

Fusion[®] Fusion MS-RA70/MS-RA70N Owner's
Manual
Owner's Manual

DRAFT

All rights reserved. Under the copyright laws, this manual may not be copied, in whole or in part, without the written consent of Garmin. Garmin reserves the right to change or improve its products and to make changes in the content of this manual without obligation to notify any person or organization of such changes or improvements. Go to www.garmin.com for current updates and supplemental information concerning the use of this product.

DRAFT

Table of Contents

Getting Started	1
What's In the Box.....	1
Stereo Controls.....	1
Using the Dial to Select Items.....	1
Selecting a Source.....	1
Entering Text.....	1
Adjusting the Backlight Brightness and Contrast.....	1
Stereo Screen.....	1
Media Player Connection.....	1
USB Device Compatibility.....	1
Connecting a USB Device.....	2
Adjusting the Volume.....	2
Adjusting the Tones.....	2
Speaker Zones.....	2
Bluetooth Device Playback	2
Connecting a Compatible Bluetooth Device.....	2
Bluetooth Range Information.....	2
Selecting a Different Bluetooth Source.....	2
Bluetooth Source Settings.....	2
Radio	3
Setting the Tuner Region.....	3
Changing the Radio Station.....	3
Presets.....	3
Saving a Channel as a Preset.....	3
Removing Presets.....	3
General Settings (RA70)	3
Appendix	3
Registering Your Fusion MS-RA70/MS-RA70N.....	3
True-Marine™ Products.....	3
FUSION-Link.....	3
Audio Control with NMEA 2000.....	3
Optional Wired Remote Controls.....	3
Troubleshooting.....	4
The stereo does not respond to key presses.....	4
The stereo keeps locking up when connected to an Apple device.....	4
The stereo is not finding my Apple device when it is connected in the dock.....	4
The stereo does not find all of my music files on my MTP device.....	4
My Bluetooth audio is interrupted by short breaks.....	4
The stereo does not display all song information from my Bluetooth source.....	4
Specifications.....	4
Stereo Dimension Drawings.....	4
Front Dimensions.....	4
Side Dimensions.....	4
Top Dimensions.....	4
Index	5

DRAFT

Getting Started

What's In the Box

- DIN mounting plate
- Four 8-gauge, self-tapping screws
- Power and speaker wiring harness
- Auxiliary-in, line-out, and subwoofer-out wiring harness

Stereo Controls



Dial ①	<ul style="list-style-type: none"> • Turn to adjust the volume. • Press to switch between zones. • Hold for at least one second to adjust the subwoofer levels. • Turn to move through the menus or adjust a setting. • Press to select the highlighted option.
	<ul style="list-style-type: none"> • Select to open a menu. • Select to return to the previous screen or menu.
	Select to change the source (Selecting a Source, page 1).
	<ul style="list-style-type: none"> • Select to skip to the previous track, when using an applicable source. • Hold to rewind the current track, when using an applicable source. • AM or FM source: <ul style="list-style-type: none"> ◦ Select to tune to the previous station. ◦ Hold for faster tuning (manual mode only). • AUX source: Select to decrease the gain for the connected source.
	<ul style="list-style-type: none"> • Select to skip to the next track, when using an applicable source. • Hold to fast forward the current track, when using an applicable source. • AM or FM source: <ul style="list-style-type: none"> ◦ Select to tune to the next station. ◦ Hold for faster tuning (manual mode only). • AUX source: Select to increase the gain for the connected source.
	<ul style="list-style-type: none"> • Select to turn on the stereo. • Hold to turn off the stereo.
	<ul style="list-style-type: none"> • Select to pause or resume. • AM or FM source: <ul style="list-style-type: none"> ◦ Select to cycle through the tuning modes (auto or manual) and presets (when two or more presets are saved). ◦ Hold to save this station as a preset.

Using the Dial to Select Items

You can use the dial to highlight and select items on the screen.

- Turn the dial to select an item on the screen.
- Press the dial to select the highlighted option.

Selecting a Source

- 1 Select .
- 2 Select an option:
 - Turn the dial to highlight a source.
 - Select repeatedly to highlight a source.
- 3 Press the dial to select the source.

Entering Text

You can enter text to change some settings field values on this device.

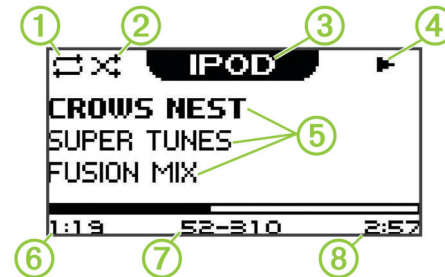
- 1 In a settings field that allows you to enter text, select to erase the existing characters.
- 2 Use the dial to choose a letter, and press the dial to select it.
- 3 Add additional letters to finish entering the text.
- 4 Select to save the new text.

Adjusting the Backlight Brightness and Contrast

- 1 Select > **SETTINGS** > **LCD**.
- 2 Press the dial to select brightness or contrast.
- 3 Adjust the brightness or contrast.
- 4 Select to exit the menu.

Stereo Screen

The information displayed on the stereo screen varies depending on the source selected. This example shows the stereo playing a track on an iPhone® mobile digital device.



①	Repeat status icon
②	Shuffle status icon
③	Source
④	Play status icon
⑤	Track details (if available)
⑥	Elapsed time
⑦	Current track number out of total number of tracks in the playlist (if available)
⑧	Track duration

Media Player Connection

⚠ CAUTION

Always disconnect your media player from the stereo when not in use and do not leave it in your vessel. This helps reduce the risk of theft and damage from extreme temperatures.

Do not remove the media player or use your stereo in a distracting manner while operating the vessel. Check and obey all marine laws in association with use.

The stereo accepts a variety of media players, including smartphones and other mobile devices. You can connect a compatible media player using a Bluetooth® wireless connection, a USB connection to the USB port on the back of the stereo, or to an optional UNI-Dock external media dock.

NOTE: If you connect an Apple® media player to the USB port on the stereo, you must either disable Bluetooth on the media player, or unpair the Bluetooth connection from the stereo to avoid possible media-playback issues.

USB Device Compatibility

You can use the USB cable that came with your media player to connect the media player to the USB connector on the back of the stereo.

The stereo is compatible with Apple devices that use a Lightning™ connector on the USB cable, such as the iPhone 6.

The stereo is compatible with media players and other USB mass storage devices that contain music in MP3, M4A, and AAC formats. A connected USB mass storage device must be formatted using the NTFS or FAT32 file system.

Connecting a USB Device


You can connect a USB device to the USB port on the stereo.

- 1 Locate the USB port on the back of the stereo.
- 2 Connect the USB device to the USB port.
- 3 Select the USB source.

Adjusting the Volume

- 1 Use the dial to adjust the volume.
- 2 If necessary, press the dial to switch between zones.
TIP: To control all zones at the same time, press the dial until all zones are highlighted.

Adjusting the Tones

- 1 Select  > **SETTINGS** > **TONE**.
- 2 Use the dial to adjust the level.
- 3 Press the dial to switch to a different tone.

Speaker Zones


You can group speakers in one area into speaker zones. This enables you to control the audio level of the zones individually. For example, you could make the audio quieter in the cabin and louder on deck.

Up to two pairs of speakers can be connected per zone, in parallel, to increase the amplifier output.

Zones 1 and 2 are powered by the on-board, Class D amplifier. To use the three line outputs and the three subwoofer outputs, you must connect external amplifiers.

You can set the balance, volume limit, subwoofer level, and name for each zone.

Setting up Speaker Zones

- 1 Select  > **SETTINGS** > **ZONE**.
- 2 Select a zone.
- 3 Select one or more options:


NOTE: Not all options are available for all zones.

- To disable the zone and remove it from the audio level pages, select **ENABLED** to clear the option button. When a zone is disabled, you cannot change any of the settings for that zone.
- To link zones 1 and 2, select **LINK TO ZONE 1** to fill the option button.
- To adjust the right and left speaker balance of this zone, select **BALANCE**, and use the dial to set the balance.
- To limit the maximum volume output of this zone, select **VOLUME LIMIT**, and use the dial to set the limit.
- To set the subwoofer level for this zone, select **SUB LEVEL**, and use the dial to set the level.

TIP: To open the subwoofer level from any screen, press and hold the dial for three seconds.

- To give the zone a specific name, select **SET ZONE NAME** (*Entering Text, page 1*).
- To allow the volume of this zone to be controlled by another amplifier or stereo and provide a fixed line level output, select **VOLUME CONTROL** to clear the option button.

Linking Zones


- 1 Select  > **SETTINGS** > **ZONE** > **ZONE 2**.
- 2 Select **LINK TO ZONE 1** to fill the button.

When zones 1 and 2 are linked, **+** appears between zones 1 and 2 on the volume screen.

Adjusting the Subwoofer Filter

You can use the subwoofer filter setting to control the subwoofer cutoff frequency, which can enhance the blend of the sound produced by the speakers and the subwoofer. Audio signals

above the selected frequency are not passed to the subwoofer. The setting applies to all subwoofer outputs.

- 1 Select  > **SETTINGS** > **ZONE** > **SUBWOOFER FILTER**.
- 2 Select a frequency.
- 3 Press the dial to save the selection.

Bluetooth Device Playback


You can pair the stereo to up to eight Bluetooth media devices.

You can control the playback using the keys, but you cannot browse the music collection. You should select the song or playlist on the media device.

The availability of song information such as song title, artist name, and track duration depends on the capability of the media player and music application. Album cover artwork and the shuffle and repeat status icons are not supported over Bluetooth wireless technology.

Connecting a Compatible Bluetooth Device

You can play media from a compatible Bluetooth device using the Bluetooth wireless connection.

- 1 Select the Bluetooth source.
- 2 Select  > **DISCOVERABLE** to make the stereo visible to your compatible Bluetooth device.
- 3 Enable Bluetooth on your compatible Bluetooth device.
- 4 Bring the compatible Bluetooth device within 10 m (33 ft.) of the stereo.
- 5 On your compatible Bluetooth device, search for Bluetooth devices.
- 6 On your compatible Bluetooth device, select the stereo from the list of detected devices.
- 7 On your compatible Bluetooth device, follow the on-screen instructions to pair and connect to the discovered stereo.

When pairing, your compatible Bluetooth device may ask you to confirm a code on the stereo. The stereo does not display a code, but it does connect correctly when you confirm the message on the Bluetooth device.

- 8 If your compatible Bluetooth device does not immediately connect to the stereo, repeat steps 1 through 7.


To prevent interruption to audio streaming over Bluetooth wireless, you can turn off the **DISCOVERABLE** setting after pairing a Bluetooth device to the stereo.

Bluetooth Range Information


The stereo and Bluetooth wireless devices have a range of 10 m (33 ft.). For optimal performance, the Bluetooth wireless device should also have a clear line of sight to the stereo.

Selecting a Different Bluetooth Source

When you have more than one Bluetooth device paired to the stereo, you can select a different source when needed. You can connect the stereo to up to eight Bluetooth devices.

- 1 With the **BLUETOOTH** source selected, select .
- 2 Select a Bluetooth device.

Bluetooth Source Settings

With the **BLUETOOTH** source selected, select .

DISCOVERABLE: Allows the stereo to be visible to Bluetooth devices. You can turn off this setting to prevent possible interruption to audio after pairing a Bluetooth device to the stereo.


REMOVE DEVICE: Removes the Bluetooth device from the stereo. To listen to audio from this Bluetooth device again, you must pair the device again.

Radio




To listen to AM or FM radio, you must have a suitable marine AM/FM antenna properly connected to the stereo and be within range of a broadcasting station. For instructions on connecting an AM/FM antenna, see the stereo installation instructions.

Setting the Tuner Region

You must select the region you are in to receive AM and FM stations properly.

- 1 Select  > **SETTINGS** > **TUNER REGION**.
- 2 Select the region you are in presently.


Changing the Radio Station


- 1 Select an applicable source, such as **FM**.
- 2 Select  repeatedly to cycle through the tuning mode:
 - Select **AUTO** to scan and stop on the next available station.
 - Select **MANUAL** to select a station manually.
 - Select **PRESETS** to select a saved station preset.
- 3 Select  or  to tune to the station.

Presets


You can save your favorite AM stations, FM stations, or SiriusXM® channels as presets for easy access. You can save up to 15 presets for each radio band.

Saving a Channel as a Preset

- 1 With an applicable source selected, tune the stereo to a channel.
- 2 Select  > **PRESETS**.
- 3 Select **SAVE CURRENT** or **ADD PRESET**.

TIP: You can quickly save the selected channel as a preset by holding .

Removing Presets

- 1 With an applicable source selected, select  > **PRESETS** > **REMOVE PRESET**.
- 2 Select an option:
 - To remove one preset, select the preset.
 - To remove all presets, select **REMOVE ALL PRESETS**.

General Settings (RA70)

Select  > **SETTINGS**.

NOTE: When an option button is filled, the option is on. When the button is clear, the option is off.

TONE: Adjusts the bass, middle, and treble tones.

ZONE: Enables you to configure the speaker zones.

LCD: Enables you to adjust the backlight brightness and contrast settings (*Adjusting the Backlight Brightness and Contrast, page 1*).

POWER SAVE: Enables and disables the LCD backlight after one minute of inactivity to save battery power.

LANGUAGE: Sets the language on the device.

TUNER REGION: Sets the region used by the FM, AM, and SiriusXM source.

TEL MUTE: Sets the behavior of the mute function when the device is connected to a hands-free mobile phone. When a call is received, the device can either mute the audio or broadcast the call through the AUX2 input. See your hands-free kit instructions.

SET DEVICE NAME: Sets a name for this stereo (*Entering Text, page 1*).

UPDATE: Updates the stereo, updates the connected remote controls, or resets all settings to the factory defaults.

ABOUT: Shows the software versions of the stereo, FUSION-Link™, and connected remote.

Appendix

Registering Your Fusion MS-RA70/MS-RA70N

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

- Go to www.fusionentertainment.com.
- Keep the original sales receipt, or a photocopy, in a safe place.

True-Marine™ Products

True-Marine products are subjected to rigorous environmental testing under harsh marine conditions to surpass industry guidelines for marine products.

Any product that bears the True-Marine stamp of assurance has been designed for simplicity of use and combines advanced marine technologies to deliver an industry leading entertainment experience. All True-Marine products are supported by the Fusion 3-year worldwide limited consumer warranty.

FUSION-Link

FUSION-Link technology allows you to fully control compatible Fusion entertainment systems on compatible multi-function displays installed at the helm, flybridge, or navigation station of the vessel. This provides you with integrated entertainment control and a less cluttered console.

The partnered multi-function display becomes the portal on which all audio on the vessel is controlled, no matter where on the vessel the stereo is installed. The FUSION-Link equipped stereo can be installed out of sight if space is an issue and users need to access the stereo only to replace removable media.

FUSION-Link technology offered on this device operates over existing industry-standard NMEA 2000® networks.

For a list of FUSION-Link capable products from companies that are partnering with Fusion, go to www.fusionentertainment.com.

Audio Control with NMEA 2000

NMEA 2000 is the most popular marine standard for data communication within vessels. It has become the standard for sending navigation and engine management data within vessels. Fusion introduces an industry-first product by incorporating NMEA 2000 functionality in its audio remote control devices. This enables the user to monitor a series of available NMEA® sentences.

Go to www.fusionentertainment.com for a full list of supported NMEA sentences.

Optional Wired Remote Controls

The stereo can be controlled by compatible Fusion wired remote controls installed in the audio zones throughout the vessel. Operating the entertainment system from the remote control is similar to operating it from the main stereo.

The wired remote controls operate over an existing NMEA 2000 network, so all remotes connected to the same NMEA 2000 as the stereo can control the stereo.

The remote control can also serve as an NMEA display showing NMEA navigation data or vessel performance data from other NMEA devices on an existing NMEA 2000 network.

Troubleshooting

The stereo does not respond to key presses

- Press and hold the power button to reset the stereo.

The stereo keeps locking up when connected to an Apple device

- Press and hold the power button to reset the stereo.
- Reset the Apple device. Go to www.apple.com for more information.
- Make sure you have the latest version of iTunes® and the latest operating software on your Apple device.

The stereo is not finding my Apple device when it is connected in the dock

- Make sure you have the latest version of iTunes and the latest operating software on your Apple device.
- Reset the Apple device. Go to www.apple.com for more information.
- Contact your Fusion dealer or send an email to Fusion from www.fusionentertainment.com.

The stereo does not find all of my music files on my MTP device

Music files must be located in a folder using one of these names. The folder must be located in the root directory of the media player.

- My Music
- My_Music
- mobile
- Music

My Bluetooth audio is interrupted by short breaks

- Ensure the media player is not covered or obstructed. Bluetooth technology performs best with line-of-sight operation.
- Bring the media player within 10 m (33 ft.) of the stereo.
- Turn off the **DISCOVERABLE** setting after pairing a Bluetooth device to the stereo.

The stereo does not display all song information from my Bluetooth source

The availability of song information such as song title, artist name, track duration, and album cover artwork depends on the capability of the media player and music application.

Album cover artwork and shuffle and repeat status icons are not supported by Bluetooth technology.

Specifications

General	
Weight	556 g (19.6 oz.)
Water resistance	IEC 60529 IPX6 (front), IEC 60529 IPX3 (rear)
Operating temperature range	From 0 to 55°C (from 32 to 131°F)
Storage temperature range	From -20 to 70°C (from -4 to 158°F)
Input voltage	From 10.8 to 16 Vdc
NMEA 2000 LEN	1 (50 mA)
Compass-safe distance	15 cm (5.9 in.)

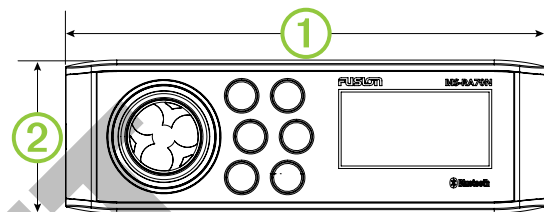
On-board, Class AB Amplifier	
Output music power per channel	50 W max. x 4 channels at 4 Ohms per channel
Total output music power	200 W max.
Current (standby)	less than 3 mA

On-board, Class AB Amplifier	
Current (max.)	15 A
Current (muted)	less than 900 mA

Tuner	Europe and Australasia	USA	Japan
FM radio frequency range	87.5 to 108 MHz	87.5 to 107.9 MHz	70 to 90 MHz
FM Frequency step	50 kHz	200 kHz	50 kHz
AM radio frequency range	522 to 1620 kHz	530 to 1710 kHz	522 to 1620 kHz
AM Frequency step	9 kHz	10 kHz	9 kHz

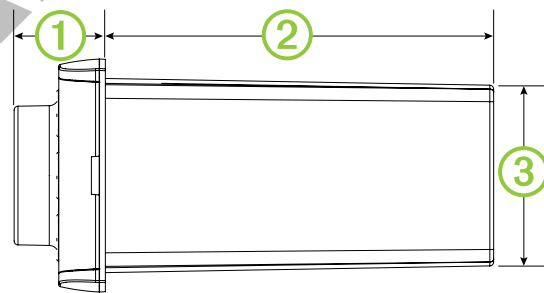
Stereo Dimension Drawings

Front Dimensions



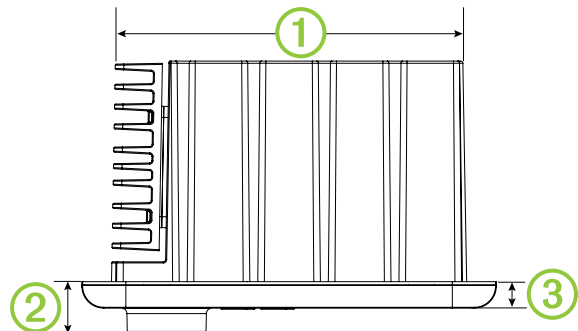
①	188 mm (7.40 in.)
②	60 mm (2.36 in.)

Side Dimensions



①	23.5 mm (0.93 in.)
②	100 mm (3.94 in.)
③	50 mm (1.97 in.)

Top Dimensions



①	161 mm (6.34 in.)
②	23.5 mm (0.93 in.)
③	12 mm (0.47 in.)

Index

A

AM **3**
Android device **4**
Apple device **1, 4**

B

backlight **1**
bass **2**
Bluetooth devices **2**

D

device **1**
 keys **1**
 registration **3**

F

FM **3**
FUSION-Link **3**

K

keys **1, 3**

L

language **3**

M

media player **1**
menu key **1**
MTP **4**

N

NMEA 2000 **3**

P

power key **1**
presets **3**
product registration **3**

R

radio
 AM **3**
 FM **3**
registering the device **3**
remote control **3**

S

SiriusXM **3**
source **1**
speaker zones **2**
subwoofer **2**

T

time
 format **3**
 setting **3**
tone **2, 3**
treble **2**

U

USB **1, 2**

V

volume **2**
 adjusting **2**

DRAFT

www.garmin.com/support



+43 (0) 820 220230



+ 32 2 672 52 54



0800 770 4960



1-866-429-9296



+385 1 5508 272
+385 1 5508 271



+420 221 985466
+420 221 985465



+ 45 4810 5050



+ 358 9 6937 9758



+ 331 55 69 33 99



+ 39 02 36 699699



(+52) 001-855-792-7671



0800 0233937



+47 815 69 555



00800 4412 454
+44 2380 662 915



(+35) 1214 447 460



+386 4 27 92 500



0861 GARMIN (427 646)
+27 (0)11 251 9999



+34 93 275 44 97



+ 46 7744 52020



+886 2 2642-9199 ext 2



0808 238 0000
+44 (0) 870 8501242



+49 (0) 89 858364880
zum Ortstarif - Mobilfunk
kann abweichen



913-397-8200
1-800-800-1020

SAFETY



© 2015 Garmin Ltd. or its subsidiaries