wirewound, phenolic body: 6.8 ohms ±5%, 2 w; sim to IRC Type BWH.
S701	19B209040-P1	----- SWITCHES -----
		(Part of R701).
		Slide: DPDT, 0.5 amp at 125 v; sim to Continental Wirt 126.
		Toggle: DPDT, 100 µa at 5 VDC; sim to Arrow-Hart and Hegeman TS-6. (Used in Model 4EC60A27 only).
		Pushbutton (red): SPNO, 1/10 amp at 115 VAC or 1/2 amp at 115 VAC; sim to Grayhill 30-1.
		Toggle: SPDT, momentary contacts, 100 µa at 5 VDC; sim to Arrow-Hart and Hegeman TM-3.

SYMBOL	G-E PART NO	DESCRIPTION
T701	19B209079-P1	----- TRANSFORMERS -----
		Audio freq: freq range 0.3-3 KC, operating 275 MADC, Pri 1: 55 ohms ±10% imp at 1 w, 0.895 ohm ±10% DC res, Sec 1: 3.2 ohms ±10% at 1 w, 0.168 ohm max DC res.
		----- TERMINAL BOARDS -----
		Phenolic: 4 brass terminals and mountings.
TB1	7775500-P8	Phenolic: 2 brass terminals and mountings.
TB3	7775500-P44	Phenolic: 5 terminals.
TB4	7775500-P11	
W701		----- CABLES -----
		CABLE ASSEMBLY PL-19A121176-G1
P711	5496078-P1	----- PLUGS -----
		Connector, push-on: Teflons, sim to FRX 27-1.
W702	19B209044-P11	----- MISCELLANEOUS -----
		Cable, RF: 5.75 inches long. Type RG-174/U.
P727	5496078-P2	CABLE ASSEMBLY PL-19A121176-G2
		Connector, push-on: Teflons; sim to FXR27-2.
19B209044-P13		----- MISCELLANEOUS -----
		Cable, RF: 4 inches long. Type RG-188/U.
XA701	19B209065-P2	----- SOCKETS -----
		Tube: 7 contacts, phenolic; sim to Alcon Metal Products 524M-2.
XK701	5491595-P5	Relay, nylon: 16 contacts; sim to Allied Control 30054-2.
		DC CHARGING CABLE ASSEMBLY PL-19B204993-G1
7160478-P1		----- MISCELLANEOUS -----
		Cable: 2 conductor, 50 inches; sim to Birnbach 789.
4034405-P1		Plug, general purpose: 4 contacts, polarized, 10 amps at 133 VRMS; sim to Cannon XLR-4-11C.
19A115513-P1		Connector, cigarette lighter: 12 VDC; sim to Cole-Hersee 1624.
7160478-P1		POWER SUPPLY EXTENSION CABLE ASSEMBLY PL-19B204289-G1
		----- MISCELLANEOUS -----
7473192-P19		Socket, phenolic: 8 terminals, cable clamp in cap; sim to HB Jones 261-32-08-030.
7473192-P26		Plug, phenolic: 8 terminals, cable clamp in cap; sim to HB Jones 261-31-08-030.
7162441-P23		Tubing, flexible, plastic: 3 feet long.
19C303620-P1		AUTO GUTTER MOUNT ANTENNA MODEL 4EY20A10 (High Band)
		Antenna Assembly, Includes: plastic ball tip; 19.5 ±0.25 inch stainless steel whip; socket; insulators; adapter: RG-58A/U cable; PL-259 plug; clip; 2-set screws; rubber pad; sim to Antenna Specialists ASP157.
19C303620-P2		Replacement Whip Assembly. Includes: plastic ball tip; 19.5 ±0.25 inch stainless steel whip; socket; insulators; sim to Antenna Specialists 19A904-1.

SYMBOL	G-E PART NO	DESCRIPTION
		MICROPHONE MODEL 4EM33B10 (19B209199-P2)
		----- MISCELLANEOUS -----
		Switch: moisture proof. Shure Brothers RP33.
		Cable and plug: approx 5 feet. Shure Brothers RP35.
		Button: red plastic. Shure Brothers RP34.
		Cartridge, magnetic controlled. Shure Brothers RP32.
		Case, mounting button and nameplate: plastic. Shure Brothers RP31.
		Shield. Shure Brothers RP36.
		MICROPHONE MODEL 4EM33C10 (19B209306-P1)
		----- MISCELLANEOUS -----
		Switch. Shure Brothers RP33.
		Cable and plug: approx 5 feet. Shure Brothers RP35.
		Button: red plastic. Shure Brothers RP34.
		Cartridge, magnetic controlled. Shure Brothers RP32.
		Case, mounting button and nameplate: plastic. Shure Brothers RP31.
		Shield. Shure Brothers RP36.
		MICROPHONE MODEL 4EM33D10 (19B209199-P3)
		Switch: moisture proof. Shure Brothers RP33.
		Cable and plug: approx 80 inches. Shure Brothers RP35.
		Button: red plastic. Shure Brothers RP34.
		Cartridge, magnetic controlled. Shure Brothers RP32.
		Case, mounting button and nameplate: plastic. Shure Brothers RP31.
		Shield. Shure Brothers RP36.
		PORTABLE ANTENNA MODEL 4EY19A10-13 (Low Band)
		----- MISCELLANEOUS -----
PL-19C303707-G1		25-31 MC Antenna Assembly. Includes: 0.25 inch dia aluminum ball, 48.25 inch stainless steel rod, tuning screw and locknut, rubber O-ring weather seal; sim to Antenna Specialists ASP-431GE.
PL-19C303707-G2		31-36 MC Antenna Assembly. Includes: 0.25 inch dia aluminum ball, 48.25 inch stainless steel rod, tuning screw and locknut, rubber O-ring weather seal; sim to Antenna Specialists ASP-A431GE.
PL-19C303707-G3		36-42 MC Antenna Assembly. Includes: 0.25 inch dia aluminum ball, 38 inch stainless steel rod, tuning screw and locknut, rubber O-ring weather seal; sim to Antenna Specialists ASP-B431GE.
PL-19C303707-G4		42-50 MC Antenna Assembly. Includes: 0.25 inch dia aluminum ball, 38 inch stainless steel rod, tuning screw and locknut, rubber O-ring weather seal; sim to Antenna Specialists ASP-C431GE.
		PORTABLE ANTENNA MODEL 4EY19A10 (High Band)
		----- MISCELLANEOUS -----
19C303858-P1		Antenna Assembly. Includes: 6-32 set screw; aluminum ball; 22.05 inch stainless steel rod; sleeving; spring; cap; O-ring; plug; sim to Antenna Specialists ASP-405GE.

SYMBOL	G-E PART NO	DESCRIPTION
2	PL-19B204532-G1	MECHANICAL PARTS (SEE RC-1087)
		Chassis Assembly: 9.74 x 4.3 x 3 inches.
		Diaphragm: 5.06 x 3.06 inches.
		Clip: 0.844 x 0.375 x .063 inches.
3	19B204527-P1	Spring, retainer: 1.358 x 1.142 x 0.787 inches.
		wire: sim to Allied Control 30040-2. (Used with K701).
5	7763541-P4	Spacer: 0.625 x 0.187 x .035 inches. (Used with R702).
6	5491595-P9	Chassis Assembly: 3.25 x 2.07 x 1.15 inches.
7	7142162-P98	Support: 1.88 x 0.6 x 0.5 inches. (Used with J701).
8	PL-19A121174-G2	Clip: 0.781 x 0.375 x 0.188 inches.
9	19A121178-P1	Spring: 1.78 x 0.52 x 0.73 inches.
10	19A121199-P1	Knob Assembly: 0.825 x 0.45 x 0.438 inches.
11	19A121215-P1	Handle Assembly: (Includes items 15, 26, 37, 28, 29 and 36).
12	PL-19B204639-G2	Jewel: 0.312 x 0.25 x 0.25 inches, red plastic; sim to Rohm and Haas 2444 Flexiglas.
13	PL-19C303537-G1	Extrusion: 7.525 x 0.604 x 0.75 inches. (Part of Handle Assembly, PL-19C303537-G1).
14	19B204949-P1	Boot, dust and moisture seal: 0.375 x 0.266 x .062 inches, silicon rubber; sim to APM-Hexseal N-5032-B.
15	19B204492-P1	Knob Assembly: 0.825 x 0.45 x 0.438 inches. (Used with R702).
17	5490135-P3	Nameplate: 4.31 x 0.986 x 0.325 inches, etched aluminum. (Used in Model 4EC60A27 only).
19	PL-19B204639-G1	Nameplate: 4.31 x 0.986 x 0.325 inches, etched aluminum. (Used in Model 4EC60A26 only).
21	NP243618	Handle: 7.29 x 0.72 x 0.610 inches. (Part of Handle Assembly, PL-19C303537-G1).
23	NP243616	Spring: 2 x .031 inches. (Part of Handle Assembly, PL-19C303537-G1).
26	19C303538-P1	Retainer: 0.45 x 0.5 x 0.13 inches. (Part of Handle Assembly, PL-19C303537-G1).
27	19A121363-P1	Pin, dowel: 0.5 x 0.135 x .028 inches. (Part of Handle Assembly, PL-19C303537-G1).
28	19A121173-P1	Nut, speed: 0.562 x 0.25 x .017 inches; sim to Tinnerman C120046017-67.
29	N533P1308	Clip, spring tension: 0.319 x 0.257 x 0.187 inches; sim to Augat Brothers 6007-8-CT.
30	4031053-P6	Sleeving, insulation: 30 inches long, 0.198 inch inside dia.
31	4035711-P4	Bracket: 0.65 x 0.44 x 0.5 inches.
32	7150727-P116	Terminal, feed-thru, insulated: 0.31 x .03 x .06 inches; sim to Seallectro RST-MM-10-TUR.
33	19A121730-P1	Spacer: .08 x 0.187 x .035 inches.
34	4034512-P3	Support Assembly: 2.39 x 0.25 x .085 inches; (Part of Handle Assembly, PL-19C303537-G1).
35	7142162-P96	Casting: 10.264 x 3.649 x 1.462 inches. (Used in Model 4EC60A28 only).
36	PL-19A121343-G1	Casting: 10.264 x 3.649 x 1.462 inches. (Used in Model 4EC60A27 only).
41	19C303457-P10	Support Assembly: 5.29 x 1.2 x 1 inches.
42	19C303457-P11	Case Assembly: 10.15 x 4.67 x 3.52 inches.
43	PL-19A121169-G1	Strike: 0.625 x 0.38 inches, chrome plated steel.
44	PL-19B204501-G1	
45	4029994-P1	



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 - To provide audio to the microphone jack. Added W-G wire from L87-1-2 to J703-4.

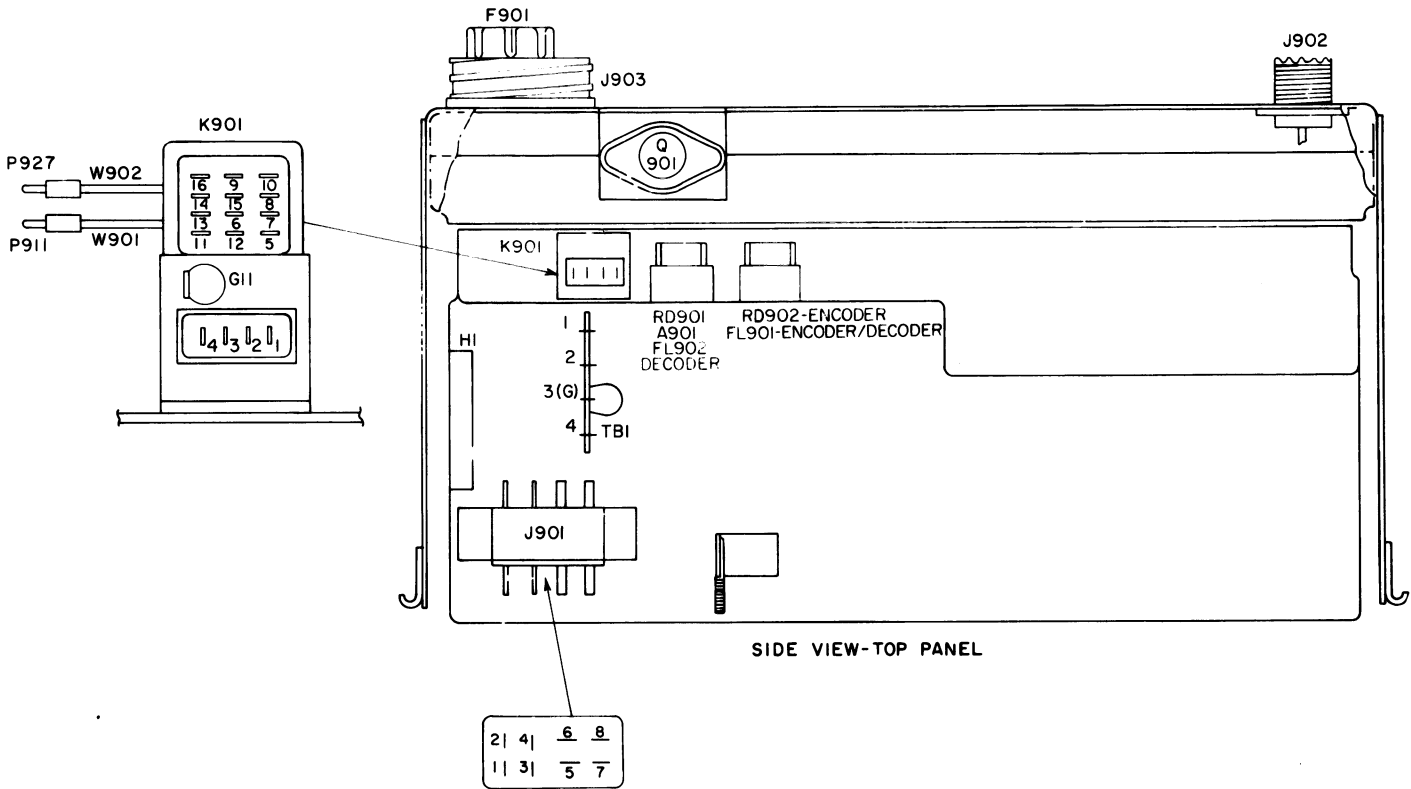
PARTS LIST		
CONTROL UNIT MODEL 4EC66A12 (PL-19D402603-G3) SINGLE FREQUENCY		
CONTROL UNIT MODEL 4EC66A13 (PL-19D402603-G4) TWO FREQUENCY		
CONTROL UNIT MODEL 4EC66A16 (PL-19D402603-G7) SINGLE FREQUENCY WITH ACCESSORY JACK OPTION		
CONTROL UNIT MODEL 4EC66A17 (PL-19D402603-G8) TWO FREQUENCY WITH ACCESSORY JACK OPTION		
TRANSMITTER-RECEIVER TOP PANEL PL-19D402599-G3 AND ASSOCIATED ASSEMBLIES		
SYMBOL	G-E PART NO.	DESCRIPTION
		----- INDICATING DEVICES -----
DS701	19C307037-P4	Lamp, incandescent: 14 v ±.01 v; sim to G-E 1815.
		----- JACKS AND RECEPTACLES -----
J701	7489183-P5	Connector: 9 contacts; sim to Winchester M9S-LRN. (Used in Models 4EC66A16 and 17).
		----- LOUDSPEAKERS -----
LS701	5491260-P7	Permanent magnet, 5-inch: 3.2 ohms ±10% voice coil imp, 15 w max operating, 385 cps ±15% resonance, paper dust cap; sim to Jensen Model P5-VAS12761.
		----- RESISTORS -----
R701	19B290256-P2	Resistor/switch: includes Resistor, variable, 5000 ohms ±20%, 0.25 w; Switch (S701), rotary, SPST, 15 amps at 10 v; sim to CTS Series 45.
R702	19B209256-P1	Variable, carbon film: 5000 ohms ±20%, 0.5 w; sim to CTS Series 45.
		----- SWITCHES -----
S701		(Part of R701).
S702	5491899-P6	Toggle: DPDT, 3 amps at 250 v; sim to Cutler-- Hammer 8363K7. (Used in Models 4EC66A13).
S703	5491899-P7	Toggle: SPST, 3 amps at 125 v; sim to Cutler-- Hammer 8280K16.
		----- TERMINAL BOARDS -----
TB701	PL-19B205152-G1	Terminal Board: 25 contacts.
		----- SOCKETS -----
XDS701	7141855-P15	Lamp: sim to Dialight 95-410-975 (modified).
		MECHANICAL PARTS
		(SEE RC-1340)
1	19A122065-P1	Bushing: 3/4-14; sim to Pyle-National DB-1191690 (modified).
2	19A122066-P1	Bushing: 1/4-18; sim to Pyle-National DB-44516 (modified).
3	4031457-P1	Support. (Used with microphone).
4	4031458-P1	Spring. (Used with microphone).
5	4032574-P2	Gasket, cover, neoprenc: approx 27-3/4 inches.
6	19D402601-P3	Casting. (Used in Model 4EC66A12).
7	19D402601-P4	Casting. (Used in Model 4EC66A13).
8	19D402601-P7	Casting. (Used in Model 4EC66A16).
9	19D402601-P8	Casting. (Used in Model 4EC66A17).
10	19B205162-P1	Diaphragm: approx 2-3/8 inches dia.
11	19A121990-P1	Spacer: 3/4 inch hex. (Used with TB701).
12	5490135-P4	Boot: 15/32-32; sim to APM-Hexseal N-1030-B. (Used with S702 in Models 4EC66A13, 17, S703).
13	NP248842	Nameplate.
14	PL-4039182-G1	Knob. (Used with R701, 702).
15	19A115040-P9	Lens, panel light: red lens; sim to Dialight 81-331. (Used with DS701).
16	NP248843	Nameplate. (Used in Models 4EC66A13, 17).
17	NP248844	Nameplate. (Used in Models 4EC66A12, 16).

SYMBOL	G-E PART NO	DESCRIPTION
A901		TRANSMITTER-RECEIVER TOP PANEL PL-19D402599-G3
		----- SUBASSEMBLIES -----
FL1 and FL2		REED HOLDER PL-19B204982-G2
		----- FILTERS -----
		TONE DETECTOR PL-19C300580
		PL-19C300580-G1 517.5 cps PL-19C300580-G2 532.5 cps PL-19C300580-G3 547.5 cps PL-19C300580-G4 562.5 cps PL-19C300580-G5 577.5 cps PL-19C300580-G6 592.5 cps PL-19C300580-G7 607.5 cps PL-19C300580-G8 622.5 cps PL-19C300580-G9 637.5 cps PL-19C300580-G10 652.5 cps PL-19C300580-G11 667.5 cps PL-19C300580-G12 682.5 cps PL-19C300580-G13 697.5 cps PL-19C300580-G14 712.5 cps PL-19C300580-G15 727.5 cps PL-19C300580-G16 742.5 cps PL-19C300580-G17 757.5 cps PL-19C300580-G18 772.5 cps PL-19C300580-G19 787.5 cps PL-19C300580-G20 802.5 cps PL-19C300580-G21 817.5 cps PL-19C300580-G22 832.5 cps PL-19C300580-G23 847.5 cps PL-19C300580-G24 862.5 cps PL-19C300580-G25 877.5 cps PL-19C300580-G26 892.5 cps PL-19C300580-G27 907.5 cps PL-19C300580-G28 922.5 cps PL-19C300580-G29 937.5 cps PL-19C300580-G30 952.5 cps PL-19C300580-G31 967.5 cps PL-19C300580-G32 982.5 cps PL-19C300580-G33 997.5 cps
C901	7489162-P39	Silver mica: 330 pf ±5%, 500 VDCW; sim to Electro Motive Type DM-15.
C902	5494481-P7	Ceramic disc: 470 pf ±20%, 1000 VDCW; sim to RMC Type JF Discap.
F901	7102673-P2	----- FUSES -----
		Quick blowing: 15 amps at 32 v; sim to Littell-fuse 311015 or Bussmann AGC-15.
J901	7473192-P31	----- JACKS AND RECEPTACLES -----
		Connector, phen: 8 terminals; sim to HB Jones 261-31-08-000.

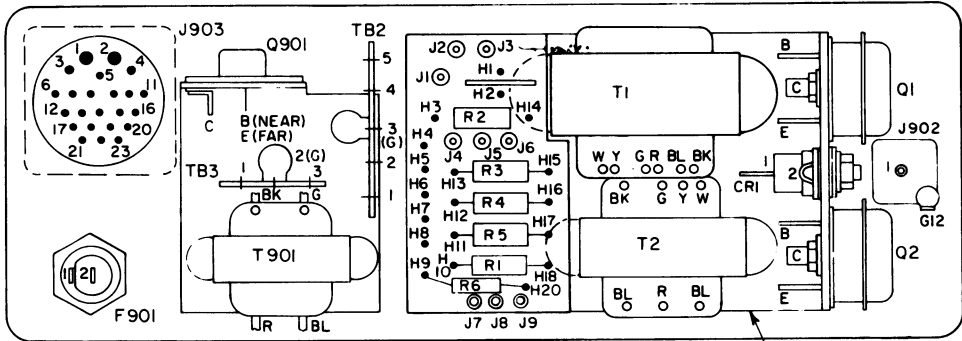
SYMBOL	G-E PART NO	DESCRIPTION
J902	2R22-P3	----- JACKS AND RECEPTACLES(Cont'd) -----
J903	19B200010-P2	Receptacle, panel, coaxial. Signal Corps SO-239 or sim to Amphenol 83-1R.
K901	19C307010-P5	Receptacle: 23 contacts; sim to Cannon Electric NK-L23-32S.
		----- RELAYS -----
P901 and P902	4029840-P2	Armature: 12 VDC nominal, 130 ohms ±10% coil res, 4 form C contacts; sim to Allied Control T154-X-413.
		----- PLUGS -----
P905	4029840-P2	Contact, electrical: sim to AMP 42827-2.
P906 thru P908	4029840-P1	Contact, electrical: sim to AMP 41854.
P909	4029840-P2	Contact, electrical: sim to AMP 42827-2.
P910	4029840-P1	Contact, electrical: sim to AMP 41854.
P912 thru P914	4029840-P2	Contact, electrical: sim to AMP 42827-2.
P916 thru P918	4029840-P2	Contact, electrical: sim to AMP 42827-2.
P920	4029840-P2	Contact, electrical: sim to AMP 42827-2.
P922 and P923	4029840-P2	Contact, electrical: sim to AMP 42827-2.
P924 and P925	7147199-P2	Connector: female contact; sim to Winchester Electronics 21804.
P926	4029840-P2	Contact, electrical: sim to AMP 42827-2.
Q901	19A115527-P1	----- TRANSISTORS -----
		Silicon, NPN.
R901	19B209022-P115	----- RESISTORS -----
		Wirewound: 1 ohm ±10%, 2 w; sim to IRC Type BWH.
R902	3R77-P473K	Fixed composition: 47,000 ohms ±10%, 1/2 w.
T901	19B209079-P1	----- TRANSFORMERS -----
		Audio freq: 0.3-3 KC freq range, Pri: 55 ohms ±10% imp, 0.895 ohm ±10% DC res, Sec: 3.2 ohms imp, 0.168 ohm DC res.
TB1	7775500-P8	----- TERMINAL BOARDS -----
		Phen: 4 terminals.
		Phen: 5 terminals.
TB3	7775500-P7	Phen: 3 terminals.

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES.

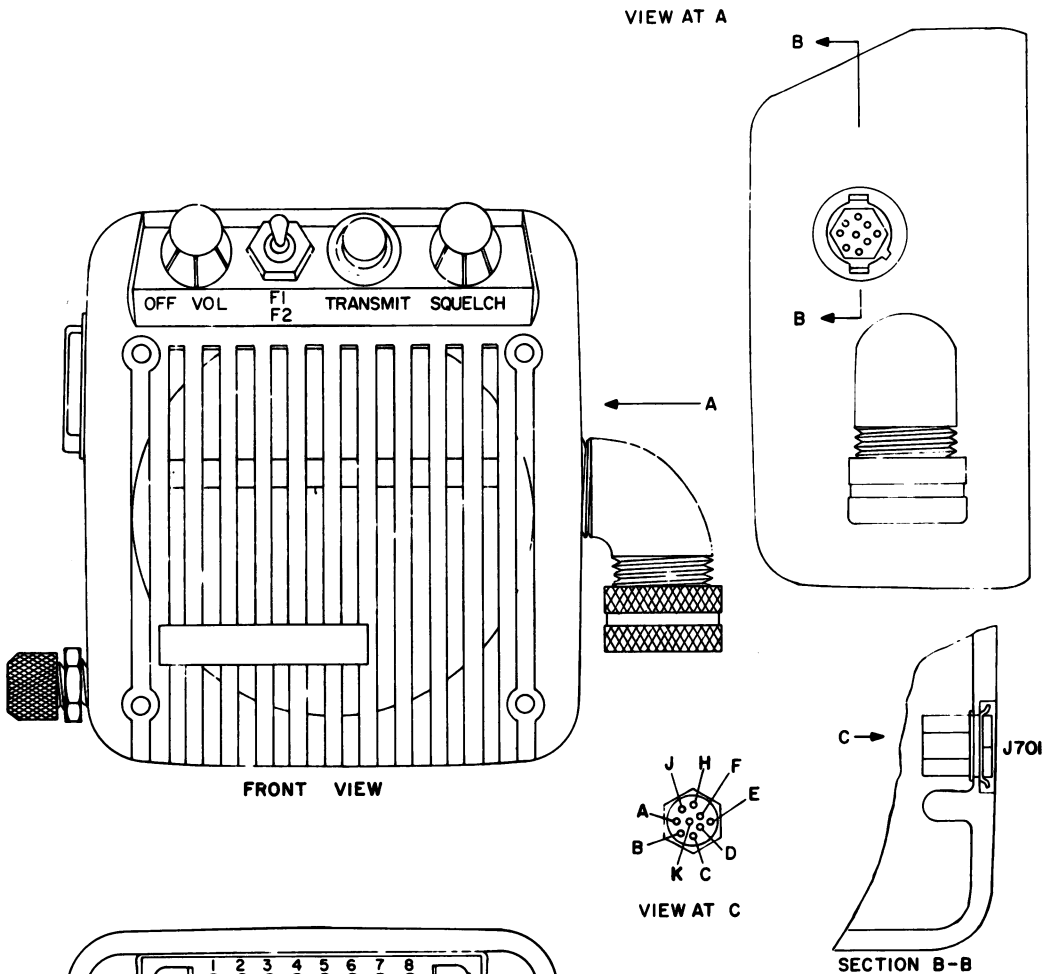
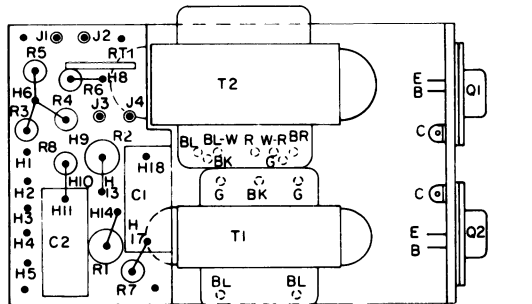
OUTLINE DIAGRAM



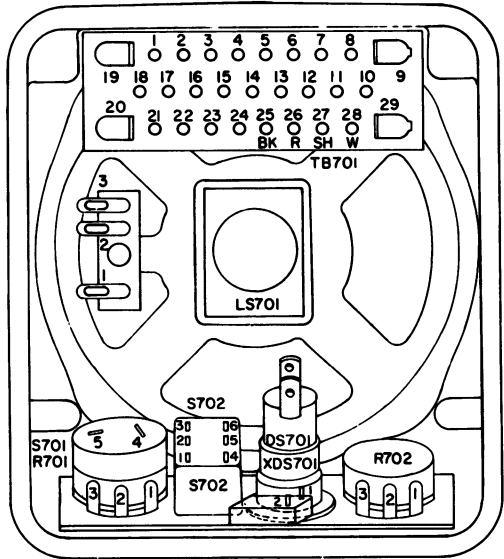
SIDE VIEW-TOP PANEL



COMPONENT VIEW-TOP COVER PANEL



FRONT VIEW



BACK VIEW
EXTENDED LOCAL CONTROL UNIT

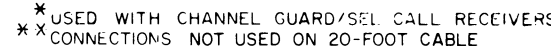
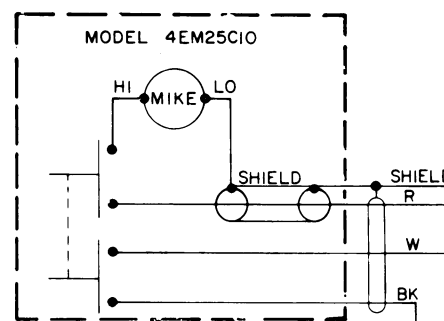
- NOTES:
1. S703 USED ONLY IN MODELS 4EC66A12, 13.
 2. S702 USED ONLY IN MODELS 4EC66A11, 13.
 3. J701 USED ONLY IN MODELS 4EC66A14-17.

SERVICE SHEET

EXTENDED LOCAL CONTROL UNIT
MODELS 4EC66A12, 13, 16 & 17
WITH TRANSMITTER-RECEIVER TOP PANEL
PL-19D402599-G3 (Used with 6/12-Volt
Power Supplies)

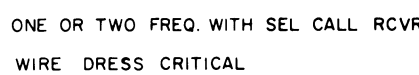
(19D402695, Rev. 5)

CONTROL CABLE



(190303826, Rev. 5)

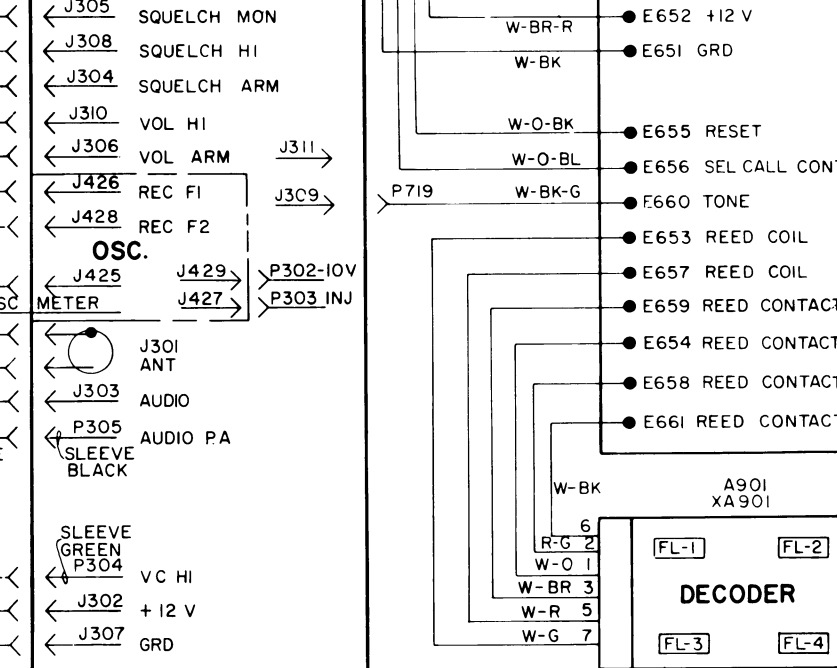
POWER SUPPLY



NOTES:

1. ALL WIRES ARE F-24 EXCEPT AS NOTED.
2. ALL DASHED LINES ARE OPTION.
3. DELETE WIRES BETWEEN TB-2-1 & TB3-3, ALSO BETWEEN TB2-5 & TB3-2, WHEN USING 10 WATT AMPLIFIER.
4. FOR POSITIVE GROUND CHANGE WIRE FROM H6 TO TB2-3 & WIRE FROM H7 TO TB2-4
5. FOR 10 WATT AMPLIFIER OPTION WHEN USING 6 OR 28 VOLTS CHANGE P1, P2 & P3 TO APPROPRIATE JACK.
6. FOR SINGLE FREQUENCY UNITS REMOVE JUMPER BETWEEN J1 & J9 ON TRANSMITTER.

SEL CALL RCVR



EXTENDED LOCAL CONTROL UNIT
MODELS 4EC66A12,13,16 & 17
WITH TRANSMITTER-RECEIVER TOP PANEL
PL-19D402599-G3 (Used with 1/12-Volt
Power Supplies)

SYMBOL	G-E PART NO	DESCRIPTION
W901		----- CABLES -----
		CABLE PL-19A121176-G1
		----- PLUGS -----
P911	5496078-P1	Push-on, coaxial: Teflon; sim to FXR 27-1.
19B209044-P11		----- MISCELLANEOUS -----
		Cable, RF: approx 6 inches; sim to Amphenol 21-898.
		----- PLUGS -----
W902		CABLE PL-19A121176-G2
		----- PLUGS -----
		----- MISCELLANEOUS -----
P927	5496078-P2	Jack, coaxial: sim to FXR 27-2.
19B209044-P13		----- MISCELLANEOUS -----
		Cable, RF: approx 4 inches; sim to Amphenol 421-105.
		----- SOCKETS -----
XA901	19B209065-P2	Tube, phen: 7 contacts; sim to Alcon Metal Products 524M-2.
XF901	19B209265-P3	Fuseholder: 15 amps at 250 v; sim to Littelfuse 342006.
XK901	5491595-P5	Relay: 16 contacts; sim to Allied Control 30054-2.
		MECHANICAL PARTS
PL-19B205129-G1		Cover. (Mounts J902, 903).
19B205127-P1		Support: approx 5-1/4 x 1 inches. (Mounts locking latch).
4029994-P1		Catch, pull-down. (Mates with catch on power supply to keep unit intact).
4037158-P7		Channel, rubber: approx 1-3/8 inches; sim to Atlantic India Rubber X661. (Located above J901).
4032574-P2		Gasket, cover, neoprene: approx 27-3/4 inches.
PL-19A121981-G1		Chassis. (Mounts T901, T82, 3).
7763541-P5		Clip, cable. (Located between F901 and J903).
19A121178-P1		Support. (Used with J901).
5491595-P9		Clip, relay: sim to Allied Control 30040-2. (Used with K901).
7763541-P4		Clip, cable. (Located by XK901).
PL-19B204532-G1		Chassis.
19A122071-P1		Grommet: approx 1-1/4 inches. (Located by K901).

SYMBOL	G-E PART NO	DESCRIPTION
PL-19A122010-G2		----- ASSOCIATED ASSEMBLIES -----
		Control Mounting Kit.
		132-174 MC ANTENNA MODEL 4EY12A13 (5490969-P13) (HIGH BAND)
5490969-P4		----- MISCELLANEOUS -----
		Antenna: includes 20-inch stainless steel whip, whip socket, antenna cable, cable adapter, PL-259 plug; sim to Antenna Specialists ASPD201GE or Danbury-Knudsen Type PA-25.
		Whip: 20-inch stainless steel.
5490969-P5		Socket, whip.
5490969-P6		Whip and whip socket: 20-inch stainless steel whip, whip socket.
7105381-P1		Cable, antenna: approx 15 feet. Type RG-58/U. (Used with G-E Dwg 2R22-P1 and G-E Dwg 7105381-P1).
2R22-P1		Adapter, cable: 1 x 7/16 inches dia. Type UG-175/U. (Used with G-E Dwg 2R22-P1 and Type RG-58/U cable).
19C303658-P1		----- MISCELLANEOUS -----
		Plug, coaxial: Signal Corps PL-259; sim to Amphenol 83-18P. (Used with G-E Dwg 7105381-P1 and Type RG-58/U cable).
		25-54 MC ANTENNAS MODELS 4EY18A10-15 (LOW BAND)
19C303707-P1		----- MISCELLANEOUS -----
		Model 4EY18A10, 25-29 MC Antenna. Includes 48-1/4 inch stainless steel rod, tuning screw, rubber O-ring weather seal; sim to Antenna Specialists ASP-431-GE.
		Model 4EY18A11, 29-33 MC Antenna. Includes 48-1/4 inch stainless steel rod, tuning screw, rubber O-ring weather seal; sim to Antenna Specialists ASP-431-GE.
19C303707-P2		Model 4EY18A12, 33-36 MC Antenna. Includes 48-1/4 inch stainless steel rod, tuning screw, rubber O-ring weather seal; sim to Antenna Specialists ASP-B431-GE.
19C303707-P3		Model 4EY18A13, 36-42 MC Antenna. Includes 38-inch stainless steel rod, tuning screw, rubber O-ring weather seal; sim to Antenna Specialists ASP-C431-GE.
19C303707-P4		Model 4EY18A14, 42-48 MC Antenna. Includes 38-inch stainless steel rod, tuning screw, rubber O-ring weather seal; sim to Antenna Specialists ASP-D431-GE.
19C303707-P5		Model 4EY18A15, 48-54 MC Antenna. Includes 38-inch stainless steel rod, tuning screw, rubber O-ring weather seal; sim to Antenna Specialists ASP-E431-GE.
2R22-P2		Adapter, UHF: right angle. Signal Corps M-359; sim to Amphenol 83-1AP. (Used in Models 4EY18A10-15).
7491074-P1		----- MISCELLANEOUS -----
		25-50 MC ANTENNA (LOW BAND)
		Antenna: includes 96-1/2 inch stainless steel rod; sim to Antenna Specialists ASPA3BGE.

SYMBOL	G-E PART NO	DESCRIPTION
7102930-P3		----- MISCELLANEOUS(Cont'd) -----
		Adapter, antenna: 2-5/16 inches. (Used with G-E Dwg 7491074-P1).
		Antenna package: includes base, adapter spring, cable and plug.
PL-4033101-G1		Antenna base. (Used in PL-4033101-G1).
PL-7472880-G5		Adapter spring. (Used in PL-4033101-G1).
5492239-P1		Cable, antenna: includes Type RG-58/U cable approx 15 feet, PL-259 plug, terminal; sim to Antenna Specialists 15A43. (Used in PL-4033101-G1).
2R22-P1		Plug, coaxial: Signal Corps PL-259; sim to Amphenol 83-18P. (Used with G-E Dwg 5492239-P1 in PL-4033101-G1).
4039101-P1		Coil, loading: 25-54 megacycles; sim to Antenna Specialists ASPA87.
PL-19A121577-G1		Antenna hook kit.
7134724-P1		Antenna hook. (Used in PL-19A121577-G1).
19C303658-P1		----- MISCELLANEOUS -----
		132-174 MC ANTENNA MODEL 4EY19A10 (HIGH BAND)
		----- MISCELLANEOUS -----
19C303620-P1		----- MISCELLANEOUS -----
		Antenna. Includes 22-inch stainless steel rod, sleeving, spring, cap and O-ring; sim to Antenna Specialists ASP-405-GE.
		25-50, 132-174 MC ANTENNA MODEL 4EY20A10
19C303620-P2		Antenna. Includes 19-1/2 inch stainless steel whip, socket, insulators, adapter, RG-58A/U cable, PL-259 plug, clip; sim to Antenna Specialists ASP-157.
19C303620-P3		Replacement whip. Includes 19-1/2 inch stainless steel whip, socket, insulators; sim to Antenna Specialists 19A904-1.
19C303707-P1		Model 4EY18A10, 25-29 MC Antenna. Includes 48-1/4 inch stainless steel rod, tuning screw, rubber O-ring weather seal; sim to Antenna Specialists ASP-431-GE.
19C303707-P2		Model 4EY18A11, 29-33 MC Antenna. Includes 48-1/4 inch stainless steel rod, tuning screw, rubber O-ring weather seal; sim to Antenna Specialists ASP-431-GE.
19C303707-P3		Model 4EY18A12, 33-36 MC Antenna. Includes 48-1/4 inch stainless steel rod, tuning screw, rubber O-ring weather seal; sim to Antenna Specialists ASP-B431-GE.
19C303707-P4		Model 4EY18A13, 36-42 MC Antenna. Includes 38-inch stainless steel rod, tuning screw, rubber O-ring weather seal; sim to Antenna Specialists ASP-C431-GE.
19C303707-P5		Model 4EY18A14, 42-48 MC Antenna. Includes 38-inch stainless steel rod, tuning screw, rubber O-ring weather seal; sim to Antenna Specialists ASP-D431-GE.
19C303707-P6		Model 4EY18A15, 48-54 MC Antenna. Includes 38-inch stainless steel rod, tuning screw, rubber O-ring weather seal; sim to Antenna Specialists ASP-E431-GE.
2R22-P2		Adapter, UHF: right angle. Signal Corps M-359; sim to Amphenol 83-1AP. (Used in Models 4EY18A10-15).
7491074-P1		----- MISCELLANEOUS -----
		25-50 MC ANTENNA (LOW BAND)
		Antenna: includes 96-1/2 inch stainless steel rod; sim to Antenna Specialists ASPA3BGE.

SYMBOL	G-E PART NO	DESCRIPTION
MICROPHONE MODEL 4EM33B10 (19B209199-P2)		----- MISCELLANEOUS -----
		Switch: moisture proof. Shure Brothers RP33.
		Cable and plug: approx 5 feet. Shure Brothers RP35.
MICROPHONE MODEL 4EM33C10 (19B209306-P1)		----- MISCELLANEOUS -----
		Button: red plastic. Shure Brothers RP34.
		Cartridge, magnetic controlled. Shure Brothers RP32.
MICROPHONE MODEL 4EM33D10 (19B209199-P3)		----- MISCELLANEOUS -----
		Case, mounting button and nameplate; plastic. Shure Brothers RP31.
		Shield. Shure Brothers RP36.
HANDSET MODEL 4EM34A10 (19B209198-P1)		----- MISCELLANEOUS -----
		Switch: moisture proof. Shure Brothers RP33.
		Cable and plug: approx 80 inches. Shure Brothers RP35.
POWER CONTROL CABLE PL-19C303828-G2		----- MISCELLANEOUS -----
		Button: red plastic. Shure Brothers RP34.
		Cartridge, magnetic controlled. Shure Brothers RP32.
POWER CONTROL CABLE PL-19C303828-G3		----- MISCELLANEOUS -----
		Case, mounting button and nameplate; plastic. Shure Brothers RP31.
		Shield. Shure Brothers RP36.
POWER CONTROL CABLE PL-19C303828-G2		----- MISCELLANEOUS -----
		Switch: moisture proof. Shure Brothers RP33.
		Cable and plug: approx 80 inches. Shure Brothers RP35.
POWER CONTROL CABLE PL-19C303828-G3		----- MISCELLANEOUS -----
		Button: red plastic. Shure Brothers RP34.
		Cartridge, magnetic controlled. Shure Brothers RP32.
POWER CONTROL CABLE PL-19C303828-G2		----- MISCELLANEOUS -----
		Case, mounting button and nameplate; plastic. Shure Brothers RP31.
		Shield. Shure Brothers RP36.
POWER CONTROL CABLE PL-19C303828-G3		----- MISCELLANEOUS -----
		Switch: moisture proof. Shure Brothers RP33.
		Cable and plug: approx 80 inches. Shure Brothers RP35.
POWER CONTROL CABLE PL-19C303828-G2		----- MISCELLANEOUS -----
		Button: red plastic. Shure Brothers RP34.
		Cartridge, magnetic controlled. Shure Brothers RP32.
POWER CONTROL CABLE PL-19C303828-G3		----- MISCELLANEOUS -----
		Case, mounting button and nameplate; plastic. Shure Brothers RP31.
		Shield. Shure Brothers RP36.
POWER CONTROL CABLE PL-19C303828-G2		----- MISCELLANEOUS -----
		Switch: moisture proof. Shure Brothers RP33.
		Cable and plug: approx 80 inches. Shure Brothers RP35.
POWER CONTROL CABLE PL-19C303828-G3		----- MISCELLANEOUS -----
		Button: red plastic. Shure Brothers RP34.
		Cartridge, magnetic controlled. Shure Brothers RP32.
POWER CONTROL CABLE PL-19C303828-G2		----- MISCELLANEOUS -----
		Case, mounting button and nameplate; plastic. Shure Brothers RP31.
		Shield. Shure Brothers RP36.
POWER CONTROL CABLE PL-19C303828-G3		----- MISCELLANEOUS -----
		Switch: moisture proof. Shure Brothers RP33.
		Cable and plug: approx 80 inches. Shure Brothers RP35.
POWER CONTROL CABLE PL-19C303828-G2		----- MISCELLANEOUS -----
		Button: red plastic. Shure Brothers RP34.
		Cartridge, magnetic controlled. Shure Brothers RP32.
POWER CONTROL CABLE PL-19C303828-G3		----- MISCELLANEOUS -----
		Case, mounting button and nameplate; plastic. Shure Brothers RP31.
		Shield. Shure Brothers RP36.
POWER CONTROL CABLE PL-19C303828-G2		----- MISCELLANEOUS -----
		Switch: moisture proof. Shure Brothers RP33.
		Cable and plug: approx 80 inches. Shure Brothers RP35.
POWER CONTROL CABLE PL-19C303828-G3		----- MISCELLANEOUS -----
		Button: red plastic. Shure Brothers RP34.
		Cartridge, magnetic controlled. Shure Brothers RP32.
POWER CONTROL CABLE PL-19C303828-G2		----- MISCELLANEOUS -----
		Case, mounting button and nameplate; plastic. Shure Brothers RP31.
		Shield. Shure Brothers RP36.
POWER CONTROL CABLE PL-19C303828-G3		----- MISCELLANEOUS -----
		Switch: moisture proof. Shure Brothers RP33.
		Cable and plug: approx 80 inches. Shure Brothers RP35.
POWER CONTROL CABLE PL-19C303828-G2		----- MISCELLANEOUS -----
		Button: red plastic. Shure Brothers RP34.
		Cartridge, magnetic controlled. Shure Brothers RP32.
POWER CONTROL CABLE PL-19C303828-G3		----- MISCELLANEOUS -----
		Case, mounting button and nameplate; plastic. Shure Brothers RP31.
		Shield. Shure Brothers RP36.
POWER CONTROL CABLE PL-19C303828-G2		----- MISCELLANEOUS -----
		Switch: moisture proof. Shure Brothers RP33.
		Cable and plug: approx 80 inches. Shure Brothers RP35.
POWER CONTROL CABLE PL-19C303828-G3		----- MISCELLANEOUS -----
		Button: red plastic. Shure Brothers RP34.
		Cartridge, magnetic controlled. Shure Brothers RP32.
POWER CONTROL CABLE PL-19C303828-G2		----- MISCELLANEOUS -----
		Case, mounting button and nameplate; plastic. Shure Brothers RP31.
		Shield. Shure Brothers RP36.
POWER CONTROL CABLE PL-19C303828-G3		----- MISCELLANEOUS -----
		Switch: moisture proof. Shure Brothers RP33.
		Cable and plug: approx 80 inches. Shure Brothers RP35.
POWER CONTROL CABLE PL-19C303828-G2		----- MISCELLANEOUS -----
		Button: red plastic. Shure Brothers RP34.
		Cartridge, magnetic controlled. Shure Brothers RP32.
POWER CONTROL CABLE PL-19C303828-G3		----- MISCELLANEOUS -----
		Case, mounting button and nameplate; plastic. Shure Brothers RP31.
		Shield. Shure Brothers RP36.
POWER CONTROL CABLE PL-19C303828-G2		----- MISCELLANEOUS -----
		Switch: moisture proof. Shure Brothers RP33.
		Cable and plug: approx 80 inches. Shure Brothers RP35.
POWER CONTROL CABLE PL-19C303828-G3		----- MISCELLANEOUS -----
		Button: red plastic. Shure Brothers RP34.
		Cartridge, magnetic controlled. Shure Brothers RP32.
POWER CONTROL CABLE PL-19C303828-G2		----- MISCELLANEOUS -----
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POWER CONTROL CABLE PL-19C303828-G3		----- MISCELLANEOUS -----
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POWER CONTROL CABLE PL-19C303828-G3		----- MISCELLANEOUS -----
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POWER CONTROL CABLE PL-19C303828-G2		----- MISCELLANEOUS -----
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POWER CONTROL CABLE PL-19C303828-G3		----- MISCELLANEOUS -----
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POWER CONTROL CABLE PL-19C303828-G2		----- MISCELLANEOUS -----
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		Shield. Shure Brothers RP36.
POWER CONTROL CABLE PL-19C303828-G3		----- MISCELLANEOUS -----
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POWER CONTROL CABLE PL-19C303828-G3		----- MISCELLANEOUS -----
		Case, mounting button and nameplate; plastic. Shure Brothers RP31.
		Shield. Shure Brothers RP36.
POWER CONTROL CABLE PL-19C303828-G2		----- MISCELLANEOUS -----
		Switch: moisture proof. Shure Brothers RP33.
		Cable and plug: approx 80 inches. Shure Brothers RP35.
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		Button: red plastic. Shure Brothers RP34.
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POWER CONTROL CABLE PL-19C303828-G3		----- MISCELLANEOUS -----
		Switch: moisture proof. Shure Brothers RP33.
		Cable and plug: approx 80 inches. Shure Brothers RP35.
POWER CONTROL CABLE PL-19C303828-G2		----- MISCELLANEOUS -----
		Button: red plastic. Shure Brothers RP34.
		Cartridge, magnetic controlled. Shure Brothers RP32.
POWER CONTROL CABLE PL-19C303828-G3		----- MISCELLANEOUS -----
		Case, mounting button and nameplate; plastic. Shure Brothers RP31.
		Shield. Shure Brothers RP36.
POWER CONTROL CABLE PL-19C303828-G2		----- MISCELLANEOUS -----
		Switch: moisture proof. Shure Brothers RP33.
		Cable and plug: approx 80 inches. Shure Brothers RP35.
POWER CONTROL CABLE PL-19C303828-G3		----- MISCELLANEOUS -----
		Button: red plastic. Shure Brothers RP34.
		Cartridge, magnetic controlled. Shure Brothers RP32.
POWER CONTROL CABLE PL-19C303828-G2		----- MISCELLANEOUS -----
		Case, mounting button and nameplate; plastic. Shure Brothers RP31.
		Shield. Shure Brothers RP36.
POWER CONTROL CABLE PL-19C303828-G3		----- MISCELLANEOUS -----
		Switch: moisture proof. Shure Brothers RP33.
		Cable and plug: approx 80 inches. Shure Brothers RP35.
POWER CONTROL CABLE PL-19C303828-G2		----- MISCELLANEOUS -----
		Button: red plastic. Shure Brothers RP34.
		Cartridge, magnetic controlled. Shure Brothers RP32.
POWER CONTROL CABLE PL-19C303828-G3		----- MISCELLANEOUS -----
		Case, mounting button and nameplate; plastic. Shure Brothers RP31.
		Shield. Shure Brothers RP36.
POWER CONTROL CABLE PL-19C303828-G2		----- MISCELLANEOUS -----
		Switch: moisture proof. Shure Brothers RP33.

PARTS LIST

LBI-3693A

CONTROL UNIT WITH SELECTIVE CALLING

MODEL 4EC6A12 (PL-19D402603-G3) (1 Frequency)

MODEL 4EC6A13 (PL-19D402603-G4) (2 Frequency)

MODEL 4EC6A16 (PL-19D402603-G7) (1 Frequency with ACCESSORY JACK OPTION)

MODEL 4EC6A17 (PL-19D402603-G8) (2 Frequency with ACCESSORY JACK OPTION)

TRANSMITTER-RECEIVER TOP PANEL PL-19D402599-G6

AND

ASSOCIATED ASSEMBLIES

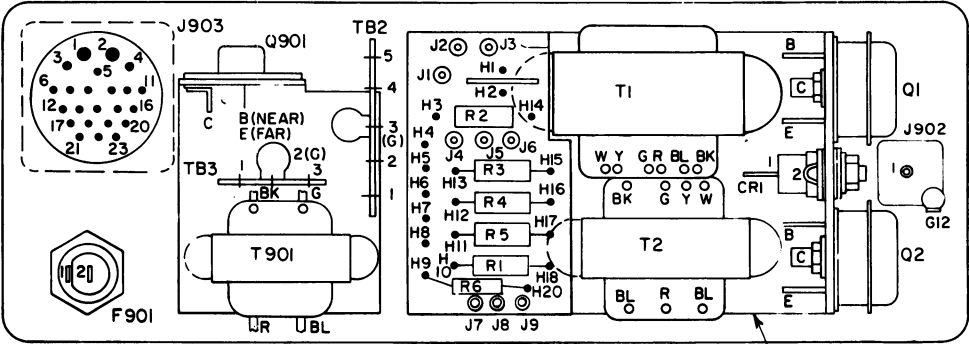
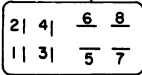
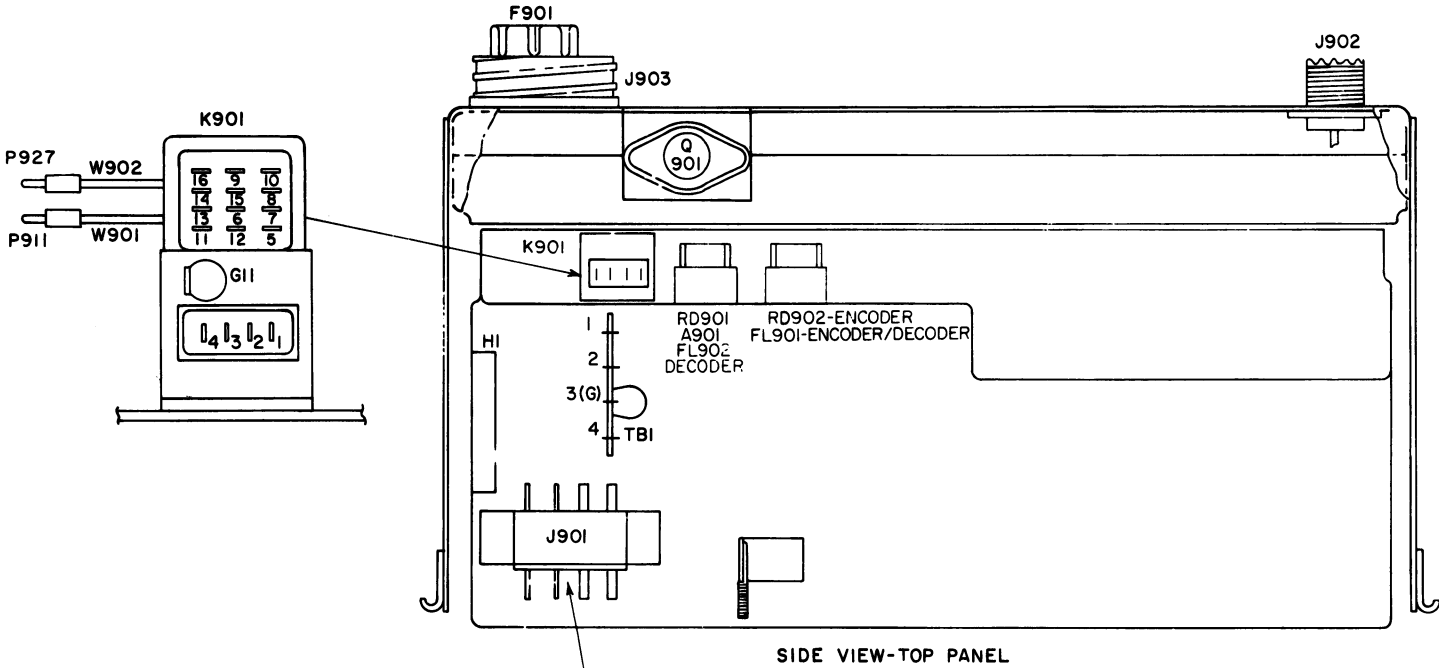
SYMBOL	G-E PART NO.	DESCRIPTION
----- INDICATING DEVICES -----		
DS701	19C307037-P4	Lamp, incandescent: 14 v; sim to G-E 1815.
----- JACKS AND RECEPTACLES -----		
J701	7489183-P5	Connector: 9 contacts; sim to Winchester M9S-LRN. (Used in Models 4EC6A16, 17).
----- LOUDSPEAKERS -----		
LS701	5491260-P7	Permanent magnet, 5-inch: 3.2 ohms $\pm$ 10% voice coil imp, 15 w max operating, 385 cps $\pm$ 15% resonance, paper dust cap; sim to Jensen Model P5-VAS12761.
----- RESISTORS -----		
R701	19B209256-P2	Resistor/switch: includes Resistor, variable, 5000 ohms $\pm$ 20%, 0.25 w; Switch (S701), rotary, SPST, 15 amps at 10 v; sim to CTS Series 45.
R702	19B209256-P1	Variable, carbon film: 5000 ohms $\pm$ 20%, 0.5 w; sim to CTS Series 45.
----- SWITCHES -----		
S701		(Part of R701).
S702	5491899-P6	Toggle: DPDT, 3 amps at 250 v; sim to Cutler--Hammer 8363K7. (Used in Models 4EC6A13, 17).
S703	5491899-P7	Toggle: SPST, 3 amps at 125 v; sim to Cutler--Hammer 8280K16.
----- TERMINAL BOARDS -----		
TB701	PL-19B205152-G1	Terminal board: 25 contacts.
----- SOCKETS -----		
XDS701	7141855-P15	Lamp: sim to Dialight 95-410-975 (modified).
MECHANICAL PARTS (SEE RC-1340)		
1	19A122065-P1	Bushing: 3/4-14; sim to Pyle-National DB-1191690 (modified).
2	19A122066-P1	Bushing: 1/4-18; sim to Pyle-National DB-44516 (modified).
3	4031457-P1	Support. (Used with microphone).
4	4031458-P1	Spring. (Used with microphone).
5	4032574-P2	Gasket, cover, neoprene: approx 27-3/4 inches.
6	19D402601-P3	Casting. (Used in Model 4EC6A12).
7	19D402601-P4	Casting. (Used in Model 4EC6A13).
8	19D402601-P7	Casting. (Used in Model 4EC6A16).
9	19D402601-P8	Casting. (Used in Model 4EC6A17).
10	19B205162-P1	Diaphragm: approx 2-3/8 inches dia.
11	19A121990-P1	Spacer: 3/4 inch hex. (Used with TB701).
12	5490135-P4	Boot: 15/32-32; sim to APM-Hexseal N-1030-B. (Used with S702 in Models 4EC6A13, 17, S703).
13	NP248842	Nameplate.
14	PL-4039182-G1	Knob. (Used with R701, 702).
15	19A115040-P9	Lens, panel light: red lens; sim to Dialight 81-331. (Used with DS701).
16	NP248843	Nameplate. (Used in Models 4EC6A13, 17).
17	NP248844	Nameplate. (Used in Models 4EC6A12, 16).

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES.

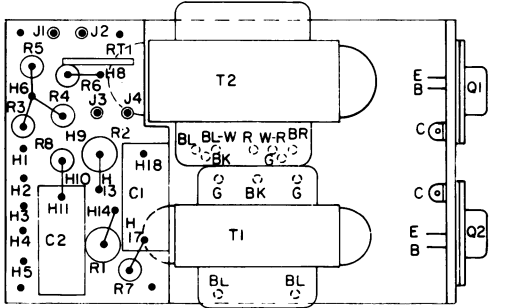
SYMBOL	G-E PART NO	DESCRIPTION
A901		TRANSMITTER-RECEIVER TOP PANEL PL-19D402599-G6
		----- SUBASSEMBLIES -----
		REED HOLDER PL-19B204982-G2
FL1 and FL2		----- FILTERS -----
		----- TONE DETECTOR PL-19C300580
		PL-19C300580-G1 517.5 cps PL-19C300580-G2 532.5 cps PL-19C300580-G3 547.5 cps PL-19C300580-G4 562.5 cps PL-19C300580-G5 577.5 cps PL-19C300580-G6 592.5 cps PL-19C300580-G7 607.5 cps PL-19C300580-G8 622.5 cps PL-19C300580-G9 637.5 cps PL-19C300580-G10 652.5 cps PL-19C300580-G11 667.5 cps PL-19C300580-G12 682.5 cps PL-19C300580-G13 697.5 cps PL-19C300580-G14 712.5 cps PL-19C300580-G15 727.5 cps PL-19C300580-G16 742.5 cps PL-19C300580-G17 757.5 cps PL-19C300580-G18 772.5 cps PL-19C300580-G19 787.5 cps PL-19C300580-G20 802.5 cps PL-19C300580-G21 817.5 cps PL-19C300580-G22 832.5 cps PL-19C300580-G23 847.5 cps PL-19C300580-G24 862.5 cps PL-19C300580-G25 877.5 cps PL-19C300580-G26 892.5 cps PL-19C300580-G27 907.5 cps PL-19C300580-G28 922.5 cps PL-19C300580-G29 937.5 cps PL-19C300580-G30 952.5 cps PL-19C300580-G31 967.5 cps PL-19C300580-G32 982.5 cps PL-19C300580-G33 997.5 cps
C902	5494481-P7	Ceramic disc: 470 pf $\pm$ 20%, 1000 VDCW; sim to RMC Type JF Discap.
----- JACKS AND RECEPTACLES -----		
J901	7473192-P31	Connector, phen: 8 terminals; sim to HB Jones 261-31-08-000.
J902	2R22-P3	Receptacle, panel, coaxial. Signal Corps SO-239 or sim to Amphenol 83-1R.
J903	19B200010-P2	Receptacle: 23 contacts; sim to Cannon Electric NK-L23-32S.
----- RELAYS -----		
K901	19C307010-P5	Armature: 12 VDC nominal, 130 ohms $\pm$ 10% coil res, 4 form C contacts; sim to Allied Control T154-X-413.
----- PLUGS -----		
P901 and P902	4029840-P2	Contact, electrical: sim to AMP 42827-2.
P905	4029840-P2	Contact, electrical: sim to AMP 42827-2.
P906 thru P908	4029840-P1	Contact, electrical: sim to AMP 41854.
P909	4029840-P2	Contact, electrical: sim to AMP 42827-2.
P910	4029840-P1	Contact, electrical: sim to AMP 41854.
P912 thru P914	4029840-P2	Contact, electrical: sim to AMP 42827-2.
P916 thru P918	4029840-P2	Contact, electrical: sim to AMP 42827-2.
P920	4029840-P2	Contact, electrical: sim to AMP 42827-2.
P922 and P923	4029840-P2	Contact, electrical: sim to AMP 42827-2.

SYMBOL	G-E PART NO	DESCRIPTION
----- PLUGS(Cont'd) -----		
P924 and P925	7147199-P2	Connector: female contact; sim to Winchester Electronics 21804.
P926	4029840-P2	Contact, electrical: sim to AMP 42827-2.
----- TRANSISTORS -----		
Q901	19A115527-P1	Silicon, NPN.
----- RESISTORS -----		
R901	19B209022-P115	Wirewound: 1 ohm $\pm$ 10%, 2 w; sim to IRC Type BWH.
R902	3R77-P473K	Fixed composition: 47,000 ohms $\pm$ 10%, 1/2 w.
----- TRANSFORMERS -----		
T901	19B209079-P1	Audio freq: 0.3-3 KC freq range, Pri: 55 ohms $\pm$ 10% imp, 0.895 ohm $\pm$ 10% DC res, Sec: 3.2 ohms imp, 0.168 ohm DC res.
----- TERMINAL BOARDS -----		
TB1	7775500-P8	Phen: 4 terminals.
TB2	7775500-P11	Phen: 5 terminals.
TB3	7775500-P7	Phen: 3 terminals.
----- CABLES -----		
W901		CABLE PL-19A121176-G1
----- PLUGS -----		
P911	5496078-P1	Push-on, coaxial: Teflone; sim to FXR 27-1.
----- MISCELLANEOUS -----		
	19B209044-P11	Cable, RF: approx 6 inches; sim to Amphenol 21-598.
W902		CABLE PL-19A121176-G2
----- PLUGS -----		
P927	5496078-P2	Jack, coaxial: sim to FXR 27-2.
----- MISCELLANEOUS -----		
	19B209044-P13	Cable, RF: approx 4 inches; sim to Amphenol 421-105.
----- SOCKETS -----		
XA901	19B209065-P2	Tube, phen: 7 contacts; sim to Alcon Metal Products 524M-2.
XK901	5491595-P5	Relay: 16 contacts; sim to Allied Control 30054-2.
MECHANICAL PARTS		
	PL-19B205129-G2	Cover. (Mounts J902, 903).
	19B205127-P1	Support: approx 5-1/4 x 1 inches. (Mounts locking latch).
	4029994-P1	Catch, pull-down. (Mates with catch on power supply to keep unit intact).
	4037158-P7	Channel, rubber: approx 1-3/8 inches; sim to Atlantic India Rubber X661. (Located above J901).
	4032574-P2	Gasket, cover, neoprene: approx 27-3/4 inches.
	PL-19A121981-G1	Chassis. (Mounts T901, TB2, 3).
	7763541-P5	Clip, cable. (Located by J903).
	19A121178-P1	Support. (Used with J901).
	5491595-P9	Clip, relay: sim to Allied Control 30040-2. (Used with K901).
	7763541-P4	Clip, cable. (Located by XK901).
	PL-19B204532-G1	Chassis.

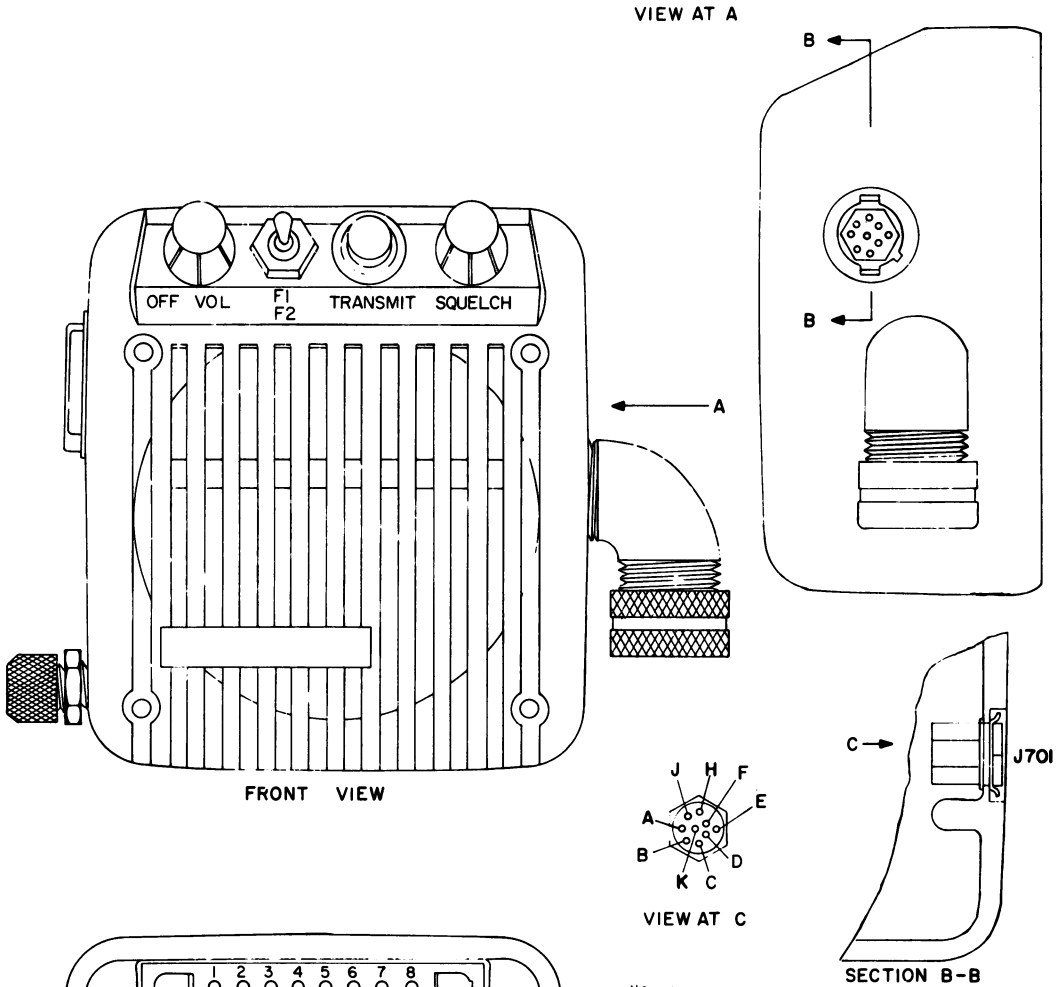
OUTLINE DIAGRAM



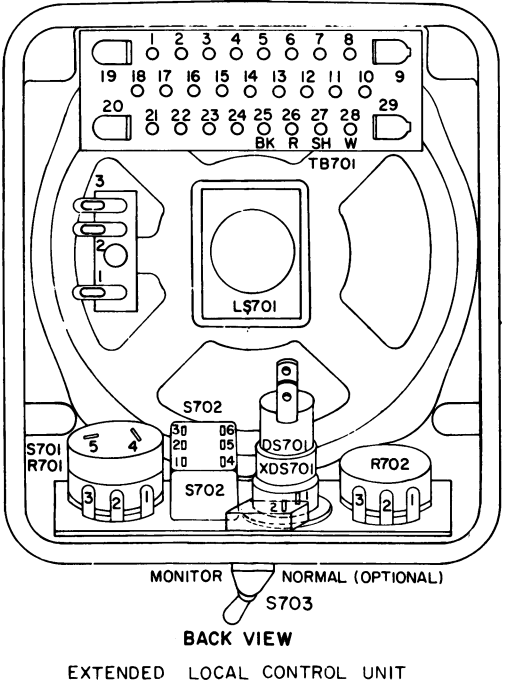
COMPONENT VIEW-TOP COVER PANEL
10-WATT AUDIO AMPLIFIER (USED WITH 6/12V POWER SUPPLY)



10-WATT T AUDIO AMPLIFIER (USED WITH 24/36V POWER SUPPLY)



- NOTES:
1. S703 USED ONLY IN MODELS 4EC66A12, 13.
2. S702 USED ONLY IN MODELS 4EC66A11, 13.
3. J701 USED ONLY IN MODELS 4EC66A14-17.



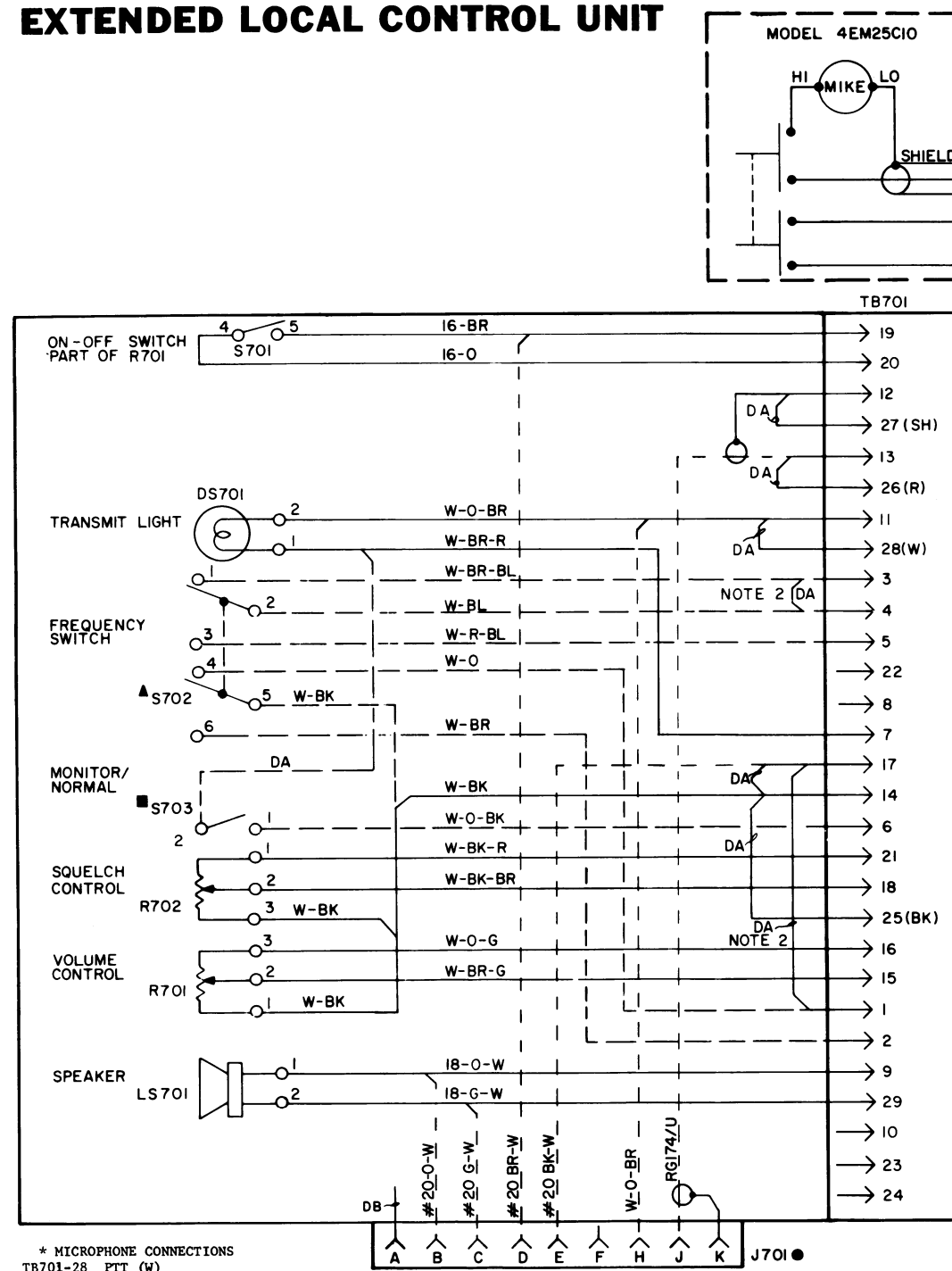
BACK VIEW
EXTENDED LOCAL CONTROL UNIT

SERVICE SHEET

EXTENDED LOCAL CONTROL UNIT
MODELS 4EC66A12, 13, 16 & 17
WITH TRANSMITTER-RECEIVER TOP PANEL
PL-19D402599-G6 (Used with 24/36-Volt
Power Supply)

(19D402695, Rev. 5)

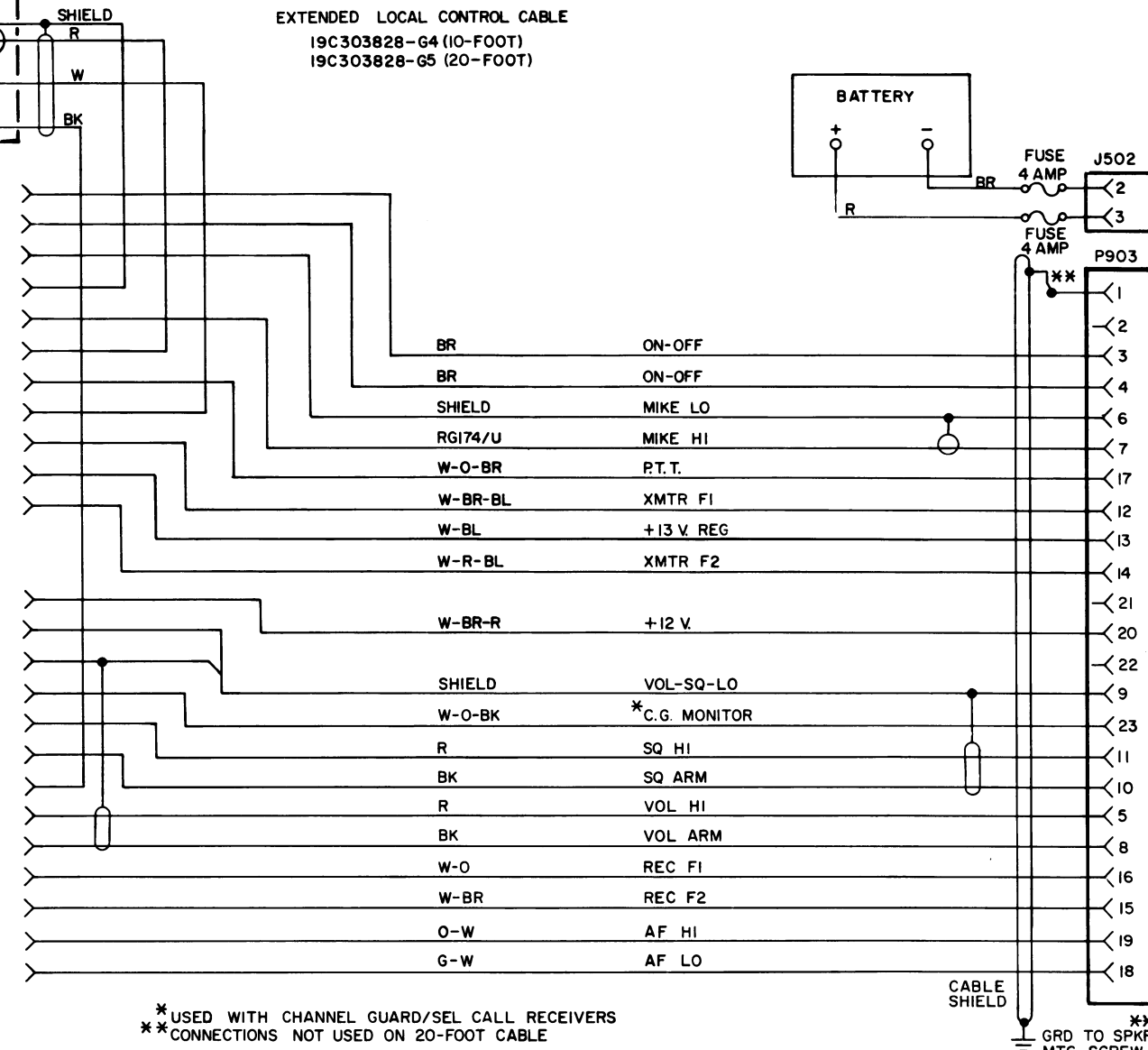
EXTENDED LOCAL CONTROL UNIT



(19C303826, Rev. 3)

CONTROL CABLE

EXTENDED LOCAL CONTROL CABLE
19C303828-G4 (10-FOOT)
19C303828-G5 (20-FOOT)

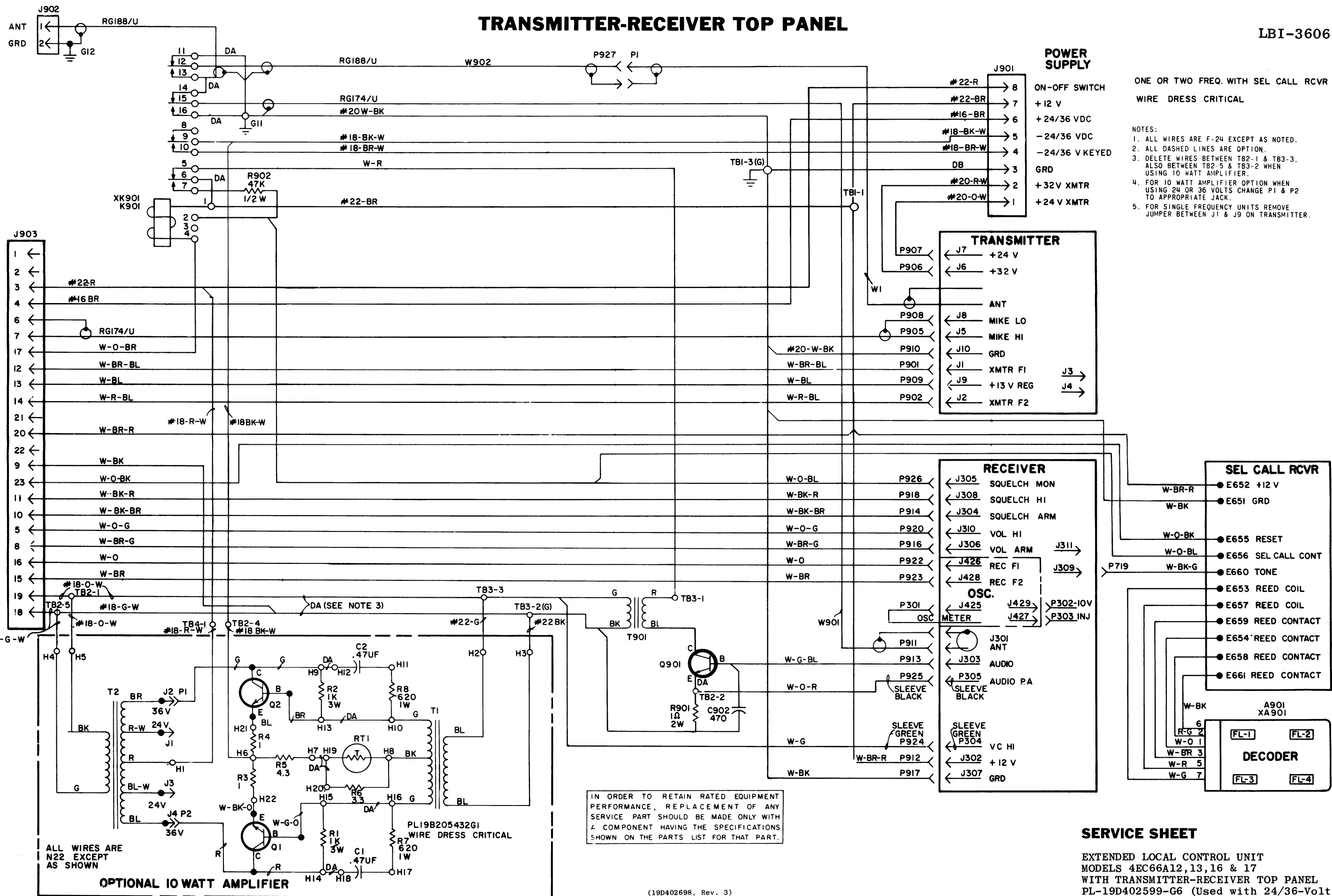


* USED WITH CHANNEL GUARD/SEL CALL RECEIVERS
** CONNECTIONS NOT USED ON 20-FOOT CABLE

(RC-1366A)

TRANSMITTER-RECEIVER TOP PANEL

LBI-3606



SERVICE SHEET

EXTENDED LOCAL CONTROL UNIT
MODELS 4EC66A12,13,16 & 17
WITH TRANSMITTER-RECEIVER TOP PANEL
PL-19D402599-G6 (Used with 24/36-Volt
Power Supply)

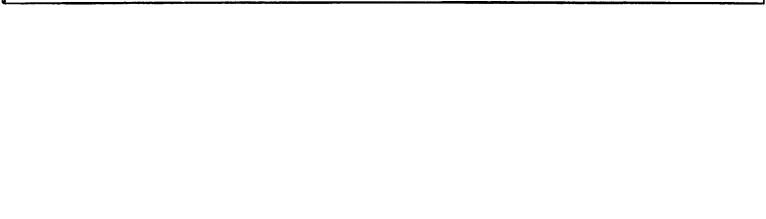
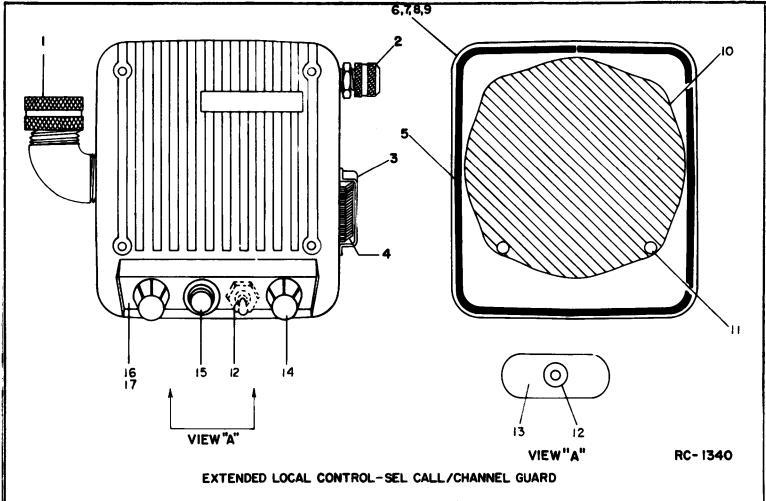
(RC-1375, Sheet 2)

(LBI-3693)

SYMBOL	G-E PART NO	DESCRIPTION
		MECHANICAL PARTS(Cont'd)
	19A122071-P1	Grommet: approx 1-1/4 inches. (Located by K901).
		----- ASSOCIATED ASSEMBLIES -----
	PL-19A122010-G2	Control Mounting Kit.
		132-174 MC ANTENNA MODEL 4EY12A13 (5490969-P13) (HIGH BAND)
		----- MISCELLANEOUS -----
		Antenna: includes 20-inch stainless steel whip, whip socket, antenna cable, cable adapter, PL-259 plug; sim to Antenna Specialists ASPD201GE or Danbury-Knudsen Type PA-25.
	5490969-P4	Whip: 20-inch stainless steel.
	5490969-P5	Socket, whip.
	5490969-P6	Whip and whip socket: 20-inch stainless steel whip, whip socket.
		Cable, antenna: approx 15 feet. Type RG-58/U. (Used with G-E Dwg 2R22-P1 and G-E Dwg 7105381-P1).
	7105381-P1	Adapter, cable: 1 x 7/16 inches dia. Type UG-175/U. (Used with G-E Dwg 2R22-P1 and Type RG-58/U cable).
	2R22-P1	Plug, coaxial: Signal Corps PL-259; sim to Amphenol 83-1SP. (Used with G-E Dwg 7105381-P1 and Type RG-58/U cable).
		25-54 MC ANTENNAS MODELS 4EY18A10-15 (LOW BAND)
		----- MISCELLANEOUS -----
	19C303707-P1	Model 4EY18A10, 25-29 MC Antenna. Includes 48-1/4 inch stainless steel rod, tuning screw, rubber O-ring weather seal; sim to Antenna Specialists ASP-431-GE.
	19C303707-P2	Model 4EY18A11, 29-33 MC Antenna. Includes 48-1/4 inch stainless steel rod, tuning screw, rubber O-ring weather seal; sim to Antenna Specialists ASP-A431-GE.
	19C303707-P3	Model 4EY18A12, 33-36 MC Antenna. Includes 48-1/4 inch stainless steel rod, tuning screw, rubber O-ring weather seal; sim to Antenna Specialists ASP-B431-GE.
	19C303707-P4	Model 4EY18A13, 36-42 MC Antenna. Includes 38-inch stainless steel rod, tuning screw, rubber O-ring weather seal; sim to Antenna Specialists ASP-C431-GE.
	19C303707-P5	Model 4EY18A14, 42-48 MC Antenna. Includes 38-inch stainless steel rod, tuning screw, rubber O-ring weather seal; sim to Antenna Specialists ASP-D431-GE.
	19C303707-P6	Model 4EY18A15, 48-54 MC Antenna. Includes 38-inch stainless steel rod, tuning screw, rubber O-ring weather seal; sim to Antenna Specialists ASP-B431-GE.
	2R22-P2	Adapter, UHF: right angle. Signal Corps M-359; sim to Amphenol 83-1AP. (Used in Models 4EY18A10-15).
		25-50 MC ANTENNA (LOW BAND)
		----- MISCELLANEOUS -----
	7491074-P1	Antenna: includes 96-1/2 inch stainless steel rod; sim to Antenna Specialists ASPA3BGE.
	7102930-P3	Adapter, antenna: 2-5/16 inches. (Used with G-E Dwg 7491074-P1).
	PL-4033101-G1	Antenna package: includes base, adapter spring, cable and plug.
	PL-7472880-G5	Antenna base. (Used in PL-4033101-G1).
	PL-7476632-G4	Adapter spring. (Used in PL-4033101-G1).

SYMBOL	G-E PART NO	DESCRIPTION
		----- MISCELLANEOUS(Cont'd) -----
	5492239-P1	Cable, antenna: includes Type RG-58/U cable approx 15 feet, PL-259 plug, terminal; sim to Antenna Specialists 19A43. (Used in PL-4033101-G1).
	2R22-P1	Plug, coaxial: Signal Corps PL-259; sim to Amphenol 83-1SP. (Used with G-E Dwg 5492239-P1 in PL-4033101-G1).
	4039101-P1	Coil, loading: 25-54 megacycles; sim to Antenna Specialists ASPA87.
	PL-19A121577-G1	Antenna hook kit.
	7134724-P1	Antenna hook. (Used in PL-19A121577-G1).
		132-174 MC ANTENNA MODEL 4EY19A10 (HIGH BAND)
		----- MISCELLANEOUS -----
	19C303658-P1	Antenna. Includes 22-inch stainless steel rod, sleeving, spring, cap and O-ring; sim to Antenna Specialists ASP-405-GE.
		25-50, 132-174 MC ANTENNA MODEL 4EY20A10
		----- MISCELLANEOUS -----
	19C303620-P1	Antenna. Includes 19-1/2 inch stainless steel whip, socket, insulators, adapter, RG-58A/U cable, PL-259 plug, clip; sim to Antenna Specialists ASP-157.
	19C303620-P2	Replacement whip. Includes 19-1/2 inch stainless steel whip, socket, insulators; sim to Antenna Specialists 19A904-1.
		MICROPHONE MODEL 4EM25C10
	1	Cable clamp. Shure Brothers RP21. (Includes parts 3 and 8).
	2	Switch. Shure Brothers RP26.
	3	Case (back) and mounting button: plastic. Shure Brothers RP21. (Includes parts 1 and 8).
	4	Switch button: red plastic. Shure Brothers RP25.
	5	Spring. Shure Brothers RP16. (Includes miscellaneous hardware).
	6	Shield. Shure Brothers RP23.
	7	Cartridge, magnetic controlled.
	8	Case (front): plastic. Shure Brothers RP21. (Includes parts 1 and 3).
	9	Cable: approx 6 feet.
		MICROPHONE MODEL 4EM33B10 (19B209199-P2)
		----- MISCELLANEOUS -----
		Switch: moisture proof. Shure Brothers RP33.
		Cable and plug: approx 5 feet. Shure Brothers RP35.
		Button: red plastic. Shure Brothers RP34.
		Cartridge, magnetic controlled. Shure Brothers RP32.
		Case, mounting button and nameplate: plastic. Shure Brothers RP31.
		Shield. Shure Brothers RP36.
		MICROPHONE MODEL 4EM33C10 (19B209306-P1)
		----- MISCELLANEOUS -----
		Switch. Shure Brothers RP33.
		Cable and plug: approx 5 feet. Shure Brothers RP35.

SYMBOL	G-E PART NO	DESCRIPTION
		Button: red plastic. Shure Brothers RP34.
		Cartridge, magnetic controlled. Shure Brothers RP32.
		Case, mounting button and nameplate: plastic. Shure Brothers RP40.
		Shield. Shure Brothers RP36.
		MICROPHONE MODEL 4EM33D10 (19B209199-P3)
		Switch: moisture proof. Shure Brothers RP33.
		Cable and plug: approx 80 inches. Shure Brothers RP35.
		Button: red plastic. Shure Brothers RP34.
		Cartridge, magnetic controlled. Shure Brothers RP32.
		Case, mounting button and nameplate: plastic Shure Brothers RP31.
		Shield. Shure Brothers RP36.
		HANDSET MODEL 4EM34A10 (19B209198-P1)
		----- MISCELLANEOUS -----
		Cartridge, transmitter: controlled magnetic. Shure Brothers RP13.
		Cartridge, receiver: 3 watt max power. Shure Brothers RP41.
		Switch. Shure Brothers RP81.
		Cable and plug: approx 5 feet. Shure Brothers RP47.
		Handle, transmitter cap, receiver cap: phen, weather proof. Shure Brothers RP49.
		POWER CONTROL CABLE PL-19C303828-G4
		----- MISCELLANEOUS -----
	19A115067-P1	Cable, 2-conductor: approx 10 feet; sim to Belden 31713.
	19B200010-P3	Plug: 23 contacts; sim to Cannon Electric NK-L23-23C-3/4.
		POWER CONTROL CABLE PL-19C303828-G5
		----- MISCELLANEOUS -----
	19A115067-P3	Cable, 2-conductor: approx 20 feet; sim to Belden 7721.
	19B200010-P3	Plug: 23 contacts; sim to Cannon Electric NK-L23-23C-3/4.
		DC TRICKLE CHARGE CABLE PL-19B204993-G2
		----- MISCELLANEOUS -----
	7160478-P1	Cable: 2-conductors: approx 50 inches; sim to Birnbach 789.
	4034405-P5	Plug: 5 sockets; sim to Cannon Electric XLR-5-11C.
	19A115513-P1	Connector, cigarette lighter: 12 VDC; sim to Cole-Herssee 1624.
		POWER CABLE PL-19B205422-G1
		----- MISCELLANEOUS -----
	19A115067-P1	Cable, 2-conductor: approx 10 feet; sim to Belden 31713.
	19A115776-P2	Phenolic: sim to Bussmann Type HNJ.
	1R16-P7	Cartridge, quick blowing: 4 amps at 250 v; sim to Littelfuse 312004 or Bussmann MTH-4.
	4034405-P3	Plug: 3 sockets; sim to Cannon Electric XLR-3-11C.



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PARTS LIST		
		10 WATT AUDIO AMPLIFIER PL-19B205432-G1
SYMBOL	G-E PART NO.	DESCRIPTION
		----- MISCELLANEOUS -----
		Cable, 2-conductor: approx 23 feet; sim to Belden 31713.
		Phenolic: sim to Bussmann Type HNJ.
		Cartridge, quick blowing: 4 amps at 250 v; sim to Littelfuse 312004 or Bussmann MTH-4.
		Plug: 3 sockets; sim to Cannon Electric XLR-3-11C.
		AC CHARGING CABLE PL-5492570-G2
		----- MISCELLANEOUS -----
		Capacitor, metallized plastic: 4 μ f $\pm$ 20%, 200 VDCW; sim to Sprague 118P4050254.
		Plug: sim to G-E 4304-3.
		Cable, 2-conductor: approx 87 inches; sim to Birnbach 789.
		Plug: 4 sockets: sim to Cannon Electric XLR-4-11C.
		POWER SUPPLY EXTENSION CABLE PL-19B204289-G1
		----- MISCELLANEOUS -----
		Receptacle: 8 terminals; sim to HB Jones 261-S2-08-030.
		Plug: 8 terminals; sim to HB Jones 261-S1-08-030.
		Sleeving, electrical: approx 7/16 inch dia.
		----- CAPACITORS -----
		----- PLUGS -----
		----- TRANSISTORS -----
		Silicon, NPN; sim to Type 2N3441.
		----- RESISTORS -----
		Metal film: 1000 ohms $\pm$ 10%, 3 w; sim to Corning Glass Type LP1-3.
		Wirewound: 1 ohm $\pm$ 10%, 2 w; sim to IRC Type BWH.
		Wirewound: 4.3 ohms $\pm$ 5%, 2 w; sim to IRC Type BWH.
		Wirewound: 3.3 ohms $\pm$ 10%, 2 w; sim to IRC Type BWH.
		Fixed composition: 620 ohms $\pm$ 5%, 1 w.
		----- THERMISTORS -----
		Disc: 1 ohm.
		----- TRANSFORMERS -----
		Audio freq: 0.3-3 KC freq range, Pri: 3.6 ohms $\pm$ 10% imp, 0.2 ohm DC res, Sec: 75 ohms imp, 5.5 ohms $\pm$ 15% DC res.
		Audio freq: 0.3-3 KC freq range, Pri: 120 ohms $\pm$ 10% imp, 5.4 ohms $\pm$ 15% DC res, Sec: 3.5 ohms imp, 0.3 ohm DC res.
		MODIFICATION KIT PL-19A122384-G1
		----- CAPACITORS -----
		----- RESISTORS -----
		Wirewound: 3.3 ohms $\pm$ 10%, 2 w; sim to IRC Type BWH.

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES.

ORDERING SERVICE PARTS

Each component appearing on the Schematic Diagram is identified by a symbol number, to simplify locating it in the parts list. Each component is listed by symbol number, followed by its description and G-E Part Number.

Service parts may be obtained from Authorized G-E Communication Equipment Service Stations or through any G-E Radio Communication Equipment Sales Office. When ordering a part, be sure to give:

1. G-E Part Number for component
2. Description of part
3. Model number of equipment
4. Revision letter stamped on unit

These instructions do not purport to cover all details or variations in equipment nor to provide for every possible contingency to be met in connection with installation, operation or maintenance.

Should further information be desired, or should particular problems arise which are not covered sufficiently for the purchaser's purposes, contact the nearest Radio Communication Equipment Sales Office of the General Electric Company.

MAINTENANCE MANUAL

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