

Radar

JMA-3400 series



- Lightweight design featuring a 12.1-inch fully dimmable display
- Chart underlay (NAVIONICS+)
- Real Time Head-up Function (Constaview)
- Variety of compact X-band scanner units



Category

>500 GT



Workboats



Fishing



Yachting



Marine Electronics &
Satellite Communications
www.mackaymarine.com

jrc-world.com

Features |

The newest addition to the JRC radar portfolio is the JMA-3400 series. This lightweight radar has a user-friendly operation system and is specially designed for fishing boats, non-international trading vessels and workboats. The system can be completed by choosing from a variety of 2 ft, 3.9 ft, 4 ft and 6 ft scanners.



- 12.1-inch fully dimmable display
- High-visibility by glass-bonded display
- Chart underlay (NAVIONICS+)
- Real Time Head-up Function (Constaview)
- Variety of compact X-band scanner units
- High speed version available
- Brushless antenna motors for extended lifetime
- Light-weight design
- Latest technologies included
- Multi-Language



- USER1 / USER2
User can register often-use functions
- Dedicated Buttons for EBL/VRM
- Easy-to-Use "Multi" Button
- USB port / SD card
Information can be saved to USB
Memory Mouse can be connected

Display |

The 12.1-inch dimmable LCD provides excellent visibility and durability. It reduces reflection of sunlight and shows clear images of even the smallest targets. The ergonomic keyboard offers user customizable keys. Programming the USER keys give you instant access to your favourite functions.

97.1 mm (3.82 inch)

130 mm (5.12 inch)

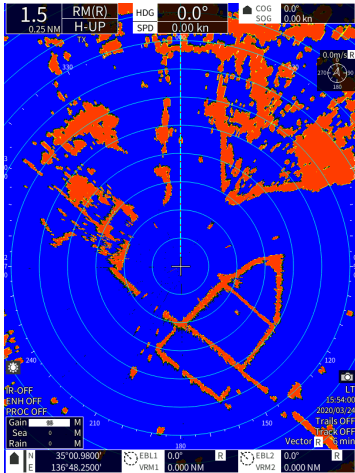


Competitors use approx 130 mm depth for a 12.1 class radar

The newly developed thin body is reduced till only 97.1 mm depth, so that it can be installed on small vessels where effective use of the limited space needs to be taken into account.

Radar overlay |

By displaying the radar image and the NAVIONICS+¹ chart in an overlapping manner, you can grasp the relationship between the radar image and the coastlines simultaneously.



Daytime mode



Daytime mode (with NAVIONICS+)



Night mode (with NAVIONICS+)

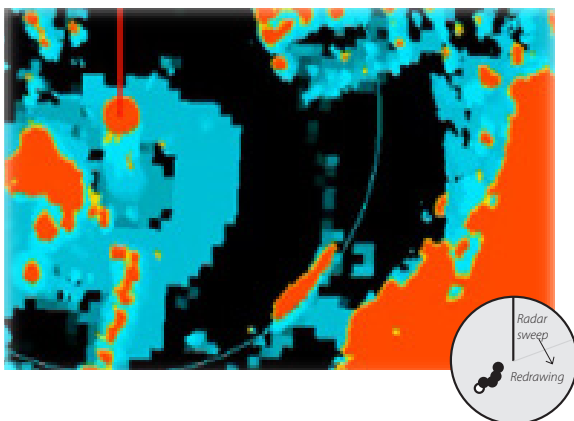
¹ Navionics chart cartridge not included. Price pending on area and content, please contact your dealer for further information.

Constaview |

Naturally our patented real time Constaview functionality is incorporated into the new radar system, processing the radar image before being displayed, generating a smooth rotation when sailing in Head-Up mode. To use real-time Head-Up, own ships position information (GPS connection) and input of heading information (compass connection) is required. When changing to North-Up, the new radar image is displayed without any delay caused by the scanner rotation. By displaying the other ships moving with a tail and displaying the fixed objects such as land and buoys so that they do not pull the tail, the movements and fixed objects of other ships can be accurately read.

Real-time Head-Up mode

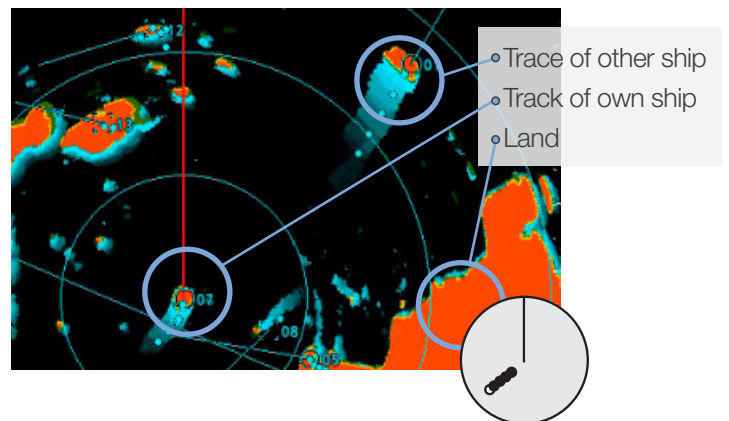
Conventional



Relative Trails

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

Constaview



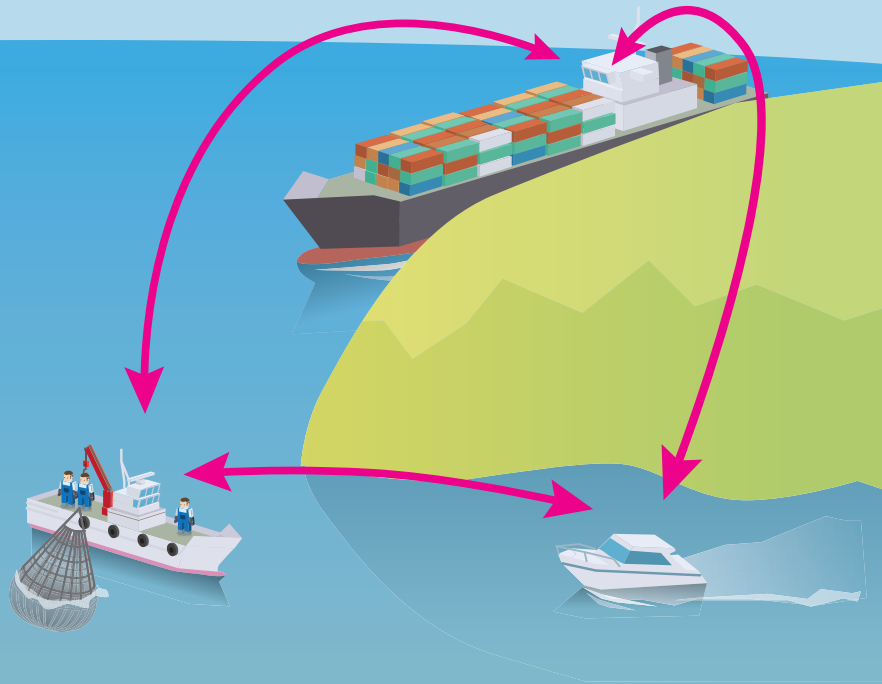
True Trails

Constaview refreshes the image every 16 ms. Despite heading changes trails are always true.

AIS

By connecting with AIS, it is possible to display ships on the island's shadow where radar waves do not reach, enabling safer navigation.

In order to use the AIS display function, it is necessary to input own ships position information (GPS connection), heading information (compass connection) and AIS information.



The JMA-3400 series is equipped with target tracking (TT) function and AIS display function. To use the target tracking function, input of heading information (compass connection) is required.



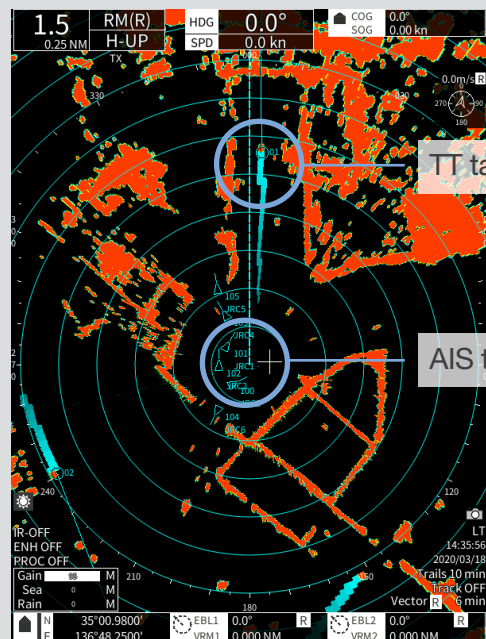
AIS JHS-183



TT List	CPA[NM]	TCPA[min]	BRG[°]	RNG[NM]	CRS[°]	SPD[kn]
No.01	---	---	2.6	1.676	360	16.91
No.02	---	---	234.9	1.496	161.3	9.50

TT List Close

Target tracking can be up to 30 ships.



TT target

AIS target

AIS List		AIS NO.100	
100	JRC0003	377470002	JRC3
101	JRC0001	377470000	JRC1
102	JRC0002	377470001	JRC2
103	JRC0004	377470008	JRC4
104	JRC0006	377470010	JRC6
105	JRC0005	377470009	JRC5

EBL1 0.0° R VRM1 0.000 NM

EBL2 0.0° R VRM2 0.000 NM

Up to 100 AIS displays can be displayed.

Scanners |

A wide range of X-band scanners, varying from small and light radome type to open array type, are available depending on installation space and required performance, all with exceptionally reliable target detection capabilities. The latest leading technologies with a set of advanced features are integrated, allowing the radar to run images faster and more efficient than ever before.



The brushless antenna motors in the scanners guarantee for extended lifetime.

In the box

- | | | | |
|--------------------|----------------|------------------------|-------------|
| • Scanner unit | To be selected | • Installation Cable | CFQ-6912-20 |
| • Scanner radiator | NAX-16B-6 | • English Manuals | 7ZPRD1007 |
| • Display unit | NCD-2364 | • Standard spare parts | |

Optional

- | | | | |
|------------------------|-------------|------------------------|-------------|
| • Extension cable - 5m | CFQ-9002 | • 20m scanner cable | CFQ-6912-20 |
| • Data cable | CFQ-5374 | • 30m scanner cable | CFQ-6912-30 |
| • 2m Data cable | CFQ-7765 | • Protector rubber cap | MTT317838 |
| • 5m scanner cable | CFQ-6912-5 | • Simulator cable | CFQ-8879 |
| • 10m scanner cable | CFQ-6912-10 | • AC-DC Rectifier | NBD-865 |
| • 15m scanner cable | CFQ-6912-15 | • Power Supply Unit | NBA-5111 |

Tech Specs |

Display unit

Display unit

NCD-2364 Weight 5 kg (11.02 lbs)



320 mm (12.60 in)



320 mm (12.60 in)



97.1 mm (3.82 in)

Scanners

2 ft | 16-48 rpm

NKE-2043 Weight 10 kg (22.05 lbs)



620 mm (24.41 in)

3.9 ft | 16-27 rpm | 27-48 rpm HS

NKE-2063A/HS Weight 21 kg (46.30 lbs)

Swing circle 1220 mm (48.03 in)



324 mm (12.76 in)

4 ft | 16-27 rpm | 27-48 rpm HS

NKE-2103-4/4HS Weight 34 kg (74.96 lbs)

Swing circle 1320 mm (51.97 in)



348 mm (13.70 in)

6 ft | 16-27 rpm | 27-48 rpm HS

NKE-2103-6/6HS Weight 36 kg (79.37 lbs)

Swing circle 1910 mm (75.20 in)



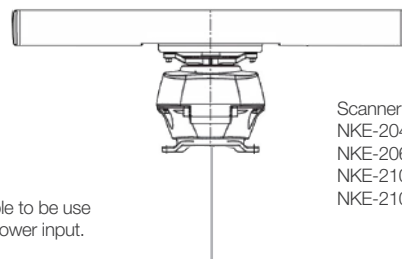
348 mm (13.70 in)

System diagram

The radar can be connected to various equipment and sensors onboard a ship. JRC's straightforward configuration assures continuous performance.

Installation cable¹
 CFQ-6912-5 (5 m)
 CFQ-6912-10 (10 m)
 CFQ-6912-15 (15 m)
 CFQ-6912-20 (20 m)
 CFQ-6912-30 (30 m)

¹ 4 kW, 6 kW model available to be use 5/10/15/20 m at 12 VDC power input.



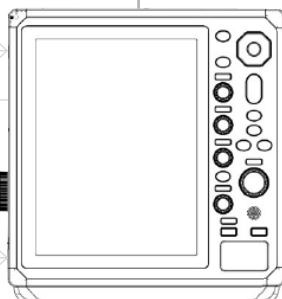
Scanner unit
 NKE-2043 (4 kW)
 NKE-2063A/HS (6 kW)
 NKE-2103-4/4HS (10 kW)
 NKE-2103-6/6HS (10 kW)

NMEA 0183 compatible equipment: 3 ports

Alarm output: 1 port

Power supply (12/24 VDC)²

² 12 V/24 V: 4/6 kW, 24 V: 6 kW-HS, 10 kW/10 kW-HS



Display unit: NCD-2364

NMEA 2000 connection: 1 port

JRC GPS connection: 1 port

DVI connection (external monitor): 1 port

USB connection: 2 ports
 Front: for data storage | Back: for mouse and trackball

SD card connection (for map): 1 port

Specifications

JMA-3404

JMA-3406

JMA-3406HS

JMA-3411-4

JMA-3411-HS

JMA-3411-6

JMA-3411-6HS

Model		Non-SOLAS					
IMO compliant							Non-SOLAS
Frequency							X-band (9410 MHz)
Range scale							0.0625, 0.125, 0.25, 0.5, 0.75, 1, 1.5, 2, 3, 4, 6, 8, 12, 16, 24, 32, 48, 64, 72 NM ³
Type	Dome						Open
Scanner							
Model	NKE-2043	NKE-2063A	NKE-2063AHS	NKE-2103-4	NKE-2103-4HS	NKE-2103-6	NKE-2103-6HS
Antenna length	2 ft.		3.9 ft.		4 ft.		6 ft.
Transmitting power	4 kW		6 kW			10 kW	
Beam width 3 dB	Hor. 4° Ver. 2.5°		Hor. 2° Ver. 30°		Hor. 1.9° Ver. 20°		Hor. 1.2° Ver. 20°
Rotation speed	16-48 rpm	16-27 rpm	27-48 rpm	16-27 rpm	27-48 rpm	16-27 rpm	27-48 rpm
Pulse width / repetition frequency	0.08 μs/4000 Hz ⁴ , 0.08 μs/2250 Hz, 0.13 μs/1700 Hz ⁴ , 0.25 μs/1700 Hz, 0.5 μs/1200 Hz, 0.8 μs/750 Hz, 1.0 μs/650 Hz						
Power consumption (at max wind load)	60 W	180 W	230 W	210 W	360 W	210 W	360 W

³ 72 NM is only 6 and 10 kW. | ⁴ Only JMA-3404 and JMA-3406/HS.

Presentation	
Screen size and resolution	12.1-inch SVGA color LCD,600x800 dot
Presentation mode	RM:North-UP / Head-UP / Course-UP TM:North-UP / Course-UP
Gain	Auto/manual
Anti SEA/RAIN clutters	Auto/manual
Trail indication	OFF,15 s,30 s,1 min,2 min,3 min,4 min,5 min,6 min,10 min,15 min,All
Off center	2/3 radius of PPI
Target data and AIS	
Tracking target capacity	30 targets
Guard zone	2 zone (Auto TT: 1 zone)
Target data	True bearing,range,true course,true speed,CPA,TCPA
Alarms	CPA/TCPA,new target,lost,system error
AIS target capacity	100 targets

Interface	
Chartography	Navionics+ on SD cartridges
NMEA 0183	3 ports
NMEA 2000	1 port
JRC GPS	1 port
DVI connection	1 port
USB connection	2 ports
NMEA 0183 input sentence	ALR, DBT, DPT, GGA, GLL, GNS, HDG, HDM, HDT, MTW, MWV, RMA, RMC, ROT, RSA, THS, VBW, VDO, VDM, VHW, VTG, VWT, VWR
NMEA 0183 output sentence	GGA, GLL, GNS, HDT, OSD, RSD, RMC, TLL, TTD, TTM, THS, VTG



ALPHATRON
Marine



www.jrc-world.com

Centers of Excellence

JRC (Japan Radio Co.,Ltd)
1-7-32 Tatsumi, Koto-ku
Tokyo 135-0053
Japan
+81 3 5534 7800

JRC Shanghai Co.,Ltd.
Floor 9-A Building C2
Shanghai International Trade Center
1599 New Jinqiao Road
Pudong, Shanghai, China 201206
+86 21 2024 0607

JRC/ProNav AS
Hovlandsveien 52
4374 Egersund
Norway
+47 5146 4300

JRC/Alphatron Marine B.V.
Schaardijk 23
3063 NH Rotterdam
The Netherlands
+31 10 453 4000

JRC South East Asia
59 S, Tuas South Avenue
Ho Lee Industrial Development
637418 Singapore
Singapore
+65 6863 0335

JRC Americas
1205 Butler Road
TX 77573 Houston
United States of America
+1 281 271 4600



**Marine Electronics &
Satellite Communications**
www.mackaymarine.com

Mackay Marine – High Seas

+1 281 479 1515 marinesales@mackaymarine.com

Mackay Communications, Satellite Solutions

+1 919 850 3100 satserv@mackaycomm.com

Mackay Marine Canada

+1 902 469 8480 sales.canada@mackaymarine.com

Mackay Marine Alaska & Pacific Northwest

+1 206 282 8080 ballard@mackaymarine.com