

RESTRICTEDBR 333(1)
Original**AERIAL OUTFIT AYF****AYF****SUMMARY OF DATA****PURPOSE**

A fixed SHF D.F. aerial fitted in submarines for use with Radio Search and D.F. Outfit UA2.

TYPE OF RECEPTION

Pulsed r.f. signals from target radar.

FREQUENCY RANGE

8000-10 000 MHz.

POLARISATION

Horizontal.

BRIEF DESCRIPTION

The Outfit consists of four free-flooding horn collectors spaced equally around the circumference of a cylindrical, pressurised, R.F. box. This contains the crystal detectors and line-matching transformers which feed video signals to the UA2 office equipment. It also houses four passive protection gas cells, one mounted in each waveguide feed, to prevent accidental crystal burn-out by strong local radar transmissions. A voltage doubling Rectifier Unit 63DX (AP 70193) mounted in the R.F. box, provides a -1 kV priming voltage for the gas cells from a 6.3 V a.c. supply switched on (a) by the seaguard radar when at sea or (b) manually when in harbour.

The aerial can be supported on a 3 ft tubular pedestal, (identical to the ANF pedestal) which may be fitted in place of the ANF pedestal or directly on the snort tube, the head of which has been suitably modified. It is orientated on installation so that the horns face Port, Starboard, Fore and Aft, the radiation pattern in the horizontal plane approximating to a cosine law for each horn. Pyrotex cables feed the video signals to the office equipment.

**MAJOR UNITS**

Pattern No.	Description	Qty.	Physical Data			
			Length	Breadth	Height	Weight
61802	Aerial Unit Design 47	4	8 in	2 in	6 in	31 lb
70102	Switch Unit Design 108	1	8 in	8 in	8 in	
70103	Rectifier Unit 63 DX*	1				
70104	R.F. Unit Design 6 Pressurised	1	16 in Dia.		12 in	50 lb
61805	Pedestal Unit 58D ("T" Class conversions only)	1	3 in	7 in Dia.		20 lb

* Installed in the R.F. Unit Design 6

POWER SUPPLY REQUIREMENTS

115/230 V 50/60 Hz 5 W for priming voltage originated by a switching voltage of (a) 180 V 500 Hz in the case of Type 1000 radar and (b) 24 V d.c. in the case of Type 267P/W.

SPECIAL TEST EQUIPMENT

AP 64261 Test Set Design 21.
AP 62858 Aerial Injection Unit Design 5.
AP 62860 Flexible Connector 30 ft

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HANDBOOKS

BR 2354(2) Handbook for Aerial Outfit AYF
BR 2348 Handbook for Radio Search and D.F. Outfit UA2.

ESTABLISHMENT LIST

E 1111.

INSTALLATION SPECIFICATION

B 807