

TYPE 944(1)

SUMMARY OF DATA

PURPOSE

I.F.F. Mk 10 Interrogator fitted in conjunction with Type 960

FREQUENCY

1030 Mc/s Transmission
1090 Mc/s Reception

WAVELENGTH

29.12 cm Transmission
27.52 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 Mc/s.

RECEIVER BANDWIDTH

8 Mc/s to 11 Mc/s at 6 dB down.

BEAM WIDTH

7 degrees at half power points.

POWER REQUIREMENTS

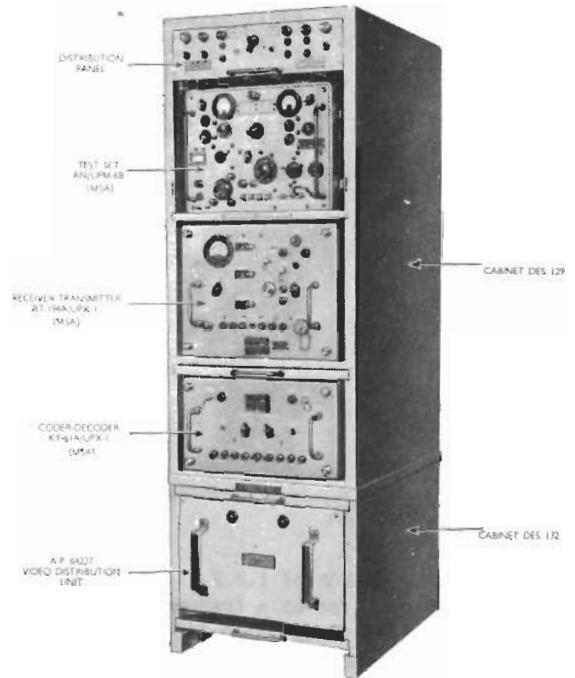
115V 50/60 c/s single phase 750 watts
220/230V D.C. or A.C. 210 watts
24V D.C. 100 watts
Extra for additional Video Distribution Unit:-
115V 50/60 c/s single phase 185 watts
220/230V D.C. or A.C. 45 watts

Heat Dissipation in Office 1 kW approx.

MAJOR UNITS

(a) American Items

- (i) Receiver-Transmitter RT-194A/UPX-1(MSA))
- (ii) Coder-Decoder KY-61A/UPX-1(MSA)) Part of AN/UPX-1A(MSA)
- (iii) Interrogator Antenna AT-352/UPA-22A(MSA)) Part of Aerial Outfit AMB
- (iv) Test Antenna AS-177/UPX(MSA))
- (v) Test Set AN/UPM-6B(MSA))



TYPE 944(1) CABINETS
(GENERAL VIEW)

(b) British Items. The following items of British design are collectively known as Accessory Outfit FFA:-

- (i) A.P.64221 Cabinet Design 129
- (ii) A.P.64224 Cabinet Design 132
- (iii) A.P.64227 Video Distribution Unit (1 or 2 in No.)
- (iv) A.P.64239 Pulse Lengthening Unit Design 2
- (v) A.P.64236 Tray, Servicing, with Runners
- (vi) A.P.64235 Tray, Servicing (2 in No.)
- (vii) A.P.64228 Mixer Control Unit (All modes) (No. as required)
- (viii) A.P.64229 Mixer Control Unit Design 2)
- (ix) A.P.64237 Box, with Terminating Resistors

PHYSICAL DATA

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

ASSOCIATED AERIAL OUTFIT

Aerial Outfit AMB (part of Type 944(1)), comprising

Interrogator Antenna AT-352/UPA-22A(MSA)
Test Antenna AS-177/UPX(MSA)

Note: The interrogator antenna is fitted as an integral part of the Type 960 aerial AQQ(2) and AQQ(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 944(1) the interrogator transmitter is triggered by the Type 960 Master Trigger 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 displays. The Coder-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 Defence Aid Programme. 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.R.2174

E LIST

E.1127

INSTALLATION SPECIFICATIONS

B831 ... Type 944(1)
B827 ... Aerial Outfits AQQ and AMB