

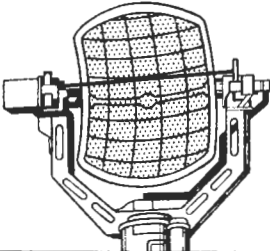
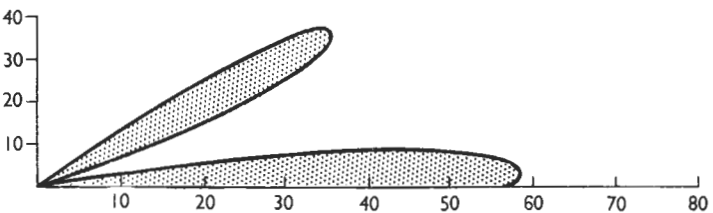
Shipborne Warning Radar Sets Data and Performance Figures

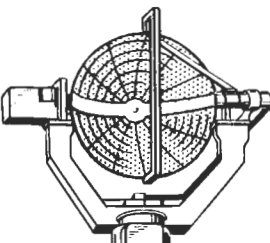
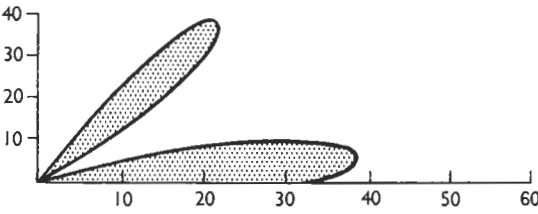
1 Type	2 Aerial	3 Frequency (Mc/s)	4 Wave Length	5 Vertical Beam Width	6 Horizl. Beam Width	7 Peak Power Output (kW)	8 P.R.R. c/s	9 Aerial Rotation (per min)	10 Pulse Length (micro secs)	11 Band Width (kc/s)	12 Range Discrim. (yards)	13 Minimum Range (yards)	14 Bearing Accuracy	15 Ships in which fitted	Maximum Detection Range Surface Targets.			Maximum Det. Range Aircraft (Mosq.) at ht		
															16 BB or RR	17 DD	18 Surface S/M	19 1,000'	20 15,000'	21 25,000'
960	Dipole Array	36,80,90	3.5 to 3.3 m	v.c.d.	35°	450	250	0 to 7 0 to 2	5 15	500 65	820 2,500	2,000 5,000	5°	BB, RR, CA, CL	11	5	-	30	115	150
Warning Surface 277P	Circular Parabolic Mesh	3,000	10 cm	4½°	4½°	500	500	0 to 15	1.9 0.7	1,000 4,000	310 100	600 200	1° - 2°	BB, RR, CA, CL FF	23 -	18 17	10 6	40	25	25
277Q	Cut Parabolic Mesh	3,000	10 cm	2½°	4½°	500	500	0 to 7½	1.9 0.7	1,000 4,000	310 100	600 200	1° - 2°	BB, RR, CA, CL	23	18	11	40 [†]	55	55
Warning Combined 293P	Tilted Parabolic Cheese	3,000	10 cm	30°	2¼°	500	500	Hand 7½ or 15	1.9 0.7	1,000 4,000	310 100	600 200	1° - 2°	BB, RR, CA, CL DD	22 -	10 13	7 5	15	15	15
293Q	Tilted Cheese	3,000	10 cm	35°	2°	500	500	Hand 5,10,15	1.9 0.7	1,000 4,000	310 100	600 200	1° - 2°	BB, RR, CA, CL DD	23 -	19 18	8 6	19	20	20
974	Twin Cheeses	10,000	3 cm	23°	1.6°	7	1,000	24-27	0.14 0.26	10,000	20 35	20 35	2°	BB, RR, CA, CL	10	12	(5 MTB)	2-3	-	-
982M	Trough Mesh	3,000	10 cm	30°	1°	500	500	0-7	1.9	1,000	310	600		New RRs.	23	19	8	20,000 50M	30,000 60M	40,000 60M
983	Parabolic Mesh	3,000	10 cm	2	5	500	500	0-7	1.9 0.7	1,000 4,000	310 100	600 200		New RRs.	23	19	8	75+	75+	75+


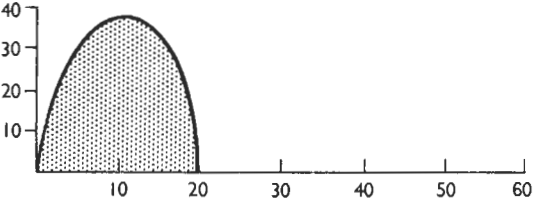
Note (i) All detection ranges in the above tables are for long pulse, narrow band width.

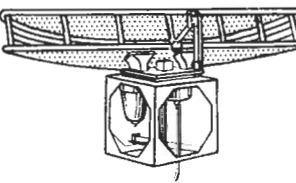
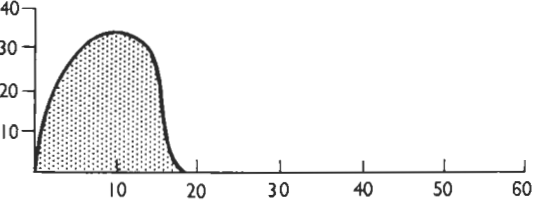
(ii) Minimum ranges are theoretical and would probably be greater in practice.

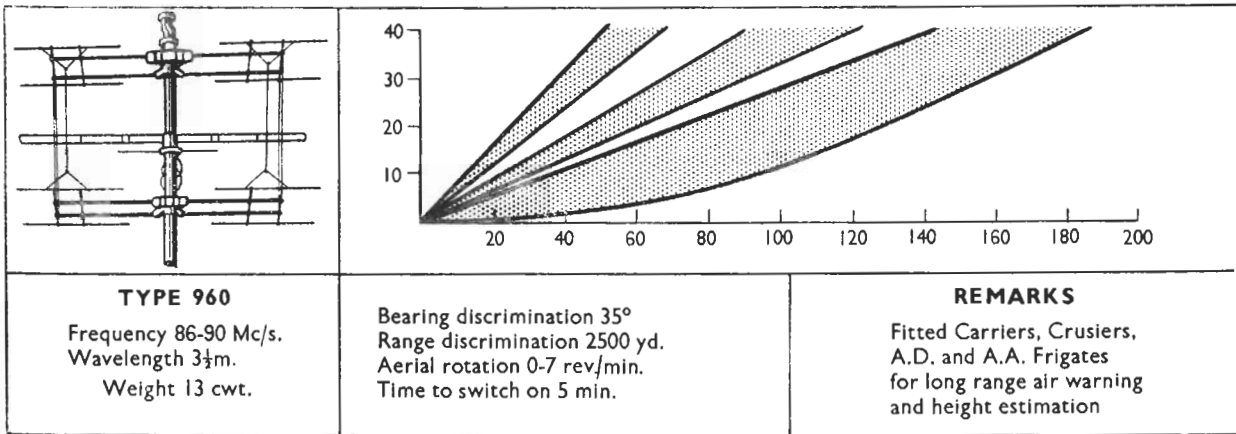
† With aerial horizontal, low A/c (but above radar horizon) probably 60 or more.

		
<p>TYPE 277Q Frequency 3000 Mc/s. Wavelength 10 cm. Weight 17 cwt.</p>	<p>Bearing discrimination $4\frac{1}{2}^\circ$ Range discrimination 310 or 100 yd. Aerial rotation $0-7\frac{1}{2}$ rev./min. Time to switch on 5 min. Heightfinding accuracy ± 1000 to 3000 ft.</p>	<p>REMARKS Fitted Cruisers and Frigates Heightfinding, low air cover and surface warning</p>

		
<p>TYPE 277P Frequency 3000 Mc/s. Wavelength 10 cm. Weight $14\frac{1}{2}$ cwt.</p>	<p>Bearing discrimination $4\frac{1}{2}^\circ$ Range discrimination 310 or 100 yd. Aerial rotation 0-15 rev./min. Time to switch on 5 min.</p>	<p>REMARKS Fitted generally in older ships for surface/air warning. Aerial can elevate for windfinding and approximate heightfinding</p>

		
<p>TYPE 293Q Frequency 3000 Mc/s. Wavelength 10 cm. Weight 6 cwt.</p>	<p>Bearing discrimination 2° Range discrimination 310 or 100 yd. Aerial rotation 5, 10, or 15 rev./min. Time to switch on 5 min.</p>	<p>REMARKS Replacement fitting for close range air and surface warning Target Indication</p>

		
<p>TYPE 293P Frequency 3000 Mc/s. Wavelength 10 cm. Weight 3 cwt.</p>	<p>Bearing discrimination $2\cdot6^\circ$ Range discrimination 310 or 100 yd. Aerial rotation $7\frac{1}{2}$ or 15 rev./min Time to switch on 5 min.</p>	<p>REMARKS Close range air and surface warning. Target Indication</p>



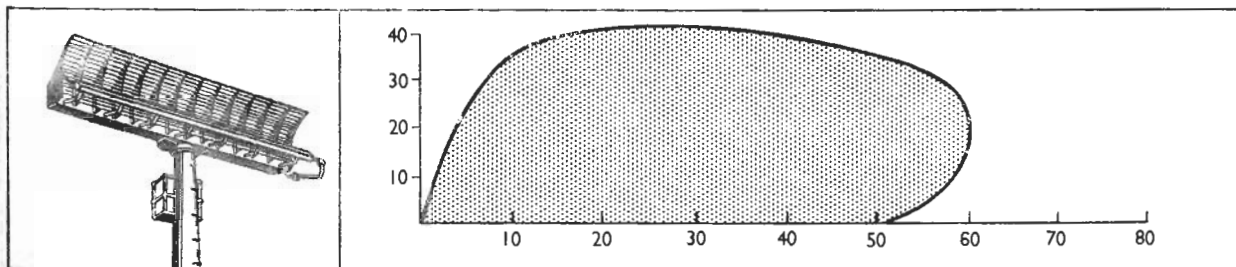
TYPE 960

Frequency 86-90 Mc/s.
Wavelength 3½m.
Weight 13 cwt.

Bearing discrimination 35°
Range discrimination 2500 yd.
Aerial rotation 0-7 rev/min.
Time to switch on 5 min.

REMARKS

Fitted Carriers, Crusiers,
A.D. and A.A. Frigates
for long range air warning
and height estimation



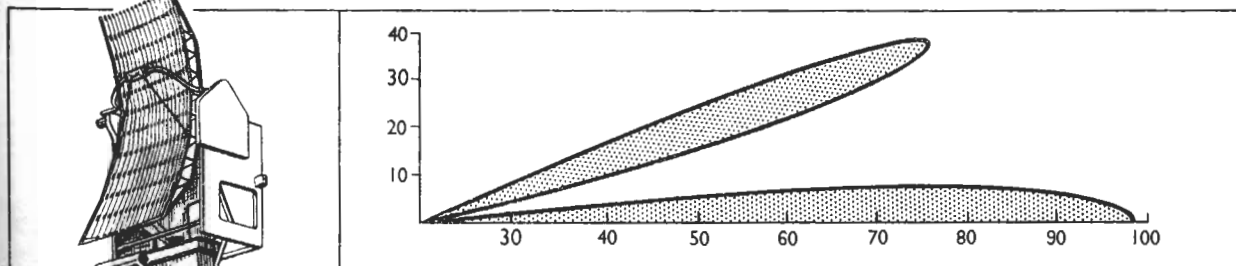
TYPE 982M

Frequency 3000 Mc/s.
Wavelength 10 cm.
Weight 1½ Tons

Bearing discrimination 0.8°
Range discrimination 310 yd.
Aerial rotation 0-7 rev/min.
Time to switch on 5 min.

REMARKS

Fitted Carriers and
A.D. Frigates for
Aircraft Direction



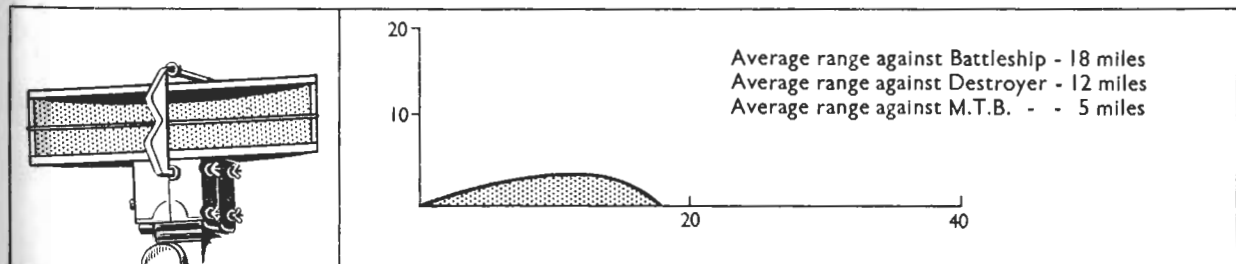
TYPE 983

Frequency 3000 Mc/s.
Wavelength 10 cm.
Weight 7 Tons

Bearing discrimination 5°
Range discrimination 310 or 100 yd.
Aerial rotation 0-7 rev/min.
Time to switch on 5 min.
Heightfinding accuracy ± 500 to 1000 ft.

REMARKS

Fitted Carriers, for height-
finding, low air and
surface cover



Average range against Battleship - 18 miles
Average range against Destroyer - 12 miles
Average range against M.T.B. - - 5 miles

TYPE 974

Frequency 10,000 Mc/s.
Wavelength 3 cm.
Weight 208 lb.

Bearing discrimination 1.6°
Range discrimination 35 or 20 yd.
Aerial rotation 24-27 rev/min.
Time to switch on 3 min.

REMARKS

Fitted for tactical and navigational
purposes in all classes of ship

TABLE 10-I
EQUIPMENT FITTED IN R. D. R.

	FLEET CARRIER	CRUISER
(a) <u>AIR WARNING</u>		
Long Range	JM Panel (960) 180-230 Mls	JM Panel (960) 180-230 Mls
Outer Metric	Outer P.P.I. (960) 100-200 Mls	Outer P.P.I. (960) 100-200 Mls
Inner Metric	Inner P.P.I. (960) 0-100 Mls	Inner P.P.I. (960) 0-100 Mls
Inner Centimetric	2 Inner) (982MF/293Q) 0-80 Mls Centimetric P.P. Is.) (982MA/293Q) 0-80 Mls	
Low Air	Low Air P.P.I. (983F/983A) 0-80 Mls	Low Air P.P.I. (277Q/293Q) 0-8/40/80 Mls
(b) <u>HEIGHT DETERMINATION</u>		
Height Estimation	JL Panel (960) 0-100-200 Mls 960 V.C.D.	JL Panel (960) 0-100/200 Mls 960 V.C.D.
Height Finding	2 Azicators (960/982MF) 0-80/120 Mls 2 Azicators (960/982MA) 0-80/120 Mls 2 JS Panels (983F)(983A) 0-100 Mls 20P/20Q/203 Control Tables	Azicator (960) 0-50/100 Mls H.P.I. (277Q) 0-40/80 Mls 277Q Control Table
(c) <u>AIR INTERROGATION AND CLASSIFICATION</u>	JM Panel (960/982MF/982MA/983F/983A) 0-20/100/230 Mls Expanded Trace Facilities Mark 10 Radar Set Control Box	JM Panel (960/277Q/293Q) 0-20/100/230 Mls Expanded Trace Facilities Mark 10 Radar Set Control Box

- NOTES:
- Intermediate Type Carrier has only one 983.
 - Inter-switching of P.P.Is., U.D.Us. and range shown, are those required to fulfil a particular function and are not necessarily the whole of the inter-switching and range scales available at any particular piece of equipment.