JMA-5200 series
Black Box Radar

Complies with SOLAS carriage requirements for vessels under 1,000 GT.

– JRC incorporates unique technology never seen on this class of radar before

Constaview™ digital signal processing
TEF™ multi-level target enhancement
True Trails on relative motion
Compact black box configuration
High visibility JRC display

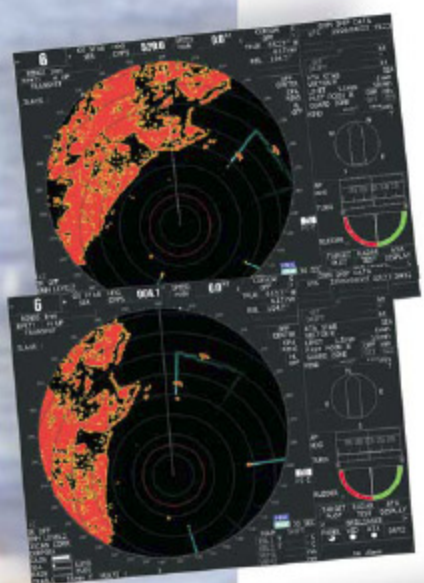
JRC Japan Radio Co., Ltd.

since 1915

JMA-5200 series – performance features

Unique features

- JMA-5200 radar series follows JRC's course with the use of high performance technology. This provides performance features never seen on this class of radar before.



Constaview™

The patented Constaview™ is realized through the use of three high-speed processors. All information gathered by the radar is fully processed within a few milliseconds before being displayed. This generates a smooth image rotation when sailing in Head-Up mode. After changing from Head-Up to North-Up, the new image is displayed without any delay caused by scanner rotation.

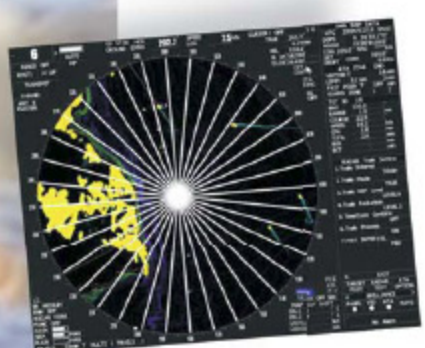
Real time Head-Up mode

Constaview™

True Trails
Constaview™ refreshes the image every 1.6mS. Despite heading changes trails are always True.

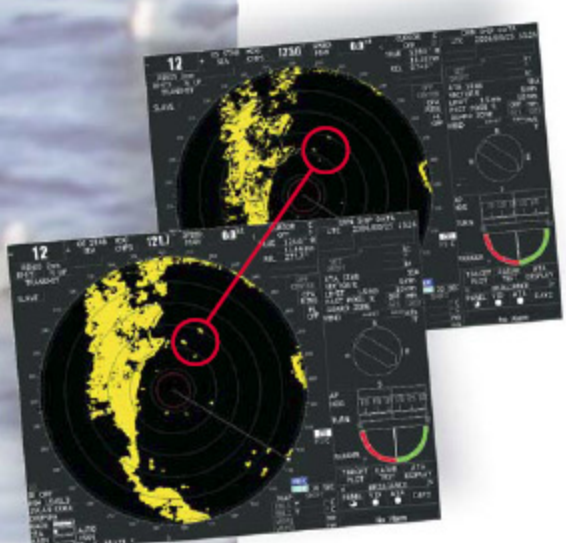
Conventional

Relative Trails
Traditional technology relies on several sweeps of the scanner to redraw the image. Trails are presented as relative.



Sector Adaptive Sea Clutter

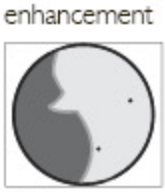
In Auto Sea Clutter mode the JMA-5200 calculates sea clutter suppression separately for the various sectors of the image. This is especially useful for coastal navigation where sea state on the coast side is different from the sea state of the open water.



Target Enhancement Function (TEF)™

This function, developed exclusively by JRC, TEF™, allows target enhancement relative to the target size. The smaller echoes are far more enlarged, giving better on-screen identification, against comparative larger echoes, such as land mass.

Without enhancement



Without enhancement smaller targets are hardly seen.

Conventional

Smaller and bigger targets are enlarged at the same level. This can result in loss of targets.

TEF™

Smaller targets are relatively far more enlarged than big targets.

JMA-5200 series
– developed for maximum ease of use

Chart-plotter option

By installing the optional NDB-34 chart plotter, full mapping facilities become available by using C-Map NT+ charts (own supply). The scale of the charts is adjusted to the radar range, allowing radar-chart overlay. The own ships trail can be memorised in 7 different colours, making various voyages easy to differentiate. A large selection of lines and marks is available for adding your own data to the charts.

Full control keyboard

Menu operation; the choice is yours!
The JMA-5200 radar series can be fully operated by using the keyboard, the internal trackball, and/or any (optional) PS2 device.

World-wide support

JRC offers comprehensive support through its offices in partnership with a world-wide network of over 270 fully trained distributors/agents (not displayed), giving support 24 hours a day, 7 days a week.

s of performance and reliability

JMA-5200 series – system flexibility

Custom display configuration

JMA-5200 radar series can be connected to JRC's 15" proprietary display. Alternatively, a range of type approved Hatteland and Melford displays may be connected.

JRC's 15" high brightness, fully dimmable display

- NWZ-164

Melford displays

- 15" MRD15SP/AC1
- 19" MRD19SP/AC1

Hatteland displays

- 15" JH-15T05 MMD-A1
- 17" JH-17T02 MMD-A1

For non-IMO vessels it is possible to connect any XGA-display from the commercial market.

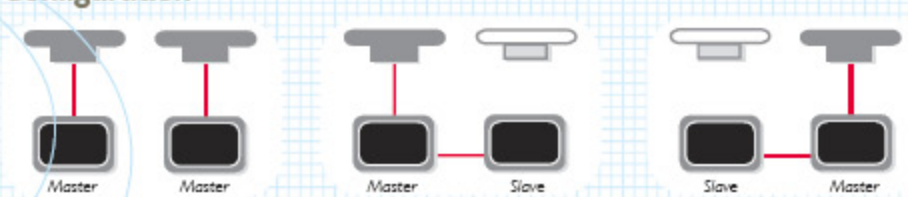
Flexible black-box configuration

The compact processing unit can be installed out of sight. It contains expansion slots for an optional ARPA function module, AIS interface and plotter unit. It is also possible to connect an optional second keyboard and display.

Simplified interswitch

Basic 'L-Type' interswitch is standard between two sets of JMA-5200, or a combination of one set JMA-5200 and one set JMA-5300.

Configuration

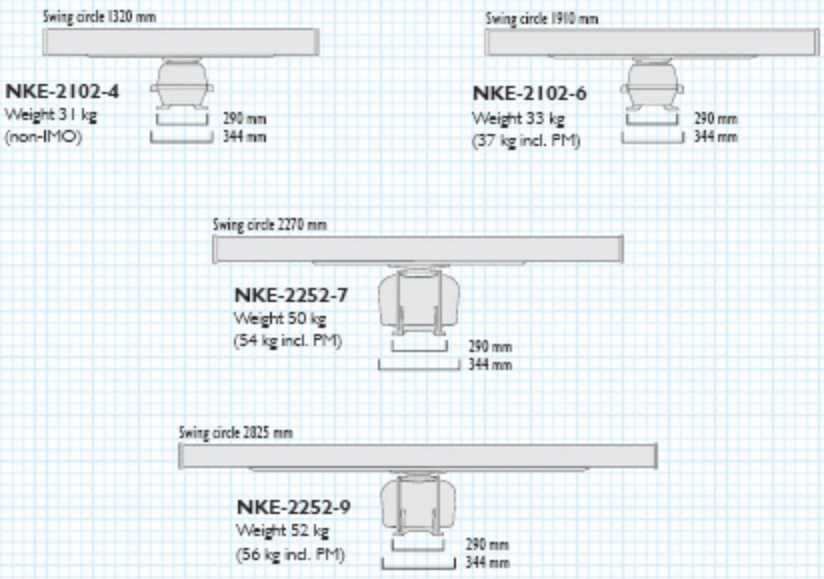


Optional cable kit required

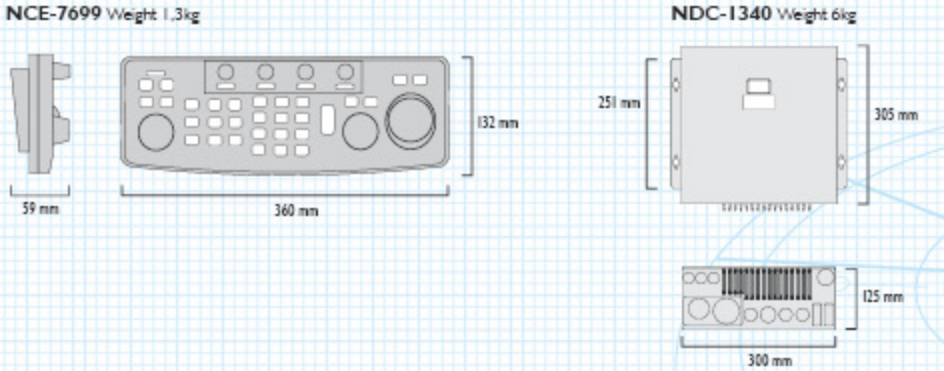
JMA-5200 series – dimensions and weights

Dimension drawings - Display unit

Dimension drawings - Scanner units



Dimension drawings - Keyboard, Processor unit



JMA-5200 series – specifications

Model		JMA-5210-4	JMA-5210-6	JMA-5220-7	JMA-5220-9
IMO compliant		X	√	√	√
Display		Color Raster Scan			
Range scale		0.125 - 96 nm			
Scanner unit					
	Model	NKE-2102-4	NKE-2102-6	NKE-2252-7	NKE-2252-9
	Antenna length	4ft.	6ft.	7ft	9ft.
	Transmitting power	10kW	10kW	25kW	25kW
	Transmitting frequency	9410MHz +/- 30MHz			
	Beam width 3db	Hor. 1.8°, Ver. 20°	Hor. 1.2°, Ver. 20°	Hor. 1.0°, Ver. 20°	Hor. 0.8°, Ver. 20°
	Rotation speed	approx. 27rpm		approx. 24rpm	
	Pulse width (receive freq.)	0.08ms/2250Hz,		0.07ms/2200Hz, 0.2ms/2200Hz,	
		0.25ms/1700Hz,		0.4ms/1400Hz,	
		0.5ms/1200Hz,		0.8ms/750Hz,	
		0.8ms/750Hz,		1.0ms/650Hz,	
		1.0ms/650Hz		1.2ms/520Hz	
	Duplexer	Circular + Diode Limiter			
	Tuning	Automatic / Manual			
	Ambient condition	Temperature: -25°C + 55°C, Relative Humidity: 93% @40°C, Maximum wind velocity 100 kts			
Processor unit					
	Model	NDC-1340			
	Bearing indication	North-Up / Course-Up / Head-Up			
	Presentation mode	RM display with True trail, RM display with Relative trail, TM display			
	EBL	2 (EBL1/EBL2) Monochrome			
	VRM	2 (VRM1/VRM2) Monochrome			
	Trail indication	Off/0.15/0.3/1/3/6/10/15/30/60-minutes and continuous			
Monitor (optional on JMA-5200BB)					
	Model	NWZ-164			
	LCD	1024x768dot (XGA)			
	Effective diameter	more than 180mm			
	Connection cable	5m (Processor-Monitor)			
Keyboard					
	Model	NCE-7699			
	Connection cable	5m (Processor-Keyboard)			
	Ambient condition	Temperature: -15°C + 55°C, Relative Humidity: 93% @40°C			
Installation cable		CFQ-6912-20 Standard L= 20m (optional up to 65m)			
Power supply (voltage)		DC 21.6 - 31.2 V			
Power consumption (at max. wind load)		approx. 300W		approx. 400W	
Optional items					
NSK unit (gyro/log interface)		NCT-4106 (required if no high speed NMEA available)			
ATA unit 30 target version		NCA-877 (ATA required for all IMO vessels)			
Interswitch cable 5m		CFQ-5251			
AIS I/F unit		NQA-4250			
Plotting function board		NDB-34			
Performance monitor		NJU-64 (required for all IMO vessels)			
Performance monitor I/F (JMA-5210 only)		MPBX40829 (required for all IMO vessels)			
Display mounting bracket for NWZ-164		MPBX42944			
2nd Station keyboard		NCE-7699			
AC Rectifier		NBA-3308			
10/15/20/30/40/50/65 mtr cable kit		CFQ-6912-10/15/20/30/40/50/65			

All specifications are subject to change without notification.

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