

RESTRICTED

BR 333(1)
Original

AERIAL OUTFIT AYE

AYE

SUMMARY OF DATA

PURPOSE

A fixed SHF DF aerial outfit fitted in surface vessels in conjunction with Aerial Outfits AYC and AYD for use with Radio Search and DF Outfits UA2/3.

TYPE OF RECEPTION

Pulsed RF signals from target radar.

FREQUENCY RANGE

7000 to 11 500 Mc/s.

POLARISATION

Horizontal and vertical.

POWER GAIN

Approx. 8 dB.

BRIEF DESCRIPTION

The Outfit comprises four Aerial Units Video, 5985-A.P.186489 orientated to face Fore and Aft, Port and Starboard. Each unit has a polystyrene-sealed horn collector capable of receiving both horizontally and vertically polarised signals in X-band. This is followed by a short twist and taper section of waveguide feeding a ridge-type crystal holder. The detector is a biased silicon cartridge crystal, CV7181, 7182 or 7183. Video signals are fed through a line-matching transformer and Pyrotenax cable to the UA2 office equipment. Provision is made for the application of a small positive bias voltage to the crystal. The horizontal polar diagram for each unit approximates to a cosine² law and the beam width in the vertical plane is approx. 30°.

MAJOR UNITS

Patt. No.	Description	Qty.	Physical Data			
			Length	Breadth	Height	Weight
61559	Box, junction, for one Patt. 13941 and one Patt. 13832 cables	4	2½ in	2 in	1½ in	1 lb
5985-A.P.186489	Aerial Unit	4	26 in	5 in	6 in	12 lb

SPECIAL TEST EQUIPMENT

Patt. 64261 Test Set Des. 21 (with Patt. 62857 Aerial Injection Unit Des. 4).

A.P.62840 Cable. CT541 Signal Generator.

HANDBOOKS

B.R.2354(1) Handbook for Aerial Outfits AYC/D/E.

B.R.2348 Handbook for Radio Search and DF Outfit UA2.

B.R.2349 Handbook for Radio Search and DF Outfit UA3. C.B. Handbook for Reciprocal Intercept in Submarines.

INSTALLATION SPECIFICATION 8.806/R2

ESTABLISHMENT LIST E.1182

RESTRICTED