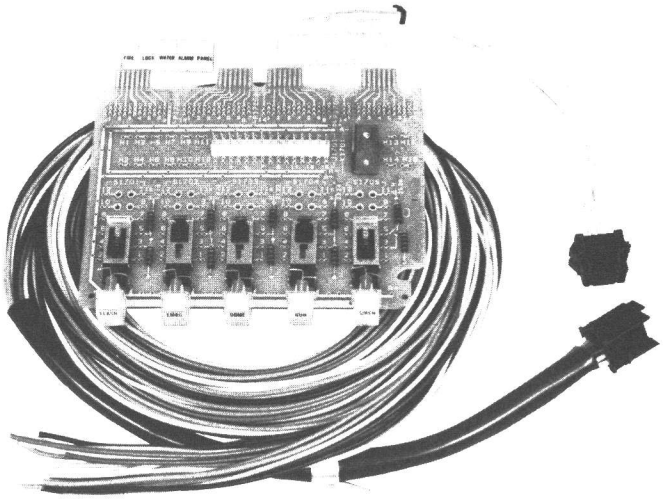
MOBILE RADIO

MAINTENANCE MANUAL

AUXILIARY SWITCH MODULE
(USED WITH C-800 AND C-900 SERIES CONTROL UNITS)



SPECIFICATIONS *

INPUT VOLTAGE	13.8 VDC	
CURRENT DRAIN (Circuit Board Only)	100 mA	
Current through Switch Contacts	1 Ampere	(Maximum)

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-30378
DATAFILE FOLDER – DF-4104

AUXILIARY SWITCH MODULE 19D423246G1

TABLE OF CONTENTS

WARNING

No one should be permitted to handle any portion of the equipment that is supplied with high voltage; or to connect any external apparatus to the units while the units are supplied with power. KEEP AWAY FROM LIVE CIRCUITS.

High-level RF energy in the transmitter Power Amplifier assembly can cause RF burns. KEEP AWAY FROM THESE CIRCUITS WEHN THE TRANSMITTER IS ENERGIZED!

DESCRIPTION

The General Electric Auxiliary Switch module used with the C-800 and C-900 Series Control Units provides the user with added flexibility to control peripheral devices. The Auxiliary Switch module plugs into the option deck(s) of the control unit and is interconnected to the peripheral devices through auxiliary switch jack J760 and selectable strapping on the module.

The Auxiliary Switch module contains five double pole double throw switches and associated LED circuitry, two interconnect cables, and a sheet of peel-off labels for function identification.

All switches are backlighted at a low level using LED's for high reliability and low power consumption. When a switch is selected (pushed in), the LED wil l glow at maximum brightness. Since one set of contacts on each switch is used to operate the LED, the other set of switch contacts (SPDT) is available to control an external device.

The two outboard switches are momentary action switches, the other three are push-push type switches.

The Auxiliary Switch module provides an interface capability between the system functions present on the backplane board and auxiliary switch jack, J760. This interface capability allows the user to select a system function, design and interface control circuit, and using a momentary or push-push type switch select the circuit for operation of an external device.

Two cables, W1701 and W1702, containing 15 conductors each are provided to interconnect the Auxiliary Switch module to the controlled external devices. W1701 interconnects J1701 on the Auxiliary Switch module and P760 on the inside back of the control unit. A 12-foot cable, W1702, used externally, interconnects the control unit and the customer-furnished controlled device.

When the Auxiliary Switch module is plugged into the backplane board all system control functions present on the backplane board become available for use on the Auxiliary Switch module at P1705. All system control functions are terminated in holes on the printed wire board. These holes are used to connect the selected system control function(s) to the appropriate switch or interface control circuit (customer designed and provided). DA jumper wire may be used for interconnecting circuits. Both the input control function and the output from the controlling circuit must be connected to operate the external device. The output of the interface control circuit must be appropriately connected to J1701.

The Schematic and Outline Diagrams identify the plugs, jacks, switches, LED's, and interconnecting holes. Transistors and resistors shown phantomed in (dashed lines) are not provided but provide a suggested component layout. Resistor wattage should not exceed one-half watt. Current drain through the switch contacts should not exceed 1 Ampere.

Optional relay K1701 may also be wired into the circuit using DA jumper wire. The relay can be mounted over holes H13-H16 as shown on the Outline Diagram. Maximum allowable current through the relay contacts is limited to two amperes. The relay is not available as standard equipment, but may be ordered from the Service Parts warehouse.

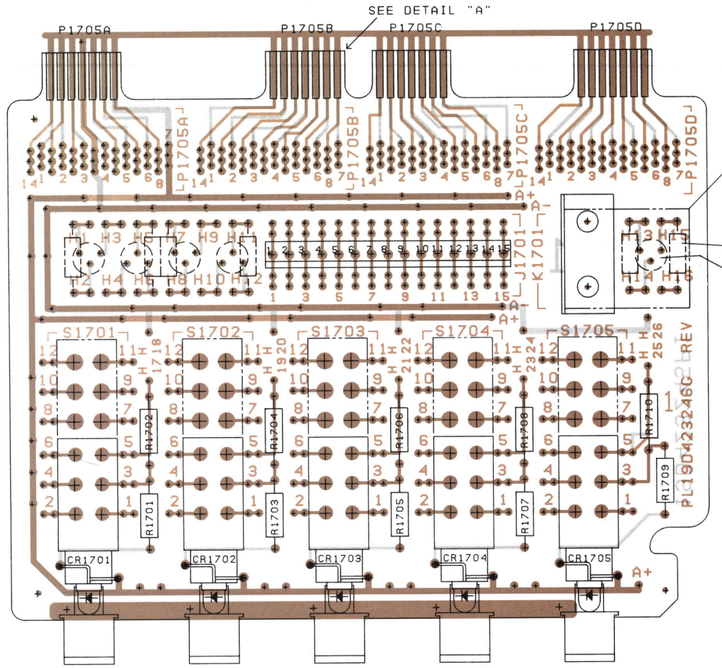
When designing circuitry for the Auxiliary Switch module, be sure to hand draw a Schematic Diagram and retain with this manual for future reference.

INSTALLATION

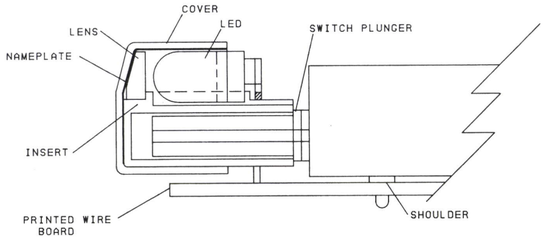
1. Remove front panel of control unit.
2. Insert red wire from cable W1701 (19B226934G1) into J760-1 (A+) and black wire into J760-2 (A-). (Refer to Outline Diagram).
3. Remove second option module if present and necessary to gain access to install J760.
4. Install J760 by pressing connector into rear cover from inside control unit.
5. Install cable clamp around cable W1701 and fasten clamp to backplane board using an existing 6-32 screw.
6. Install Auxiliary Switch module in appropriate option deck and plug W1701 cable into J1701 on option board. Inatall second option board if removed.
7. Replace front cover.
8. Plug external cable (W1702) into J760 on rear of control unit.

MAINTENANCE

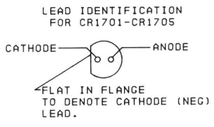
Troubleshooting the Auxiliary Switch module is facilitated using option extender board 19D417773. The extender board allows the serviceman to troubleshoot the Auxiliary Switch module from outside the control unit.

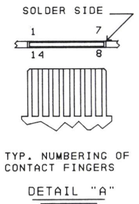


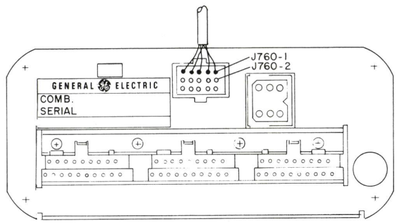
(19B226829, Sh. 1, Rev. 1)
(19B226829, Sh. 2, Rev. 1)



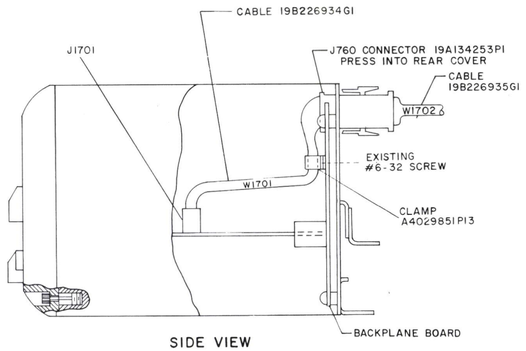
(19D424588, Rev. 1)



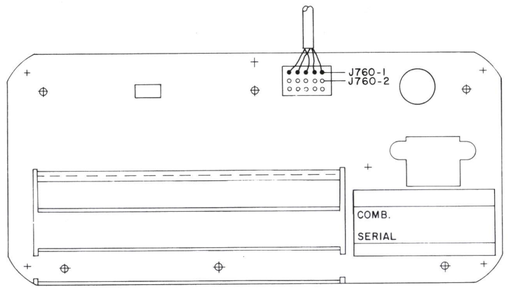




REAR VIEW
(C-800)



SIDE VIEW

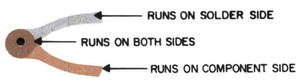


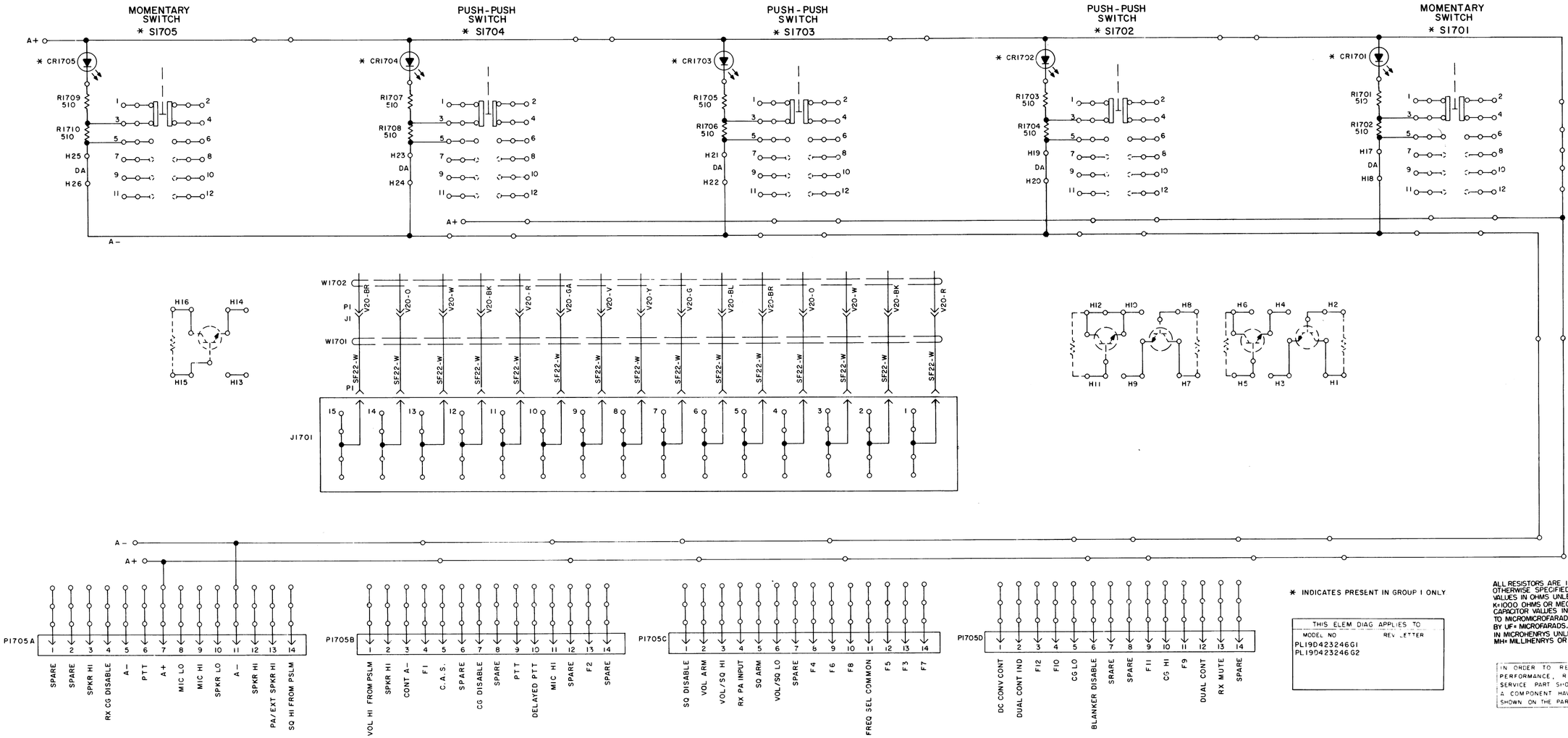
REAR VIEW
(C-900)

RC-3092

OUTLINE & INSTALLATION DIAGRAM

AUXILIARY SWITCH MODULE





* INDICATES PRESENT IN GROUP I ONLY

THIS ELEM DIAG APPLIES TO	
MODEL NO	REV LETTER
PLI9D423246G1	
PLI9D423246G2	

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.

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.

(19R622180, Rev. 1)

SCHEMATIC DIAGRAM

AUXILIARY SWITCH MODULE

Issue 1

PARTS LIST

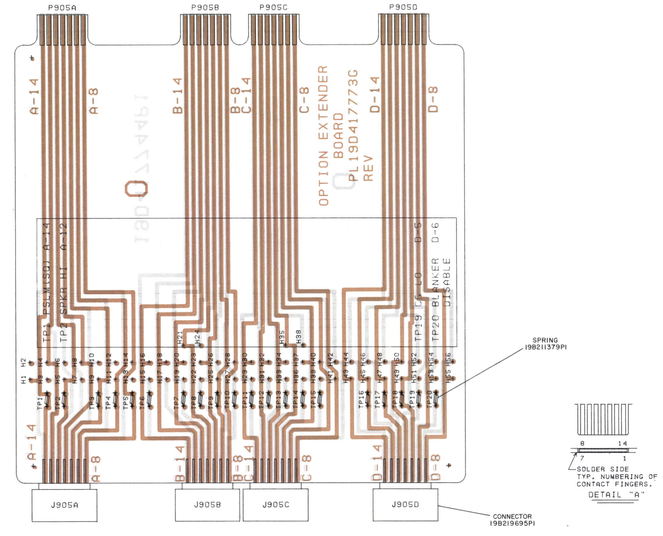
LBI-30377

AUXILIARY SWITCH MODULE
19D423246G1 WITH SWITCHES
19D423246G2 W/O SWITCHES

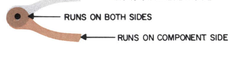
SYMBOL	GE PART NO.	DESCRIPTION
		- - - - - - - DIODES AND RECTIFIERS - - - - - - -
CR1701 thru CR1705	19A134146P14	Diode, opto-electronic: yellow; sim to Opcoa LSW23L-101.
		- - - - - - - JACKS AND RECEPTACLES - - - - - - -
J1701	19A116659P114	Connector, printed wiring: 15 contacts; sim to Molex 09-60-1151.
		- - - - - - - - OPTIONAL RELAY - - - - - - - - -
K1701	5491595P12	Armature: 1.5 w operating, 520 ohms ±15% coil res, 2 form C contacts; sim to Allied Control T154-X-186.
		- - - - - - - - - - RESISTORS - - - - - - - - -
R1701 thru R1710	3R77P511J	Composition: 510 ohms ±5%, 1/2 w.
		- - - - - - - - - - SWITCHES - - - - - - - - - -
S1701	19B209563P3	Push: 1 station, 2PDT, momentary action; sim to Switchcraft Series 70,000.
S1702 thru S1704	19B209563P2	Push: 1 station, 2PDT, altermate action; sim to Switchcraft Series 70,000.
S1705	19B209563P3	Push: 1 station, 2PDT, momentary action; sim to Switchcraft Series 70,000.
		- - - - - - - - - - - CABLES - - - - - - - - - -
W1701		CABLE ASSEMBLY 19B226934G1
		- - - - - - - - JACKS AND RECEPTACLES - - - - -
J1		Connector. Includes:
	19A134253P1	Shell.
	19A134254P3	Contact, electrical: wire size No. 18-26 AWG; sim to AMP 350037-1.
		- - - - - - - - - - - - PLUGS - - - - - - - - - -
P1		Connector. Includes:
	19A116659P24	Shell.
	19A116781P6	Contact, electrical: wire range No. 22-26 AWG; sim to Molex 08-50-0108.
W1702		CABLE ASSEMBLY 19B226935G1
		- - - - - - - - - - - - PLUGS - - - - - - - - - -
P1		Connector. Includes:
	19A134253P2	Shell.
	19A134254P1	Contact, electrical: wire size No. 18-26 AWG; sim to AMP 350036-1.
	7162441P24	Insulator, sleeving.
	7142878G1	Clip, loop.
		- - - - - - - - - MISCELLANEOUS - - - - - - - - -
	NP280002	Nameplate, plastic. (FUNCTION- located under pushbutton of S1701-S1705).
	19B226334P1	Pushbutton. (Used with S1701-S1705).
	19B226331P1	Actuator. (Used with S1701-S1705).
	19C321004P1	Lens. (Used with S1701-S1705).
	19A115010P3	Contact, electrical: sim to Malco 13A009-11. (Located on printed board at CR1701-CR1705).
	4038946P3	Support. (K1701).
	19B200525P103	Rivet, tubular. (Secures K1701 support).
	4029851P13	Clip loop.

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES

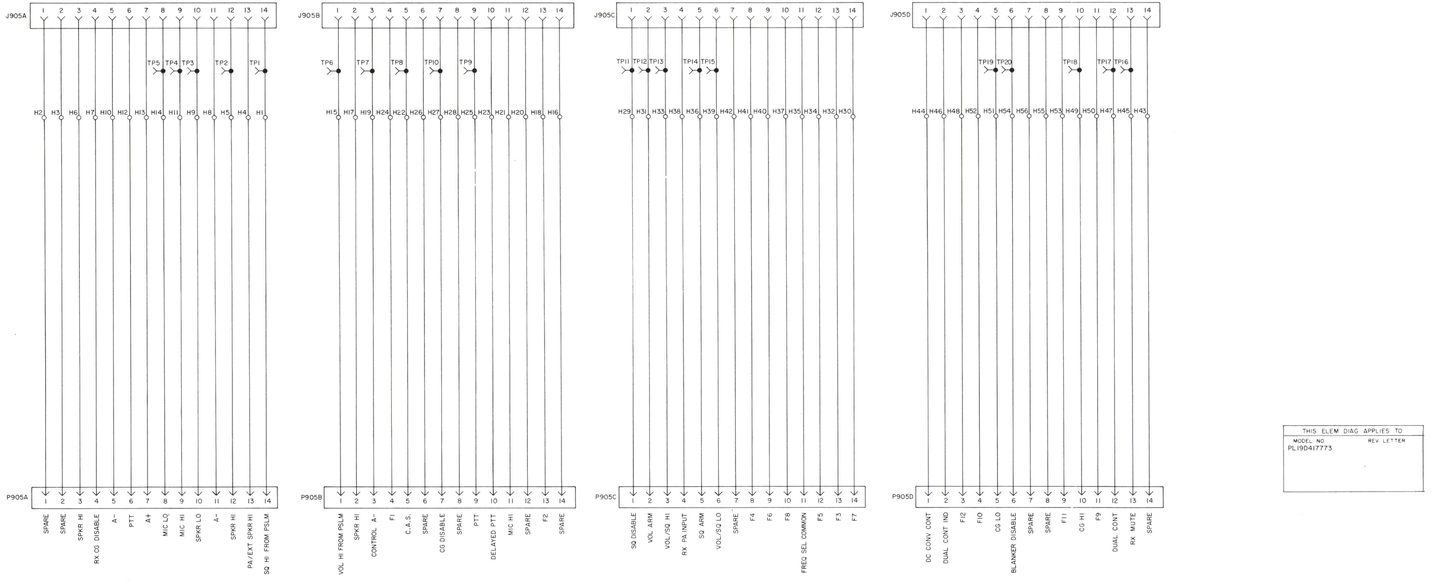
OUTLINE DIAGRAM



(19D424211, Rev. 0)
(19B226451, Sh. 2, Rev. 0)
(19B226451, Sh. 3, Rev. 0)



SCHEMATIC DIAGRAM



(19R622088, Rev. 1)

THIS ELEM DIAG APPLIES TO	
MODEL NO	REV LETTER
PL19D417773	

OUTLINE & SCHEMATIC DIAGRAM

OPTION MODULE EXTENDER BOARD

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 GE Part Number.

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

1. GE 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.

MOBILE RADIO DEPARTMENT
GENERAL ELECTRIC COMPANY • LYNCHBURG, VIRGINIA 24502

GENERAL ELECTRIC

Printed in U.S.A

ECP-824