

# RESTRICTED

BR 333(1)  
Original

TYPE 974(1)(2)

974

## SUMMARY OF DATA

### PURPOSE

A high definition warning surface radar set used principally for pilotage and navigation. Type 974(1) has a 12 in Display. Type 974(2) a 5 in Display.

### 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 JU) can 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 Modulator, Transmitter and R.F. section of the Receiver is housed in the Aerial Outfit AKL.

### FREQUENCY

9345 - 9405 MHz

### WAVELENGTH

3.2 cm

### POWER OUTPUT

7 kW (peak)

### PULSE REPETITION FREQUENCY

1000 p/s.

### PULSE LENGTH

0.14  $\mu$ s on 1 and 3 mile ranges.  
0.26  $\mu$ s on 10 and 25 mile ranges.

### RECEIVER BANDWIDTH

10 MHz flat to within 3 dBs.

### BEAM WIDTH

Vertical  $23^{\circ}$  Horizontal  $1.6^{\circ}$

### AERIAL ROTATION SPEED

24 revs per minute.

### POWER REQUIREMENTS AND CONSUMPTION

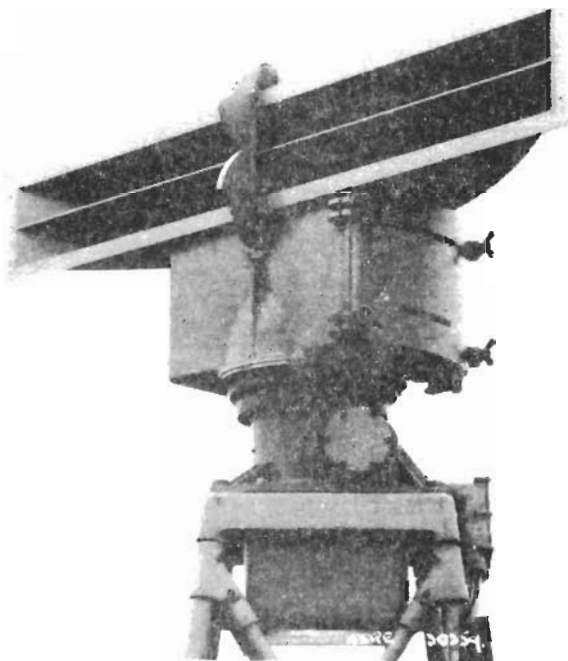
A.C. Ships 440 volts 60 Hz 4 phase 1 kW  
1.9 amp per phase (running)  
5 amp per phase (starting)

D.C. Ships 110 or 220 volts d.c. 1 kW.

### HEAT DISSIPATION

Receiver Unit 240 watts  
Display Unit 105 watts  
Power Pack for Remote Display 100 watts

Power Supply Unit 370 watts  
R.F. Head 50 watts  
Motor Scanner Drive 260 watts



AERIAL OUTFIT AKL

**MAJOR UNITS AND PHYSICAL DATA**

AP No.	Description	No. off			Physical Data			
		A.C. Ships	110 V D.C. Ships	220 V D.C. Ships	Height	Width	Depth	Weight
100002	R.F. Head	1	1	1	Fitted	in Aerial Outfit AKL		
100005	Receiver-Unit D.C.	-	1	1	2' 10"	1' 7"	10"	85 lb
100006A	Display Unit 12 in D.C.	-	1	1	1' 6 1/2"	1' 4 1/2"	2' 1 1/2"	165 lb
100007	Power Supply Unit 440 V 3 ph A.C.	1	-	-	1' 7"	2' 8"	1' 7"	264 lb
100008	Power Supply Unit 220 V D.C.	-	-	1	1' 7"	2' 8"	1' 5"	217 lb
100009	Azimuth Stabilisation Unit	1	1	1	7 1/2"	1' 3"	6"	20 lb
100014	Receiver-Unit A.C.	1	-	-	2' 10"	1' 7"	10 1/2"	85 lb
100015A	Display Unit 12 in A.C.	1	-	-	1' 6 1/2"	1' 4 1/2"	2' 1 1/2"	165 lb
100026	Power Supply Unit 110 V D.C.	-	1	-				
100012	Power Pack for Remote Display	1	1	1	1' 10"	1' 0"	11 1/2"	50 lb
100309	Control Unit							
Aerial Outfit AKL								
100000	Reflector Unit	1	1	1				63 lb
100001	Pedestal Unit D.C.	-	1	1				78 lb
100013	Pedestal Unit A.C.	1	-	-	3' 2"	4' 2"	16 1/2"	78 lb
100003	Motor Scanner Drive 440 V A.C. 50 Hz	1	-	-				33 lb
100004	Motor Scanner Drive 220 V D.C.	-	-	1				33 lb
100268	Motor Scanner Drive 110 V D.C.	-	1	-				33 lb

**ASSOCIATED AERIAL OUTFIT**

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

**ASSOCIATED POWER SUPPLY OUTFIT**

The necessary power supplies (80 V 1000 Hz A.C.) are derived from power supply units included as part of Type 974 and has not been allowed a separate designation.

**REMARKS**

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

**HANDBOOK**

**ESTABLISHMENT LIST**

**INSTALLATION SPECIFICATION**

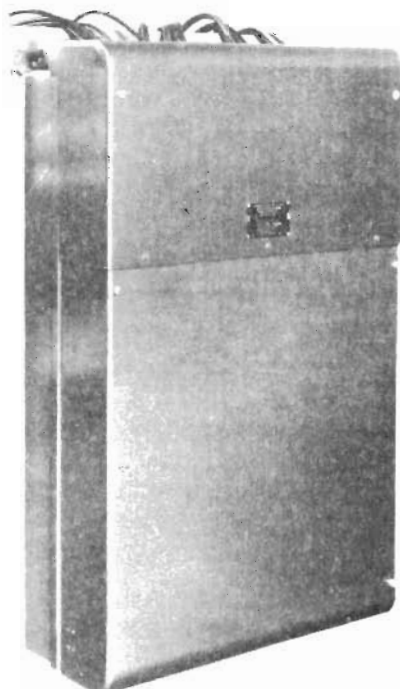
BR 1983

E 1031

B 728



MAIN DISPLAY UNIT



RECEIVER UNIT