PURPOSE
A teacher designed to stimulate an Radar Displays two aircraft echoes each able to be controlled independently in range and bearing, to provide practice in interception and tailing from a P.V.1. types 960, 201 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 R.C. = 35 watts
To be taken from existing supplies.

MAJOR UNITS

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Physical Data</th>
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</thead>
<tbody>
<tr>
<td>1 65176</td>
<td>Signal Generator, Outfit HRG (2 in No.)</td>
<td>Height Width Depth Weight</td>
</tr>
<tr>
<td>2 65163</td>
<td>Tray, springs, for Part 65176 Signal Generator</td>
<td>- - -</td>
</tr>
<tr>
<td>3 65174</td>
<td>Control Unit, Outfit HRG</td>
<td>11&quot; 11/4&quot; 11/4&quot; 10 lbs</td>
</tr>
<tr>
<td>4 65173</td>
<td>Framework, steel, for Control Unit, Outfit HRG</td>
<td>- - -</td>
</tr>
<tr>
<td>5 59368</td>
<td>Display Unit, Design 15</td>
<td>11 1/4&quot; 11/4&quot; 2 1/4&quot; 110 lbs</td>
</tr>
<tr>
<td>6 56207</td>
<td>Tray, mounting for Display Unit, Design 15</td>
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</tbody>
</table>

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, electromagnetic 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 radio-controlled. The scale of the map is 1/100th 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 Generator.

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

The whole outfit is an adoption for novel use of the Air Ministry Trainer Type 47.

REMARKS

Teacher Outfit NBS 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 restricted for use in harbour only.

HANDBOOK

2.N. 1221

2.531

Not issued. R/O. 305/H gives Installation Instructions.

ESTABLISHMENT LIST

INSTALLATION SPECIFICATION