

**AERIAL OUTFITS AKU(3)(4)**

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SUMMARY OF DATA

**PURPOSE**

AKU(3) and AKU(4) are narrow-band aerals, designed for use with Submarine X-band radars Type 1002/1003 to provide combined sea and air warning.

**BRIEF DESCRIPTION**

The aerial is mounted on a periscopic mast that is hydraulically raised and lowered. The Training Motor and hand drive mechanism is housed on a base plate attached to the crosshead. Connection to the standing waveguide is by means of an automatic coupling unit that connects up only in the fully raised position, all other electrical connections being permanently made via an articulated sheath assembly that houses the cables in the case of AKU(3). In AKU(4), the articulated sheath is replaced by a special cable and spring loaded cable-drum. Aerial true bearing is transmitted by magslip. An automatic Sector Selection facility is provided.

**BEAM WIDTHS**

- 1.8° horizontal (at half field strength)
- 9° vertical (at half field strength), tilted 3° upward to the horizontal.

**MAJOR UNITS**

<u>AP No.</u>	<u>Description</u>
AP 63482	Waveguide, Size 16, Connection Flexible
5985-AP 186284	Waveguide, Size 16, Connection
5985-AP 71023A	Reflector assembly matched
AP 63762	Waveguide Size 16, Rotating Joint Design 2
AP 63763	Auto Coupling Unit, Waveguide Size 16
AP 63764	Control Unit EHT, Design 105
AP 63765	Control Unit RF Design 106
AP 63767	Articulated Sheath Assembly
AP 64005	Drive Motor 1/3 HP
AP 64033	Waveguide, Size 16 Connectors, set of, -AKU(3) only
5985-AP 186572	Waveguide, Size 16 Connectors, set of, -AKU(4) only
5990-99-972-6467	Synchro Differential Transmitter (Follow Through, magslip) - AKU(3) only
AP 63768	Junction box, 18 way Design 3
5985-AP 186261	Control Unit, Aerial
AP 71024	Control Unit Design 140 (Sector Selector)
5990-99-972-6465	Synchro Transmitter (Magslip) - AKU(4) only

**PHYSICAL DATA**

Overall length of AKU(3) Mast, Aerial to base casting 12.7m (41 ft 6 in). The AKU(4) is 1.7m (5 ft 4½in) longer.  
 Diameter of mast 24.1 cm (9.5 in)  
 Weight of mast complete with Crosshead, Drive, motor and base attachment 1088 kg (2410 lb).  
 Weight of Reflector Assembly 47.6 kg (105 lb).

**POWER REQUIREMENTS**

115V 60 Hz 3 phase for Aerial Motor  
 24V dc for MAST RAISED lamps and RF Control Unit.

**HANDBOOK**

BR 2944

**ESTABLISHMENT LIST**

E1273

**INSTALLATION SPECIFICATION**

B823