

AERIAL OUTFIT ADN(3)

ADN(3)

SUMMARY OF DATA

PURPOSE

For use with Types 992Q and 992R in association with GW systems.

BRIEF DESCRIPTION

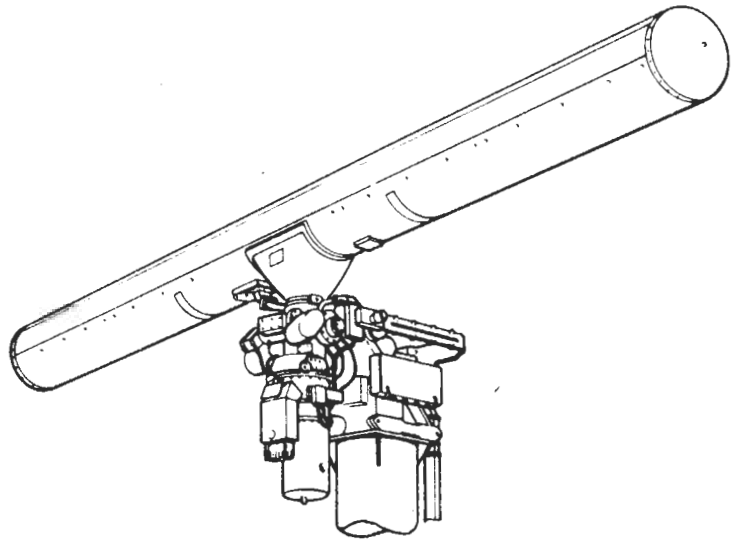
The aerial comprises a linear slotted array enclosed in a cylindrical plastic radome and the pedestal on which it is mounted is stabilised in the pitch and roll planes. The aerial and pedestal components and protective finishes have been chosen to withstand the high temperature and corrosive environment produced by gas turbine exhausts.

Aerial rotation speeds of 15 or 30 rev/min are provided. The normal speed is 15 rev/min. At this speed the ADN may be synchronised with Aerial Outfit AKE. The 30 rev/min is used exceptionally for navigational purposes. A ship's head marker is provided at both speeds. Facilities are also provided for hand training of the aerial and for automatic stowing of the aerial on ship's head.

Control of each of the training and stabilising motions is by an amplidyne servo loop, comprising a servo amplifier, amplidyne generator and the appropriate aerial drive motor. The servo amplifier control equipment and the amplidyne generator are located in the radar office and machinery space, respectively.

Coarse and fine synchro transmissions provide accurate bearing information to the weapons system. Compass correction is provided externally by the ship's Azimuth Retransmission Unit (RTU).

Waveguides, rotating joints and aerial are pressurised at 2.1 kg/cm² (30 lb/in²)



CHARACTERISTICS

- Beam width : 1.2° horizontal
 30° vertical
- Beam Elevation : 15°
- Gain : Approx 29 dB
- Operating Frequency : 2944-3052 MHz
- Polarisation : Vertical

MAJOR UNITS

- 5985-99-527-2490 Antenna Guard Assembly
- 5985-99-527-2488 Pedestal, Aerial
- 5840-99-924-9954 Waveguide Assembly
- 5840-99-418-0716 Cabinet Aerial Control
- 5840-99-418-0989 Drawer Aerial Indicator
- 5985-99-527-2489 Control Antenna
- 5840-99-529-6473 Drawer Squint Correction
- 5840-99-418-0993 Drawer Servo Amplifier
- 6125-99-462-4051 AC/DC/DC/DC Motor Generator Amplidyne Module Control

PHYSICAL DATA

- Aerial length : 640 cm (21 ft)
- Turning Circle : 655 cm (21.5 ft)
- Height of Pedestal with Aerial : 198 cm (6.5 ft)
- Weight of Pedestal : 476 kg (1050 lb)
- Weight of Aerial : 183 kg (404 lb)
- Control Cabinet :

Height	Width	Depth
142 cm	65 cm	66 cm
(56 in.)	(25.5 in.)	(26 in.)
- Weight of Control Cabinet (excluding drawers) : 227 kg (500 lb) approximately

BR 333(1)
Original

RESTRICTED

POWER REQUIREMENTS

440 V 60 Hz 3 phase 3½ kVA, for amplidyne generators
220 V dc 1 A for aerial motor fields
115 V 400 Hz single phase 6 A for servo amplifiers and synchros
60 V 60 Hz single phase 1 A for amplidyne generator demagnetising circuits
24 V dc 2 A for control gear

HANDBOOK

BR 359(2, 3, 4) General, User and System Information
BR 359(5) Units — Technical Description

ESTABLISHMENT LIST

E1439

INSTALLATION SPECIFICATION

B1340