# TYPE 944(2) 944(2)

SUMMARY OF DATA

## PURPOSE

I.F.F. Mk. 10 interrogator co-ordinated with Types 277/293.

## BRIEF DESCRIPTION

The Mark 10 I.F.F. System 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.

Type 944(2) comprises (a) I.F.F. Mk.110 co-ordinated with radar Types 277 or 293 or (b) unco-ordinated. In (a) the I.F.F. aerial rotation is co-ordinated with that of the main air-warning radar and the I.F.F. responses are superimposed on the radar video to provide a mixed display. In (b) the I.F.F. interrogator is completely independent, having its own exclusive display arrangements.

## FREQUENCY

1030 MHz Transmission
1090 MHz Reception

## POWER OUTPUT

1 kW approximately

## PULSE REPETITION FREQUENCY

Co-ordinated – 250 pulses per second (from radar trigger unit)

Unco-ordinated – 400 pulses per second.

## PULSE LENGTH

1 $\mu$s approximately from transmitter, lengthened to 4.5 $\mu$s approximately for display

## INTERMEDIATE FREQUENCY

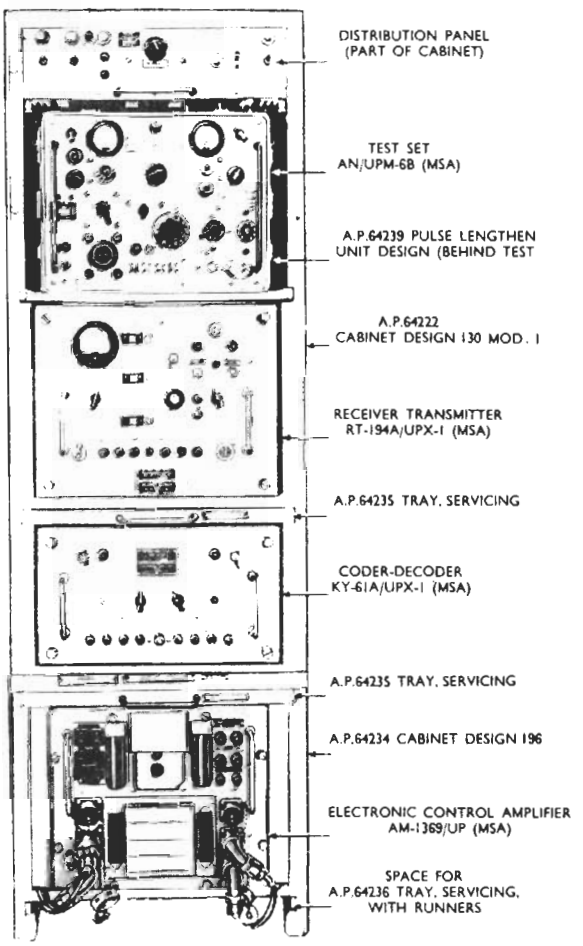
59.5 MHz

## RECEIVER BANDWIDTH

8 MHz to 11 MHz at 6 dB down.

## BEAM WIDTH

14 degrees at half-power points.




INTERROGATOR CABINET EQUIPMENT

## MAJOR UNITS

(a) American Items

(i) Receiver-Transmitter RT-194A/UPX-1 (MSA) } Part of AN/UPX-1A(MSA)
(ii) Coder-Decoder KY-61A/UPX (MSA) }

(iii) Electronic Control Amplifier AM-1369/UP (MSA) } Part of AN/UPA-23A (MSA) Aerial Outfit AMC)
(iv) Antenna AT-353A/UPA-23A (MSA) }
(v) Antenna Pedestal AB-447/UP (MSA) }

(vi) Motor Generator PU-343/U (MSA)

(vii) Test Set AN/UPM-6B (MSA)

(b) British Items

The following items of British design are collectively known as Accessory Outfit FFB:-

| | | | |
|---|---|---|---|
| (i) | AP 64222 | Cabinet Design 130 | |
| (ii) | AP 64234 | Cabinet Design 196 | |
| (iii) | AP 64239 | Pulse Lengthening Unit Design 2 | |
| (iv) | AP 64235 | Tray Servicing (2 in number) | |
| (v) | AP 64236 | Tray Servicing with runners | |
| (vi) | AP 64228 | Mixer Control Unit (all Modes) | No. as required |
| (vii) | AP 64229 | Mixer Unit Design 2 | |
| (viii) | AP 64237 | Box, with Terminating Resistors | |
| (ix) | AP 64238 | Aerial Control Unit 41B (Part of Aerial Outfit AMC) | |

## ASSOCIATED AERIAL OUTFIT

Aerial Outfit AMC (Part of Type 944(2)).

## PHYSICAL DATA

| | Height | Width | Depth | Weight |
|---|---|---|---|---|
| Cabinets | 6 ft | 1 ft 10 in | 2 ft 4 in | 550 lb |
| Aerial Control Unit | 1 ft | 1 ft 1 in | 1 ft | 50 lb |
| Motor Generator | 1 ft 4 in | 10 in | 2 ft 1 in | 155 lb |
| Aerial and Pedestal | - | - | - | 210 lb |

## POWER REQUIREMENTS

| | |
|---|---|
| 115 V 50/60 Hz single phase main supply | 2.5 kVA (9 kVA for 0.6 sec. during start up of aerial system) |
| 115/220/230 V d.c. or a.c. | 210 W for anti-condensation heaters |
| 24 V d.c. | 40 W for mixer units |

In unco-ordinated installations, additional for aerial control unit:

| | |
|---|---|
| 115 V 50/60 Hz single phase | 50 W |
| 24 V d.c. | 50 W |

Heat dissipation in office 1 kW approx.

## 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 items necessary to link the I.F.F. Mk. 10 System with British radars have been designed in the United Kingdom.

## HANDBOOK

BR 1379

## ESTABLISHMENT LIST

E 1127

## INSTALLATION SPECIFICATION

B 833