

AERIAL OUTFIT AZN(1)(2)

AZN(1)
AZN(2)

SUMMARY OF DATA

PURPOSE

Aerial Outfit AZN(1) and AZN(2) are dual purpose DF and Radar aerials designed for use in submarines AZN(1) being an earlier version as fitted to Resolution and class while AZN(2) is a later version as fitted to Swiftsure and class. The rotatable aerial assembly consists of a directional S,C,X and J band df aerial for use with Outfit UA12 and a narrow beam X band radar aerial for use with Radar Type 1003.

BRIEF DESCRIPTION

Aerial Outfits AZN(1) and AZN(2) comprise:

1. (a) AZN(1) and AZN(2) — An X band horn and parabolic reflector for Radar 1003.
- (b) AZN(1) — An S and C band horn and reflector for DF Outfit UA12.
- AZN(2) — As above without reflector.
- (c) AZN(1) — An X and J band horn and reflector for DF Outfit UA12.
- AZN(2) — As above without reflector.

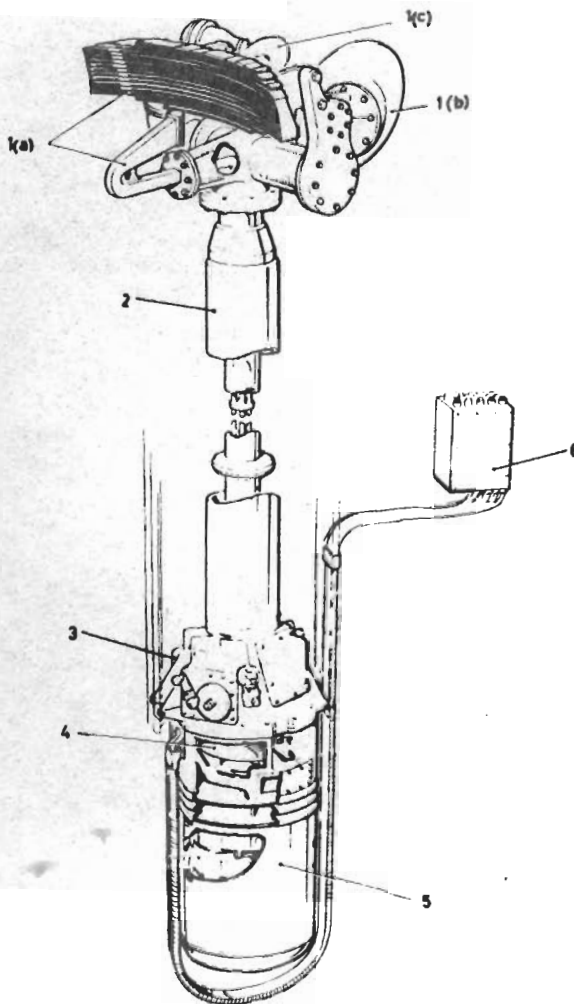
AZN(1)

The complete aerial is constructed in the form of an open gantry, the ends of which support the radar reflector with the two EW aerials mounted on brackets at the rear. The DF aerials are at 133° relative bearing to the radar aerial.

AZN(2)

The aerial is constructed in the form of a vertical bulbous cylinder, one vertical face supporting the parabolic reflector and horn of the X band Radar 1003. Disposed in Azimuth to the reflector the X/J and S/C wide flare horns are mounted on a vertical line, with the X/J horn uppermost.

2. A 36 ft hollow mast enclosing a central rotating torque tube which houses the aerial waveguides and cables.
3. A base of mast crosshead which encloses the aerial drive motor, gearbox and synchros and which also carries the receiver assembly. The hydraulically operated rams which raise and lower the mast are bolted to the crosshead.
4. A drive section containing the motor, gearbox, synchro elements and rotating joint.
5. A receiver at the base of the mast containing the four receiver units (one for each band) which provide amplification and detection of the pulse/cw signals fed from the aerial. Travelling wave tube amplifiers are used for RF amplification. The video outputs of the receivers are fed to Outfit UA12. An rf test source is incorporated from which test signals may be injected into the receiver for system check purposes.
6. An articulated sheath and interconnecting box provided the flexible connection between the Aerial Outfit and Ships Wiring.
7. A Sector Selector Unit, RF Control Unit and Autocoupler associated with Radar Type 1003 (not shown).



AZN(1)

MAJOR UNITS

AP 63765	Control Unit RF
AP 71024	Control Unit Sector Selector
5895-99-972-5086	Interconnecting Unit
5895-99-972-3044	Canister Receiver
5895-99-972-3045	Receiver Unit
5895-99-972-3046	Receiver Unit
5895-99-972-3047	Receiver Unit