

H. 374A

Admiralty Signal Establishment,  
c/o G.P.O. London.

S E C R E T.

May, 1942

HANDBOOK FOR TYPE MKS. I & II.  
AND NOTES ON MK. III.

1. INTRODUCTION.

Type 271 R.D.F. set is designed to operate on surface targets and is not intended as a warning set for use against aircraft.

The wavelength is 10 cms. (3000 Mc./sec.) and the transmitter power about 5 kW. The beam radiated from the aerial system is much sharper than that employed in longer wave sets. This means that searching for targets must be carried out methodically and facilitates operation in narrow waters and differentiates between targets at similar ranges on not widely different bearings.

There are two range scales; 5000 yards, and 25,000 yards, (These may be altered in the near future, in which case the calibration technique described on page 20 will be slightly different). (See Page 23).

The short range scale will give greater range accuracy: the sharper nature of the echoes on the long range scale makes their detection much easier when their amplitude is little more than noise level.

If accurate ranging is required special additional ranging equipment is necessary. The Type 271 indicator even when most carefully set up must not be expected to give an accuracy greater than  $\pm$  200 yards at ranges below 1,000 yards and  $\pm$  500 yards at ranges greater than 10,000 yards.

# TYPE 271.

INTER UNIT CONNECTIONS

## INTER-UNIT CONNECTIONS - PLUGS & LEADS

### SOCKET REFERENCE

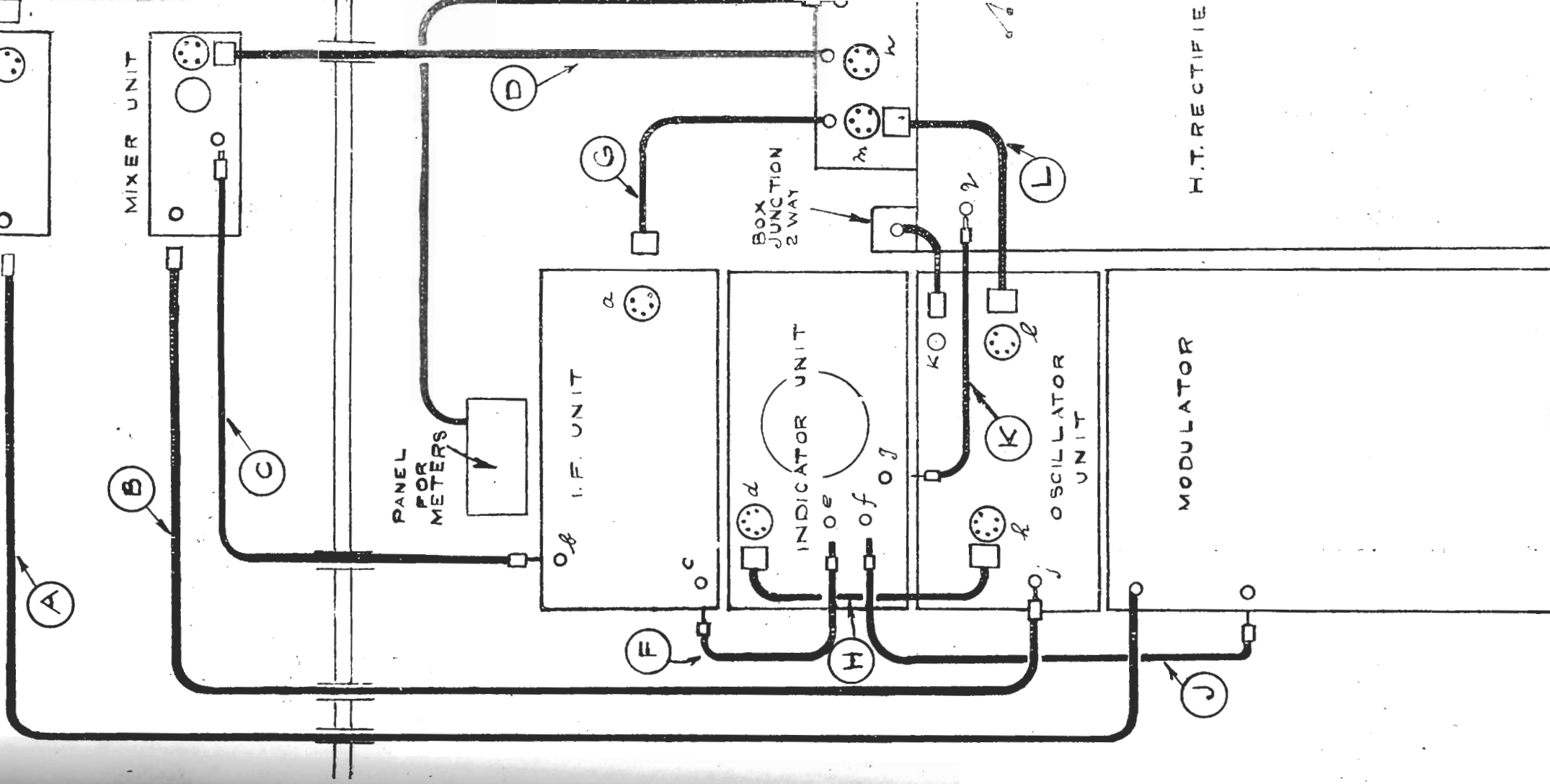
a POWER INPUT  
 b SIGNAL INPUT  
 c SIGNAL OUTPUT  
 d POWER SUPPLIES  
 e TO AMPLIFIER  
 f SYNC. INPUT  
 g MONITOR INPUT  
 h SUPPLY TO INDICATOR  
 j OSCILLATOR OUTPUT  
 k 180V 500~  
 l POWER SUPPLIES  
 m POWER INPUT  
 n W/M SUPPLY  
 p CRYSTAL TEST  
 q MONITOR

BOX JUNCTION  
6 WAY.

### PLUGS & LEADS

REF	N° STAMPED ON LEAD	CABLE	TERMINATIONS
A	1	ASE 48C	HT. SOCKET
B	2	9MM.KLS.	LOW CAPACITY PLUG & PYE CONNECTOR
C	3	9MM.KLS.	PYE SOCKETS
D	4	A.P. 7698	AP 3947 SOCKET 5 WAY
E	4	A.P. 7698	AP 3947 SOCKET 5 WAY
F	5	AS. 42.	PYE CONNECTORS
G	6	AP 9086	AP 3947 SOCKET 5 WAY
H	7	SCREENED FLEX CONDUIT.	SOCKETS, 6 WAY MAP W. 160
J	8	AS 42.	PYE CONNECTORS.
K	9	AS. 42.	AP 651. PLUG. PO GAUGE A & PYE SOCKET
L	10	AP 7698	AP 4674 & 3947 SOCKETS, 5 WAY

TRANSMITTER



MIXER UNIT

I.F. UNIT

INDICATOR UNIT

OSCILLATOR UNIT

MODULATOR

H.T. RECTIFIER

A

B

C

D

E

F

G

H

I

J

K

L

PANEL FOR METERS

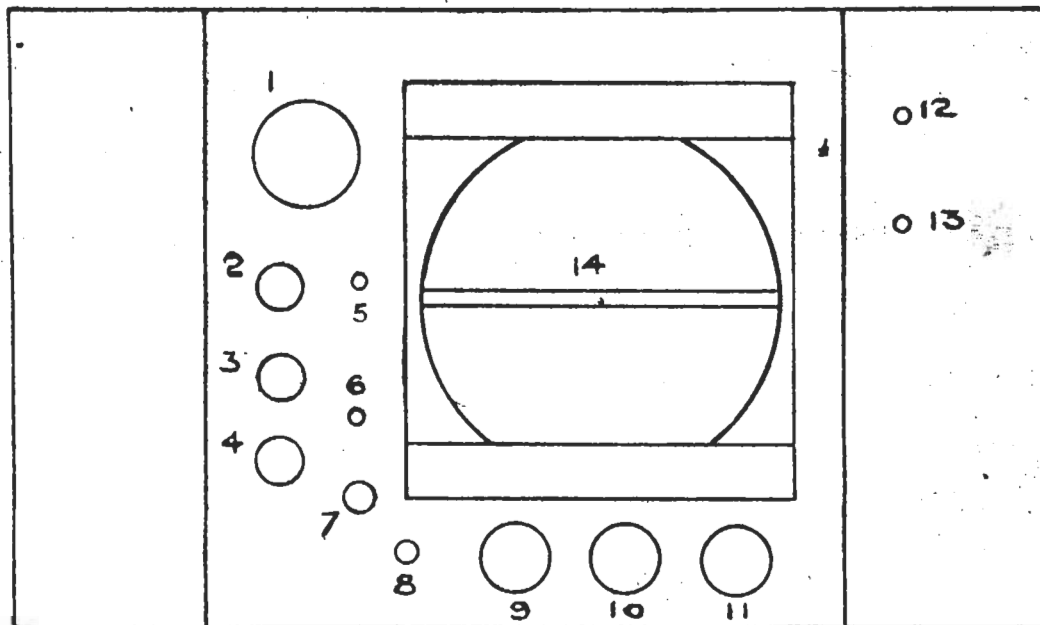
BOX JUNCTION 2 WAY

# TYPE 271.

## INDICATOR UNIT



INDICATOR  
LAY OUT.



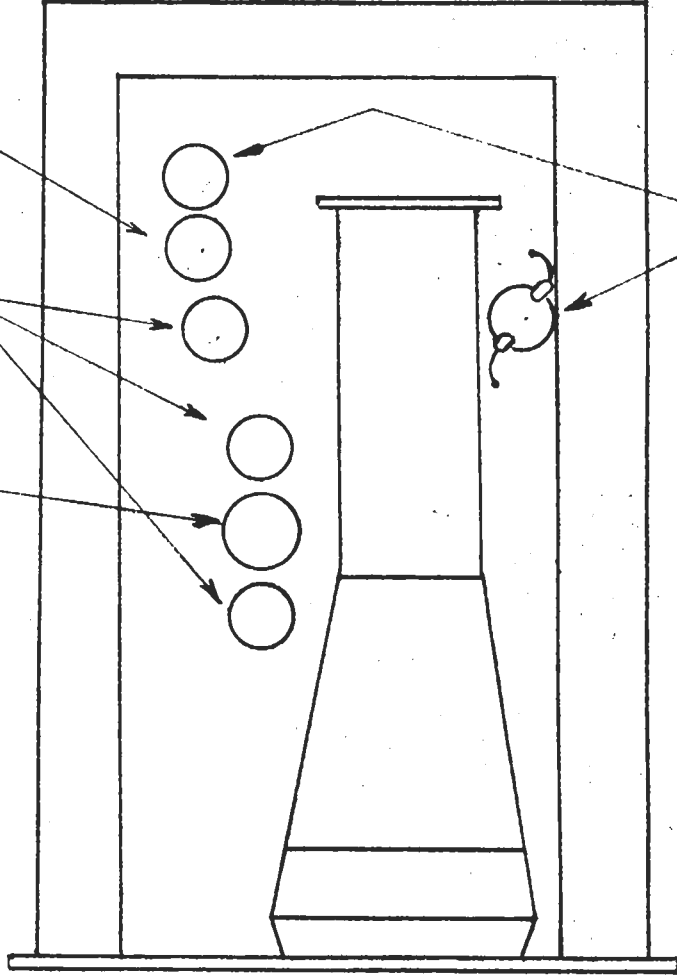
### SCHEMATIC DIAGRAM OF CONTROLS

- |   |                     |    |                          |
|---|---------------------|----|--------------------------|
| 1 | POWER SUPPLIES      | 9  | BRILLIANCE               |
| 2 | TO WAVEMETER        | 10 | FOCUS                    |
| 3 | SIGNAL INPUT        |    | 100 - 25000 YARDS        |
| 4 | SYNC. INPUT         | 11 | 40 - 5000 YARDS          |
| 5 | HOR. SHIFT          |    | 10 - MONITOR             |
| 6 | VERT. SHIFT         | 12 | 5000 YARDS } PRESET      |
| 7 | MONITOR INPUT JACK. | 13 | 25000 YARDS } FOR RANGE. |
| 8 | CALIBRATION ON-OFF. | 14 | SCALE.                   |

VR 54

VR 91

NR 73



VT 61 &  
VR 54  
MAY BE  
INTERCHANGED.

LOCATION C VALVES