

**RECEIVER REPLY (TRANSPONDER) OUTFIT RRA AND RRA(2)**

**RRA**

SUMMARY OF DATA

**PURPOSE**

Receiver system fitted in conjunction with Radar Types 978 or 1006 for processing replies from X-band transponders fitted in helicopters.

**BRIEF DESCRIPTION**

The radar transmissions from Types 978 or 1006 impinge on the X-band transponder aerial in the helicopter, and for each pulse received the transponder transmits a reply on 9310 MHz. This reply consists of a series of 0.5  $\mu$ s pulses, the number of pulses in each train depending on pre-flight setting of a switch in the helicopter. In the ship the replies are extracted from the radar waveguide by a 3-port circulator (978) or Tuned Tee (1006), and passed to the receiver system where they are converted to video for display. Two sets of video outputs are provided, one of which contains all the pulses of the transponder reply (can be pulse coded) whilst the other supplies only the first pulse of each reply train (uncoded). At the display the transponder signals may be mixed with the radar video or displayed separately, selection being controlled by a Mixer, Electronic Marker (part of Marker Outfit MDA-MHD) or by Mixer, Video, Signal for displays not included in a Marker Outfit distribution.

**FREQUENCY**

9310 MHz.

**INTERMEDIATE FREQUENCY**

30 MHz

**BANDWIDTH**

15 MHz.

**MAJOR UNITS**

RRA

NSN

5895-99-972-3303  
5895-99-972-3314  
5895-99-972-3305  
  
5895-99-972-3753

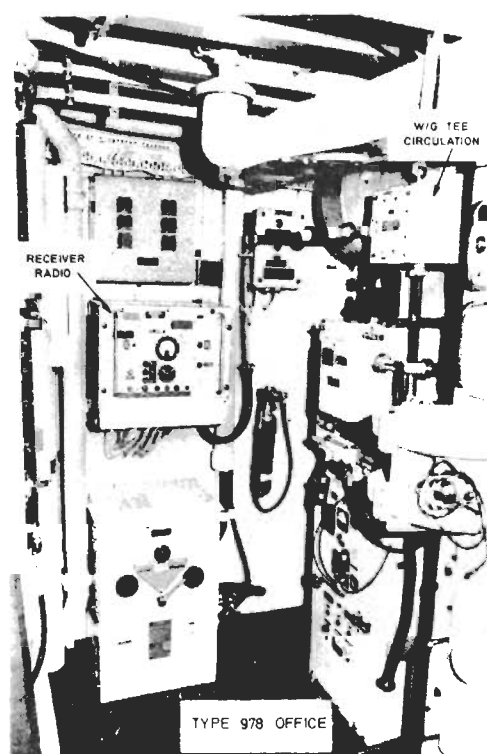
Description

Waveguide, Tee, Circulation  
Receiver, Radio  
Mixer, Video, Signal (fitted at display positions not having Mixer, Electronic Marker)  
Delay Unit (fitted in radar video and sync lines to compensate for transponder delays).

RRA(2)

5895-99-972-3303  
5895-99-522-8287  
5895-99-522-9732  
  
5895-99-522-9733

Waveguide, Tee, Circulation  
Receiver, Radio  
Mixer, Video, Signal (fitted at display positions not having Mixer, Electronic Marker)  
Delay Unit (fitted in radar video and sync lines to compensate for transponder delays).



BR 333(1)  
Original

## RESTRICTED

### PHYSICAL DATA

	Height	Width	Depth	Weight
Circulator	24 cm (9.025 in.)	23 cm (9.125 in.)	18 cm (7.125 in.)	5.9 Kg (13 lb)
Receiver	44 cm (17.3125 in.)	38 cm (15.125 in.)	20 cm (8.0025 in.)	22.7 Kg (50 lb)

### POWER REQUIREMENTS

115 V, 50/60 Hz, 50 VA at 0.8 power factor, Main supply  
115 V (at approximately 15 W), Anti-condensation supply.

### REMARKS

RRA(2) has been introduced to make the outfit compatible with both cables UR54 and UR114 which may be used in installation. Existing installations do not need to be modified until any major unit is changed. The new unit will be supplied with the new plugs to be fitted to the existing cables. Under no circumstances should the old plugs be mated with the new sockets. It is not necessary to change all units at once.

### HANDBOOK

BR 2474

### ESTABLISHMENT LIST

E 1467

### INSTALLATION SPECIFICATION

B 927/R1