

**TYPE 1003(1)(2)(3)**

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SUMMARY OF DATA

**PURPOSE**

Type 1003(1)(2)(3) is a submarine radar designed to give combined surface and air warning, together with an accurate ranging facility.

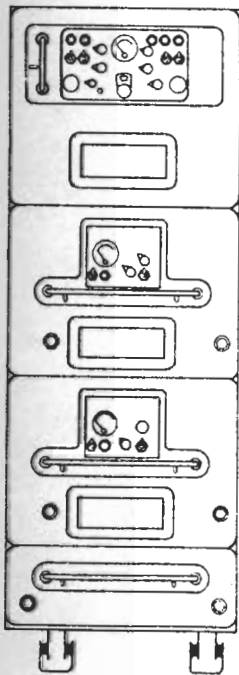
**BRIEF DESCRIPTION**

Types 1003(1)(2)(3) consist of the three major equipments here illustrated, together with Aerial Outfit AZM and Aerial Outfit AKU(4). Either of the two aerials may be connected to one of the transmitters in Panel 77A (or 77A/A) at any one time and Sector Selection is available with Aerial Outfit AKU(4).

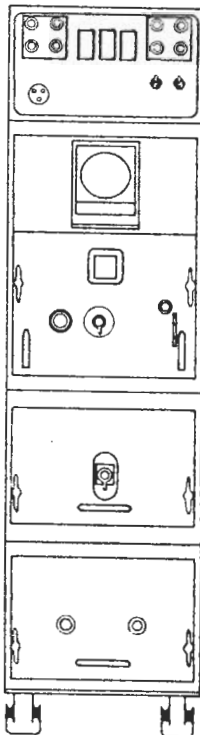
Aerial Outfit AZM(1) is fitted in Type 1003(1), and Aerial Outfit AZM(2) in Types 1003(2) and 1003(3). Types 1003(1) and 1003(2) can be fitted with component equipments having either single or dual voltage conditioning heaters, but Type 1003(3) will accept only those component equipments having dual voltage conditioning heaters.

Two PPI displays are fitted and used with Aerial Outfit AKU(4). Display Outfit JP5 is fitted in the Radar Office and Display Outfit JP4 in the Control Room. HMS DREADNOUGHT will, however, be fitted until first refit with Display Outfit JP3 in the Radar Office and Display Outfit JP3M in the Control Room.

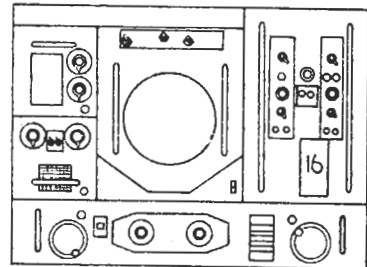
An A-scan display (Display Outfit JT1) is used with the ranging aerial, AZM.



TRANSMITTER RECEIVER  
RADAR 77A



DISPLAY OUTFIT JT1



DISPLAY OUTFIT JP3

**ELECTRICAL CHARACTERISTICS**

Transmitter Frequency	:	9650 MHz $\pm$ 50 MHz
Power Output	:	30 kW nominal
Pulse Repetition Frequency	:	400—500 Hz
		or
		2000—2500 Hz
Pulse Duration	:	1 $\mu$ s or 0.2 $\mu$ s
Intermediate Frequency	:	30 MHz
Receiver Bandwidth	:	2 MHz at $-3$ dB (Narrow)
		8 MHz at $-3$ dB (Wide)

**MAJOR UNITS**

<u>AP No.</u>	<u>Description</u>
AP 63215 or 5840-AP 173243	Transmitter-Receiver 77A, 77A/A
AP 62167 or 5840-AP 173244	Cabinet Assembly Design 62, Control
AP 62172 or 5840-AP 173245	Cabinet Assembly Design 63, RF
AP 62181 or 5840-AP 173246	Cabinet Assembly Design 64, Rectifier
AP 61364 or 5840-AP 173251	Cabinet Assembly Design 28, Display
AP 61360	Cabinet Assembly Design 27, Range Calibrating
AP 61327 or 5840-AP 173250	Cabinet Assembly Design 26, Rectifying
5840-AP 173040 or 5840-AP 173123 or AP 173253	Cabinet Indicator
5840-AP 173043 or 5840-AP 173120	Generator Sweep
5840-AP 172291 or 5840-AP 173122	Mixer Unit
5840-AP 173041 or 5840-AP 173121	Indicator Plan Position
5840-AP 173044	Range and Bearing Unit
5840-AP 173164 or AP 61421A	Range and Bearing Unit
5840-AP 173045 or 5840-AP 173254	Cabinet Control Power Supply
5840-AP 173046	Power Supply
5840-AP 204150	Servo Amplifier Mark 4 A.C.

**PHYSICAL DATA**

	<u>Height</u>	<u>Width</u>	<u>Depth</u>	<u>Weight</u>
Panel 77A, 77A/A	158 cm (62.5 in.)	57 cm (22.5 in.)	61 cm (24 in.)	408 Kg (900 lb)
Panel JT1	162.5 cm (64 in.)	47 cm (18.5 in.)	61 cm (24 in.)	317.5 Kg (700 lb)
Panel JP3/3M	68.6 cm (27 in.)	86.4 cm (34 in.)	66.0 cm (26 in.)	239 Kg (527 lb)
Panel JP4	46.3 cm (18.25 in.)	55.9 cm (22 in.)	66.0 cm (26 in.)	207 Kg (478 lb)
Panel JP5	68.6 cm (27 in.)	86.4 cm (34 in.)	66.0 cm (26 in.)	237 Kg (523 lb)

**POWER REQUIREMENTS**

180 V 500 Hz	77A, 77A/A, JT1, JP3/4/5
or 200 V 400 Hz	
230 V 50 Hz	
or 115 V 60 Hz	Fan Motor
115 V 400 Hz, one phase	JT1, JP3/4/5. Magslip
115 V 60 Hz, three phase	Aerial Motor
220 V dc	
or 115 V 60 Hz	Anti-condensation Heaters
24 V dc	

**ASSOCIATED DISPLAY OUTFITS**

JT1, JP3/4/5

**ASSOCIATED AERIAL OUTFITS**

AKU(4), AZM(1)(2)

**HANDBOOK**

BR 2945

**ESTABLISHMENT LIST**

E 1133

**INSTALLATION SPECIFICATION**

B 821