TOP QUALITY — LOW COST CRC AMATEUR RADIO EQUIPMENT

CODAR RADIO COMPANY

CODAR 12 VOLT POWER SUPPLY UNIT TYPE 12/MS.

INSTRUCTION MANUAL

The CODAR 12/MS Power Supply Unit employs the latest developments in solid state techniques to provide up to 280 volts at 100 mA and 150/180 volts V.F.O.supply from a nominal 12 volt D.C.source. Although primarily designed for use with the CODAR AT5 Transmitter, it can be used with any similar equipment for car or marine installations.

A total of 7 semi-conductors in conjunction with a high efficiency toroid transformer are used,and the built-in remote control facility employing a precision micro-miniature heavy duty relay makes for easier installation avoiding L.T. voltage drop and the need for heavy duty cables and control switching.External connections are made to a terminal block and power supply socket.The Unit is supplied complete with a 4' power supply cable fitted plugs each end and 4' of 5 way control cable supplied as a twin pair and 3 way miniature cable.

PROTECTION

Full H.T. can be short-circuited without damage to the Unit which automatically stops functioning until the fault is corrected.In addition the built-in fuse protects the L.T.side. (Replacements 10 amp. rating).

POLARITY OF SUPPLY

It is important that the polarity of the supply is checked before installation,as incorrect polarity applied to the Unit may damage the power transistors.The Unit is supplied ready for use on a POSITIVE earth (chassis)electrical system as this is the most common system employed on the majority of cars.Provision is made inside the Unit to change over to NEGATIVE earth (chassis) system if required.

NEGATIVE EARTH SUPPLY.

To change the Unit for NEGATIVE earth supply,remove the Unit cover (7 flat headed screws) and change over the BLACK and RED leads as shown in FIG.3/4. The BLACK lead is transferred to the RED tag and the RED lead to the BLACK tag as shown.

INSTALLATION.

The Unit is fitted with the 4 self tapping screws and washers supplied, the correct size drill for these screws being No.45.The tag on the BLACK flying lead is fitted with a self tapping screw direct to the car metal work to provide a good earth return.It is essential that this lead makes good contact to the car metal work.

Care must be taken to ensure that no protuding bolt heads or metalwork can come into contact with the power transistors under the baseplate.

K4XL's  BAMA

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REMOTE CONTROL SWITCHING UNIT TYPE 12 R/C.

This Unit provides remote control of the 12 M/S Unit with STANDBY/NET/TRANSMIT and aerial changeover switching. A neon panel lamp gives indication when H.T. is ON in the NET and TRANSMIT positions. Connections are made to a matching terminal block with identical numbering to the 12 M/S Unit and 3 co-axial sockets are provided for aerial connections to the receiver and transmitter.

INSTALLATION.

The Unit can be fitted under the car instrument panel or where convenient with the 4 self tapping screws and washers supplied. Care should be taken that the correct terminals are connected with the colour coded cables provided. The twin pair is used for Terminals 2 and 3, and the 3 way miniature cable for Terminals 4/5/6. See FIG.1. Looking at the rear of the Unit, the centre co-a x socket is AERIAL, the right hand socket is RECEIVER AERIAL INPUT and the left hand socket TRANSMITTER OUTPUT.
The cables should be taped together for neatness and anchored where necessary to prevent direct pull on the connections.

SWITCHING FUNCTIONS.

L.T.SWITCH.	Main L.T.ON/OFF. Supply to 12 M/S ready, Transmitter heaters on.
STANDBY.	Relay supply OFF. Aerial switched to Receiver. L.T. supply to Terminal No.1.
NET.	Relay supply ON. V.F.O. supply only ON. Main H.T.OFF. Aerial remains switched to Receiver. L.T. supply to Terminal No.1. H.T. Indicator ON. Coupling for V.F.O. pick-up switched to Receiver input for netting.
TRANSMIT.	Relay supply ON. Main H.T.ON to Transmitter. H.T. Indicator ON. Aerial transferred to Transmitter. Receiver input shunted. L.T. supply to Terminal No.1 OFF. H.T. Indicator ON.

Note: In the STANDBY position, the V.F.O. supply is shorted out by the relay contacts in the de-energised position to prevent V.F.O. "hang on" when switching from NET or TRANSMIT to STANDBY.

SPARE L.T.SUPPLY FOR RECEIVER. For Transistor Receivers or Convertors.

Terminal No.1 provides a switched L.T. supply to the receiver. As supplied this Terminal is connected to the changeover switch S1B (See FIG.2) which supplies L.T. (12 volts) in the NET and STANDBY positions and disconnects the supply in the TRANSMIT position.

FOR VALVE TYPE RECEIVERS.

If it is required to make the Terminal permanently "live", the lead should be disconnected from the changeover switch and connected to either Terminals 2 or 3. On Terminal 2 it will be live continuously (via the L.T. fuse) and on Terminal 3 it will be live only when the main L.T. switch is ON together with the Transmitter heaters.

Alternatively the Terminal can be left connected as supplied and used to supply 12 volts to a relay in the receiver to switch off the receiver H.T. in the TRANSMIT position, and the valve heater supply taken from either Terminals 2 or 3 as required.

If the current consumption of the receiver exceeds 2/3 amps, its supply should be taken from an external live point, as the L.T. fuse will be carrying the total equipment current and may blow with switching on surges if loaded too heavily.

Cable connections for TYPE 12 M/S Power Supply Unit and TYPE 12R/C Remote control Switching Unit.

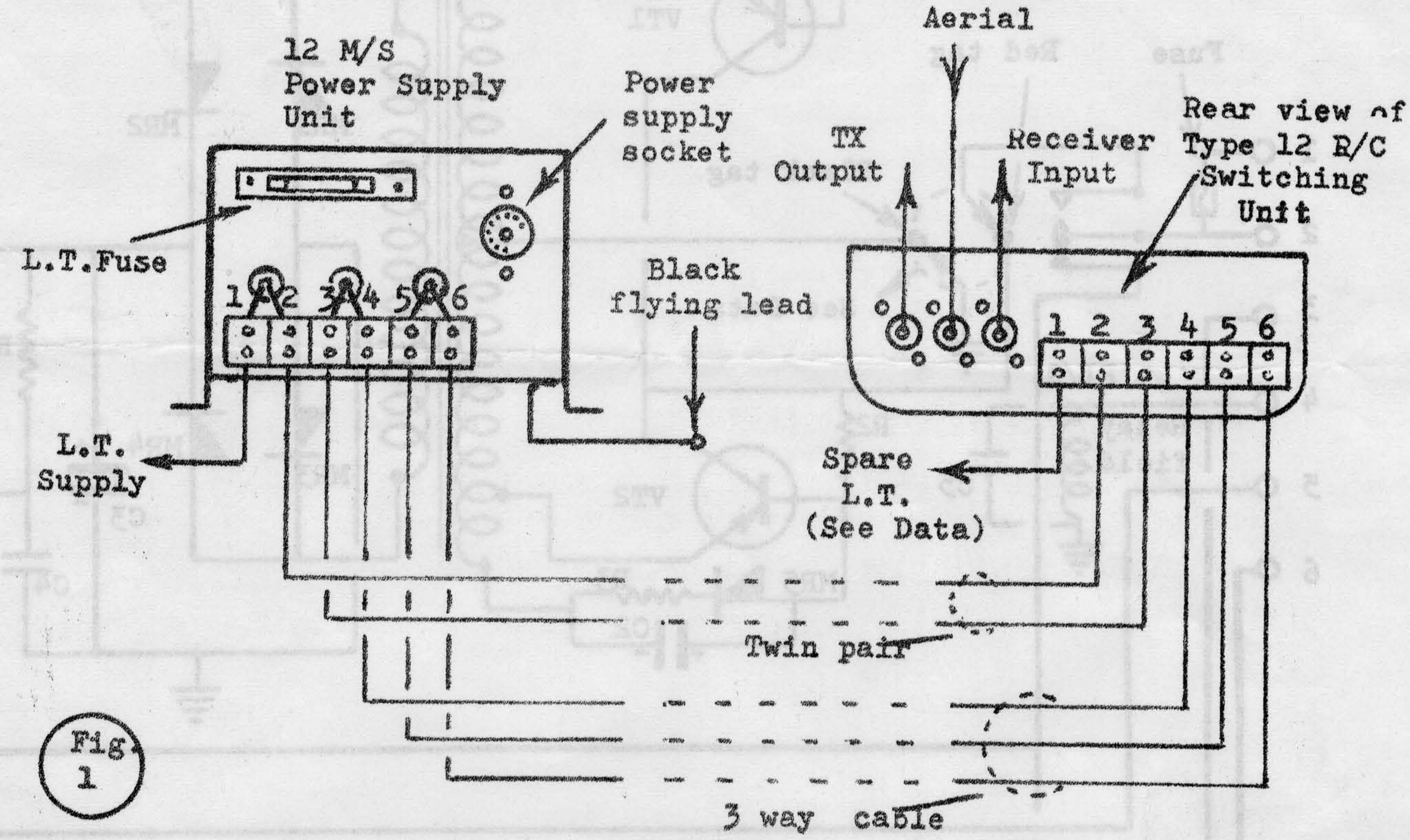

Fig 1

Schematic Diagram of TYPE 12 R/C Remote Control Switching Unit.

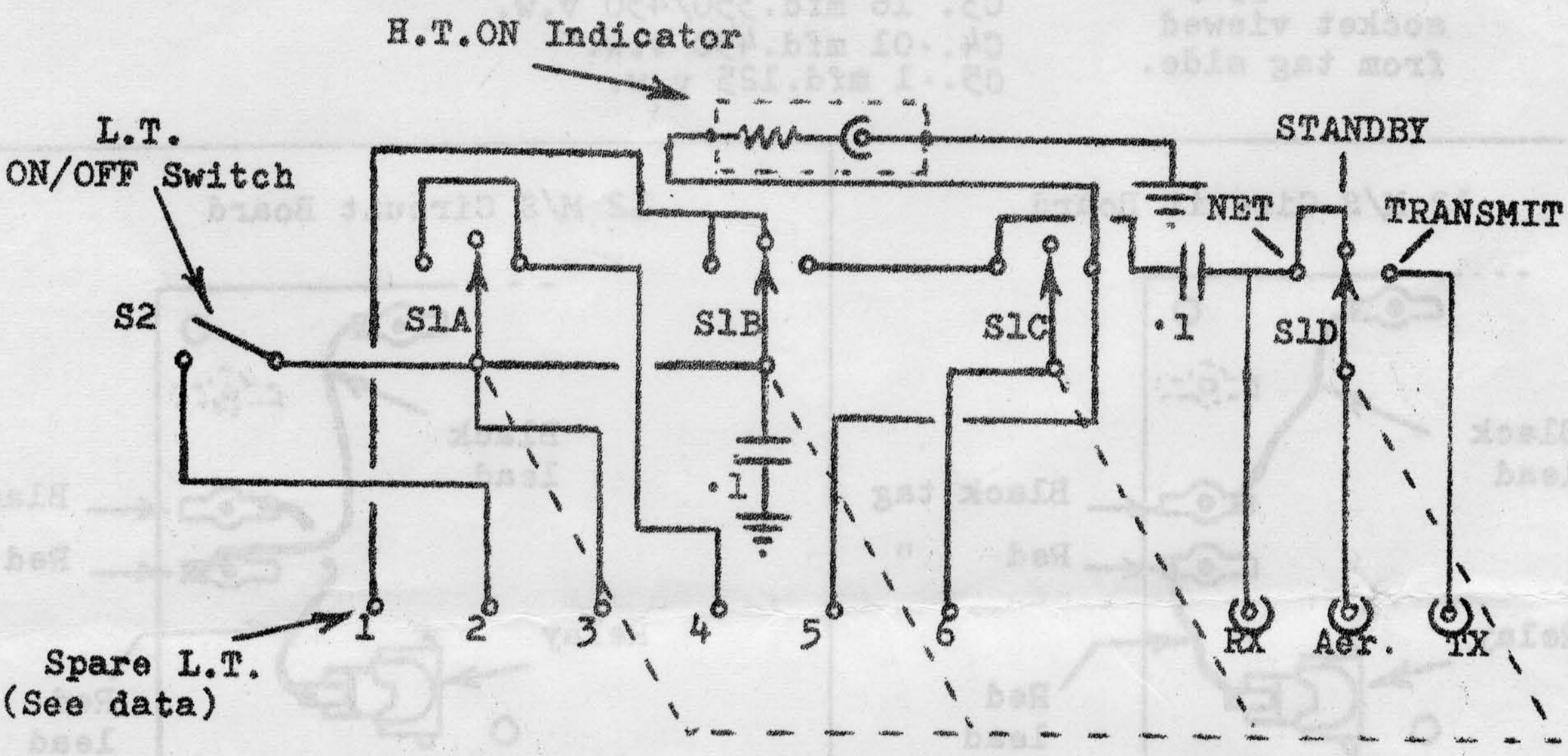

Fig. 2

Terminal No.1 Spare L.T.(See Data for alternative connections)
" No.2 L.T.feed via fuse on 12 M/S Unit.
" No.3 L.T. return to TX heaters.
" No.4 Relay field.
" No.5 H.T.Supply.
" No.6 H.T.return to TX.

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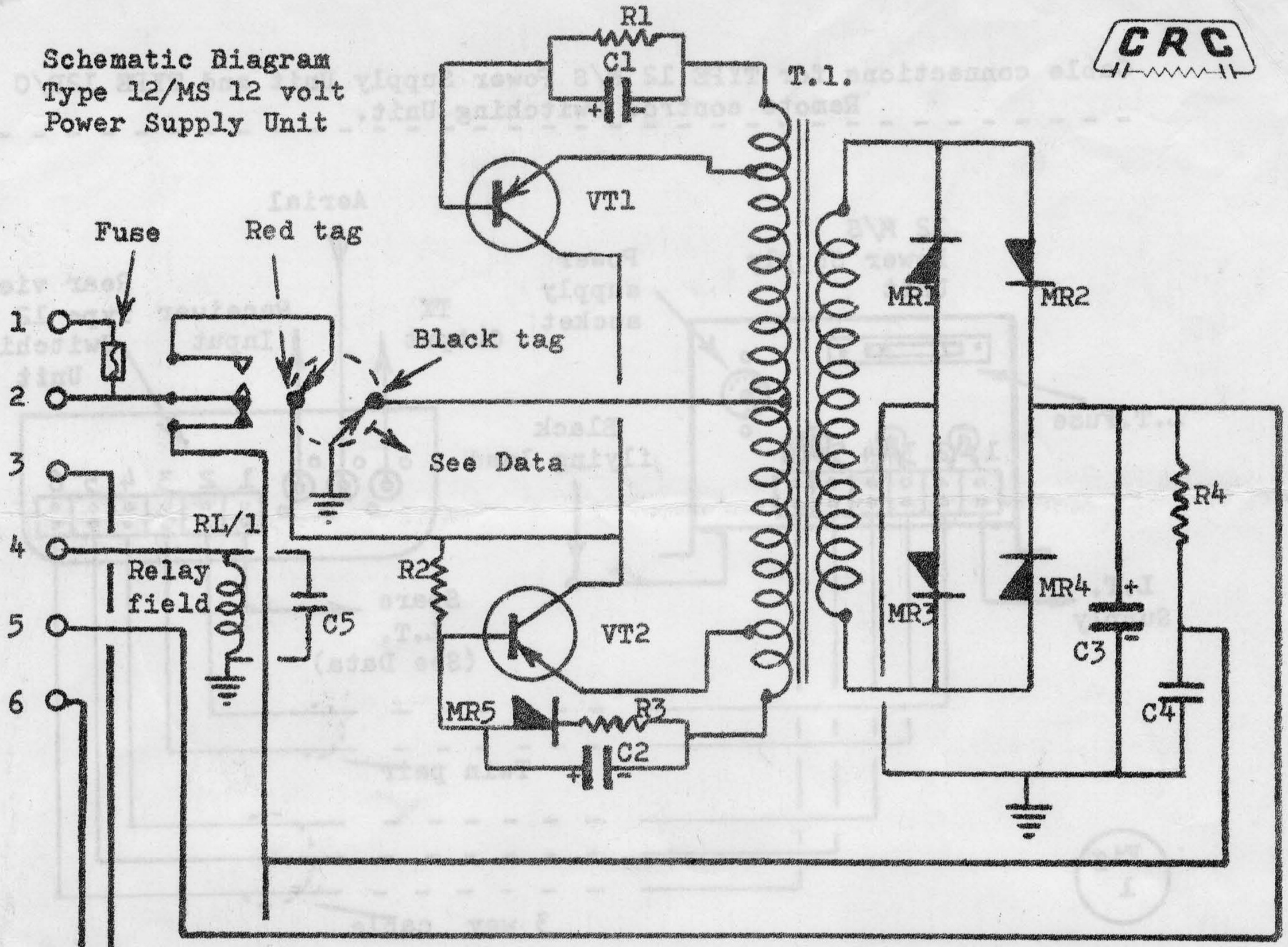
Schematic Diagram
Type 12/MS 12 volt
Power Supply Unit



Power supply socket viewed from tag side.

VT1,VT2..NKT 401/OC 28.
MR 1,2,3,4..BY105.
MR 5 ..... BY105/BY101
RL/1 Omron 1015/12.
T.1. F/12T.
C1/2.10 mfd.16/25 v.w.
C3. 16 mfd.350/450 v.w.
C4..01 mfd.450 v.w.
C5..1 mfd.125 v.w.

R1/3. 10 ohm ½w.
R2. 1k ohm ½w.
R4. 22k ohm ½w.
Fuse. 10 amp.

12 M/S Circuit Board

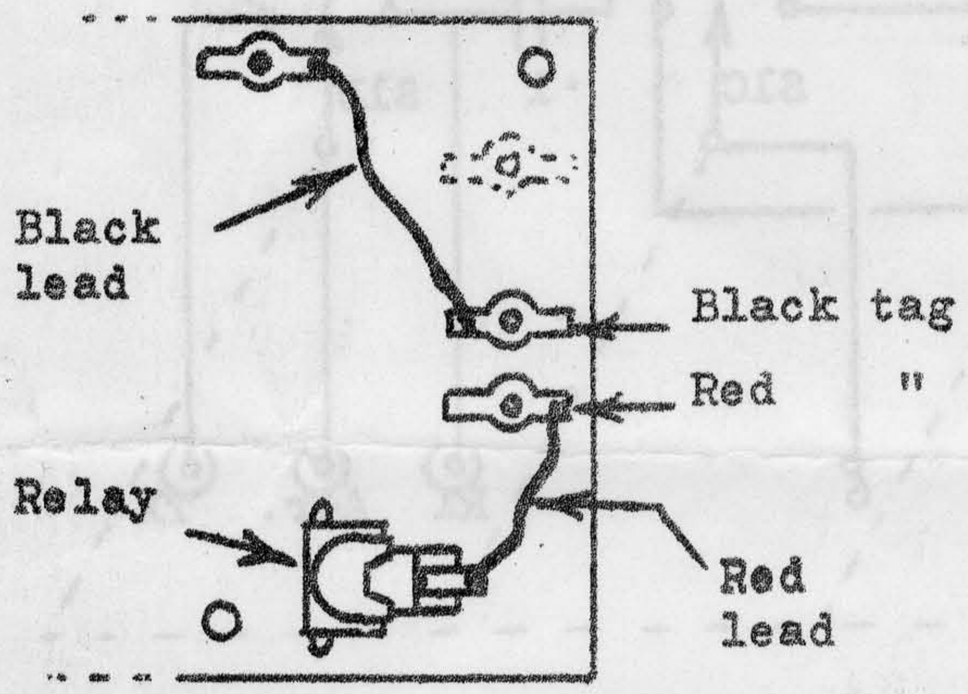


Fig. 3 WIRING LINKS FOR 12 VOLT POSITIVE EARTH SYSTEM. (See Data)

12 M/S Circuit Board

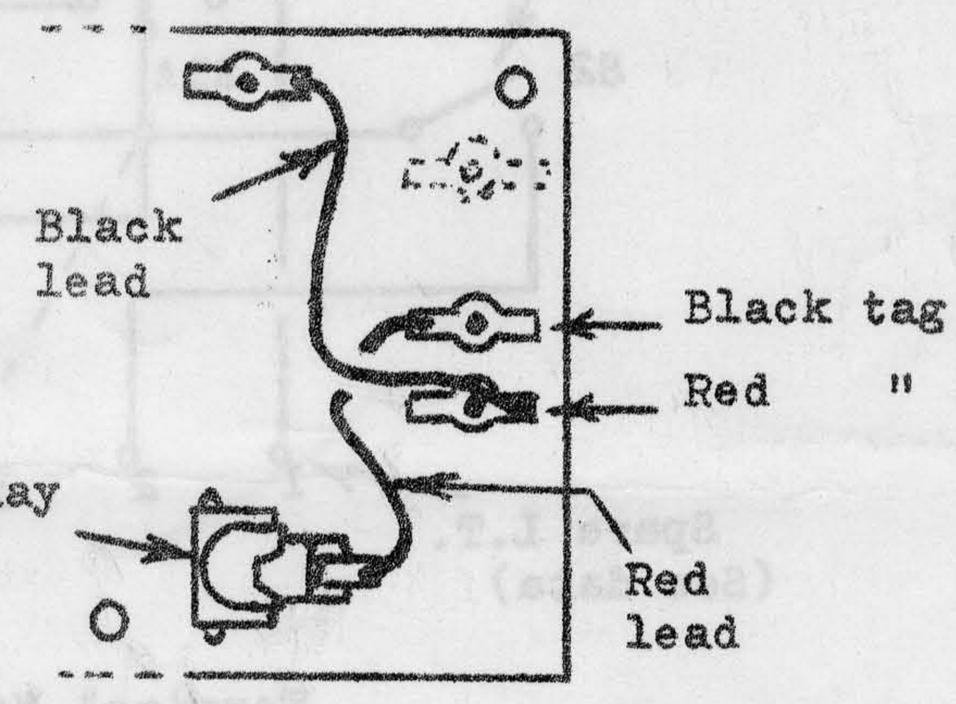


Fig. 4 WIRING LINKS FOR 12 VOLT NEGATIVE EARTH SYSTEM. (See Data)

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