MAINTENANCE MANUEL FOR PROGRESS LINE PORTABLE RECHARGEABLE BATTERY POWER SUPPLY

Model: 4EP18A10

SPECIFICATIONS

Type	EP-18-A	
Description	Battery Power Supply for Progress Line Portable Combinations.	
Duty Cycle	10% cycle - 1 minute transmit. 9 minute receive.	
Ambient Temperature Range	-30% to +60%	
Charging Input	AC Source 117V 10%	15.9V maximum DC Source
Power Output		
Receiver	70 ma at 12.7 volts	
Transmit	4.75 ma at 13 volts 875 ma at 1.25 volts 6 ma at 60 volts 60 ma at 120 volts	

5152

CONTENTS

ILLUSTRATIONS

These instructions do not purport to cover all possible 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, the matter should be referred to the nearest General Electric Company District Sales Office.

GENERAL ELECTRIC PROGRESS LINE

PORTABLE BATTERY POWER SUPPLY MODEL 4EP18A10

Model 4EP18A10 Rechargeable Battery Power Supply is designed for use with Progress Line Portable Combinations HN-11-W or N and HN-31-W or N.

The power supply mounts on the bottom of the main portable chassis by means of two catches. The Rechargeable Battery Pack is directly interchangeable with the extended battery pack. The power supply portion is connected to the radio portion by plug and jack. A charging jack is located on one end of the power pack.

POWER SUPPLY

The transistorized power supply runs from 11 rechargeable D size "flashlight" cells and supplies all necessary voltages for the transmitter. The cells run the receiver directly. A constant current type charging circuit is used to charge the battery from a 117 V AC source which fully charges the battery within 16 hours.

The power supply can also be charged by connecting it to an automobile ignition system. This method, however, is not intended to be the normal means of charging, as a full charge will not be affected in all cases. A separate cable is required for DC charging. The direct-current charging source must not exceed a maximum value of 15.9 volts. When charging from an automobile ignition system, switch S1 should be in the ground position corresponding to the car battery polarity.

If the Portable Combination must be operated under conditions which will cause the filament supply to exceed 1.32 volts, a series dropping resistor should be inserted to compensate for the increased voltage. Refer to Service Sheet RC-693. The power supply provides for inserting a resistor (at R5) to replace the standard buss wire.

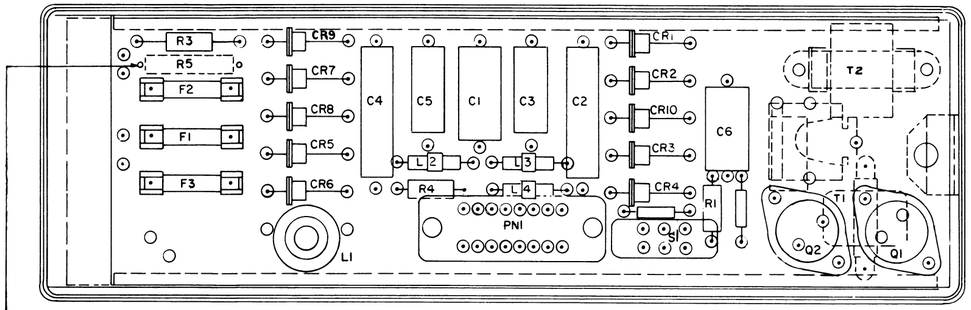
MAINTENANCE

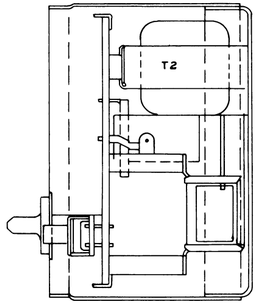
The power supply is easily detached from the main portable chassis by releasing the two catches and unplugging from the main unit. The power supply itself is a printed circuit board and is hinged on one end to permit raising for inspection and repair. Raising the board exposes the battery pack as well as the charging plug and wires.

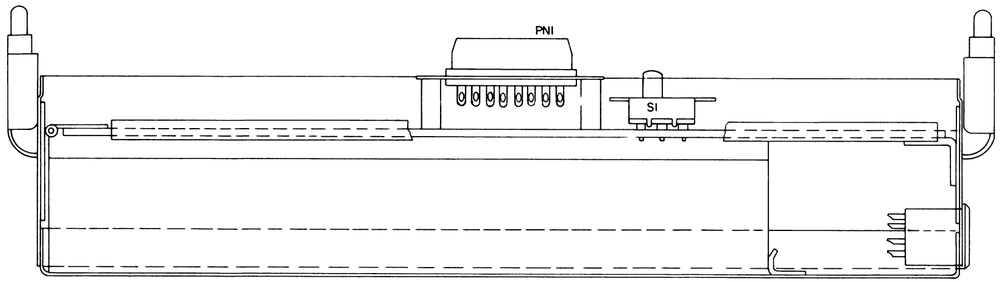
PERIODIC CHECK

To obtain optimum performance from the equipment a program of regular preventive maintenance should include the following:

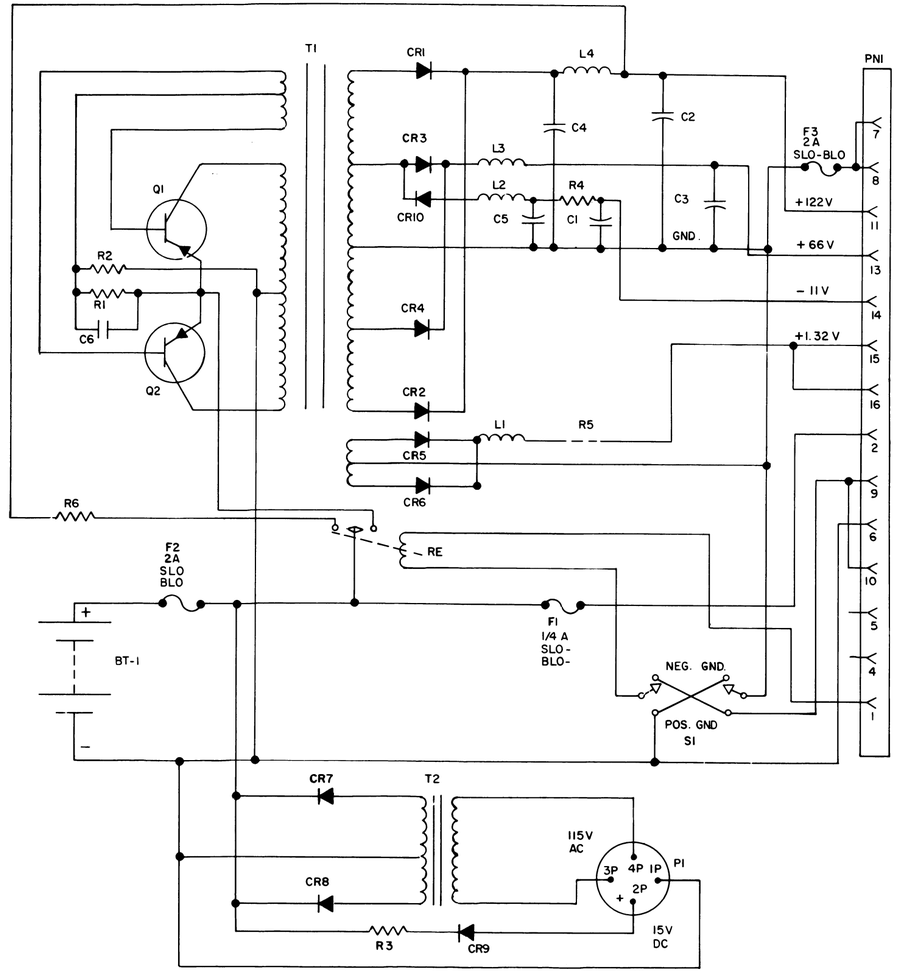
1. A mechanical inspection for loose, broken or damaged components.
2. An inspection of the cable connections.
3. Measurement of the output voltage.







(C-5496392, Rev. 1)



(C-5496257, Rev. 3)

Fig. 1 - Service Sheet

RECHARGEABLE BATTERY POWER SUPPLY MODEL 4EP18A10, REV. A

(RC-693A)

PARTS LIST
FOR
RECHARGEABLE BATTERY POWER SUPPLY
MODEL 4EP18A10 REV A

SYMBOL	DESCRIPTION	G-E DRAWING & PART NO.
	CAPACITORS	
C1#	Capacitor, 100 mfd, 15 vdc. Sprague 30D172A1. Changed by Rev. A.	
C2#	Capacitor, 10 mfd, 150 vdc. Sprague 30D218A1.	
C3#	Capacitor, 10 mfd, 100 vdc. Sprague 30D208A1.	
C4#	Capacitor, 10 mfd, 150 vdc. Sprague 30D218A1.	
C5#	Capacitor, 10 mfd, 150 vdc. Sprague 30D208A1	
C6	Capacitor, 25 mfd, 400 w vdc Astron Type MQCF-4-25	
	RECTIFIERS	
CR1 and CR2	Rectifier, North American Type NL-30	
CR3 and CR4	Rectifier, North American Type NL-20	
CR5 and CR6	Rectifier, International Rectifier Co. Type #66-3293	
CR7 thru CR9	Rectifier, International Rectifier Co. Type SD-91	
CR10	Rectifier, North American Type NL-20	
	FUSE	
F1	Fuse, "Slo-Blo", 3AG, 1/4 amp 250 v	B-7487942-P1
F2 and F3	Fuse, "Slo-Blo", 3AG, 2 amp 125 v	B-7487942-P27
	INDUCTORS	
L1	Coil, .65 +.05 -.0 ohms 250 ± 25 μ Henries Sonotone Corp. Type No. 22520	
L2 thru L4	Choke, approx. 800 turns random wound to give inductance of 5.4 MH. min. to 5.7 MH Max. Sonotone Type No. 22510	PL-4033350
	PLUG	
P1	Plug, Cannon Type XLR-4-32	
PN1	Plug, Amphenol Type 26-4100-16P	B-5491961-P2
	TRANSISTOR	
Q1 and Q2	Transistor, Clevite Type No. CDT 1336	
	RESISTORS	
R1	Composition, 82 ohms ±10%, 1/2 w.	C-3R77-P820K
R2	Composition, 3.9 K ohms, ±10%, 1 w.	C-3R78-P342K
R3	Wirewound, 1 ohm, ± 5%, 3 w.	B-7489160-P1
R4	Composition, 6.8K ohms, ±10%, 1 w.	C-3R78-P682K
R5	Composition - as needed	
R6	Composition, 1100 ohms, ±10%, 1/2 w.	C-3R77-P102K
	SWITCH	
S1	Receptacle, Amphenol Type No. 26-4200-16S	B-5491961-P12
	TRANSFORMERS	
T1	Transformer, Atlantic Type C-2056	
T2	Transformer, Atlantic Type C-2055	
	BATTERY	
BT1	(11) Nickel-Cadmium "D" cells Sonotone Corp. No. X-22155.	A-4034224-P1