PURPOSE


BRIEF DESCRIPTION

Types 954W(1) and (2) are ultrasonic transponders for replying to I.F.F. Mark 10 interrogators. Both units employ the same items of transponder 40GU(1)/40GU(2), but Type 954W(1) includes Radar Test Set AS/UPM-46 (NA)

In addition and is fitted in cases where it is not possible to utilise the test set provided with I.F.F. Mark 10 Interrogator. Types 954W(1) or 954W(2). In the case of Type 954W(2) 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-transponder where they are passed to Counter-Decoder MT-29/294-4 which generates a 1 kHz, 50% duty cycle square wave output. The pulse-pair feeds, via a switch to the S.I.F. equipment. The transponder when it receives a coded pulse train for each pulse-pair it feeds the coded pulse trains are fed to the modulation of the transponder, 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 I.F.F. coupling means to basic operation if required, when the I.F.F. coupling means the transponder will fire and the antenna will radiate one pulse for each pulse-pair received.

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 pulses.

INTERMEDIATE FREQUENCY

59.5 kHz

RECEIVER BANDWIDTH

8 MHz to 11 MHz at 6 dB down.

AERIAL BEAM WIDTH

Omnidirectional.

HEAT DISSIPATION IN OFFICE

750 W approximately

ASSOCIATED AERIAL OUTFIT

ANA, comprising Antenna AS-17SF/PX (10kW).

TYPE 954W(1)

RESTRICTED
MAJOR UNITS

[*] TYPE 95W(1)

- Receiver-Transmitter RT-269/UPX-5 (M5A)
- Coder-Decoder KY-qJ/3/A-20 (M5A) Mod. 1
- Radar Set control C-1376/UPX-5 (M5A)
- S965-AP 16433F Cabinet, Transponder (Upper)
- AP 6421G Cabinet Design 133 (Mod. 1)
- S965-AP 16433F Coder, Transponder

Part of Radar Identification Set AN/UPX-5 (M5A)

Accessory Outfit FNC

S.I.F. Outfit SN8

NOTE: 1 Two items of Type 95W equipment, viz., decoder, Passive and decoder, distress, are fitted in two Type 95W(1) Transponder cabinets.

NOTE: 2 Type 95W(2) as in (1) above with the addition of Radar Test Set AN/UPX-66 (M5A) and with AP 64223 Cabinet Design 133 (Mod. 1) instead of S965-AP 16433F Cabinet.

NOTE: 3 The two items of Type 95W equipment referred to in Note 1 are not fitted in the Type 95W(2) cabinets.

PHYSICAL DATA

<table>
<thead>
<tr>
<th>Height</th>
<th>Width</th>
<th>Depth</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cabinets with equipment</td>
<td>6 ft</td>
<td>22 in</td>
<td>28 in</td>
</tr>
</tbody>
</table>

POWER REQUIREMENTS

95W(1) 95W(2)

115 V, 50/60 Hz main supply 700 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

GR 1239

ESTABLISHMENT LISTS

Type 95W(1) and (2) 1126
Outfit ANA 1173
Outfit FCC 1172
Outfit SN8 1173
Test Set AN/UPX-66 (M5A) 426

INSTALLATION SPECIFICATION

W12