

JMA-2300MK2 Radar

JRC



– the JMA-2300MK2 radar offers excellent target detection in a compact design

10-inch mono display

New System-on-Chip technology

Semi-Constaview digital signal processing

AIS and MARPA+ as standard

Newly designed multi-speed scanners

Color RGB video output



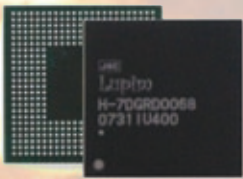
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JMA-2300MK2 series

– features

Features

The JMA-2300MK2 continues the success of its predecessor, utilizing the latest digital signal processing for excellent target identification and detection in a compact design including all-new designed scanners.



System-on-Chip

JRC engineers custom designed the System-on-Chip (SoC) inside the new JMA-2300MK2 series to be an extremely powerful tool. With such a small chip, weighing less than a sugar cube, performance remains at out high standards. At the same time, the SoC technology makes the compact radar very power efficient.

AIS and MARPA+

The new radar has the ability to display 50 AIS symbols, and 10 **MARPA+** tracking targets as standard. The high quality of the display provides outstanding target definition and discrimination. The (second generation) **MARPA+** continues JRC's successful **MARPA+** technology first found in the previous JMA-2300 radar series. Our engineers continued developing and improving the technology, until now, with **MARPA+**, manual or automatic target tracking is even more reliable.

DirecTrak

The new radar has an easy vessel searching function based on AIS, called **DirecTrak**. This function shows the nearest 50 vessels received by the AIS. If you select a vessel on the list, then range and bearing is displayed of the selected vessel.

Semi-Constaview

Based on JRC's patented technology found in the bigger radars, the new JMA-2300MK2 integrates **Semi-Constaview**.

This allows fast processing of targets, showing true trails in Head-Up mode, without interference of fixed targets, such as land or mass.



Processor built-in

Besides the display and operating keys, this compact all-in-one unit has the processor integrated, allowing for a flexible installation approach.

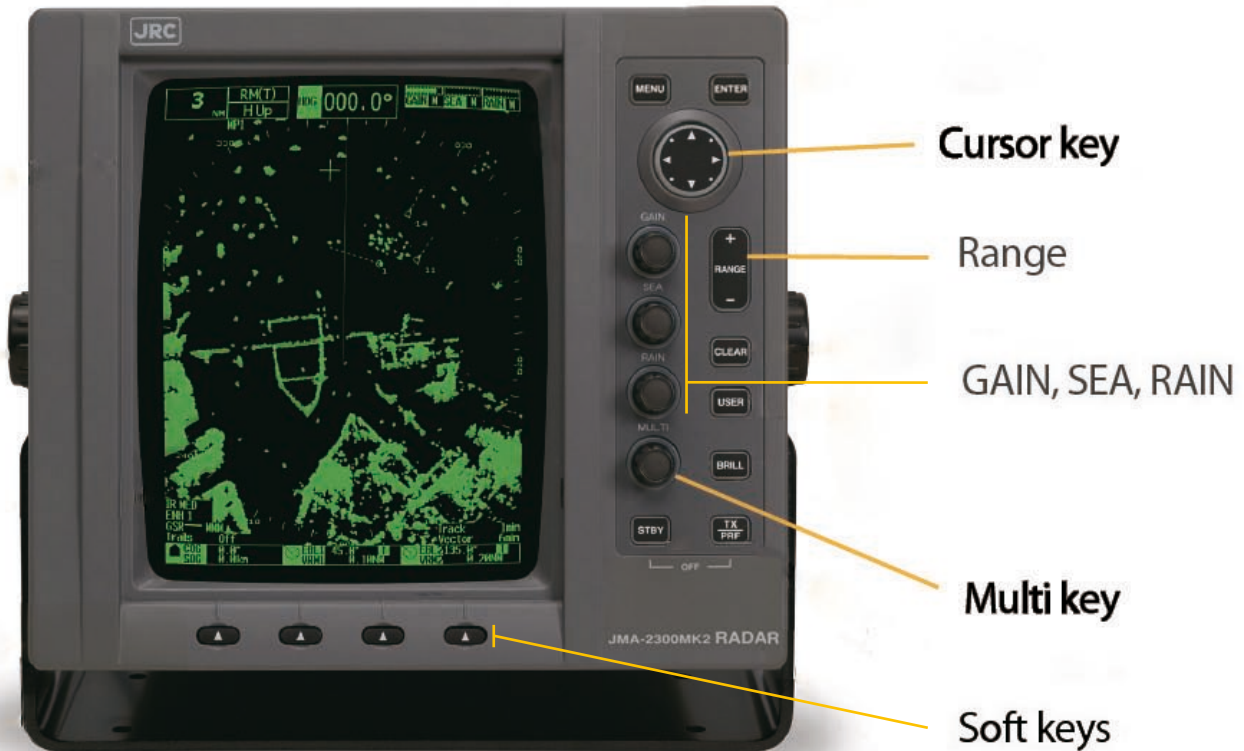
MARPA+, Semi-Constaview, DirecTrak : function name

JMA-2300MK2 series

– operation

Simple operation

Smooth and simple operation is guaranteed with the solid and responsive touch of the keys.




Multi key

This allows you immediately run through and go into all various menus by rotate and press.



Soft keys

The display unit incorporates 4 soft keys, just below the display  corresponding to the most used functions of a specific operation using the multi key. You instantly see the options you have, without losing the sight of the radar picture.

Cursor key

The cross key is a multi functional add on to the display. Move the cursor and go through menus.

Languages

This JMA-2300MK2 radar series supports the English, Japanese, Chinese, Korean, Spanish, Portuguese, French and Norwegian.



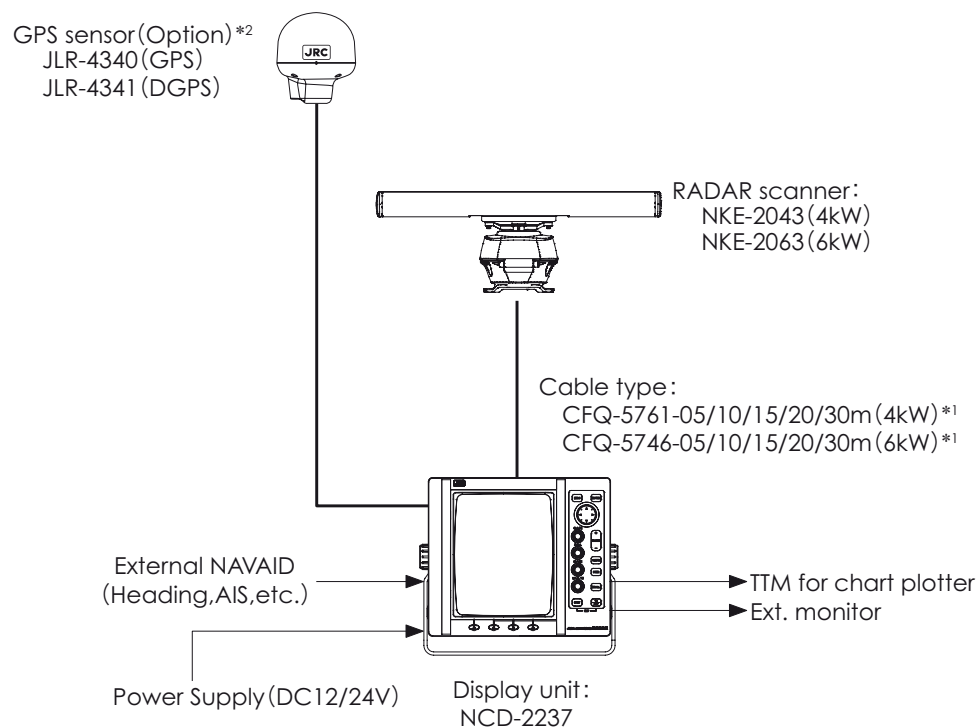
SART

The radar is capable of picking up SART signals, enabling an immediate response for search and rescue efforts.

JMA-2300MK2 series

– configuration

System diagram



*1: Available to be used 5/10/15/20m at DC12V power input.

*2: Available direct connection with optional JRC GPS sensors.

What's standard?

- Display
- Scanner (4 or 6kW)
- Power cable (2m)
- Scanner cable
- Length 4kW: 15m, 6kW: 20m
- Sun cover
- Spare parts
- Manuals

What's optional?

- | | |
|----------------------|-------------------------------------|
| · Rectifier | NBD-865 |
| · 4kW scanner cable | CFQ-5761-05/10/20/30 |
| | <i>Cable connector at both ends</i> |
| · 6kW scanner cable | CFQ-5746-05/10/15/30 |
| | <i>Cable connector at both ends</i> |
| · Ext. monitor cable | CFQ-5762 |
| · GPS compass | CFQ-5469 JLR-20/21/30/31 |



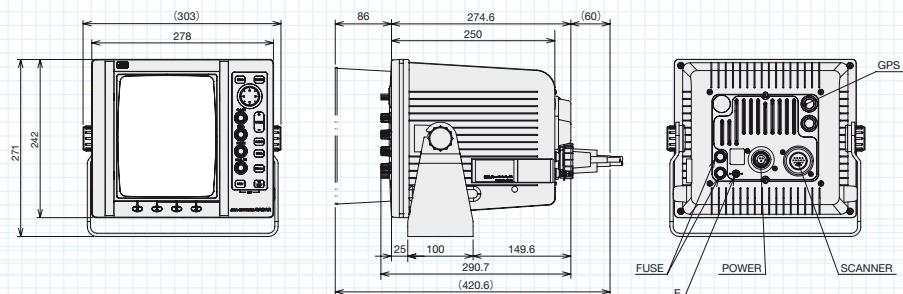
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JMA-2300MK2 series

– dimensions

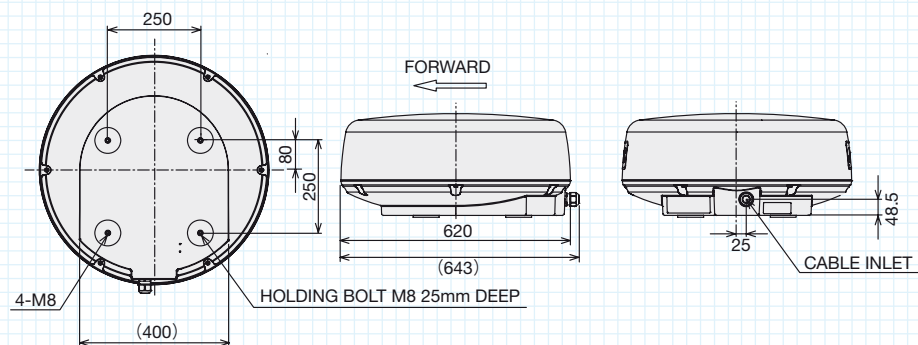
Display unit

NCD-2237 Mass Approx.8kg

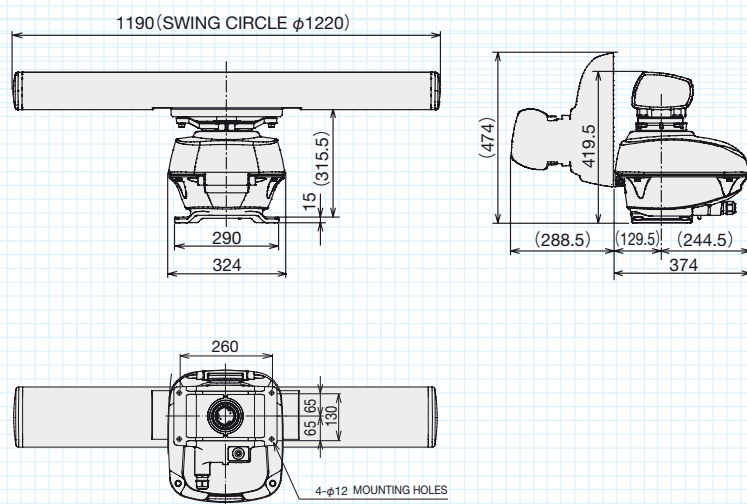


Scanner unit

4kW NKE-2043 Mass Approx.10kg



6kW NKE-2063 Mass Approx.21kg



JMA-2300MK2 series

– specifications

Name	Marine Radar	
Model	JMA-2353	JMA-2354
Display	Raster scan PPI	
Scanners		
Model	NKE-2043	NKE-2063
Transmitting frequency	X-band (9410±30MHz)	
Transmitting power	4kW	6kW
Scanner type	radome	open
Antenna length	2ft	3.9ft
Rotation speed	16-48rpm	16-27rpm
Beam width 3dB	H:4°, V:25°	H:2°, V:30°
Pulse width/repetition freq.	0.08μs/4000Hz 0.08μs/2250Hz 0.13μs/1700Hz 0.25μs/1700Hz 0.5μs/1200Hz 0.8μs/750Hz 1.0μs/650Hz	
Maximum range	48NM	72NM
Range scale	0.125, 0.25, 0.5, 0.75, 1.5, 3, 6, 12, 24, 48 NM	0.125, 0.25, 0.5, 0.75, 1.5, 3, 6, 12, 24, 48, 72 NM
Display unit		
Model	NCD-2237	
Axial resolution	less than 30m	
Minimum detection range	less than 40m	
Bearing accuracy	less than ±1°	
Display	10-inch Mono CRT display (640 by 480 pixels)	
Effective diameter	121mm	
Presentation mode	RM: North / Head / Course-up TM: North / Course-up	
Gain	Auto / manual	
Sea / rain	Auto / manual	
Trail indication	OFF, 15s, 30s, 1min, 2min, 3min, 6min, 10min, 15min, All	
Off center	within 66% of PPI radius	
Barge icon	Available	
MARPA+ acquisition mode	Auto / Manual	
MARPA+ targets	10 targets	
MARPA+ tracking	20NM	
MARPA+ info	True, Bearing, Range, True course, True speed, CPA, TCPA	
Vector mode and length	True/relative vector, adjustable from 1 to 60 minutes	
Guard zone	2 zones	
Alarms	CPA/TCPA, New Target, Lost, System Error	
AIS targets (built-in)	50 targets	
AIS info	MMSI, call sign, ship's name, COG, SOG, CPA, TCPA, heading, distance, longitude/latitude, status etc	
Input (navaid)	GGA, GNS, GLL, RMC, VTG, VBW, VHW, THS, HDT, HDG, HDM, DPT, DBT, MTW, ROT, RSA, VDM, VDO, ALR, MWV, VWT, VWR	
Input (heading)	IEC61162 (4800bps/38400bps - THS, HDT, HDG, HDM) JRC-NSK format (JLR-20/21/30/31)	
Input (speed)	IEC61162 (4800bps - VBW, VHW)	
Output	RSD, OSD, TTM, TLL, TTD, GGA, RMC, GNS, GLL, VTG, THS, HDT	
Contact out	1 for external buzzer	
Ext. monitor	Additional cables H frequency:31.51kHz, V frequency:58.9Hz, Dot clock:30MHz	
Power supply	DC12/24V -10/+30%	
Power consumption	Approx60W	typ.:Approx85W maximum wind:Approx180W
Ambient conditions	Temperature: -25° to +55° (Scanner) / -15° to +55° (Display unit) Relative humidity 0% to 93% non-condensing IP code: IP26 (Scanner) / IPx5 (Display front panel)	
Option		
Rectifier	NBD-865	
Scanner cable	CFQ-5761-xx(xx: 05/10/20/30 m)*1	CFQ-5746-xx(xx: 05/10/15/30 m)*1
RGB cable	CFQ-5762	
Connection cable for JLR-20/21/30/31	CFQ-5469	

* 1 : Maximum cable length as 20m at DC12V operated.

• Specifications may be subject to change without notice.

For further information, contact:



Since 1915

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ISO9001, ISO14001 Certified