

GROUP H.1

RADIO AND RADAR SUPPLIES
(CODE RT, DM, IF AND RS)

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Equipment employed

1. The major components employed in the radio and radar supplies circuits are quoted below, together with the appropriate Air Publications to which

reference should be made for a detailed description and the necessary servicing required to maintain them in an efficient condition.

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Set selector, radar ranging and radar test switches, Rotax, Type D.5406	A.P.4343C, Vol.1, Sect.1, Chap.28
Radar supply indicator, Dowty, Type C.5165Y, Mk.1 or Type A.2	A.P.4343E, Vol.1, Sect.18, Chap.-
Inverter, Type 200	A.P.4343B, Vol.1, Sect.16, Chap.8.
Circuit breakers, Type A.2 and A.6	A.P.4343B, Vol.1, Sect.10, Chap.6.
Tele-briefing push switch, Type 1290	A.P.4343C, Vol.1, Sect.1, Chap.-
Tele-briefing lamp, Type A	A.P.4343E, Vol.1, Sect.18, Chap.7

DESCRIPTION

Radio and radar supplies

2. Each radio and radar installation is separately fused and obtains a supply from the supply panel in the radio bay. The supply for the A.R.I. 18064 twin V.H.F. installation is normally connected to No.1 transmitter-receiver, via a fuse in the V.H.F. relay box attached to the lower longeron below the radio mounted structure, but the supply may be transferred from No.1 to No.2 transmitter-receiver, via another fuse in this box, by the energizing of a relay G controlled by a set selector switch. The relay is mounted in the V.H.F. relay box, while the switch is situated on the cabin port shelf. Operation of the set selector switch also energizes relays C and D within the V.H.F. relay box to transfer the press-to-transmit, microphone and telephones from No.1 to No.2 set.

3. The press-to-transmit switch is incorporated in the throttle lever and when depressed, makes the earth return for the microphone and press-to-transmit relay B, which is also mounted in the V.H.F. relay box and supplied from a fuse in this box. The audio warning relay A, which is also mounted in the V.H.F. relay box, is supplied and controlled by the hydraulic pressure indicator circuit, as described in Group D.2 of this chapter. The telebriefing relays E and F are also mounted in the relay box and supplied from a fuse in this box, the relays being energized by the insertion of the tele-briefing plug into its socket at the tail of the aircraft. A lamp, located on the cabin port shelf, indicates when the tele-briefing plug is inserted. A tele-briefing push-switch adjacent to this lamp should be depressed when it is required to talk over the system.

4. The A.R.I. 5849 D.M.E. and the A.R.I. 5131 I.F.F. installations each obtain their supply from the supply panel. The D.M.E. installation being

protected by a circuit breaker and the I.F.F. installation being supplied via a fuse. As there is no electrical switching, reference to the routing and theoretical diagrams given in fig.3 will render further explanation unnecessary.

5. The supply for the A.R.I. 5820 radar ranging installation is obtained from No.2 inverter in the A.C. supplies circuit, as described in Group E.1 of this chapter and from a Type 200 inverter situated in the radio bay. The supply to the Type 200 inverter is taken from a circuit breaker on the supply panel, via the contacts of a relay within the inverter. This relay is energized by the control and output of No.2 flight instrument inverter and, when energized, completes the supply from the circuit breaker, thus causing the Type 200 inverter to commence operation, provided that the A.R.I. 5820 installation is switched on by means of the radar ranging switch located on the cabin port shelf. A magnetic indicator, also on this shelf, will indicate that the installation is operating. A switch for testing the installation for correct operation, is mounted on the rear portion of the cabin port shelf. The inverter is protected from an overload by a 5 amp. fuse carried in a fuse holder situated in the radio bay on the forward face of the port fuel tank door on frame 19.

SERVICING

General

6. For general servicing of the electrical system as a whole, reference should be made to Group A.1 of this chapter. Apart from keeping all the components clean and carrying out the standard routine tests of security and serviceability as described in the appropriate volumes quoted in para.1, no further servicing should be necessary. Should a fault be reported in either the radio or radar installations, the supply circuit should be checked before any other

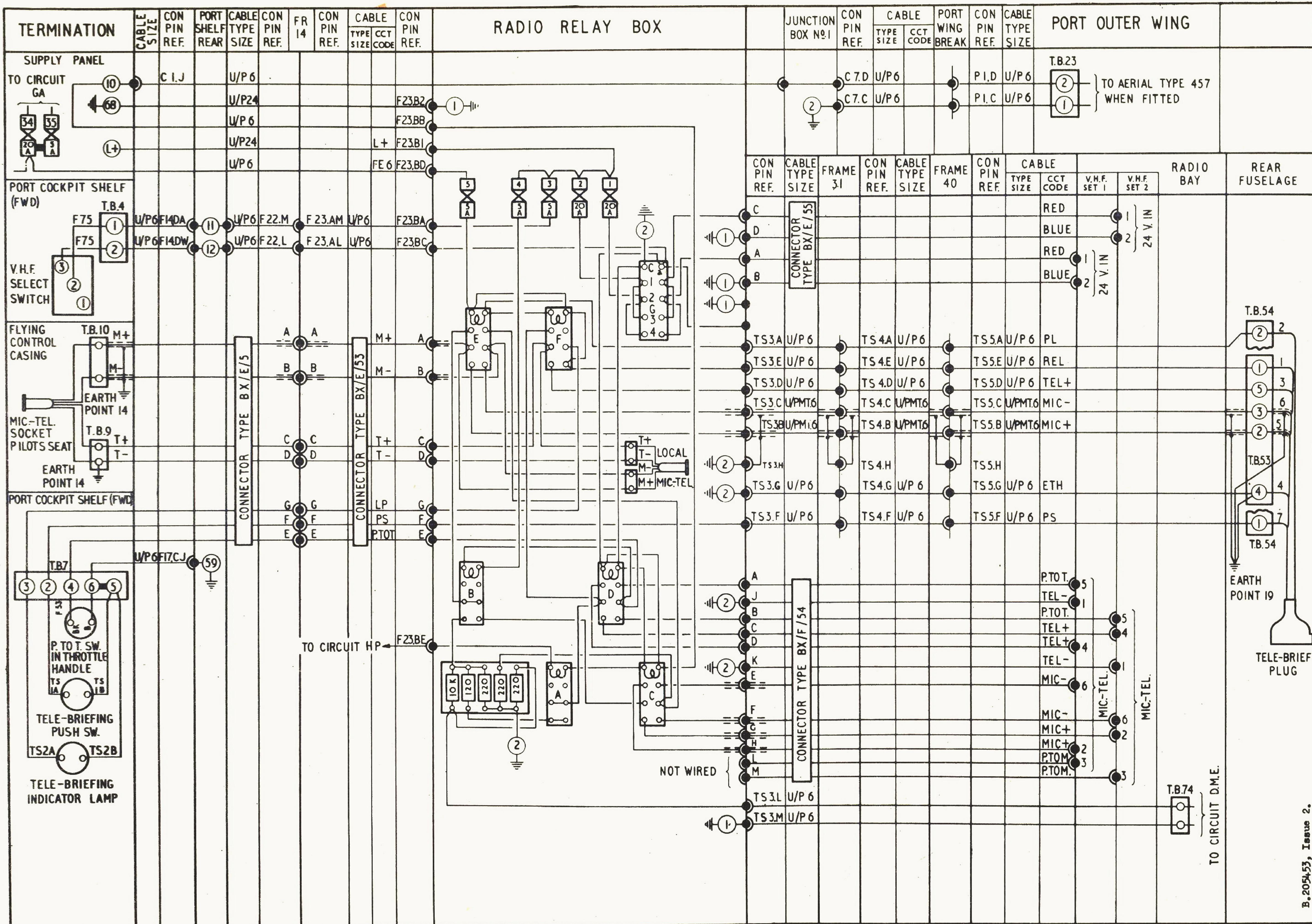
tests are made, to ensure that the failure is not located in this circuit. Ensure that the connectors are correctly assembled and test the voltage, both on and off load.

REMOVAL AND ASSEMBLY

General

7. Once access has been obtained, the removal and assembly of the electrical components forming the

radio and radar supply circuit should present no unusual difficulties. The removal of the Type 200 inverter is fully described under the removal of the gun firing panel in Group A.2 of this chapter and the removal of the V.H.F. relay box, which carries the majority of the equipment, is covered in Section 6, Chapter 1 of this volume.



<divFIG. I.A.R.I. 18064 RADIO SUPPLY(ROUTING)

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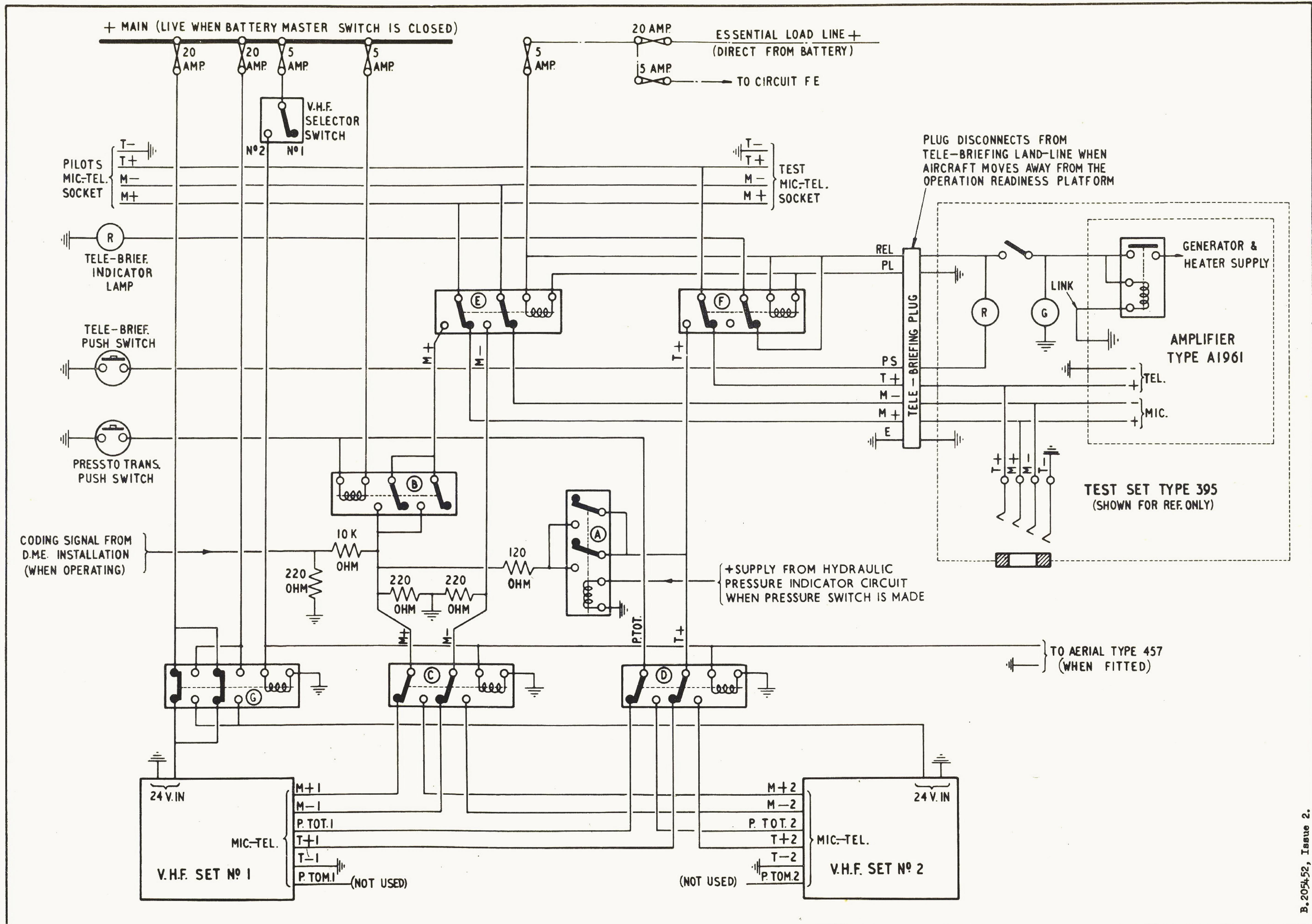


FIG. 2. A.R.I. 18064 RADIO SUPPLY (THEORETICAL)

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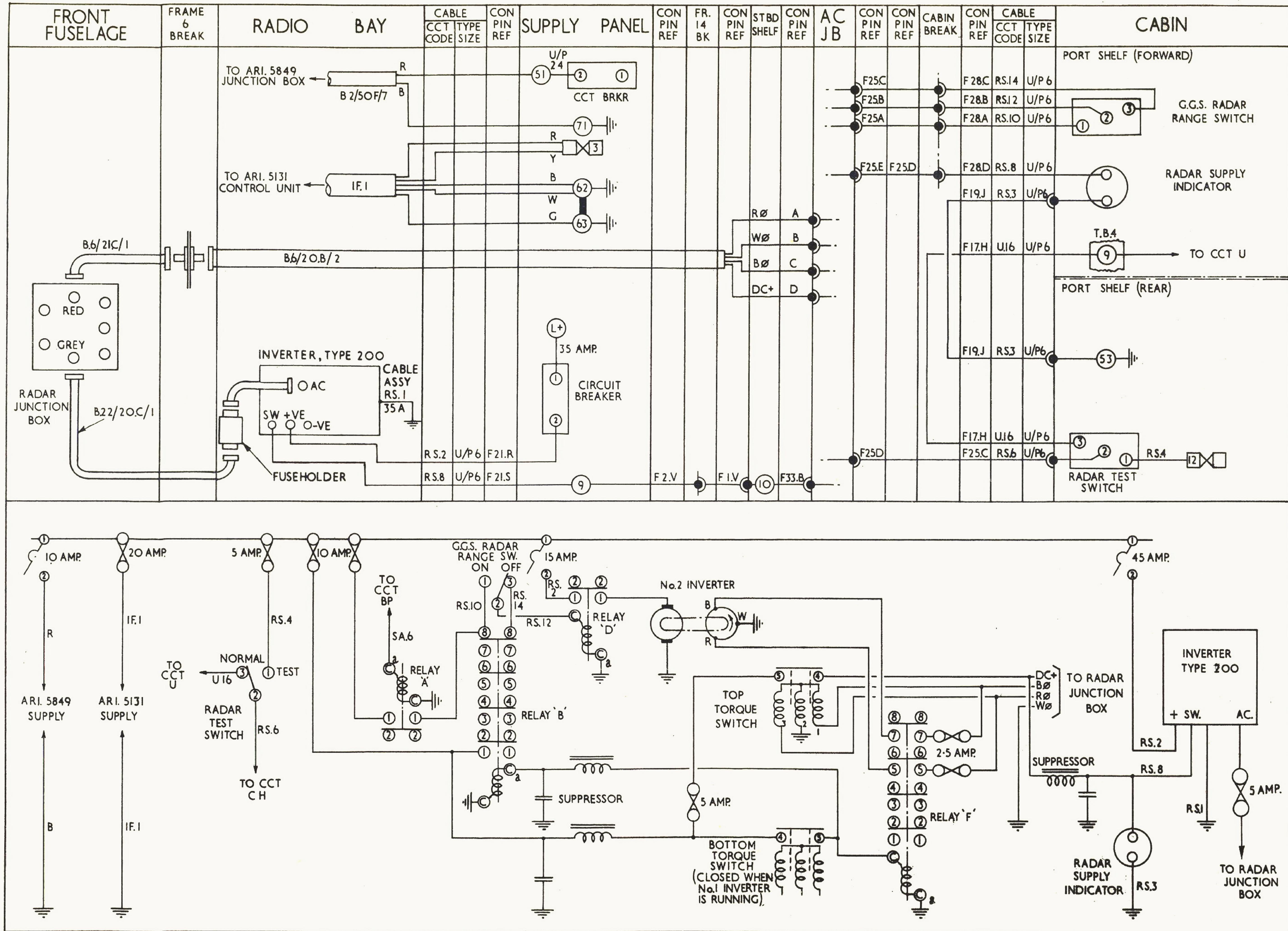


FIG. 3. A.R.I.5849 A.R.I.5131 AND A.R.I.5820 SUPPLY (ROUTING AND THEORETICAL)

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