

JMA-5372-SA Solid State Radar



Complies to IMO CAT-2 for
vessels below 10,000 GT.

– the JMA-5372-SA target detection transcends conventional S-band pulse radar systems

19-inch high brightness display (option)

No magnetron ensures low maintenance cost

Superior clutter processing

Constaview™ and TEF™ as standard

No tuning and pre-heating required



Japan Radio Co., Ltd.

since 1915



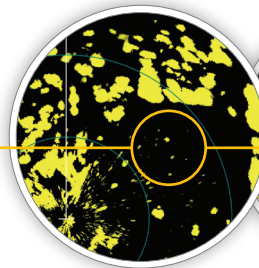
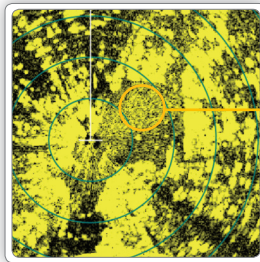
Features

A new generation marine scanner that displays targets with high accuracy while transmitting at just 1/100th of the power of a conventional radar.

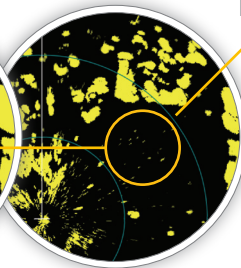
Target detection

The solid state radar will easily detect moving targets in clutter compared to conventional systems. With a comprehensive Doppler filter at the heart of the solid state radar, moving targets are not only detected in clutter, but also clearly displayed on the screen.

Unfiltered image



Solid State



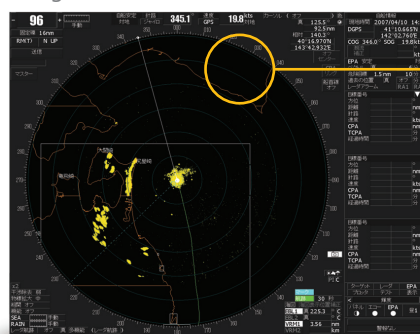
Magnetron

Filtered image with moving targets

Long range detection

Advanced pulse compression with the 250W solid state transceiver not only improves short range, but dramatically improves long range detection.

Magnetron



Solid State



Applications

This highly compact and flexible installation 'black box' version of JRC S-Band digital (solid state) radar is suited for vessels with a need of superior clean target detection and for owners with a wish of lower lifetime maintenance cost. The latter is achieved as there is no magnetron who need to be replaced during normal maintenance work.

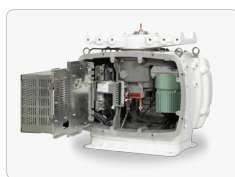
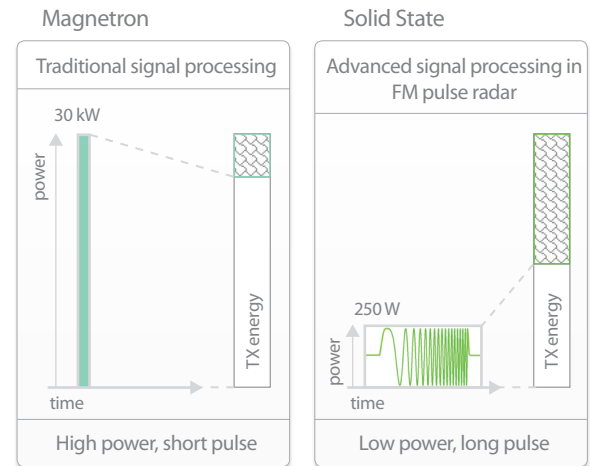
Operation

Signal processing

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

The transmission capacity is only 250W compared to the traditional radar that uses a 30.000W peak. The advanced pulse compression significantly improves the long and short distance detection of targets while using only 1/100th of the transmission capacity of a conventional radar.

The new technology has come through exposure tests to extreme temperatures, humidity and vibrations very well.



Pedestal



Transceiver

Low maintenance transceiver

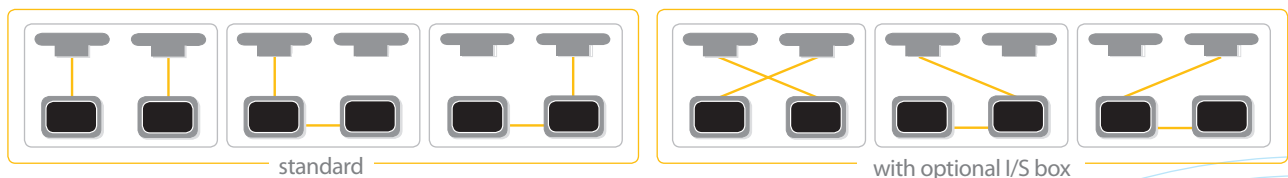
The radar integrates a digital transceiver instead of a life limited (analog) magnetron, providing higher reliability and performance and will keep maintenance costs to a minimum. Today, cost of a digital radar is higher, but realistically, probably not by more than one or two replacement magnetrons. This means that the cost of purchase is normally recovered within a few years.

No tuning and pre-heating

Being magnetron free also means a significant reduction in maintenance while at the same time offering instantaneous operation (transmission) from start up, with no pre-heating or tuning required.

Interswitching

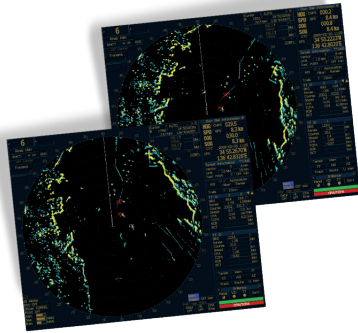
Optional interswitching (up to 8 displays) is possible with the JRC JMA-5372-SA



Remote Maintenance System (RMS)

JRC has the ability to cost-effectively monitor performance and functionality of the JMA-5372-SA while at sea, significantly reducing downtime and maintenance cost. To establish RMS connection at sea maintenance server (JRC VDR) and satellite communications (JRC FB) are required onboard. More info jrceurope.com/rms

Flexibility

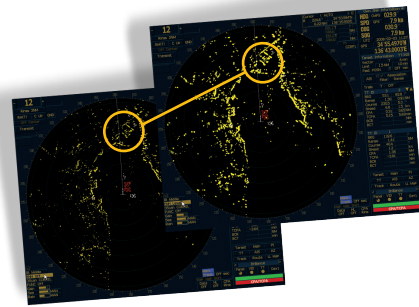


Constaview™

The second generation and patented Constaview™ is realized through the use of high-speed processors. All info gathered by the radar is processed within a few milliseconds before displayed, generating a smooth image rotation when sailing in Head-Up mode.

TEF™

Developed exclusively by JRC, Target Enhancement Function (TEF™), allows target enhancement relative to the target size. Sophisticated processing results in a proportional enhancement where relative enhancement of small targets is greater than larger targets.



Upgrade kit

Newly available is a Solid State S-band upgrade path for JMA-5300Mk2 radar, by replacing the scanner unit onboard the vessel. The radar operation remains the same, so officers can continue to trust on JRC's high performance and reliability and easily perform the tasks associated with the company's other in-house developed technologies, Constaview™ and TEF™.

In the box upgrade kit

- Scanner (incl performance monitor)
- Power Control Unit (PCU)
- PCU to processor cable (20m)
- Manual + Labels

In the box standard

- Display¹
- Scanner (incl performance monitor)
- Processor
- Power Control Unit (PCU)
- Cables
- Keyboard
- Spare parts
- Manual

Cables

- Scanner to PCU (40m)
- PCU to processor (20m)
- Processor to keyboard (5m)
- Processor to display¹ (5m)

Options

- | | |
|--|-------------|
| • 19-inch display | NWZ-173 |
| • Table mount bracket display | MPBC42446 |
| • ATA unit ² (30 targets) | NCA-877A |
| • ARPA unit ² (100 targets) | NCA-877WA |
| • AIS interface unit ² | NQA-2103 |
| • Gyro interface unit ² | NCT-59A |
| • Power supply ³ | NBA-5111 |
| • Plotting function board | NDB-34A |
| • Interswitch unit (up to 4 radars) | NQE-3141-4A |
| • Interswitch unit (up to 8 radars) | NQE-3141-8A |

1. Optional in black box configuration
2. ATA or ARPA, AIS and gyro must be fitted on ships compliant to IMO regulations
3. AC power is required for antenna scanner motor



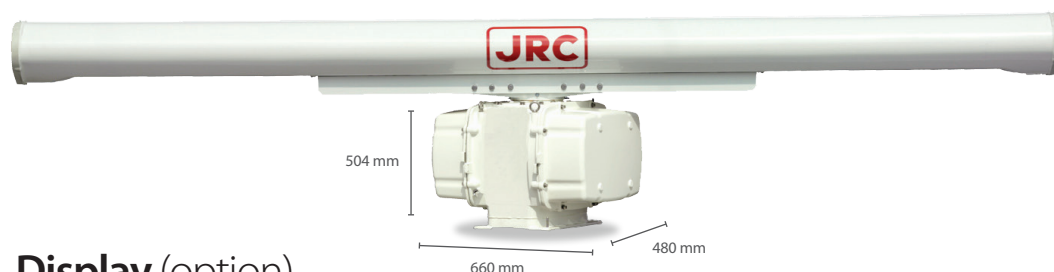
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Weight and dimensions

Scanner

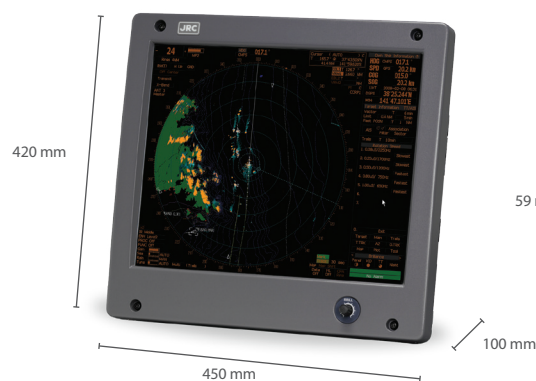
NKE-1532PM Weight 170 kg

Swing circle 4000 mm



Display (option)

NWZ-173 Weight 7,7 kg



Keyboard

NCE-5217 Weight 1.3 kg



Processor

NDC-1551 Weight 6 kg



Power control unit

NQE-3167 Weight 12 kg



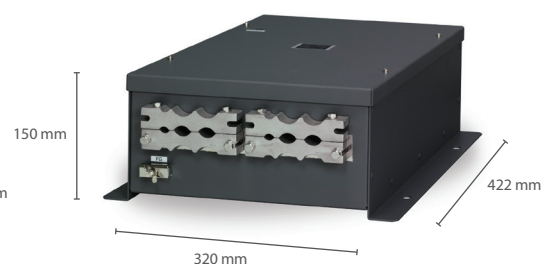
Power supply (option)

NBA-5111 Weight 15 kg



Interswitch (option)

NQE-3141-4A Weight 6 kg



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Specifications

| | JMA-5372-SA |
|------------------------|--|
| IMO approved | ✓ |
| Type | S-band (2-unit type) |
| Performance monitor | Integrated |
| Antenna length | 12ft (3.92m) |
| Output power | 250W |
| Transmitting frequency | 3040 MHz (P0N), 3060 MHz ±4 MHz (Q0N) |
| Beam width | 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 | 250mm PPI, 19-inch LCD (1280 by 1024 pixels) |
| 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 | 2,000 points (20,000 points with NBD-34A option) |
| Off center | Within 66% of radius, except 96 NM |
| Target Tracking (TT) | 0, 30, 100 (depends on TT board ¹) |
| AIS targets | 300 (sleeping + activated), 100 (activated) ² |
| Power supply voltage | Display: 24V DC ³ (-10%+50%) Scanner: 100-115V/220-240V AC (+/-10%) |
| Power consumption | Processor: 240W + Scanner: 600VA (typical) 1600VA (at max wind) |
| Ambient conditions | Temperature: -25 to 55°C (scanner) -15 to 55°C (others) Relative humidity: 0% to 93% non-condensing |

1. NCA-877A: 30 targets, NCA-877WA: 100 targets
2. NQA-2103 required
3. AC power supply optional (NBA-5111)

Authorized reseller

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