
JMA-9172-SA

Solid State Radar



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

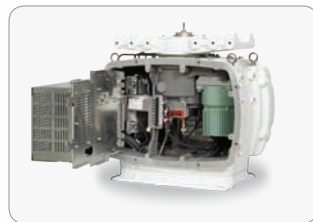
Target detection unlike anything before
No magnetron ensures low maintenance cost
First class clutter processing
Constaview™ and TEF™ as standard
Free from tuning and pre-heating

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.

Pedestal



Transceiver

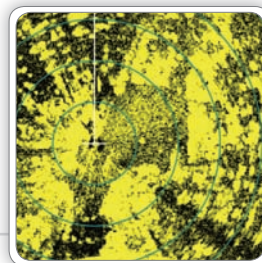


Processor

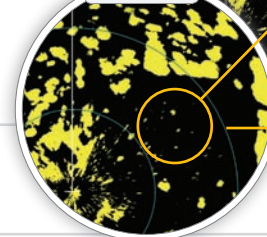
Moving target detection

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.

Unfiltered image

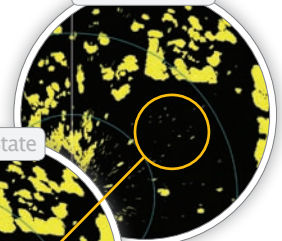


Solid State



Moving targets

Conventional



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.



Conventional

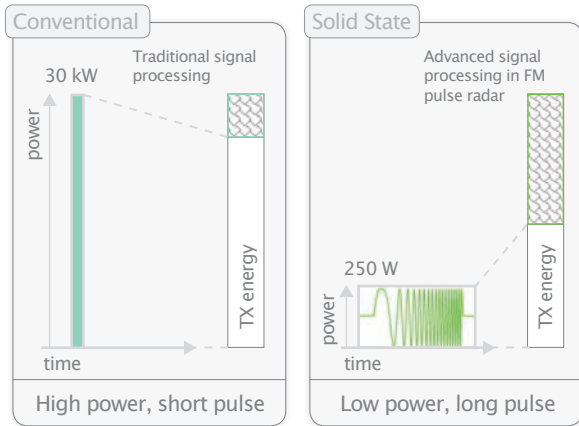


Solid State

JMA-9172-SA

- advanced technology

Why 30kW & 250W appear equal?



Advanced signal processing

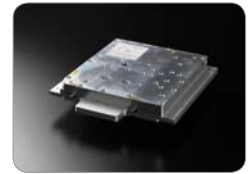
JRC's new solid state architecture integrates an advanced signal processing technology that detects and displays information at a new level.

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.



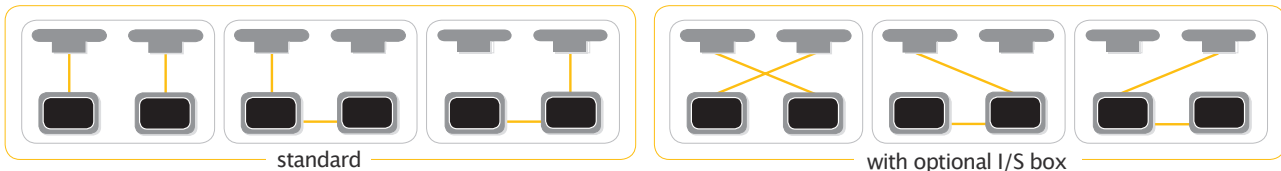
Transceiver features protected enclosure

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 jrceurope.com/support](http://more.atjrceurope.com/support)

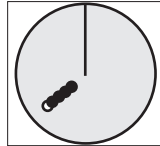
JMA-9172-SA

- unique functions

Constaview™

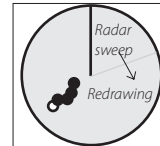
The second generation and patented Constaview™ is realized through the use of three high-speed processors (in-house Tornado™ technology). All information gathered by the radar is fully processed within a few milliseconds before being displayed. A smooth image rotation is generated when sailing in Head-up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

Constaview™

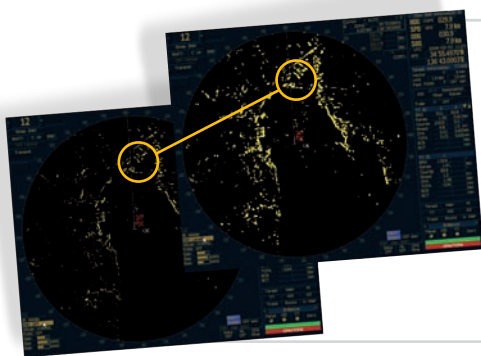


True Trails
Constaview™ refreshes the image every 16mS. Despite heading changes trails are always true.

Conventional



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

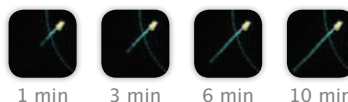


Target Enhancement Function™

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



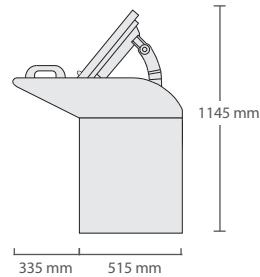
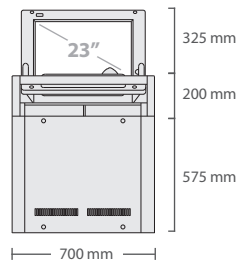
Japan Radio Co., Ltd.

JMA-9172-SA

- size and weight

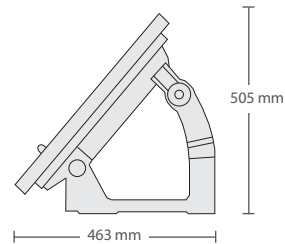
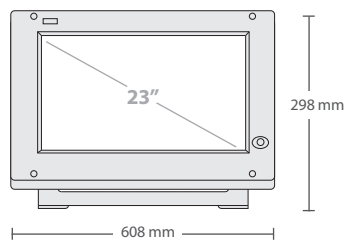
Stand alone version

NDC-9170 Weight 130 kg

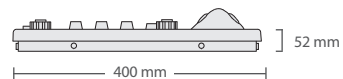
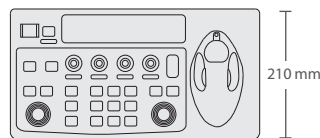


Desktop version

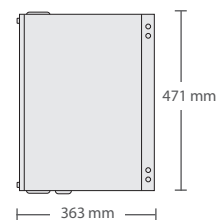
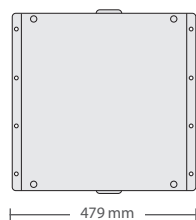
NWZ-178 Weight 25 kg



NCE-5322 Weight 3,5 kg

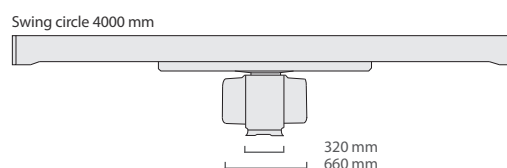


NDC-1478 Weight 30 kg



Solid state S-band scanner

NKE-1532 Weight 170 kg



JMA-9172-SA

- specifications

	JMA-9172-SA
IMO approved	✓
Frequency	S-band (2-unit type)
Performance monitor	Integrated
Antenna length	12 ft (3.66 m)
Transmitting power	250 W
Transmitting frequency	P0N (3040 MHz), Q0N (3060 MHz ±4 MHz)
Beam width 3 db	Horizontal 1.9°, vertical 25°
Rotation speed	24 rpm
Pulse width	0.07 μs - 18.3 μs
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
Signal processing	Pulse compression
Doppler processing	32 filters
Display	1280 by 1024 pixels (≥ 320 mm PPI color raster scan)
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) center/independent 000.0° to 359.9°, numerical indication in 4 digits
VRM	2 (VRM1/VRM2) 0.000 to 100.0 NM, numerical indication in 4 digits
Trail indication	3 stages: short/middle/long (eg. 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
TT (Target Tracking)	100
AIS targets	300 (sleeping + activated), 100 (activated)
Power	100V to 115V AC and/or 220V to 240V AC, 50/60 Hz, 1Ø
Power consumption	600VA (at max wind 2200VA)
Ambient conditions	-25° to 55°C (scanner), -15° to 55°C (display)
Relative humidity	0% to 93% non-condensing (@ 40°C)

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