AERIAL OUTFIT AKN

AKN

SUMMARY OF DATA

PURPOSE

For use with Radar Type 963.

BEAM WIDTH

Horizontal (to half power $1^{o} \pm 0.2^{o}$.

Vertical (to half power) $1.65^{o} - 1.85^{o}$

Elevation angle of beam axis is normally 3.5^{o} but adjustable by Dockyard between 2^{o} and 4^{o}.

BRIEF DESCRIPTION

The aerial consists of a radome-enclosed reflector, the flare being situated in the focal plane of the reflector for combined transmission and reception on a nominal wavelength of 3 cm., horizontally polarized. It is stabilised for roll and pitch, when the training axis is aligned vertically with the stable element up to angles of $\pm 4^{o}$ Pitch and $\pm 10^{o}$ Roll. When unstabilised, the training axis is automatically aligned perpendicular to the deck of the ship.

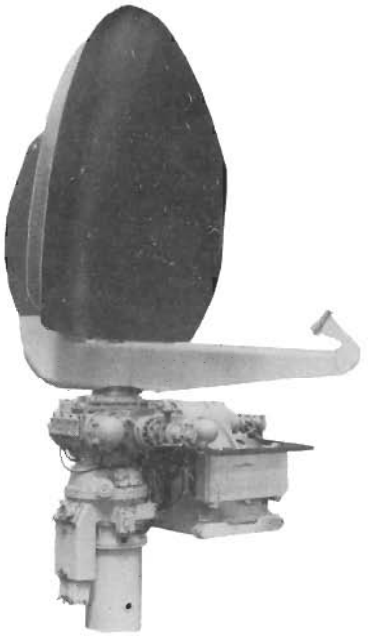
The aerial training motion may be controlled either automatically or manually if this facility is incorporated. In auto-training, an amplidyne servo controls the aerial and gives continuous rotation from approximately 0 to 35 r.p.m. or 45 to 60 r.p.m. in two stages.

MAJOR UNITS

	AP No.	Description
		Aerial Pedestal Assembly
1.	62670	Pedestal Unit 58F
2.	62690	Reflector Assembly for Aerial Outfit AKN
3.	64173	Waveguide, Size 16, Design 3
4.	64174	Waveguide, Size 16, Design 4
5.	62662	Radome, Design 2
		Aerial Control Group
6.	68106	Cabinet Design 44 Fire Detector
7.	68004	Meter Unit Design 11
8.	68105	Fire Detector Control Unit
9.	68172	Cabinet Design 36 Aerial Control
10.	68075	Aerial Indicator Unit
11.	68174	Relay Unit Design 54
12.	68076	Aerial Control Drawer 41A
13.	68077	Amplifier Amplidyne Control Drawer 46J
14.	68078	Aerial Bearing Transmission Drawer
15.	68724	Cabinet Design 48 Air Cooling
16.	68101	Cooling Drawer Design 2 (for A.C. Ships)
17.	68102	Cooling Drawer Design 3 (for D.C. Ships)
18.	64350	Power Distribution Board, 59G
19.	64352	Power Distribution Board, 59H
		Miscellaneous
20.	68079	AC/DC/DC/DC Motor Generator Amplidyne (A.C. Ships)
21.	68099	DC/DC/DC/DC Motor Generator Amplidyne (D.C. Ships)
22.	68128	Stable Element Drawer
23.	68082	Stable Element
24.	62671	Stable Element Cabinet, Design 175
25.	W8828B	Air Conditioning Unit SE.2

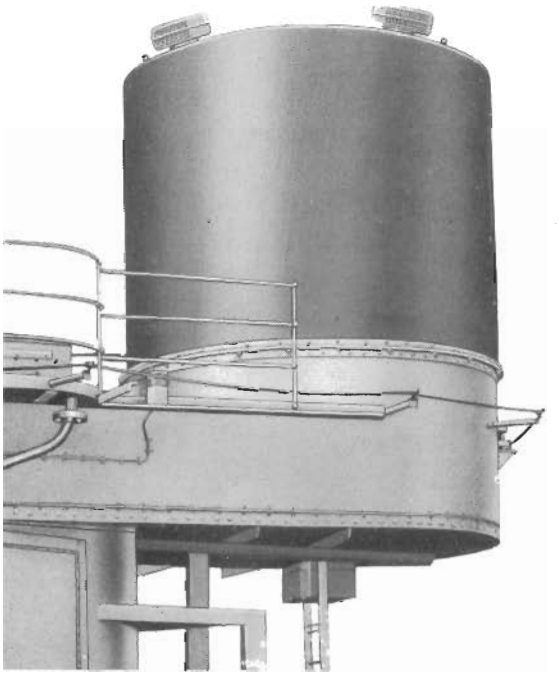
NOTES: Items 7 and 8 are housed in Item 6
Items 10 to 14 are housed in Item 9
Items 16 and 17 are housed in Item 15
Items 22 and 23 are housed in Item 24
Items 22 and 23 are first-ship fitting items

Subsequent installations will incorporate stable element AP 61388 and drawer AP 61394.



AERIAL ASSEMBLY
AERIAL IS ENCLOSED BY A RADOME

AERIAL ASSEMBLY
(RADOME REMOVED)



RADOME FITTED

PHYSICAL DATA

Weight of Platform – located Equipment	: 1380 lb approx.
Weight of Office Equipment	: 1500 lb approx.
Side of Reflector	: 7 ft 6 in by 4 ft 6 in
Aperture of Reflector	: 7 ft 6 in by 4 ft 6 in
Weight of Rotating Equipment	: 180 lb approx.
Size of Radome	: 9 ft by 8 ft 8 in
Weight of Radome	: 400 lb approx.

POWER REQUIREMENTS

(a) 220 V d.c. 7.7 kW for amplidyne set, heat exchanger, split field servo amplifiers, control circuits, and aerial motor fields.

or

(b) 440 V, 60 Hz 3–phase, 7.6 kVA, for amplidyne set heat exchanger motor.

(c) 50 V, 50 or 60 Hz, 1–phase, 0.25 kVA for amplidynes.

(d) 180 V, 400 or 500 Hz, 1–phase, for amplidyne amplifiers and magslips.

(e) 120 V, 333 Hz, 3–phase 0.3 kVA, for stable element AP 68082 (first–ship fitting item): 115 V, 400 Hz, for stable element AP 61388 in subsequent installation.

HANDBOOK

BR 1557(4) A and B

ESTABLISHMENT LIST

E 1109

INSTALLATION SPECIFICATION

B 840 in 3 Parts