TYPE 974
SUMMARY OF DATA

PURPOSE
A high definition warning surface radar set used principally for piloting and navigation.

FREQUENCY
9360 - 9605 kHz.

WAVELENGTH
3.2 cm.

POWER OUTPUT
7 kW (peak)

PULSE REPETITION FREQUENCY
1000 pulses per second.

PULSE LENGTH
0.16 microsecond on 1 and 3 mile ranges.
0.26 microsecond on 10 and 25 mile ranges.

RECEIVER BANDWIDTH
10 kHz flat to within 3 db.

BEAN WIDTH
Vertical 23° Horizontal 1.6°

AERIAL ROTATION SPEED
24 rpm, per minute.

POWER REQUIREMENTS AND CONSUMPTION
A.C. Shapes
480 volts 60 c/s 3 phase 1 kW.
1.5 amp per phase (running)
5 amp per phase (starting)

D.C. Shapes
110 or 220 volts D.C. 1 kW.

HEAT DISSIPATION
Receiver Unit 260 watts
Display Unit 105 watts
Power Pack for Remote Display 100 watts

AERIAL OUTFIT AKL

Major Units and Physical Data

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>A.C. Ships</th>
<th>110V D.C. Ships</th>
<th>220V D.C. Ships</th>
<th>Physical Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>100002</td>
<td>R.F. Head</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>Pivoted in Aerial Outfit AKL</td>
</tr>
<tr>
<td>100005</td>
<td>Receiver Unit D.C.</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2.1 10° 17° 104°</td>
</tr>
<tr>
<td>100006A</td>
<td>Display Unit 12 ft. D.C.</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>17° 68° 12° 17° 104° 165°</td>
</tr>
<tr>
<td>100007</td>
<td>Power Supply Unit 160V 3ph A.C.</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2.1 10° 24° 21° 17° 165°</td>
</tr>
<tr>
<td>100008</td>
<td>Power Supply Unit 220V D.C.</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2.1 10° 21° 17° 15° 15°</td>
</tr>
<tr>
<td>100009</td>
<td>Airfuel Radiomation Unit</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>17° 6° 17° 6° 6°</td>
</tr>
<tr>
<td>100014</td>
<td>Receiver Unit A.C.</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2.1 10° 17° 104° 165°</td>
</tr>
<tr>
<td>100014A</td>
<td>Display Unit 12 ft. A.C.</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2.1 10° 17° 104° 165°</td>
</tr>
<tr>
<td>100025</td>
<td>Power Supply Unit 110V D.C.</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>17° 6° 17° 6°</td>
</tr>
<tr>
<td>100012</td>
<td>Power Pack for Remote Display</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>11° 10° 17° 11°</td>
</tr>
</tbody>
</table>

Aerial Outfit AKL

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>A.C. Ships</th>
<th>110V D.C. Ships</th>
<th>220V D.C. Ships</th>
<th>Physical Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>100000</td>
<td>Reflector Unit</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3° 20° 8° 2° 2°</td>
</tr>
<tr>
<td>100001</td>
<td>Pedestal Unit D.C.</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3° 20° 8° 2° 2°</td>
</tr>
<tr>
<td>100013</td>
<td>Pedestal Unit A.C.</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3° 20° 8° 2° 2°</td>
</tr>
<tr>
<td>100003</td>
<td>Motor Smoother Drive 110V A.C.</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3° 20° 8° 2° 2°</td>
</tr>
<tr>
<td>100004</td>
<td>Motor Smoother Drive 220V D.C.</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3° 20° 8° 2° 2°</td>
</tr>
<tr>
<td>100026A</td>
<td>Motor Smoother Drive 110V D.C.</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3° 20° 8° 2° 2°</td>
</tr>
</tbody>
</table>
ASSOCIATED AERIAL OUTFIT

Aerial Outfit AU consisting of Reflector Unit, Pedestal Unit and Motor-Scanner Drive. It houses the R.F. head.

ASSOCIATED POWER SUPPLY OUTFIT

The necessary power supplies (1000/1000 c/s A.C.) are derived from power supply units included as part of Type 974 and has not been allowed a separate designation.

BRIEF DESCRIPTION

Type 974 is a radar set which gives high definition of surface targets up to a maximum range of 25 miles. It is capable of ranging down to 20 yards with a range discrimination of 25 yards on shorter ranges. The range accuracy is of the order of 2% of the indicated range. Control of the equipment is effective from the main display unit, only one remote display unit (Display Outfit 20) one at present be fitted.

The Operations Room contains the Receiver Unit, Main Display Unit and Azimuth Stabiliser Unit. The R.F. head which comprises the Indicator, Transmitter and R.F. section of the Receiver is housed in the Aerial Outfit AU.

REMARKS

Type 974 is the Commercial Decca Marine Radar Type 12, modified for service use.

HANDBOOK

E.1031

INSTALLATION SPECIFICATION

B.A. 1943

£ 728

MAIN DISPLAY UNIT

RECEIVER UNIT