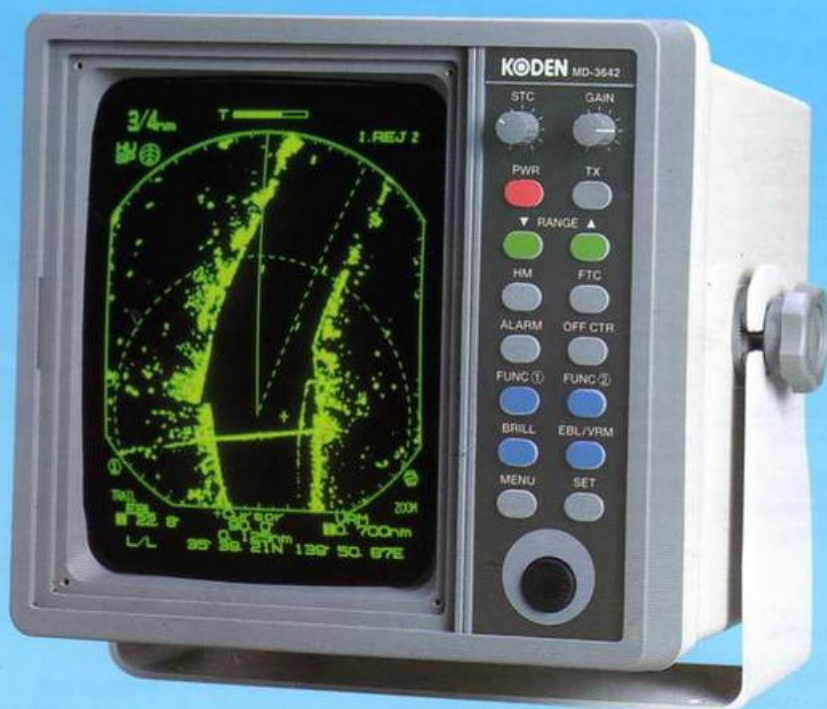


KODEN

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 also allows for easy selection of the different function choices.

- **The latest technology in pointing device**

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

- **Freely selectable range scales**

The optimum range scale suit your present situation can be selected from a host of range scales choices available. No need to worry any more about the measuring distances.

- **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 display. 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.

- **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 targeting and detect hazards such as buoys at short distances.

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	
	M2	0.5 / 1000	
	L	1.0 / 500	
		0.15/2000	
IF center frequency	60 MHz		
IF band width	S, M1	6 MHz	
	M2, L	3 MHz	
		20 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

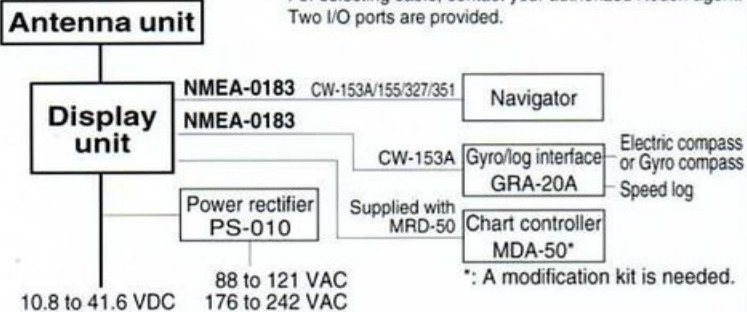
Display unit

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 3/4 1 1.5 2 3 4 6 8 12 16 24 32 (48)
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 1k 1.5k 2k 3k 4k 6k 8k 12k 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

For selecting cable, contact your authorized Koden agent.
 Two I/O ports are provided.



EQUIPMENT LIST

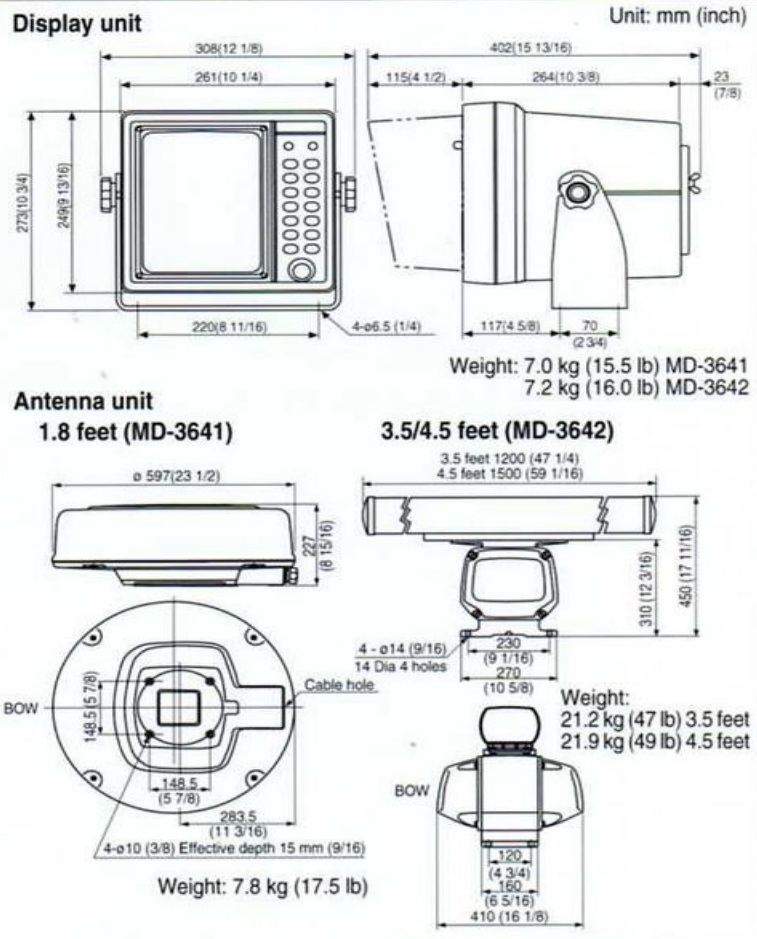
Standard equipment

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

Gyro/log interface	GRA-20A	With power and connecting cable	1.7 kg (3.75 lb)
EMI filter	MRF-110		0.72 kg (1.6 lb)
Magnifying lens	MRL-110		0.89 kg (2.0 lb)
Connecting cable	CW-153A	With 6-pin connectors	5 m (16 3/8 ft)
	CW-154A	With 6-pin connector and one end plain	5 m (16 3/8 ft)
	CW-155	With BNC and 6-pin connectors	5 m (16 3/8 ft)
	CW-327/351	With 6-pin connectors	5 m (16 3/8 ft)
Chart controller	MDA-50	With bracket and cables	2.5 kg (5.6 lb)
Power rectifier	PS-010	With two 8 A fuses	3.5 kg (7.8 lb)
AC power cable	VV-2D8	Both ends plain	3 m (9 13/16 ft)

DIMENSIONS AND WEIGHT



* Specifications subject to change without notice.

KODEN

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Certified to ISO 9001 (TUV 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: