

Clarion®

Marine Installation Guide

Effective MY 2012

Source Units

CMV1
CMD6
CMD7
M309
M109
CMS1

Remote Controls

MW1
MW2
MW3

Satellite Radio

SCC1

iPod Interface

CCU-IPOD2

Auxiliary Audio Input

MA-AUXF
MA-AUXM
CCA-USB

Power Amplifiers

XN3410
XN3210

Speakers

CMQ1720R CMG1720R
CMQ1620R CMG1620R
CMQ2510W CMG1620S
CMQ2010W CMG2510W



Cautions

- Read all instructions carefully before beginning installation.
- Unit is designed for use in marine applications with a positive 12 volt DC power supply and negative ground.
- To prevent short circuiting, disconnect battery's negative terminal before beginning installation (Figure 1).
- Do not install unit where it can be submerged.
- Do not install unit at any angle less than horizontal or greater than +30° (Figure 2, CMS1 excluded).
- When properly installed and control panel is closed, Clarion's CMV1, CMD6 AND CMD7 source unit is watertight. Internal components however, are not waterproof. Prevent damage to internal components by ensuring that mounting gasket is sealed against mounting surface.
- Clarion's M309 and M109 source units are NOT watertight and are designed for mounting locations where water is not present. Prevent damage to internal components by ensuring that chassis drip shield is intact.
- If any modification to boat is required (ie: drilling holes, cutting panels, etc.), consult boat's manufacturer beforehand.
- Use only supplied mounting hardware. Use of other mounting bolts, brackets, etc. can result in damage and void warranty (Figure 3).
- Any unused speaker leads must be individually insulated and secured so that they do not short circuit.
- Should fuse replacement become necessary, always use a fuse having same amperage rating as originally specified. Substituting a fuse with a higher amperage rating can result in damage to unit as well as fire.
- Prevent water from running along wires and entering chassis through connector by looping and positioning wiring harness below chassis, allowing any water to drip off and away.
- Wire lengths will vary under individual applications. Use of proper gauge wire is critical to unit's performance and safety of boat. Refer to American Wire Gauge "AWG" Chart (Page 25) for proper wire gauge selection.
- All wiring and circuit protection must comply with ABYC E-11 AC/DC electrical systems standard.
- If you are unfamiliar with any proper methods of installation, please consult a professional installation facility or contact Marine Audio (see back cover).

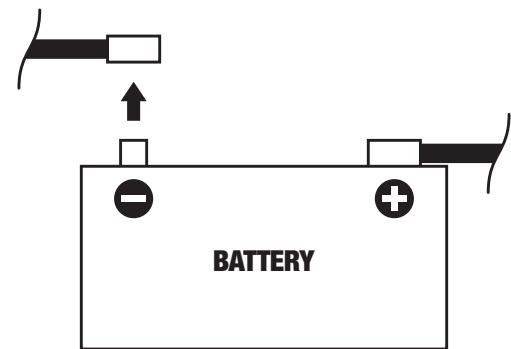


Figure 1

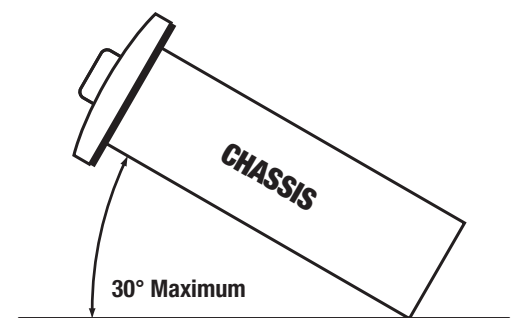


Figure 2

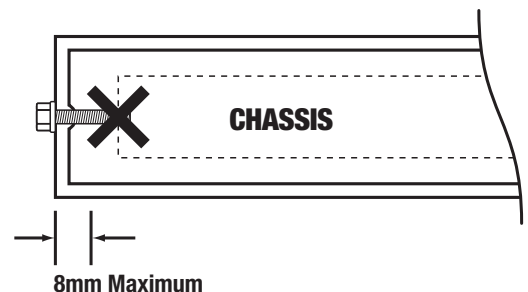
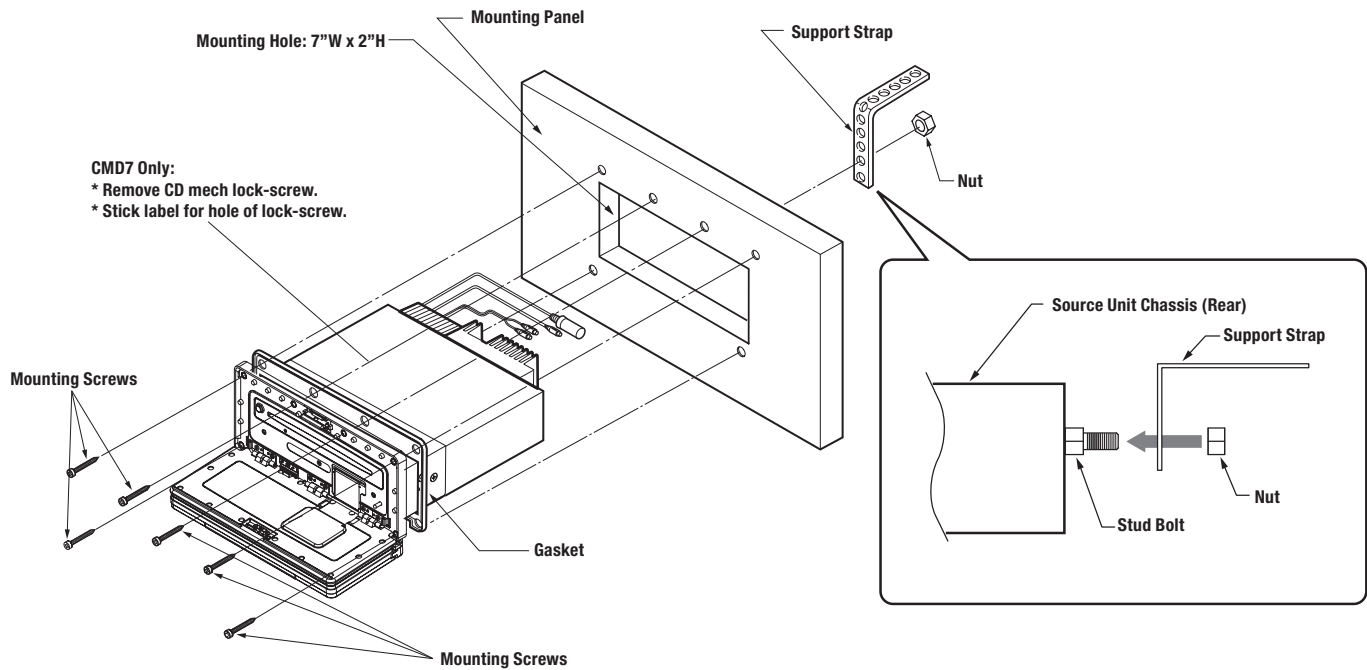


Figure 3

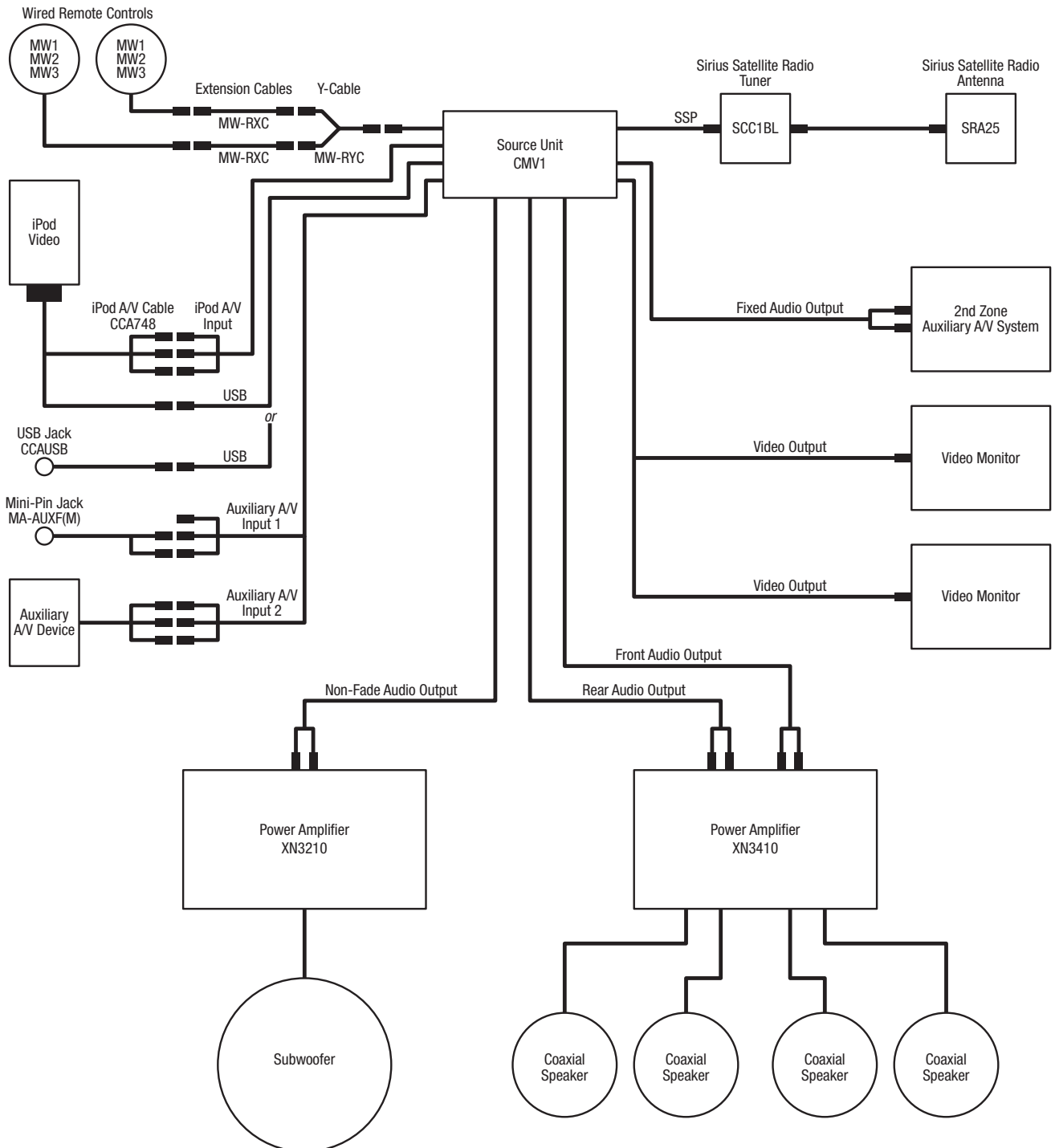
Mounting

1. Cut and drill mounting holes in smooth, flat, solid mounting surface using supplied template.
2. Rotate two mounting screw covers in lower left and right hand corners by pulling outward from bottom.
3. Insert chassis into mounting hole and secure to mounting surface by using supplied screws.
4. Secure rear chassis to fixed point of boat using supplied support strap and machine stud bolt/nut.
5. Rotate two mounting screw covers back into place.



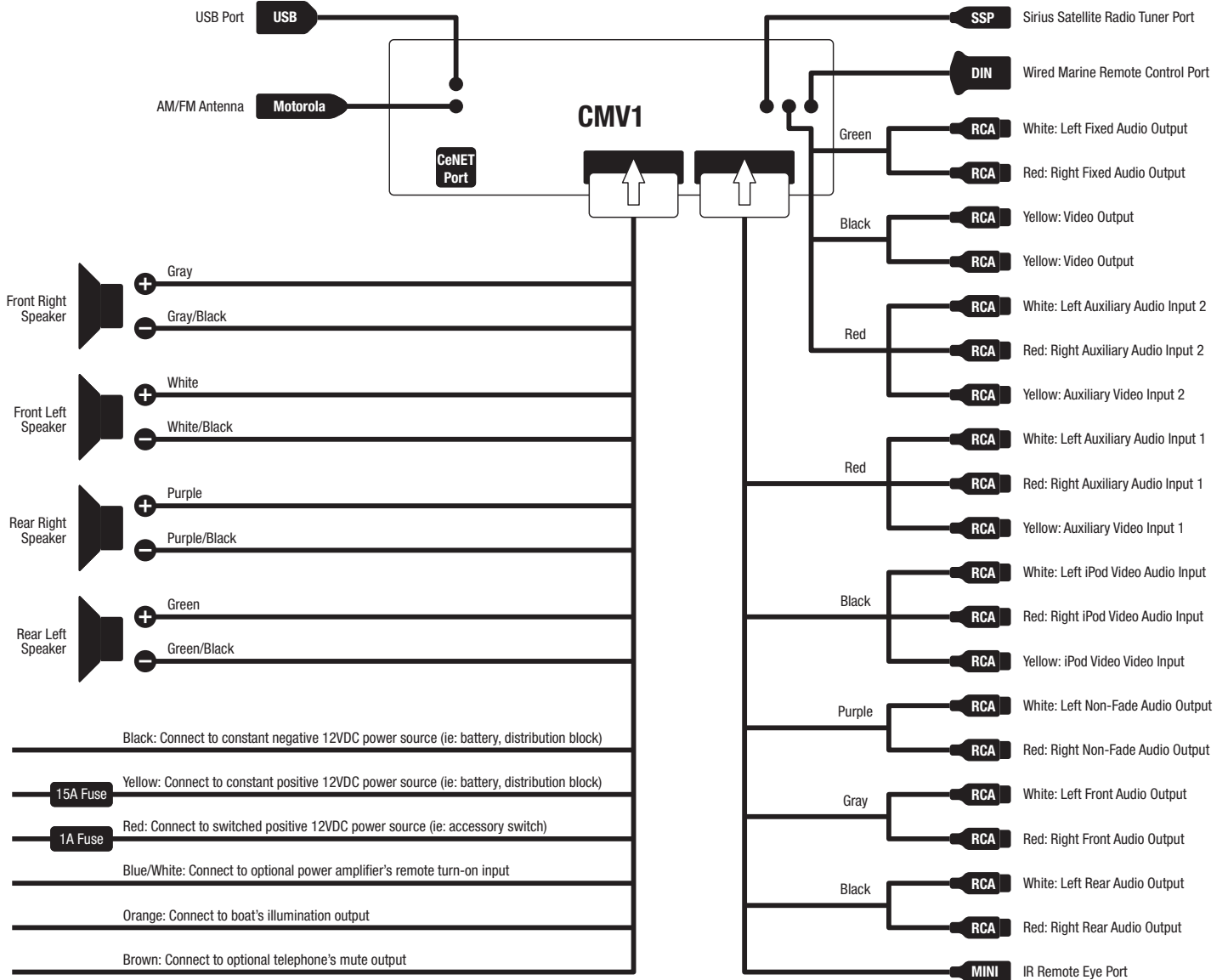
Source Units: CMV1

Sample System



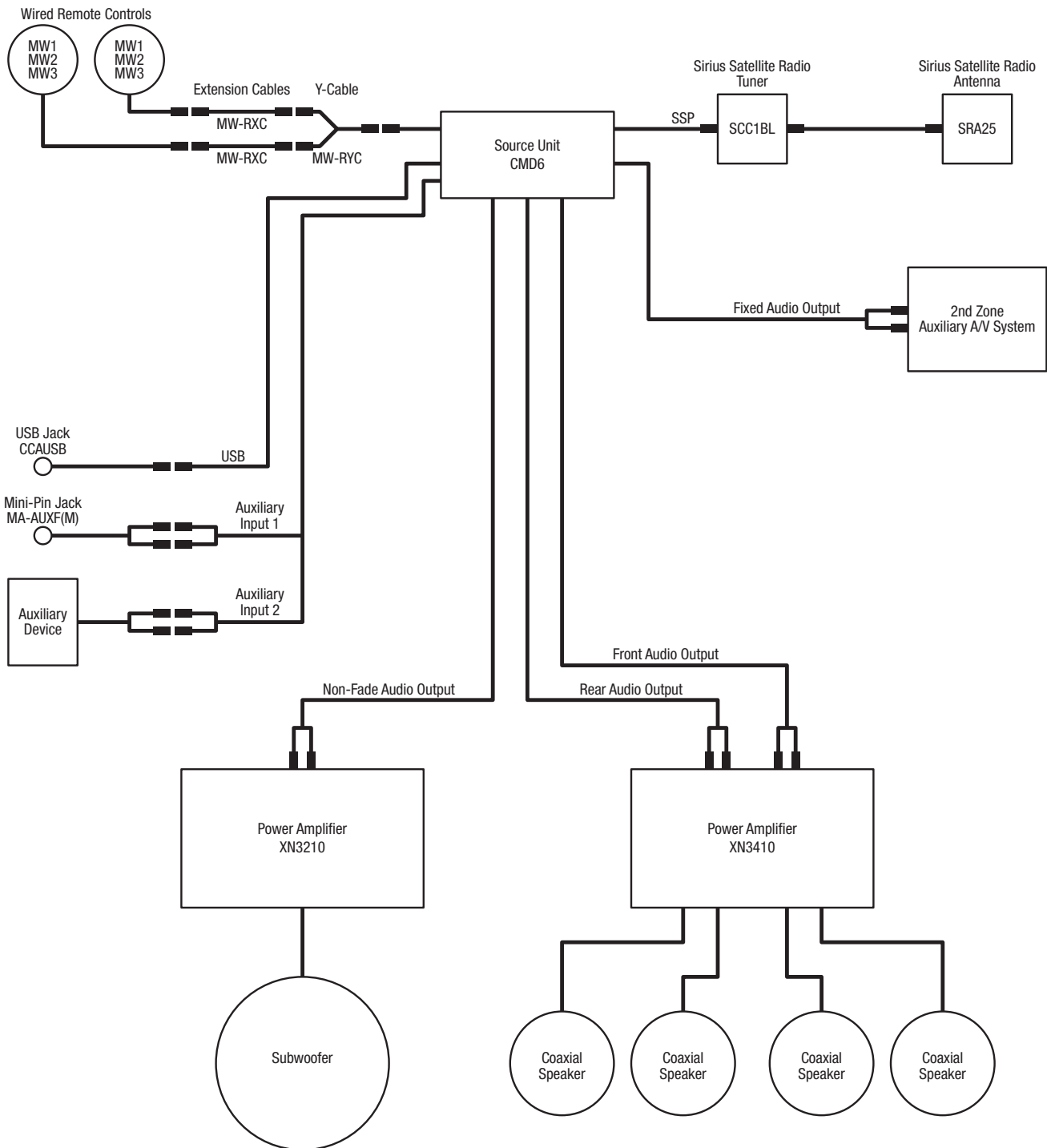
Source Units: CMV1

Connections



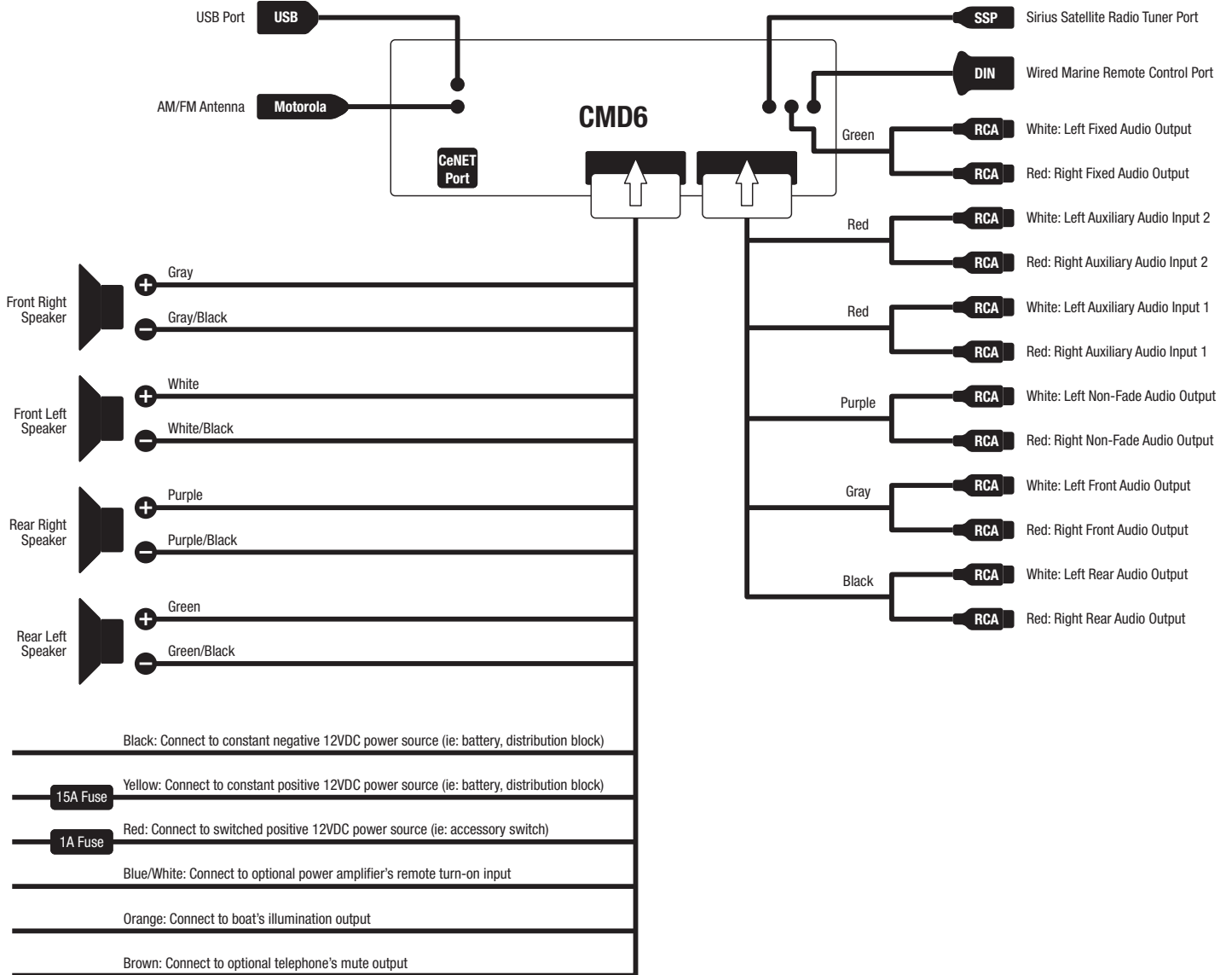
Source Units: CMD6

Sample System



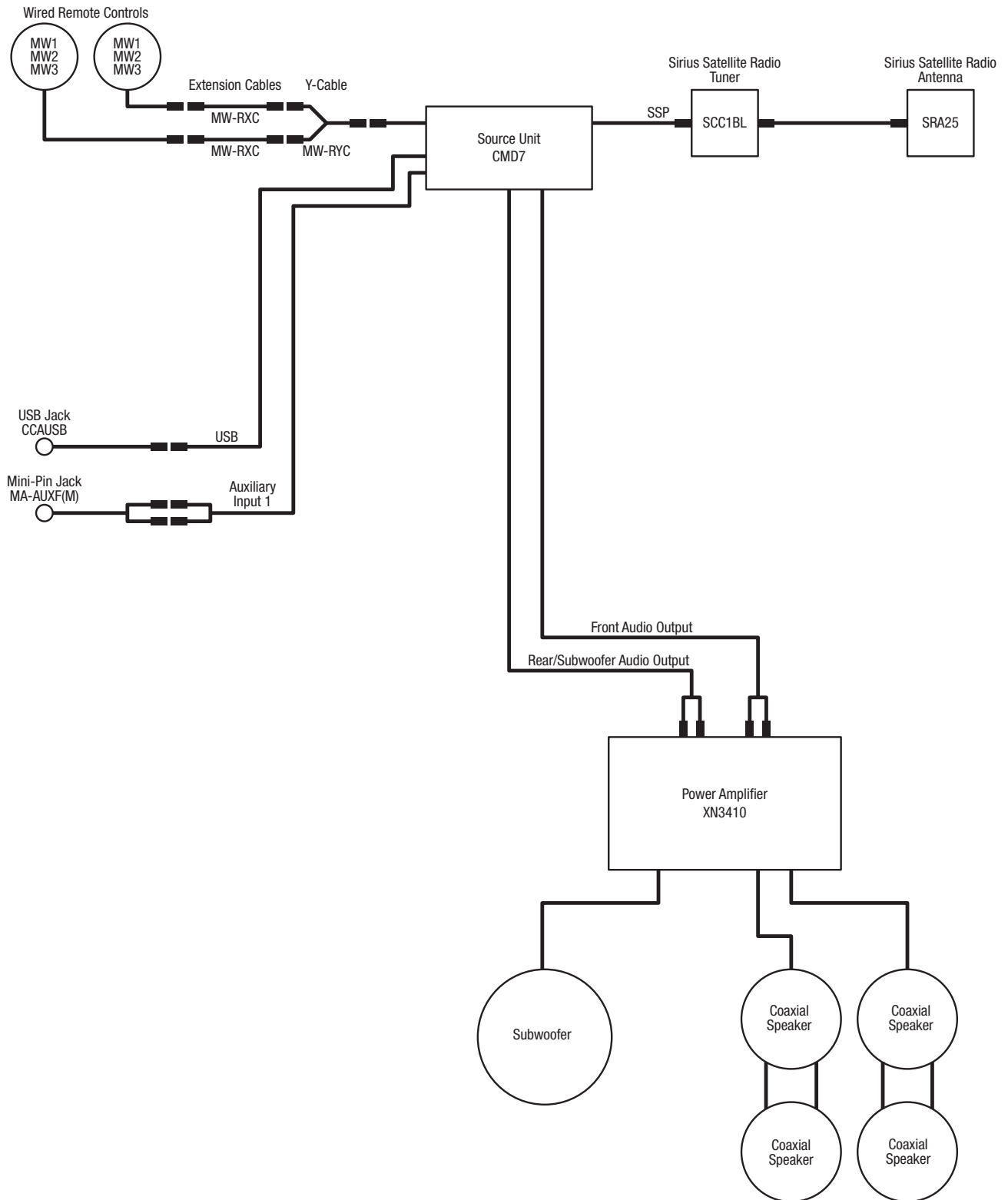
Source Units: CMD6

Connections



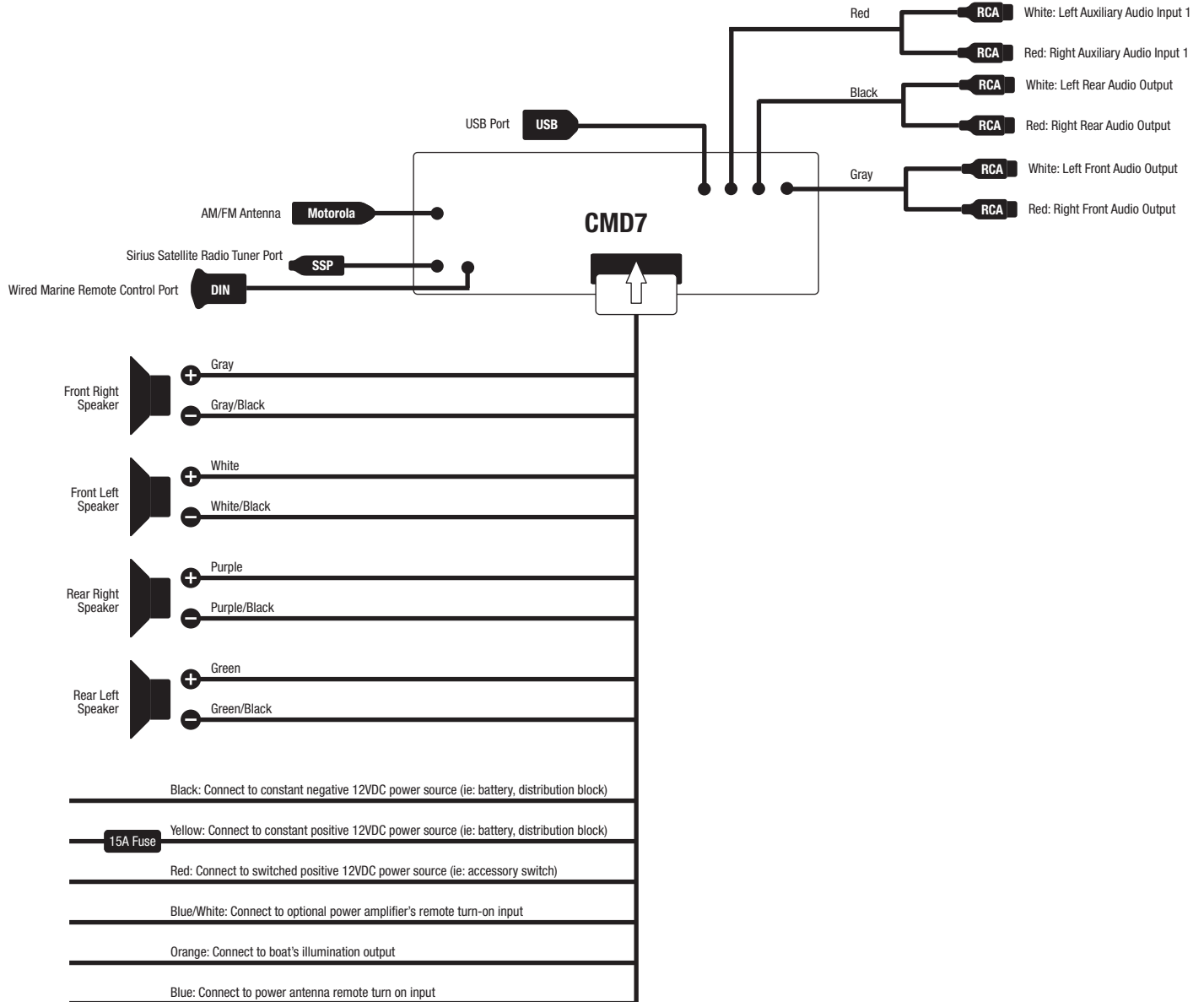
Source Units: CMD7

Sample System



Source Units: CMD7

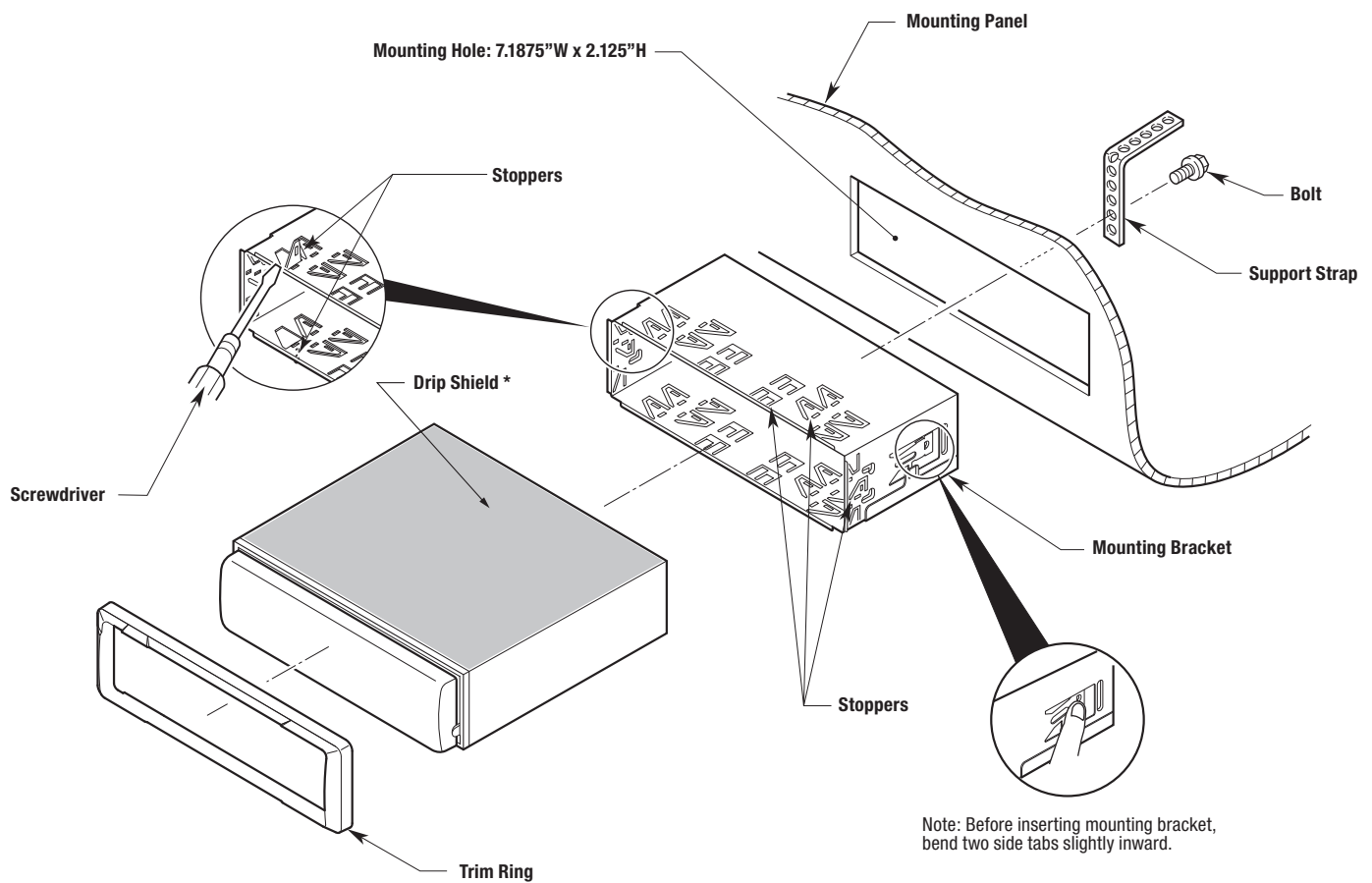
Connections



Source Units: M309 • M109

Mounting

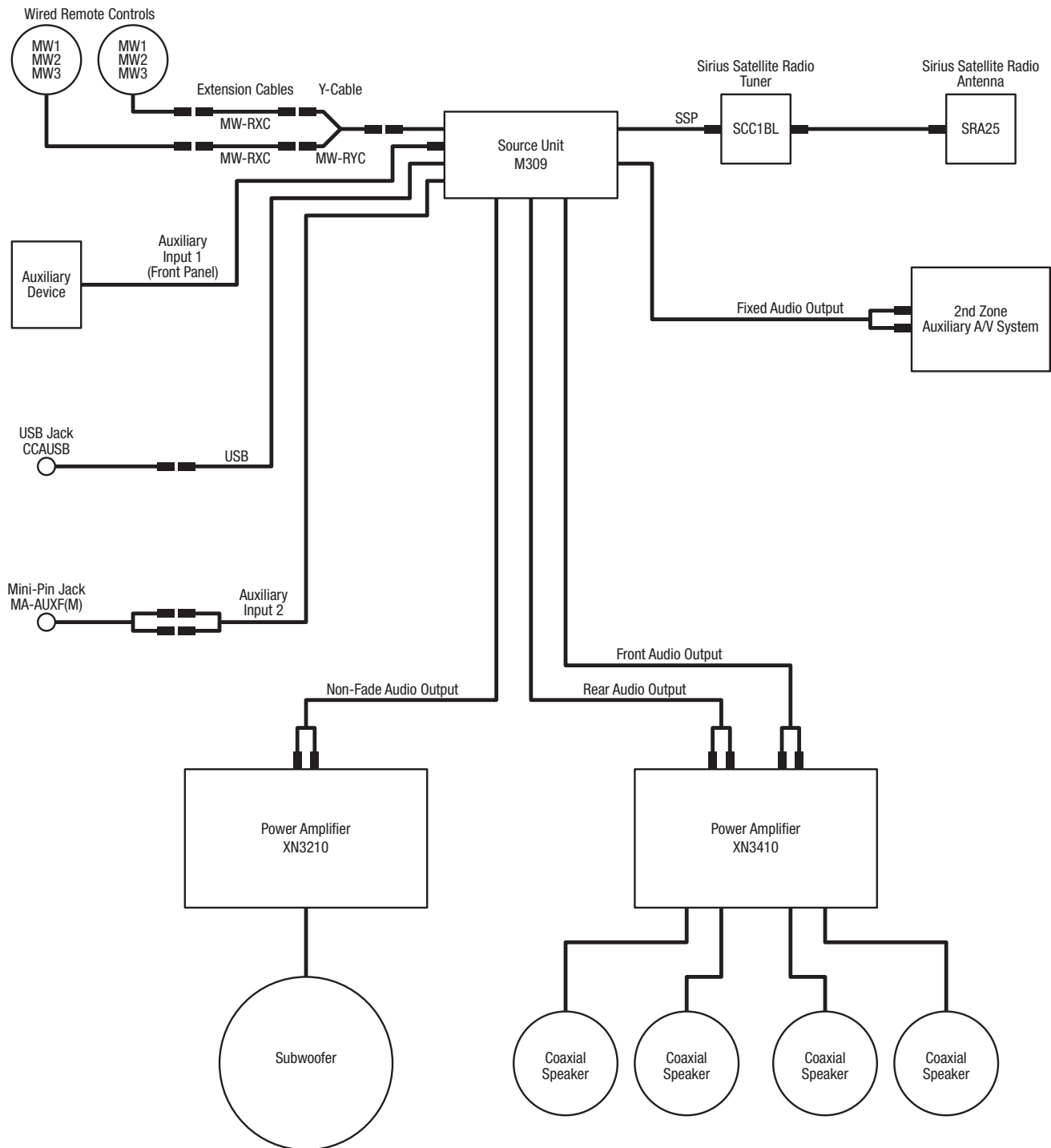
1. Cut mounting hole in smooth, flat, solid mounting surface.
2. Insert supplied mounting bracket into mounting hole.
3. Bend mounting bracket's stopper tabs behind mounting panel until secure.
4. Remove trim ring from source unit.
5. Insert chassis into mounting bracket until it locks into place.
6. Secure rear of chassis to fixed point of boat using supplied support strap and machine bolt.
7. Re-attach trim ring.



* Drip Shield is on M109 only. M309 has sealed chassis.

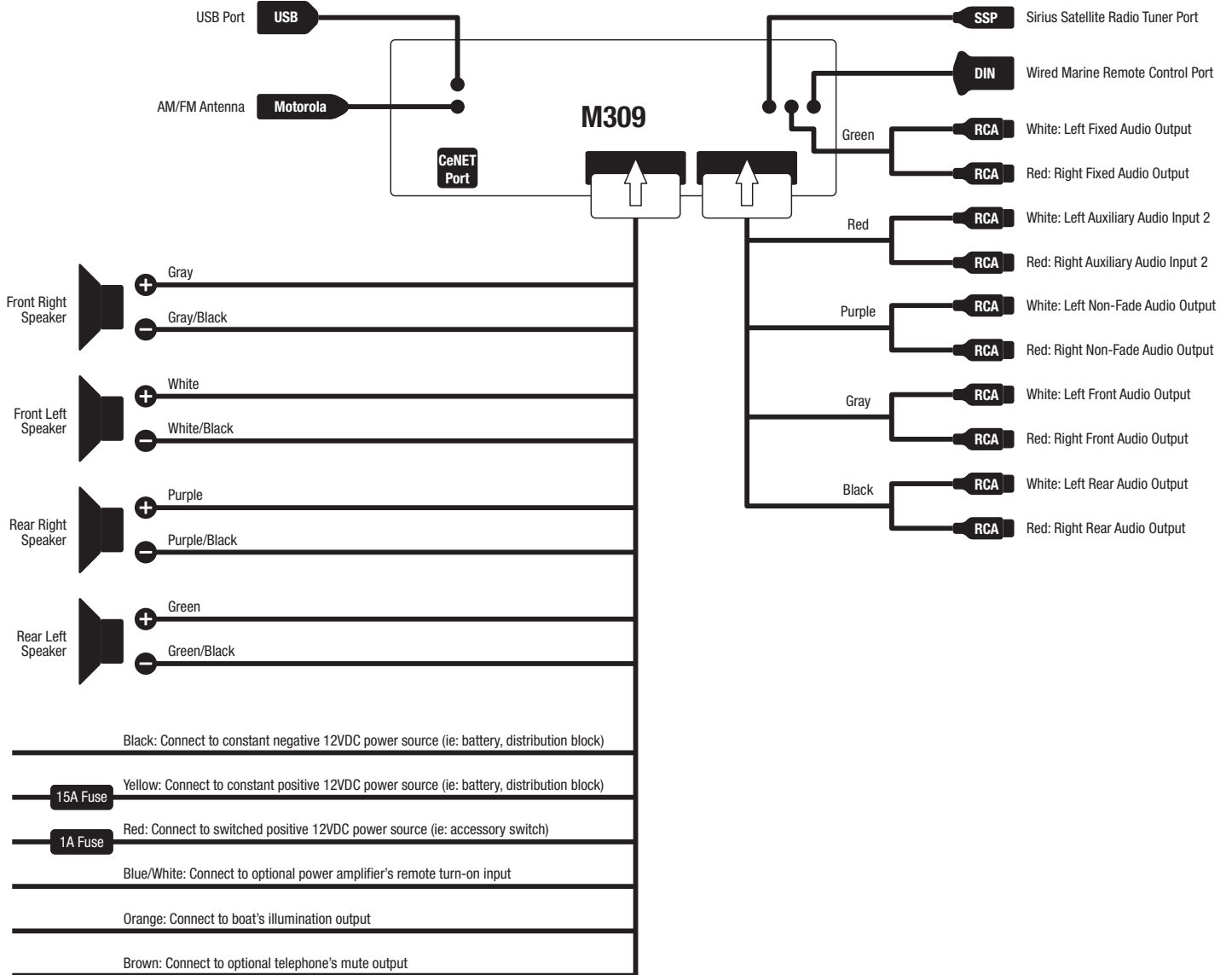
Source Units: M309

Sample System



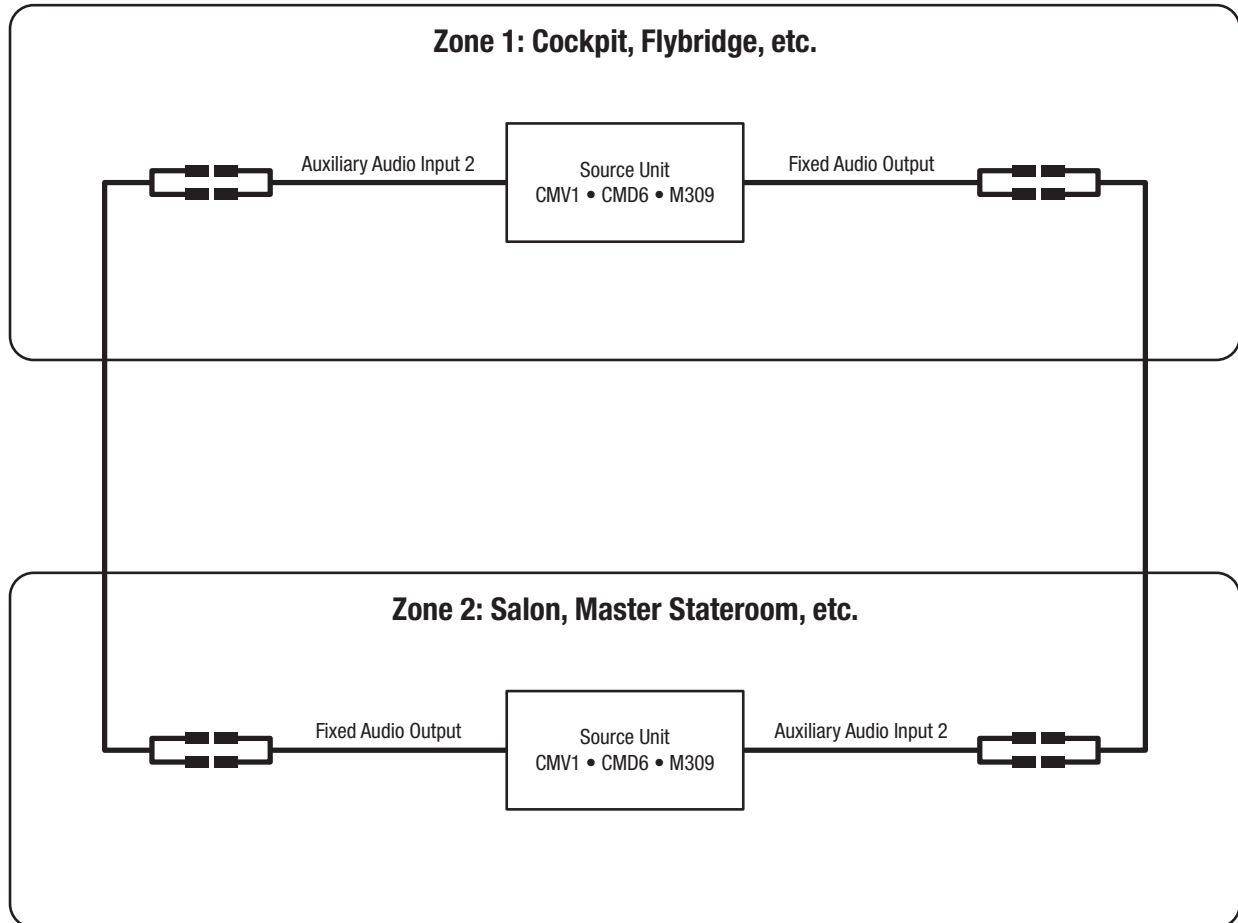
Source Units: M309

Connections



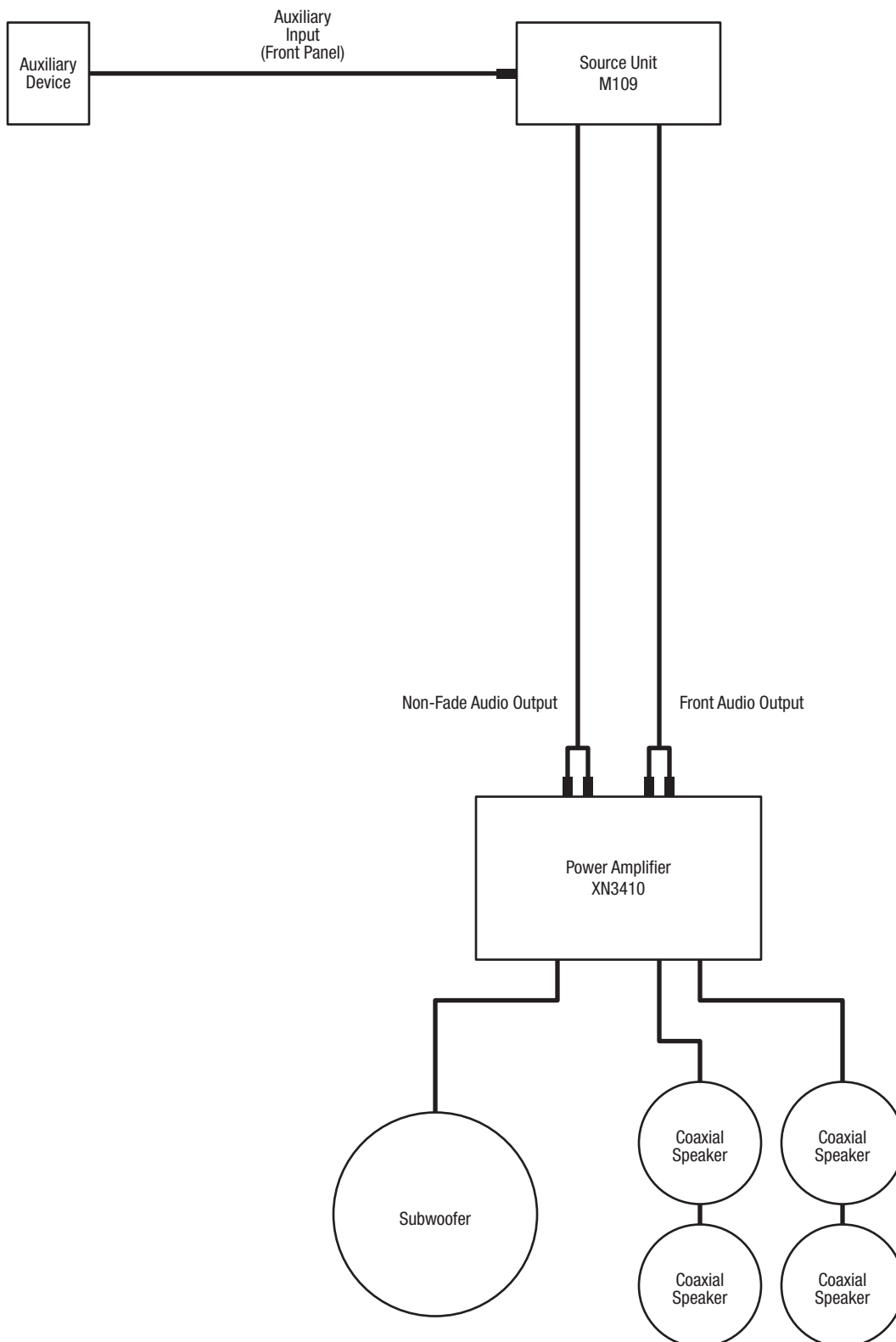
Source Units: CMV1 • CMD6 • M309

Sample System: Fixed Audio Output + Auxiliary Audio Input



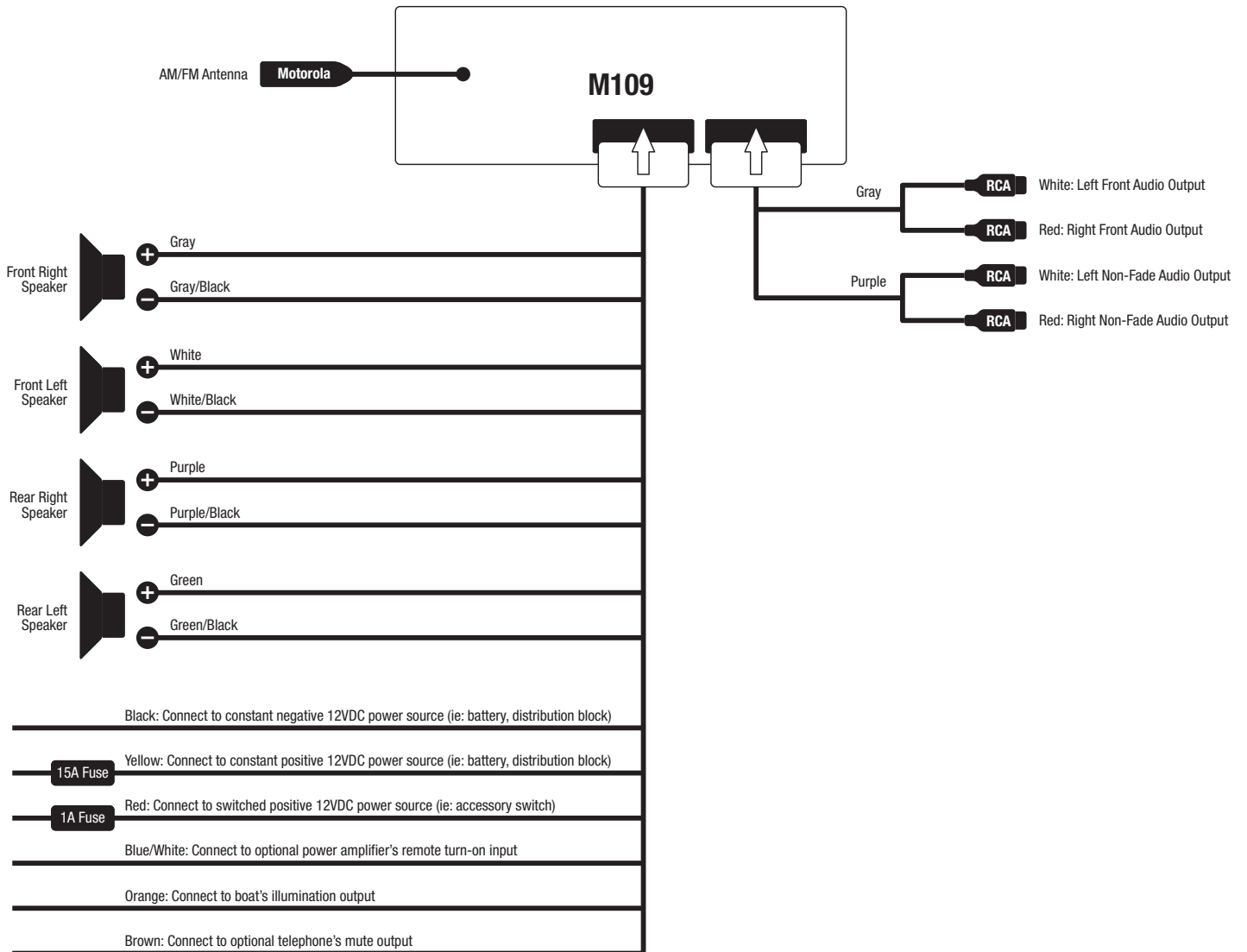
Source Units: M109

Sample System



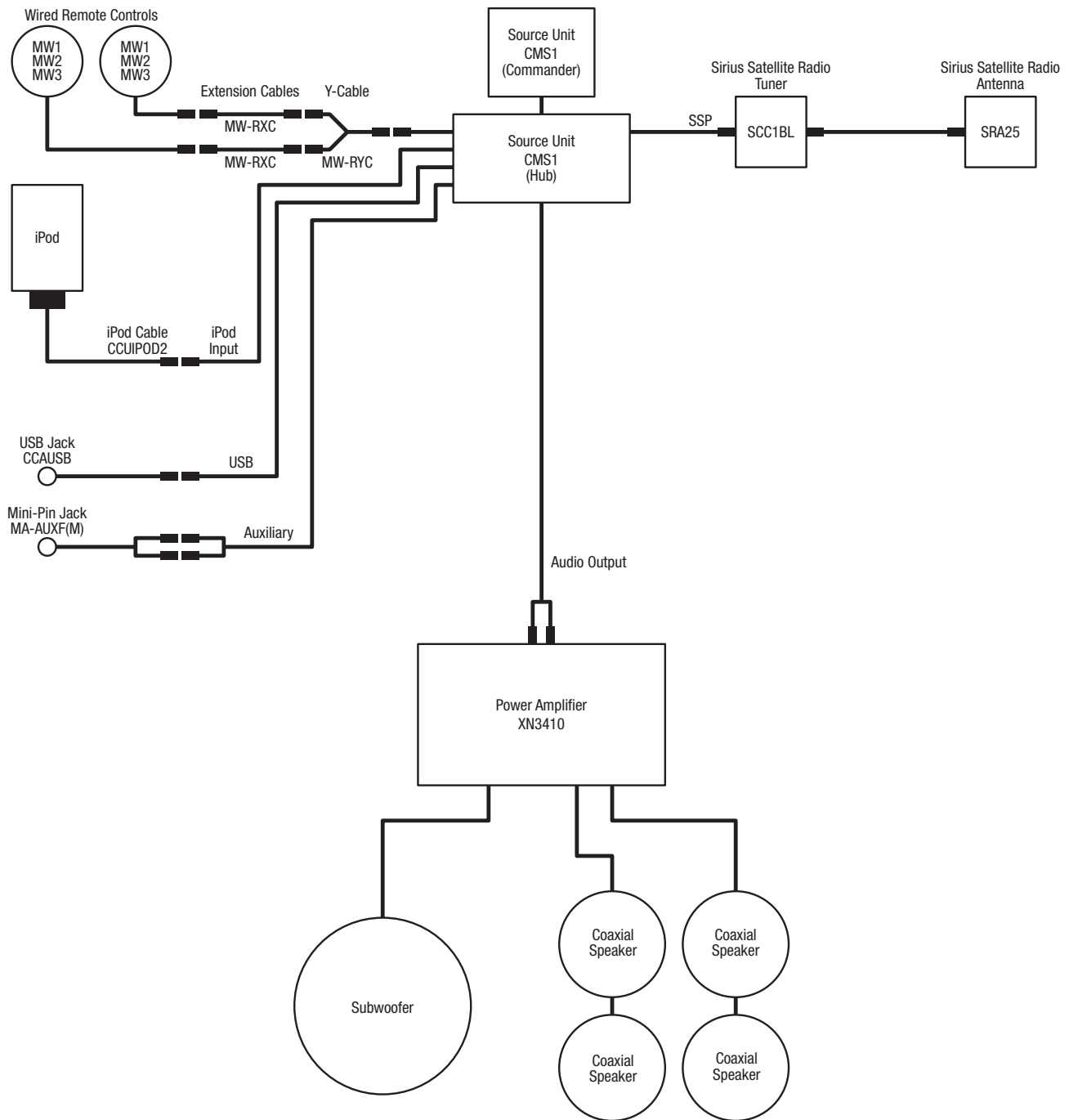
Source Units: M109

Connections



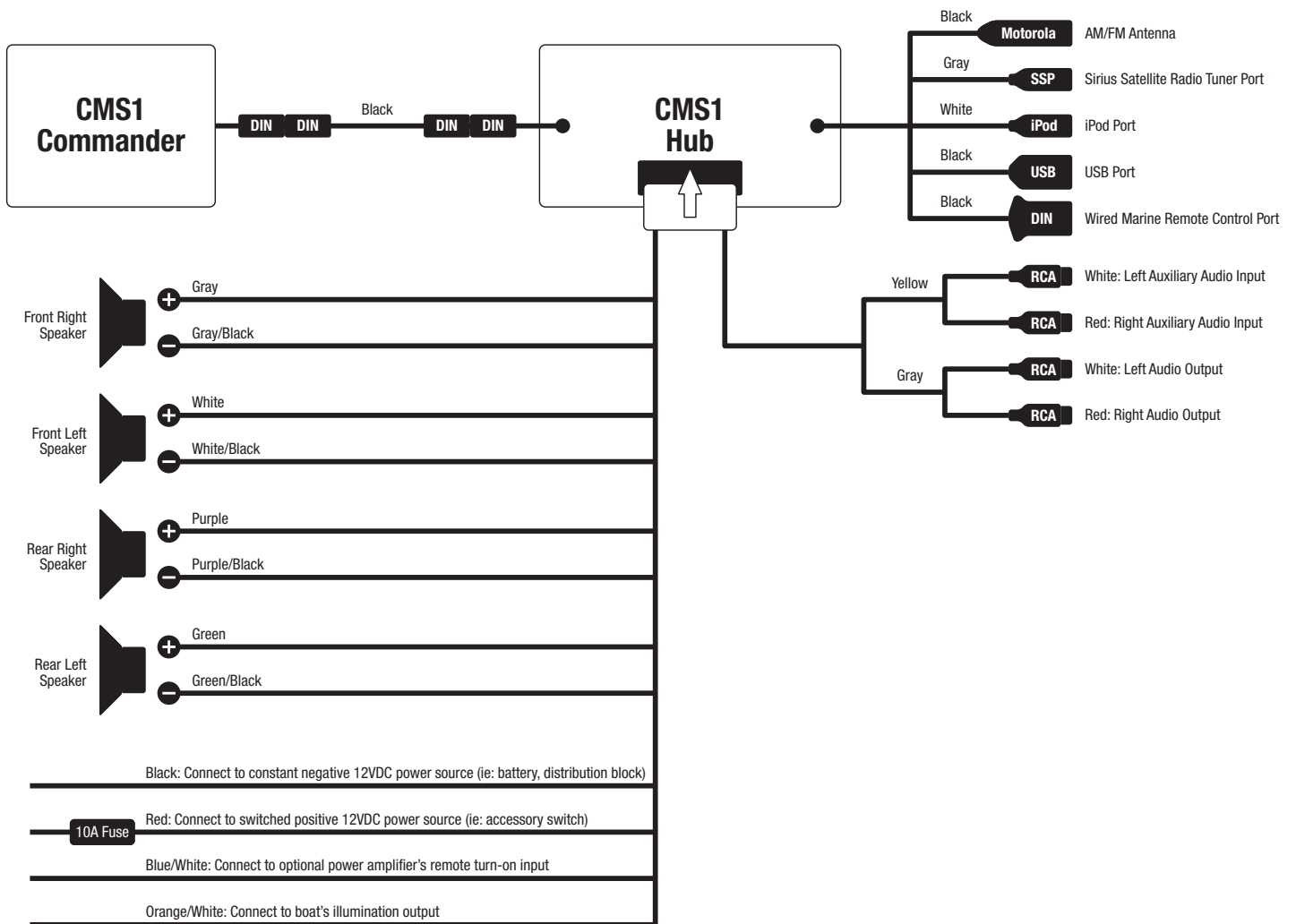
Source Units: CMS1

Sample System



Source Units: CMS1

Connections



Remote Controls: MW1 • MW2 • MW3

Cautions

- Read all instructions carefully before beginning installation.
- Unit is designed for use in marine applications with a positive 12 volt DC power supply and negative ground.
- To prevent short circuiting, disconnect battery's negative terminal before beginning installation (Figure 1).
- Do not install unit where it can be submerged.
- If any modification to boat is required (ie: drilling holes, cutting panels, etc.), consult boat's manufacturer beforehand.
- Use only supplied mounting hardware. Use of other mounting bolts, brackets, etc. can result in damage and void warranty (Figure 2).
- All wiring and circuit protection must comply with ABYC E-11 AC/DC electrical systems standard.
- If you are unfamiliar with any proper methods of installation, please consult a professional installation facility or contact Marine Audio (see back cover).

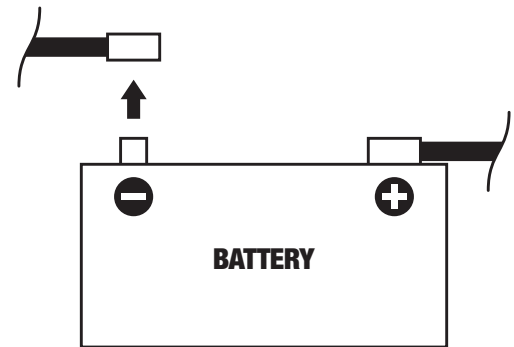


Figure 1

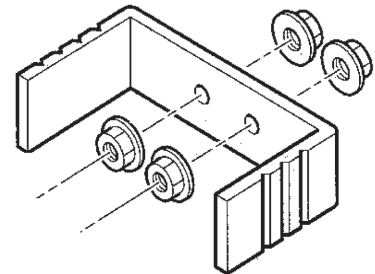


Figure 2

Mounting

1. Cut mounting hole in smooth, flat, solid mounting surface (Figure 3).
2. Insert remote control into mounting hole (Figure 4).
3. Secure remote control to mounting surface using supplied bracket and nuts (Figure 5).

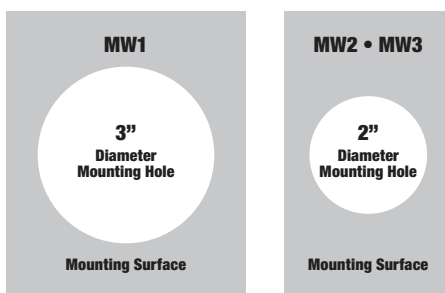


Figure 3

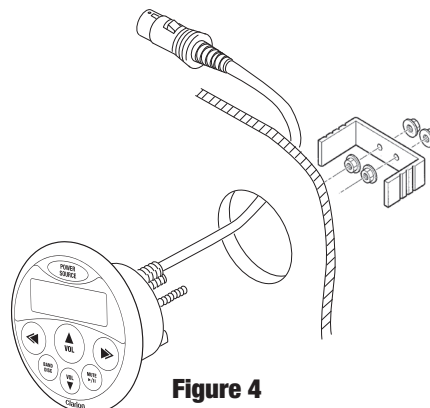


Figure 4

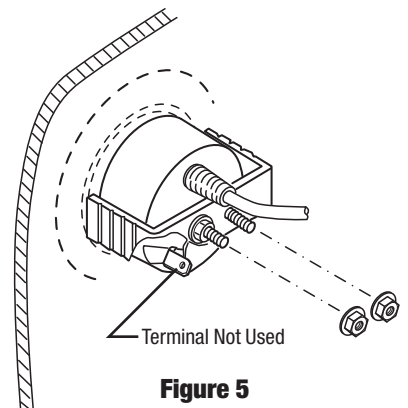


Figure 5

Remote Controls: MW1 • MW2 • MW3

Connections

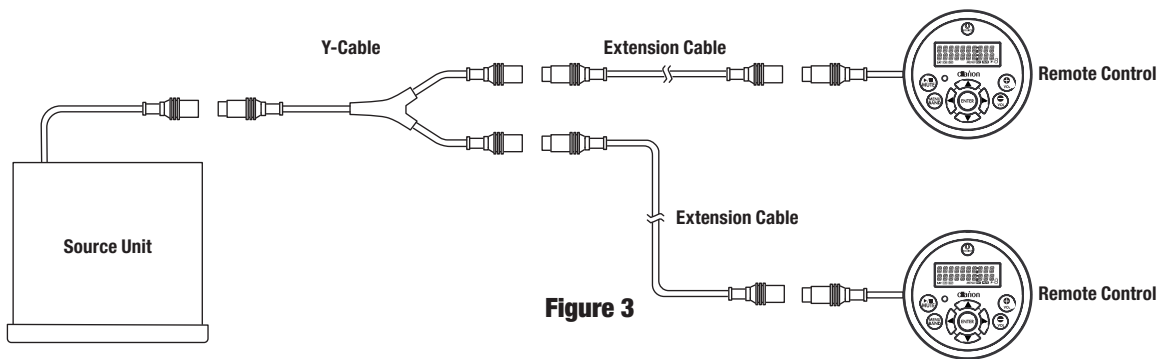
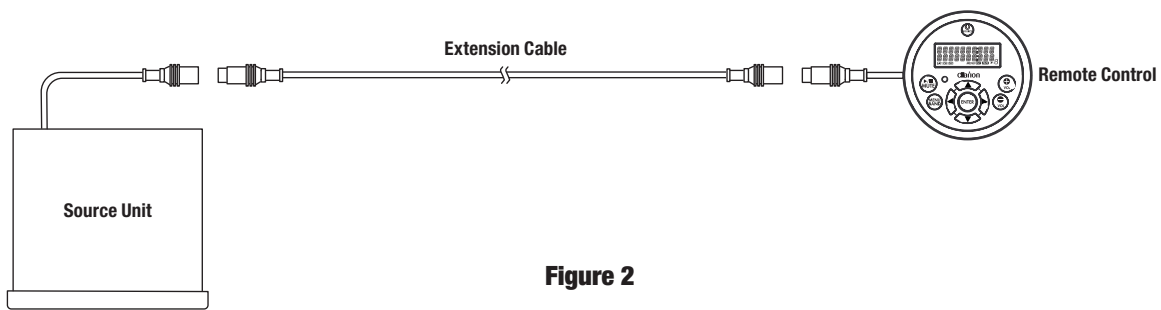
- Connect source unit to remote control via MW-RXC extension cable (Figure 1).

If multiple remote controls are to be installed and/or additional length is required, Y-cables and extension cables may be connected (Figure 2).

Note: Terminal on back of housing is not used.

Extension cables and Y-cables available separately.

Model	Description
MW-RXC-10	10' Remote Control Extension Cable
MW-RXC-25	25' Remote Control Extension Cable
MW-RXC-35	35' Remote Control Extension Cable
MW-RYC	Remote Control Y-Cable



Up to three MW1 remote controls can be used together with connection cable length totaling up to 48' per remote control.

Up to four MW2 remote controls can be used together with connection cable length totaling up to 48' per remote control.

Up to two MW1 and two MW2 remote controls can be used together with connection cable length totaling up to 48' per remote control.

Note: All remote control Y-cables must be placed directly at the source unit.

Cautions

- Read all instructions carefully before beginning installation.
- Unit is designed for use in marine applications with a positive 12 volt DC power supply and negative ground.
- To prevent short circuiting, disconnect battery's negative terminal before beginning installation (Figure 1).
- Do not install unit where it can be exposed to direct sunlight, hot air (ie: heater, engine compartment, etc.), or water.
- Do not install unit upside down (Figure 2).
- Install unit in an area that has adequate ventilation.
- If any modification to boat is required (ie: drilling holes, cutting panels, etc.), consult boat's manufacturer beforehand.
- Use only supplied mounting hardware. Use of other mounting bolts, brackets, etc. can result in damage and void warranty.
- Should fuse replacement become necessary, always use a fuse having same amperage rating as originally specified. Substituting a fuse with a higher amperage rating can result in damage to unit as well as fire.
- Wire lengths will vary under individual applications. Use of proper gauge wire is critical to unit's performance and safety of boat. Refer to American Wire Gauge "AWG" Chart (Page 25) for proper wire gauge selection.
- All wiring and circuit protection must comply with ABYC E-11 AC/DC electrical systems standard.
- If you are unfamiliar with any proper methods of installation, please consult a professional installation facility or contact Marine Audio (see back cover).

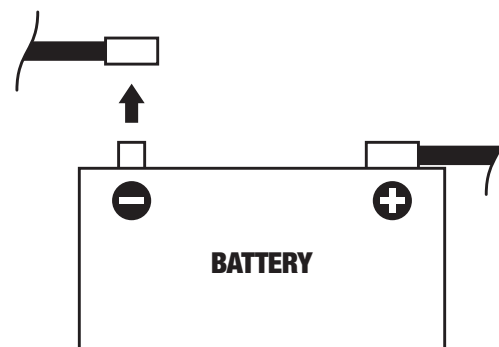


Figure 1

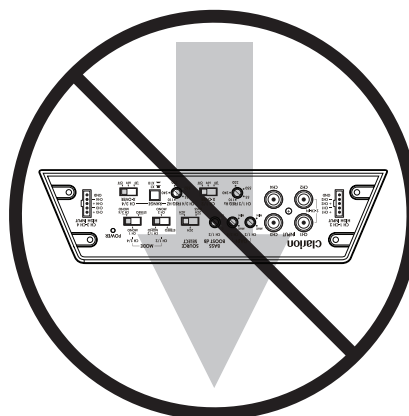


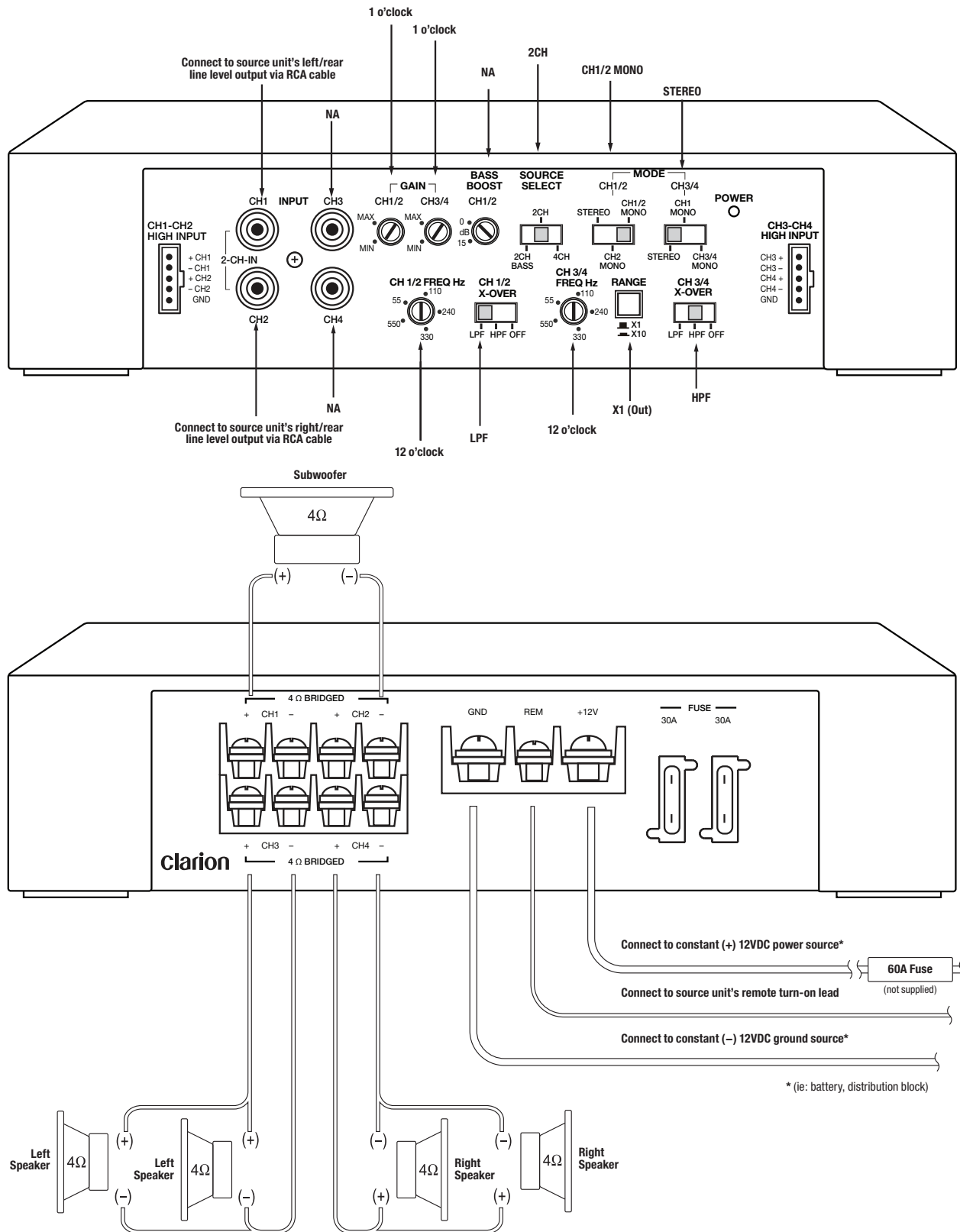
Figure 2

Mounting

- Secure unit to smooth, flat, solid mounting surface.

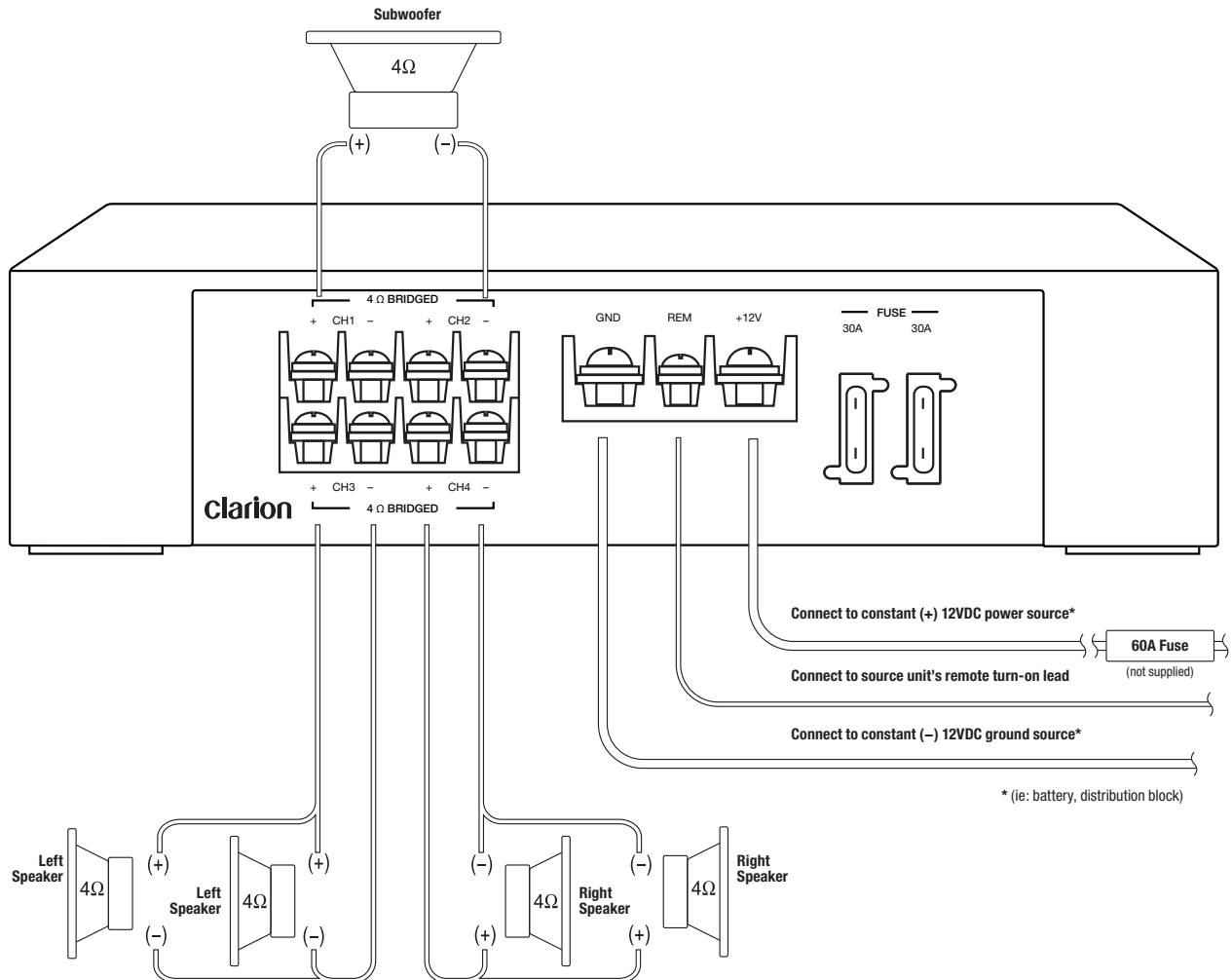
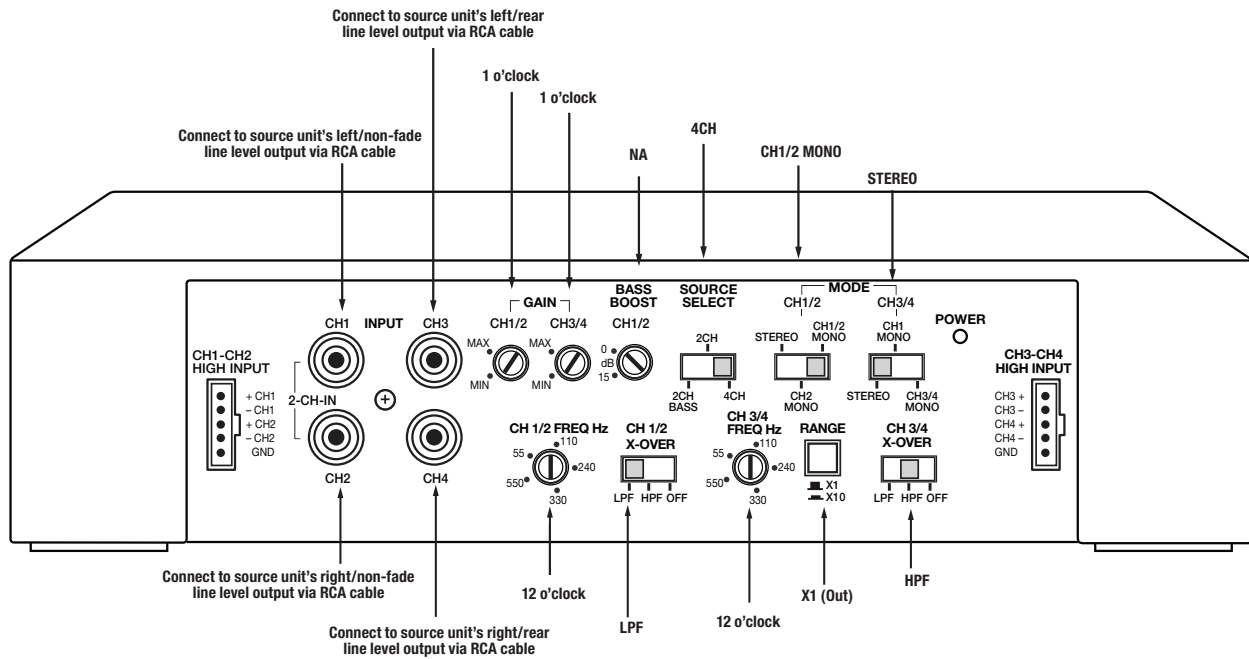
Power Amplifiers: XN3410

Settings & Connections: Standard Configuration



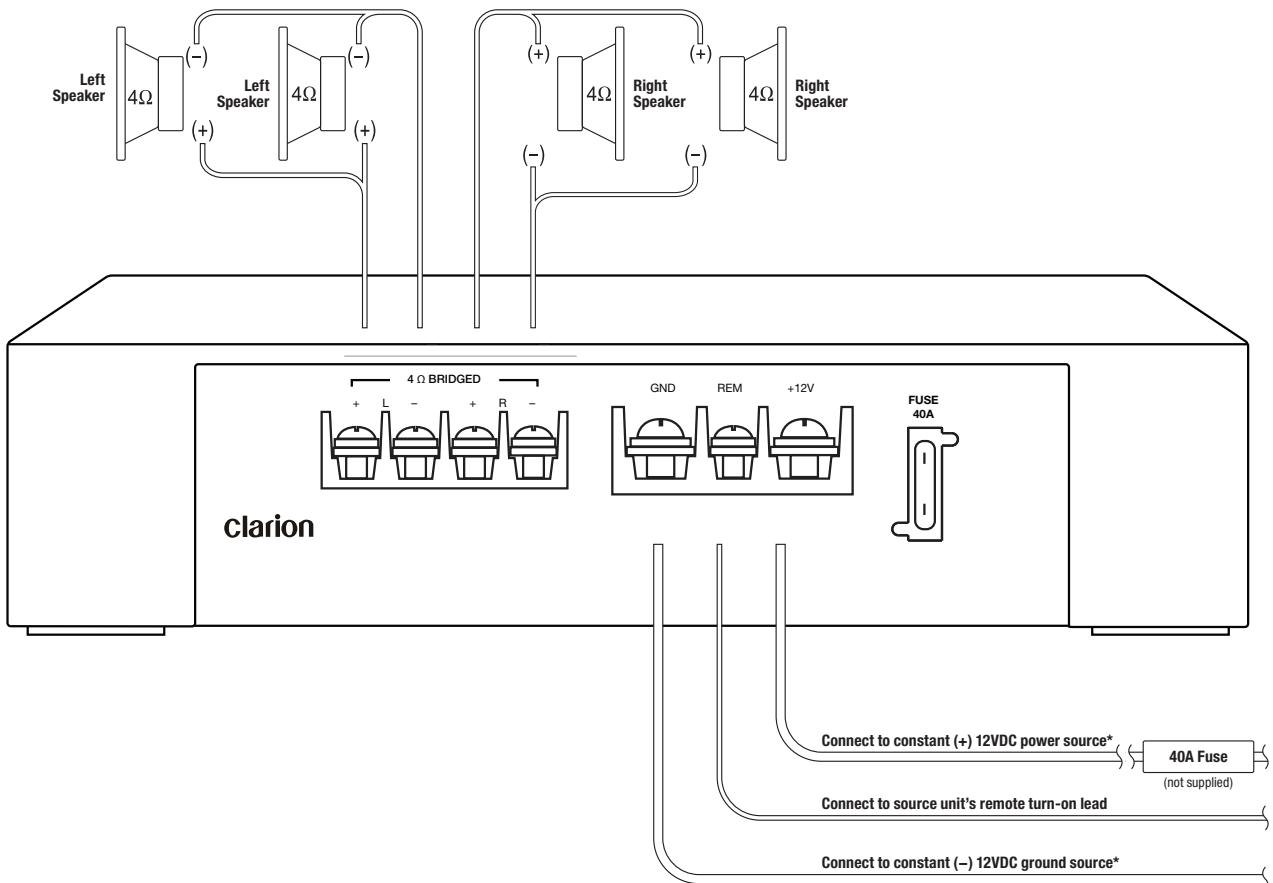
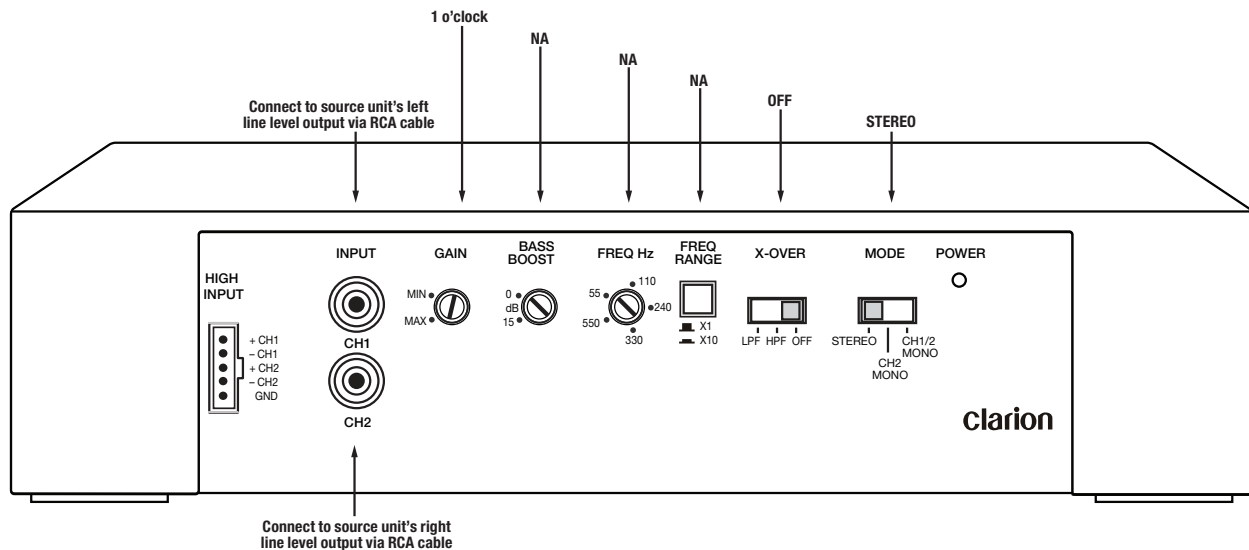
Power Amplifiers: XN3410

Settings & Connections: Optional Configuration (CMV1, CMD6, and M309 source units only)



Power Amplifiers: XN3210

Settings & Connections



* (ie: battery, distribution block)

Speakers: CMQ1720R • CMQ1620R • CMQ2510W • CMQ2010W CMG1620S • CMG1620R • CMG1720R • CMG2510W

Cautions

- Read all instructions carefully before beginning installation.
- If any modification to boat is required (ie: drilling holes, cutting panels, etc.), consult boat's manufacturer beforehand.
- Use only supplied mounting hardware. Use of other mounting screws, clips, etc. can result in damage and void warranty.
- All wiring and circuit protection must comply with ABYC E-11 AC/DC electrical systems standard.
- If you are unfamiliar with any proper methods of installation, please consult a professional installation facility or contact Marine Audio (see back cover).

Mounting

1. Cut mounting hole in smooth, flat, solid mounting surface.
2. Insert speaker into mounting hole.
3. Secure speaker to mounting surface using supplied mounting hardware.

Connections

1. Connect speaker cables to speaker's terminals via female spade connectors.
2. Secure speaker cable to speaker's stress relief tab located on rear of speaker's frame with zip tie (supplied).

Model	Type	Grille Diameter	Mounting Hole Diameter	Mounting Depth	Positive Terminal	Negative Terminal
CMQ1720R	Coaxial	7.75"	6.25"	2.5"	.25"	.187"
CMQ1620R	Coaxial	6.375"	5"	2.675"	.25"	.187"
CMQ2510W	Subwoofer	10.75"	8.875"	4.875"	.25"	.187"
CMQ2010W	Subwoofer	8.875"	6.75"	3.875"	.25"	.187"
CMG1620S	Component	7"	5"	2.25"	.25"	.187"
CMG1620R	Coaxial	7"	5"	2.25"	.25"	.187"
CMG1720R	Coaxial	7.75"	6.25"	2.375"	.25"	.187"
CMG2510W	Subwoofer	10.75"	8.875"	4.5"	.25"	.187"

American Wire Gauge

AWG Chart (3% Voltage Drop)

Length (feet): Determined by measuring the total length of stranded copper wire conductor from (+) 12VDC power source connection to audio component and back to (-) 12VDC ground source connection.

Current Draw (amperage): Determined by adding total combined amperage draw on single circuit.

Length (ft.)	Current Draw (A)												
	5	10	15	20	25	30	40	50	60	70	80	90	100
10	18	14	12	12	10	10	8	8	6	6	6	4	4
15	16	12	10	10	8	8	6	6	4	4	4	2	2
20	14	12	10	8	8	6	6	4	4	4	2	2	2
25	14	10	8	8	6	6	4	4	2	2	2	1	1
30	12	10	8	6	6	4	4	2	2	2	1	1/0	1/0
40	12	8	6	6	4	4	2	2	1	1/0	1/0	2/0	2/0
50	10	8	6	4	4	2	2	1	1/0	1/0	2/0	3/0	3/0
60	10	6	6	4	2	2	1	1/0	2/0	2/0	3/0	3/0	4/0
70	10	6	4	2	2	2	1/0	2/0	2/0	3/0	3/0	4/0	4/0
80	8	6	4	2	2	1	1/0	2/0	3/0	3/0	4/0		
90	8	4	4	2	1	1/0	2/0	3/0	3/0	4/0			
100	8	4	2	2	1	1/0	2/0	3/0	4/0	4/0			
110	8	4	2	2	1	1/0	2/0	3/0	4/0				
120	6	4	2	1	1/0	2/0	3/0	4/0	4/0				
130	6	4	2	1	1/0	2/0	3/0	4/0					
140	6	2	2	1/0	2/0	2/0	3/0	4/0					
150	6	2	1	1/0	2/0	3/0	4/0						
160	6	2	1	1/0	2/0	3/0	4/0						
170	6	2	1	2/0	3/0	3/0	4/0						

Conductor Gauge (Stranded Copper Wire)

Note: All wiring and circuit protection must comply with ABYC E-11 AC/DC electrical systems standard for 10% voltage drop conductor sizes. Marine Audio recommends the above AWG 3% voltage drop chart for optimum system performance.

Clarion®

Technical Support

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