

## DESCRIPTION

The 01-80358A62 is designed to program and/or test the P50+ portable radio without the use of the battery pack. It is designed to operate from a DC supply at a nominal 7.5 volts (low power) or 11.25 volts (high power) and a current capacity of 2 amps maximum.

The Battery Eliminator employs a silicon controlled rectifier (Q1) as a crowbar to prevent over-voltage from reaching the radio. When a voltage greater than 13.0V is present the zener diode VR1 conducts and causes the SCR (Q1) to trigger. This clamps the output of the supply and blows the fuse thereby protecting the radio from over-voltage.

In addition to over-voltage protection, the Battery Eliminator prevents reverse polarity from damaging the radio. If reverse polarity is present the silicon diode CR1 will conduct and cause the fuse to blow.

The two 100pf ceramic capacitors, C3 and C4, are employed to prevent RF from firing Q1. Capacitor C1 is used to suppress voltage transients when the source supply is turned on.

## OPERATION

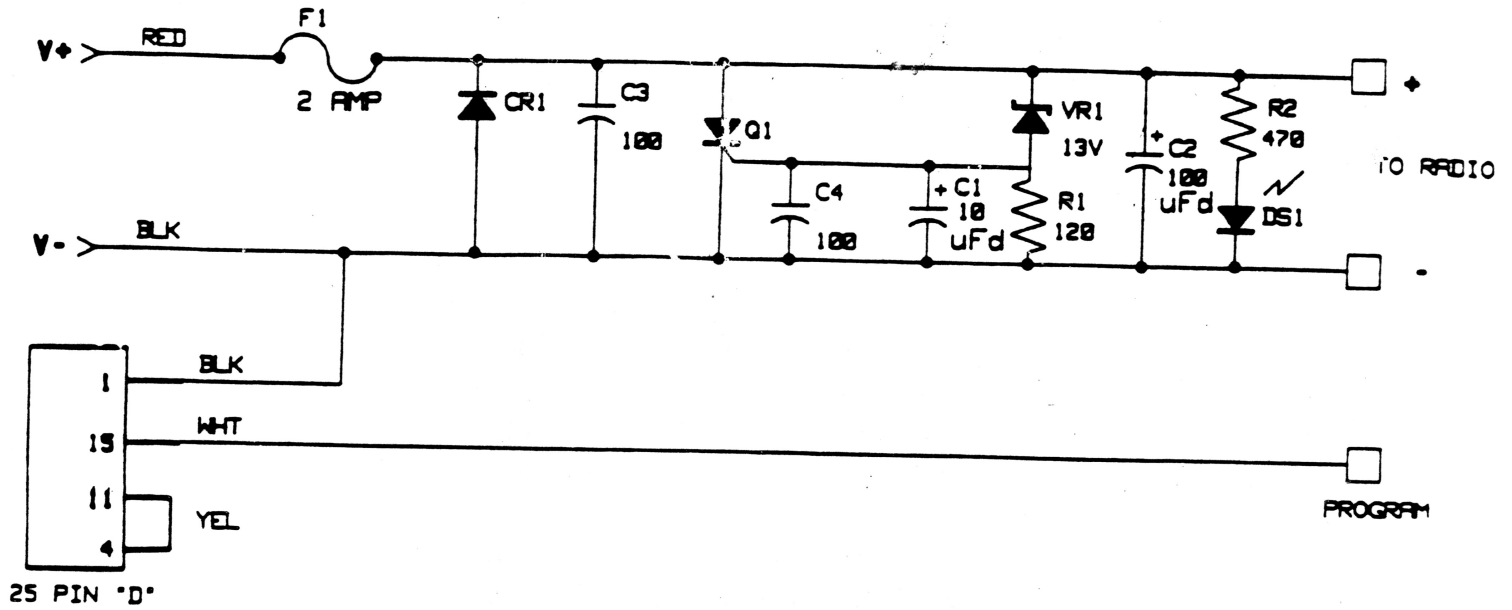
### **A. BATTERY ELIMINATOR**

Set the power supply to a nominal of 7.5V for low power radios or 11.25V for high power radios (13 volts maximum). If the supply has a current limiting, adjust for approximately 2 amps. Turn off supply and attach to the Programming Cable/Battery Eliminator via the dual banana plug. Remove the battery pack from the radio and attach the Programming Cable/Battery Eliminator. Turn on supply and it is now ready for use.

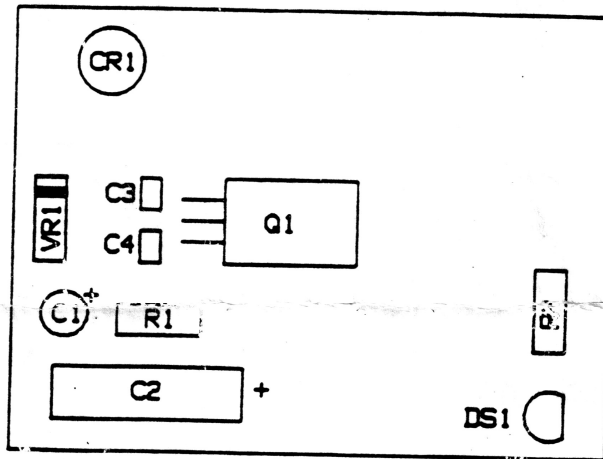
### **B. PROGRAMMING**

Programming the radio is accomplished by connecting the 25 pin "D" connector to the RIB (P/N 01-80353A74). Refer to your P50+ service manual for programming.

## SCHEMATIC DIAGRAM



## BOARD LAYOUT (COMPONENT SIDE)



## REPLACEMENT PARTS LIST

REF. NO.	PART NUMBER	DESCRIPTION	NON-REFERENCE	DESCRIPTION
R1	0611009C27	Resistor 120 5% 1/4W	0200131435	Nut 4-40 (3 per)
R2	0680318D41	Resistor 470 5% 1/4W	0300131979	Screw 4-40X7/16
C3,C4	2182358G94	Capacitor 100PF	0300140207	Screw 4-40X5/16 (8 per)
C1	2384665F01	Capacitor 10uf	0410057A24	Washer, Shoulder (3 per)
C2	2384669A19	Capacitor 100uf	0984538E03	Connector 25 Pin
Q1	4800869569	Silicon Control Rectifier	1482882A01	Fuse Holder
CR1	4882525G01	Diode	1482883A01	Fuse Cap
VR1	4882256C50	Zener 13V	1580379B08	Cover
DS1	4884404E03	Light Emitting Diode	1580379B18	Housing 25 Pin
F1	6500042092	Fuse 2 Amp	2883619K01	Dual Banana Plug
			3980379B12	Battery Contact (2 per)
			3980379B36	Probe
			4182885A01	Spring
			4282884A01	Fuse Clip (2 per)
			4380379B29	Spacer
			4680379B09	Block