PURPOSE:
1.F.F. NK 10 interrogator fitted in conjunction with Type 960

FREQUENCY
1020 kHz Transmission
1050 kHz Reception

WAVELENGTH
29.12 cm Transmission
27.58 cm Reception

POWER OUTPUT
1 kW approximately

PULSE REPETITION FREQUENCY
250 pulses per second (from Master Trigger Unit)

PULSE LENGTH
1 microsecond approx. from transmitter, lengthened to 3.5 microseconds approx. for display.

INTERMEDIATE FREQUENCY
59.5 kHz

RECEIVER BANDWIDTH
8 kHz to 11 kHz at 6 db down.

SWEEP WIDTH
7 degrees at half power points.

POWER REQUIREMENTS

- 115V 50/60 c/s single phase 750 watts
- 220V/230V D.C. or A.C. 210 watts
- 24V D.C. 100 watts
- Extra for additional Video Distribution

Units:
- 115V 50/60 c/s single phase 165 watts
- 220V/230V D.C. or A.C. 65 watts

Heat Dissipation in Office
1 kW approx.

MAJOR UNITS (a) American Items

(i) Receiver-Transmitter RT-154/AF2-1(NAV)
(ii) Coder-Decoder ET-61A/AF2-1(NAV)
(iii) Interrogator Antenna AT-112/1/2/3/4(NAV)
(iv) Test Antenna AT-177(NAV)
(v) Test Set AN/UPX-60(NAV)

Part of AN/UPX-14(NAV)
Part of AN/UPX-14(NAV)
Part of AN/UPX-14(NAV)
Part of AN/UPX-14(NAV)
(b) British Items. The following items of British design are collectively known as Accessory Outfits ISA-

(1) A.P.64001 Cabinet Design 129
(11) A.P.64005 Cabinet Design 1/12
(111) A.P.64027 Video Distribution Unit (1 or 2 in No.)
(111v) A.P.64036 Pulse Lengthening Unit Design 3
(v) A.P.64026 Trig. Servicing, with Runners
(11v) A.P.64025 Trig. Servicing (2 in No.)
(vii) A.P.64026 Mixer Control Unit (all models) (No. as required)
(viii) A.P.64029 Mixer Control Unit Design 2
(112) A.P.64029 Box, with Terminating Resistors

PHYSICAL DATA

Office Equipment: Weight 6 ft Width 22 in. Depth 28 in. Weight 600 lb

ASSOCIATED AERIAL OUTFIT

Aerial Outfit AW6 (part of Type 960), comprising

Interrogator Antennas AT-150/TPA-21/MA
Test Antennas AB-177/UP1IX/A

Note: The Interrogator antenna is fitted as an integral part of the Type 960 aerial AQ(2) and AQ(3).

BRIEF DESCRIPTION

The Mark 10 system of I.F.F. is a pulsed secondary radar in which a signal transmitted from an interrogator in the ship is received by a transponder fitted in the craft under observation. The transponder then sends back an appropriate reply which is detected by the receiving part of the Interrogator and distributed for display. Three modes of operation are available for general, personal and functional identification.

In the Type 960, the interrogator transmitter is triggered by the Type 960 Master Trig. Unit, the aerial is included in the Type 960 aerial assembly and rotates with it and the I.F.F. responses are displayed on the Type 960 display. The Decoder/Decoder selects the required "mode" of I.F.F. by remote control from Mixer Control Units fitted at remote display positions. The main items of equipment are fitted in the Type 960 office.

REMARKS

The main items of Interrogator equipment, although made in the United Kingdom, are of American design and have been supplied under the Mutual Defense Aid Program. The video distribution unit and other items necessary to link the I.F.F. Mk. 10 system with British radars have been designed in the United Kingdom.

HANDBOOK

B.8.217

E LIST

E.1127

INSTALLATION SPECIFICATIONS

BSM ... Type 960
BS27 ... Aerial Outfits AQ and AQ(3)