

RESTRICTED

TEACHER OUTFIT HRG

SUMMARY OF DATA

PURPOSE

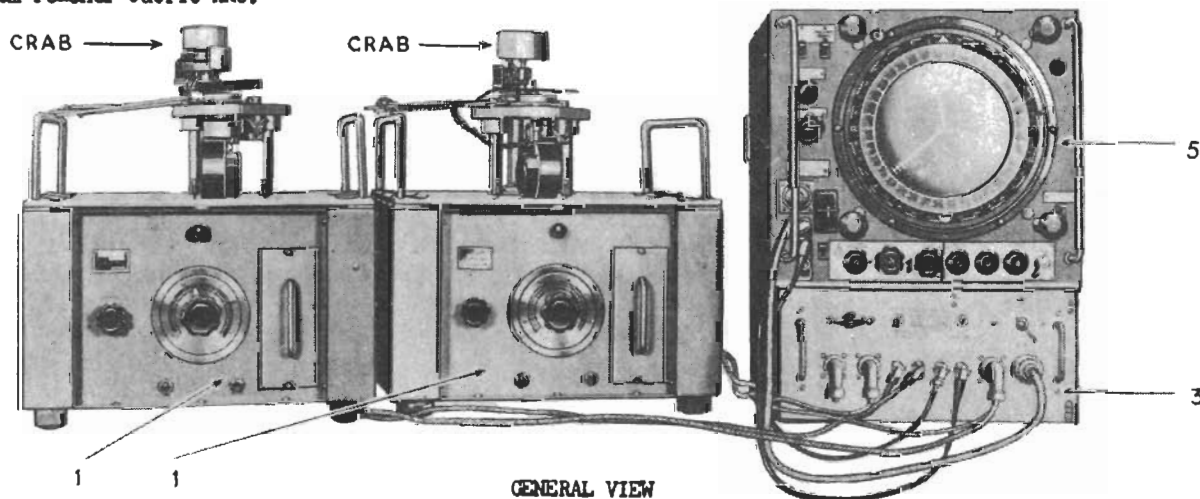
A teacher designed to simulate on Radar Displays two aircraft echoes each able to be controlled independently in range and bearing, to provide practice in interception and telling from a P.P.I. Types 960, 281 and 79 can be simulated. The equipment is fitted in Aircraft Carriers and certain shore establishments.

PULSE REPETITION FREQUENCY	500 pulses per second.
RANGE	50 miles.
BEAM-WIDTH	10° to 60° (variable as required).
ECHO SPEED	200 to 400 knots (variable as required).
AERIAL SIMULATOR ROTATION SPEED	4 revolutions per minute
POWER REQUIREMENTS AND CONSUMPTION	180 volts 500 c/s - 325 watts 230 volts 50 c/s - 200 watts 24 volts D.C. - 24 watts
	To be taken from existing supplies.

MAJOR UNITS

	Patt. No.	Description	Physical Data			
			Height	Width	Depth	Weight
1	65176	Signal Generator, Outfit HRG (2 in No.)	2' 3"	1' 8"	1' 8"	100 lbs
2	65863	Tray, sprung, for Patt. 65176 Signal Generator (2 in No.)	-	-	-	-
3	65174	Control Unit, Outfit HRG	11"	1' 8½"	1' 7"	100 lbs
4	65173	Framework, steel, for Control Unit, Outfit HRG	-	-	-	-
5	58368	Display Unit, Design 15	1' 4"	1' 6½"	2' 0"	110 lbs
6	W8207	Tray, mounting for Display Unit, Design 15	-	-	-	-

Items 5 and 6 are normally only provided when no other suitable Display is already fitted within 70 feet cable run from Teacher Outfit HRG.



BRIEF DESCRIPTION

The outfit provides two independently moving echoes simulating aircraft. Each echo can be made to follow any course within the range limits of five and fifty miles at any speed between two hundred and four hundred knots. No facilities are provided for the simulation of surface vessels, I.F.F. responses, echo fluctuations or the effects of jamming. One radar display only can be fed by the outfit.

The aircraft producing the echoes are represented by a three-wheeled device called a 'crab'. This crab moves across a map on the top of the Signal Generator, in a miniature reproduction of an aircraft's movements. The course and speed of this crab may be readily controlled. The scale of the map is 1/10 inch = 1 nautical mile so that the full range of the crab is 50 miles. The amplitude of the echoes is not automatically varied with range and therefore fading can only be introduced by manual variation of the gain control on the Signal Generators.

Teacher Outfit HRC functions on its own without any assistance from a parent radar set.

The whole outfit is an adaption for naval use of the Air Ministry Trainer Type 47.

REMARKS

Teacher Outfit HRC is mechanically unsuitable for use at sea, as it is essential that when operating it be kept on a level plane. When installed in a ship it is intended for use in harbour only.

HANDBOOK

B.R. 1821

ESTABLISHMENT LIST

E.931

INSTALLATION SPECIFICATION

Not issued. A.F.O. 2051/49 gives installation instructions.