



# FUSION® MS-NRX300 Installation Instructions

## Important Safety Information

### ⚠ WARNING

See the *Important Safety and Product Information* guide in the product box for product warnings and other important information.

### ⚠ CAUTION

Always wear safety goggles, ear protection, and a dust mask when drilling, cutting, or sanding.

### NOTICE

When drilling or cutting, always check what is on the opposite side of the surface.

## Getting the Owner's Manuals

To fully understand the features and operations of your stereo, you can get the latest stereo owner's manual and translations of manuals from the web. You can also download the full remote owner's manual for more information about using this remote.

- 1 Go to [www.fusionentertainment.com/marine](http://www.fusionentertainment.com/marine).
- 2 Select the product.
- 3 Select **Product Support > Manuals and Downloads**.
- 4 Select a manual.

## What's In the Box

- Mounting gasket
- Four 8-gauge, self-tapping screws
- Two screw covers
- 6 m (20 ft.) NMEA 2000® backbone cable
- NMEA 2000 T-connector
- NMEA 2000 female terminator
- NMEA 2000 inline terminator
- Dust cover

## Tools Needed

- Phillips screwdriver
- Drill
- 2.5 mm (<sup>3</sup>/<sub>32</sub> in.) drill bit
- 50 mm (2 in.) hole saw
- Marine sealant (optional)

## Connection Considerations

You can connect the MS-NRX300 remote control to a FUSION stereo using one of two methods, depending on the stereo:

- A new FUSION remote control network
- An existing NMEA 2000 network

The main difference between a FUSION remote control network and a NMEA 2000 network is how they receive power. A NMEA 2000 network receives power through a power cable connected to the backbone and a power source.

A FUSION remote control network receives power from the stereo. The stereo can supply power to a FUSION remote control network if it has the NRX POWER option in the

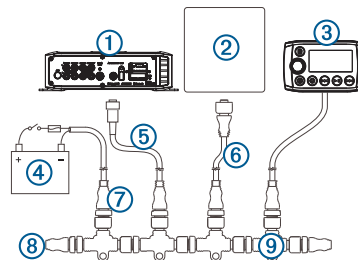
SETTINGS menu or if a red drop cable is included in the stereo box.

If the stereo cannot supply power to the FUSION remote control network, you must connect the MS-NRX300 remote control using the NMEA 2000 network.

## NMEA 2000 Connection Considerations

You may connect the remote control to the stereo using an existing NMEA 2000 network.

- You can connect more than three MS-NRX300 remote controls to one FUSION stereo.
- You are connecting to a FUSION stereo that cannot provide power to the remote, such as a BB100 or MS-RA70N stereo.
- You can control a connected FUSION stereo from a FUSION-Link™ compatible chartplotter.



Item	Description
①	FUSION stereo
②	Compatible chartplotter
③	MS-NRX300 remote control*
④	12 Vdc power source with an ignition or in-line switch
⑤	NMEA 2000 drop cable and T-connector, dependant on stereo. See the following table.
⑥	NMEA 2000 drop cable
⑦	NMEA 2000 power cable, 2 m (6 ft.) (CAB000541)
⑧	NMEA 2000 terminator or backbone cable
⑨	NMEA 2000 T-connector (CAB000581)*

\*Components included with the FUSION MS-NRX300 remote control.

**NOTE:** The NMEA 2000 network may include other NMEA 2000 devices.

## NMEA 2000 Cables and Software Settings

The cables required to connect to the NMEA 2000 vary depending on the stereo. See the table below to determine which cables and possible software settings are required for your stereo model.

All stereos require a CAB000581 T-connector to connect the drop cable to the NMEA 2000 network. You can extend the drop cable to a maximum length of 6 m (20 ft.) using a standard NMEA 2000 cable.

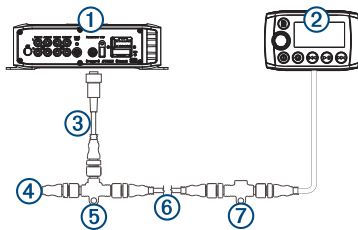


Stereo	Cables and software settings required
NRX POWER option in software. Examples: • Apollo™ MS-RA770 • Apollo MS-RA670	<ul style="list-style-type: none"> <li>Included NMEA 2000 (320-00387-00) drop cable required.</li> <li>NMEA 2000 T-connector (CAB000581) required, but not included.</li> </ul> <p style="text-align: center;"><b>NOTICE</b></p> <p>To avoid damaging other devices on the NMEA 2000 network, the NRX POWER option must be off. This is off by default. See the stereo owner's manual for more information.</p>
NRX POWER option in software, NMEA 2000 cable hardwired to stereo. Examples: • MS-UD650/AV650 • MS-UD755/AV755	<ul style="list-style-type: none"> <li>Use the cable on the stereo wiring harness.</li> <li>NMEA 2000 T-connector (CAB000581) required, but not included.</li> </ul> <p style="text-align: center;"><b>NOTICE</b></p> <p>To avoid damaging other devices on the NMEA 2000 network, the NRX POWER option must be off. This is off by default. See the stereo owner's manual for more information.</p>
No NRX POWER option in software. Examples: • MS-BB100 • MS-RA70N/RA70NSX	<ul style="list-style-type: none"> <li>Included NMEA 2000 (320-00387-00) drop cable required.</li> <li>NMEA 2000 T-connector (CAB000581) required, but not included.</li> </ul>
No NRX POWER option in software, red cable included. Example: MS-BB300R	<ul style="list-style-type: none"> <li>Drop cable (CAB000863, black) required, but not included.</li> <li>NMEA 2000 T-connector (CAB000581) required, but not included.</li> </ul> <p style="text-align: center;"><b>NOTICE</b></p> <p>To avoid damaging other devices on the NMEA 2000 network, do not use the red drop cable (CAB000862) included with the stereo to connect to the NMEA 2000 network.</p>

### FUSION Remote Control Network Connection Considerations

You may connect the remote control to the stereo using an unpowered FUSION remote control network if you have the following conditions.

- You do not have a full NMEA 2000 network on your boat.
- You are connecting three or fewer MS-NRX300 remote controls to one FUSION stereo.
- You are connecting to a FUSION stereo that can provide power to the remote. The stereo can supply power to the remote control if it has an NRX POWER option in the SETTINGS menu or if a red drop cable is included.



Item	Description
①	FUSION stereo
②	MS-NRX300 remote control*
③	NMEA 2000 drop cable. See the following table.
④	NMEA 2000 female terminator*
⑤	NMEA 2000 T-connector (CAB000581)*

Item	Description
⑥	NMEA 2000 backbone cable, 6 m (20 ft.)*
⑦	NMEA 2000 inline terminator*

\*Components included with the FUSION MS-NRX300 remote control.

### FUSION Remote Control Network Cables and Software Settings

The cables required to connect to the FUSION remote control network vary depending on the stereo. See the table below to determine which cables and possible software settings are required for your stereo model.

The stereo can supply power to the remote control if it has an NRX POWER option in the SETTINGS menu or if a red drop cable is included.

Stereo characteristics	Cables and software settings required
NRX POWER option in software. Examples: • Apollo MS-RA770 • Apollo MS-RA670	<ul style="list-style-type: none"> <li>Included NMEA 2000 (320-00387-00) drop cable required.</li> <li>You must enable the NRX POWER setting to provide power to the remote control. Select <b>⏏</b> &gt; <b>SETTINGS &gt; NRX POWER</b>.</li> </ul>
NRX POWER option in software, NMEA 2000 cable hardwired to stereo. Examples: • MS-UD650/AV650 • MS-UD755/AV755	<ul style="list-style-type: none"> <li>Use the cable on the stereo wiring harness. No additional cables needed.</li> <li>You must enable the NRX POWER setting to provide power to the remote control. Select <b>⏏</b> &gt; <b>SETTINGS &gt; NRX POWER</b>.</li> </ul>
No NRX POWER option in software. Examples: • MS-BB100 • MS-RA70N/RA70NSX	Not supported. Connect to a NMEA 2000 network.
No NRX POWER option in software, red cable included. Example: MS-BB300R	Use the red drop cable (CAB000862) supplied with the stereo.

### Mounting Considerations

When selecting a mounting location, observe these considerations.

- The device must be mounted in a location where there is at least 75 mm (3 in.) of clearance behind the mounting surface and you can access the controls after it is mounted.
- If you want to mount the device outside the boat, it must be mounted in a location well above the waterline, where it is not submerged.
- If you want to mount the device outside the boat, it should be mounted in a location where it will not be damaged by a docks, pilings, or other pieces of equipment.

### Mounting the Remote Control

- At the mounting location, use a 50 mm (2 in.) hole saw to cut through the mounting surface.
- Place the remote control in the cutout and mark the pilot holes.
- Remove the remote control from the cutout, and using a 2.5 mm (<sup>3</sup>/<sub>32</sub> in.) drill bit, drill the pilot holes.
- Apply marine sealant around the cutout (optional).
- Place the gasket on the back of the remote control.
- Feed the attached NMEA 2000 cable through the cutout.
- Place the remote control in the cutout.
- Secure the remote control to the mounting surface using the included screws.

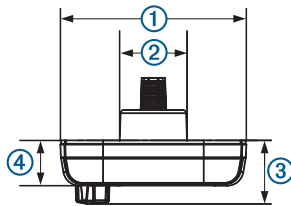
- 9 Install the decorative bezel around the edges of the remote control.
- 10 Route the NMEA 2000 cable away from sources of interference and connect it to the NMEA 2000 network or the FUSION remote control network.

## More Information

### Specifications

Specification	Measurement
Operating voltage	From 10.8 to 16 Vdc negative ground
Electrical input current	110 mA at 12 Vdc
NMEA 2000 Load Equivalency Number (LEN)	3 (150 mA)
Operating temperature	From 0 to 50°C (from 32 to 122°F)
Storage temperature	From -20 to 70°C (from -4 to 158°F)
Water rating	IEC 60529 IPX7

### Top Dimensions



Item	Measurement
①	110 mm (4 <sup>5</sup> / <sub>16</sub> in.)
②	42 mm (1 <sup>5</sup> / <sub>8</sub> in.)
③	28 mm (1 <sup>3</sup> / <sub>32</sub> in.)
④	16.5 mm (4 <sup>1</sup> / <sub>64</sub> in.)

### Supported NMEA 2000 PGN Information

PGN Number	Data Field
127250	Heading sensor reference: • 0: True • 1: Magnetic
128259	Water speed reference: • 00: Paddle wheel • 01: Pitot tube • 02: Doppler log • 03: Correlation log (ultrasound) • 04: Electromagnetic (EM) log
128267	Water depth: • Offset add or subtract
129025	Position: • Latitude and longitude
129026	Course Over Ground (COG) and Speed Over Ground (SOG) COG reference: • 0: True • 1: Magnetic
129029	Global Navigation Satellite System (GNSS) position data
129284	Navigation data: • ETA date
130306	Wind data reference: • 0x02 : Apparent wind (relative to the vessel centerline)
130310	Water temperature and air pressure
130311	Water temperature and air pressure
130312	Temperature and temperature source: • - 00 : Sea temperature

PGN Number	Data Field
130314	Actual pressure and pressure source: • 00 : Atmospheric pressure
130577	Direction data and COG reference: • 0: True • 1: Magnetic

### Registering Your FUSION MS-NRX300

Help us better support you by completing our online registration today.

- Go to [www.fusionentertainment.com](http://www.fusionentertainment.com).
- Keep the original sales receipt, or a photocopy, in a safe place.

### Software Updates

For best results, you should update the software in all FUSION devices at the time of installation to ensure compatibility.

Go to [www.fusionentertainment.com/marine](http://www.fusionentertainment.com/marine) to download the latest software. Software updates and instructions are available on your device product page.

### 物質宣言

部件名称	有毒有害物质或元素					
	铅	汞	镉	六价铬	多溴联苯	多溴二苯醚
印刷电路板组件	X	O	O	O	O	O
屏幕/背光	X	O	O	O	O	O
金属零件	X	O	O	O	O	O
电缆 电缆组件 连接器	X	O	O	O	O	O

本表格依据 SJ/T11364 的规定编制。

O: 代表此种部件的所有均质材料中所含的该种有害物质均低于 (GB/T26572) 规定的限量

X: 代表此种部件所用的均质材料中, 至少有一类材料其所含的有害物质高于 (GB/T26572) 规定的限量

\*該產品說明書應提供在環保使用期限和特殊標記的部分詳細講解產品的擔保使用條件。



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