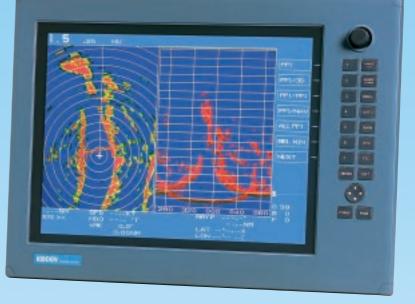


## 15-inch Color LCD Marine Radar

# **MDC-1520**

Dual radar screens on a large Liquid Crystal Display, providing crisp and clear picture!

## 25 kW power output 120 NM range scale



### FEATURES

#### • Dual radar screen on a large, wide flat display

The dual radar screen shown on the 15-inch color Liquid Crystal Display provides constant vigilance in short and long ranges at the same time. Each screen can be controlled independently for Range, Gain, Anti-Sea Clutter and Anti-Rain Clutter.

#### • Semi-3D display

Radar echoes are shown in realistic visual impressions by signal strength and are displayed on the Mercator type grid. The semi-3D display can be shown together with normal radar screen.

#### · Auto gain and clutter controls are standard

Using the AUTO key, your radar settings become automatic for the Gain and Anti-Sea Clutter and Anti-Rain Clutter controls. The radar's computer expertly sets Gain, STC, and FTC levels, allowing the operator to concentrate on other tasks. Previously, these features were found only in larger and more expensive radar systems.

#### • ATA (Automatic Tracking Aid)

The ATA is featured as standard, providing automatic tracking for up to 10 assigned targets. Using this feature, target movement can be represented in vector form as well as numeric form, providing necessary data for assessing the risk of collision.

#### • High speed antenna

A 50-rpm antenna turning rate is available via the menu for a high-speed craft that requires fast picture update to avoid collisions.

#### • Multi-color radar picture

The radar picture can be changed to a multi-color presentation allowing each echo to be displayed in a different color depending on the signal strength.

#### 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 essential for navigation in congested waters, rivers and canals, which requires constant vigilance.

#### On screen Multi-languages

Sixteen 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, Turkish and Thai.

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

Six dedicated key switches are provided for fundamental radar controls, such as range scale, brilliance, Gain, Anti-Sea Clutter and Anti-Rain Clutter. Plus, a variety of advanced functions are also available via the menu.

#### User defined keys

Frequently used functions can be assigned to six user-defined keys. Available functions total 24, and are assorted into 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, Anti-Sea Clutter and Anti-Rain Clutter. 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 places where water splash is frequent such as the fly bridge, open deck, etc.

#### **SPECIFICATIONS**

Antenna unit					
Aerial		4 feet / 6 feet / 9 feet			
Peak power output		25 kW nominal			
Transmitting frequency		9410 ± 30 MHz			
Beam width Horizontal		1.2°/0.8°			
Vertical		22°/25°			
Rotation		25 or 50 rpm			
Pulse length (µsec)/	S	0.08/2000			
PRF (Hz)	M1	0.3/1300			
	M2	0.6/800			
	L	1.2/450			
IF center frequency		60 MHz			
Noise figure		6.5 dB or less			
Operating temperature		-25°C to +55°C (-13°F to +131°F)			
Operation in wind (rela	tive)	100 knots with 10 m connecting cable driven at 25 rpm			

Display unit

Display unit					
Display	15-inch color LCD (TFT)				
Resolution	640 x 480 pixels				
Video level	4 levels				
Indication system	PPI, PPI + semi-3D, Split radar range				
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 48 96 120				
Rings interval (nm)	0.0625 0.125 0.25 0.25 0.25 0.5 1 2 4 8 16 20				
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 sca				
	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,				
	ATA, Night display				
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	18.0 to 41.6 VDC				
Power consumption	150 W nominal				
Operating temperature	0°C to +55°C (+32°F 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

Antenna unit
Option connectories  Radar signal output (For Monitor Display)    Bisplay unit
• <u>NMEA-0183</u> Navigator
Power rectifier
100/115 VAC    Solid lines: Standard devices and connections.      18.0 to 41.6 VDC    200/230 VAC    Solid lines: Optional devices and connections.

#### **EQUIPMENT LIST**

#### Standard equipment Antenna unit RB719A Transceiver unit RW701A-04 4 feet aerial RW701A-06 6 feet aerial RW701B-09 9 feet aerial Display unit MRD-96B With hard cover, with ATA built-in 1 Connecting cable 242J159098B-15M 15 m (59 1/6 ft), with two connectors 1 (See Note) CW-249-2M 2 m (6 9/16 ft), with a connector and one end plain DC power cable 1 Spare parts kit set Installation materials 1 set Operation manual 1

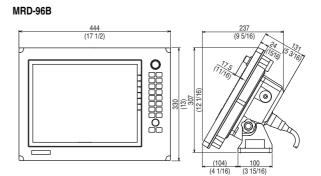
Note: Other cable length selections available; 10 m, 20 m, 30 m

#### Options

Option connector kit	249J153058	For external connection
Junction box	JB-15	For external connection, with 1.5 m (4 15/16 ft) cable
		With two 5 A fuses
AC power cable	VV-2D8-3M	3 m (9 13/16 ft), both ends plain

#### **DIMENSIONS AND WEIGHT**

#### **Display unit:**



#### Antenna-Scanner unit:

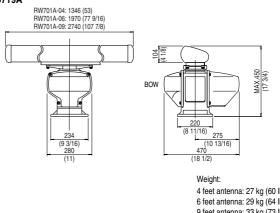
Weight: 7.8 kg (17.2 lb)



Safety

precaution

For details, please contact:



4 feet antenna: 27 kg (60 lb) 6 feet antenna: 29 kg (64 lb) 9 feet antenna: 33 kg (73 lb)

Unit: mm (inch)

#### • Design and specifications are subject to change without notice.

To ensure proper and safe use of the equipment, please carefully

read and follow the instructions in the Operation Manual.

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