

KODEN

10-INCH HIGH-RESOLUTION MARINE RADAR

MD-3641/3642



MD-3641: 1.8 ft, 4 kW, Radome

MD-3642: 3.5/4.5 ft, 4 kW, Open

FEATURES

- **Convenient function keys and menu system**

By assigning frequently used functions to the two FUNC keys, you can promptly select different radar modes. The menu system enables easy selection of the different function choices.

- **The latest technology in pointing device**

A newly developed pointing device that is both watertight and dust-proof is used. This device enables you to make quick and easy selection of the variable range maker and other user functions.

- **Freely selectable range scales**

The optimum range scales that will suit your present situation can be selected from a host of range scale choices available. Therefore, there is no need to worry about the measuring distances anymore.

- **Own track indication and picture mode selection make navigation easy.**

By connecting your navigation system and electric compass or gyrocompass, you can display your own vessel's track on the screen. North up, course up, head up and true motion modes are also available.

- **The location memory can be conveniently used for finding buoys for rescue work.**

The system memorizes the location of your boat when the FUNC key is pressed. This function is especially effective for locating someone who has fallen overboard or returning to previously dropped buoys (connection to a navigation system is necessary).

- **Warning zone setting to alert you of closing events.**

By designating two points using the cursor, a flexible warning zone can be created. An IN and OUT alarm mode can also be selected.

- **Intermittent transmission watch**

The intermittent transmission function is located in the SAVE mode. This feature is particularly useful for watch keeping under reduced power consumption, and will alert the user if a target has entered the warning zone.

- **Two-speed antenna rotation makes quick moving, long-distance target detection possible (MD-3642 only)**

A choice between 50 rpm and 25 rpm antenna speeds enables the system to carry out stable target detection even on a high-speed boat at short range. Long distance sensitivity is also improved.

- **High resolution targeting and upgraded receiver performance (MD-3642 only)**

The IF amplifier performance has been upgraded to enhance the detection of small targets and other small vessel.

- **Target Tracking (Option)**

Using this feature you can plot a target and obtain CPA (Closest Point of Approach) and TCPA (Time to CPA) to aid in avoiding potential collision hazards. Using ATA, up to 10 targets can be acquired manually. Once acquired, the targets are automatically tracked with a vector being developed for each target. The navigational information such as CPA, TCPA, speed and the target course are shown in the digital window on the screen.

SPECIFICATIONS

Antenna unit

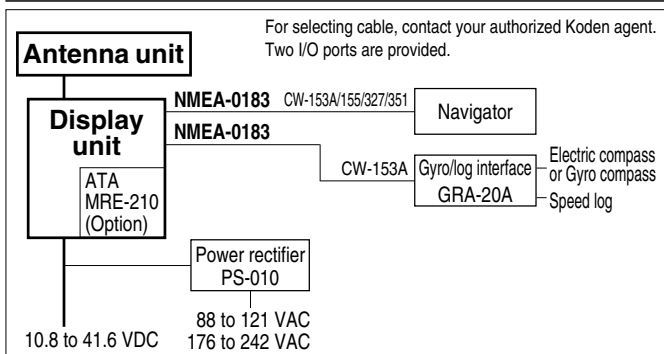
Model	MD-3641	MD-3642T	MD-3642F
Aerial	1.8 feet (radome)	3.5 feet (Open scan)	4.5 feet (Open scan)
Peak power output	4 kW		
Transmitting frequency	9410 ± 30 MHz		
Beam width Horizontal	4 °	2.4 °	1.7 °
Vertical	25 °		
Rotation	24 rpm	50 rpm (pulse length:S, M1, M2)/25 rpm (pulse length:L)	
Pulse length (µsec)/	S 0.1 / 2000	0.06/4000	
PRF (Hz)	M1 0.25 / 2000	0.15/2000	
	M2 0.5 / 1000	0.4/1000	
	L 1.0 / 500	1.0/500	
IF center frequency	60 MHz		
IF band width	S, M1 6 MHz	20 MHz	
	M2, L 3 MHz	5 MHz	
Noise figure	6 dB nominal	5 dB nominal	
Operating temperature	- 25° to + 55 °C (- 13 ° to 131 °F)		
Operation in wind (relative)	100 knots	70 knots	

Display unit

Display	10-inch monochrome green high resolution CRT		
Resolution	480 x 640 pixels		
Video level	8 levels		
Presentation modes	Head up, *north up, **course up, ***true motion		
Range scales (nm)	(1/16) 1/8 1/4 1/2 3/4 1 1.5 2 3 4 6 8 12 16 24 32 (48)		
Rings interval (nm)	(1/32) 1/16 1/8 1/4 1/2 1/2' 1' 1' 2' 2' 4' 4' 8' 8'		
Range scales (m)	(125) 250 500 1k 1.5k 2k 3k 4k 6k 8k 12k 16k 24k 32k 48k 64k (96k)		
Rings interval (m)	(25) 50 100 200 300 500 500' 1k 1k 2k 2k 4k 4k 8k 8k 16k (16k)		
	(:) : MD-3642		
Off-center	Sweep origin can be moved to any position within 75 % of the effective diameter		
Echo trail interval	Continuous, 15, 30 sec., 1, 3, 6 min., OFF		
Alarm	IN and OUT alarms		
Minimum range	Better than 20 m (66 feet) on 1/8 nm range		
Range discrimination	Better than 20 m (66 feet)		
Range accuracy	Better than 7 m (23 feet) or 0.8 % of the maximum range of the scale in use, whichever is the greater		
Bearing accuracy	Better than ± 1 °		
Navigation data display	Boat position (Latitude/longitude, Loran C LOP) or bearing/speed		
Other functions	Gain, STC, FTC, heading marker off, Interference rejection, target expansion, zoom, two VRMs, two EBLs (0.1° step), floating EBL/VRM, cursor position (latitude/longitude), parallel cursor, steering/distance of target (true/relative), distance unit (nm/km), signal processing, location memory, intermittent transmission		
Input data format	NMEA-0183 (BOD, BWC, GGA, GLL, GTD, HCC, HDM, HDT, HSC, VHW, VTG, WDC, WPL), NMEA-0182, CIF, JRC		
Power supply	10.8 to 41.6 VDC		
Power consumption	55 W or less (at 24 VDC)	85 W or less (at 24 VDC)	
Operating temperature	- 15 ° to + 55 °C (5 ° to 131 °F)		

* North up, **course up mode : Bearing data from an electric compass, a gyro compass or a navigator is required.
 *** True motion : Speed data from a speed log, and Bearing data from an electric compass, a gyro compass or a navigator is required.

CONNECTIONS



EQUIPMENT LIST

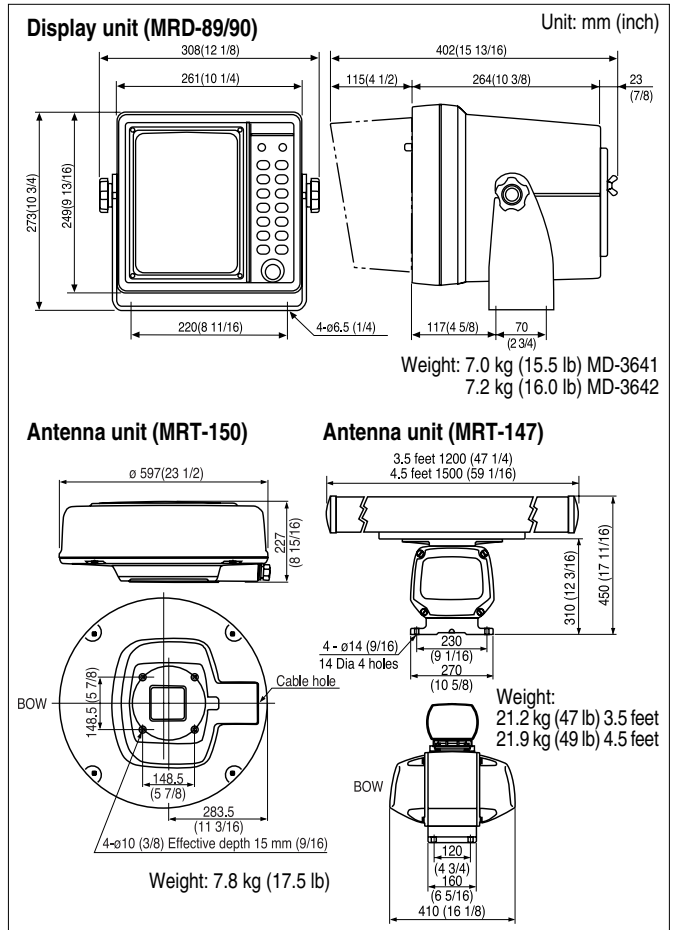
Standard equipment

Antenna unit	MRT-150	1.8 feet, MD-3641	1
Aerial	MRA-45	3.5 feet, MD-3642T	
	MRA-46	4.5 feet, MD-3642F	
Transceiver	MRT-147	MD-3642T/3642F	
Display unit	MRD-89	With vinyl cover, MD-3641	1
	MRD-90	With vinyl cover, MD-3642	
Hood	MRH-110		1
Connecting cable	CW-525	With 24-pin and 14-pin connectors, MD-3641	10 m (32 13/16 ft)
	CW-526	With 24-pin and one end plain, MD-3642	
DC power cable	CW-89	With 3-pin connector and one end plain	5 m (16 3/8 ft)
Spare parts kit			1 set
Installation materials			1 set
Operation manual			1

Option

ATA module kit	MRE-210	With connecting cable
Gyro/log interface	GRA-20A	With power and connecting cable
EMI filter	MRF-110	
Magnifying lens	MRL-110	
Connecting cable	CW-153A	5 m (16 3/8 ft), with 6-pin connectors
	CW-154A	5 m (16 3/8 ft), with 6-pin connector and one end plain
	CW-155	5 m (16 3/8 ft), with BNC and 6-pin connectors
	CW-327/351	5 m (16 3/8 ft), with 6-pin connectors
Power rectifier	PS-010	With two 8 A fuses
AC power cable	VV-2D8	3 m (9 13/16 ft), both ends plain

DIMENSIONS AND WEIGHT



* Specifications subject to change without notice.

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Certified to ISO 9001 (TUV PRODUCT SERVICE)



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

FOR DETAILS, PLEASE CONTACT: