RECEIVER REPLY (TRANSPONDER) OUTFIT RRB — RRB

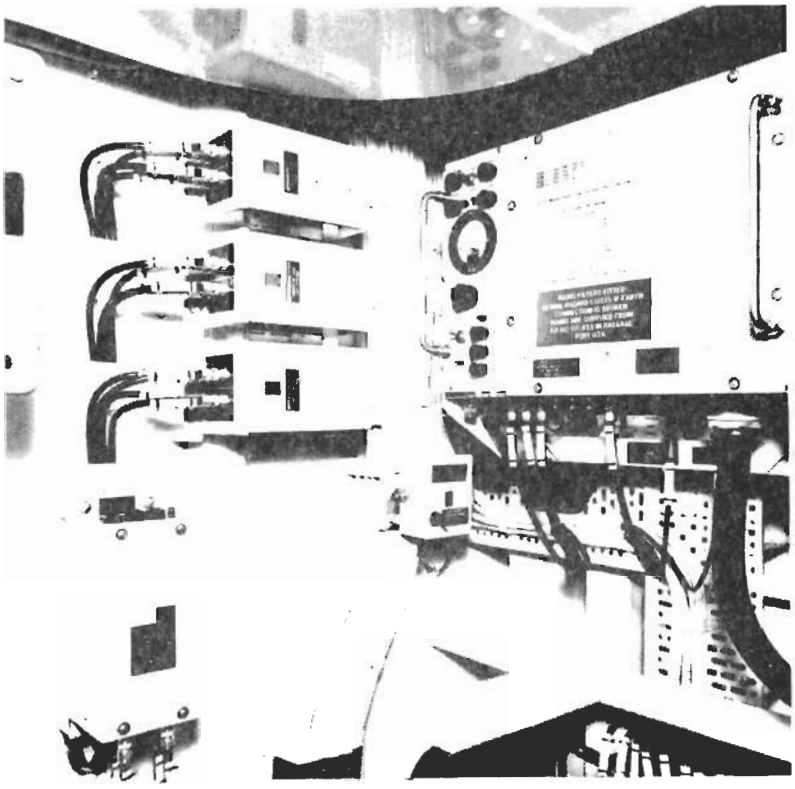
SUMMARY OF DATA

PURPOSE

A receiver system fitted in conjunction with Radar Type 1006 for identification and reliable tracking of X-band transponder fitted helicopters.

BRIEF DESCRIPTION

The radar transmissions from Type 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 may be selected by the pilot to be a single 0.5 μs pulse or a series of 0.5 μs pulses (nominal); the number of pulses in each train will depend upon pre-flight setting in older equipment or are pilot selected in newer equipments. In the ship, the replies are extracted from the radar waveguide by a tuned waveguide filter (Junction Box Tuned Tee) and passed to the receiver system where they are converted to video for display. The receiver produces up to six coded outputs which contain all the pulses of the transponder reply. An output is passed to a Video Code Suppression Unit (VCSU) which is selected to give either a coded or uncoded quantised output (ie the output is no longer raw video; the pulse or pulses are of constant amplitude provided the input video signal is above a preset threshold). If an uncoded VCSU output is selected, the first framing pulse of the code train is used to give single pulse quantised output arranged to be coincident with the radar return. At the display, the transponder systems may be mixed with the radar video or displayed separately, selection being controlled by use of either the Auxiliary Video Inputs at the display or by a Mixer Electronic Marker (part of Outfits MDA-MDL).



FREQUENCY

9310 MHz.

INTERMEDIATE FREQUENCY

30 MHz.

MAJOR UNITS

NSN	Description
5865-99-531-2778	Receiver Radio
5865-99-531-2777	Video Code Suppression Unit
6110-99-531-2617	Distribution Box
5985-99-531-8473	Junction Box Tuned Tee which is superseding 5985-99-523-7191 Tuned Tee Waveguide Assembly
5895-99-527-6913	Delay Line Assembly
5985-99-422-0881	Waveguide, Flexible, Twistable.

PHYSICAL DATA

	Height	Width	Depth	Weight
RRB Receiver	45.5 cm (17.9 in.)	40.5 cm (15.9 in.)	20 cm (7.9 in.)	13.6 Kg (30 lb)
VCS U	26 cm (10.2 in.)	11.5 cm (4.5 in.)	10 cm (3.9 in.)	3.0 Kg (6.6 lb)

POWER REQUIREMENT

RRB(1) Receiver: 115 V 60 Hz 1-phase 115 VA; ACH supply 115 V 60 Hz 1-phase 30 VA
VCSU 115 V 60 Hz 1-phase 5 VA

REMARKS

The RRB(1) Outfit is designed as a "pipeline" replacement for Outfits RRA(1) and RRA(2).

HANDBOOK

BR 8549

ESTABLISHMENT LIST

S1830

INSTALLATION SPECIFICATION

B1366