

GARMIN®

FUSION APOLLO™ MS-RA800



Installation Instructions

Important Safety Information

WARNING

Failure to follow these warnings and cautions could result in personal injury, damage to the vessel, or poor product performance.

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

This device must be installed according to these instructions.

Disconnect the vessel's DC power supply before making any modifications to it.

Before applying power to this product, make sure it has been correctly grounded according to these instructions.

You must review and follow the applicable important power considerations when selecting the power cable and fuse or circuit breaker. Using an incorrectly-rated power cable, fuse, or circuit breaker for your installation type may cause a fire or other potential issues that could result in serious personal injury, damage to the device or the vessel, or poor product performance ([Important Power Connection Information for New Installations, page 13](#)).

To avoid potential risk of fire, possibly resulting in serious personal injury or property damage, only replace fuses used in installation with the same type and rating.

CAUTION

To avoid possible personal injury, 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 to avoid damaging the vessel.

Do not use the stereo as a template when drilling the mounting holes because this may damage the glass display and void the warranty. You must only use the included template to correctly drill the mounting holes.

The installer is responsible for ensuring the installation complies with all applicable local, regional, and national regulations, standards, and best practices for marine electrical systems. You must verify that all wiring, circuit protection, grounding, and installation methods comply with the requirements for the vessel and installation location, including applicable standards such as ABYC®, ISO, RCD or other relevant marine electrical standards.

You must read all installation instructions before beginning the installation. If you experience difficulty during the installation, contact Garmin® Product Support.

What's In the Box

- Mounting gasket

- Four 8-gauge, self-tapping screws
- Two screw covers
- Power and speaker wiring harness
- Auxiliary-in, line-out, and subwoofer-out wiring harnesses
- 2 m (6 ft.) NMEA 2000® drop cable
- Dust cover

Tools Needed

- Phillips screwdriver
- Electric drill
- Drill bit (size varies based on surface material and screws used)
- Rotary cutting tool or jigsaw
- Appropriately-rated circuit breaker or inline fuse for the primary power cable ([Important Power Connection Information for New Installations, page 13](#))
- 1 A inline fuse for the ignition cable
- Silicone-based marine sealant (optional)
- Wire for power and ground cable extension. The required wire gauge depends on the length of the extension and the connected power source ([Power Cable Gauge Guide, page 7](#)).
- 22 AWG (0.33 mm²) wire for ignition cable extension

Mounting Considerations

⚠ CAUTION

In high ambient temperatures and after extended use, the rear portion of the device enclosure may reach temperatures deemed dangerous to touch. To avoid possible personal injury, the device must be installed in a location where only the face is accessible to users and the rear portion cannot be touched during operation.

NOTICE

This device should be mounted in a location that is not exposed to extreme temperatures or conditions. The temperature range for this device is listed in the product specifications. Extended exposure to temperatures exceeding the specified temperature range, in storage or operating conditions, may cause device failure. Extreme-temperature-induced damage and related consequences are not covered by the warranty.

- You must mount the stereo on a flat surface.
- You must mount the device in a location with adequate ventilation so it does not trap heat.
- When installed properly using optional marine sealant, the stereo is water resistant from the front. The connectors on the back are not water resistant, so you must not install the stereo in a location where the back may become submerged or regularly exposed to water.
- If you are installing the stereo in a location that may be exposed to water on occasion, you must mount it within 45 degrees below or 15 degrees above the horizontal plane.
- If you are installing the stereo in a location that may be exposed to water on occasion, you must add a drip loop to the cable to allow water to drip off of the cable and avoid damage to the stereo.
- If you need to mount the stereo on the outside of the boat, you must mount it in a location far above the waterline, where it is not submerged, and where it cannot be damaged by docks, pilings, or other pieces of equipment.
- To avoid interference with a magnetic compass, you should mount the stereo at least 40 cm (15.75 in.) away from a compass.

Mounting the Stereo

NOTICE

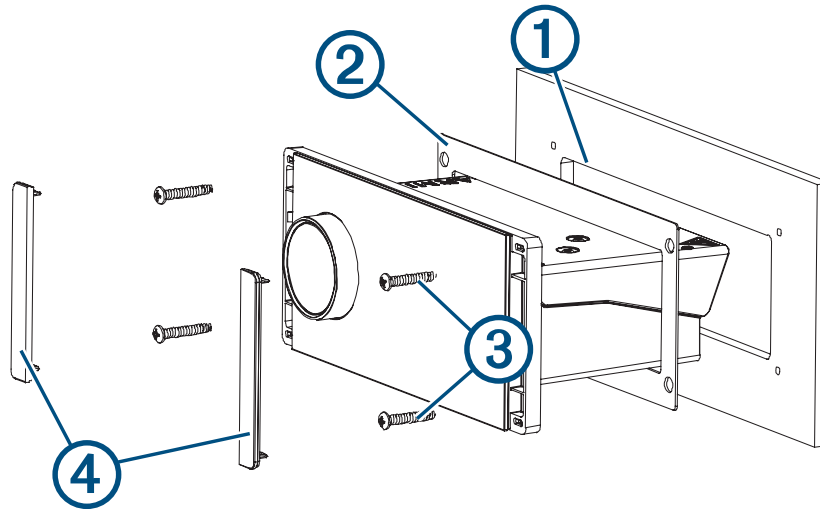
Do not use the stereo as a template when drilling the mounting holes because this may damage the display and void the warranty. You must only use the included template to correctly drill the mounting holes.

Be careful when cutting the hole to mount the stereo. There is only a small amount of clearance between the case and the mounting holes, and cutting the hole too large could compromise the stability of the stereo after it is mounted.

Do not apply grease or lubricant to the screws when fastening the stereo to the mounting surface. Grease or other lubricants can cause damage to the stereo housing.

Before you can mount the stereo in a new location on the mounting surface, you must select a location in accordance with the mounting considerations.

- 1 Adhere the template to the mounting surface.
- 2 Drill a hole inside the corner of the dashed line on the template.
- 3 Cut the mounting surface ① along the inside of the dashed line on the template.



- 4 Ensure the mounting holes on the stereo line up with the pilot holes on the template.
- 5 Using an appropriately sized drill bit for the mounting surface and screw type, drill the pilot holes.
- 6 Remove the template from the mounting surface.
- 7 Complete an action:
 - If you are installing the stereo in a dry location, place the included mounting gasket ② on the back of the stereo.
 - If you are installing the stereo in a location that is exposed to water, apply silicone-based marine sealant on the mounting surface around the cutout.

NOTICE

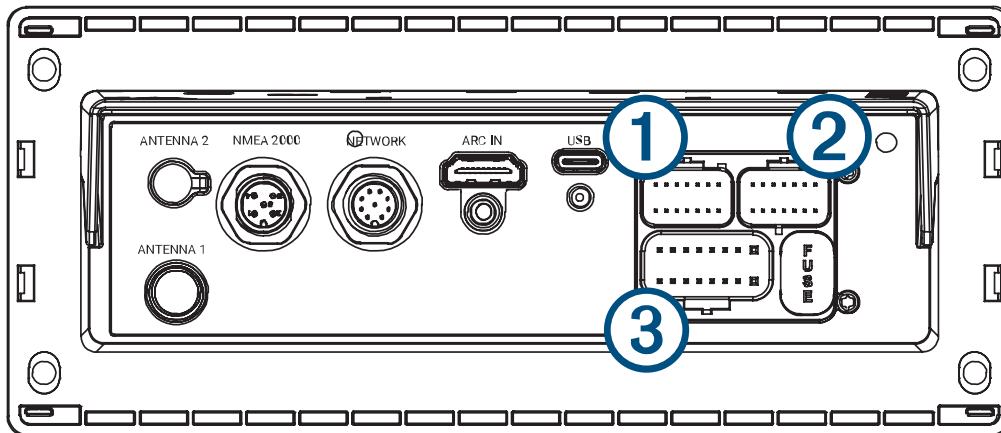
Do not install the included mounting gasket if you applied sealant to the mounting surface. Using sealant and the mounting gasket may reduce water resistance.

- 8 If you will not have access to the back of the stereo after installation, make the necessary wiring connections.
- 9 Secure the stereo to the mounting surface using the included screws ③.
You should hand-tighten the screws when securing the stereo to the mounting surface to avoid over tightening them.
- 10 Snap the screw covers in place ④.

Connection Considerations

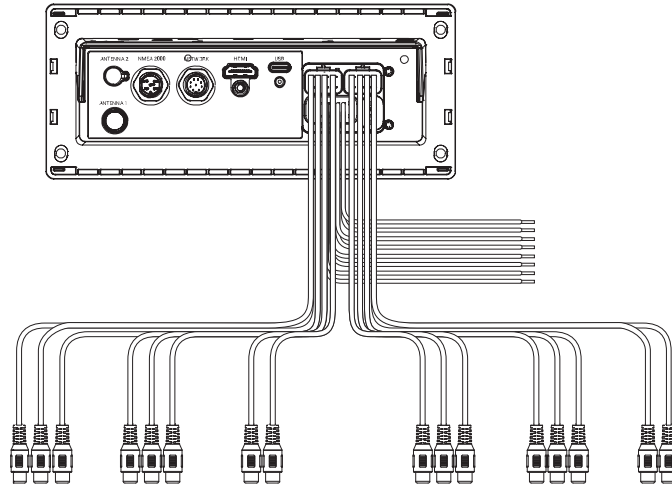
For the stereo to function correctly, you must connect it to power, to speakers, and to input sources. You should carefully plan the layout of the stereo, speakers, and input sources, as well as optional NMEA 2000® network, Fusion PartyBus™ network, Garmin BlueNet™ network or Legacy Garmin® Marine Network needs before making any connections.

Port Identification



Item	Description
ANTENNA OR ANTENNA 1	Connects the stereo to an AM/FM antenna using a standard DIN plug (not included). On a European model, you can connect the stereo to a compatible Digital Audio Broadcast (DAB) antenna using a standard DIN plug (not included) to receive DAB stations in regions where available. If you are installing the stereo on a boat with a metal hull, you must use a ground-dependent antenna. If you are installing the stereo on a boat with a non-metal hull, you must use a ground-independent antenna. See the installation instructions provided with your antenna for more information.
ANTENNA 2	This port is present only on European models. Connects to a compatible DAB antenna with a male FAKRA connector (not included) to receive DAB stations in regions where available. Connects to an FM antenna using a male FAKRA connector (not included). When using this port you must configure it for the type of antenna you are using (Configuring the Antenna Ports for DAB and FM Antennas , page 12).
NMEA 2000	Connects the stereo to a NMEA 2000® network (NMEA 2000® System Wiring Diagram , page 11).
NETWORK	Garmin BlueNet™ network connector. Connects the stereo to a Garmin® chartplotter or to another Fusion PartyBus™ stereo, zone stereo, or network (Fusion PartyBus™ Networking , page 14).
USB	Connects the stereo to a USB-C® device or USB-C extension cable (not included).
ARC IN	Connects the stereo to a digital audio source, such as TV or DVD player, using the Audio Return Channel (ARC) over HDMI® (Audio Return Channel , page 12).
FUSE	Contains an internal 25 A fuse for the device. NOTE: This fuse is in addition to the appropriately-rated circuit breaker or inline fuse needed when connecting to the power source (Important Power Connection Information for New Installations , page 13).
①	Connects the stereo to the wiring harness for auxiliary input 2, and for the line and subwoofer outputs for zones 3 and 4.
②	Connects the stereo to the wiring harness for auxiliary input 1, and for the line and subwoofer outputs for zones 1 and 2.
③	Connects the stereo to the power and speaker wiring harness.

Wiring Harness Wire and Connector Identification



Wire or RCA Connector Function	Bare Wire Color or RCA Label Name	Notes
Ground (-)	Black	Connects to the power source (Power Connection, page 7).
Power (+)	Yellow	Connects to the power source (Power Connection, page 7).
Ignition	Red	Connects to the power source (Power Connection, page 7).
Amplifier on	Blue	Connects to optional external amplifiers, enabling them to turn on when the stereo turns on. NOTICE A connected amplifier must use the same ground (-) as the stereo for this signal wire to function correctly.
Telemute	Brown	Activates when connected to the same ground (-) as the stereo. For example, when you connect this wire to a compatible, hands-free mobile kit, the audio mutes or the input switches to Aux1 when a call is received and the kit connects this wire to the same ground (-) as the stereo. You can enable this functionality from the settings menu.
Dim	Orange	Connects to the boat's illumination wire to dim the stereo screen when the lights are on. The gauge of the illumination wire must be suitable for the fuse supplying the circuit it is connected to. NOTICE The stereo and the vessel must use the same ground (-) connection for the Dim wire to function correctly.
Speaker zone 1 left (+)	White	
Speaker zone 1 left (-)	White/black	
Speaker zone 1 right (+)	Gray	
Speaker zone 1 right (-)	Gray/black	
Speaker zone 2 left (+)	Green	
Speaker zone 2 left (-)	Green/black	
Speaker zone 2 right (+)	Purple	
Speaker zone 2 right (-)	Purple/black	
Zone 1 line out (left) Zone 1 line out (right) Zone 1 subwoofer out	ZONE 1 ZONE 1 SUB OUT	Provides output to an external amplifier, and is associated with the volume control for zone 1. Each subwoofer cable provides a single mono output to a powered subwoofer or subwoofer amplifier.

Wire or RCA Connector Function	Bare Wire Color or RCA Label Name	Notes
Zone 2 line out (left) Zone 2 line out (right) Zone 2 subwoofer out	ZONE 2 ZONE 2 SUB OUT	Provides output to an external amplifier, and is associated with the volume control for zone 2. Each subwoofer cable provides a single mono output to a powered subwoofer or subwoofer amplifier.
Auxiliary in 1 left Auxiliary in 1 right	AUX IN 1	Provides an RCA stereo line input for audio sources, such as a CD or MP3 player.
Zone 3 line out (left) Zone 3 line out (right) Zone 3 subwoofer out	ZONE 3 ZONE 3 SUB OUT	Provides output to an external amplifier, and is associated with the volume control for zone 3. Each subwoofer cable provides a single mono output to a powered subwoofer or subwoofer amplifier.
Zone 4 line out (left) Zone 4 line out (right) Zone 4 subwoofer out	ZONE 4 ZONE 4 SUB OUT	Provides output to an external amplifier, and is associated with the volume control for zone 4. Each subwoofer cable provides a single mono output to a powered subwoofer or subwoofer amplifier.
Auxiliary in 2 left Auxiliary in 2 right	AUX IN 2	Provides and RCA stereo line input for audio sources, such as a CD or MP3 player.

Important Power Connection Information for Existing or OEM Installations

WARNING

You must review and follow the applicable important power connection information. Failure to do so may cause a fire or other potential issues that could result in serious personal injury, damage to the device or the vessel, or poor product performance.

Considerations when Replacing a Previous Fusion® Stereo

If you are replacing a previous Fusion stereo, you may be able to use the existing 15 A power cable harness with this stereo. Read these considerations and only proceed with using the existing power cable if they are met.

- If you are not connecting speakers to the stereo as you plan to connecting the stereo to an external amplifier instead, you can use the existing 15 A power cable harness. Observe the considerations for installations using an external amplifier only ([New Installations Using Only an External Amplifier, page 13](#)).
- If you are connecting speakers to the stereo to use the internal amplifier, you can use the existing 15 A power cable as long as you observe these considerations:
 - The power cable must be rated for 15 A or higher.
 - The fuse or circuit breaker connected to the positive wire must be 15 A
 - The maximum voltage drop that can be experienced by the stereo is 1.0 Vdc for a 12 Vdc system or 2.0 Vdc for a 24 Vdc system.¹
 - You must set the correct speaker profiles for your connected speakers in the DSP settings of the Fusion Audio app.

NOTICE

Installing the stereo using an existing 15 A power cable without setting the correct speaker profiles will result in amplifier clipping and may blow the fuse.

Considerations for OEM Installations

If you are an OEM installing this stereo, you may use an approved specialized power and speaker adapter cable. You should use 25 A adapter cables when possible.

Although it is not appropriate for all installations, you can use an approved 15 A adapter cable if you follow the considerations below. The approved 15 A cables include these Garmin® part numbers:

- 010-12482-00
- 010-12482-40

When connecting the stereo to an approved 15 A power and speaker adapter cable, you must observe these considerations:

¹ When calculating voltage drop, be sure to add together the length of both the positive and negative wires, as well as including the fuse or circuit breaker and any isolator switches.

- The current through these adapter cables must not exceed 15 A.
- The fuse or circuit breaker connected to the positive wire must be 15 A.
- The power cable must be rated for 15 A or greater.
- The maximum voltage drop experienced by the stereo must not exceed 1.0 Vdc for a 12 Vdc system or 2.0 Vdc for a 24 Vdc system.¹
- You must set the correct speaker profiles for your connected speakers in the DSP settings of the Fusion® Audio app.

Power Connection

When connecting the stereo to power, you must connect the yellow, red, and black wires to the power source. The yellow and red wires have different functions, and the method you use to connect them to power depends on how you plan to use the stereo on your vessel.

NOTICE

When you are not using the vessel for an extended period of time, you should remove power to the stereo to avoid draining the battery.

Yellow wire:

- This wire provides power to the stereo.
- This wire must be connected through an appropriately-rated circuit breaker or inline fuse ([Important Power Connection Information for New Installations, page 13](#))
- This wire provides power to the stereo at all times, and it will drain the battery even when the stereo is not in use. You should install a manual switch on this wire if a circuit breaker is not available on the vessel, or if you cannot toggle the breaker to remove power to the stereo when storing the vessel.
- When extending this wire, the required wire gauge depends on the length of the extension and the connected power source ([Power Cable Gauge Guide, page 7](#))

Red wire:

- This wire can be connected to the same power source as the yellow wire through the ignition or through a manual switch. This enables you to turn the stereo on and off automatically when you turn the vessel on and off, or when you activate the switch.
- Using this wire to turn the stereo on and off behaves in the same way as using the power button on the stereo to turn it on and off. It is not necessary to connect this wire through the ignition or manual switch if you plan to toggle the power using the power button on the stereo or using a connected chartplotter or remote control, and can instead be tied together with the yellow wire. This wire must be connected to turn the stereo on.
- When you turn off the stereo using this switch or the power button, it enters a standby mode that allows the stereo to start up again faster than if you switch the power off using the yellow wire. When it is in standby mode, the stereo uses up to 350 mA, and you must turn off power to the stereo on the yellow wire through the circuit breaker or manual switch when you are not using the vessel to avoid draining the battery.

⚠ WARNING

You must connect this wire to power through a 1 A fuse (not included), whether or not you connect it to the ignition or manual switch. Connecting this wire to power without a fuse could result in a short on the wire, which may lead to over heating and a possible fire.

- If it is necessary to extend this wire, use 22 AWG (0.33 mm²) wire.

Black wire:

- This is the ground wire, and you must connect it to the negative terminal of the power source or to a common ground.
- When extending this wire, the required wire gauge depends on the length of the extension and the connected power source ([Power Cable Gauge Guide, page 7](#))

Power Cable Gauge Guide

The gauge of wire needed to connect the stereo to power and ground depends on the power source and the length of the cable run from the power source to the stereo. Refer to this table to determine the appropriate wire gauge for your installation. This table accounts for terminal connection resistance.

¹ When calculating voltage drop, be sure to add together the length of both the positive and negative wires, as well as including the fuse or circuit breaker and any isolator switches.

NOTE: If you are using aluminum wire, you should use a wire two gauges larger than the gauge listed below to compensate for a potential voltage drop due to the wire material.

Power Source	Less Than 1 m (3.5 ft.)	1 through 5 m (3.5 through 16 ft.)	Greater than 5 m (16 ft.)
24 VDC	14 AWG (2 through 3 mm ²)	12 AWG (3 through 4 mm ²)	8 AWG (8 through 10 mm ²)
12 VDC	12 AWG (3 through 4 mm ²)	8 AWG (8 through 10 mm ²)	4 AWG (21 through 25 mm ²)

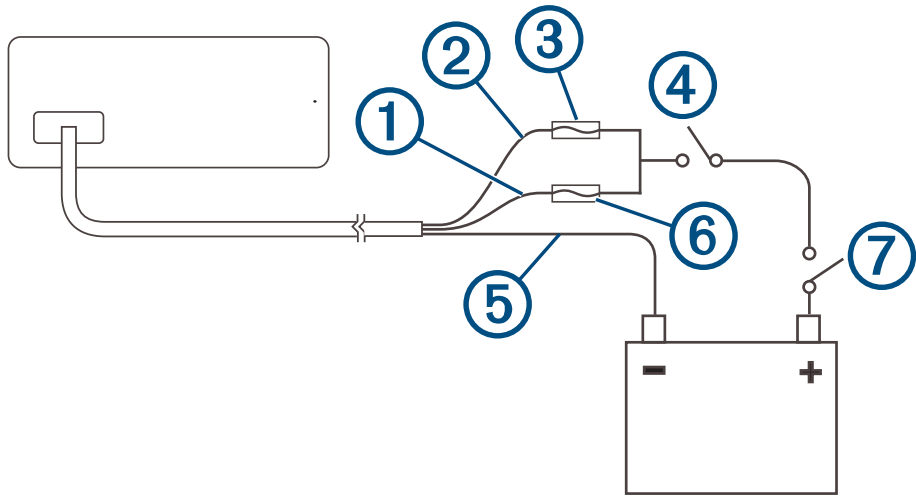
Connecting to Power Without Using an Ignition Switch

This method of connection is used most often on larger vessels and on vessels with multiple networked stereos and other marine devices. For these installations, a faster startup time is typically less critical, and it is more effective to use the breaker or a dedicated switch on the electrical panel to turn off the stereo and ensure that no unexpected power drain occurs.

NOTICE

When you are not using the vessel, you should remove power to the stereo using the circuit breaker or manual switch to avoid draining the battery.

- 1 Consult this diagram to plan the wire connections.



Item	Description	Notes
①	Yellow wire	You should connect this wire to the red wire before you connect both wires to the manual switch or circuit breaker.
②	Red wire	You should connect this wire to the yellow wire so that it does not act as a physical standby switch.
③	1 A fuse (not included)	You must install this fuse on the red wire before you connect the red wire to the yellow wire.
④	Manual switch (optional)	This switch is needed only if a circuit breaker is not available or if you require a more-convenient method of cutting power to the stereo.
⑤	Black wire	Ground (-) You must connect this wire to the same ground as the power source, or to a common ground.

Item	Description	Notes
⑥	Appropriately-rated inline fuse or circuit breaker (<i>Important Power Connection Information for New Installations</i> , page 13)	An appropriately-rated fuse or circuit breaker is required and must be rated for the current requirements of the stereo installation and the power cable used. The fuse or circuit breaker must be located at the battery end of the supply cable.
⑦	Appropriately-rated circuit breaker for a power-distribution cable (<i>Important Power Connection Information for New Installations</i> , page 13)	If the stereo is connected to a power-distribution cable or bus that also supplies other equipment, this should include a fuse or circuit breaker rated for the power-distribution cable used. This fuse or circuit breaker must be located within 150 mm (6 in.) of the battery.

- 2 Route all wires to the stereo wiring harness, the circuit breaker or switch, and the power source as necessary.

Do not connect the wiring harness to the stereo until after you have made all of the bare wire connections.

- 3 Install all of the necessary fuses on the red and yellow wires.

- 4 Connect the wiring harness to the stereo.

When the circuit breaker or manual switch on the combined yellow and red wires is closed, the stereo is always on. You can use the power button on the stereo or a connected chartplotter or remote control to place the stereo in a low-power standby mode if needed.

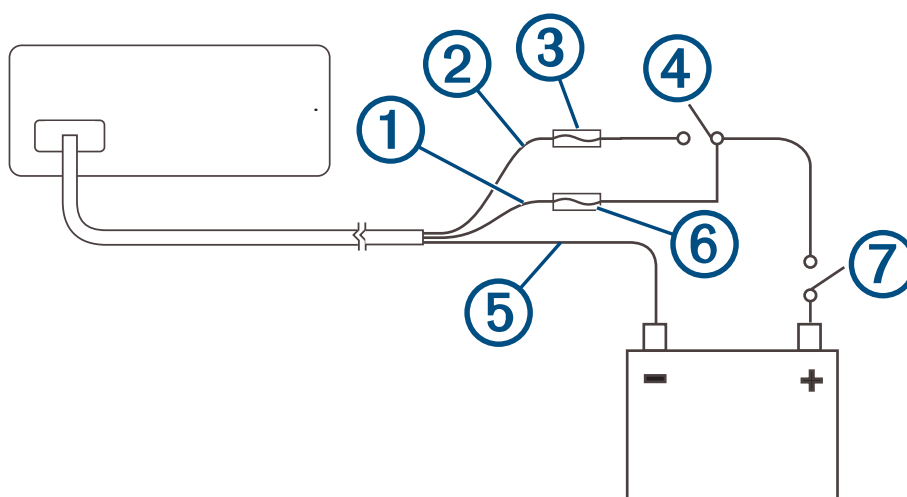
Connecting to Power Through an Ignition Switch

This method of connection is used most often on ski boats, wake boats, and similar sport or recreational vessels where power to the engines is toggled often. For these installations, a quick standby and faster startup time is desired so that music can be stopped and begin playing again as quickly as possible after restarting the engines. When in standby mode, the stereo uses up to 350 mA, and you should connect the power wires through a circuit breaker or manual switch to avoid draining the battery when you are not using the boat.

NOTICE

When you are not using the vessel for an extended period of time, you should remove power to the stereo using the circuit breaker or other manual switch on the yellow wire to avoid draining the battery.

- 1 Consult this diagram to plan the wire connections.



Item	Description	Notes
①	Yellow wire	You must connect this wire to the same power source as the ignition or ACC switch.
②	Red wire	You must connect this wire to the ignition or ACC switch before you connect it to the same power source as the yellow wire.
③	1 A fuse (not included)	You must install this fuse on the red wire before you connect the red wire to the ignition or ACC switch.

Item	Description	Notes
④	Ignition or ACC switch	Connecting the red wire to this switch allows the stereo to enter a low-power standby mode when you turn off the engines, so it can start up faster when you turn on the engines again.
⑤	Black wire	Ground (-)
⑥	Appropriately-rated inline fuse or circuit breaker (<i>Important Power Connection Information for New Installations, page 13</i>)	An appropriately-rated fuse or circuit breaker is required and must be rated for the current requirements of the stereo installation and the power cable used. The fuse or circuit breaker must be located at the battery end of the supply cable.
⑦	Appropriately-rated circuit breaker for a power-distribution cable (<i>Important Power Connection Information for New Installations, page 13</i>)	If the stereo is connected to a power-distribution cable or bus that also supplies other equipment, this should include a fuse or circuit breaker rated for the power-distribution cable used. This fuse or circuit breaker must be located within 150 mm (6 in.) of the battery.

- 2 Route all wires to the stereo wiring harness, the ignition or ACC switch, the circuit breaker, and the power source as necessary.

Do not connect the wiring harness to the stereo until after you have made all of the bare wire connections.

- 3 Install all of the necessary fuses on the red and yellow wires.

- 4 Connect the wiring harness to the stereo.

When you turn on the ignition switch, the stereo turns on along with other accessory electronics. When you turn off the ignition switch, the stereo enters a low-power standby mode.

Speaker Zones

You can group speakers in one area into a speaker zone. 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.

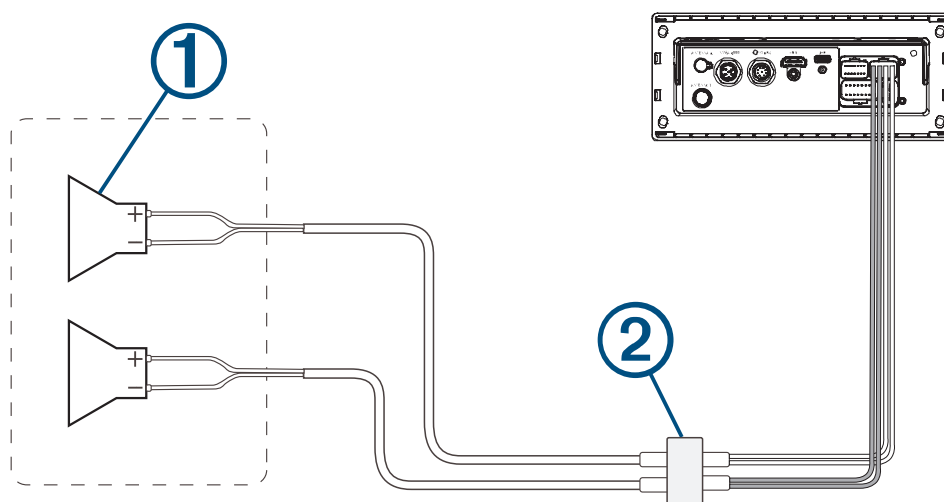
The speaker wires on the wiring harness for zones 1 and 2 are powered by the on-board amplifier. To use the RCA line outputs and the RCA subwoofer outputs for zones 1 and 2, you must connect external amplifiers.

Zones 3 and 4 are available as line-level outputs only. To use the RCA line outputs and the RCA subwoofer outputs for zones 3 and 4, you must connect external amplifiers.

You can set the balance, volume limit, tone, subwoofer frequency, and name for each zone, and configure other zone-specific settings.

NOTE: Subwoofer frequency is not adjustable when managed by DSP.

Single-Zone System Wiring Example

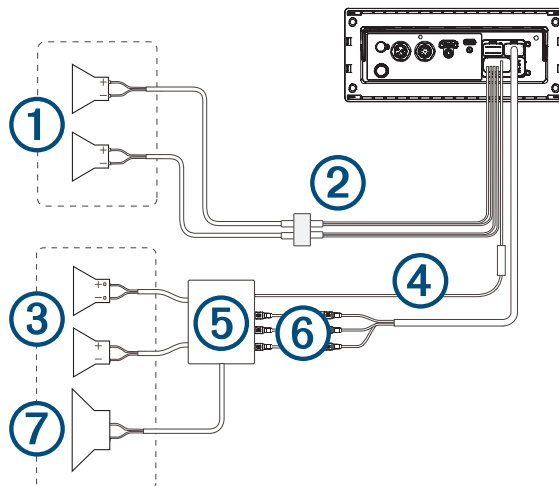


①	Speakers
②	Water-tight connection

Speaker System Wiring Using a Line Out

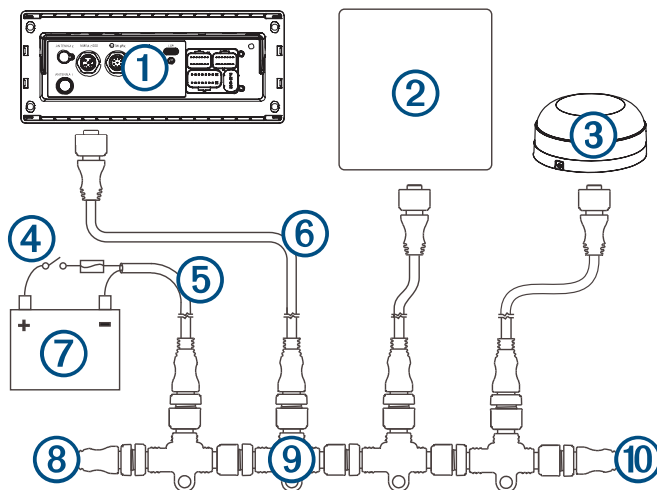
This diagram illustrates a system installation with an external amplifier and subwoofer connected to zone 2 on the stereo using a line out. You can connect an amplifier and subwoofer to any or all of the available zones on the stereo.

NOTE: You can connect speakers to the speaker wires for the internal stereo amplifier while using the line out on zones 1 and 2, although adjusting the volume affects both the speakers connected to the internal amplifier and the line out. This may result in uneven volume levels.



①	Zone 1 speakers
②	Water-tight connection
③	Zone 2 speakers
④	Amplifier-on signal wire You must connect this wire to each amplifier connected to a zone line out. A connected amplifier must use the same ground (-) as the stereo for this signal wire to function correctly.
⑤	Powered amplifier connected to the zone 2 line out
⑥	Zone 2 line out and subwoofer out Each subwoofer cable provides a single mono output to a powered subwoofer or subwoofer amplifier. You may need to use an RCA splitter to connect this to an amplifier.
⑦	Subwoofer

NMEA 2000® System Wiring Diagram



①	Stereo
②	Supported chartplotter, MFD, or compatible Fusion® NMEA 2000 remote control
③	NMEA 2000 GPS antenna, speed sensor, or wind instrument. When the stereo is connected to the same NMEA 2000 network as a compatible engine, a GPS antenna, a chartplotter with a built-in GPS antenna, a wind instrument, or a water speed sensor, it can be configured to automatically adjust the volume according to the engine RPM, the speed over ground, the wind speed, or the speed through water. See the stereo Owner's Manual for more information.
④	In-line switch
⑤	NMEA 2000 power cable NOTE: A standard NMEA 2000 power cable has an inline fuse that should be installed when making this connection.
⑥	NMEA 2000 drop cable, up to 6 m (20 ft.)
⑦	9 to 16 Vdc power supply
⑧	NMEA 2000 terminator or backbone cable
⑨	NMEA 2000 T-connector
⑩	NMEA 2000 terminator or backbone cable

Audio Return Channel

The Audio Return Channel (ARC) enables you to play digital audio from a television or other source with HDMI® technology over the stereo system speakers.

HDMI version 1.4 or newer cables support ARC. When planning your stereo installation, check whether your devices and cables support ARC. Most devices that support ARC have an ARC or eARC label on the HDMI connector that supports ARC.

You may need to configure your television or other source to output audio over ARC. This stereo supports ARC (but not eARC), CEC 1.4, and PCM stereo audio. See the manual for your source device for configuration instructions if needed.

There is a limit to the length of the HDMI cable when using ARC functionality. If your source is greater than 5 m (16 ft.) away from the stereo, confirm with the cable manufacturer that it can support ARC at the length needed.

TIP: On compatible televisions, you can control the volume of the stereo using the television remote control when using the ARC source.

Configuring the Antenna Ports for DAB and FM Antennas

NOTE: These instructions apply only to European models. DAB stations are broadcast only in select areas of Europe, so not all models support this feature.

There are two antenna ports on the stereo, and you can connect a DAB antenna and an FM antenna to either of them, depending on the type of connector on the antenna. After connecting an antenna, you must configure the stereo to use the antenna properly.

- 1 Select  > **SETTINGS** > **SOURCE** > **DAB**.
- 2 Select an option:
 - To configure an antenna port for a DAB antenna, select **DAB ANTENNA**.
 - To configure an antenna port for an FM antenna, select **FM ANTENNA**.
- 3 Select the antenna port where you connected the antenna.
- 4 Repeat these steps for the other antenna, if necessary.
- 5 If the connected antenna requires power from the stereo, select  > **SETTINGS** > **SOURCE** > **DAB** and select **ANTENNA 1 POWER** or **ANTENNA 2 POWER** depending on which port you connected the antenna (Optional).

Important Power Connection Information for New Installations

WARNING

You must review and follow the applicable important power considerations. Failure to do so may cause a fire or other potential issues that could result in serious personal injury, damage to the device or vessel, or poor product performance.

This stereo has different power cable and fuse or breaker requirements depending on how you install and use it. Before selecting the power cable extension and the fuse or circuit breaker, you must determine one of two intended uses for the stereo and refer to the requirements for that installation type:

- The stereo will be installed for use with the internal amplifier either immediately or in the future ([New Installations Using the Internal Amplifier, page 13](#)).
- The stereo will be installed for use with an external amplifier only, and the internal amplifier will never be used ([New Installations Using Only an External Amplifier, page 13](#)).

New Installations Using the Internal Amplifier

WARNING

If you plan to connect speakers to the stereo and use the internal amplifier either at the time of installation or in the future, you must follow these cable and fusing guides. Using the incorrect cable, fuse, or circuit breaker may cause a fire or other potential issues that could result in serious personal injury, damage to the device or vessel, or poor product performance.

If you plan to use the internal amplifier in the stereo, observe the following considerations and use these appropriate components. If you do not plan to connect speakers at the time of installation, but will most likely connect them later, it is advisable to follow these guidelines to avoid the need to rewire in the future.

Critical Specification	12 Vdc Power Source	24 Vdc Power Source
Power supply rating	The power supply must provide 25 A or more.	The power supply must provide 15 A or more.
Power cable rating	The power cable must be rated for 25 A or more.	The power cable must be rated for 15 A or more.
Fuse or circuit breaker rating	The fuse or circuit breaker connected to the positive wire must be 25 A.	The fuse or circuit breaker connected to the positive wire must be 15 A.
Voltage drop	The maximum voltage drop that can be experienced by the stereo should not exceed 1.0 Vdc. ¹	The maximum voltage drop that can be experienced by the stereo should not exceed 2.0 Vdc. ¹
OEM requirements (Considerations for OEM Installations, page 6)	You are able to use a specialized Fusion® power-adapter cable. It must be rated for 25 A or higher.	You are able to use a specialized Fusion power-adapter cable. It must be rated for 15 A or higher.

New Installations Using Only an External Amplifier

If plan to connect the stereo to an external amplifier instead of connecting speakers to use the internal amplifier, observe these considerations. If you think that you may connect speakers to the internal amplifier in the future, you should follow the internal amplifier installation instructions to avoid potentially needing to rewire the system in the future.

Critical Specification	12 Vdc or 24 Vdc Power Source
Power supply rating	The power supply must provide at least 5 A.
Power cable rating	The power cable must be rated for 5 A or greater.
Fuse or circuit breaker rating	The fuse or circuit breaker connected to the positive wire must be 5 A.

NOTICE

After installation, you must change the INTERNAL AMP ON setting on the stereo. See the *Fusion Apollo™ MS-RA800 Owner's Manual* for more information. Connecting the stereo to power using these specifications without turning off the internal amplifier on may result in a blown fuse, overheating, or poor product performance.

¹ When calculating voltage drop, be sure to add together the length of both the positive and negative wires, as well as including the fuse or circuit breaker and any isolator switches.

Fusion PartyBus™ Networking

The Fusion PartyBus networking feature allows you to connect multiple compatible stereos together on a network, using a combination of wired or wireless connections.

NOTE: When you connect a Fusion® stereo to Garmin BlueNet™ network or a Garmin® Marine Network, you are limited to using only Garmin and Fusion devices. You may not be able to use third-party routers, storage devices, or other network products with this stereo directly.

TIP: When the stereo is connected to a Garmin BlueNet network or a Garmin Marine Network, you can connect a mobile device to a wireless access point on a connected Garmin chartplotter and use the Fusion Audio app to control the stereo.

You cannot use Wi-Fi® networking when a stereo is connected to a Garmin network.

You can group a compatible stereo, such as the Fusion Apollo™ RA800 stereo, with other compatible stereos connected to the Fusion PartyBus network. Grouped stereos can share available sources and control media playback on all of the stereos in the group, which allows for a synchronized audio experience across the vessel. You can quickly create, edit, and break up groups as needed from any compatible stereo or remote control on the network.

NOTE: A zone stereo, such as the Fusion Apollo SRX400, can create or join a group to control and play sources from other stereos, but it cannot share its sources with the group.

For additional considerations when sharing sources, see the owner's manual.

You can use compatible stereos and remote controls, whether they are grouped or not, to adjust the volume of the available speaker zones for any stereo on the network.

You can connect up to eight Fusion PartyBus stereos on a network wirelessly.

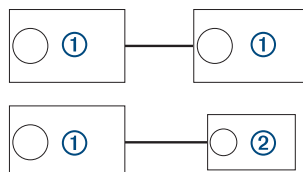
Wired Networking Considerations

When you are planning your network installation, observe the following considerations for all wired connections.

- This device uses Garmin BlueNet™ technology for wired network connections. For more information about Garmin BlueNet technology, including best practices for properly constructing a network that contains both Garmin BlueNet devices and legacy Garmin® Marine Network devices, go to garmin.com/manuals/bluenet
 - If you are connecting this stereo to another stereo or device that has a Garmin BlueNet network port, you can use standard Garmin BlueNet cables (not included).
 - If you are connecting this stereo to another device that uses Legacy Garmin Marine Network cables, you should use a Garmin Marine Network to Garmin BlueNet network adapter cable (010-12531-11 or 010-13094-00, not included).
 - If you are connecting this stereo to another stereo or device that uses standard Ethernet port, you should use an RJ45 to Garmin BlueNet network adapter cable (010-12531-02, not included).
 - If you multiple chartplotters using a mix of Garmin BlueNet network and legacy Garmin Marine Network connections, you should connect this device to a Garmin BlueNet chartplotter or switch for the best performance.
 - For more information about Garmin BlueNet technology, go to garmin.com/manuals/bluenet
- You can use one network cable to connect the stereo directly to a compatible device.
- You must use wired network switches and wired or wireless network routers when you connect more than two compatible devices to a network.
- If you install a router on the network, it should be configured to be a DHCP server by default. See your router instructions for more information.
- If you do not install a router, and there are no other DHCP servers on the network, you should configure one Fusion PartyBus™ stereo to be a DHCP server (*Setting the Fusion PartyBus™ Device as the DHCP Server*, page 18).

Wired Network Example for Direct Connections

No network setting changes are needed when connecting two devices together directly, but for the best results, you should configure one device to be a DHCP server (*Setting the Fusion PartyBus™ Device as the DHCP Server*, page 18).



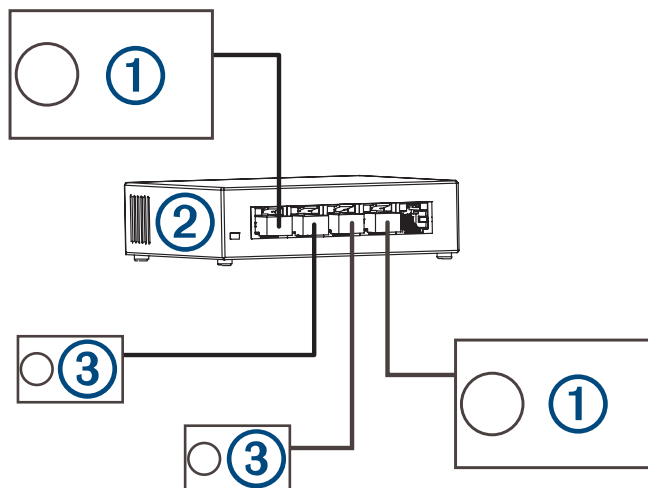
①	Fusion PartyBus™ stereo
②	Fusion PartyBus zone stereo or remote control

Wired Network Example with a Switch or Router

You must use wired network switches, a wired network router, or both to connect more than two devices.

If you have more than two devices using Garmin BlueNet™ network technology, you can use a Garmin BlueNet 20 switch to connect them.

If you did not install a router, and there are no other DHCP servers on the network, you should configure one Fusion PartyBus™ stereo to be a DHCP server ([Setting the Fusion PartyBus™ Device as the DHCP Server, page 18](#)). If you installed a router, you may need to configure it to be a DHCP server. See your router instructions for more information.



①	Fusion PartyBus stereo
②	Wired network switch, wired network router, or Garmin BlueNet 20 switch
③	Fusion PartyBus zone stereo or remote control

Wireless Networking Considerations

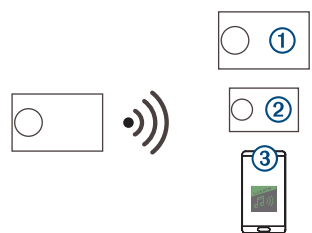
When you are planning your network, observe the following considerations for all wireless connections.

- Wired connections are more reliable than wireless connections. You should plan your network to use network cables, but if it is not possible, many Fusion PartyBus™ devices are Wi-Fi® compatible. You can connect them to wireless routers or access points.
- If you install a wireless router on the network, it should be configured to be the DHCP server by default. See your wireless router instructions for more information.
- If you are not using a wireless router, you can configure this device as a wireless access point, so you can connect other devices within wireless range.

NOTE: You should not configure this device as a wireless access point if you have a router installed on the network, because it may introduce DHCP conflicts and result in poor network performance.

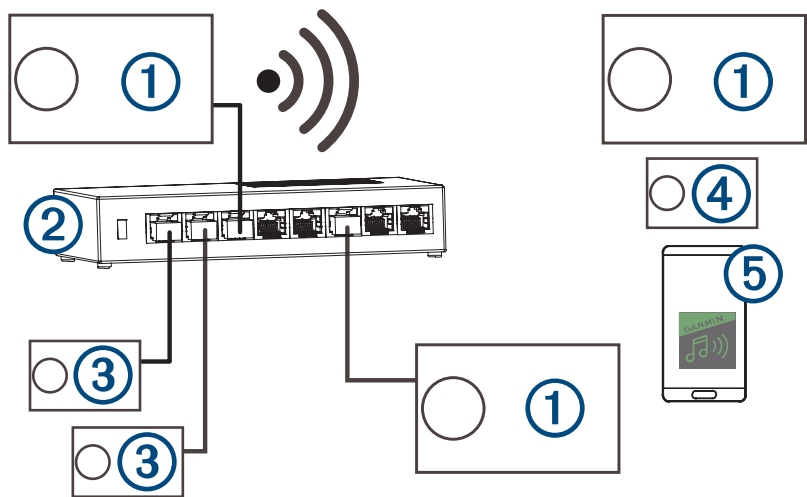
- If you connect a Fusion PartyBus device to the network as a WI-FI CLIENT, you cannot connect any additional wired Fusion PartyBus devices to that device.
- You can connect a smartphone to the wireless network to control any stereo on the network using the Fusion® Audio app.
- You can connect an Apple® device to the wireless network to stream media to multiple stereos on the network using Apple AirPlay® 2.
- Connecting a Bluetooth® device to the stereo may interfere with some Wi-Fi connections.
- Wi-Fi signals may interfere with Bluetooth device connections. You should turn off the Wi-Fi setting on your stereo if you are not using it to connect to a wireless network or to provide a wireless access point.

Wireless Access Point Example



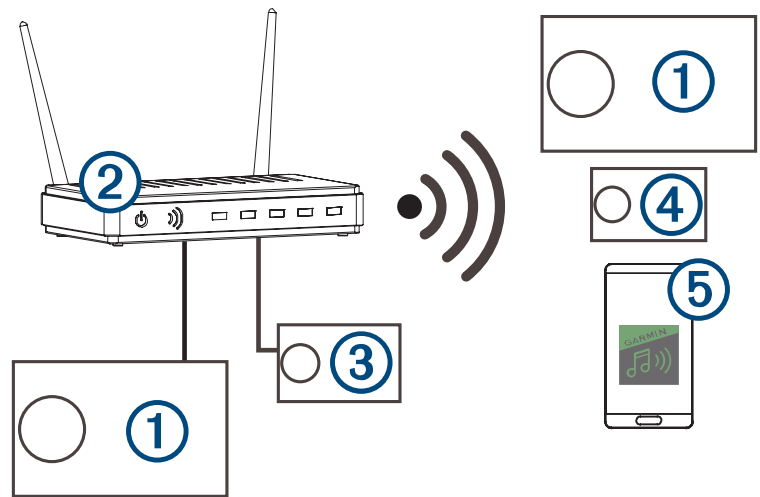
①	Fusion PartyBus™ stereo
②	Fusion PartyBus zone stereo
③	Mobile device using the Fusion® Audio app

Wireless Network Example with a Wired Switch or Router



①	Fusion PartyBus™ stereo
②	Wired network switch or wired network router
③	Fusion PartyBus zone stereo or remote control
④	Fusion PartyBus zone stereo
⑤	Mobile device using the Fusion® Audio app.

Wireless Network Example with a Wireless Router or Access Point



①	Fusion PartyBus™ stereo
②	Wireless network router or wireless access point
③	Fusion PartyBus zone stereo or remote control
④	Fusion PartyBus zone stereo
⑤	Mobile device using the Fusion® Audio app

Constructing a Network

You should have a basic understanding of networking when building a network for Fusion PartyBus™ devices. These instructions guide you through the basics of building and configuring a network, and should apply to most situations. If you need to perform advanced networking tasks, such as assigning static IP addresses to devices on the network or configuring advanced settings on a connected router, you may need to consult a networking professional.

- 1 Determine the installation location of the Fusion PartyBus devices you want to connect to the network.
NOTE: Wired connections are more reliable than wireless connections. When planning your network, you should run network cables instead of using wireless connections when possible.
- 2 Determine the installation location of any needed network routers or switches.
- 3 Route network cable to the installation locations of the stereos, switches, and router.
NOTE: If you are connecting this stereo only to other stereos or devices with a Garmin BlueNet™ network port, you can run Garmin BlueNet cables instead of Cat5e or Cat6 cable. If you are connecting to other stereos or devices with a standard RJ45 network port, you must use an RJ45 to Garmin BlueNet adapter cable (010-12531-02, not included) to connect a Cat5e or Cat6 cable to this stereo.

- 4 Connect the network cables to the stereos, switches, and router.

NOTICE

Do not completely install the stereos yet. You should test the network before you install the stereos.

- 5 Turn on all devices connected to the network, including wireless devices.
- 6 Select an option:
 - If you are using a network router (wired or wireless), consult the documentation provided with your router to configure the router as the DHCP server, if necessary. When using a router as the DHCP server, all stereos on the network should use their default configuration (DHCP client).
 - If you are not using a wireless router, you should configure a stereo as a wireless access point, if necessary ([Setting the Fusion PartyBus™ Device as a Wireless Access Point, page 19](#)). Configuring a stereo as a wireless access point makes that stereo the DHCP server, and all of the other stereos on the network should use their default configuration (DHCP client).

- If you are not using a network router, not using a stereo as a wireless access point, and there are no other DHCP servers on the network, you should configure one of the stereos as the DHCP server ([Setting the Fusion PartyBus™ Device as the DHCP Server, page 18](#)).
- 7 Test the network by selecting  > **GROUPS** to view a list of devices connected to the on the network, and select an option:
- If any Fusion PartyBus devices are not available to the network, troubleshoot the network ([Network Troubleshooting, page 19](#)).
 - If all Fusion PartyBus devices are available on the network, complete the installation for each stereo, if necessary.

Network Configuration

TIP: You can select the network status icon from any screen to open the network configuration menu.

Setting the Fusion PartyBus™ Device as the DHCP Server

If you connected more than two network devices together using a network switch or wireless access point but you did not install a router, you should configure only one Fusion PartyBus stereo to be a DHCP server.

NOTICE

Having more than one DHCP server on the network causes instability and poor performance for all devices on the network.

NOTE: If you have set up this stereo as a WI-FI ACCESS POINT, it is configured as a DHCP server by default, and no further settings changes are needed ([Setting the Fusion PartyBus™ Device as a Wireless Access Point, page 19](#)).

- 1 If the device is connected to the network using an Ethernet cable, select  > **SETTINGS** > **NETWORK** > **WI-FI OFF**.
- 2 If the device is connected to the network using an Ethernet cable, select **STATIC IP** > **SAVE**.
- 3 Select **ADVANCED** > **DHCP SERVER** > **DHCP ENABLED** > **SAVE**.

Connecting the Stereo to a Garmin® Network

NOTE: When you connect the stereo to a Garmin BlueNet™ network or a Garmin Marine Network, you are limited to using only Garmin and Fusion® devices. You will not be able to use third-party routers or other network products with this stereo directly.

You cannot use Wi-Fi® networking to connect to a Garmin chartplotter, nor can you use Wi-Fi networking on the stereo when it is connected to a Garmin chartplotter using a wired network connection.

You can connect this stereo to a Garmin BlueNet network or a Garmin Marine Network in order to view and control the stereo using a compatible Garmin chartplotter.

NOTE: If a Garmin chartplotter is detected on the network, the stereo automatically switches to GARMIN MARINE NETWORK mode, the stereo reboots, and all other network settings on the stereo are disabled. If this does not happen automatically, reset the stereo network settings and connect it again ([Resetting Network Settings, page 19](#)). If this still does not happen automatically, perform a factory reset on the stereo and connect it again.

This stereo is compatible with both Garmin BlueNet devices and Garmin Marine Network devices. You can connect the stereo to either type of network, but if you have multiple stereos, they should all be connected to one network type or another.

NOTE: If your vessel has a mix of Garmin Marine Network and Garmin BlueNet networks connected through a Garmin BlueNet bridge, all stereos should be connected to the Garmin BlueNet network for the best performance.

For more information about Garmin BlueNet technology, including best practices for constructing a network including both Garmin BlueNet devices and Garmin Marine Network devices, go to garmin.com/manuals/bluenet.

TIP: When the stereo is connected to a Garmin network, you can connect a mobile device to a wireless access point on a connected Garmin chartplotter and use the Fusion Audio app to control the stereo.

- 1 Determine the best device on the Garmin BlueNet network or the Garmin Marine Network to which you should connect the stereo.
- 2 Select an option:
 - To connect the stereo to a Garmin BlueNet device, use a Garmin BlueNet cable (not included).
 - To connect the stereo to a Garmin Marine Network device, use a Garmin Marine Network to Garmin BlueNet network adapter cable (010-12531-11 or 010-13094-00, not included).

Setting the Fusion PartyBus™ Device as a Wireless Access Point

Before you can connect additional Fusion PartyBus devices or smartphones to a Fusion PartyBus device wirelessly, you must configure one device as a wireless access point. This is not necessary if you installed a wireless router or other wireless access point on the network.

NOTICE

You should not configure this device as a wireless access point if you have a router installed on the network. Doing so may introduce DHCP conflicts and result in poor network performance.

For more detailed configuration instructions, see the owner's manual.

- 1 Select  > **SETTINGS** > **NETWORK** > **WI-FI ACCESS POINT**.
- 2 Select **USE DEFAULTS** and wait for the device to save the network settings.
NOTE: After the default settings are saved, you can scroll down to the bottom of the NETWORK menu to view the default SSID assigned to the access point.
- 3 Select  > **SETTINGS** > **NETWORK** > **ADVANCED** > **WI-FI AP SETTINGS** > **PASSWORD** and enter a password for the wireless access point.

NOTE: When you configure the stereo as a wireless access point, you can also use the wired network connection without changing any additional settings. The wired and wireless networks are bridged.

Connecting the Fusion PartyBus™ Device to a Wireless Access Point

You can connect this device to a wireless access point on a router or compatible Fusion PartyBus device on the network. This device can connect using Wi-Fi® Protected Setup (WPS), if it is supported by your access point. This device can connect using Apple® Accessory Configuration (WAC) using a supported Apple device.

- 1 Select  > **SETTINGS** > **NETWORK** > **WI-FI CLIENT** > **SSID**.
A list of wireless access points within range appears.
- 2 Select the Fusion PartyBus wireless access point.
- 3 If necessary, select **PASSWORD**, enter the password, and select .
- 4 Select **SAVE**.

NOTE: After you connect the stereo to a wireless access point, you cannot use the wired network connection.

Resetting Network Settings

You can reset all network settings for this stereo to the factory default values.

- 1 Select  > **SETTINGS**.
- 2 Select **NETWORK** > **ADVANCED** > **RESET** > **YES**.

Advanced Network Configuration

You can perform advanced networking tasks on a Fusion PartyBus™ device, such as defining DHCP ranges and setting static IP addresses. See the owner's manual for more information.

NOTE: When connected to a Garmin® Marine Network via ethernet and configured as a DHCP client, the stereo automatically detects and connects to the Garmin Marine Network.

Network Troubleshooting

If you cannot see or connect to Fusion Apollo™ devices on the network, perform these steps.

- Verify that all Fusion Apollo stereos, remote controls, network switches, routers, and wireless access points are connected to the network and turned on.
- Verify that wireless Fusion Apollo devices are connected to a wireless router or wireless access point on the network.
Wired connections are more reliable than wireless connections. If possible, you should connect devices to the network using an Ethernet cable.
- Verify that only one device, either a stereo or a router, is configured as a DHCP server. If you are connected to a Garmin® chartplotter using a wired Garmin BlueNet™ or Garmin Marine Network connection, it acts as the DHCP server for the network and no connected stereo should be configured as a DHCP server.
- Change the channel on your router or wireless access point to test for and correct interference.
You may experience wireless interference if there are many nearby wireless access points.
- Disconnect Bluetooth® devices to test for and correct interference.
Connecting a Bluetooth device to a stereo configured as a wireless access point or client may reduce wireless performance.

- If you configured static IP addresses, verify that every device has a unique IP address, that the first three sets of numbers in the IP addresses match, and that the subnet masks on every device are identical.
- If you have made configuration changes that might be causing networking issues, reset all network settings to the factory default values.
- If you connected the Fusion Apollo device to a Garmin chartplotter using a wired Garmin BlueNet or Garmin Marine Network connection, the network settings on the device should change automatically to **GARMIN MARINE NETWORK**.

If the network settings do not change as expected, reset the network settings on the device ([Resetting Network Settings](#), page 19).

Stereo Information

Specifications

General

Weight	750 g (26.5 oz.)
Water resistance	IEC 60529 IPX7 (front of stereo only, when properly installed) IEC 60529 IPX2 (rear of stereo, when properly installed)
Operating temperature range	From 0 to 50°C (from 32 to 122°F)
Storage temperature range	From -20 to 70°C (from -4 to 158°F)
Input voltage	From 10.8 to 32 Vdc
Current (max.)	25 A
Current (muted)	Less than 900 mA
Current (off)	Less than 350 mA
Fuse	25 A mini blade-type
NMEA 2000® LEN @ 9 Vdc	2 (100 mA)
Bluetooth® wireless range	Up to 10 m (30 ft.)
ANT® wireless range	Up to 3 m (10 ft.)
Wireless frequencies/protocols	Wi-Fi® 2.4 GHz @ +19.49 dBm maximum Bluetooth 2.4 GHz @ +15.11 dBm maximum ANT 2.4 GHz @ 3.22 dBm maximum
Compass-safe distance	40 cm (15.75 in.)

On-board, Class D Amplifier

Output music power per channel	4 x 80 W max. 4 ohm
Total output peak power	320 W
Output power per channel ¹	4 x 40 W RMS less than 1% THD+N, 4 ohm (CTA-2006-D)
Line output level (max.)	5.6 V (peak to peak)
Aux input level (typical)	1 V RMS typical, 2 V RMS max.

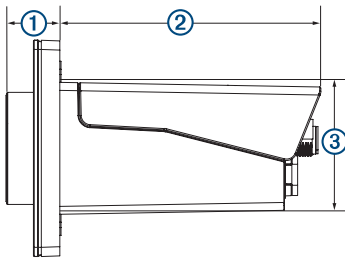
Tuner frequencies

Tuner	Europe and Australasia	USA	Japan
FM radio frequency range	87.5 to 108 MHz	87.5 to 107.9 MHz	76 to 95 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
DAB frequency	174 to 240 MHz (Band III)	N/A	N/A

¹ The stereo may limit the output power to prevent the amplifier from overheating, and to maintain the audio dynamics.

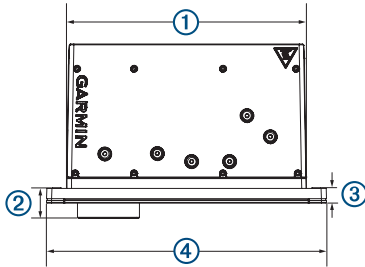
Stereo Dimension Drawings

Side Dimensions



①	20.4 mm (0.8 in.)
②	99 mm (3.9 in.)
③	50 mm (1.97 in.)

Top Dimensions



①	164 mm (6.5 in.)
②	20.4 mm (0.8 in.)
③	10 mm (0.39 in.)
④	192 mm (7.56 in.)

Software Updates

Go to support.garmin.com to find software updates and information for your device.

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	邻苯二甲酸二(2-乙基己)酯	邻苯二甲酸丁苄酯	邻苯二甲酸二丁酯	邻苯二甲酸二异丁酯
印刷电路板组件	×	○	○	○	○	○	○	○	○	○
屏幕/背光	×	○	○	○	○	○	○	○	○	○
金属零件	×	○	○	○	○	○	○	○	○	○
电缆 电缆组件 连接器	×	○	○	○	○	○	○	○	○	○
塑料和橡胶零件	○	○	○	○	○	○	○	○	○	○

本表格依据 SJ/T11364 的规定编制。

○: 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

×: 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

* 该产品说明书应提供在环保使用期限和特殊标记的部分详细讲解产品的担保使用条件。



中国微功率无线电发射设备合规

- 一) 工作于 2400-2483.5MHz 频段的 ANT 技术无线遥控设备, 使用频率: 2400-2483.5MHz, 发射功率限值: 10mW(e.i.r.p), 频率容限: 160kHz
- 二) 不得擅自改变使用场景或使用条件、扩大发射频率范围、加大发射功率(包括额外加装射频功率放大器), 不得擅自更改发射天线;
- 三) 不得对其他合法的无线电台(站)产生有害干扰, 也不得提出免受有害干扰保护;
- 四) 应当承受辐射射频能量的工业、科学及医疗(ISM)应用设备的干扰或其他合法的无线电台(站)干扰;
- 五) 如对其他合法的无线电台(站)产生有害干扰时, 应立即停止使用, 并采取措施消除干扰后方可继续使用;
- 六) 在航空器内和依据法律法规、国家有关规定、标准划设的射电天文台、气象雷达站、卫星地球站(含测控、测距、接收、导航站)等军民用无线电台(站)、机场等的电磁环境保护区域内使用微功率设备, 应当遵守电磁环境保护及相关行业主管部门的规定;
- 七) 禁止在以机场跑道中心点为圆心、半径 5000 米的区域内使用各类模型遥控器;
- 八) 微功率设备使用时温度 0~50°C 直流电压 10.8 ~ 32 V。

联系信息

制造厂商: 台湾国际航电股份有限公司

销售厂商: 上海佳明航电企业管理有限公司

联络地址: 上海市徐汇区桂平路 391 号(新漕河泾国际商务中心 A 座 37 层)

电话: 021-60737675

客服专线: 400-819-1899

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M/N: A04580/B04580

IC: 1792A-A04580

船用音響主機