INSTRUCTIONS

for

CONTROL UNIT TYPE EC-75-A and B

LBI-8619A

DF-4081

COMMUNICATION PRODUCTS DEPARTMENT

GENERAL ELECTRIC

LYNCHBURG, VIRGINIA

Printed in U.S.A.

CONTROL UNIT TYPE EC-75-A & B

DESCRIPTION

The Manual Mobile Control Units Type EC-75-A, B are used in applications where Mobile Telephone Service is provided. These Control Units are designed to operate on one to four channels depending on the number of crystals supplied in the associated radio unit.

Control chassis PL-19D402708-G1, as used in the two types, provides Reverting and accomodates volume and squelch controls for an external speaker. Control chassis PL-19D402708-G3 provides Reverting and a Key Lock but excludes the volume, squelch and external speaker features.

The two types of Control Units are essentially the same. The basic difference is that Type EC-75-B is provided with a nameplate for Bell System applications. The features and circuits are discussed in the following paragraphs along with some of the more common control options.

SUPERVISORY CONTROL

The Control Unit includes a reverting circuit board A701 which can be switched in to provide reverting to a preselected channel when the handset is returned to it's cradle upon completion of a call. When the Mobile Combination is shipped P702 is connected to one of the channels at the Channel Selector switch. P702 may be connected to any channel chosen as the home channel.

When the Control Unit is in the non-revert condition selection of channels is by means of the Channel Selector Switch. Outgoing and incoming calls take place on the channel selected by the switch.

With the Revert switch in the revert position the Mobile Radio will be on the channel selected by the position of P702. When the handset is removed from the cradle to make a call, control of the channel is returned to the Selector Switch unless an incoming call has been received.

In applications where 600/1500 cycle search is provided the Reverting Board A701 performs similar functions. In these applications P702 is moved to J704 which is wired to J701 pin 9. When this is done the positive voltage for channel selection is supplied to all the channels that are strapped in on the Component Board. When a call is received on any of the channels being searched the logic circuitry stops the search on the channel and maintains control over the channel selection until the call is completed.

CHANNEL SELECTOR SWITCH

The Channel Selector Switch is located on the right when the Control Unit is viewed from the front. This switch has eleven positions, four of which are used, one for each of the channels available. The

channels are designated by number as they appear on the switch. When the mobile telephone unit is on, a channel light appears behind the channel jewel showing which channel has been selected. Any channel can be selected by turning the dial to bring the proper jewel over the channel light. The position of the channel jewels may be changed to conform to the local channel number of letter designation arrangement. The procedure is given in the section on Grouping Channels below.

INDICATOR LIGHTS

Just above the Channel Selector Switch there are two indicator lights. The red light on the right is marked TRANS and when illuminated indicates that the transmitter is keyed on. The yellow light, on the left marked CALL is illuminated when a call is received and remains on until the handset is removed from the cradle. The number card light is normally off and comes on when the handset is removed from the cradle.

POWER SWITCH

The Power Switch located in the lower center is turned on by means of a knob or key. This switch controls the input power to the mobile telephone control circuitry, receiver and keying circuits.

NUMBER CARD HOLDER

On the left hand side of the Control Unit there is a number card assembly. The number card is illuminated when the handset is removed from the hanger to place or answer a call. The light behind the card is controlled through the hookswitch.

SOUNDER

The Sounder is located inside the Control Unit and is interlocked with the Decoder and Control Logic. When a call is received the Sounder operates to alert the subscriber.

EARPIECE LEVEL CONTROL

The earpiece level control, on the back of the Control Unit, allows the operator to adjust the earpiece volume. This control is located on the back in the lower left corner when the unit is viewed from the front.

AUXILIARY SWITCH (Optional)

The Auxiliary Switch in the center is used when the External Alarm feature is incorporated in the unit. This switch permits an external circuit (such as a horn relay) to be actuated during the ring when a call is received by the mobile telephone. In circuits where a relay is switched it is necessary to add a diode across the relay to protect the transistor. The external circuit gives continuity to battery when operated. The diode must therefore be connected across the relay with the cathode to the positive side to provide protection.

SPEAKER OPTION

When the external speaker option is used with Control Unit chassis PL-19D402708-G1 the Squelch and On-Off Volume controls are provided. The Volume control mounts on the front panel at the center top, and the Squelch control mounts internally with the sahft protruding through the hole just above the Earpiece Level Control. Speaker operation is not controlled by the hookswitch position.

STANDBY OPTION

Either Control Unit can be provided with the Standby Option. This option permits the receipt of a call while the transmitter is off. When a call is to be answered the transmitter should be allowed to warm up before attempting to transmit.

REVERTING BOARD A701

The Reverting circuit is a series of six transistors arranged as a bistable with a buffer and switching transistor on each half of the bistable. One half the bistable is made up of transistors Q3, Q6 and Q7. The other half is composed of Q4, Q5 and Q8. Q3 and Q4 make up the bistable and Q7 and Q8 the buffers and Q5 and Q6 the switch.

When the circuit is switched in by means of the Revert-Non Revert switch the mobile radio is connected to receive on a preselected channel. The specific channel is determined by the channel strapping. When the reverting circuit is operational and the handset on it's cradle, the radio unit will be connected to receive on the channel that P702 is connected to. Under these circumstances positive voltage is applied through CR6 to the base of Q3 and Q7. This transistor Q7 conducts causing Q6 to conduct. Since Q6 is directly connected to the plus 10 volts source the collector voltage rises to close to 10 volts. When this occurs positive voltage is fed from the collector to P702 and thence to the selected channel, or Search lead on the control unit connector if such facilities are provided in the particular application. The positive voltage is then used to select the oscillator desired.

Since Q3 and Q4 are connected in a bistable circuit Q4 is turned off when Q3 is turned on. With Q4 off Q8 and Q5 are also off. When Q5 is off, the lead to the arm of the Channel Selector Switch is at(A-) potential.

If the handset is removed from the cradle while the Revert-Non Revert switch is in the Revert position negative voltage will be applied to the junction of CR6 and R6. This negative voltage will back bias diode CR6, thus effectively removing it from the circuit, and apply a negative pulse through C3 and diode CR2 to the base of Q3. This negative pulse causes Q3 to stop conducting and Q4 to conduct. The bistable is thus changed in state and switch Q5 conducts and applies positive voltage to the arm of the Channel Selector Switch. It is thus that control of the channel is retuned to the Selector Switch.

When an incoming call is received and the Revert switch is in the revert condition a positive voltage is fed to CR2 through R7 thus back

biasing the diode and preventing the downshift, which occurs when the handset is picked up, from reaching the base of Q3. The bistable does not change state and as a result channel control remains with P702.

When the handset is returned to it's cradle after a call is completed, the radio unit will revert to the selected channel if the Revert switch is on Revert. If the Revert switch is on the Non-Revert position the Channel Selector Switch will determine the channel.

REVERTING WITH 600/1500 CYCLE SEARCH

When the Mobile Unit is wired for 600/1500 cycle search P702 is connected to the J704 Search contact TB4-4. In this mode of operation, when the Revert switch is on Non-Revert, the channel selection is under the control of the Channel Selector Switch. Out going and incoming calls take place on the channel selected by means of the Channel Selector Switch.

When the Revert switch is on Revert the positive voltage for channel selection is placed on the search lead to the radio unit. This positive voltage results in a search of all available channels for the presence of signalling. When signalling occurs on any of the channels being searched, the logic circuitry stops the search on that channel and maintains control over the channel selection until the call is complete or until the signalling of a wrong number ceases.

SOUNDER

The Sounder on the Control Unit is a free running multivibrator with a small loudspeaker as the load. The Sounder is actuated by the application of voltage upon receipt of the proper number code from the telephone terminal. Q701 and Q702 are connected so the output from each transistor is coupled to the base of the other. Resistors R708 and R706 serve as bias resistors for the base circuits. Resistors R707 serves as the load for Q701 and the loudspeaker serves for Q702. The positive voltage to actuate the sounder is fed through the control logic. When the subscriber answers the call the Decoder resets and the voltage is removed from the sounder.

MAINTENANCE

DISASSEMBLY

To service the Control Unit it must be removed from its housing. When the Control Unit is already mounted in a vehicle it can be removed from the housing by removing the control cable connector and then the two screws, one on each side of the male plug on the rear of the unit. When the chassis is withdrawn from the case the small connector to the Hookswitch must be disconnected. The handset can be forced through the cable entry hole if the transmitter and receiver caps are removed.

Access to the circuit boards in the control unit may be obtained by removing the three screws which are used to mount to the rear plate. Reverting Board A701 is mounted in four slots so it will come loose except for the cable connections when the rear plate is removed.

The Channel Selector switch knobs are friction fitted. To remove knobs insert a knife blade or small screwdriver under the knob as close to the shaft as possible and pry away from the front panel. The indicator light jewels are threaded and easily removed to obtain access to the lights. The two lights mounted internally, one for the number card and the other for the Channel, are accessible when the chassis is removed from the case. Normally it will not be necessary to disconnect the handset to change lights.

CALL NUMBER ASSIGNMENT

In setting the mobile in operation a call number must be assigned and strapped in the Decoder. For information concerning the procedure refer to the Decoder Unit Instructions. The number card must be placed in the Control Unit for the ready reference of the mobile subscriber. The card is inserted as follows:

1. Remove the chassis from the housing and disconnect the Hookswitch plug P701 from the jack J702.

2. Remove the two screws and retaining clamps.

3. The Number card retainer can now be removed to insert the number card.

4. Reassemble the retainer with the new card and remount on the Control Unit.

GROUPING CHANNELS

The channels available to the subscriber should be grouped on the Channel Selector Switch. The procedure involves changing the position of the channel designators on the Channel Selector switch. To group channel designators on the Channel Selector switch remove the dial as indicated under Disassembly and perform the following steps:

1. Remove the jewel retainer ring. This is accomplished by the use of a screwdriver blade inserted under the ring and prying up, or by means of needle nose pliers. A single jewel can be removed by slightly compressing the ring and pressing out the jewel.

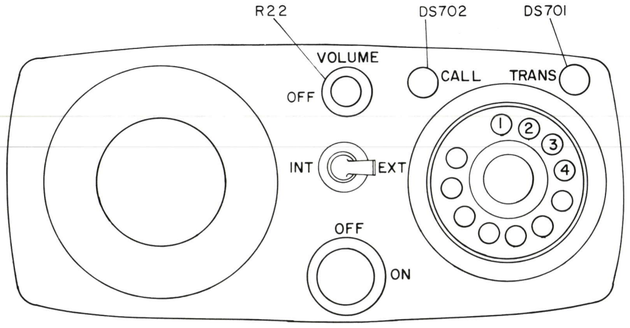
2. Remove the jewels and relocate in the desired grouping.

3. Insert blank jewels in the positions where channels are not available to the mobile subscriber. Letter combinations jewels are obtainable as a part of Option 5818 for the Control Unit. Normal channel positions and channel designators are shown in the table on the Outline Diagram.

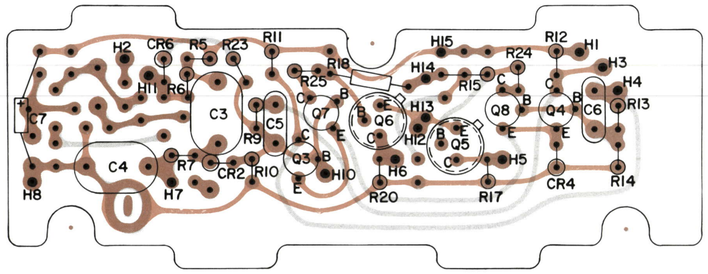
4. Remount the jewel retainer ring making sure that all jewels are properly seated and engaged by the edge of the ring.

5. Set the dial stop pins at the maximum rotation desired.

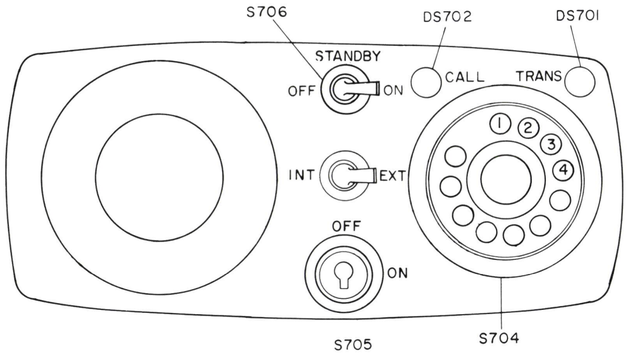
6. Remount the dial on the Control Unit, making sure the Dial stop pins will permit selection of all channels to be provided.



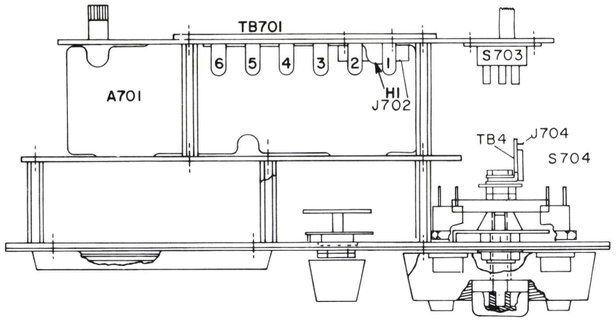
S702



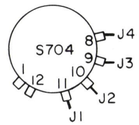
(19B205116, Sh. 1, Rev. 0)
(19B205116, Sh. 2, Rev. 0)



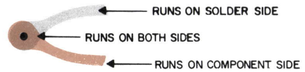
S705 S704



CHANNEL DESIGNATOR	MOBILE TRANSMIT FREQUENCY
JL	157.77
YL	157.80
JP	157.83
YP	157,86
YJ	157.89
YK	157.92
JS	157.95
YS	157.98
YR	158.01
JK	158.04
JR	158.07



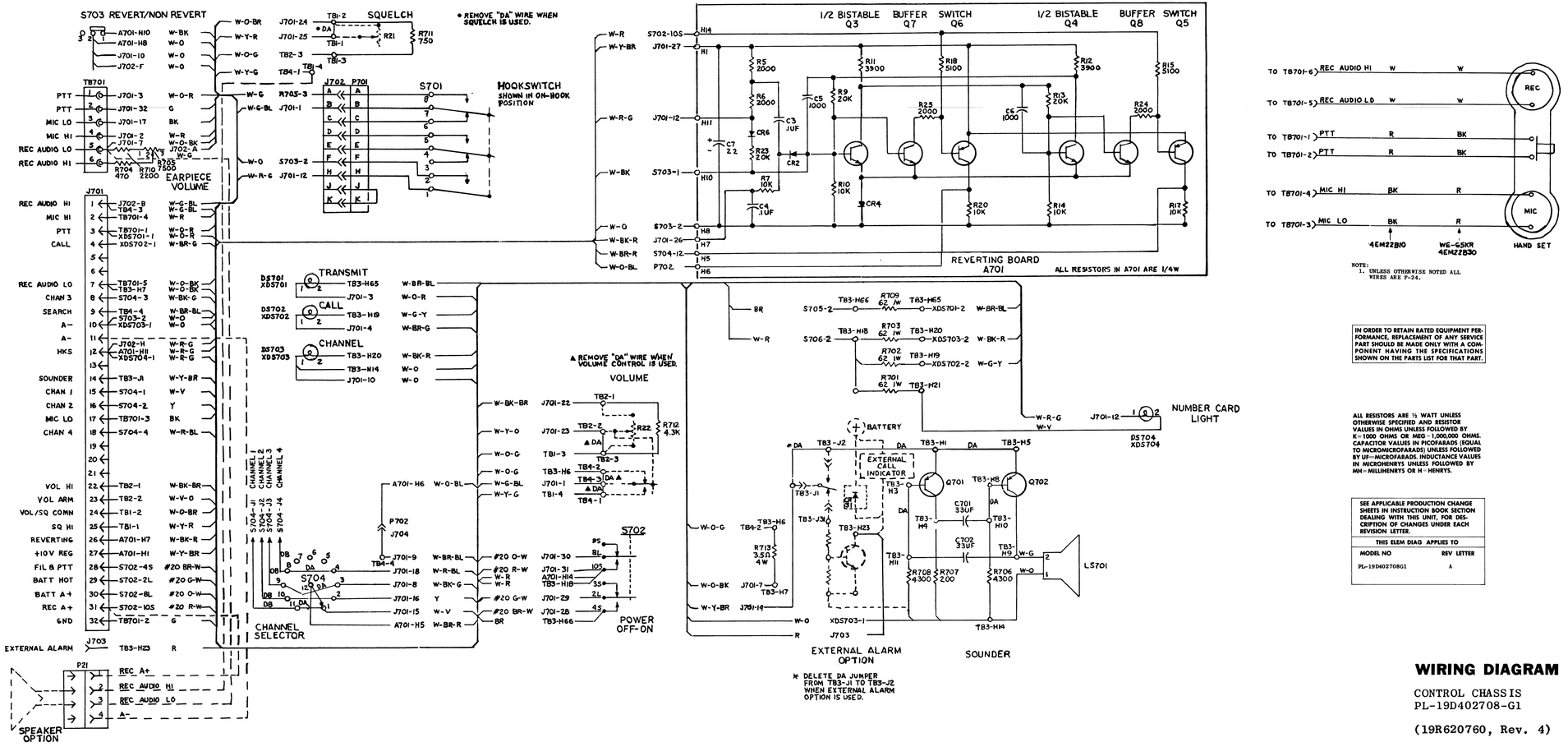
NORMAL CHANNEL ASSIGNMENTS		LOCAL ASSIGNMENT
Y1	CHANNEL 1	
Y2	CHANNEL 2	
Y3	CHANNEL 3	
Y4	CHANNEL 4	



OUTLINE DIAGRAM

CONTROL UNIT
TYPE 4EC75A & B

(19D402800, Rev. 0)



NOTE:
1. UNLESS OTHERWISE NOTED ALL WIRES ARE #-24.

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.

ALL RESISTORS ARE ½ WATT UNLESS OTHERWISE SPECIFIED AND RESISTOR VALUES IN OHMS UNLESS FOLLOWED BY K=1000 OHMS OR MEG=1,000,000 OHMS. CAPACITOR VALUES IN PICOFARADS (EQUAL TO MICROMICROFARADS) UNLESS FOLLOWED BY UF=MICROFARADS. INDUCTANCE VALUES IN MICROHENRYS UNLESS FOLLOWED BY MH=MILLIHENRYS OR H=HENRYS.

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

THIS ELEM DIAG APPLIES TO	
MODEL NO	REV LETTER
PL-19D402708G1	A

DF-4081

WIRING DIAGRAM

CONTROL CHASSIS
PL-19D402708-G1

(19R620760, Rev. 4)

PARTS LIST

LBI-8613B

CONTROL UNIT
MODELS 4EC75A11, 13 INDEPENDENT
MODELS 4EC75B11, 13 BELL
19D402708G1 REVERTING WITHOUT KEYLOCK
19D402708G3 REVERTING AND KEYLOCK

SYMBOL	GE PART NO.	DESCRIPTION
A701		COMPONENT BOARD 19B205156G1
		- - - - - - - - - - CAPACITORS - - - - - - - - - -
C3 and C4	19A116080P7	Polyester: 0.1 µf ±20%, 50 VDCW.
C5 and C6	5494481P111	Ceramic disc: 1000 pf ±20%, 1000 VDCW; sim to RMC Type JF Discap.
C7	5496267P13	Tantalum: 2.2 µf ±20%, 20 VDCW; sim to Sprague Type 150D.
		- - - - - - - - DIODES AND RECTIFIERS - - - - - - - -
CR2	19A115250P1	Silicon.
CR4	19A115250P1	Silicon.
CR6	19A115250P1	Silicon.
		- - - - - - - - - - TRANSISTORS - - - - - - - - - -
Q3 and Q4	19A115123P1	Silicon, NPN; sim to Type 2N2712.
Q5 and Q6	4037993P1	Germanium, PNP; sim to Type 2N1303.
Q7 and Q8	19A115123P1	Silicon, NPN; sim to Type 2N2712.
		- - - - - - - - - - RESISTORS - - - - - - - - - -
R5 and R6	3R152P202J	Composition: 2000 ohms ±5%, 1/4 w.
R7	3R152P103J	Composition: 10,000 ohms ±5%, 1/4 w.
R9	3R152P203J	Composition: 20,000 ohms ±5%, 1/4 w.
R10	3R152P103J	Composition: 10,000 ohms ±5%, 1/4 w.
R11 and R12	3R152P392J	Composition: 3900 ohms ±5%, 1/4 w.
R13	3R152P203J	Composition: 20,000 ohms ±5%, 1/4 w.
R14	3R152P103J	Composition: 10,000 ohms ±5%, 1/4 w.
R15	3R152P512J	Composition: 5100 ohms ±5%, 1/4 w.
R17	3R152P103J	Composition: 10,000 ohms ±5%, 1/4 w.
R18	3R152P512J	Composition: 5100 ohms ±5%, 1/4 w.
R20	3R152P103J	Composition: 10,000 ohms ±5%, 1/4 w.
R23	3R152P203J	Composition: 20,000 ohms ±5%, 1/4 w.
R24 and R25	3R152P202J	Composition: 2000 ohms ±5%, 1/4 w.
		- - - - - - - - - - CAPACITORS - - - - - - - - - -
C701 and C702	19A115028P17	Polyester: 0.33 µf ±20%, 100 VDCW.
		- - - - - - - - INDICATING DEVICES - - - - - - - -
DS701 thru DS704	19B201122P1	Lamp, incandescent: 6 v; sim to GE Type 1768.

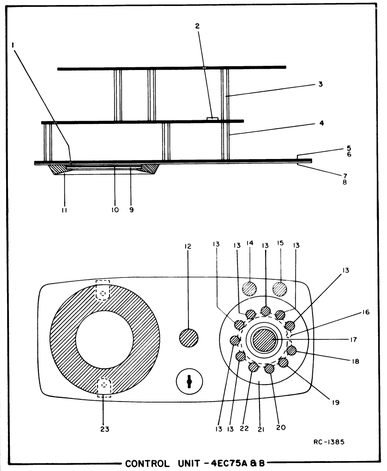
*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES

SYMBOL	GE PART NO.	DESCRIPTION
		- - - - - - - - - - HANDSETS - - - - - - - - - -
HS701	5493739P2	Model 4EM22B10. (Used with Independent). Includes the following:
		Handset: sim to ITT 69(C)410.
		Case: black.
		Receiver. ITT P-75547.
		Transmitter, carbon. ITT P-75555.
		Switch. ITT P80032.
		Cable. ITT 101900()650.
	5493739P12	Model 4EM22B12. (Used with Independent). Includes the following:
		Handset: sim to ITT 6912(C)410.
		Case: blue.
		Receiver. ITT P-75547.
		Transmitter, carbon. ITT P-75555.
		Switch. ITT P80032.
		Cable. ITT 101912()650.
	5493739P13	Model 4EM22B13. (Used with Independent). Includes the following:
		Handset: sim to ITT 6902(C)410.
		Case: red.
		Receiver. ITT P-75547.
		Transmitter, carbon. ITT P-75555.
		Switch. ITT P80032.
		Cable. ITT 101902()650.
	5493739P8	Model 4EM22B18. (Used with Independent). Includes the following:
		Handset: sim to ITT 6915(C)410.
		Case: white.
		Receiver. ITT P-75547.
		Transmitter, carbon. ITT P-75555.
		Switch. ITT P80032.
		Cable. ITT 101915()650.
	5493739P10	Model 4EM22B20. (Used with Independent). Includes the following:
		Handset: sim to ITT 6913(C)410.
		Case: beige.
		Receiver. ITT P-75547.
		Transmitter, carbon. ITT P-75555.
		Switch. ITT P80032.
		Cable. ITT 101013()650.
	5493739P30	Model 4EM22B30. (Used with Bell). Includes the following:
		Handset.
		Case: black.
		Receiver. ITT P-75547.
		Transmitter, carbon. ITT P-75555.
		Switch. ITT P80032.
		Cable. ITT 101900()650.
	5493739P32	Model 4EM22B32. (Used with Bell). Includes the following:
		Handset.
		Case: blue.
		Receiver. ITT P-75547.
		Transmitter, carbon. ITT P-75555.
		Switch. ITT P80032.
		Cable. ITT 101912()650.

SYMBOL	GE PART NO.	DESCRIPTION
	5493739P33	Model 4EM22B33. (Used with Bell). Includes the following:
		Handset.
		Case: red.
		Receiver. ITT P-75547.
		Transmitter, carbon. ITT P-75555.
		Switch. ITT P80032.
		Cable. ITT 101902()650.
	5493739P38	Model 4EM22B38. (Used with Bell). Includes the following:
		Handset.
		Case: white.
		Receiver. ITT P-75547.
		Transmitter, carbon. ITT P-75555.
		Switch. ITT P80032.
		Cable. ITT 101915()650.
	5493739P40	Model 4EM22B40. (Used with Bell). Includes the following:
		Handset.
		Case: beige.
		Receiver. ITT P-75547.
		Transmitter, carbon. ITT P-75555.
		Switch. ITT P80032.
		Cable. ITT 101935()650.
HS701	4038824P1	Black: sim to Western Electric G5KR-3.
	4038824P2	Aqua blue: sim to Western Electric G5KR-62.
	4038824P3	Cherry red: sim to Western Electric G5KR-53.
	4038824P4	Turquoise: sim to Western Electric G5KR-64.
	4038824P8	White: sim to Western Electric G5KR-58.
	4038824P9	Rose pink: sim to Western Electric G5KR-59.
	4038824P10	Light beige: sim to Western Electric G5KR-60.
		- - - - - - - - JACKS AND RECEPTACLES - - - - - - - -
J701	5491961P4	Plug: 32 contacts; sim to Amphenol 26-4100-32P.
J702	19C307014P6	Connector: 9 contacts; sim to US Component UMI-9F.
J703	19A115584P2	Terminal: sim to Harvey Hubbell 414B41.
		- - - - - - - - - - LOUDSPEAKERS - - - - - - - - - -
LS701*	5493383P7	Permanent magnet, 2-1/4 inch: 100 ohms ±10% voice coil imp, 90 ohms ±20% DC res, 500 mw operating, 400-5000 Hz.
		In 19D402708G1 Earlier than REV A: In 19D402708G3 of REV A and earlier:
	5493383P5	Permanent magnet, 2-1/4 inch: 200 ohms ±10% voice coil imp, 180 ohms ±20% DC res, 500 mw operating, 500 Hz +20% -10% resonance.
		- - - - - - - - - - PLUGS - - - - - - - - - -
P702	4036634P1	Contact, electrical: sim to AMP 42428-2.
		- - - - - - - - - - TRANSISTORS - - - - - - - - - -
Q701 and Q702	4037993P1	Germanium, PNP; sim to Type 2N1303.
		- - - - - - - - - - RESISTORS - - - - - - - - - -
R701 thru R703	3R79P620J	Composition: 62 ohms ±5%, 2 w.
R704	3R77P471J	Composition: 470 ohms ±5%, 1/2 w.

SYMBOL	GE PART NO.	DESCRIPTION
R705	19B209114P4	Variable, wirewound: 7500 ohms ±20%, 3 w; sim to CTS Series 117.
R706	3R77P432J	Composition: 4300 ohms ±5%, 1/2 w.
R707	3R77P201J	Composition: 200 ohms ±5%, 1/2 w.
R708	3R77P432J	Composition: 4300 ohms ±5%, 1/2 w.
R709	3R79P62OJ	Composition: 62 ohms ±5%, 2 w.
R710	3R77P222J	Composition: 2200 ohms ±5%, 1/2 w.
R711	3R77P751J	Composition: 750 ohms ±5%, 1/2 w.
R712	3R77P432J	Composition: 4300 ohms ±5%, 1/2 w.
R713	5493035P10	Wirewound: 3.5 ohms ±5%, 5 w; sim to Hamilton Hall Type HH.
R714*	19B209114P6	Variable, wirewound: 2.5K ohms ±20%, 3 w; sim to CTS Series 117. (Used in 19D402708G3). Added by REV A.
		- - - - - - - - - - SWITCHES - - - - - - - - - -
S702	5495454P25	Rotary: 2 poles, 2 positions, non-shorting contacts, 2 amps at 25 VDC or 1 amp at 110 VAC; sim to Oak Type "A" or Centralab Series 100. (Used in 19D402708G1).
S703	19B209040P4	Slide: SPDT, 0.5 amp at 125 v; sim to Continental Wirt Type 126.
S704	19B209272P1	Rotary: 1 section, 1 pole, 11 positions, non-shorting contacts, 3.5 amps at 12 VDC or 230 ma at 115 VAC; sim to CTS 14306-1.
S705	19B209276P6	Lock: SPST, 2 amps at 14 VDC; sim to Chicago Lock 2274-80-2. (Used in 19D402708G3).
S706	19B209301P13	Toggle: SPDT, 3 amps at 125 v; sim to Arrow-Hart and Hegeman 83052-CE. (Used in 19D402708G3).
		- - - - - - - - TERMINAL BOARDS - - - - - - - -
TB1	7487424P17	Miniature, phen: 4 terminals.
TB2	7487424P18	Miniature, phen: 3 terminals.
TB4	7487424P7	Miniature, phen: 4 terminals.
TB701	7117710P6	Phen: 6 terminals; sim to Cinch 1776.
		- - - - - - - - - - SOCKETS - - - - - - - - - -
XDS701 and XDS702	19B201122P13	Lamp.
XDS703	19B209316P2	Lampholder: sim to Drake X4001-014.
XDS704	19B209316P1	Lampholder: sim to Drake X4001-008.
		HANDSET CONTROL HOUSING 19B205166G1-7
		- - - - - - - - - - PLUGS - - - - - - - - - -
P701	19C307014P5	Connector: 9 contacts; sim to US Component UMI-5M.
		- - - - - - - - - - SWITCHES - - - - - - - - - -
S701	4035863G2	Push: 1 form B and 2 form C contacts, 2 amps at 25 VDC.
		- - - - - - - - - - MISCELLANEOUS - - - - - - - - - -
	4036415G8	Control housing: black plastic. (Used in 19B205166G1).
	4036415G9	Control housing: green plastic. (Used in 19B205166G2).
	4036415G10	Control housing: blue plastic. (Used in 19B205166G3).
	4036415G11	Control housing: pink plastic. (Used in 19B205166G4).
	4036415G12	Control housing: beige plastic. (Used in 19B205166G5).
	4036415G13	Control housing: white plastic. (Used in 19B205166G6).
	4036415G14	Control housing: red plastic. (Used in 19B205166G7).

SYMBOL	GE PART NO.	DESCRIPTION
	4036414G15	Cradle: black plastic. (Used in 19B205166G1).
	4036414G16	Cradle: green plastic. (Used in 19B205166G2).
	4036414G17	Cradle: blue plastic. (Used in 19B205166G3).
	4036414G18	Cradle: pink plastic. (Used in 19B205166G4).
	4036414G19	Cradle: beige plastic. (Used in 19B205166G5).
	4036414G20	Cradle: white plastic. (Used in 19B205166G6).
	4036414G21	Cradle: red plastic. (Used in 19B205166G7).
	4035891P1	Pin.
		CONTROL CABLE 19C311004G1 (Used with Independent) 19C311004G5 (Used with Bell)
		- - - - - - - - - - FUSES - - - - - - - - - -
F701	7102673P2	Quick blowing: 15 amps at 32 v; sim to Littelfuse 311015 or Bussmann AGC-15.
F702	1A16P8	Quick blowing: 5 amps at 250 v; sim to Littelfuse 312005 or Bussmann MTH-5.
		- - - - - - - - - - PLUGS - - - - - - - - - -
P1	19B209310P1	Connector, phen: 29 female contacts; sim to Amphenol 126-893.
P2	19A122040G1	Connector: 32 contacts; sim to Amphenol 26-4300-328 (modified).
		- - - - - - - - - - SOCKETS - - - - - - - - - -
XF701 and XF702	19A115776P2	Fuseholder: sim to Bussmann Type HBJ.
		MECHANICAL PARTS (SEE MC-1385)
1	19A121980P2	Lens, telephone number: frosted.
2	4036555P1	Insulator, washer: nylon. (Used with Q5, 6, 701, 702).
3	7142162P101	Spacer: 1-7/16 inch hex.
4	7142162P81	Spacer: 1-1/16 inch hex.
5	19B205138G3	Chassis. (Used in 19D402708G1).
6	19B205138G4	Chassis. (Used in 19D402708G3).
7	NP249018	Nameplate. (Used in 19D402708G1).
8	NP249034	Nameplate. (Used in 19D402708G3).
9	19A121980P1	Lens, telephone number: clear. (Front).
10	NP248833	Nameplate.
11	19B205117P1	Ring, chrome. (Holds telephone number lens).
12	N529P16D	Button, plug: approx 15/16 inch dia.
13	19B201122P6	Cap, lens: yellow translucent. (Used with DS702).
14	19B201122P4	Cap, lens: red translucent. (Used with DS701).
15	N901P125C6	Ring, retaining: jewel.
17	19A121958G1	Knob, pushbutton. (Used with S704).
18	19B205118P18(1)	Jewel: clear.
19	19B205118P14(2)	Jewel: clear.
20	19B205118P15(3)	Jewel: clear.
21	19C303804P1	Knob, plastic. (Used with Channel Selector).
22	19C303804P16(4)	Jewel: clear.
23	7763541P1	Clip: spring.



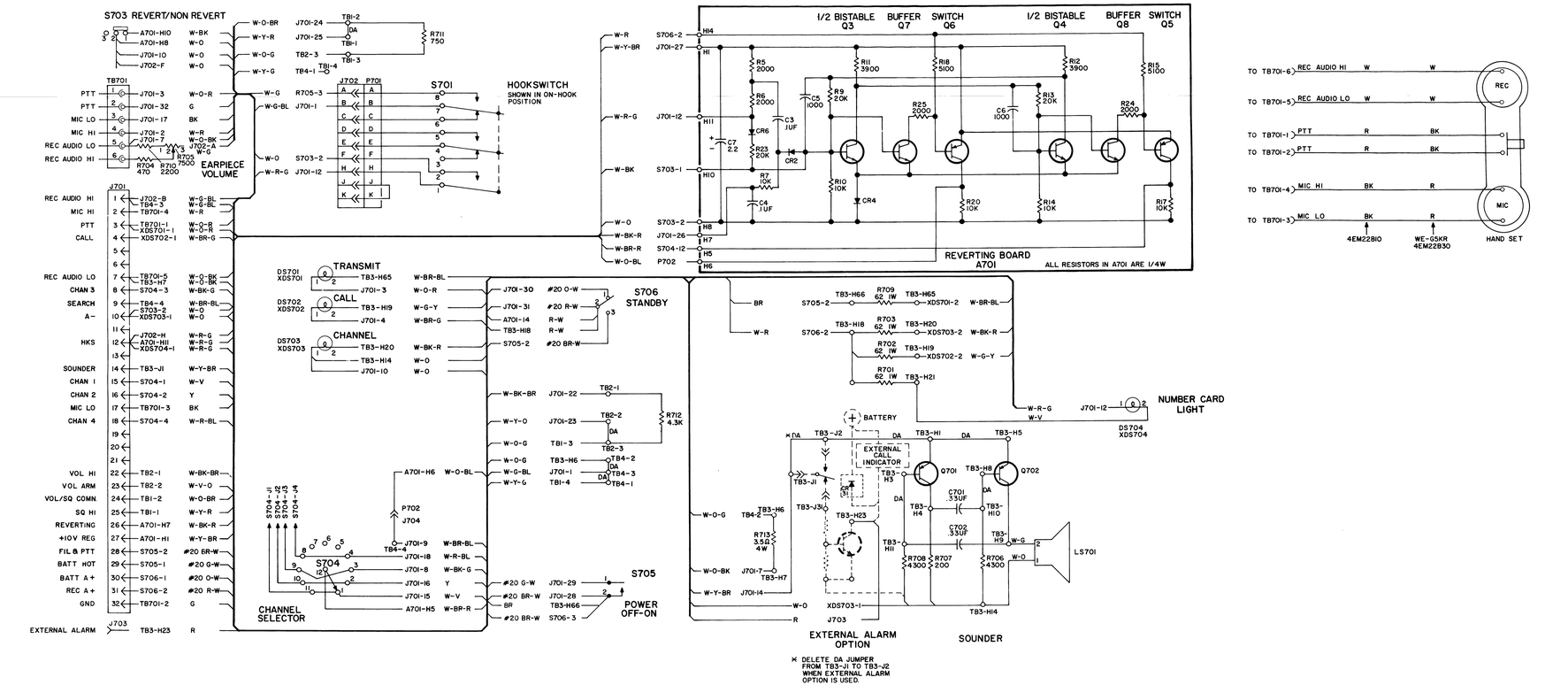
CONTROL UNIT - 4EC75A & B

PRODUCTION CHANGES

Changes in the equipment to improve performance or th 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.

19D402708G1 (4EC75A11,B11)

REV. A - To utilize improved component now available.
Changed the speaker LS701 from 5493383P5 to 5493383P7.



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.

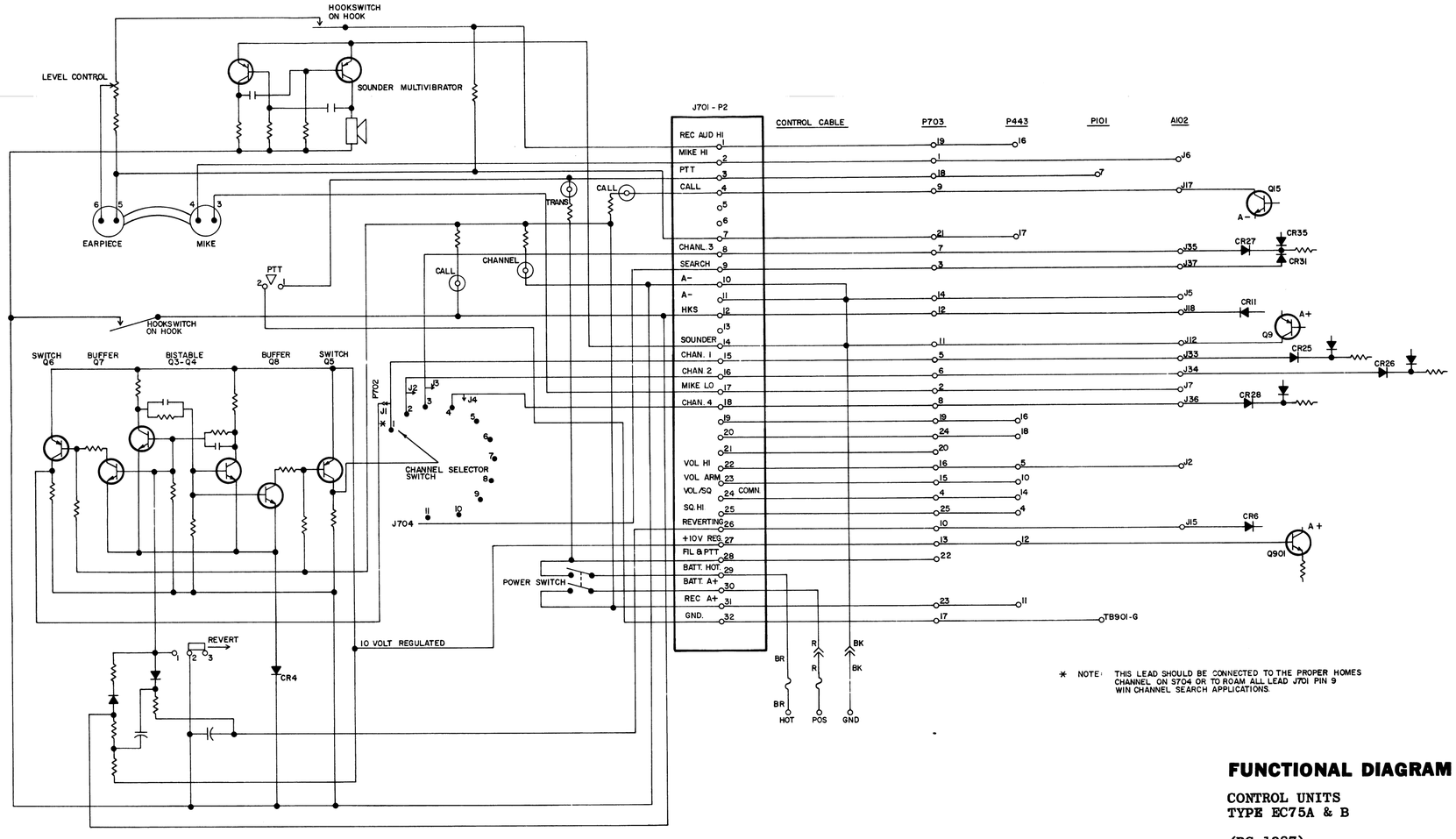
ALL RESISTORS ARE 1/2 WATT UNLESS OTHERWISE SPECIFIED AND RESISTOR VALUES IN OHMS UNLESS FOLLOWED BY K=1000 OHMS OR MEG=1,000,000 OHMS. CAPACITOR VALUES IN PICOFARADS (EQUAL TO MICROMICROFARADS) UNLESS FOLLOWED BY UF= MICROFARADS. INDUCTANCE VALUES IN MICROHENRYS UNLESS FOLLOWED BY MH= MILLIHENRYS OR H=HENRYS.

NOTE
1. UNLESS OTHERWISE NOTED ALL WIRES ARE F-24.

WIRING DIAGRAM

CONTROL CHASSIS
PL-19D402708-G3

(19R620769, Rev. 2)



* NOTE: THIS LEAD SHOULD BE CONNECTED TO THE PROPER HOMES CHANNEL ON S704 OR TO ROAM ALL LEAD J701 PIN 9 WIN CHANNEL SEARCH APPLICATIONS.

FUNCTIONAL DIAGRAM

CONTROL UNITS
TYPE EC75A & B

(RC-1387)