

SUMMARY OF DATA



OFFICE EQUIPMENT

PURPOSE

A radio search and D/F equipment fitted in submarines and surface vessels to determine the bearing and characteristics of a target radar.

TYPE OF RECEPTION

Pulsed r.f. signals from target radar.

FREQUENCY RANGE

2500-11 500 MHz. For range of associated aerial outfits, see below.

BRIEF DESCRIPTION

This equipment is used in conjunction with Aerial Outfits AYC, AYD, AYE and AYP. The aerial outfits consist of the appropriate horns and signal rectifier systems, the UA2 being the video amplifier and display unit. Four video frequency amplifiers amplify the signals from the port, starboard, fore and aft aerial collectors respectively and feed them to the output chassis. This in turn drives the deflection plates of a C.R.T. to produce a radial trace denoting the bearing of the target radar. In addition, the output chassis provides for the mixing of the signals from the individual channels for pulse brightening and aural monitoring. The audio component is fed via an audio output chassis to a specially designed headset with split earphones to enable the operator to listen to both target radar signals and speech from an external voice channel.

An input selector switch selects video signals from any one of the aerial outfits fitted.

The unit also includes a built-in generator which simulates audibly a received signal and provides a visual test signal on any octantal relative bearing. A dial bearing indicator is fitted in front of the C.R.T. and, when fed with "M" type compass transmission, indicates true bearing of the target radar.

The power supply circuits are embodied in a separate unit.

ELECTRICAL PERFORMANCE

Input Impedance to v.f. amplifiers 75 ohms
Input Level 5 μ v Peak (minimum)
Output Level 18 v Peak (maximum)
Overall Gain of v.f. Amp 100 dB \pm 3 dB
Frequency Response to 20 dB down, 6 kHz to 1 MHz
Audio Line Impedance 600 ohms

MAJOR UNITS

Pattern No.	Description	Physical Data			
		Height	Width	Depth	Weight
62620	Amplifier and Display Unit Des. 2	19 in.	13 $\frac{1}{2}$ in.	18 $\frac{1}{2}$ in.	110 lb
62625	Rectifier Unit 638X	11 $\frac{1}{2}$ in.	13 $\frac{1}{2}$ in.	14 in.	61 lb

POWER SUPPLY AND CONSUMPTION

115-230 V 50-60 Hz, single phase, 250 watts.

HEAT DISSIPATION

250 watts. (The Display Unit can be air cooled by exhaust from main trunking).

ASSOCIATED AERIAL OUTFITS

Aerial Outfit AYC 2500-4100 MHz)
Aerial Outfit AYD 4100-7000 MHz) For fitting in surface vessels
Aerial Outfit AYE 7000-11 500 MHz)

Aerial Outfit AYF 8000-10 500 MHz - For fitting in submarines

ASSOCIATED TEST EQUIPMENT

Pattern 61640 Test Set Design 15 (For AYC)
Pattern 63369 Test Set Design 19 (For AYD)
Pattern 64261 Test Set Design 21 (For AYE and AYF)
Pattern 61695 Test Set Design 18 (Video Test Set)

HANDBOOKS

BR 2348 (Radio Search and D/F Outfit UA2)
BR 2354(1) (Aerial Outfits AYC, AYD, AYE)
BR 2354(2) (Aerial Outfit AYF)

ESTABLISHMENT LIST

E1111

INSTALLATION SPECIFICATIONS

3805 Radio Search and D/F Outfit UA2
3806 Aerial Outfit AYC, AYD, AYE
5807 Aerial Outfit AYF