JMA-3300
Radar

– JRC's new radar incorporates the latest leading technologies

10.4-inch ultra bright LCD
New System-on-Chip technology
Semi-Constaview digital signal processing
AIS and MARPA+ as standard
High speed version available

**JRC** *Japan Radio Co., Ltd.*

JMA-3300 series – features

Features

The JMA-3300 series is JRC's newest radar, featuring a 10.4-inch ultra bright LCD, and incorporates the latest digital signal processing for excellent target identification and detection in a compact design.
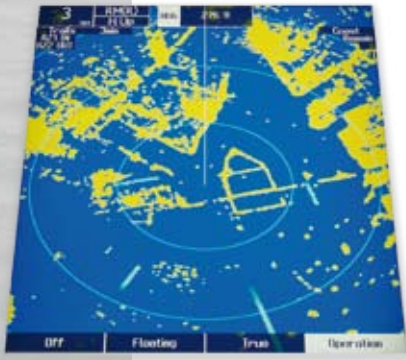
Display

The tough glass bonded LCD is backlit by white LED's giving 1000cd/m^2 of brightness, making the radar image amazingly sharp. A feature not previously found on this class of radar.
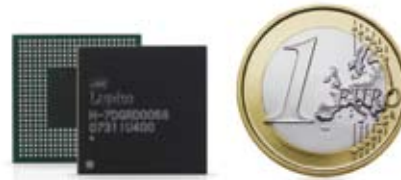
System–on–Chip

JRC engineers custom designed the System-on-Chip (SoC) inside the new JMA-3300 series to be an extremely powerful tool. With such a small chip, weighing less than a sugar cube, performance remains at our 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.
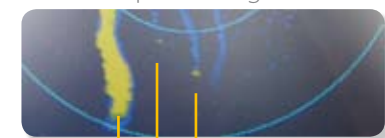
Without SoC processing

With SoC processing

Clear land echo

Jet ski

Small boat

Semi-Constaview

Based on JRC's patented technology found in the bigger radars, the new JMA-3300 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.

Sea trials

With Mount Fuji in the background, JRC engineers successfully tested the new JMA-3300 radar in Suruga Bay. See on the left side actual photos results of our SoC technology. Land echoes are clearly visible and smaller echoes are far more enlarged than bigger echoes, giving a better on-screen separation and identification.
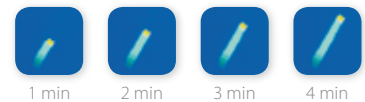
JMA-3300 series
– easy user interface

Simple operation

Smooth and comfortable operation is guaranteed with the solid and responsive feel of the keys. A dedicated jog-dial is conveniently integrated as well as the function keys for one-touch access to GAIN, SEA and RAIN. The JMA-3300 also incorporates 4 soft-key switches just below the display that can be assigned by the user. Here you can specify commonly used functions, making it even simpler to navigate.

Cursors keys

Range up and down

One-touch access to GAIN, SEA and RAIN

Jog dial

USB memory

4 soft-keys "shortcuts"

Trails

Other ship's movement and speed can be monitored from length and direction of their trails, primarily serving for collision avoidance. It integrates four different trail length modes, which will show a ship's course instantly, a unique operational feature that allows for more flexibility.

1 min   2 min   3 min   4 min

Transparent menus

With the transparent (pop-up) windows, you can navigate through menus or view required data, such as own ship data or cursor data, without losing the complete radar image.

Languages

The JMA-3300 series allows you to switch between English, Japanese, French, German, Spanish, Italian, Portuguese and Norwegian.

USB

Updating your radar with the latest software is made easy with a conveniently integrated USB port on the front side of the display.
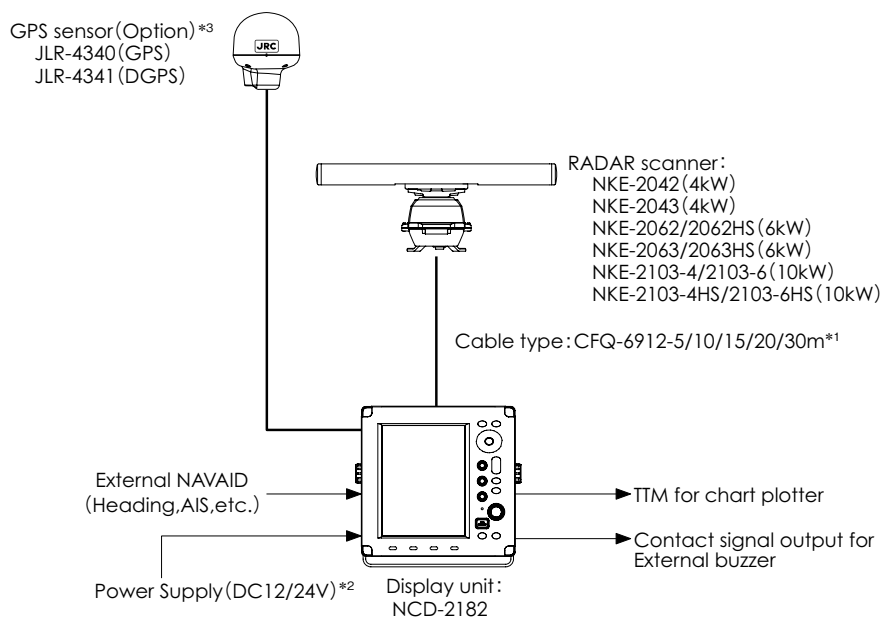

MARPA+, Semi-Constaview, DirecTrak : function name

Chip technology

JMA-3300 series
– configration

System diagram

GPS sensor(Option)*3
JLR-4340(GPS)
JLR-4341(DGPS)

RADAR scanner:
NKE-2042(4kW)
NKE-2043(4kW)
NKE-2062/2062HS(6kW)
NKE-2063/2063HS(6kW)
NKE-2103-4/2103-6(10kW)
NKE-2103-4HS/2103-6HS(10kW)

Cable type: CFQ-6912-5/10/15/20/30m*1

External NAVAID
(Heading,AIS,etc.)

TTM for chart plotter

Contact signal output for
External buzzer

Power Supply(DC12/24V)*2   Display unit:
NCD-2182

*1: 4kW, 6kW model available to be use 5/10/15/20m at DC12V power input.
*2: 12V/24V: 4/6kW, 24V: 6kW-HS,10kW/10kW-HS
*3: Available direct connection with optional JRC GPS sensers.

What's in the box

· Display
· Scanner
· Cables
· Spare parts
· Operation guide/manual
· Installation manual

Which cables
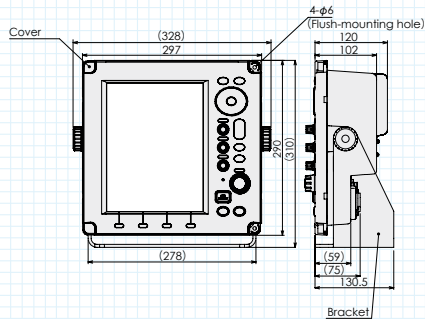· Display to scanner   5/10/15/20/30 m
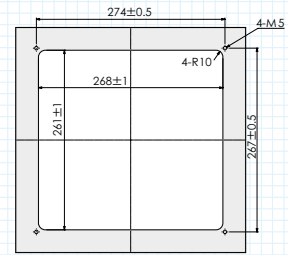
Options
· Display cover

JMA-3300 series
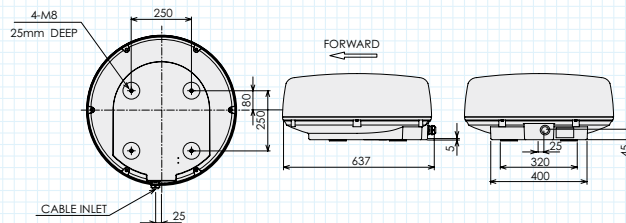# – dimensions

Display unit

NCD-2182 Mass Approx. 5 kg

Cover
(328)
297
120
102
4-φ6
(Flush-mounting hole)
290
(310)
(278)
(59)
(75)
130.5
Bracket

Flush mounting hole

274±0.5
268±1
261±1
267±0.5
4-M5
4-R10

Scanner unit

4kW NKE-2042 Mass Approx. 10.5 kg

4-M8
25mm DEEP
250
180
250
FORWARD
637
5
25
320
400
45
CABLE INLET
25

4kW NKE-2043 Mass Approx. 10 kg

250
180
250
FORWARD
620
(643)
25
48.5
4-M8
400
4-M8
HOLDING BOLT M8 25mm DEEP
CABLE INLET
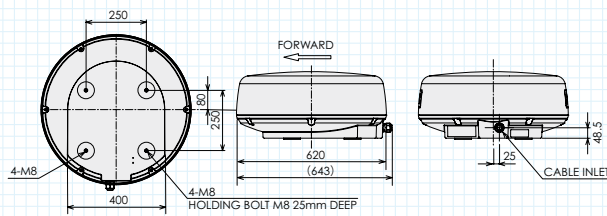
6kW NKE-2062/2062HS Mass Approx. 24 kg

1190 (SWING CIRCLE φ1220)
290
344
14
(525)
432
(317.5)
(192)
438
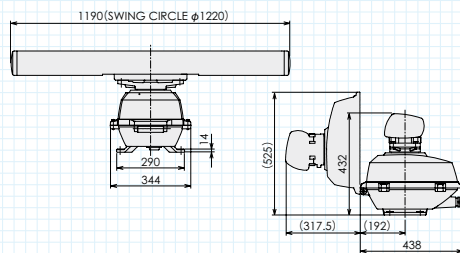
6kW NKE-2063/2063HS Mass Approx. 21 kg

1190 (SWING CIRCLE φ1220)
290
324
(31.5.5)
5
(474)
419.5
(288.5)
(29.5)
(244.5)
374
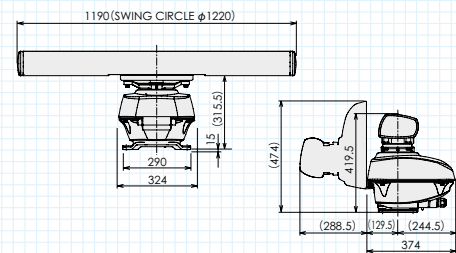
10kW NKE-2103-4/2103-4HS NKE-2103-6/2103-6HS Mass 4ft = Approx. 34 kg / 6ft = Approx. 36 kg

6FT : 1880 (SWING CIRCLE φ1910)
4FT : 1285 (SWING CIRCLE φ1320)
290
348
(14)
(552.2)
(337)
206
461
457.4
(58.7)
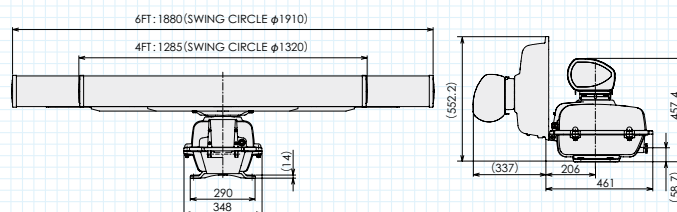
JMA-3300 series – specifications

Name	Marine Radar									
Model	JMA-3314	JMA-3334	JMA-3316	JMA-3316HS	JMA-3336	JMA-3336HS	JMA-3340-4	JMA-3340-4HS	JMA-3340-6	JMA-3340-6HS
Display	color raster scan PPI									
Scanners										
Model	NKE-2042	NKE-2043	NKE-2062	NKE-2062HS	NKE-2063	NKE-2063HS	NKE-2103-4	NKE-2103-4HS	NKE-2103-6	NKE-2103-6HS
Transmitting frequency	X-band (9410MHz ±30MHz)									
Transmitting power	4kW		6kW				10kW			
Scanner type	radome		open							
Antenna length	2ft		3.9ft				4ft		6ft	
Rotation speed	16-48rpm		16-27rpm	27-48rpm	16-27rpm	27-48rpm	16-27rpm	16-48rpm	16-27rpm	16-48rpm
Beam width 3dB	H: 4°, V: 25°		H: 2°, V: 30°				H: 1.8°, V: 20°		H: 1.2°, V: 20°	
Pulse width/repetition freq.	0.08μs/2250Hz 0.25μs/1700Hz 0.5μs/1200Hz 1.0μs/650Hz	0.08μs/4000Hz 0.08μs/2250Hz 0.13μs/1700Hz 0.25μs/1700Hz 0.5μs/1200Hz 0.8μs/750Hz 1.0μs/650Hz	0.08μs/2250Hz 0.25μs/1700Hz 0.5μs/1200Hz 1.0μs/650Hz		0.08μs/4000Hz 0.08μs/2250Hz 0.13μs/1700Hz 0.25μs/1700Hz 0.5μs/1200Hz 0.8μs/750Hz 1.0μs/650Hz		0.08μs/2250Hz 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-2182									
Axial resolution	less than 30m									
Minimum detection range	less than 40m									
Azimuth resolution	less than ±1°									
Display	Glass bonded 10.4-inch LCD display (640 by 480 pixels) 1000cd/m² by white LED backlight									
Effective diamater	more than 150mm									
Presentation mode	RM: North / Head / Course-up TM: North / Course-up									
Gain	Auto / manual									
Sea / rain	Auto / manual									
Trail indication	4 stages (example 1 minute to 1 hour or continuous)									
Off center	within 66% of PPI radius									
Barge icon	Available									
MARPA+ acquisition mode	Auto / manual									
MARPA+ targets	10 targets									
MARPA+ tracking	20NM									
MARPA+ info	To be selected from true heading, distance, COG, SOG, 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	To be selected from 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, VWT, VWR									
Input (heading)	IEC61162 (4800/38400bps - THS, HDT, HDG, HDM) JRC-NSK format (JLR-20/30) Gyro-sync/step (360x, 180x, 90x, 36x)*¹									
Input (speed)	IEC61162 (4800bps - VBW, VHW) Log-sync (360x, 180x, 90x, 30x)*¹ Log-pulse (800, 400, 200, 100)*¹									
Output	RSD, OSD, TTM, TLL, TTD, GGA, RMC, GNS, GLL, VTG, THS, HDT									
Contact out	1 for external buzzer									
Power supply	DC12/24V −10/+30%*²						DC24V −10/+30%			
Power consumption	Approx60W		typ.: Approx85W maximum wind: Approx230W		typ.: Approx85W maximum wind: Approx180W	typ.: Approx85W maximum wind: Approx230W	typ.: Approx100W maximum wind: Approx360W			
Ambient conditions	Temperature: −25° to 55°C (scanner) / −15° to 55°C (display unit) Relative humidity 0% to 93% non-condensing IP code: IP26 (scanner) / IP55 (display front panel)									
Option										
Installation cable(scanner to display unit)	CFQ-6912-xx (xx: 5/10/15/20/30 m)*²									
Gyro interface unit	NCT-4106A									
Display cover	MTV304869									
Connection cable for JLR-20 (10m)	CFQ-5469									

*1：Optional Gyro interface unit NCT-4106A required.   *2：Maximum cable length as 20m at DC12V operated

• Specifications may be subject to change without notice.

For further information, contact:

JRC
Since 1915

Japan Radio Co., Ltd.

URL http://www.jrc.co.jp/eng/

Main Office: Fujisawa bldg. 30-16, Ogikubo 4-chome
Suginami-ku, Tokyo 167-8540, Japan
Telephone: +81-3-6832-1816
Facsimile: +81-3-6832-1845

Overseas Branches : Seattle, Amsterdam, Athens, Manila
Liaison Offices : Taipei, Jakarta, Singapore, Hanoi,
Shanghai, Hamburg, New York