

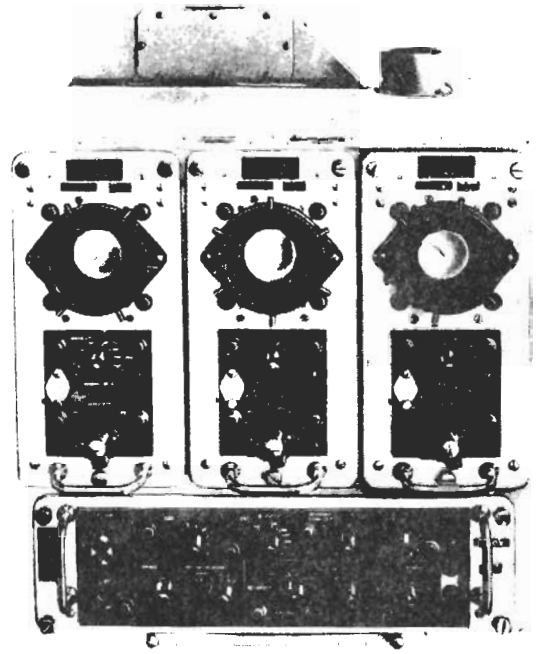
SUMMARY OF DATA

**PURPOSE**

A transistorised SHF df equipment fitted with Aerial Outfit AYG in submarines to determine the bearing and characteristics of an intercepted radar. It supersedes Outfit UA2.

**BRIEF DESCRIPTION**

The outfit comprises three identical display units together with a power supply and reference unit. The three displays cover between them S, C, X and J-band; the C and J-band sharing a display which can either display both bands simultaneously or individually by switching between them. Each display is connected to the appropriate S, X, C and J section of the AYG(2) at AYH by four video feeders making twelve feeders overall. The video signals from the fore, aft, port and starboard aerial crystals are amplified by separate but identical video amplifiers which drive the deflection plates of a crt. The resulting radial trace denotes the bearing of the intercepted signal; the length of the trace is proportional to signal strength but this does not relate directly to range. The video signals are also combined to give an audio output by which first detection is usually made. This also enables the operator to estimate the aerial rotation period and PRF using the simulated signals from the reference unit for comparison. The reference signal can also be switched to the display to check bearing accuracy. A bearing indicator dial, magstrip-driven from the ship's compass, enables true bearings to be read off. An audio output for a recorder is provided. Associated equipments are Pulse Analyser YAF and Printer Digital which provide a visual and printed readout of pulse width and prf.



GENERAL VIEW OF UA4

**MAJOR UNITS AND PHYSICAL DATA**

Item	Pattern No.	Description	Height	Width	Depth	Weight
1	5895-AP 164846	Cabinet, Receiver	64.1 cm (25.25 in.)	54.6 cm (21.5 in.)	52.1 cm (20.5 in.)	37.65 Kg (83 lb)
2	5895-AP 164847	Display, Signal, Video (3 off)	34.5 cm (13.5 in.)	17.8 cm (7 in.)	45 cm (18.5 in.)	16.78 Kg (37 lb)
3	5895-AP 164394	Power and Reference Unit	14 cm (5.5 in.)	49.5 cm (19.5 in.)	43.2 cm (17 in.)	18.6 Kg (41 lb)

NOTE Three Items 2 and one Item 3 are fitted in Item 1.

**ELECTRICAL PERFORMANCE**

- Shortest detectable pulse 0.1  $\mu$ s.
- Sensitivity in dBm at detector crystal in aerial approximately 45 dBm for all bands.
- Input impedance 75 ohm.
- Output impedance at recorder terminals 250 ohm approximately.
- Overall bearing accuracy better than 10°

**POWER SUPPLY AND CONSUMPTION**

- 115/230 V 50-60 Hz 1-phase 400 W
- 115 V 400 Hz 1-phase 25 W (for servo control of dials, bearing indicator).
- 115/230 V 50-60 Hz 1-phase 30 W (for anti-condensation heaters).

**ASSOCIATED AERIAL OUTFIT**

Aerial Outfits AYG(2) and AYH.

## **ASSOCIATED TEST EQUIPMENT**

CT343 Video Pulse Generator  
CT540/538/541

## **HANDBOOKS**

BR 4187 Handbook for Radio Search and DF Outfit UA4  
CB 4855 Handbook for Aerial Outfit AYG(1) and AYG(2)  
CB 4863(R) Reciprocal Intercept in S/Ms.  
BR 4209 Pulse Analyser YAF.  
BR 4231 Printer Digital 6625-99-523-9877  
BR 354 Aerial Outfit AYH.

## **ESTABLISHMENT LIST**

E1282

## **INSTALLATION SPECIFICATION**

B906 Outfit UA4.  
B869/R2 Aerial Outfit AYG(2).