JRC

ALPHATRON Marine

Doppler log

JLN-740

High accuracy speed and distance log

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Features

The JLN-740 series is a single axis water SDME compliant with the IMO MSC.96 (72) standard, required on all internationally voyaging ships exceeding 300 GT. Boasting never-before-seen accuracy for speed measurement, the JLN-740 is also installed with our company's proprietary bubble detection function, which informs you when measurement accuracy is impaired due to air bubble contact.

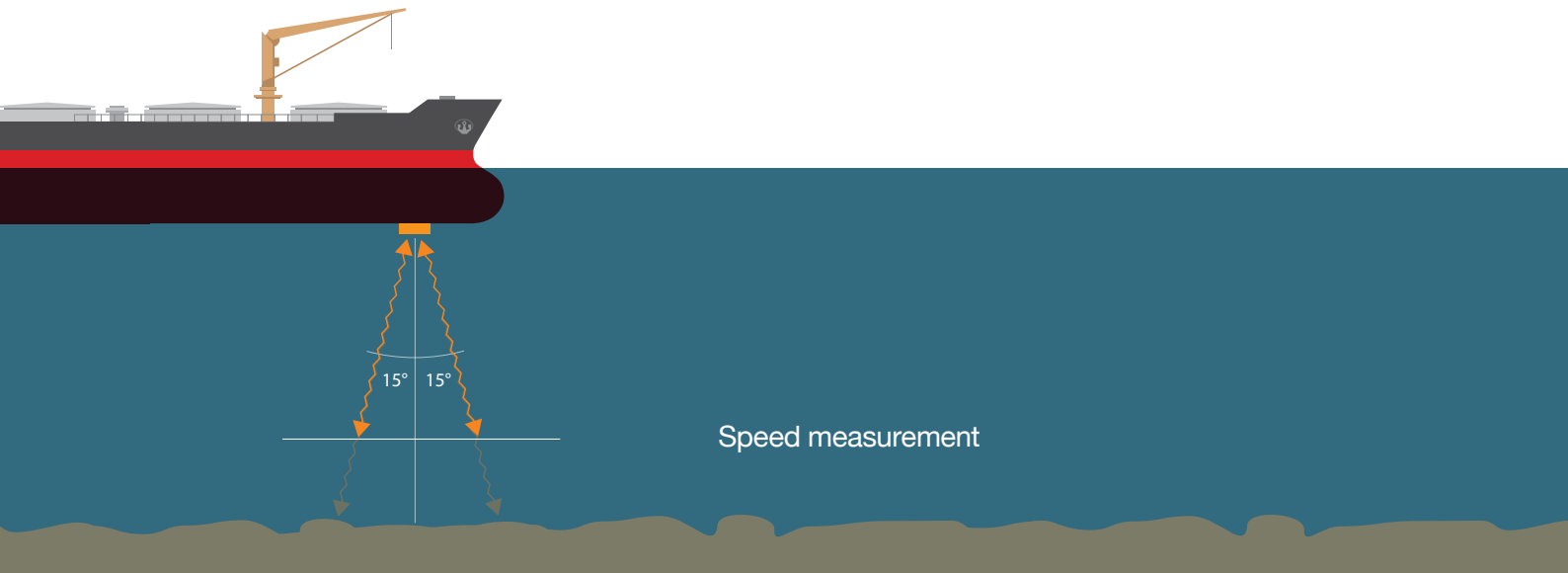
- Highly accurate speed and distance log
- Color touch display
- Proprietary bubble detection
- Intuitive operation
- Precise navigation during berthing
- Advanced interfacing
- Various accessories available
- Various remote displays
- Supports remote maintenance
- BAM compliant alert handling

The units feature a color LCD touch display for the main and sub displays, allowing you to view important information and adjust brightness on all displays from a single location.

Precise ship speed tracking

The JLN-740 series utilizes digital signal processing, which, coupled with optimizations to existing speed measurement waveforms and the reliability of ship bottom mounting, has resulted in water speed measurement with accuracy up to 0.03kn or 0.3% in all models (measured at fixed speeds)

That accuracy of information allows for highly fuel-efficient speeds, which means faster voyages with less waste. Along with improved speed measurements, the series also has greatly improved ship speed tracking, relaying all the information you need for precise navigation during berthing.



Speed measurement

Touch operation

With just one physical power button, the 5-inch color main display and 6.5 and 8.4-inch for the remote displays are operated by touch operation. The touch screens can be easily read during daylight but also in darkness, with excellent clarity, even when viewed from a wide angle. All displays feature dimmable backlighting and have a graphical user interface is logical, easy to use and consistent throughout. All displays are designed for the industrial environment found onboard of ships, ensuring years of problem free operation.

Cost-effective operation

The doppler speed log is also available with a cost-effective 4.5-inch display with the main data displayed in large characters of easy reading. In addition that the display is fully dimmable and has backlit keys, it features dual LED backlight (white and orange) making it easy to operate in various light settings on the bridge.

Remote support

RMS

The JLN-740 supports the JRC original Remote Maintenance System (RMS), one of the core elements of JRC's customer operations support philosophy. With the VDR connected through LAN, the JLN-740 doppler log can be monitored from shore using JRC's FB or GX satellite communications system. This allows a cost-effective determination of the operating status, software version installed but also firmware can also be updated through J-Marine Cloud.

Bubble detection

A long-unsolvable problem with doppler-based water speed measuring systems was reduced accuracy from bubbles making contact with the measuring device on the bottom of the vessel. The JLN-740 series detects when bubbles contact the transducer, and using proprietary technology from JRC alerts you of reduced measuring accuracy via the display. Confirming the source of the issue typically requires visually examining the device on the bottom of the ship. However, onboard air bubble detection allows you to skip unnecessary preventive maintenance.

Distribution processor

This speed log incorporates a highly reliable interfacing field. You can easily connect a wide range of additional equipment to optimize your configuration. A second display, smaller remote displays and analog indicators are just a few of the possibilities. The JLN-740 can also output the measurement information to radar and ecdis.

Signal processor

The transducer room has a quite bad environment with regard to vibration and humidity, therefore, before signal is distributed to various equipment, the transducer is directly connected to the processor, minimizing loss of signal and extending cable length to hundreds of meters.

Transducer

The transducer is compact and constructed of light weight moulded rubber, to minimize the effects on aeration, which allows stable and accurate operation.

Gate valve

Using an optional gate valve transducer allows for long-term cost saving and easy maintenance as dry docking is not necessary.

IMO compliant

The JLN-740 series is designed according to the latest IMO regulations on all internationally-voyaging vessels exceeding 300 GT and meets the standards for the IEC environmental test standards. When used with JRC's satellite log JLN-720, ships exceeding 50,000 GT will meet the requirements for IMO MSC.334(90).

IMO	**Environment**		
v MSC.96(72)	v IEC 60945	Navigation and radiocommunication equipment	2002
v A.824(19)	v IEC 61023	Speed and distance measuring equipment (SDME)	2007
v A.694(17)	v IEC 62288	Presentation of nav-related info on shipborne display	2014
v MSC.334(90)[1]	v IEC61162-1	Digital interfaces-single talker and multiple listeners	2010
	v IEC61162-450[2]	Digital interfaces-Ethernet interconnection	2011

JRC is continuously developing and evaluating new products, based on future IMO requirements that will contribute to your future safety and navigation at sea.

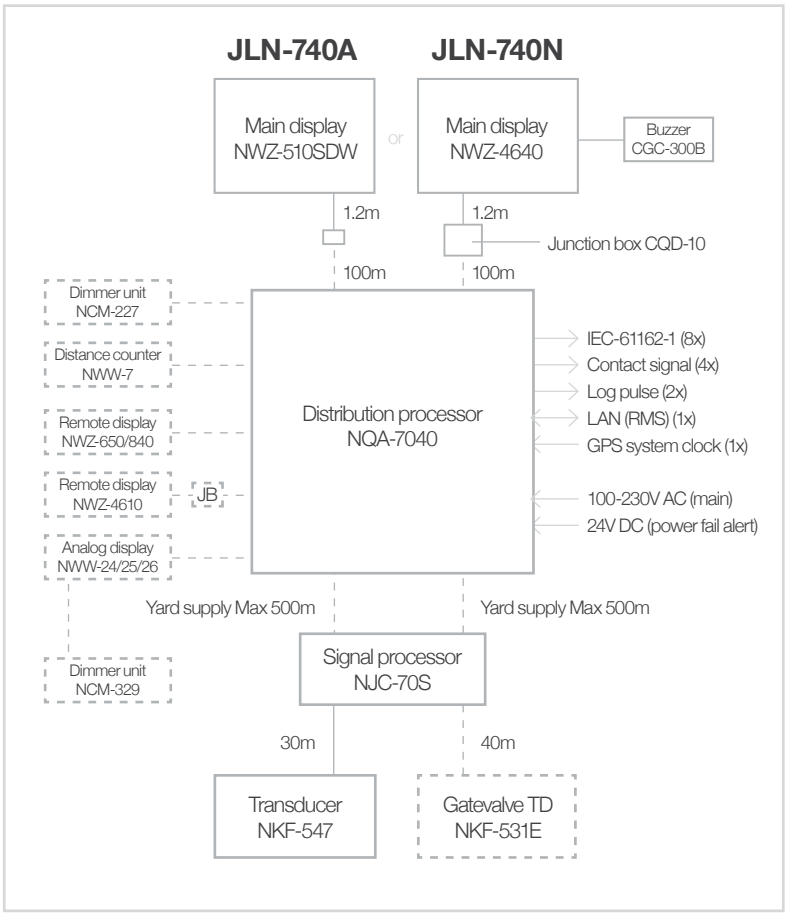
Snap on mounting

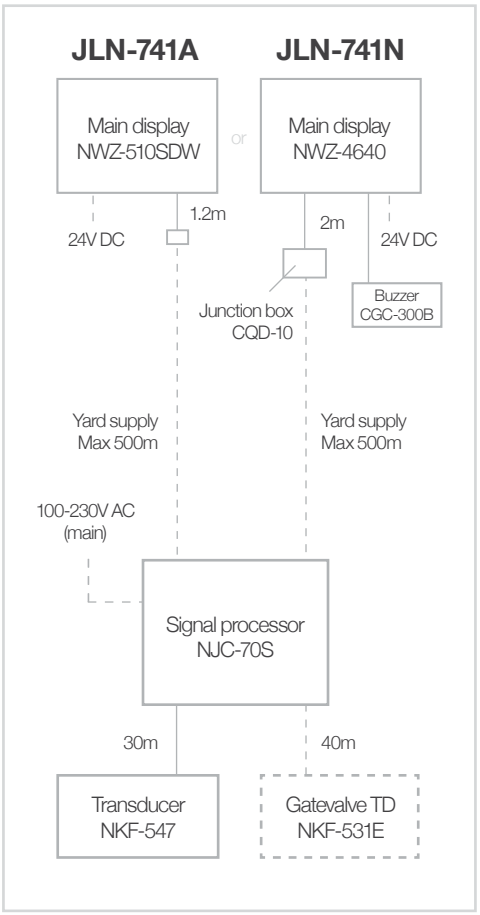
Our standard main touch screen display and two remote displays feature our famous and unique snap on flush mount system, making it possible to fit the display without tools. The display can easily be pushed into the frame and kept in position by a click/spring system. As a result, a minimal amount of screws or mounting bolts are visible and allows for easy maintenance.

1. If used in combination with JLN-720
2. Only supported by JLN-740A/N

System diagram

The JLN-740 is available in four configurations. For large vessels, we have a four-unit setup enabling data sharing of radar, ECDIS and other navigation equipment and for smaller vessel a three-unit setup. In both unit configurations, you can choose from a high quality color touch display or a cost-effective black and white display.





In the box

• Main display	NWZ-510SDW[1] or NWZ-4640[2]
• Data cable	CFS-5680[1] or CFQ-5766A[2]
• Junction box	CQD-10[2]
• Signal processor	NJC-70S
• Power supply	NBA-5143
• Transducer	NKF-547 (30 m cable attached)
• Distribution processor	NQA-7040[3]
• Buzzer	CGC-300B[2]
• LAN connector	5JWBS00548[3]
• Spare parts	7ZXNA3007
• Instruction manual	7ZPNA3108

Accessories

• 6.5-inch remote display	NWZ-650SDR
• 8.4-inch remote display	NWZ-840SDR
• Multi Info Display (MID)	NWZ-4610
• Distance counter	NWW-7
• Dimmer unit	NCM-227/329
• Analog display	NWW-24/25/26
• Junction box	CQD-10
• Gatevalve transducer	NKF-531E
• Power supply	NBA-5143

1. For JLN-740A/JLN-741A 2. For JLN-740N/JLN-741N 3. For JLN-740A/JLN-740N

Tech Specs

Main display (JLN-74xA)
NWZ-510SDW Weight 1.2 kg (2.65 lbs)

180 mm
(7.09 in)

96 mm
(3.78 in)

Main display (JLN-74xN)
NWZ-4640 Weight 0.8 kg (1.76 lbs)

162 mm
(6.38 in)

175 mm
(6.89 in)

NWZ-510SDW:
5-inch touch display
480-by-800-pixel resolution

NWZ-4640:
4.5-inch monochrome display
128-by-64-pixel resolution

Signal processor
NJC-70S Weight 5.5 kg (12.13 lbs)

482 mm
(18.98 in)

315 mm
(12.4 in)

Distribution processor
NQA-7040 Weight 6 kg (13.23 lbs)

490 mm
(19.29 in)

300 mm
(11.81 in)

NJC-70S:
Fore/aft speed scale -40 to 40 kn
Accuracy at fixed speeds: 1% or 0.1kn, whichever is greater

NQA-7040:
Compass safety 0.8 STD, 0.4 Steer
Power 100-230V AC

Transducer
NKF-547 Weight 17 kg (37.48 lbs)

130 mm
(5.12 in)

ϕ135 mm
(5.31 in)

Gatevalve transducer
NKF-531E Weight 48 kg (105.82 lbs)

390 mm
(15.35 in)

175 mm
(6.89 in)

Dual-beam pulse Doppler system
2 MHz operating frequency

Environmental:
Operating temperature -3 to 40°C
Storage temperature -10 to 70°C
Water pressure 600 kPa (6 bar)

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Centers of Excellence

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