TYPES 954M(1) AND 954M(2)

954M(1)
954M(2)

SUMMARY OF DATA

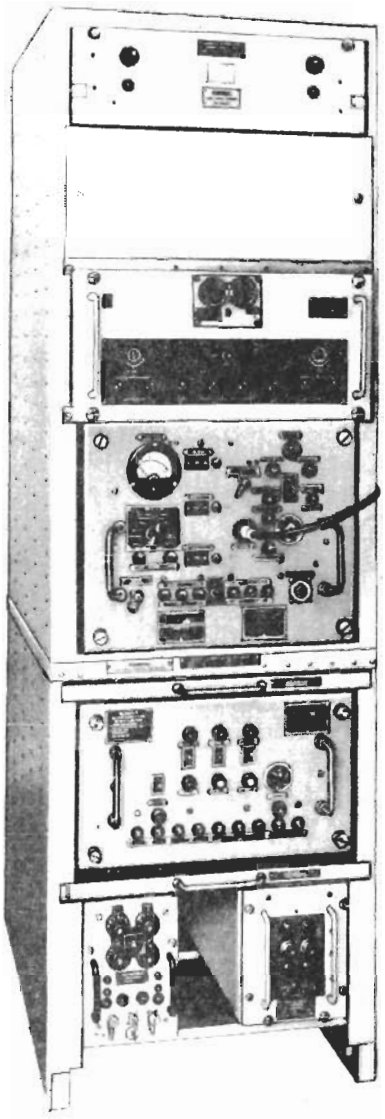
PURPOSE

I.F.F. Mark 10 Transponder with Selective Identification Feature (S.I.F.).

BRIEF DESCRIPTION

Types 954M(1) and (2) are shipborne transponders for replying to I.F.F. Mark 10 interrogators. Both sets employ the same items of transponder equipment, but Type 954M(2) includes Radar Test Set AN/UPM-6B (MSA) in addition and is fitted in cases where it is not possible to utilise the test set provided with I.F.F. Mark 10 interrogators Types 944M(1) or 944M(2). In the case of Type 954M(1) two items of S.I.F. equipment belonging to the interrogator are fitted in the cabinet for convenience.

The interrogations are received as pulse-pairs on a frequency of 1030 MHz. These interrogations are converted to video signals in the receiver-transmitter from whence they are passed to Coder-Decoder KY-88/UPX-5 which generates a single pulse for each correct interrogation. These pulses are fed to the S.I.F. Coder, Transponder which generates a coded pulse train for each pulse fed in. The coded pulse trains are fed to the modulator of the transmitter, the output of which is fed to the antenna and radiated on 1090 MHz as replies the interrogations. The equipment may be switched to basic operation if required, when the S.I.F. coding circuits will be by-passed and the antenna will radiate one pulse for each pulse-pair received.



TYPE 954M(1)

FREQUENCY

1030 MHz Reception 1090 MHz Transmission.

POWER OUTPUT

300 W (peak) approximately.

PULSE REPETITION FREQUENCY

Up to 4000 pulses per second (depending on interrogation rate).

PULSE DURATION

0.5 μs (the transponder normally transmits a train of pulse.

INTERMEDIATE FREQUENCY

59.5 MHz

RECEIVER BANDWIDTH

8 MHz to 11 MHz at 6 dB down.

AERIAL BEAM WIDTH

Omni-directional.

HEAT DISSIPATION IN OFFICE

750 W approximately

ASSOCIATED AERIAL OUTFIT

AMA, comprising Antenna AS-177/UPX (MSA).

MAJOR UNITS

(a) TYPE 954M(1)

(i)	Receiver-Transmitter RT-269/UPX-5 (MSA)	Part of Radar Identification Set AN/UPX-5 (MSA)
(ii)	Coder-Decoder KY-88/UPX-5 (MSA) Mod. 1	
(iii)	Radar Set control C-1076/UPX-5 (MSA)	
(iv)	5895-AP 164237 Cabinet, Transponder (Upper)	Accessory Outfit FFC
(v)	AP 64225 Cabinet Design 133 (Mod. 1)	
(vi)	5895-AP 164337 Coder, Transponder	S.I.F. Outfit SNB

NOTE: 1 Two items of Type 944M equipment, viz., Decoder, Passive and Decoder, Distress, are fitted in the Type 954M(1) transponder cabinets.

(b) TYPE 954M(2)

As in (a) above with the addition of Radar Test Set AN/UPM-6B (MSA) and with AP 64223 Cabinet Design 131 (Mod. 1) instead of 5895-AP 164237 Cabinet.

NOTE: 2 The two items of Type 944M equipment referred to in Note 1 are not fitted in the Type 954M(2) cabinets.

PHYSICAL DATA

	Height	Width	Depth	Weight
Cabinets with equipment	6 ft	22 in	28 in	600 lb approximately

POWER REQUIREMENTS

	954M(1)	954M(2)
115 V, 50/60 Hz main supply	750 VA	600 VA
115 or 220 V anti-condensation heater supply	210 W	120 W

REMARKS

The main items of transponder equipment are of American design, although manufactured in the United Kingdom under the Mutual Security Aid (M.S.A.) agreement. The cabinets and S.I.F. coder are of British design and manufacture.

HANDBOOK

BR 2329

ESTABLISHMENT LISTS

Type 954M(1) and (2)	E1128
Outfit AMA	E1171
Outfit FFC	E1172
Outfit SNB	E1307
Test Set AN/UPM-6B (MSA)	AE25

INSTALLATION SPECIFICATION

B832