Chapter 2

RADAR INSTALLATIONS

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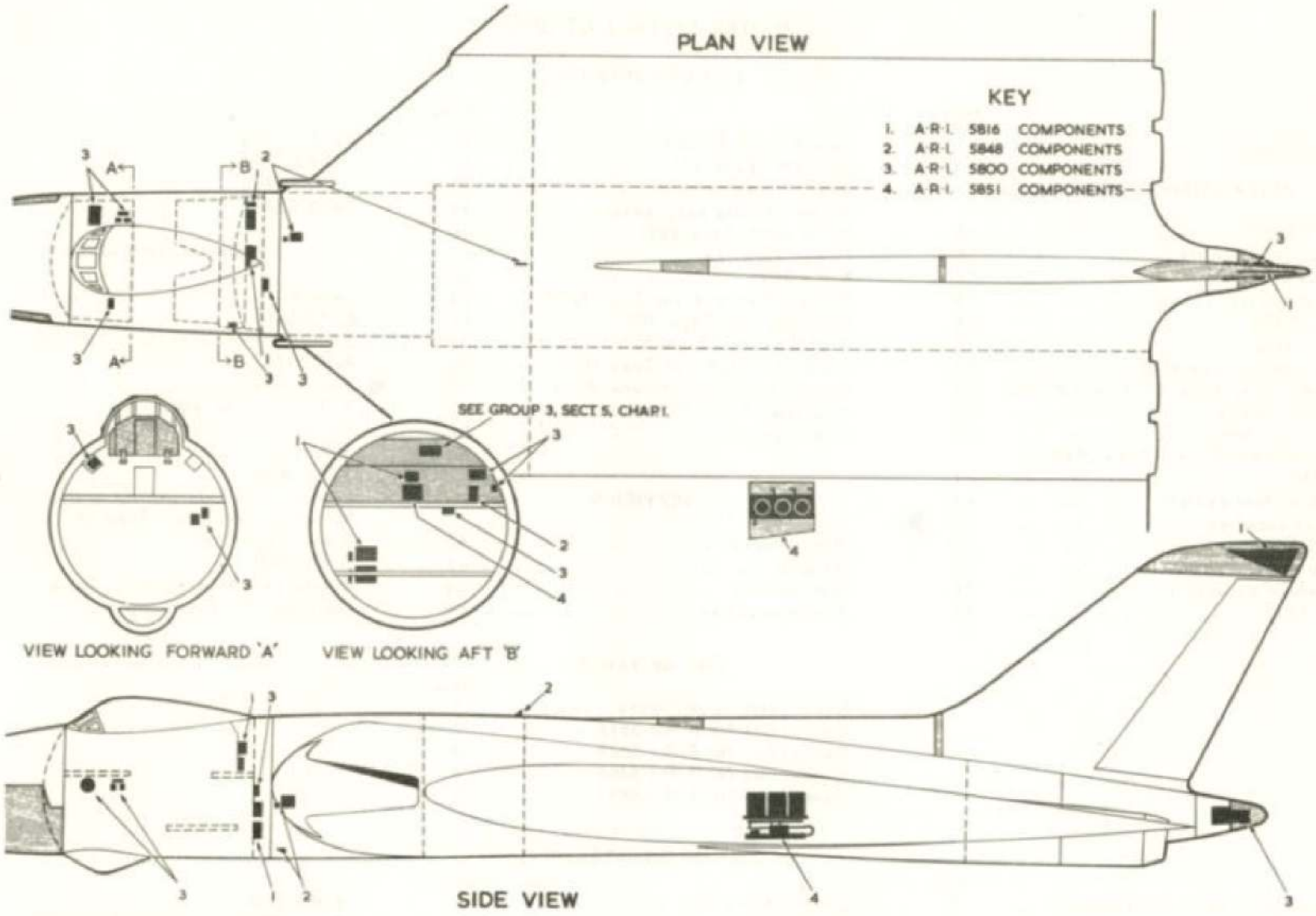


Fig 1. Location of radar installations.

RESTRICTED

Introduction

1. This chapter deals with the installation and general functioning of the radar equipment. A general location illustration is provided in fig.1, and individual system location illustrations will be found adjacent to the text describing the particular system. Routing charts for each system are included at the end of the text.

2. The radar installations fitted to the aircraft consist of the following:-

A.R.I.5816
A.R.I.5848
A.R.I.5800
A.R.I.5851
A.R.I.5810 (See Sect.5, Chap.2, Group 6)

The following modifications are included in this group:-

Mod.160 Introduction of relay unit type 4827 for A.R.I.5800 and deletion of non standard connector.

◀ Mod.703 A.R.I.5800 - To reposition waveform generator under crew's floor. ▶

3. A.C. and d.c. supplies to the various radar installations are fed from the aircraft bus-bars via the distribution fuses in panel 11P. The power supply control switches for the radar installations are fitted to the radar and a.c. supplies panel, which forms part of the main navigation panel 12P, at the crew's station. A list of the radar fuses and their ratings is contained in Table 1.

DESCRIPTION AND OPERATION

A.R.I.5816

4. The Gee Mk.3 installation is a radio navigational aid, to enable an aircraft to find its position in the area served by the Gee ground system. The ground system consists of chains of fixed ground radio transmitters which radiate the position fixing signals. The installation fitted to the aircraft (A.R.I.5816) receives and displays the signals from the ground chain, and provides information which the radar navigator can interpret on special charts.

5. The Gee Mk.3 installation is under the control of the radar navigator, and consists of the following major components:-

Receiver	Type R3673
Waveform generator	Type 72
Indicator C.R.T.	Type 26
Suppressed fin aerial	Supplied with fin
Junction box	Type 360A
Junction box	Type 361A
Junction box	Type 359A

All controls used in normal operation of the installation are carried on the indicator unit. Descriptive and servicing information for the A.R.I.5816 is contained in A.P.2557M, Vol.1.

Component details

6. Location details for the major units are contained in fig.2, and connector assembly details are given in Table 2.

7. The receiver unit, Type R3673, and waveform generator, Type 72 are located on the starboard side of the cabin, below the navigator's table. These units are fitted to single type standard S.B.A.C. racks, with the waveform generator fitted above the receiver.

8. The racks are mounted to the crew's floor support structure on resilient mounted trays. The junction boxes (Type 361A for the receiver unit, Type 360A for the waveform generator) are secured to the rear frameworks of the racks, and the units locate into the junction boxes through dowels which project from the unit rear plates. A spring-loaded clamp on the front member of each mounting rack holds the unit in position on the rack, and also holds down the spring-loaded unit carrying handle.

9. The connections between the receiver and waveform generator unit and their respective junction boxes are made via Jones-type plugs and sockets, and the interconnections between the junction boxes are carried out through connectors terminating in Mk.4 miniature sockets. There are in consequence no connectors directly associated with the major removable items of equipment.

10. The indicator unit, Type 26, is installed in a similar mounting tray to that for the other two major units. The indicator is located on the navigator's panel and its associated junction box, Type 359A, is attached to the back plate of the mounting tray.

11. The indicator contains a cathode-ray display tube and its associated power unit time base and video circuits, a cyrstal oscillator and frequency correcting circuit.

Power supplies

12. A.C. and d.c. supplies to the A.R.I.5816 are fed from the aircraft bus-bars via suitable fuses in the distribution panel 11P.

13. D.C. supply at 28-volts is fed from fuse 220, and a.c. supply at 115 volts, 1600 c/s is obtained from the No.3 rotary inverter. Further information on the a.c. supplies, and the method of change-over in the event of a failure of supply, is contained in Sect.5, Chap.1, Group 3A of this book. ▶

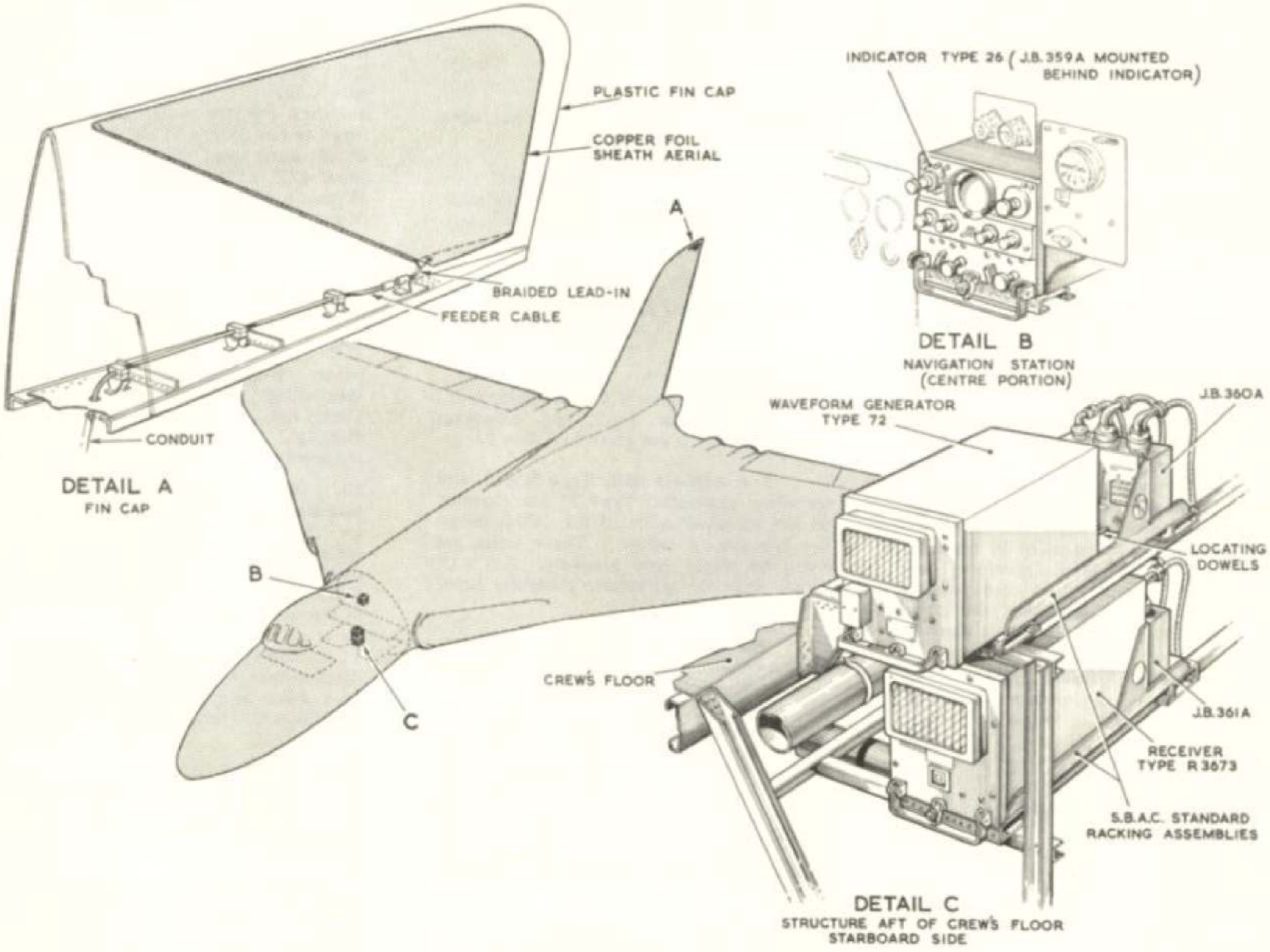


Fig. 2 A.R.I. 5816

RESTRICTED

14. Two thermostat controls are fitted to the system, one each in the input circuits of the receiver and waveform generator. They are adjusted to open at a predetermined internal temperature as stated in A.P.2557M, Vol.1, Pt.1, Chap.3.

Aerial system

15. The aerial for the A.R.I.5816 is built in to the cap at the extreme aft tip of the fin. It consists of a copper foil sheath secured to the inside contour of the preformed insulated fin cap, two copper braided leads being attached to each side of the aerial to form a suitable lead-in.

A.R.I.5848

16. The A.R.I.5848 is a secondary radar system, which provides automatic identification as friendly when the aircraft is properly challenged by suitably equipped ground or airborne radars.

17. The equipment provides two separate channels for identification of specific friendly aircraft among many friendlies. A coded reply, independent of the mode of interrogation, is provided as an emergency signal and indicates that the aircraft is in distress.

Main units

18. The main units of the installation are shown in fig.3 and are described briefly in the following paragraphs. For more detailed information reference should be made to A.P.2887N, Vol.1.

T.R. unit, Type 4585

19. The T.R. unit, Type 4585, is a pressurised airborne transponder designed as a direct replacement for American transponders, RT82/APX-6 and RT279/APX-6. The pressurised casing is charged from a Schrader valve on the front face of the unit, and an internal blower motor in provided for cooling purposes. The unit carries suitable plugs and sockets for connection to the aircraft cables, and is mounted at the starboard side of the nose wheel bay.

Coder unit, Type KY-95A/APX-25

20. This unit operates in conjunction with the T.R. unit, and is located forward of the T.R. unit in the nose wheel bay.

Control units

21. Two control units are used in the installation, a Type C1158/APX for use with the T.R. unit, and a Type C1128/APX-25 for use with the coder unit. Both units are fitted on the navigator's panel as shown in fig.1.

Aerial system

22. The aerial system consists of two omni Type 100 aerials fitted, one on the upper surface, and one on the lower surface of the fuselage. The upper aerial is located on the bomb bay roof forward of the A.D.F. loop aerial; the lower aerial is located on the starboard undersurface of the nose wheel bay.

Aerial switch unit, Type 2160 or 6850

23. The switch unit is mounted adjacent to the coder unit in the nose wheel bay, and when in use, switches the T.R. unit to the upper and lower aerials alternately.

Aerial test switch

24. This 3-position switch is located in the nose wheel bay adjacent to the aerial switch unit, and is labelled, AERIAL POSITION - UPPER, LOWER, FLIGHT. The switch enables the T.R. unit to be connected to either the upper or lower aerials for test purposes. For normal operation, however, the switch is locked in the FLIGHT position.

Power supplies

25. Power supplies of 115-volt, single phase 1,600 c/s a.c. and 28-volt d.c. are fed from fuses 271 and 212 respectively in 11P, and controlled by a double-pole switch on the navigator's panel. The a.c. supply is provided by No.3 inverter, Type 350.

26. The switch also controls a 115-volt, 3-phase, 400 c/s supply to the blower motor in the T.R.unit, via the contacts of relay 706 on the starboard side of the nose wheel bay. This supply is also fed from No.3 inverter via fuses 705 and 706 in 22P. Further details of the power supplies are contained in Book 2, Sect.5, Chap.1, Group 3A.

A.R.I.5800

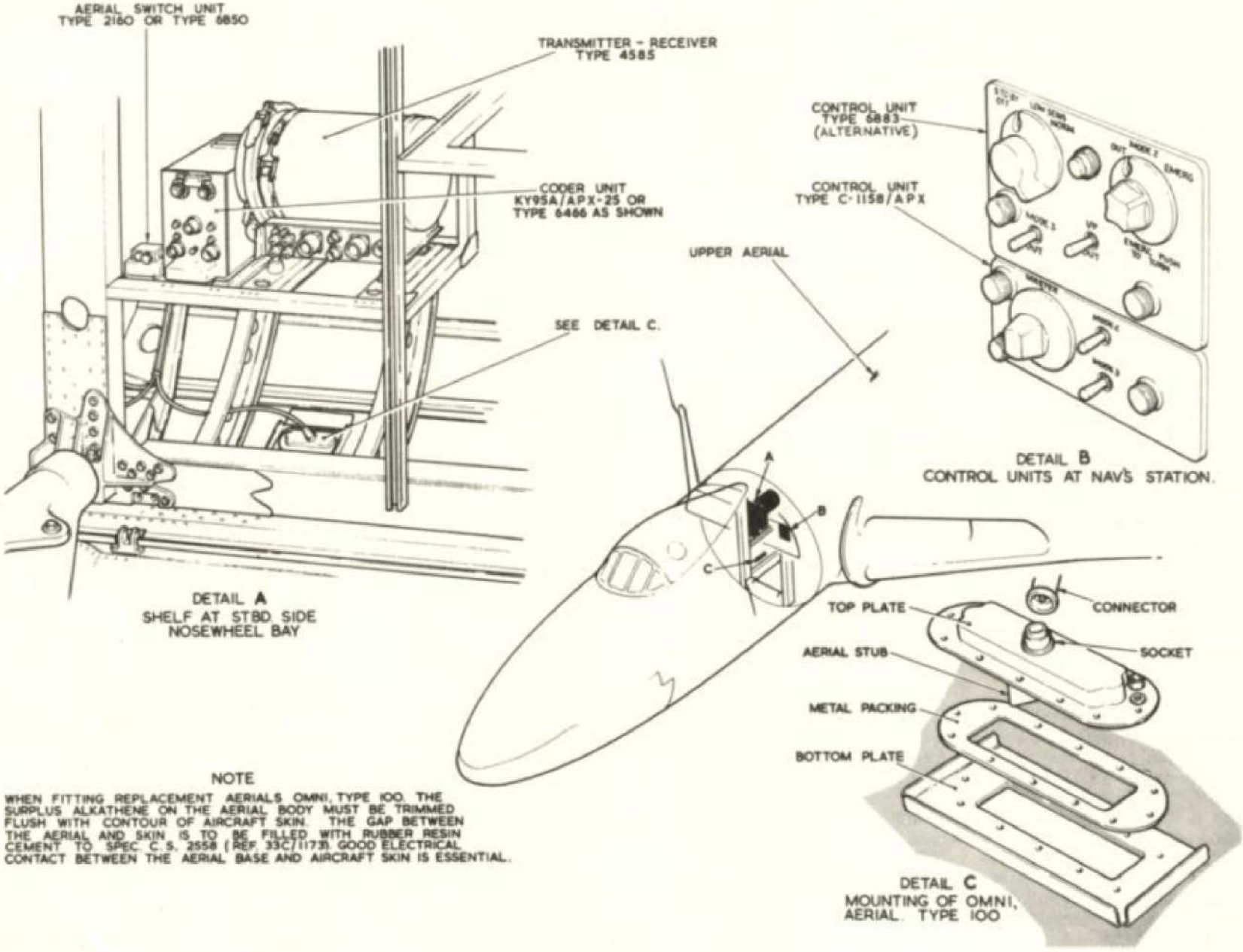
27. This equipment is installed in the aircraft to give warning of enemy approach astern. The zone covered by the equipment is ± 60 deg. in azimuth, and + 15 to -65 deg. in elevation with a range of not less than 1½ miles. Range is measured from the tail of the aircraft; azimuth and elevation are measured relative to the longitudinal axis of the aircraft.

28. The presence of an aircraft within the prescribed zone is indicated by a warning note on the intercomm. In addition to this aural warning, a C.R.T. indication of the approximate position of the aircraft is provided.

29. The equipment is entirely automatic, and depends for its operation upon the reception, in one scan of a series of echoes from the enemy aircraft. These echoes are fed to a counting circuit, which after a pre-determined interval, triggers a further circuit. When the second circuit is triggered, it operates the warning note circuit and produces the spot indication on the C.R.T.

30. The installation is under the control of the first navigator, and consists of the following major components:-

Transmitter/receiver	Type TR.3690	Radar Head Type 1
Scanner unit	Type 119	
Waveform generator	Type 76	
Control unit	Type 611	
Indicator	Type 27	
Control unit, auxiliary	Type 912	
Junction box	Type 398	
False warning suppressor unit		
Relay unit	Type 4827	
Junction box 27J	Aircraft Installation.	



NOTE

WHEN FITTING REPLACEMENT AERIALS OMNI, TYPE 100. THE SURPLUS ALKATHENE ON THE AERIAL BODY MUST BE TRIMMED FLUSH WITH CONTOUR OF AIRCRAFT SKIN. THE GAP BETWEEN THE AERIAL AND SKIN IS TO BE FILLED WITH RUBBER RESIN CEMENT TO SPEC. C.S. 2558 (REF. 33C/1173). GOOD ELECTRICAL CONTACT BETWEEN THE AERIAL BASE AND AIRCRAFT SKIN IS ESSENTIAL.

Fig. 3 A.R.I. 5848

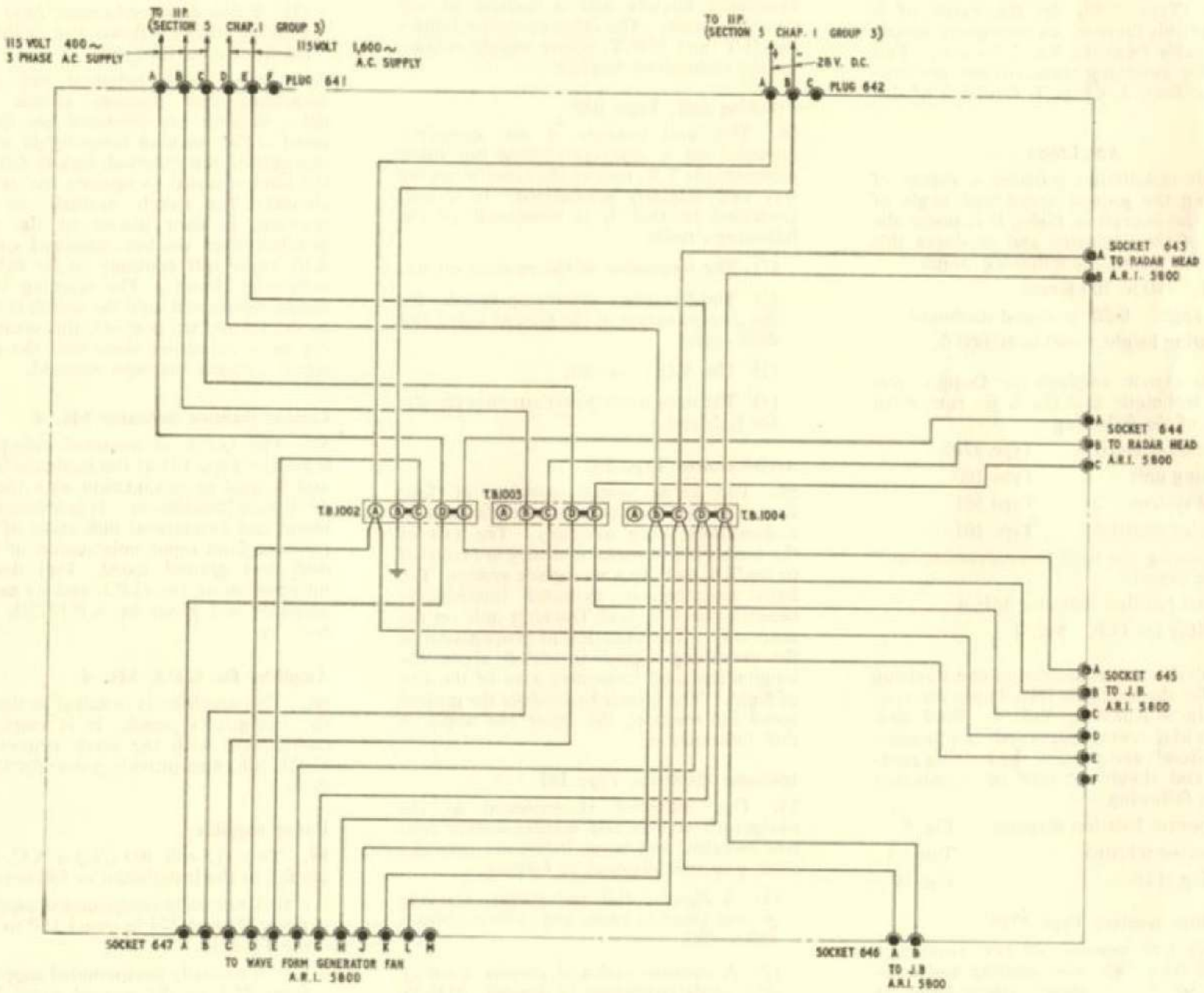


Fig. 5. 27 J wiring diagram

Emergency supplies

49. The a.c. supplies to the installation are normally obtained from the No. 3 rotary inverter (Type 350). In the event of a failure of this inverter, an emergency supply is obtainable from the No. 2 inverter. Full details for switching these circuits are contained in Sect. 5, Chap. 1, Group 3 of this book.

A.R.I.5851

50. This installation provides a means of measuring the ground speed and angle of drift of the aircraft in flight, it is under the control of the navigator and produces this information within the following ranges:—

Speed. 100 to 700 Knots

Drift angle. 0-20° port and starboard

Operating height. 400 to 60,000 ft.

51. The system employs the Doppler frequency technique and the basic equipment consists of the following:—

Transmitter receiver	Type 3710
Tracking unit	Type 100
Aerial system	Type 501
Indicator electrical	Type 101

The following are used in conjunction with the basic items:—

Ground position indicator Mk. 4

Amplifier for G.P.I. Mk. 4

52. Full theoretical descriptive and servicing details for the complete installation are contained in A.P.2890R, Vol. 1. Brief descriptions of the components and their location in the aircraft are given in the ensuing paragraphs and should be read in conjunction with the following:—

Component location diagram	Fig. 6
Connector schedule	Table 5
Routing chart	Fig. 10

Transmitter receiver Type 3710

53. This unit consists of two containers mounted on a light alloy casting and pressurized to 5 lb. above atmospheric at ground level. The assembly is fitted to a mounting tray installed in a compartment aft of the port undercarriage bay. One container houses the magnetron transmitter, its associated circuits and a section of the receiver circuit. The other container houses the H.T. and E.H.T. power supply circuits for the transmitter-receiver.

Tracking unit, Type 100

54. This unit consists of one container mounted on a separate casting but fitted alongside the T.R. unit on the same mounting tray and similarly pressurized. It is self-contained in that it is composed of the following circuits:—

(1) The remainder of the receiver circuit.

(2) The frequency measuring circuits for the determination of the ground speed and drift angle.

(3) The A.G.C. circuit.

(4) The associated power supplies circuits for 1, 2, and 3.

Aerial system Type 501

55. The aerial system consists of four slotted arrays lying parallel to each other in a directional horn assembly. The axis of the aerials is horizontal and they are coupled to the T.R. unit by a waveguide system. The horn assembly is mounted immediately beneath the T.R. and Tracking unit on the same tray. The direction of propagation of the measuring signals is varied about the longitudinal and transverse axes of the line of flight. The former to produce the ground speed information, the latter the angle of drift information.

Indicator electrical Type 101

56. This indicator is mounted at the navigator's station and besides certain control switches and neon indicators provides three principal displays as follows:—

(1) A circular dial and pointer showing ground speed in knots and calibrated from 100 to 700.

(2) A circular dial and pointer showing drift angle calibrated in degrees, 20-0-20, with the '0' at the "12 o'clock" position. The resulting left and right hand semi-circle scales are marked PORT and STAR. respectively.

(3) A five digit cyclometer type counter showing distance flown and calibrated to tenths of a nautical mile.

A warning lamp coloured red and an associated two position switch labelled SIG — MEMORY are mounted on the front panel. The warning lamp lights when the strength of the reflected signals falls below the level required to operate the measuring circuits. The switch, normally in the SIG position, is then placed to the MEMORY position when the last measured speed and drift angle will continue to be fed to the indicating circuits. The warning lamp remains illuminated until the switch is returned to the normal SIG position, this occurs when the neon indicators show that the reflected signal strength has been restored.

Ground position indicator Mk. 4

57. The G.P.I. is mounted alongside the indicator Type 101 at the navigator's station and is used in conjunction with the A.R.I. 5851 basic installation. It provides an automatic and continuous indication of ground position from input information of heading drift and ground speed. Full descriptive information on the G.P.I. and its associated amplifier are given in A.P.1275B, Vol. 1, Sect. 16.

Amplifier for G.P.I. Mk. 4

58. This amplifier is installed at the rear of the navigator's panel. It is employed in conjunction with the servo system of the G.P.I. Mk. 4 to provide power for the track drive.

Power supplies

59. Two 115-volt 400 c/s 3 ø A.C. supplies are fed to the installation as follows:—

(1) A normally compounded supply from fuses 273 and 274 in panel 11P to PL1 on the TR.3710.

(2) A specially compounded supply direct from PL4 on the control panel Type 25 at the crew's station to PL2 on the TR.3710.

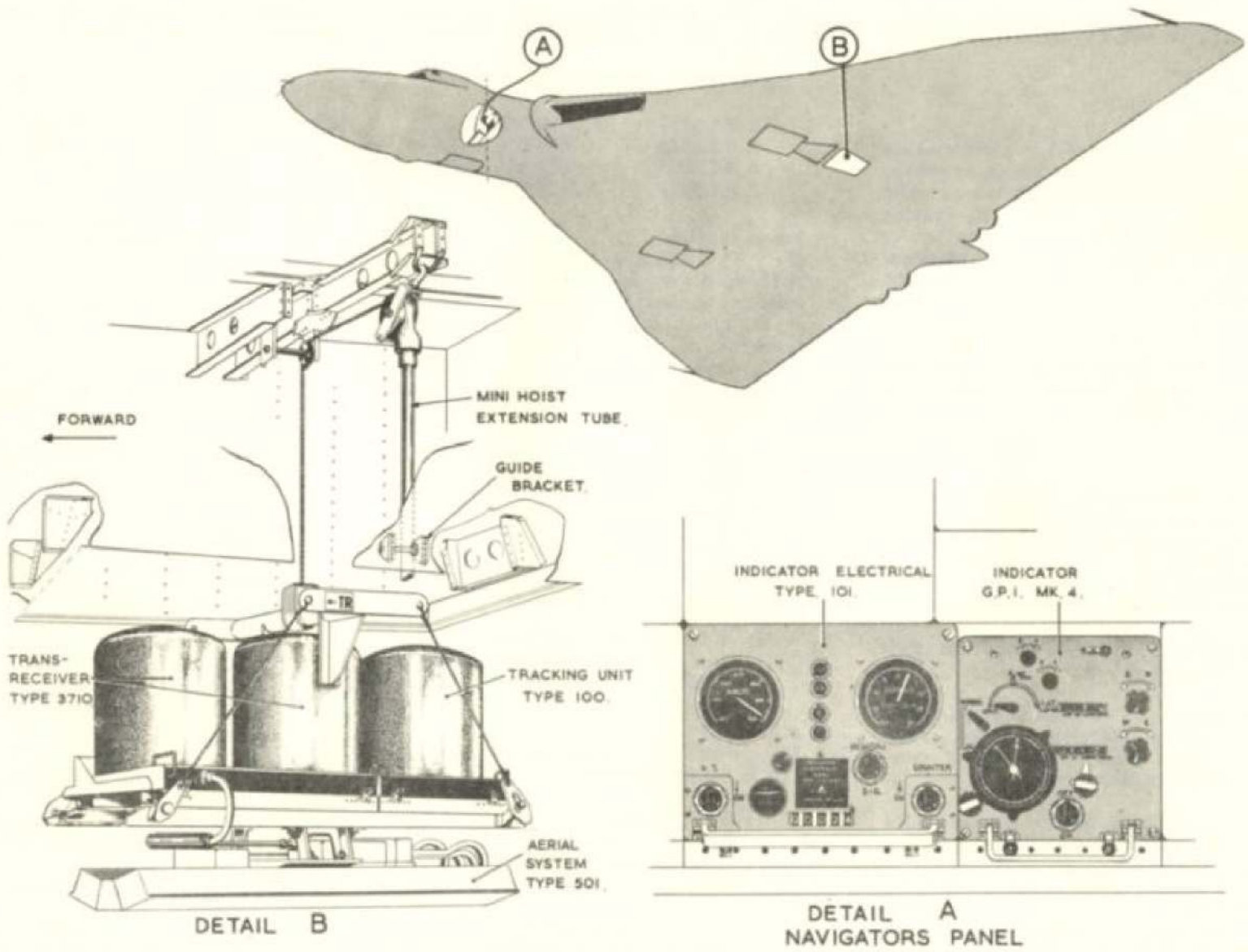


Fig. 6 A.R.I. 5851

The specially compounded supply is required to cater for the load variations occurring at the inter valve coupling and anode circuits of the last two stages in the modulator circuit.

60. The 28-volt d.c. supply is fed from fuse 27 on panel 3P via pin No.1 of the G4B compass distribution box on the R.P.B. to the G.P.I. Mk.4.

61. The installation obtains its supply from the No.5 (Type 153) rotary inverter, at 115 volts, 400 c/s, 3-phase a.c. No provision is made against failure of the No.5 inverter, and if it fails, the A.R.I.5851 will not function. Full details regarding switching of the No.5 inverter, and the routing of supplies are contained in Group 3A of Sect.5, Chap.1.

SERVICING

A.R.I.5816	A.P.2557M, Vol.1
A.R.I.5848	A.P.2887N, Vol.1
A.R.I.5800	A.P.2891H, Vol.1
A.R.I.5851	A.P.2890R, Vol.1

Precautions

62. Servicing personnel in particular are warned that a.c. or d.c. voltages in excess of 100 can become dangerous, under certain conditions, to the extent of causing personal injury, fatal or otherwise and/or damage to equipment. It is essential therefore that the utmost attention be given to servicing instructions concerning safety of either a general or particular application. It is equally essential that the maximum co-operation be employed between trades mutually concerned in servicing operations.

General

63. In addition to the detailed setting-up, operating and servicing instructions for the various installations and their components promulgated in their relevant Air Publications or elsewhere, the following periodic checks should be made for:-

(1) Security of components and their mountings.

(2) Security of all plugs and sockets, terminal blocks, fuse holders and bonding point connections throughout.

(3) Insulation resistance and continuity throughout the permanent wiring and fixed connectors.

Instructions

64. Servicing instructions for the installation and their components are contained in the Air Publications listed hereunder:-

Power supplies

65. The inputs to the installations can be checked for correct value at the positions indicated in the following paragraphs. Such checks could reveal the cause of incorrect operation of an installation and, in so doing, save considerable wasted effort on removal and replacement of otherwise suspected components.

A.R.I.5816

66. With the control switch on panel 12P in the ON position:-

(1) D.C. 28 volts
Pins C (pos.) and D (neg.) of the input socket to JB360A.

(2) A.C. 115 volts, 1600 c/s
Pins A and B of the input socket to JB360A.

A.R.I.5848

67. With the control switch on panel 12P in the ON position:-

(1) D.C. 28 volts
Pins D (pos.) and E (neg.) of the input socket to the transmitter-receiver.

(2) A.C. 115 volts 1600 c/s
Pins A and C of the input socket to the transmitter-receiver.

(3) A.C. 115 volts, 400 c/s, 3-phase
Pins A - B - C of the T.R. blower motor supply socket.

A.R.I.5800

68. With the control switch on panel 12P in the ON position:-

(1) D.C. 28 volts
Terminals A (pos.) and B (neg.) of TB.1002.

(2) A.C. 115 volts, 400 c/s, 3-phase
Terminal D of TB.1002 and Terminals B and D of TB.1003.

(3) A.C. 115 volts, 1600 c/s
Terminals B and D of TB.1004
The TB's are located inside JB27J.

A.R.I.5851

69. The d.c. supply is independent of the control switch but this has to be in the ON position to make the a.c. supplies available.

(1) D.C. 28 volts
Pins 1 (pos.) and 2 (neg.) of the G4B compass input socket to the G.P.I. Mk.4.

(2) A.C. 115 volts, 400 c/s 3-phase - normal.
Pins A, B, and C of the input socket to PL1 (LM) on the TR.3710.

(3) A.C. 115 volts, 400 c/s, 3-phase - Special.
Pins 1 and 2, 3 and 4, and 5 and 6 of the input socket to PL2 (LN/A) on the TR.3710.

General

70. Access to the majority of components is straightforward. The following points however, should be observed when it is necessary to remove and replace equipment. Loose connectors should be safely stowed to prevent damage or electrical faults. Unless otherwise stated, the replacement procedure is the reverse of that for removal. When replacing equipment, care should be taken to ensure correct mating of the connectors; the appropriate routing charts refer. Where items are mounted in standard S.B.A.C. racking, their removal consists simply of unscrewing the knurled nuts of the securing clamps, and withdrawing the units. On replacing such items, it is important to ensure that the locating dowels engage properly, in order to maintain correct alignment of the plugs and sockets of the units and associated racks. If difficulty is encountered in fitting units to the racks, undue mechanical force should not be applied.

A.R.I.5816

Equipment at navigators' station

71. The following components are mounted in standard S.B.A.C. racking and are thus easily removed:-

Waveform generator, Type 72 Receiver, Type 3673	crews' floor
Indicator, Type 26	navigators' panel

A.R.I.5848

Control units

72. The two control units are removed by unscrewing the securing screws and uncoupling the associated connectors.

T.R. unit, Type 4585

73. This unit is secured to anti-vibration mountings and is easily removed.

Coder unit

74. This unit is secured to anti-vibration mountings adjacent to the T.R. unit and is easily removed.

REMOVAL AND ASSEMBLY

Aerials

75. The aerials can be withdrawn from their mountings by removing the twelve securing screws in each case and disconnecting the associated connector.

A.R.I.5800

Equipment at navigator's station

76. The equipment at this location consists of the following:-

Control unit, Type 611
Indicator unit, Type 27

Removal of the control unit consists of unscrewing the four corner screws securing it to the panel, and withdrawing it sufficiently to detach the connectors at the rear. Access to remove the indicator unit is obtained when the control unit is removed as above. The connector at the aft end of the indicator can then be detached, and slackening of the four collar securing bolts will allow the unit to be withdrawn.

Waveform generator, Type 76

77. Removal of this unit consists simply of detaching the connectors from the front panel and unscrewing the knurled nuts securing the unit to the mounting crate.

Radar head, Type 1

78. Access to the radar head is obtained by removing the three panels at the aft end of the tail cone. The connectors to the unit can then be detached, the four bolts securing the radar head to the structure removed, and the complete assembly withdrawn from the structure.

A.R.I.5851

Equipment at navigator's station

79. The following items are mounted in standard S.B.A.C. racking, and are thus easily removed:-

Indicator, Type 101
G.P.I. Mk.4

Equipment in port wing

80. This equipment consists of the following items:-

T.R. unit, Type 3710
Tracking unit, Type 100
Aerial system, Type 501

These are mounted on a tray, which is removable as a complete unit from the wing structure. The removal procedure, utilising the necessary ground equipment, is as follows:-

(1) Obtain the following items:-

1 Trolley, Ref.No.26DC/95095
1 Sling, Ref.No.26DC/95093
1 Minihoist, 5 cwt, consisting of:

Handle.....Ref.No.4GC/5743
Extension tube.....Ref.No.4GC/5452
Winch, 5 cwt. Ref.No.4GC/5703
Top sheath, Type 1...Ref.No.4GC/5736
Ball end.....Ref.No.4GC/5433

(2) Detach all connectors from the equipment.

(3) Attach the sling by the four hooks provided, to the mushroom pins at the corners of the tray.

(4) Position the minihoist inside the compartment by threading it upwards through the guide bracket on the outboard wall and securing the hook of the top sheath to the U link fastened to the structure immediately above the bracket.

(5) Thread the ball end of the hoisting cable through the pulley in the centre of the compartment roof and attach it to the sling.

(6) Take up the slack in the hoisting cable, ensuring that the attachments to the tray are secure, and that the steadying members of the sling fit properly to the centre canister.

(7) Remove the four bolts securing the tray to the structure.

(8) Hoist the tray sufficiently to disengage the attachment lugs from those of the structure.

(9) Move the trolley into position ready to receive the tray.

(10) Lower the tray on to the locating dowels on the trolley and, secure the tray by the trolley captive screws.

TABLE 1

Radar installation fuses

No.	Rating (amps.)	Panel	Service
27 (d.c.)	2·5	3P	A.R.I.5851 - G.P.I. Mk.4 (and G4B compass)
210 (d.c.)	2·5	11P	A.R.I.5800 - J.B.27J, plug 642
212 (d.c.)	2·5	11P	A.R.I.5848 - T.R.4585
220 (d.c.)	2·5	11P	A.R.I.5816 - J.B., Type 360A
231 (400 c/s, a.c.)	5	11P	A.R.I.5800 - J.B.27J, plug 641
232 (400 c/s, a.c.)	5	11P	A.R.I.5800 - J.B.27J, plug 641
268 (1,600 c/s, a.c.)	2·5	11P	A.R.I.5816 - J.B., Type 360A
270 (1,600 c/s, a.c.)	5	11P	A.R.I.5800 - J.B.27J, plug 641
271 (1,600 c/s, a.c.)	2·5	11P	A.R.I.5848 - T.R.4585
273 (400 c/s, a.c.)	5	11P	A.R.I.5851 - T.R.3710
274 (400 c/s, a.c.)	5	11P	A.R.I.5851 - T.R.3710
705 (400 c/s, a.c.)	2·5	22P	A.R.I.5848 - T.R.4585 (fan)
706 (400 c/s, a.c.)	2·5	22P	A.R.I.5848 - T.R.4585 (fan)

TABLE 2

Connectors for A.R.I.5816

Ref.No.	Cable form	Connecting between
10HB/1131	25 Metvin small 2·5	Indicator Type 26 (Red) and Receiver, Type R3673 (Red)
10HB/1132	18 Coremetvin small No.1	Waveform generator Type 72 (Blue) and Receiver Type R3673 (Blue)
10HA/13912	18 Coremetvin small No.1	Indicator, Type 26 (Yellow) and Waveform Generator Type 72 (Yellow)
10HA/13914	Quadravin small 2.5	Waveform generator, Type 72 and plug 436 in 11P
10HA/13915	Uniradio 43	Receiver Type R3673 and plug break 199
10HA/13913	Uniradio 43	Plug break 190 and aerial break
10HA/13916	Uniradio 43	Aerial and aerial break

TABLE 3

Connectors for A.R.I.5848

Ref.No.	Avro Part No.	Cable form	Connecting between
10HA/15962	-	Uniradio 4 or 67	Aerial switch unit and upper aerial
10HA/15963	-	Uniradio 4 or 67	Aerial switch unit and lower aerial
-	4/T3403	Uniradio 67	Aerial switch unit and T.R. unit
-	5/T3403	Miniature 12A	Control unit and plug 155
	6/T3403	Miniature 12A	Coder unit and plug 155
	7/T3403	Miniature 12F	Coder unit and T.R. unit
	8/T3403	Uninyvin 20	Aerial switch unit and aerial control switch T.B.646

Table 4

Connectors for A.R.I.5800

Ref. No.	Cable form	Connecting between
10HB/1231	12 Metvinsmall 2·5	Waveform generator Type 76 (506) and Fan (510).
10HB/1232	Sextometvinsmall No. 1	J.B. Type 398 (1202) and Cont. Unit Type 912 (1301).
10HB/1233	18 Metvinsmall	Waveform generator Type 76 (501) and J.B. Type 398 (1203).
10HB/1234	18 Metvinsmall	J.B. Type 398 (1201) and R.P.B. plug 200.
10HB/1235	Sextometvinsmall 2·5	Trans. Recvr. Type 3690 (106) and Panel plug (103).
10HB/1236	18 Metvinsmall No. 1	Waveform generator Type 76 (504) and Cont. Unit Type 611 (902).
10HB/1237	18 Metvinsmall No. 1	Waveform generator Type 76 (505) and Cont. Unit Type 611 (901).
10HB/1238	Uniradio 70	Waveform generator Type 76 (503) and R.P.B. plug 193.
10HB/1239	Uniradio 70	Trans. Recvr. Type 3690 (107) and Tail Break plug 664.
10HB/1240	Duradio 68	Waveform generator Type 76 (502) and R.P.B. plug 192
10HB/1241	Duradio 68	Trans. Recvr. Type 3690 (108) and Tail Break plug 663.
10HB/1242	Sextometvinsmall 2·5	Cont. Unit Type 611 (903) and Suppressor Unit 10AE/690 (1402).
10HB/1243	18 Metvinsmall No. 1	Cont. Unit Type 611 (905) and Indicator Type 27.
10HB/1244	12 Metvinsmall 2·5	Fan (511) and J.B.27J (647)
10HB/1245	Dumetvinsmall 2·5	Relay Unit Type 4827 (1502) and J.B. Type 154.
10HB/1252	18 Metvinsmall	Trans. Recvr. Type 3690 (105) and Tail break plug 662.
10HB/1253	Sextometvinsmall 2·5	Suppressor Unit 10AE/690 (1401) and Relay Unit Type 4827 (1501).

Table 5

Connectors for A.R.I.5851

Ref. No.	Cable form	Connecting between
10HB/1302	20 Core	Indicator Type 101 (LC) and R.P.B. plug 191.
10HB/1304	21 Core	R.P.B. plug 191 and wing break.
10HA/14266	20 Core	U/C break and tracking unit Type 100 (LC)
10HA/14269	5 Core	U/C break and tracking unit Type 100 (LD).
10HA/14270	5 Core	R.P.B. plug 157 and wing break.
10HA/14271	5 Core	Ground position indicator (LD) and R.P.B. plug 157.
10HA/14272	Tripren 18	U/C break and Transmitter-receiver TR.3710 (LM).
10HA/14273	3 Core	U/C break and Transmitter-receiver TR.3710 (LN/A).
10HA/14274	6 Core	Amplifier (L.T.) and Ground position Indicator (L.T.).
10HA/14275	5 Core	Ground position indicator (LU) and G4B compass (LU).
10HA/14276	7 Core	Ground position indicator (LP) and Indicator Type 101.
10HA/14277	8 Core	Tracking unit Type 100 (LA) and Transmitter-receiver TR.3710 (LA).
10HA/14278	Uniradio 70	Tracking unit Type 100 (LG) and Transmitter-receiver TR.3710 (LG).
10HA/14279	13 Core	Tracking Unit Type 100 (LB/B) and Aerial Type 501 (LB/B).
10HA/14280	Uniradio 70	Transmitter-receiver TR.3710 (LH) and Test Point (LH).
10HA/14281	12 Core	Transmitter-receiver TR.3710 (LJ) and Test Point (LJ).
10HA/14299	21 Core	U/C break (LC) and wing break (LC).
10HA/14300	5 Core	U/C break (LD) and wing break (LD).
10HA/14301	Tripren 18	U/C break (LM) and wing break (LM).
10HA/14302	3 Core	U/C break (LN/A) and wing break (LN/A).

P29303 359164/8827 4/59 500 C & P Gp 375

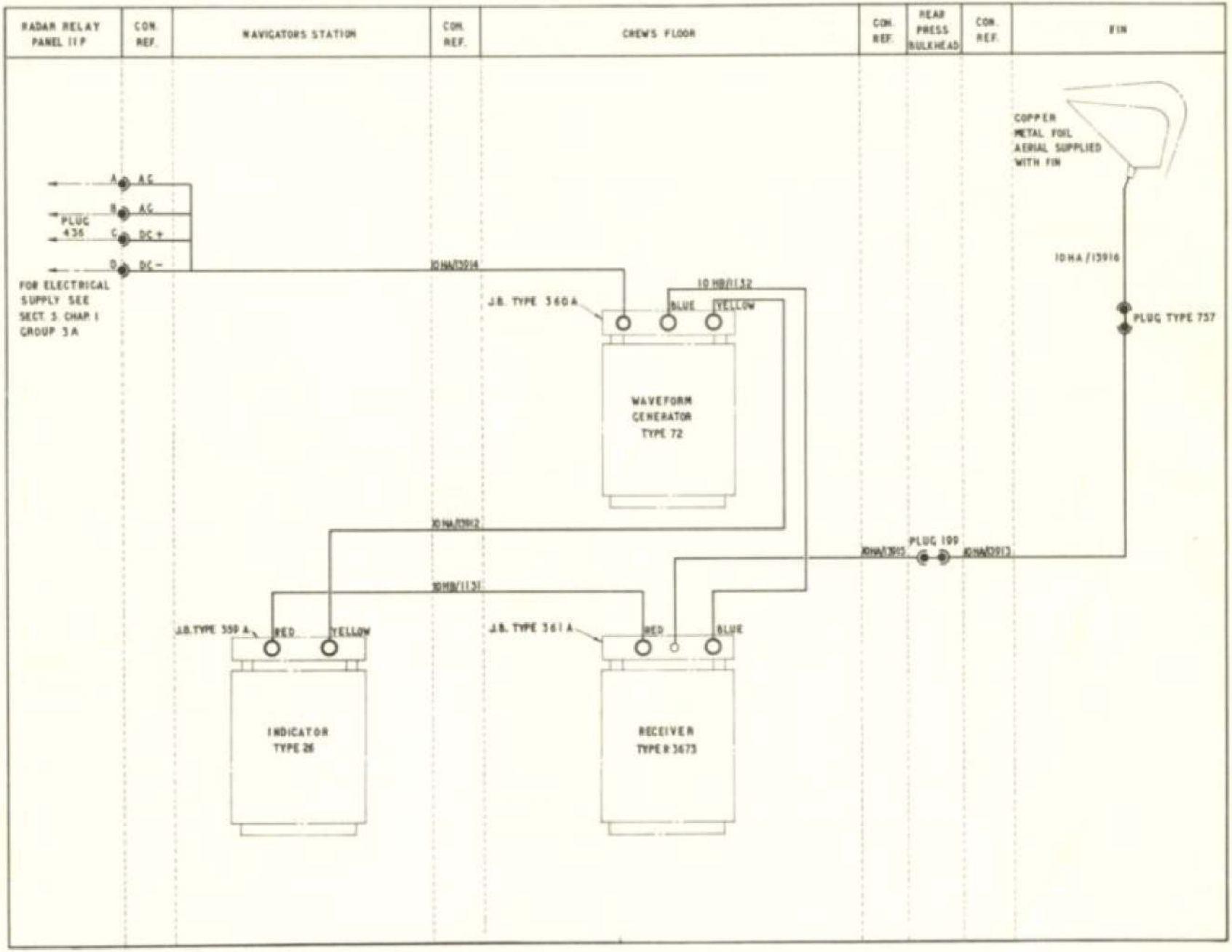


Fig. 7 A.R.I. 5816

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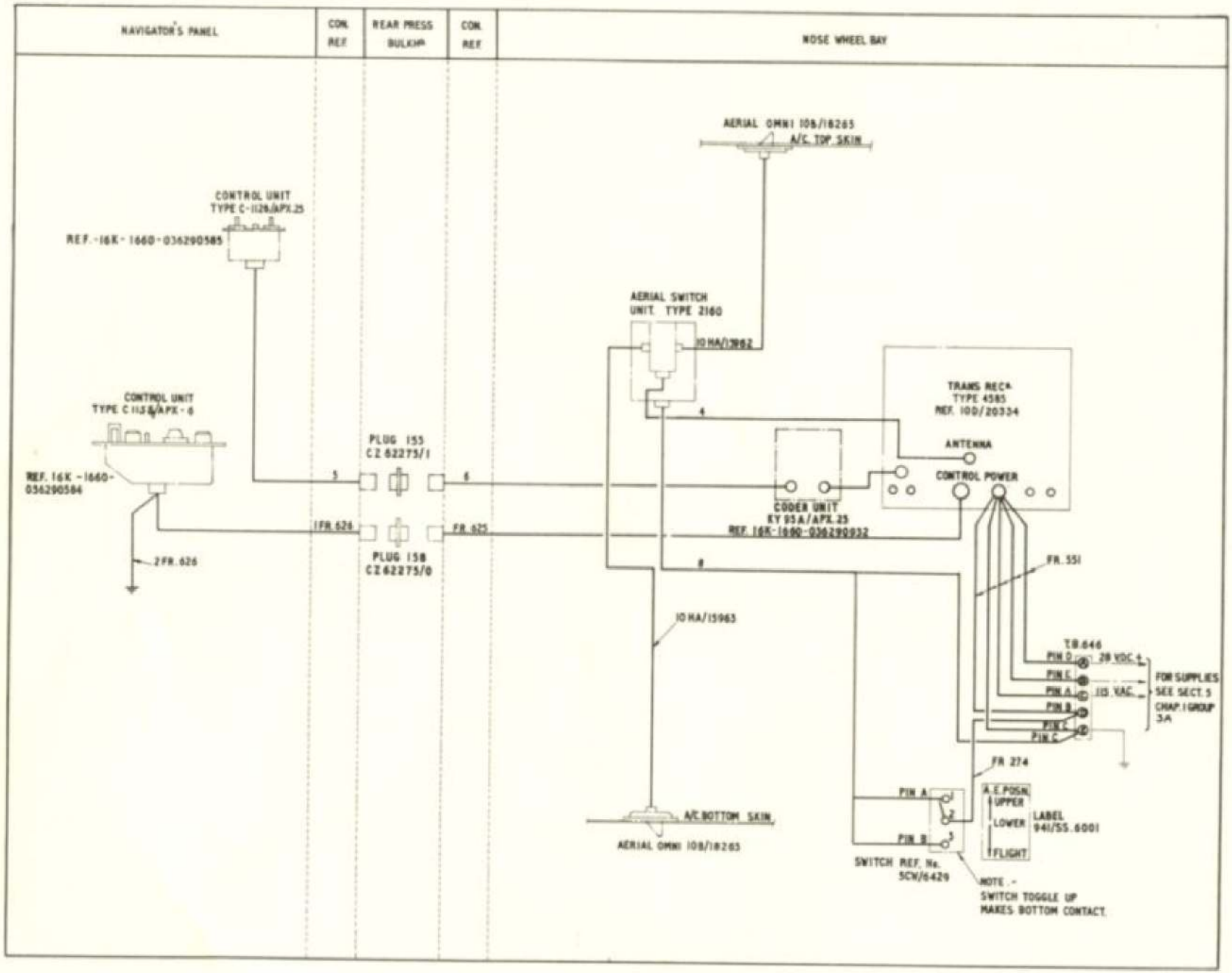

Fig. 8 A.R.I. 5848

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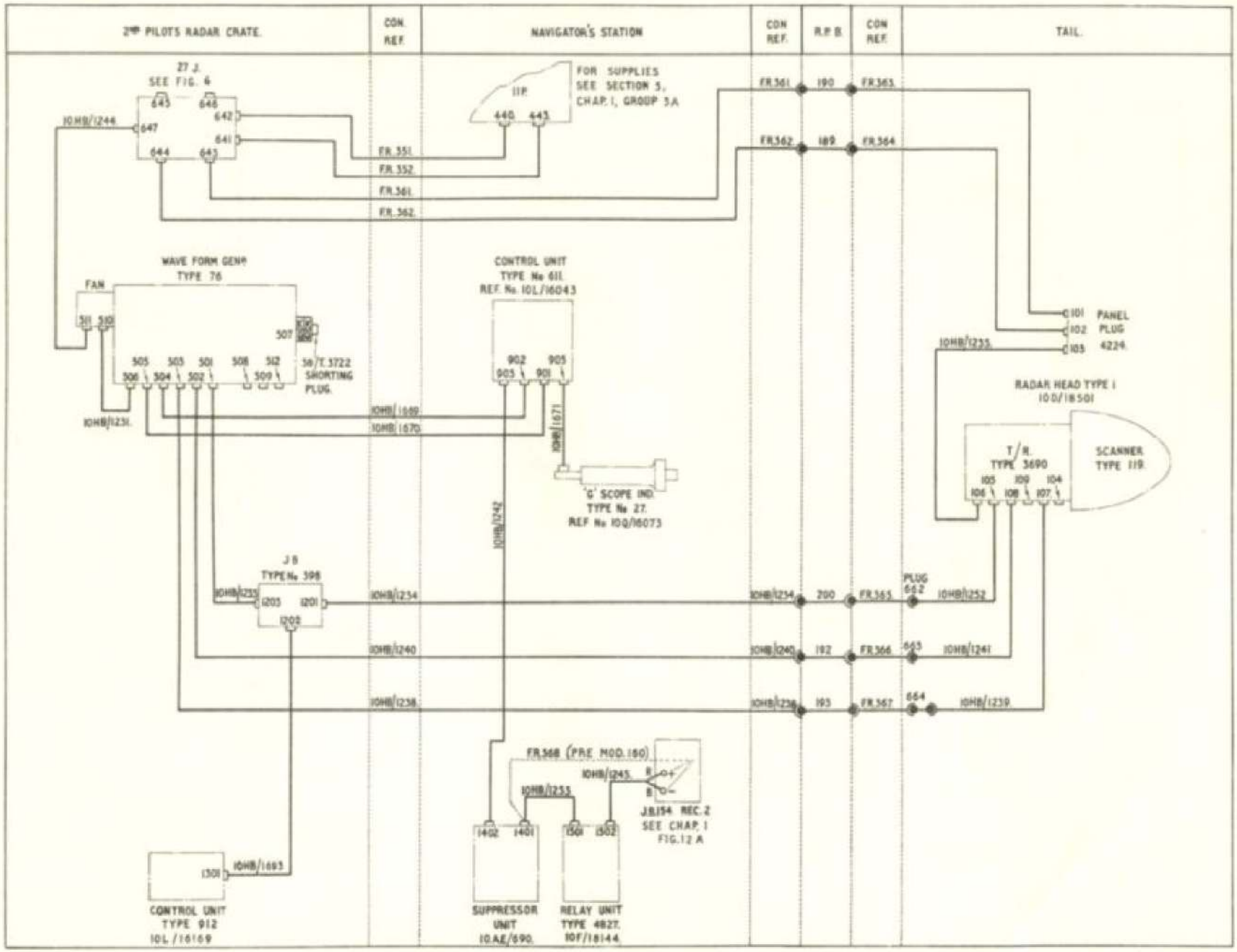

Fig. 9 A.R.I. 5800 (pre and post Mod. 160)

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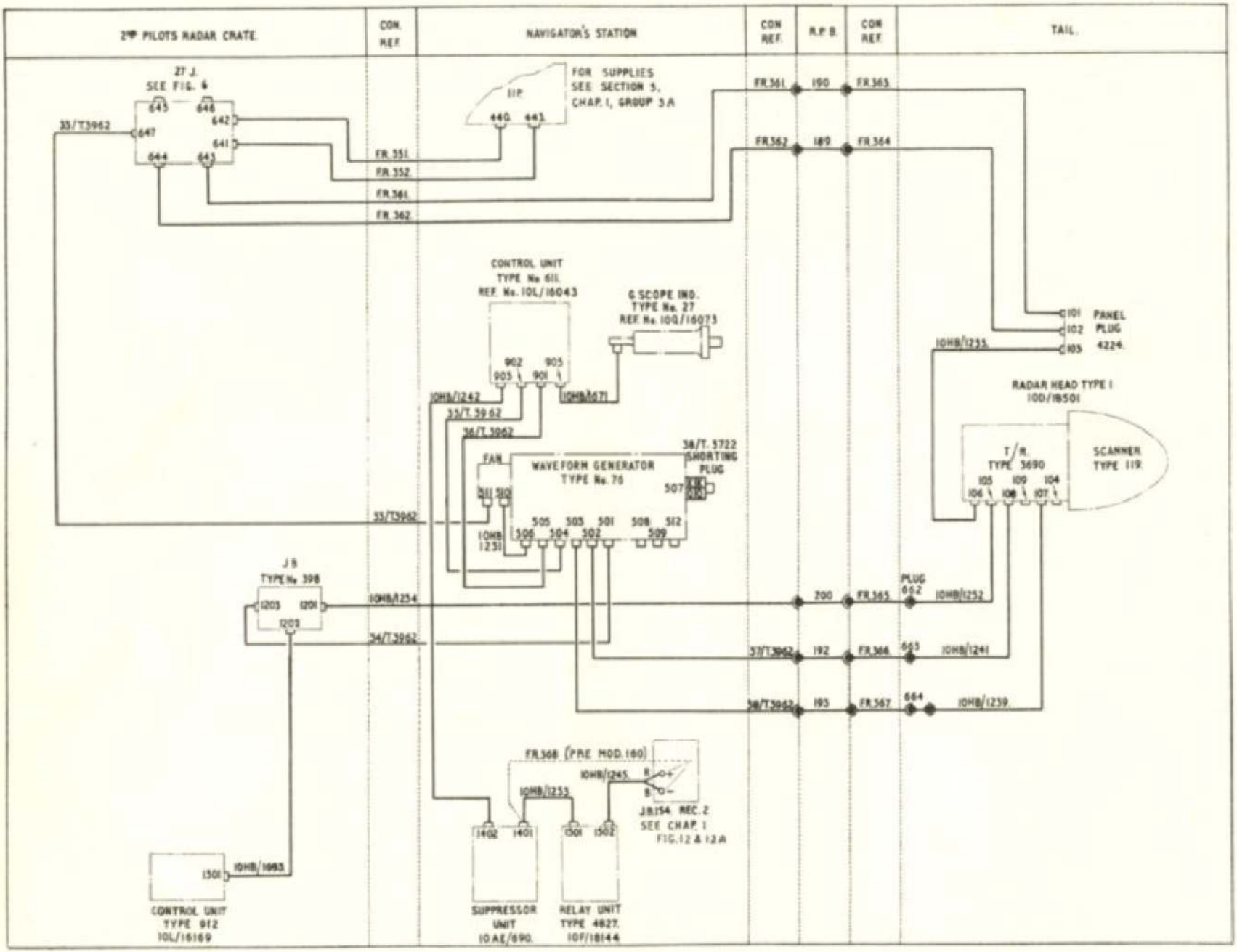

Fig. 10 A.R.I. 5800 (post Mod. 703)

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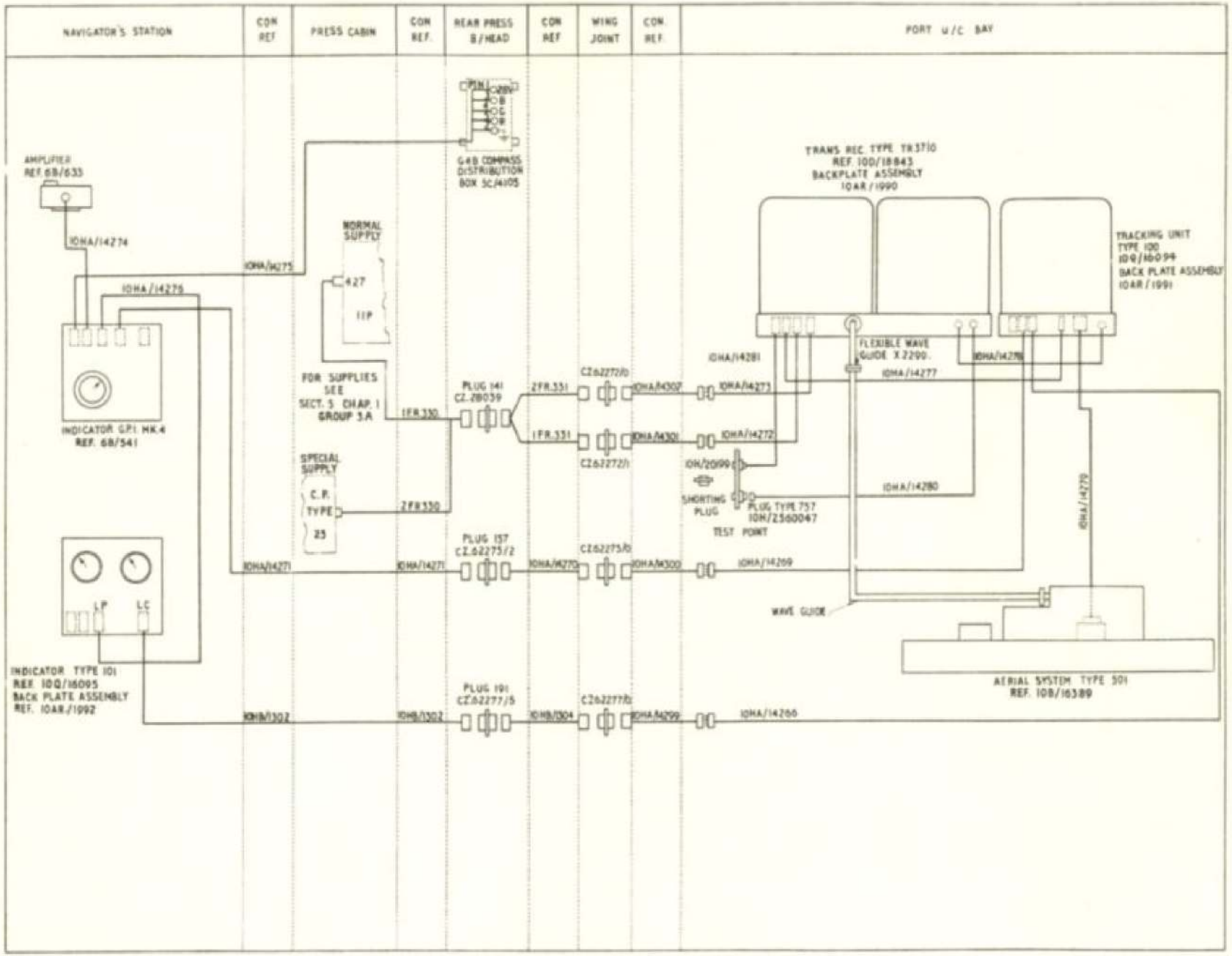

Fig. 11 A.R.I. 5851

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