
JMA-9172-SA

Solid State Radar

JRC



– JRC's new S-band Solid State radar represents the next generation of unparalleled performance

Target detection unlike anything before
No magnetron ensures low maintenance cost
First class clutter processing
Constaview™ and TEF™ as standard
Free from tuning and pre-heating

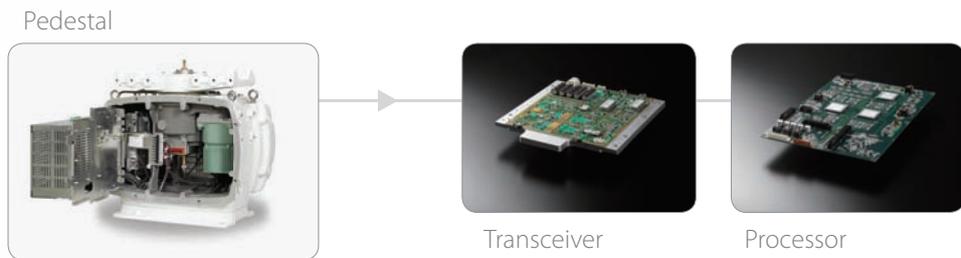
JRC *Japan Radio Co., Ltd.*

JMA-9172-SA

– features

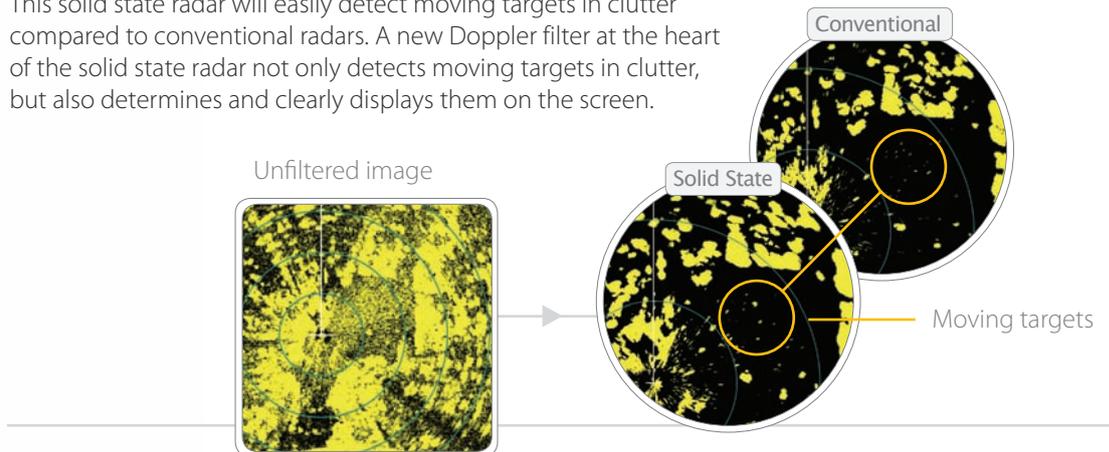
Features

JRC's new IMO approved JMA-9172-SA, S-band Solid State radar, represents a new generation of marine radars, utilizing advanced signal processing technology to display targets with high accuracy while using a stabilized high-power solid state transceiver. The advanced radar functions and operation are based on JRC's successful JMA-9100 radar series.



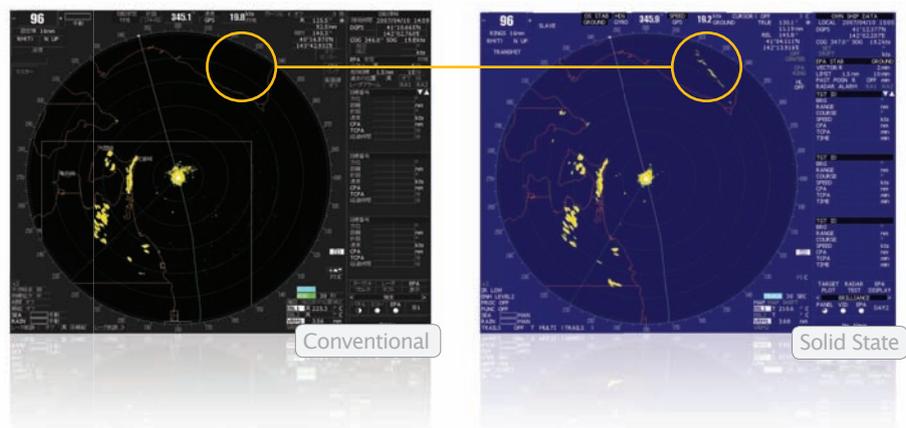
Moving target detection

This solid state radar will easily detect moving targets in clutter compared to conventional radars. A new Doppler filter at the heart of the solid state radar not only detects moving targets in clutter, but also determines and clearly displays them on the screen.



Long range target detection

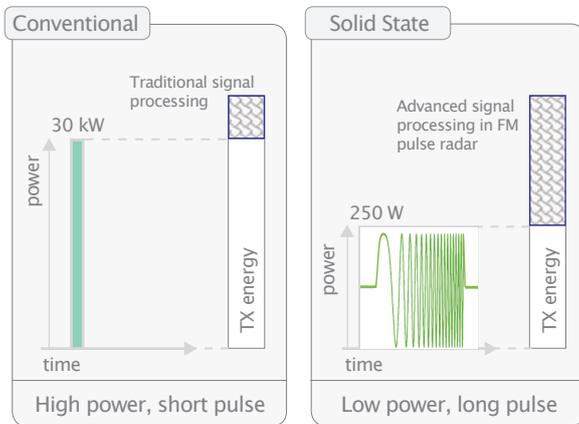
Advanced pulse compression with the 250 W solid state transceiver not only improves short range performance, but dramatically improves long range target detection while using only 1/100 of the power of a conventional radar.



JMA-9172-SA

– advanced technology

Why 30kW & 250W appear equal?



Advanced signal processing

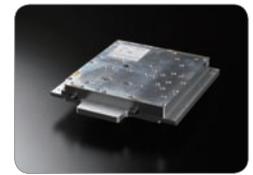
JRC's new solid state architecture integrates an advanced signal processing technology that detects and displays information at a new level.

These dedicated signal processing circuits are producing higher capability than a magnetron radar, and greatly exceeding detection performance.

The solid state has a (peak) power of 250 W, superseding a typical marine radar in which the magnetron has a 30 kW power output.

Low maintenance transceiver

The radar integrates a highly reliable solid state transceiver in place of a life limited magnetron. The solid state radar provides higher reliability and performance and will keep maintenance costs to a minimum.



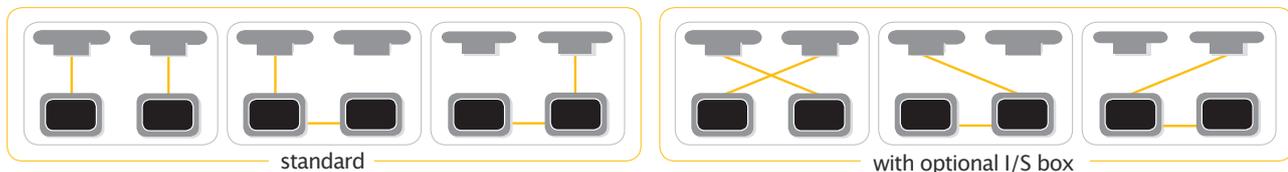
Transceiver features protected enclosure

No tuning and pre-heating

The transceiver, by virtue of its solid state design, requires no tuning and pre-heating. Transmission is available immediately after the power is turned on.

Interswitching

Optional interswitching (up to 8 displays) is possible with the JRC JMA-9100 series.



Remote Maintenance System (RMS)

JRC has the ability to cost-effectively monitor performance and functionality of the JMA-9172-SA while at sea, significantly reducing downtime and maintenance costs. [More at \[jrc-europe.com/support\]\(http://more.at.jrc-europe.com/support\)](http://more.at.jrc-europe.com/support)

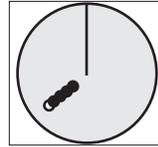
JMA-9172-SA

– unique functions

Constaview™

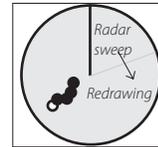
The second generation and patented Constaview™ is realized through the use of three high-speed processors (in-house Tornado™ technology). All information gathered by the radar is fully processed within a few milliseconds before being displayed. A smooth image rotation is generated when sailing in Head-up mode. When changing to North-up, the new radar image is displayed without any delay caused by the scanner rotation.

Constaview™

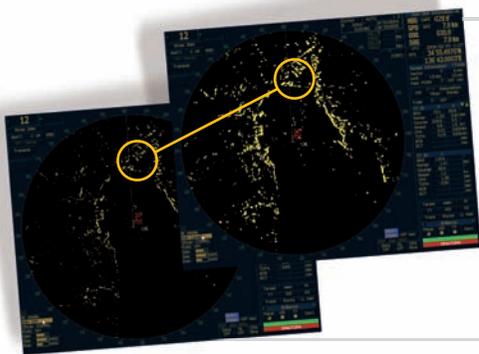


True Trails
Constaview™ refreshes the image every 16mS. Despite heading changes trails are always true.

Conventional



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

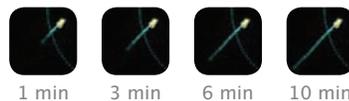


Target Enhancement Function™

Developed exclusively by JRC, TEF™, allows target enhancement relative to the target size. The smaller echoes are far more enlarged than bigger echoes, giving a better on-screen separation and identification.

Select a trail length

Others ships movement and speed can be monitored from length and direction of their trails, primary serving for collision avoidance. The JMA-9172-SA integrates three different trail length modes, that will show a ship's course instantly. A unique operation features that allows for more flexibility. Example:



What's in the box

The JMA-9172-SA is JRC's first brand new S-band solid state marine radar and variation of this model is a choice in desktop and standalone.

- Display
- Scanner
- Keyboard
- Processor
- Cables
- Spare parts
- Manual (English)

Which cables?

- Display to scanner max 65 m

Options

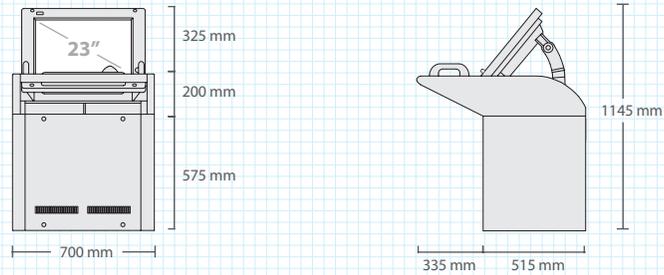
- Interswitch (built-in) NQE-3141-2A (up to 2)
- Interswitch (box type) NQE-3141-4A/8A (up to 4 and 8)
- VDR I/F CFQ-1891
- De-icing device CHG-215

JMA-9172-SA

– size and mass

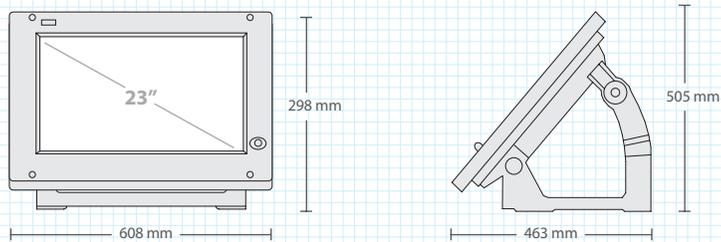
Stand alone version

NCD-9170 Mass 130 kg

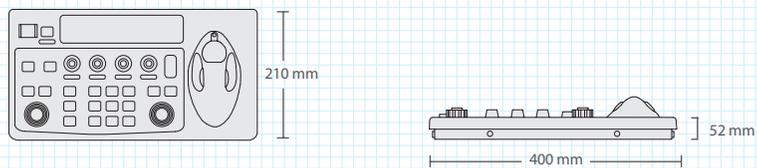


Desktop version

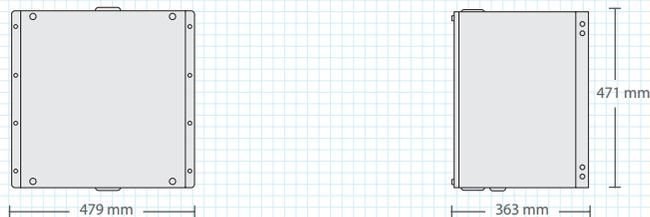
NWZ-178 Mass 25 kg



NCE-5322 Mass 3.5 kg

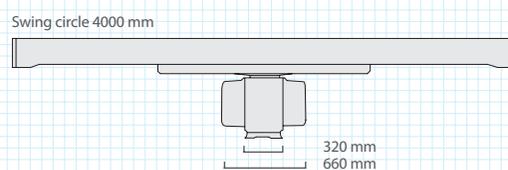


NDC-1478 Mass 30 kg



Solid state S-band scanner

NKE-1532 Mass 170 kg



JMA-9172-SA

– specifications

Name	Solid State S-band Marine Radar
Model	JMA-9172-SA
IMO compliant	MSC.191(79) / MSC.192(79)
Unit type	2-unit type
Performance monitor	integrated
Frequency	S-band
Display	color raster scan PPI
Scanners	
Model	NKE-1532
Antenna length	12ft
Transmitting power	250W
Transmitting frequency	P0N(3040MHz), Q0N(3060MHz±4MHz)
Beam width 3db	Hor.1.9°, Ver.25°
Rotation speed	24rpm
Pulse width(freq.)	SP1:0.07μs / 4.6μs, 8MHz / 2280Hz MP1:0.14μs / 9.1μs, 8MHz / 2280Hz MP2:0.29μs / 9.1μs, 8MHz / 2280Hz LP1:0.57μs / 9.1μs, 8MHz / 1280Hz LP2:1.14μs / 18.3μs, 8MHz / 640Hz
Duplexer	circulator + diode limiter
Range scale	0.125/0.25/0.5/0.75/1.5/3/6/12/24/48/96 NM
Motor	brushless
Tuning	Auto
Modulator	Solid Statemodulator circuit
Ambient condition	temperature: -25°C +55°C, relative humidity: 93% @40°C
Pulse compression	standard
Doppler filter	standard
Radar display unit	
Model(stand alone)	NCD-9170
Model(desktop)	NCD-9170T
LCD	1280x1024 dot
Effective diameter	≥320mm
Bearing indication presentation mode	north-up / course-up / head-up RM display with true trail, RM display with relative trail, TM display
EBL	2 (EBL1/EBL2) (center/independent) 000.0° - 359.9°, numerical indication in 4 digits
VRM	2 (VRM1/VRM2), 0.000 - 100.0 NM, numerical indication in 4 digits
Trail indication	3 stages: short, middle, long (e.g. short: off /0.25/0.5/1/3/6/10/15-min)
Navigation markers	20,000 points
Off center	within 66% of radius, except 96 NM
ARPA tracking numbers	100
AIS target numbers	300 (sleeping + activated), 100 (activated)
Ambient condition	temperature: -15°C +55°C, relative humidity: 93% @40°C
installation cable(max length 65m)	H-2695110056
Power supply(voltage)	AC 110V (AC 100 to 115V) and/or AC 230V (AC 220 to 240V), 50/60Hz, 1Ø
Power consumption(max wind)	avg 600VA max 2200VA
Option items	
Power control	NQE-3167
Interswitch(built-in type: up to 2)	NQE-3141-2A
interswitch(box type: up to 4)	NQE-3141-4A
interswitch(box type: up to 8)	NQE-3141-8A
VDR-I/F	CFQ-1891
Deicing device	CHG-215

• Specifications may be subject to change without notice.

For further information, contact:



Since 1915

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