

# KODEN

## 7-INCH, HIGH-RESOLUTION COLOR LCD RADAR

# MDC-721/741/740

*Ultimate choice  
for navigation!*

*High quality compact radar,  
offering crisp and clear picture.*

**MDC-721: 1.2 ft, 2 kW, Radome**

**MDC-741: 2 ft, 4 kW, Radome**

**MDC-740: 3 ft/4 ft, 4 kW, Open Antenna**



## FEATURES

### • Semi-3D display

Radar echoes are shown as realistic visual impressions. The amplitude of echo is determined by its signal strength and is painted on the Mercator type coordinate. The semi-3D display is shown together with normal radar screen.

### • Auto gain and clutter controls as standard

Using the AUTO key, your radar settings are automatic for the gain and rain/sea clutter. The radar's computer expertly sets Gain, STC, and FTC levels, allowing the operator to concentrate on other chores. Previously, these features were found only in larger and more expensive radar systems.

### • High speed antenna

You can select your antenna rotation speed to 48 rpm via the menu. A vital feature for fast moving ship navigating congested waters, rivers, canal, etc.

### • ATA option

The Automatic Tracking Aid feature is available as an option. Using this option your radar tracks up to 10 targets, providing the latest collision avoidance information in vector form.

### • Semi-continuous range scales

Closely separated range scales are available via the menu. The scale value increases or decreases by approximately 10 % of the range in use. This feature is quite essential for the navigation in congested waters, which requires constant vigilance.

### • On screen Multi-languages

Fifteen languages are available as standard and can be selected via the menu. These include; Chinese, Danish, English, French, German, Greek, Italian, Japanese, Korean, Norwegian, Portuguese, Russian, Spanish, Swedish, and Turkish.

### • One-key-one-function plus menu operation

Six dedicated key switches are provided for fundamental radar controls, such as range scale, brilliance, Gain, STC and FTC. Plus, a variety of additional functions are also available via the menu.

### • User defined keys

Frequently used functions can be assigned to seven user-defined keys. Available functions total 28, and are assorted in 4 groups. You can customize this radar to your own operational needs.

### • Rotary control

One large rotary control is provided for quick and easy operation controlling EBL, VRM, Gain, STC and FTC. No more cumbersome key controls are needed, such as, up and down, right and left.

### • Splash proof display

The display unit can be installed even in a place where water splash protection is not good such as, the fly bridge, open deck, etc.

## SPECIFICATIONS

### Antenna unit

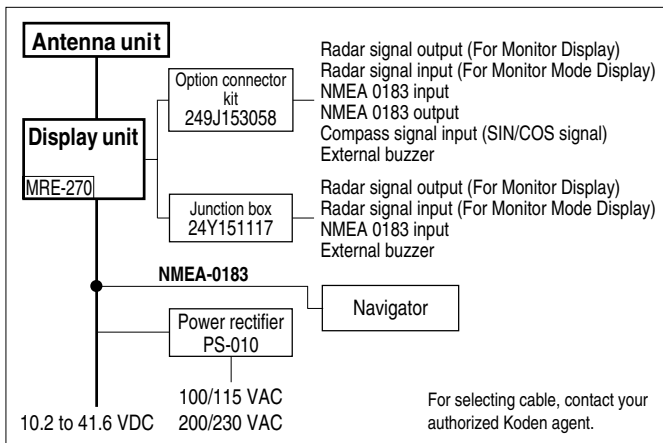
Model	MDC-721	MDC-741	MDC-740
Aerial	1.2 feet (radome)	2 feet (radome)	3 feet/4 feet (Open scan)
Peak power output	2 kW	4 kW	
Transmitting frequency	9445 ± 30 MHz	9410 ± 30 MHz	
Beam width	Horizontal 6.0 ° Vertical 25 °	3.9 °	2.5 ° (3 feet)/1.8 ° (4 feet) 22 °
Rotation	24 rpm ± 20 %	24 or 48 rpm	24 or 48 rpm (24 VDC or more)
Pulse length (µsec)/	S 0.12 / 2000	0.08/2,000	
PRF (Hz)	M 0.3 / 1,500 L 0.8 / 600	0.25/1,500	0.8/600
IF center frequency	60 MHz		
Noise figure	6.5 dB or less		
Operating temperature	- 25 ° to + 55 °C (- 13 ° to 131 °F)		
Operation in wind (relative)	100 knots		

### Display unit

Display	7-inch color LCD (TFT)
Resolution	640 x 480 pixels
Video level	4 levels
Indication system	PPI, PPI + semi-3D, ALL PPI
Presentation modes	Head up, *north up, **course up, ***true motion
Range scales (nm)	0.125 0.25 0.5 0.75 1.5 3 6 12 24 (36) (48)
Rings interval (nm)	0.0625 0.125 0.25 0.5 1.0 2.0 4.0 8.0 (12.0) (12.0) (36)/(12.0): MDC-741, (48)/(12.0): MDC-740
Off-center	Can be 100% off-centered over the full range
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
Range discrimination	Better than 25 m
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 ± 1 °
Navigation data display	Boat position (Latitude/longitude), bearing and speed
Other functions	Gain, STC, FTC, auto tuning, heading marker off, Interference rejection, target expansion, zoom, two VRMs, two EBLs (0.1 ° step), floating EBL/VRM, cursor position (latitude/longitude), parallel cursor, bearing (true/relative), distance unit (nm/km), signal processing, location memory, intermittent transmission
Input data format	NMEA-0183 (BER, BEW, BPI, BWC, BWR, DBT, DPT, GGA, GLL, HDG, HDM, HDT, HSC, MTW, RMA, RMB, RMC, VHW, VTG, XTE)
Power supply	10.2 to 41.6 VDC
Power consumption	45 W/(MDC-721)/55 W/(MDC-741)/70 W/(MDC-740) or less
Operating temperature	0 ° to + 55 °C (32 ° 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	RB714A	1.2 feet, MDC-721	1
	RB715A	2 feet, MDC-741	
Aerial	RW701A-03	3 feet, MDC-740	
	RW701A-04	4 feet, MDC-740	
Transceiver	RB716A	MDC-740	
Display unit	MRD-99	With hard cover	
Connecting cable	242J160680A	With two connectors, MDC-721	10 m (32 13/16 ft)
	242J158055A	With two connectors, MDC-741	
	242J159098A	With two connectors, MDC-740	
DC power cable	242J158054	With a connector and one end plain	2 m (6 9/16 ft)
Spare parts kit			1 set
Installation materials			1 set
Operation manual			1

Note: Other cable length selections available : 15 m, 20 m, 30 m.

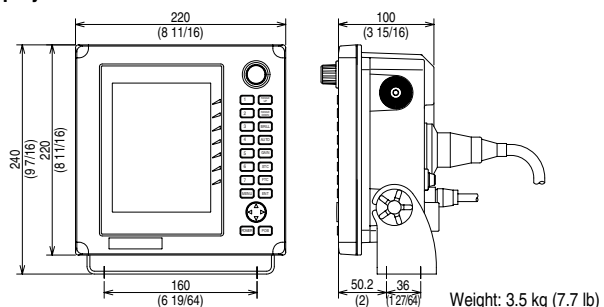
### Option

ATA module kit	MRE-270	With connecting cable
Option connector kit	249J153058	
Junction box	24Y151117	For external connection, with 1.5 m cable
Power rectifier	PS-010	With two 5 A fuses
AC power cable	VV-2D8	3 m (9 13/16 ft), both ends plain

## DIMENSIONS AND WEIGHT

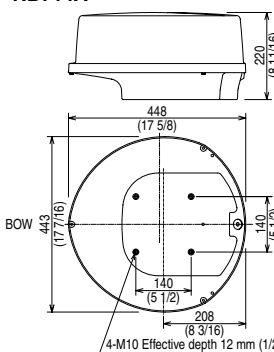
### Display unit MRD-99

Unit: mm (inch)

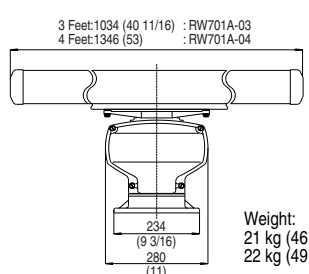


### Antenna unit

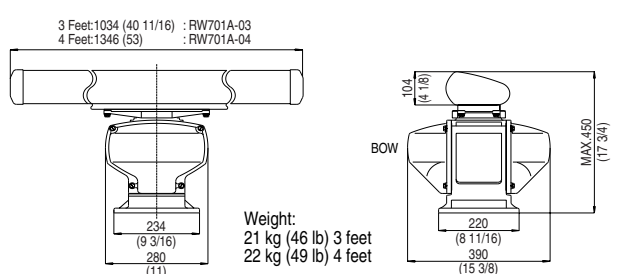
#### RB714A



#### RB715A



#### RB716A



\* 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: