

**SPECIFICATIONS OF MARINE RADAR
MODEL 1623**

1 GENERAL

1.1 Indication system PPI Daylight display, raster scan, 4 tones in monochrome

1.2 Range, Pulselength (PL) & Pulse Repetition Rate (PRR)

Range (nm)	0.125, 0.25, 0.5, 0.75	1, 1.5, 2	3, 4, 6, 8, 12, 16
Pulse Length	0.08 μs (short)	0.3 μs (medium)	0.8 μs (long)
Pulse Repetition Rate	3000 Hz nominal	1200 Hz nominal	600 Hz nominal

1.3 Range resolution 16 m

1.4 Bearing discrimination 6.7°

1.5 Minimum range 22 m

1.6 Bearing accuracy Within 1°

1.7 Range ring accuracy 1.0 % of range or 8 m, whichever is the greater

2 SCANNER UNIT

2.1 Radiator Micro-strip

2.2 Polarization Horizontal

2.3 Antenna rotation speed 24/31/41 rpm nominal (auto-select according to range)

2.4 Radiator length 34 cm

2.5 Horizontal beamwidth Less than 6.2°

2.6 Vertical beamwidth 25°

2.7 Sidelobe attenuation Less than -20 dB

3 TRANSCEIVER MODULE

3.1 Frequency 9410 MHz ±30MHz (X band)

3.2 Modulation P0N

3.3 Peak output power 2.2 kW

3.4 Modulator FET Switching Method

3.5 Intermediate frequency 60 MHz

3.6 Tuning Automatic

3.7 Receiver front end MIC (Microwave IC)

3.8 Bandwidth 15 MHz (short pulse), 5 MHz (medium/long pulse)

3.9 Duplexer Circulator with diode limiter

3.10 Time of heat-up 1-min. approx.

4 DISPLAY UNIT

4.1 Screen 6" rectangular monochrome LCD

4.2 Display pixels 240(H) x 320(V) dots,
Effective radar display area: 240x240 dots

4.3 Range, Range interval, Number of rings

Range (nm/km)	0.125	0.25	0.5	0.75	1	1.5	2	3	4	6	8	12	16	24
Ring interval	0.0625	0.125	0.125	0.25	0.25	0.5	0.5	1	1	2	2	3	4	6
Number of rings	2	2	4	3	4	3	4	3	4	3	4	4	4	4

Range unit: nm/sm/km selectable, 0.125: nm/sm only, 24: km only

- 4.4 Markers Heading Line, Bearing Scale, Range Rings, Variable Range Marker (VRM), Electronic Bearing Line (EBL), Tuning Bar, Cursor, Parallel Cursor, Alarm Zone, Waypoint Mark*, North Mark*
- 4.5 Alphanumeric indications Range, Range Ring Interval, Display Mode (HU), Interference Rejection (IR), Variable Range Marker (VRM), Electronic Bearing Line (EBL), Stand-by (ST-BY), Guard Alarm (G (IN), G (OUT), UP RANGE), Echo Stretch (ES), Range and Bearing to Cursor, Bearing or L/L Position, Echo Tailing (TRAIL), Trailing Time, Trailing Elapsed Time, Watchman (WATCHMAN), Zoomed Display (ZOOM), Navigation Data*, Heading* (HDC) *: external data required
- 4.6 Input sentences IEC61162, NMEA0183 (Ver1.5/2.0) BWC, BWR, DBK, DBS, DBT, DPT, GGA, GLC, GLL, GTD, HDG, HDM, HDT, MTW, MWV, RMA, RMB, RMC, VBW, VHW, VTG, XTE, ZDA
- 4.7 Output sentences IEC61162, NMEA0183 (Ver3.0) TLL (by key operation)

5 ENVIRONMENTAL CONDITION

- 5.1 Ambient temperature
 - Scanner unit -25°C to +70°C
 - Display unit -15°C to +55°C
- 5.2 Relative humidity 95 % or less at +40°C
- 5.3 Degree of protection
 - Scanner unit IPX6
 - Display unit IPX5 (IPX0 when an external buzzer installed)
- 5.4 Vibration IEC60945

6 POWER SUPPLY

12-24 VDC: 3.5-1.6 A

7 COATING COLOR

- 7.1 Display unit N3.0
- 7.2 Scanner unit Cover: N9.5, Bottom: 2.5PB 3.5/10

8 COMPASS SAFE DISTANCE

- 8.1 Display unit Standard: 0.50 m Steering: 0.30 m
- 8.2 Scanner unit Standard: 1.25 m Steering: 0.95 m