KODEN

7-inch, High-resolution
Radar Plotter

MDP-621/641/640

- *Radar and Plotter functions combined.*
- *Built-in C-Map NT+ worldwide base map.*
- *Cost-effective space saver.*
- *Ideal solution for small vessels.*

MDP-621: 1.2 ft , 2 kW Radome
MDP-641: 2 ft , 4 kW Radome
MDP-640: 3 ft / 4 ft , 4 kW Open Scanner

designed for C-MAP NT+

FEATURES

• Radar with chart facility
Radar and chart functions are combined into one, providing an integrated navigation system. Operation is easy and straightforward with dedicated key functions and function-definable soft-keys. Frequent setting or adjustment is performed using the pointing keypad and rotary control. The system includes a radar sensor and a charting facility as standard.

• Radar functions
Various KODEN radar sensors (from 2 kW to 4 kW) can be directly connected. Widely-proven features such as dual screen, semi-3D display, user-definable range scales, high speed antenna (except 1.2 ft Radome), etc. are available as standard. For users in the southern hemisphere, the picture mode can be changed to South-up mode from the standard North-up mode. The ATA facility is also available as an option.

• Plotter functions
Built-in C-MAP NT+ worldwide base map is included as standard. Charts can be displayed separately or overlaid on the radar picture. The Auto Scale function adjusts the screen so that a waypoint is always shown in the center of the screen. Frequently used ranges can be recalled at a touch of a key. A total of 8300 Marks can be designated as waypoints. Furthermore, tracked targets supplied from the ATA unit are displayed on the chart or chart-overlaid radar screen.

• Flat screen
A non-reflection, 7-inch high-resolution flat panel display provides a flicker free non-fading picture, minimizing operator's eye fatigue. The display color can be changed for daytime or nighttime operation.

• Hands-free operation
A newly developed smart auto tuning and video processing system sets the operator free from cumbersome adjustments such as setting up the tuning, STC, gain, etc. With a hands free operation the navigator can concentrate on other, more important tasks on the bridge.

• Alarm zone
A user defined fan-shaped zone monitors and alerts the operator when ships enter and depart the specified area. This feature becomes part of the ATA (Automatic Tracking Aid) functions when the optional ATA module is fitted.

• Collision assessment
Using the optional ATA (Automatic Plotting Aid) function, other ships' movement is displayed on the screen in vector form. This feature provides a direct and logical assessment of collision risk and urges the operator to take early maneuvering operations. All tracked ship's data can be output to an external device such as an electronic plotter unit.

• Picture offset to any point
The picture can be offset to any point within 2/3 of the screen radius to obtain a better viewing range.

• Compact and waterproof designs
A streamlined portrait mode display fits anywhere on the boat; on the table, tilted console space or even on the fly bridge, backed by the strengthened waterproof design.

SPECIFICATIONS

Antenna unit

		MDP-621	MDP-641	MDP-640
Aerial length and type		1.2 ft Radome	2 ft Radome	3 ft/4 ft Open
Peak power output		2 kW	4 kW	
Frequency		9445 ±30 MHz	9410 ±30 MHz	
Beam width	Horizontal	6.0°	3.9°	2.5° / 1.8°
	Vertical	25°		22°
Rotation		24 rpm	24 or 48 rpm	
Transmission pulse width	S(Short pulse)	0.12 µs / 2000 Hz	0.08 µs / 2000 Hz	
	M1(Medium 1 pulse)	0.3 µs / 1500 Hz	0.25 µs / 1500 Hz	
	L (Long pulse)	0.8 µs / 600 Hz	0.8 µs / 600 Hz	
Operation in wind		100 knots (measured with 10 m connecting cable used)		
Water proofing grade		CFR-46	IPX6 (IEC60529)	

Display unit

Display device	7 inch TFT high resolution color LCD
Resolution	640 x 480 dots
NMEA 0183 Interface	Input: NMEA 0183 ver 1.5/2.0 Output: NMEA 0183 ver 2.0
Input data	DBS, DBT, DPT, GGA, GLL, HCC, HDT, HDM, HDG, MTW, MWV, RMC, VHW, VTG

Radar functions

Display mode	Head up, North up or South up, Course up, True motion		
Range (nm, sm, km)	0.125 to 24	0.125 to 36	0.125 to 48
Indication system	PPI, PPI + semi-3D, Dual Screen		
Echo trail interval	Continuous, 15, 30 sec, 1, 3, 6 min		
Alarm	IN and OUT alarms		
Minimum range	Better than 25 m on 0.125 nm range (MDP-641/640)		
	Better than 30 m on 0.125 nm range (MDP-621)		
Range discrimination	Better than 25 m (MDP-641/640)		
	Better than 30 m (MDP-621)		
Range accuracy	Better than 8 m (26 feet) or 0.9 % of the maximum range of the scale in use, whichever is the greater		
Bearing accuracy	Better than ±0.1 %		
Other functions	GAIN, STC, FTC, Off-center, auto tuning, heading marker off, interference rejection, target expansion, zoom, two VRMs, two EBLs, floating EBL/VRM, cursor position, parallel cursor, intermittent transmission, ATA, night display		

Plotter functions

Display mode	Head up, North up, Course up, Own ship center fixed mode, 3 fix scale, Other ship plot mode with ATA
Effective projection area	0.5 nm to 7000 nm
Plot interval	1 sec to 600 sec or 0.01 nm to 10 nm
Map projection	Mercator
Usable area	85 degree latitude or below
Memory & storage capacity	Track: 7000 points
	Mark (Waypoint): 8300 points
	Route: 50 routes with 50 points
	Graphics: 500 points
	Other ship's track: 1000 points x 10 targets
Alarms	Arrival, Anchor watch, Cross track error, Speed
Electronic chart	C-Map NT+

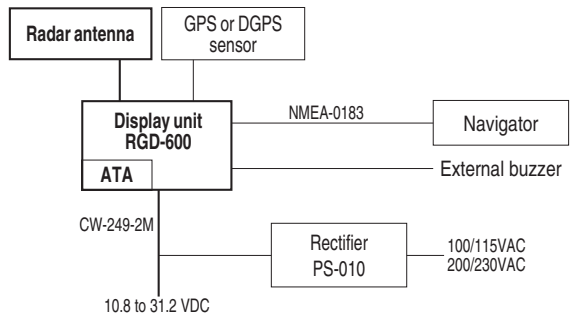
Power supply

Rated voltage	12 to 24 VDC		
Power consumption	55 W or less	60 W or less	70 W or less

Environmental conditions

	Antenna	Display
Operating temperature	-25°C to +55°C	-15°C to +55°C
Storage temperature	+70°C	+70°C
Relative humidity	93 % ±3 % at +40°C	
Waterproof grade	IPX6 (RB715A/716A)	IPX5
	CFR-46 (RB714A)	

CONNECTIONS



Thick solid lines: Standard devices and connections.
Thin solid lines: Optional devices and connections.

EQUIPMENT LIST

Standard equipment

Antenna unit	Aerial	RW701A-03	3 feet
		RW701A-04	4 feet
	Transceiver	RB716A	4 kW
	Radome	RB715A	2 feet / 4 kW
		RB714A	1.2 feet / 2 kW
Display unit		RGD-600	With Hard Cover and Hood
Connecting cable		242J159098A	10m (32 13/16 ft) with connectors on both ends(for OPEN)
		242J158055A	10m (32 13/16 ft) with connectors on both ends(for RADOME)
		242J160680A	10m (32 13/16 ft) with connectors on both ends(for RB714A)
DC power cable		CW-249-2M	2 m (6 9/16 ft) with 5-pin connector one end
Spare parts kit		RGD-600.SP	
Installation material		M12-BOLT.KIT	For antenna unit (for OPEN)
		M10-BOLT.KIT	For antenna unit (for RADOME)
Operation manual		MDP-600SER.OM.E	

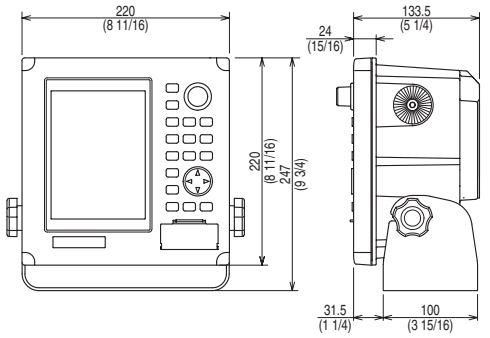
Optional items

DGPS sensor	KBG-2(B-type)	With 10m cable with connector
GPS sensor	GPS-10A(B-type)	With 10m cable with connector
ATA	MRE-310	Built into display unit
Navigator connecting cable	CW-373	With 6-pin connector attached on both ends
	CW-376	With 6-pin connector one end flying leads on other end
Rectifier	PS-010	With 2 spare fuses (5 A)
AC power cable	VV-2D8	Flying leads on both ends

DIMENSIONS AND WEIGHT

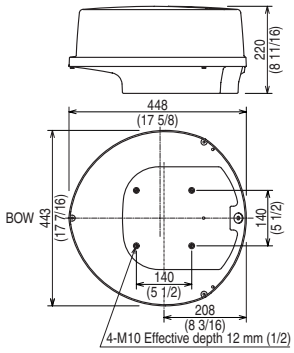
Unit: mm (inch)

Display unit: RGD-600



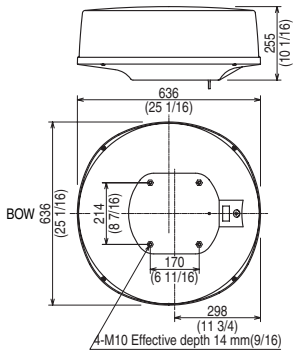
Weight:
3.5 kg (7.8 lb)

Antenna unit: RB714A



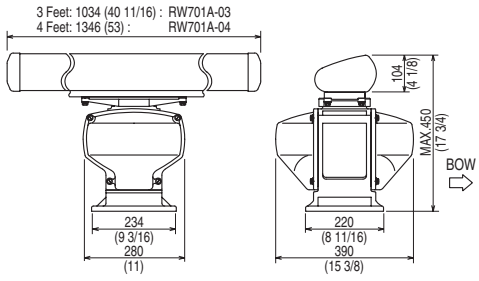
Weight: 6 kg (13.5 lb)

Antenna unit: RB715A



Weight: 10 kg (22 lb)

Antenna unit: RB716A with RW701A-03/04



Weight:
21 kg (46 lb)
with RW701A-03
22 kg (49 lb)
with RW701A-04

* Specifications subject to change without notice.

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Certified to ISO 9001 (TÜV PRODUCT SERVICE)

⚠ Safety precaution	To ensure proper and safe use of the equipment, please carefully read and follow the instructions in the OPERATION MANUAL.

FOR DETAILS, PLEASE CONTACT:

OMDP621/641/640-00 03 X SI 2Y1
PRINTED IN JAPAN