

Chapter 2
A.R.I. 5848

LIST OF CONTENTS

<i>Introduction</i>	Para. 1	<i>Power supplies</i>	Para. 11
DESCRIPTION AND OPERATION		SERVICING	
<i>General</i>	2	<i>Precautions</i>	12
<i>Main units</i>	4	<i>Installation</i>	13
<i>T.R. unit, Type 4585</i>	5	<i>Pressure check</i>	14
<i>Coder unit, Type KY-95A/APX-25</i>	6	<i>Power supplies</i>	15
<i>Control units</i>	7		
<i>Aerial switch unit, Type 2160 or 6850</i>	8	REMOVAL AND INSTALLATION	
<i>Aerial test switch</i>	9	<i>General</i>	16
<i>Aerial system</i>	10		

LIST OF TABLES

	Table
<i>Connections for A.R.I.5848</i>	1

LIST OF ILLUSTRATIONS

	Fig.
◀ <i>Component location, pre Mod, 2024</i>	1
<i>Component location, post Mod, 2024</i>	2
<i>Routing charts A.R.I.5848-post Mod. 2024</i>	3 ▶

Introduction

1. This chapter provides descriptive

and servicing information on the A,R,I. 5848. A location diagram of the main units

◀ is provided together with a routing chart for post Mod.2024 installations. ▶

DESCRIPTION AND OPERATION

General

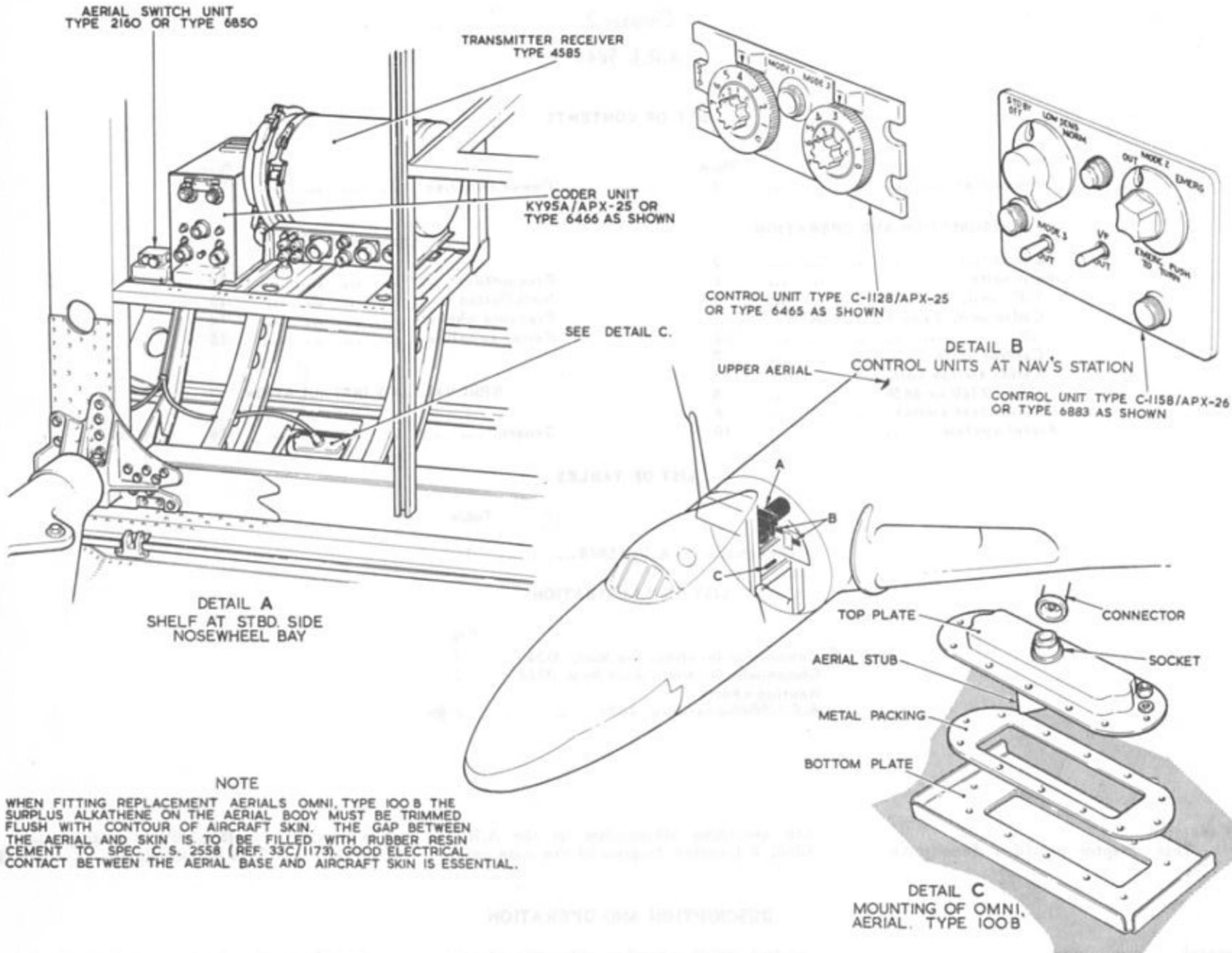
2. A.R.I.5848 is a secondary radar

system which provides automatic identification as friendly when the aircraft is

properly challenged by suitably equipped ground or airborne radars.

V.2.1C. 1324

RESTRICTED



V.2.1C. 1325

◀ Fig.1 Component location - pre Mod.2024 ▶
(additional information)

RESTRICTED

3. 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

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

T.R. Unit, Type 4585

5. 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 is provided for cooling purposes. The unit has suitable plugs and sockets to mate with the existing aircraft cables and is mounted at the starboard side of the nosewheel bay.

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

6. This unit works in conjunction

Precautions

12. Servicing personnel in particular are warned that a.c. and d.c. voltages in excess of 100 volts can be dangerous to the extent of causing personal injury fatal or otherwise. It is essential that the utmost attention be given to servicing instructions where matters of safety are concerned and that maximum co-operation be maintained between trades mutually concerned in servicing operations.

Installation

13. The setting up, operating and

with, and is mounted adjacent to, the T.R. unit in the nosewheel bay.

Control units

7. Two co-axial units are used in the installation, a Type C1158/APX-6 (or Type 6883) for use with the T.R. unit, and a Type C1128/APX-25 (or Type 6465) for use with the coder unit. Both units are mounted at the A.E.O's station as shown in fig.1. With the introduction of Mod.2024, the control units are repositioned as shown in fig.2.

Aerial switch unit, Type 2160 or 6850

8. The switch unit is mounted adjacent to the T.R. unit in the nosewheel bay and when in use switches the T.R. unit alternately to the upper and lower aerals.

Aerial test switch

9. This 3-position switch is mounted in the nosewheel bay adjacent to the aerial switch unit. The switch is labelled AERIAL POSITION - UPPER, LOWER, FLIGHT. The switch allows the T.R. unit to be permanently connected to either the upper or lower aerals for test purposes. The switch must be locked in the FLIGHT position for normal operation.

SERVICING

servicing instructions for A.R.I.5848 will be found in A.P.2887N, Vol.1. The connectors, plugs, sockets and terminal blocks should be examined for damage and ingress of dirt and moisture and the security of all components should be checked regularly. The aerial test switch should be checked to ensure that it is locked in the FLIGHT position.

Pressure check

14. At each inspection check that the case pressure of the T.R. unit is not less than 3 p.s.i.a. If necessary the pres-

Aerial system

10. The aerial system consists of two omni Type 100 aerals fitted, one to the upper surface, and one to 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 undersurface of the fuselage at the starboard side of the nosewheel bay.

NOTE . . .

Whenever an aerial, omni, type 100 becomes unserviceable it is advisable to replace it with an aerial, omni, type 100B (Ref.No. 10B/20275)

Power supplies

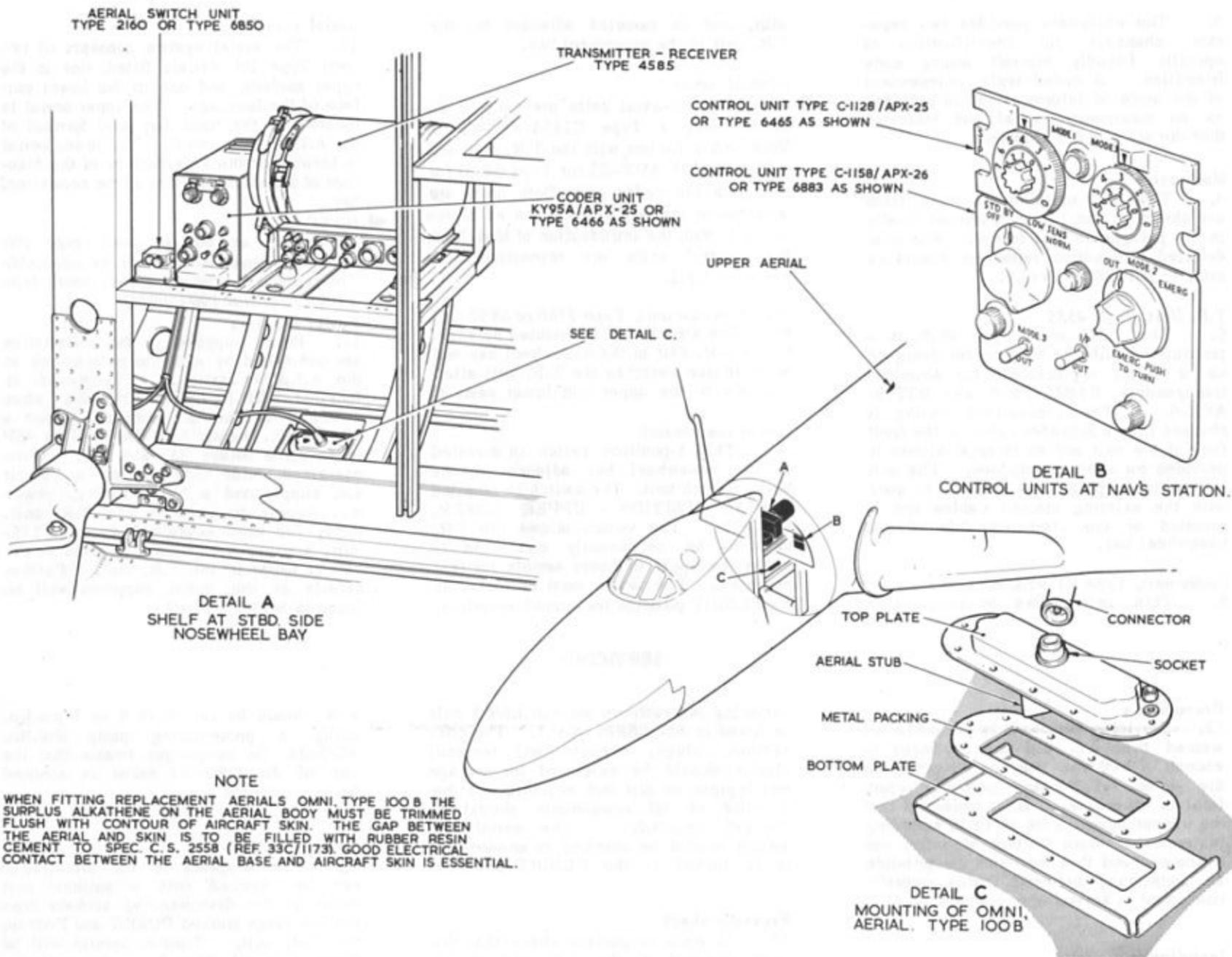
11. Power supplies to the installation are controlled by a single pole switch at the A.E.O's station. The switch is labelled I.F.F. SUPPLY and when switched to the ON position allows a 28-volt d.c. supply from fuse 693 in 48P to energise relays 337 and 723. When energised relay 337 allows a 28-volt d.c. supply and a 115-volt single phase a.c. supply to pass to the T.R. unit. Relay 723 when energised allows a 115-volt, 3 phase a.c. supply to pass to the blower motor in the T.R. unit. Further details of the power supplies will be found in Sect.6, Chap.7.

sure should be raised to 4 or 5 p.s.i.a. using a pressurising pump Ref.No. 4G/5435. On completion ensure that the cap of the Schrader valve is screwed back in position.

Power supplies

15. The supplies to the installation can be checked with a suitable test meter at the disconnected sockets from the two plugs marked POWER and FAN on the T.R. unit. Further details will be found in Sect.6, Chap.7 together with the appropriate routing chart.

RESTRICTED



V.2.1C. 1327

Fig.2 Component location - post Mod, 2024

RESTRICTED

REMOVAL AND INSTALLATION

General

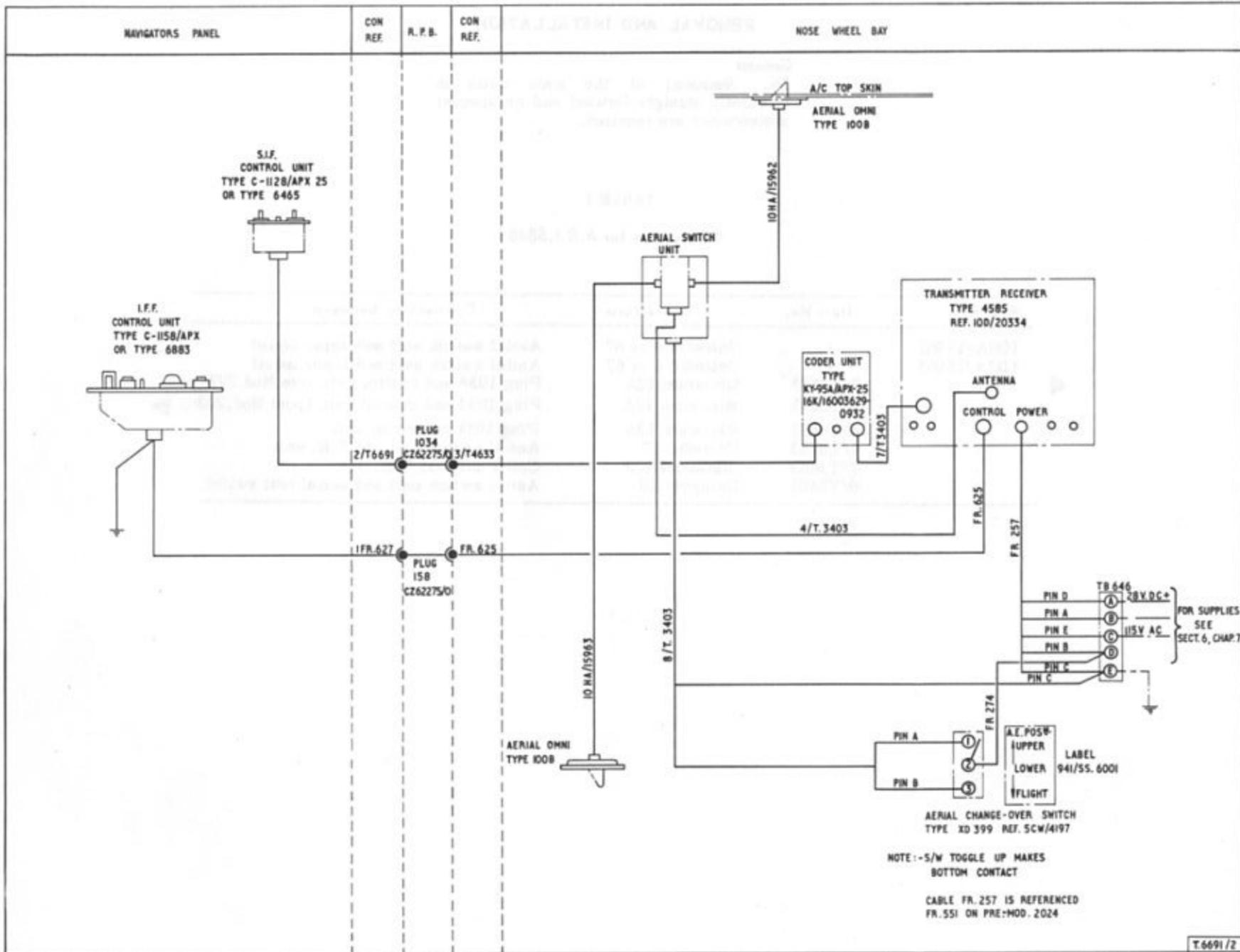
16. Removal of the main units is relatively straight forward and no special instructions are required.

TABLE 1

Connectors for A.R.I.5848

Ref. No.	Item 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
◀	2/T4633	Miniature 12A	Plug 1034 and control unit, (pre Mod.2024)
	2/T6691	Miniature 12A	Plug 1034 and control unit, (post Mod.2024) ▶
	3/T4633	Miniature 12A	Plug 1034 and coder unit
	4/T3403	Uniradio 67	Aerial switch unit and T.R. unit
	7/T3403	Miniature 12F	Coder unit and T.R. unit
	8/T3403	Uninyvin 20	Aerial switch unit and aerial test switch

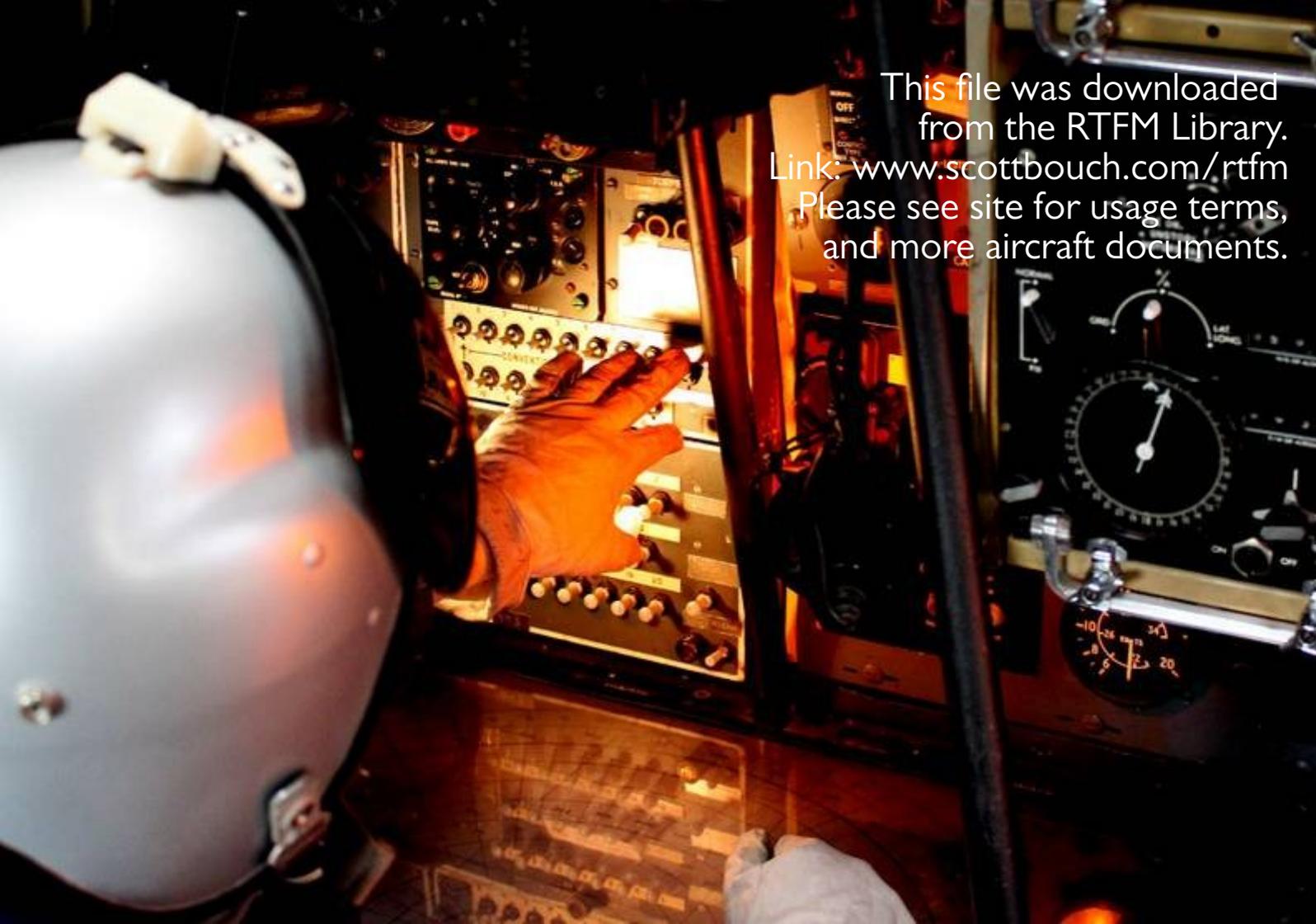
V.2.1C. 1328



V.2.1C. 1329

Fig.3 A.R.I.5848 - post Mod.2024

T 6691/2



This file was downloaded
from the RTFM Library.
Link: www.scottbouch.com/rftm
Please see site for usage terms,
and more aircraft documents.