REAR SEAT EXTENSION FOR DIAL SIMULTANEOUS DUPLEX MTS COMBINATIONS (OPTION 5856)

The Rear Seat Extention Option may be added to a Simultaneous Duplex MTS Combination to provide an extension handset and control unit for the convenience of a passenger in the rear seat of a negative ground vehicle.

The option consists of two modified Control Units (Model 4EC44A12) and a Rear Seat Extension Cable (PL-19C300276-G3). A nameplate, on the rear of each unit (near the connector), identifies one unit as EXTENSION A and the second unit as EXTENSION B.

The Channel Selector Switch (S701) in each unit has been modified so that Extension B has channel selection priority; however, Extension A can select channels when the Extension B handset is on hook.

The Extension A unit is modified by the addition of Rear Seat Extension Modification Kit PL-4034042-G2 and the Extension B unit is modified by the addition of Rear Seat Extension Modification Kit PL-4034042-G1. Circuits of the modified control units are shown in Wiring Diagram 19D402074.

The Rear Seat Extension Cable (PL-19C300276-G3) has been modified to prevent improper dial pulses or premature reverting due to sneak circuits. A component board containing diodes and relay circuits has been installed in the cable junction box (as shown in the Simplified Diagram, Figure 2 and Wiring Diagram 19B204072) to isolate the Control Unit circuits.

If desired, the ON-OFF-STBY switch key can be removed from the Extension B (rear seat) unit to maintain ON-OFF-STBY control from the Extension A (front seat) unit. This arrangement decreases the possibility of inadvertently leaving the power on when the vehicle is not in use.

INSTALLATION

If a Simultaneous Duplex MTS Combination with Option 5856 is to be installed in a vehicle, the standard equipment should be installed according to the instructions packaged with the equipment (LBI-8155). The Rear Seat Extension may be installed with the combination or it may be installed at a later date in the following manner.

1. Mount the Model 4EC44A12 - EXTENSION A Control Unit on the dash or on the transmission tunnel post, in the front of the vehicle, in place of the standard Control Unit.

2. Install the Model 4EC44A12 - EXTENSION B Control Unit in the rear seat area, convenient to the passengers. The reverting switch on this unit should be locked in the "ON" position.

3. Disconnect the Power/Control plug (Power/Control Cable PL-19C300276-G1, G2) from the Transmitter-Receiver Case and connect it at the Junction Box in the Rear Seat Extension Cable. Refer to Cable Diagram, Fig. 1.

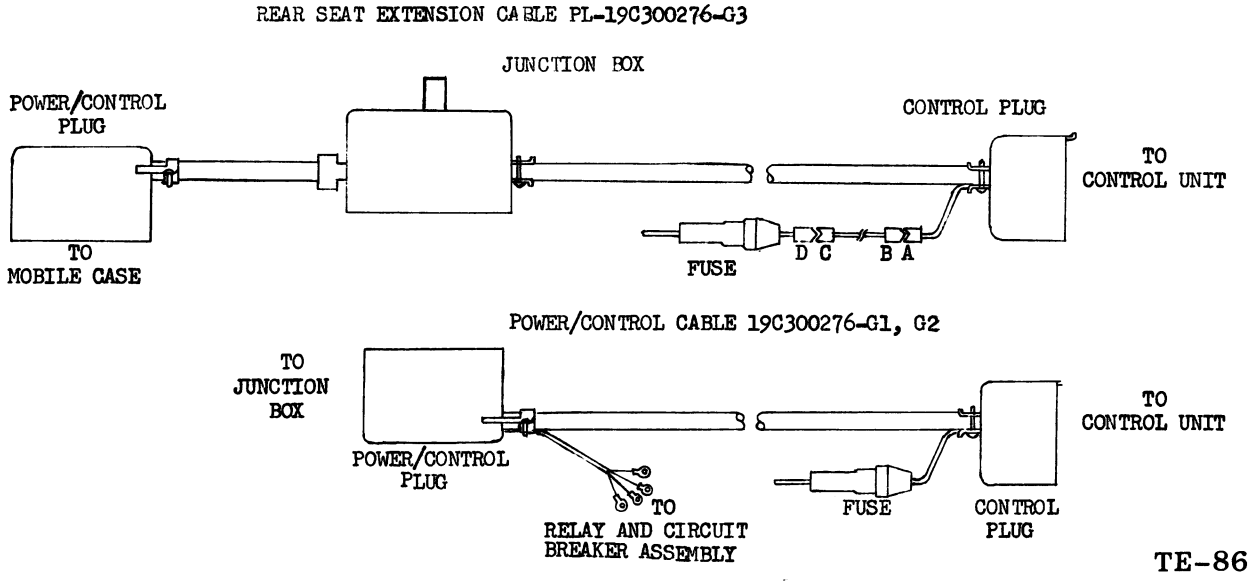


Fig. 1 - CABLE DIAGRAM REAR SEAT EXTENSION CABLES

4. Route the Rear Seat Extension Cable to the Extension A Control Unit location. When possible the cable should be routed under the floor mats along the driveshaft tunnel. The Control Plug is designed with removable pins so that the plug can be removed from the cable, if necessary, to allow routing of the cable through tight spaces. To disconnect the plug, loosen the cable clamp and hardware that holds the cover in place and slide the cover out of the way. Slide the insulation back on each lead, grasp the taper-tab terminal with long nose pliers and pull the terminal from the connector. When the cable is in place, reconnect the taper-tab terminals (refer to the color code chart below) and re-assemble the cover.

COLOR CODE CHART	
WIRE COLOR	CONTROL PLUG PIN NUMBER
RED	1
ORANGE	2
BLUE	3
WHITE-BLACK	4
RED-BLACK	5
GREEN-BLACK	6
ORANGE-BLACK	7
BLUE-BLACK	8
BLACK	9
WHITE	10
PURPLE-WHITE	11
RED-WHITE	12
BLUE (jumper)	13 to 20
GREEN (2 terminals)	14 and 15
RED (jumper)	16 to 18
GREEN-WHITE	17
ORANGE-WHITE	19
BLUE-WHITE	21
GREEN-RED	22
ORANGE-RED	23
BLUE-RED	24
ORANGE-GREEN	25
BLUE-GREEN	26
FUSE LEAD (2 terminals)	28 and 29
BLUE-ORANGE	30

5. The cable plugs should be connected as shown in Fig. 1.

6. The Rear Seat Extension Cable Fuse lead may be connected at the Relay and Circuit Breaker Assembly with the fuse lead from the standard cable or it may be connected to a 12 volt terminal in the rear seat area. (In-line connectors A, B, C and D are provided to shorten the cable when desired). If the driver is to control the power, the fuse lead may be disconnected at A-B, leaving the connector cover to protect the lead from accidental shorting.

OPERATION

The basic operation of the MTS equipment will not be changed by the addition of the Rear Seat Extension; however, the handset for the Rear Seat Extension should not be lifted from the cradle while the front unit is in use unless both Control Unit channel selector switches are in the same position.

NOTE

The revertive circuits in the Control Units make it possible for either extension unit to receive an incoming call without pressing the push button for the revertive channel; however, the call will be disrupted if the remaining unit comes off-hook without being on the revertive channel. To eliminate such interruptions the subscribers should become accustomed to pressing the revertive channel push button when answering an incoming call and should also make certain that the units are on the same channel when both Control Units are to be in use.

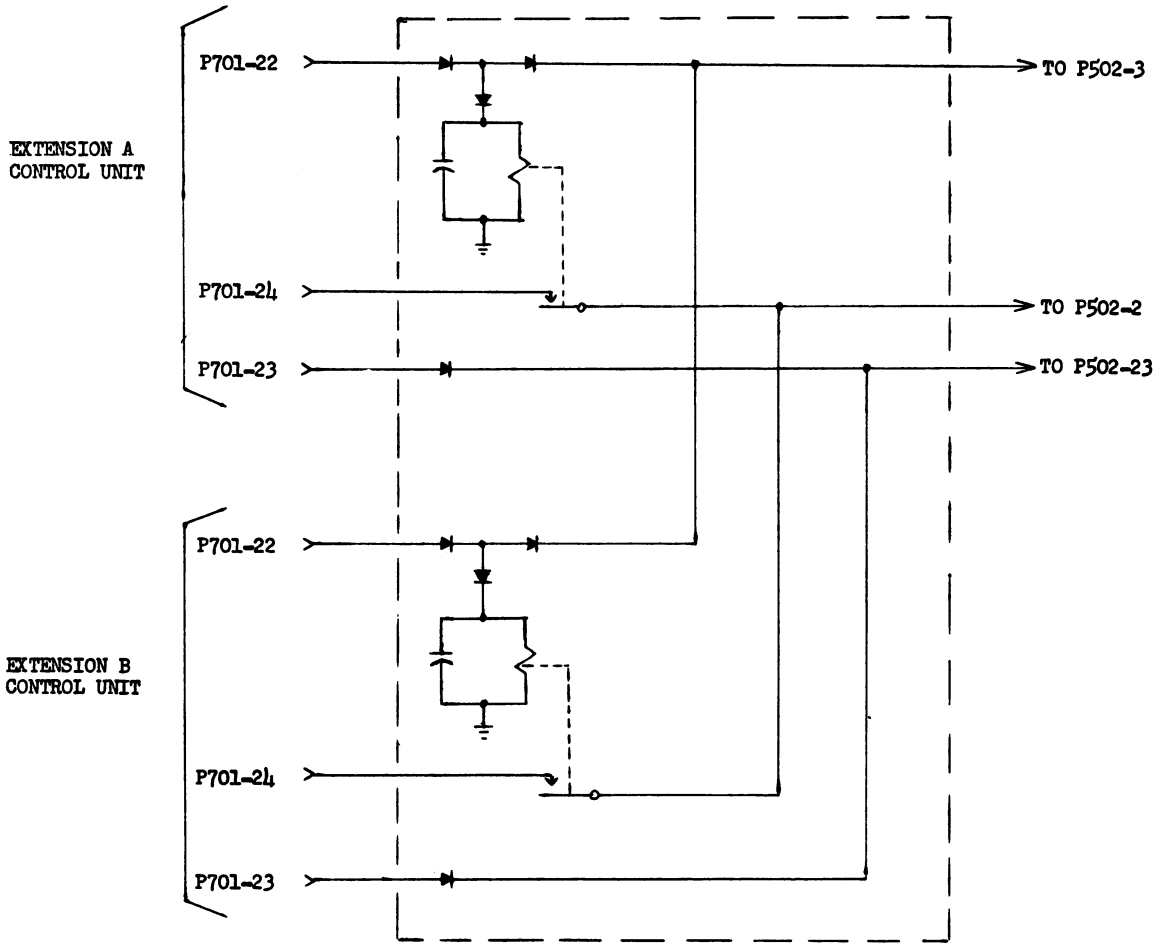
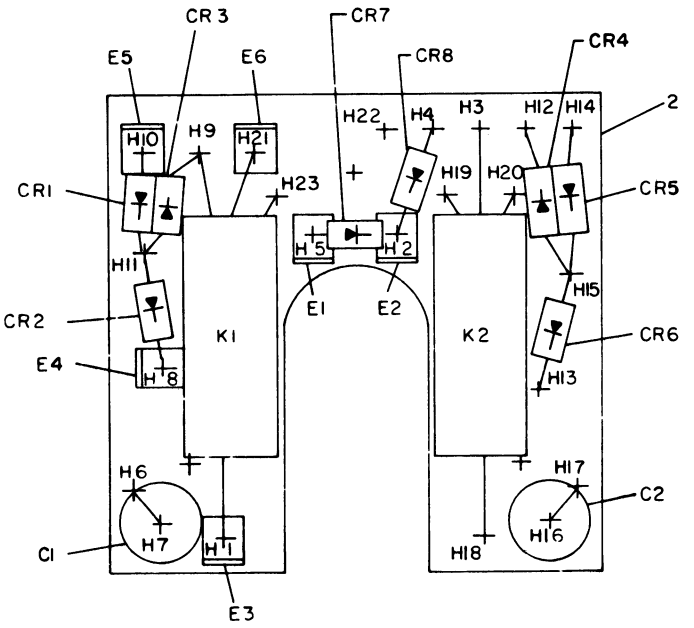
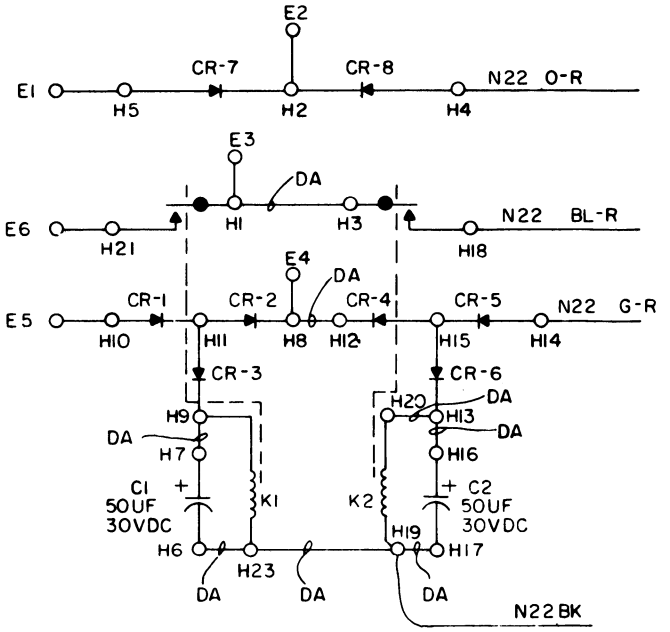


Fig. 2 - SIMPLIFIED DIAGRAM
COMPONENT BOARD CIRCUITS FOR JUNCTION BOX
(MODIFICATION TO CABLE PL-19C300276-G3)

COMMUNICATION PRODUCTS DEPARTMENT
GENERAL ELECTRIC COMPANY
LYNCHBURG, VIRGINIA

Printed in U.S.A.





Wiring & Outline Diagram

REAR SEAT EXTENSION CABLE
MODIFICATION KIT PL-19B204072-G1

(19B204072, Rev. 1)

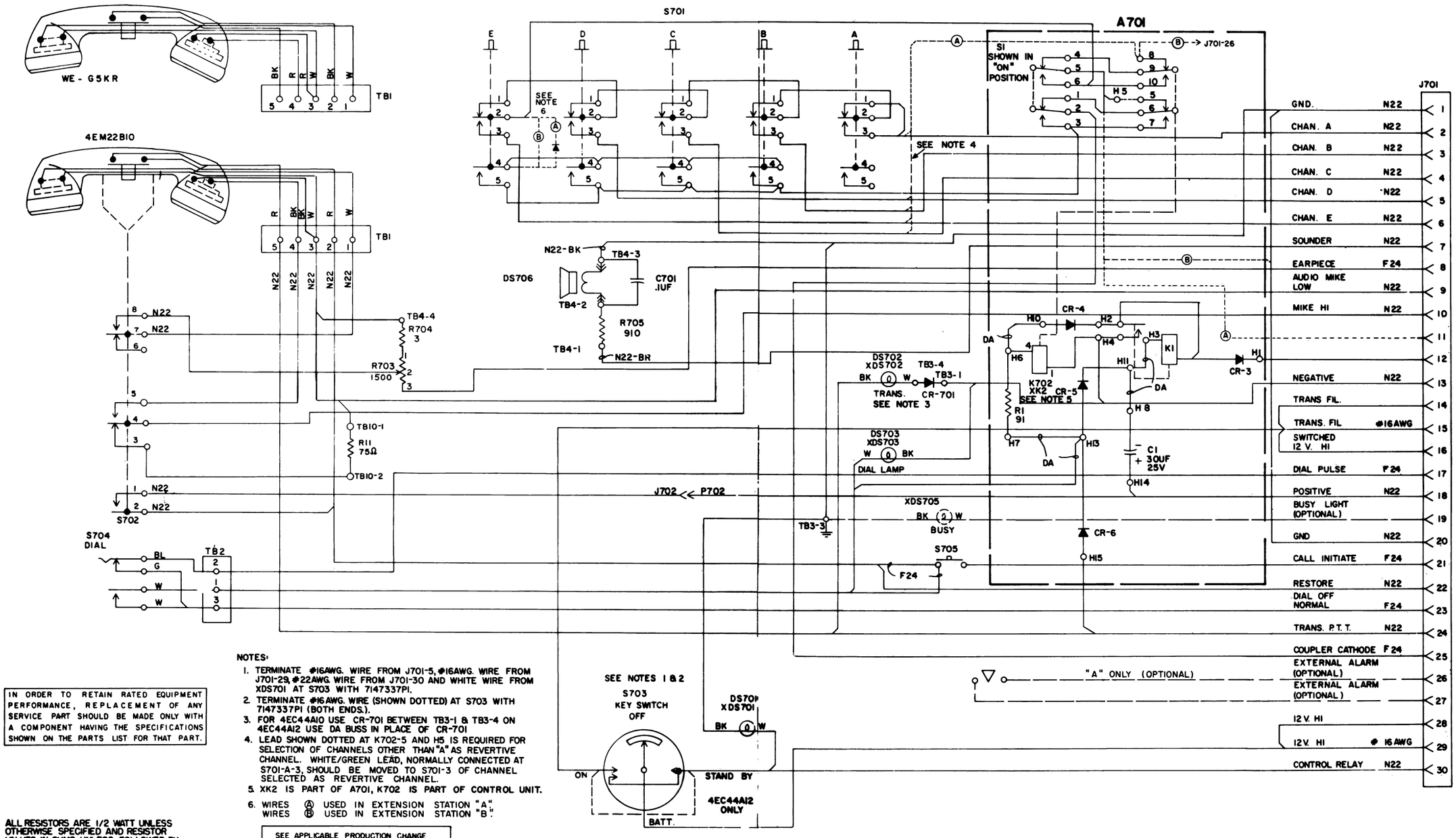
PARTS LIST

REAR SEAT EXTENSION CABLE MODIFICATION KIT

PL-19B204072-G1

SYMBOL	G-E PART NO.	DESCRIPTION
		CAPACITORS
C1 and C2	5491000-P1	Electrolytic: 30 uf +100% -50%, 25 VDCW; Sim to Sprague S45553.
		DIODES
CR1 thru CR8	4036936-P1	Silicon.
		RELAYS
K1 and K2	19C307002-P1	Sealed reed: 12 VDC, 1000 ohms ±15%, 1 form A contact; Sim to Struthers-Dunn MRRIA.

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES



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.

NOTES:

1. TERMINATE #16AWG. WIRE FROM J701-5, #16AWG. WIRE FROM J701-29, #22AWG. WIRE FROM J701-30 AND WHITE WIRE FROM XDS701 AT S703 WITH 7147337P1.
2. TERMINATE #16 AWG. WIRE (SHOWN DOTTED) AT S703 WITH 7147337P1 (BOTH ENDS.).
3. FOR 4EC44AI0 USE CR-701 BETWEEN TB3-1 & TB3-4 ON 4EC44AI2 USE DA BUSS IN PLACE OF CR-701
4. LEAD SHOWN DOTTED AT K702-5 AND H5 IS REQUIRED FOR SELECTION OF CHANNELS OTHER THAN "A" AS REVERTIVE CHANNEL. WHITE/GREEN LEAD, NORMALLY CONNECTED AT S701-A-3, SHOULD BE MOVED TO S701-3 OF CHANNEL SELECTED AS REVERTIVE CHANNEL.
5. XK2 IS PART OF A701, K702 IS PART OF CONTROL UNIT.
6. WIRES (A) USED IN EXTENSION STATION "A".
   WIRES (B) USED IN EXTENSION STATION "B".

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
4EC44AI0	F
4EC44AI2	F

Wiring Diagram

CONTROL UNIT MODEL 4EC44A12
WITH REAR SEAT EXTENSION
OPTION 5856

(19D402074, Rev. 2)

PARTS LIST

CONTROL UNIT
MODEL 4EC44A12, REV. F
WITH
REAR SEAT EXTENSION OPTION 5856

SYMBOL	G-E PART NO.	DESCRIPTION
		SUBASSEMBLIES
A701*		COMPONENT BOARD ASSEMBLY PL-19B204011-G1 (Added by Rev. D)
		CAPACITORS
C1	5491000-P1	Electrolytic: 30 uf +100% -50%, 25 VDCW; Sim to Sprague S45553.
		RECTIFIERS
CR3 thru CR6	5490415-P2	Silicon.
		RELAYS
K1	19C307002-P1	Sealed reed: 12 VDC, 1000 ohms ±15%, 1 form A contact; Sim to Struthers-Dunn MRR1A.
		RESISTORS
R1	3R79-P910J	Fixed composition: 91 ohms ±5%, 2 w.
		SWITCHES
S1	19A115004-P1	Slide: DPDT, 200 VDC at 15 ma, 12 VDC at 30 ma; Sim to Oak 19640509.
		CABLES
W1	19B204006-P1	Cable: 10 in. Type 24.
		SOCKETS
XK2	5491595-P4	Relay: Nylon, 10 contacts; Sim to Allied 30054-1.
		CAPACITORS
C701*	7161189-P2	Fixed ceramic disc: 0.1 uf +80% -30%, 50 VDCW; Sim to Sprague 36C172. (Added by Rev. D).
		INDICATING DEVICES
DS701		Incandescent: Min bay. base, 18 v, 0.15 amps. Sim to G-E Type 1445.
DS702 and DS703		Incandescent: Min bay. base, 14.5 v, 0.12 amps, Sim to G-E Type 53.
DS706*	5495088-P7	Earphone: 500 ohms imp; Sim to Telex 60136 (Requires the following plug). (Added by Rev. D)
	5495088-P28	Plug, miniature: Straight, (without cord); Sim to Telex 18332.
		JACKS AND RECEPTACLES
J701	5496819-P2	Connector: Phenolic, 30 contacts; Sim to HB Jones 242-30-01-031.
J702*	7147199-P1	Connector: 1 male contact; Sim to Winchester Electronics 21803. (Added by REV. E).
		RELAYS
K702*	5491595-P21	6 VDC, 52 ohms, 2 form C contacts; Sim to Allied T154-C-C. (Added by Rev. D).
		PLUGS
P702*	7147199-P2	Connector: 1 female contact; Sim to Winchester Electronics 21804. (Added by REV. E).

SYMBOL	G-E PART NO	DESCRIPTION
		RESISTORS
R701*	3R77-P240K	Fixed composition: 24 ohms ±10%, 1/2 w. (Deleted by Rev. D).
R702*	5491537-P3	Potentiometer, carbon film: 250 ohms ±20%, 0.3 w, linear taper; Sim to CTS 70. (Deleted by Rev. D).
R703	5491537-P4	Potentiometer, carbon film: 1500 ohms ±20%, 0.15 w, 10% taper; Sim to CTS 70.
R704*	19B209022-P26	Wirewound: 3 ohms ±5%, 2 w; Sim to IRC BWH. (Added by Rev. C).
R705*	3R77-P911J	Fixed composition: 910 ohms ±5%, 1/2 w. (Added by Rev. D).
		SWITCHES
S701	5492650-P1	Push button: 1 form C and 1 form A contacts on each button, non shorting; Sim to Oak 212-510-80.
S703	19B200150-P2	Rotary: On-Off-On, 30 amps at 12 VDC, (with 2 ignition lock keys sets); Sim to J Pollak LS-60LE.
S704	4038823-P1	Telephone Dial Asm: Western Electric Type 8A. (Supplied by Western Electric for use in Model 4EC44A12).
S705	7481654-P6	Push Button: Momentary contact, SPNO, 1/10 amp at 115 vac, non-inductive; Sim to Grayhill 30-1.
		SOCKETS
XDS701	PL-4038185-G1	Lamp Holder Asm: Min. Bay. Base, (with shield); Sim to Drake N517.
XDS702	7144663-P11	Light Indicator: Mtg brkt, (used with T3-1/4 min. bay. base lamp); Sim to Dialight 2-15.
XDS703	19B200005-P1	Lamp: Cad. plated, (used with miniature bayonet base lamp); Sim to Alden 81 SL.
XDS705*	7144663-P11	Light, Indicator: Mtg brkt, (used with T3-1/4 min. bay. base lamp); Sim to Dialight 2-15. (Deleted by Rev. D).
		MISCELLANEOUS
	4038824-P1	Handset: Western Electric Type G5KR-3. (Supplied by Western Electric for use in Model 4EC44A12.)
		REAR SEAT EXTENSION MODIFICATION KIT PL-4034042-G1 (Modifies Extension B Unit) and PL-4034042-G2 (Modifies Extension A Unit)
		DIODES
CR1	5495920-P1	Germanium.
		RESISTORS
R11	3R77-P750J	Fixed composition; 75 ohms ±5%, 1/2 w.
		SWITCHES
S702	PL-4038834-G1	Switch Assembly: consists of
	19B200147-P2	Switch: 1-form-B, 2-form-C contacts, 25 VDC at 2 amps.
	7147199-P2	Connector: 1-female contact; Sim to Winchester Elecs. 21804.

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES.