ALPINE R2-A75M R-Series Class D Car Amplifier Owner's Manual

Contents

ALPINE R2-A75M R-Series Class D Car Amplifier

Product Information

- **Specifications**
  - **Model:** R2-A75M
  - **Type:** Mono Power Amplifier
  - **Application:** Mobile 12V
  - **Channels:** 1

Product Usage Instructions

- **Points to Observe for Safe Usage**
  - Read this manual carefully before using the system components.
  - They contain instructions on how to use this product safely and effectively. Alpine cannot be responsible for problems resulting from failure to observe the instructions in this manual.
- **Important Safety Instructions**
  - DO NOT OPERATE ANY FUNCTION THAT TAKES YOUR ATTENTION AWAY FROM SAFELY DRIVING YOUR VEHICLE. Any function that requires your prolonged attention should only be performed after coming to a complete stop.
  - Always stop the vehicle in a safe location before performing these functions. Failure to do so may result in an accident.
  - KEEP THE VOLUME AT A LEVEL WHERE YOU CAN STILL HEAR OUTSIDE NOISES WHILE DRIVING.
  - Excessive volume levels that obscure sounds such as emergency vehicle sirens or road warning signals (train crossings, etc.) can be dangerous and may result in an accident. LISTENING AT LOUD VOLUME LEVELS IN A CAR MAY ALSO CAUSE HEARING DAMAGE.
  - DO NOT DISASSEMBLE OR ALTER. Doing so may result in an accident, fire or electric shock.
  - USE THIS PRODUCT FOR MOBILE 12V APPLICATIONS. Use for other than its designed application may result in fire, electric shock or other injury.
  - USE THE CORRECT AMPERE RATING WHEN REPLACING FUSES. Failure to do so may result in fire

or electric shock.
    - DO NOT BLOCK VENTS OR RADIATOR PANELS. Doing so may cause heat to build up inside and may result in fire.
    - MAKE THE CORRECT CONNECTIONS. Failure to make the proper connections may result in fire or product damage.
    - USE ONLY IN CARS WITH A 12-VOLT NEGATIVE GROUND. (Check with your dealer if you are not sure.) Failure to do so may result in fire, etc.
    - BEFORE WIRING, DISCONNECT THE CABLE FROM THE NEGATIVE BATTERY TERMINAL. Failure to do so may result in electric shock or injury due to electrical shorts.
    - DO NOT ALLOW CABLES TO BECOME ENTANGLED IN SURROUNDING OBJECTS. Arrange wiring and cables in compliance with the manual to prevent obstructions when driving. Cables or wiring that obstruct or hang up on places such as the steering wheel, gear lever, brake pedals, etc. can be extremely hazardous.
    - DO NOT SPLICE INTO ELECTRICAL CABLES. Never cut away cable insulation to supply power to other equipment. Doing so will exceed the current carrying capacity of the wire and result in fire or electric shock.
    - DO NOT DAMAGE PIPE OR WIRING WHEN DRILLING HOLES. When drilling holes in the chassis for installation, take precautions so as not to contact, damage or obstruct pipes, fuel lines, tanks or electrical wiring. Failure to take such precautions may result in fire.
    - DO NOT USE BOLTS OR NUTS IN THE BRAKE OR STEERING SYSTEMS TO MAKE GROUND CONNECTIONS. Bolts or nuts used for the brake or steering systems (or any other safety-related system), or tanks should NEVER be used for installations or ground connections.
    - Using such parts could disable control of the vehicle and cause fire etc.
- **FAQ**
    - **Q:** Can I use this amplifier in a 24V system?
    - **A:** No, this amplifier is designed for mobile 12V applications only. Using it in a 24V system may result in fire, electric shock, or other injury.
    - **Q:** What should I do if the volume level is too loud?
    - **A:** Keep the volume at a level where you can still hear outside noises while driving. Excessive volume levels that obscure sounds such as emergency vehicle sirens or road warning signals can be dangerous and may result in an accident. Listening at loud volume levels in a car may also cause hearing damage.
    - **Q:** Can I splice into electrical cables to power other equipment?
    - **A:** No, you should never cut away cable insulation to supply power to other equipment. Doing so will exceed the current carrying capacity of the wire and result in fire or electric shock.

WARNING

Points to Observe for Safe Usage

- Read this manual carefully before using the system components. They contain instructions on how to use this product in a safe and effective manner.
- Alpine cannot be responsible for problems resulting from failure to observe the instructions in this manual.

WARNING

- This symbol means important instructions. Failure to heed them can result in serious injury or death.
- DO NOT OPERATE ANY FUNCTION THAT TAKES YOUR ATTENTION AWAY FROM SAFELY DRIVING YOUR VEHICLE.
- Any function that requires your prolonged attention should only be performed after coming to a complete stop. Always stop the vehicle in a safe location before performing these functions. Failure to do so may result in an accident.
- KEEP THE VOLUME AT A LEVEL WHERE YOU CAN STILL HEAR OUTSIDE NOISES WHILE DRIVING.
- Excessive volume levels that obscure sounds such as emergency vehicle sirens or road warning signals (train crossings, etc.) can be dangerous and may result in an accident. LISTENING AT LOUD VOLUME LEVELS IN A CAR MAY ALSO CAUSE HEARING DAMAGE.
- **DO NOT DISASSEMBLE OR ALTER.**
  - Doing so may result in an accident, fire or electric shock.
- **USE THIS PRODUCT FOR MOBILE 12V APPLICATIONS.**
  - Use for other than its designed application may result in fire, electric shock or other injury.
- **USE THE CORRECT AMPERE RATING WHEN REPLACING FUSES.**
  - Failure to do so may result in fire or electric shock.
- **DO NOT BLOCK VENTS OR RADIATOR PANELS.**
  - Doing so may cause heat to build up inside and may result in fire.
- **MAKE THE CORRECT CONNECTIONS.**
  - Failure to make the proper connections may result in fire or product damage.
- **USE ONLY IN CARS WITH A 12 VOLT NEGATIVE GROUND.**
  - (Check with your dealer if you are not sure.) Failure to do so may result in fire, etc.
- **BEFORE WIRING, DISCONNECT THE CABLE FROM THE NEGATIVE BATTERY TERMINAL.**
  - Failure to do so may result in electric shock or injury due to electrical shorts.
- **DO NOT ALLOW CABLES TO BECOME ENTANGLED IN SURROUNDING OBJECTS.**
  - Arrange wiring and cables in compliance with the manual to prevent obstructions when driving. Cables or wiring that obstruct or hang up on places such as the steering wheel, gear lever, brake pedals, etc. can be extremely hazardous.
- **DO NOT SPLICE INTO ELECTRICAL CABLES.**
  - Never cut away cable insulation to supply power to other equipment. Doing so will exceed the current carrying capacity of the wire and result in fire or electric shock.
- **DO NOT DAMAGE PIPE OR WIRING WHEN DRILLING HOLES.**
  - When drilling holes in the chassis for installation, take precautions so as not to contact, damage or obstruct pipes, fuel lines, tanks or electrical wiring. Failure to take such precautions may result in fire.
- **DO NOT USE BOLTS OR NUTS IN THE BRAKE OR STEERING SYSTEMS TO MAKE GROUND CONNECTIONS.**
  - Bolts or nuts used for the brake or steering systems (or any other safety-related system), or tanks should NEVER be used for installations or ground connections. Using such parts could disable control of the vehicle and cause fire etc.
- **KEEP SMALL OBJECTS SUCH AS BATTERIES OUT OF THE REACH OF CHILDREN.**
  - Swallowing them may result in serious injury. If swallowed, consult a physician immediately.

CAUTION

This symbol means important instructions. Failure to heed them can result in injury or property damages.

- **HALT USE IMMEDIATELY IF A PROBLEM APPEARS.**
  - Failure to do so may cause personal injury or damage to the product. Return it to your authorized Alpine dealer or the nearest Alpine Service Center for repair.
- **HAVE THE WIRING AND INSTALLATION DONE BY EXPERTS.**
  - The wiring and installation of this unit require special technical skills and experience. To ensure safety, always contact the dealer where you purchased this product to have the work done.
- **USE SPECIFIED ACCESSORY PARTS AND INSTALL THEM SECURELY.**
  - Be sure to use only the specified accessory parts. Use of other than designated parts may damage this unit internally or may not securely install the unit in place. This may cause parts to become loose resulting in hazards or product failure.
- **ARRANGE THE WIRING SO IT IS NOT CRIMPED OR PINCHED BY A SHARP METAL EDGE.**
  - Route the cables and wiring away from moving parts (like the seat rails) or sharp or pointed edges. This will prevent crimping and damage to the wiring. If wiring passes through a hole in metal, use a rubber grommet to prevent the wire's insulation from being cut by the metal edge of the hole.
- **DO NOT INSTALL IN LOCATIONS WITH HIGH MOISTURE OR DUST.**
  - Avoid installing the unit in locations with a high incidence of moisture or dust. Moisture or dust that penetrates this unit may result in product failure.

SERVICE CARE

IMPORTANT NOTICE

- This Amplifier has been type-tested and found to comply with the limits for a Class B computing device per the specifications in Subpart J of Part 15 of FCC Rules.
- This equipment generates and uses radio frequency energy, and it must be installed and used properly by the manufacturer's instructions.
  - SERIAL NUMBER:
  - INSTALLATION DATE:
  - INSTALLATION TECHNICIAN:
  - PLACE OF PURCHASE:

IMPORTANT

- Please record the serial number of your unit in the space provided here and keep it as a permanent record. The serial number plate is located on the rear of the unit.

For European Customers

- Should you have any warranty questions, please consult your store of purchase.
- For Customers in other Countries

IMPORTANT NOTICE

- Customers who purchase the product with which this notice is packaged, and who make this purchase in countries other than the United States of America and Canada, please contact your dealer for information regarding warranty coverage.

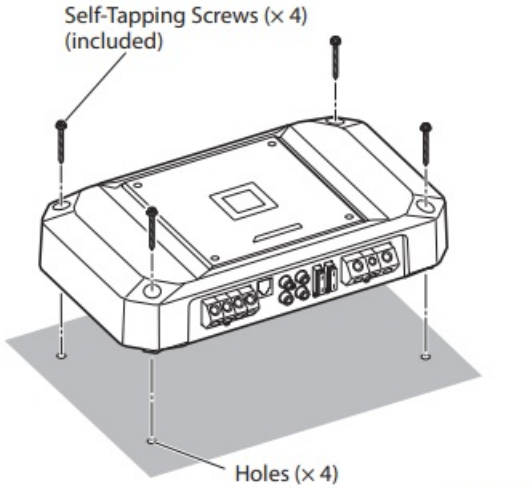
ACCESSORIES

- Self-Tapping Screw……..4
- Hexagon Wrench……1 SET

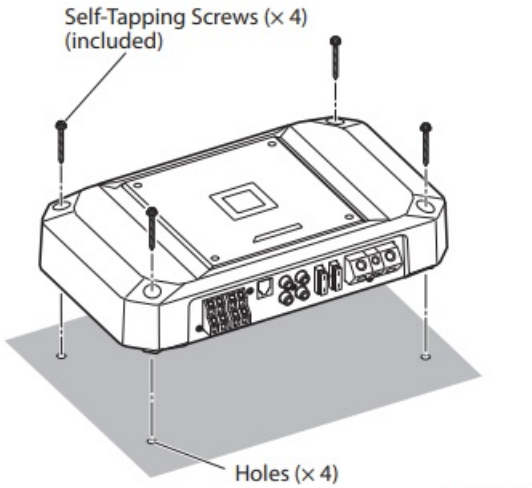
INSTALLATION

Due to the high power output of the R2-A75M/
R2-A60F considerable heat is produced when the amplifier is in operation. For this reason, the amplifier should be mounted in a location which will allow for free circulation of air, such as inside the trunk. For alternate installation locations, please contact your authorized Alpine dealer.

1. Using the amplifier as a template, mark the four screw locations.
2. Make sure there are no objects behind the surface that may become damaged during drilling.
3. Drill the screw holes.
4. Position the R2-A75M/R2-A60F over the screw holes, and secure with four self-tapping screws.



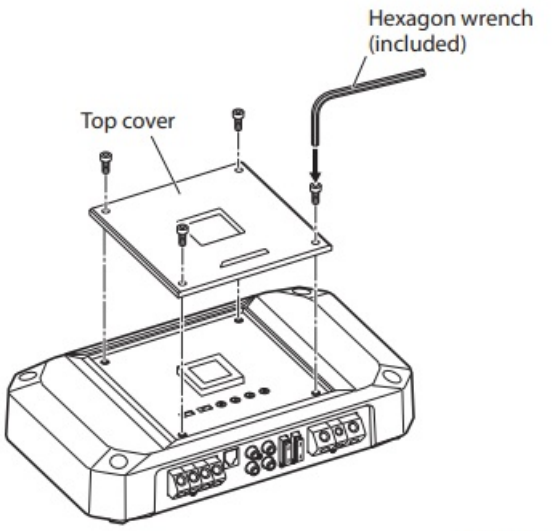
R2-A75M



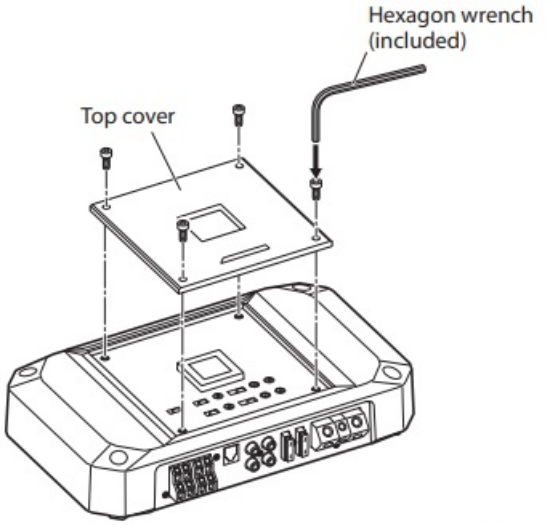
R2-A60F

REMOVING THE TOP COVER

To use the top inner panel, remove the top cover.



R2-A75M

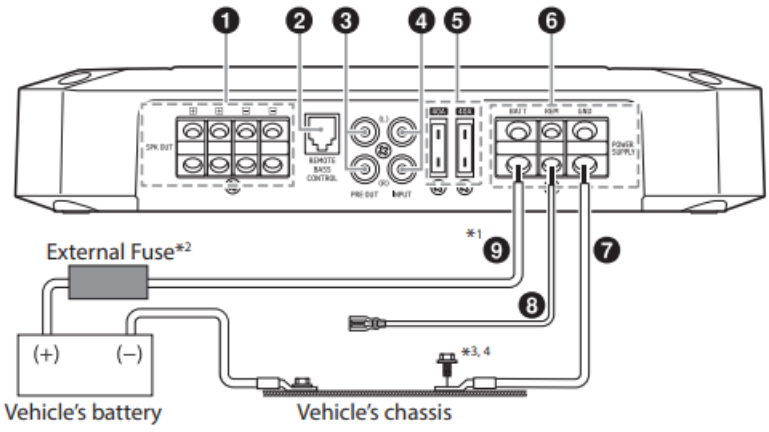


R2-A60F

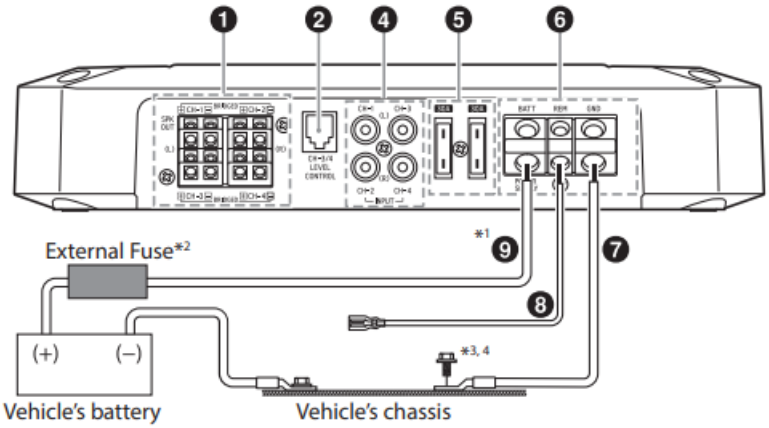
CONNECTIONS

Before making connections, be sure to turn the power off to all audio components.

R2-A75M



R2-A60F



1. For details on the wire size to be used, refer to the supplied “Cautions on Power Supply Wires Connection” and “Cautions on Power Supply Wires” (page 20), and then use the wire of the specified size.
2. Be sure to add an External Fuse (e.g. Fuse Block, Circuit Breaker) with the battery lead as close as possible to the battery’s positive (+) terminal. Add an external fuse with the same capacity, or a slightly larger capacity, as the total of the fuse capacities of the amplifier. For details on the fuse capacity of this machine, see “Battery Lead **(9)**” (page 5).
3. Connect all equipment to the same ground point while keeping the wire length as short as possible.
4. To securely connect the ground lead, use an already installed screw.

To prevent external noise from entering the audio system

- Locate the unit and route the leads at least 10 cm (4”) away from the vehicle’s harness.
- Keep the battery power leads as far away from other leads as possible.
- Connect the ground lead securely to a bare metal spot (remove any paint or grease if necessary) of the vehicle’s chassis.
- If you add an optional noise suppressor, connect it as far away from the unit as possible. Your Alpine dealer carries various noise suppressors, contact them for further information.
- Your Alpine dealer knows best about noise prevention measures so consult your dealer for further information.

1. **Speaker Output Terminals**
    - Connect the Speaker Output Lead (+) / (–) using the Hexagon hole screw of the Speaker Output Terminals **(1).**
    - For details on how to connect, see “Cautions on wire lead connections” (page 6).
    - Be sure to observe correct speaker output connections and polarity about the other speakers in the system. Connect the positive output to the positive speaker terminal and the negative to negative.
- **About Subwoofer Input/Output (R2-A75M only)**
    - The input is stereo but the output is monaural.
    - Reversing subwoofer polarity (swapping positive and negative connections to the subwoofer) may be desirable in some installations for optimum bass performance.
- **About Bridged Connections (R2-A60F only)**
    - In the bridged mode, connect the left positive to the positive terminal of the speaker and the right

negative to the negative terminal of the speaker. Do not use the speaker (–) terminals as a common lead between the left and right channels.

- **NOTE:**
  - Do not connect the speaker (–) terminal to the vehicle's chassis.
  - Remote Bass Control (optional) (R2-A75M only)
  - CH-3/4 Remote Level Control (optional) (R2-A60F only)

2. **Connect the Remote Bass Control Unit**
   - RUX-KNOB.2 (sold separately) to adjust the output level remotely. This is not to replace the appropriate gain level setting between the amplifier and head unit.
3. **Pre-Out Jacks (R2-A75M only)**
   - These jacks provide a line level output. This is an ideal output for driving a second subwoofer amp. This output is full-range and is not affected by the crossover.
4. **RCA Input Jacks**
   - Connect these jacks to the line out leads on your head unit using RCA extension cables or Speaker-RCA Conversion cables (sold separately).
   - Be sure to observe correct channel connections; Left to Left and Right to Right.
5. **Fuse**
   - R2-A75M……..40 A × 2
   - R2-A60F…….30 A × 2
   - USE THE CORRECT AMPERE RATING WHEN REPLACING FUSES.
   - Failure to do so may result in fire or electric shock.
6. **Power Supply Terminal**
   - Connect the Ground Lead **(7),** Remote Turn-on Lead **(8),** and Battery Lead **(9)** using the Hexagon hole screw of the Power Supply Terminal **(6).**
   - For details on how to connect, see "Cautions on wire lead connections".
7. **Ground Lead (sold separately)**
   - Connect this lead securely to a clean, bare metal spot on the vehicle's chassis. Verify this point to be a true ground by checking for continuity between that point and the negative (–) terminal of the vehicle's battery. Ground all your audio components to the same point on the chassis to prevent ground loops while keeping wire length as short as possible.
   - For details on the wires size to be used, refer to the supplied "Cautions on Power Supply Wires Connection" and "Cautions on Power Supply Wires" (page 20), and then use the wire of the specified size.
8. **Remote Turn-On Lead (sold separately)**
   - Connect this lead to the remote turn-on (positive trigger, (+) 12 V only) lead of your head unit. If a remote turn-on lead is not available, see the "CONNECTION CHECKLIST" section on page 7 for an alternative method.
   - When connecting the speaker output leads of the head unit to this unit with a Speaker-RCA
   - Conversion cable (sold separately), you do not need to connect the remote turn-on lead, owing to the "REMOTE SENSING" function of this unit. However, the "REMOTE SENSING" function may not work depending on the signal source connected. In such a case, connect the remote turn-on lead to an incoming power supply cord (accessory power) in the ACC position.
9. **Battery Lead (sold separately)**
   - Be sure to add an External Fuse (e.g. Fuse Block, Circuit Breaker) with the battery lead as close as

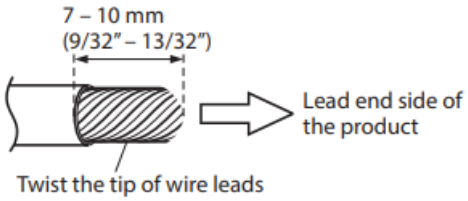
possible to the battery's positive (+) terminal.

- This fuse will protect your vehicle's electrical system in case of a short circuit. See below for appropriate fuse value requirement:
  - **R2-A75M**..... 80 A
  - **R2-A60F**..... 60 A
- For details on the wires size to be used, refer to the supplied "Cautions on Power Supply Wires Connection" and "Cautions on Power Supply Wires" (page 20), and then use the wire of the specified size.

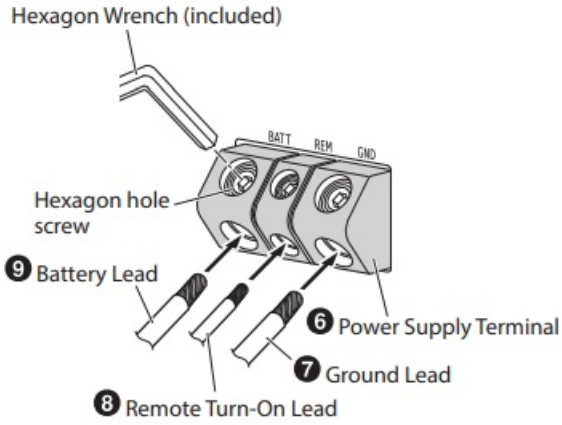
Cautions on wire lead connections

When using third-party wire cables (power supply wire), use the supplied screws to simplify the connection. Refer to the description below for the proper procedure. If you are in doubt about how to make this connection, consult your dealer.

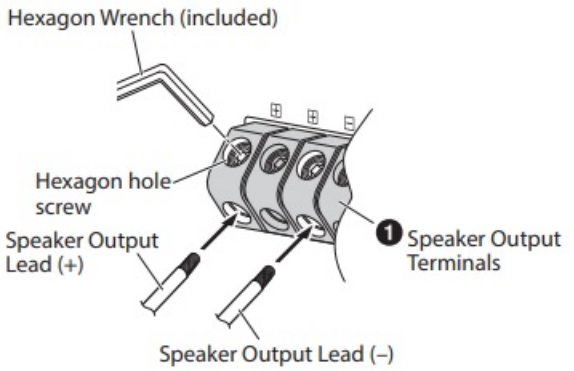
1. Check the wire size.
   - For details on the wires size to be used, refer to the supplied "Cautions on Power Supply Wires
   - **Connection" and "Cautions on Power Supply**
     - Wires" (page 20), and then use the wire of the specified size.
     - If the wire gauge used is unknown, ask your dealer.
2. Remove the insulation from the ends of the wire leads by about 7 – 10 mm (9/32" – 13/32").



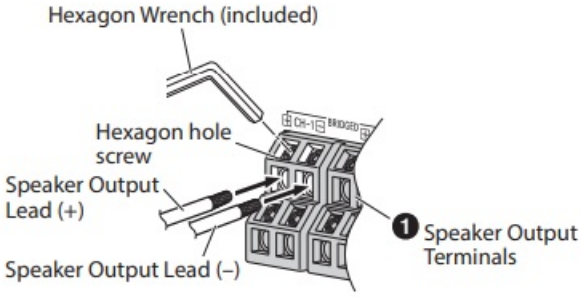
   - **NOTES:**
     - If length of the exposed wire is too short, a poor connection may occur causing operation failure or sound interruption.
     - On the other hand, if the length is too long, an electrical short-circuit may occur.
3. Tighten the hexagon hole screw with the hexagon wrench (Large or Small) (included) to secure the lead.
   - Before making this connection, use insulated shrink tubing to cover any exposed wire extending beyond the terminal.
   - **Power Supply Terminal**



   - **Speaker Output Terminals**



R2-A75M



R2-A60F

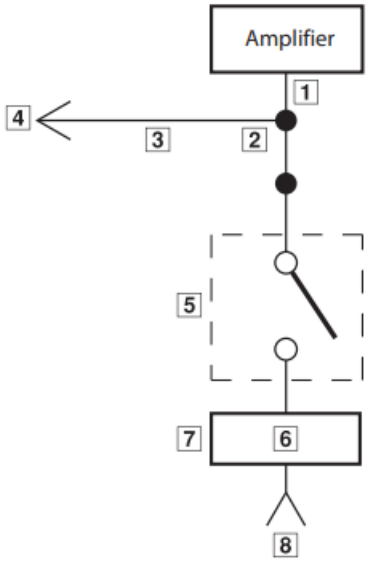
- **NOTES:**
  - Be sure to use the Hexagon hole screw attached to the Power Supply Terminal **(6)** or Speaker Output Terminals **(1)**.
  - For safety reasons, connect the battery leads last.
  - To prevent disconnection of the leads or dropping of the unit, do not use the cabling to carry the unit.

CONNECTION CHECKLIST

Please check your head unit for the conditions listed below:
Remote Turn-On Lead

- **a.** The head unit does not have a remote turn-on or power antenna lead.
- **b.** The head unit's power antenna lead is activated only when the radio is on (turns off in the tape or CD Mode).
- **c.** The head unit's power antenna lead is logic level output (+) 5 V, negative trigger (grounding type), or cannot sustain (+) 12 V when connected to other equipment in addition to the vehicle's power antenna.
  - If any of the above conditions exist, the remote turn-on lead of your R2-A75M/R2-A60F must be connected to a switched power source (ignition) in the vehicle.
  - Be sure to use a 3 A fuse as close as possible to this ignition tap. Using this connection method, the R2-A75M/R2-A60F will turn on and stay on as long as the ignition switch is on.
  - If this is objectionable, an SPST (Single Pole, Single Throw) switch, in addition to the 3 A fuse mentioned above, may be installed in-line on the R2-A75M/R2-A60F turn-on lead. This switch will then be used to turn on (and off) the
  - R2-A75M/R2-A60F. Therefore, the switch should be mounted so that is accessible by the driver.
  - Make sure the switch is turned off when the vehicle is not running. Otherwise, the amplifier will remain on and drain the battery.

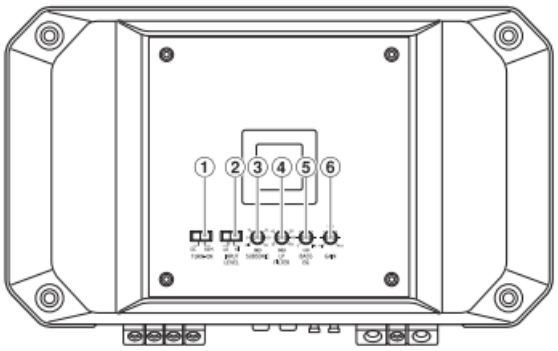
1. Blue/White
2. Power Antenna
3. Remote Turn-On Lead
4. To other Alpine component’s Remote Turn-On Leads
5. SPST Switch (optional)
6. Fuse (3 A)
7. As close as possible to the vehicle’s ignition tap
8. Ignition Source



SWITCH SETTINGS

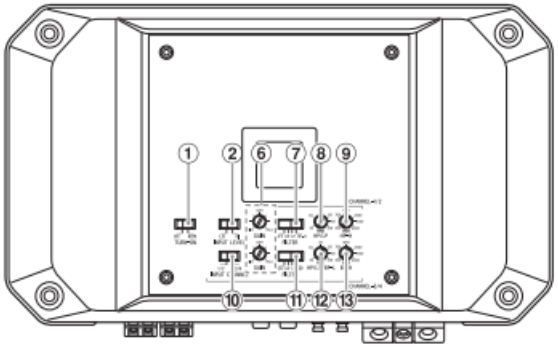
- Before switching each Selector Switch, turn off the power and insert a small screwdriver, etc., perpendicularly to the Switch.
- To use the top inner panel, remove the top cover. See “REMOVING THE TOP COVER” (page 3).

R2-A75M



(Top inner panel)

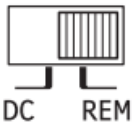
R2-A60F



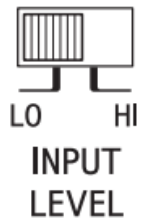
(Top inner panel)

1. **Auto Turn-on Switch**

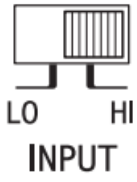
- **a)** For the “DC” Input setting, connecting the Remote Turn-OnLead is not required due to the “REMOTE SENSING” function of this product.



- **b)** However, the “REMOTE SENSING” function may not work correctly depending on the signal source connected. In such a case, connect the Remote Turn-On Lead to an incoming power supply cord (accessory power) in the ACC position and switch to the “REM” Input setting.
    - The DC offset auto turn-on circuit was designed to work with ONLY high level signals (i.e., speaker level signals). These high level signals usually come from the amplified output of radios, head units, and amplifiers. Because LO signal input (i.e., low level signals) cannot turn on the amplifier, the REMOTE trigger signal must be supplied and the REM setting needs to be used for LO signal input.* * For details on turning on the unit with the ACC trigger signal, see the Remote Turn-On Lead **(8)** section (page 5).
2. **Input Level Switch**



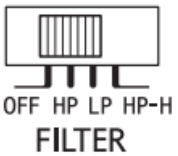
- **a)** If input is via the head unit pre-out line using an RCA extension cable (sold separately), set to “LO”.



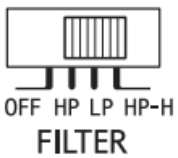
- **b)** If input is via the head unit speaker line using a speaker-RCA conversion cable (sold separately), set to “HI”.

3. **Filter Adjustment Knob (R2-A75M only)**
    - The subsonic filter is for cutting ultra low frequencies from the input signal before being amplified. Frequencies lower than the specified frequency are attenuated at 24 dB/octave.
    - **This is desirable for several reasons:**
        - To protect speakers too small or not capable of reproducing ultra low frequencies.
        - To minimize power wasted from reproducing inaudible sound.
        - To protect subwoofers in vented enclosures from over excursion below the tuning frequency.
4. **Crossover Frequency Adjustment Knob (LP FILTER) (R2-A75M only)**
    - Use this control to adjust the crossover frequency between 50 Hz to 400 Hz.
5. **Bass EQ Adjustment Knob (R2-A75M only)**
    - Add a 50 Hz bass boost up to +12 dB to tune your bass response.
6. **Input Gain Adjustment Knob**
    - Set the R2-A75M/R2-A60F input gain to the minimum position. Using a dynamic CD as a source, increase the head unit volume until the output distorts. Then, reduce the volume 1 step (or until the output is no longer distorted). Now, increase the amplifier gain until the sound from the speakers becomes distorted.
    - Reduce the gain slightly so the sound is no longer distorted to achieve the optimum gain setting.
7. **Filter Mode Selector Switch (CHANNEL-1/2) (R2-A60F only)**

- **a)** Set to the “OFF” position when the amplifier will be used for driving full range speakers or when using an external electronic crossover. The full frequency bandwidth will be output to the speakers with no high or low frequency attenuation.



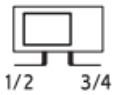
- **b)** Set to the “HP” position when the amplifier is used to drive a tweeter/ midrange system. At this setting, Crossover Frequency Adjustment Knob **(8)** provides adjustment between 50 Hz to 400 Hz. The frequencies below the crossover point will be attenuated at 12 dB/octave.
    - **NOTE:** In this case the maximum Bass EQ boost level is reduced.



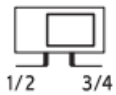
- **c)** Set to the “LP” position when the amplifier is used to drive a subwoofer. At this setting, Crossover Frequency Adjustment Knob **(8)** provides adjustment between 50 Hz to 400 Hz. The frequencies above the crossover point will be attenuated at 12 dB/octave.

- **d)** Set to the “HP-H” position when the amplifier is used to drive a tweeter system. At this setting, Crossover Frequency Adjustment Knob **(9)** providesadjustment between 400 Hz to 6 kHz. The frequencies below the crossover point will be attenuated at 12 dB/octave.

8. **Crossover Frequency Adjustment Knob (HP/ LP FREQ.) (R2-A60F only)**
    - Use this control to adjust the crossover frequency between 50 Hz to 400 Hz.
9. **Crossover Frequency Adjustment Knob (HP-H FREQ.) (R2-A60F only)**
    - Use this control to adjust the crossover frequency between 400 Hz to 6 kHz.
10. **Input Channel Selector Switch (CHANNEL-3/4) (R2-A60F only)**



- **a)** This switch setting is for selecting either 2-channel or 4-channel input mode. When set to “1/2”, signal will be copied from CH-1/2 and sent to CH-3/4, eliminating the need for Y-adapters.



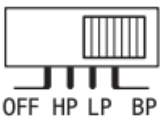
- **b)** Setting this switch to “3/4” will keep both inputs, CH-1/2 and CH-3/4 independent. A 4-channel source is required for this mode.

11. **Filter Mode Selector Switch (CHANNEL-3/4) (R2-A60F only)**

- **a)** Set to the “OFF” position when the amplifier will be used for driving full range speakers or when using an external electronic crossover. The full frequency bandwidth will be output to the speakers with no high or low frequency attenuation.

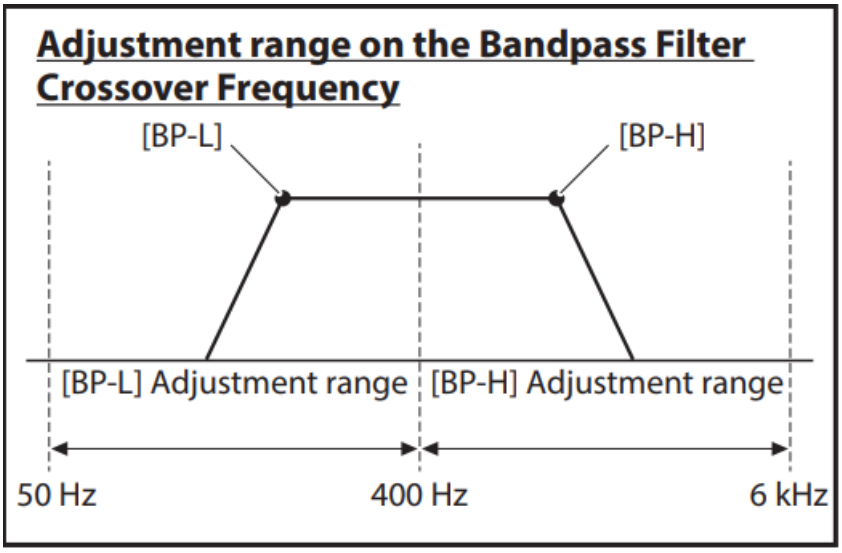
- **b)** Set to the “HP” position when the amplifier is used to drive a tweeter/ midrange system. At this setting, Crossover Frequency Adjustment Knob **(12)** provides adjustment between 50 Hz to 400 Hz. The frequencies below the crossover point will be attenuated at 12 dB/octave.

- **c)** Set to the “LP” position when the amplifier is used to drive a subwoofer. At this setting, Crossover Frequency Adjustment Knob **(12)** provides adjustment between 50 Hz to 400 Hz. The frequencies above the crossover point will be attenuated at 12 dB/octave.

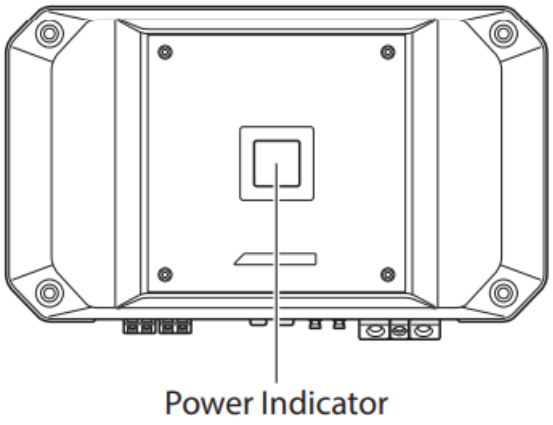


- **d)** Set to “BP” if the amplifier is used to drive a midbass or midrange speaker. Frequencies lower than the specified frequency set by Crossover Frequency Adjustment Knob **(12),** and higher than the frequency specified set by Crossover Frequency Adjustment Knob ( ), are attenuated at 12 dB/ octave.

12. **Crossover Frequency Adjustment Knob (HP/ LP/BP-L FREQ.) (R2-A60F only)**
    - Use this control to adjust the crossover frequency between 50 Hz to 400 Hz.
        - **NOTE:**
            - When the Crossover Mode Selector Switch **(11)** is set to [BP], adjust the Crossover Frequency Adjustment Knob **(12)** and **(13).**
            - Crossover Frequency Adjustment Knob (BP-H FREQ.) (R2-A60F only)
            - Use this control to adjust the crossover frequency between 400 Hz to 6 kHz.
        - **NOTES:**
            - When the Crossover Mode Selector Switch **(11)** is set to [BP], adjust the Crossover Frequency Adjustment Knob **(12)** and **(13).**
            - When the Crossover Mode Selector Switch **(11)** is set to [HP] or [LP], the adjustment of the Crossover Frequency Adjustment Knob **(13)** is disabled.



About Power Indicator



Lights up when power is on. Is off when the power is off.

Indication color	Status	Solution
Blue	The amplifier circuit is normal.	
Red (blinking)	The operating temperature is hi gh.	Turn down the volume of the head unit (input signal). Decrease the vehicle’s interior temperature to a norm al level. The indicator color changes to blue.
Red	The amplifier circuit is abnormal . An electrical short has occurre d, or the supply current is too hi gh.	Turn off the power supply and eliminate the cause. Th en turn on the unit and verify that the indicator color h as changed to blue. If it remains red, turn off the unit and consult your dealer.
	The operating temperature is to o high.	Decrease the vehicle’s interior temperature to a norm al level. The indicator color changes to blue.
	The power supply voltage is too high.	Use the correct power supply voltage. The indicator c olor changes to blue.

SYSTEM DIAGRAMS

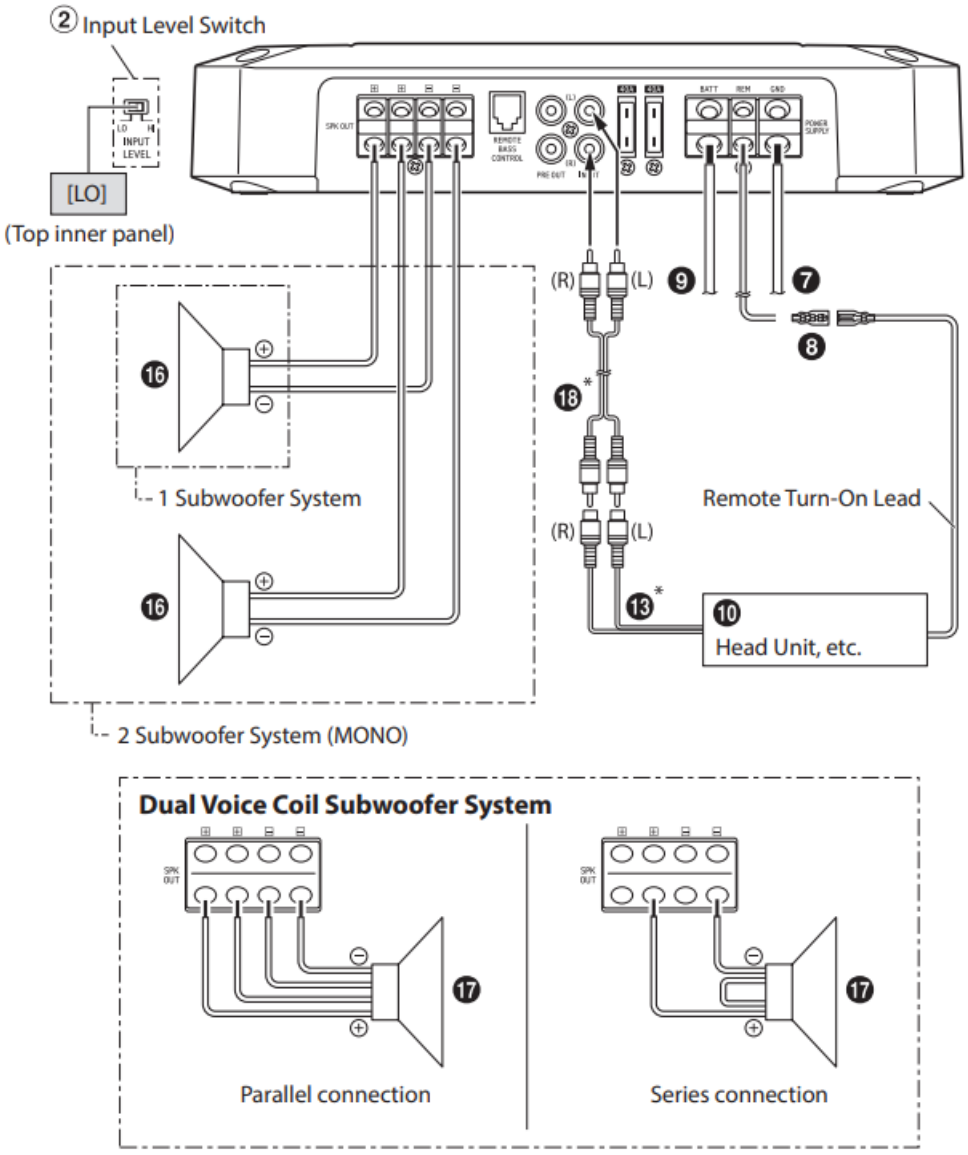
Before making a connection, check the total number of impedance of the speaker connected to the unit. If you have any questions, contact the nearest Alpine dealer.

Basic Connection Diagram for R2-A75M

1. Speaker Output Terminals
2. Remote Bass Control (optional)
3. Pre-Out Jacks
4. RCA Input Jacks
5. Fuse
6. Power Supply Terminal
7. Ground Lead (sold separately)
8. Remote Turn-On Lead (sold separately)
9. Battery Lead (sold separately)
10. Head Unit, etc.
11. Front Output
12. Rear Output
13. Subwoofer Output
14. Front Speakers
15. Rear Speaker
16. Subwoofer
17. Dual Voice Coil Subwoofer

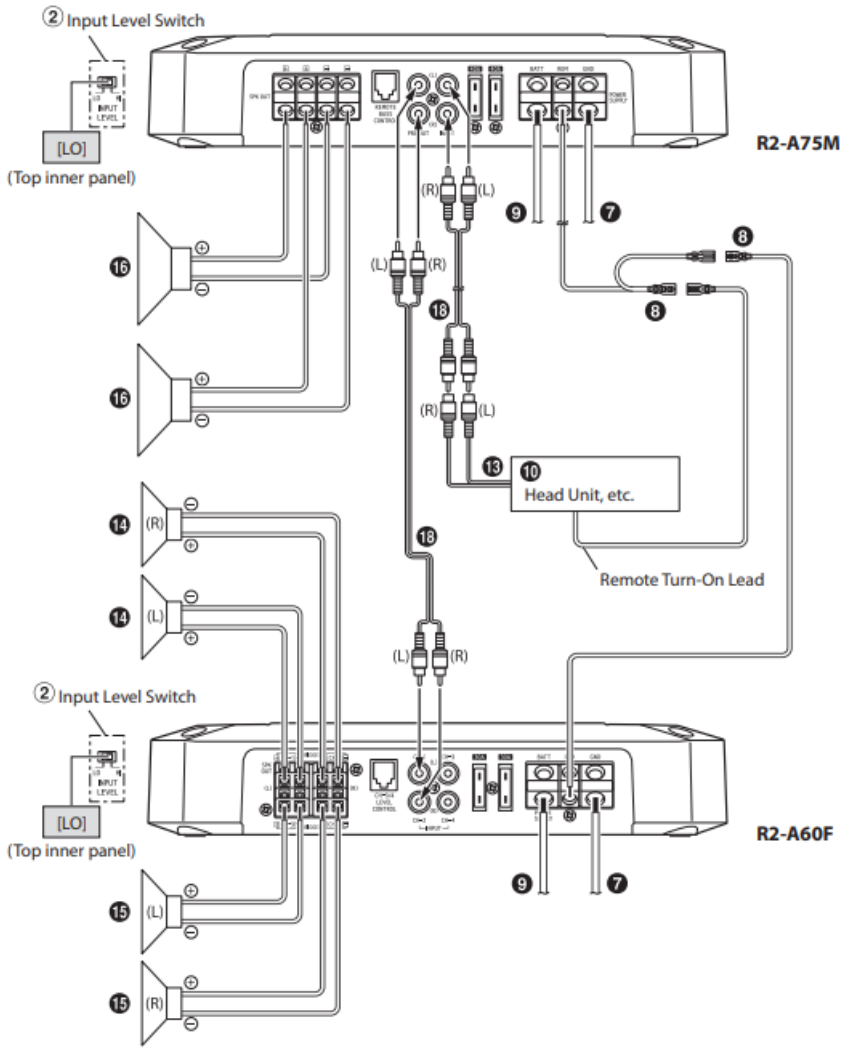
18. RCA Extension Cable (sold separately)
19. Speaker-RCA Conversion Cable (sold separately)
20. Y-Adapter (sold separately)
21. Front Speakers (Tweeter)
22. Front Speakers (Midrange)

Subwoofer System



- If the connected head unit does not have an RCA Output and RCA Extension Cable **(18)** cannot be used, you can use the Speaker-RCA Conversion Cable **(19)** (sold separately). For details on how to make a connection, see “About Connecting to the Speaker Input Level System” (page 19).
- For the 2 Subwoofer System/Dual Voice Coil Subwoofer System, make sure that the minimum impedance exceeds 2 Ω in total. In addition, the Power Output listed in the SPECIFICATIONS (page 21) is the specification with the total impedance value.

4 Speaker + Subwoofer / 2 Amplifier System (Connection example with R2-A60F)



- For details on the connection of R2-A60F, see “Basic Connection Diagram for R2-A60F” (page 15).

Basic Connection Diagram for R2-A60F

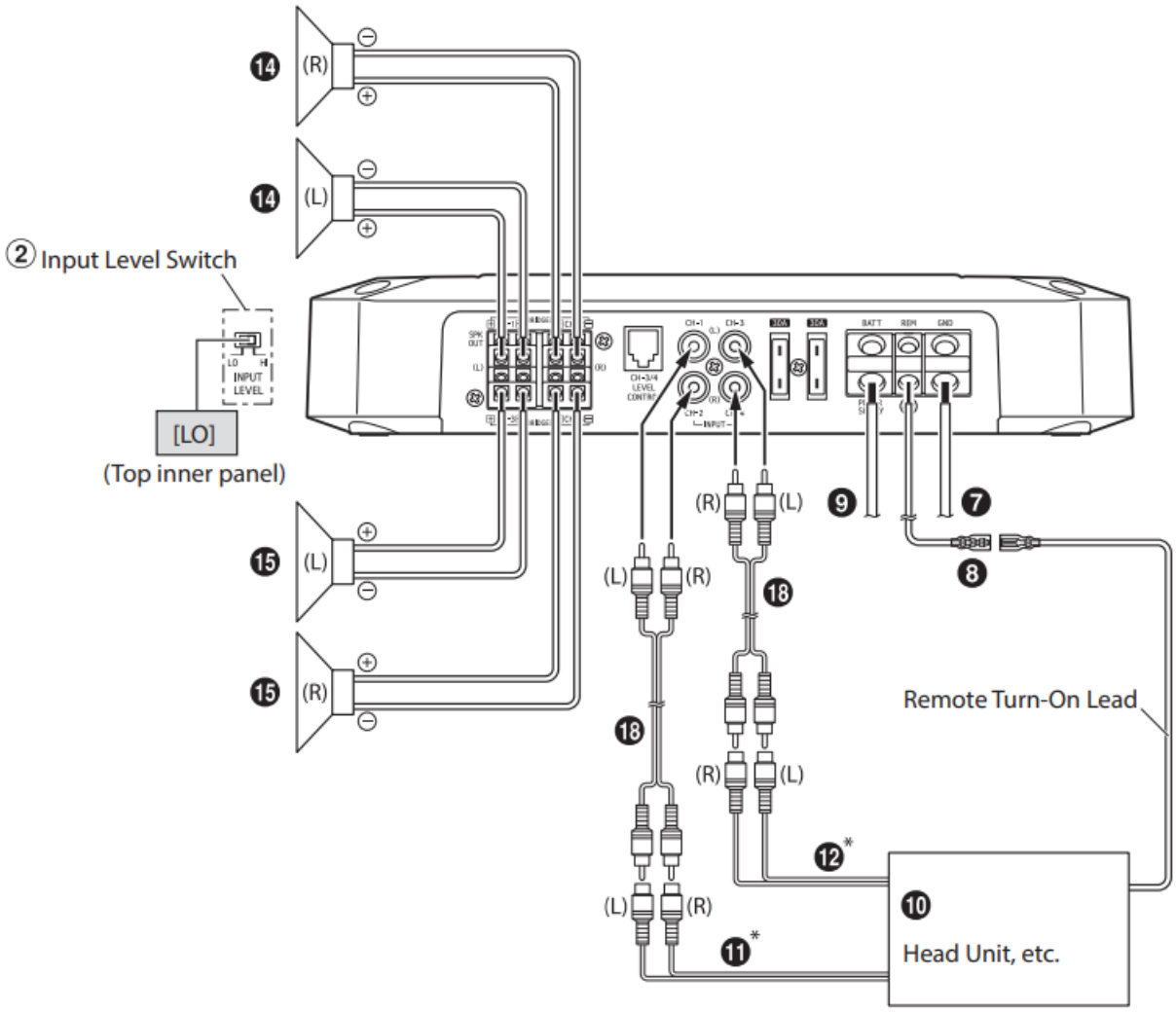
1. Speaker Output Terminals
2. Remote Bass Control (optional)
3. Pre-Out Jacks
4. RCA Input Jacks
5. Fuse
6. Power Supply Terminal
7. Ground Lead (sold separately)
8. Remote Turn-On Lead (sold separately)
9. Battery Lead (sold separately)
10. Head Unit, etc.
11. Front Output
12. Rear Output
13. Subwoofer Output
14. Front Speakers
15. Rear Speaker
16. Subwoofer

17. Dual Voice Coil Subwoofer
18. RCA Extension Cable (sold separately)
19. Speaker-RCA Conversion Cable (sold separately)
20. Y-Adapter (sold separately)
21. Front Speakers (Tweeter)
22. Front Speakers (Midrange)

For R2-A60F, change the Input Channel Selector Switch **(10)** setting according to the number of channels of the speaker input.

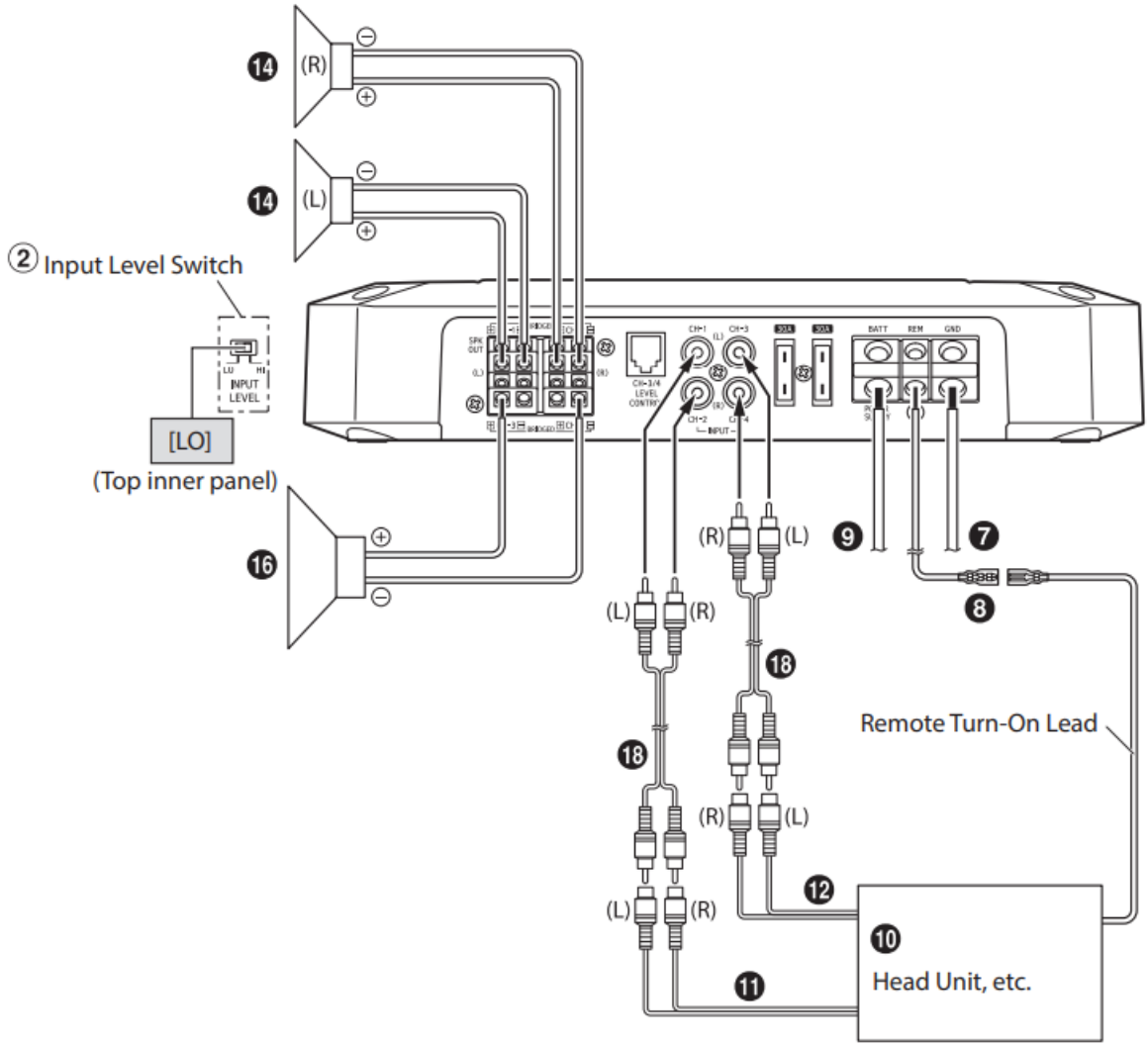
	4-Channel Input: ⓫ ⓬	2-Channel Input: ⓫
⑩ Input Channel Selector Switch (CHANNEL-3/4)		

4 Speaker System

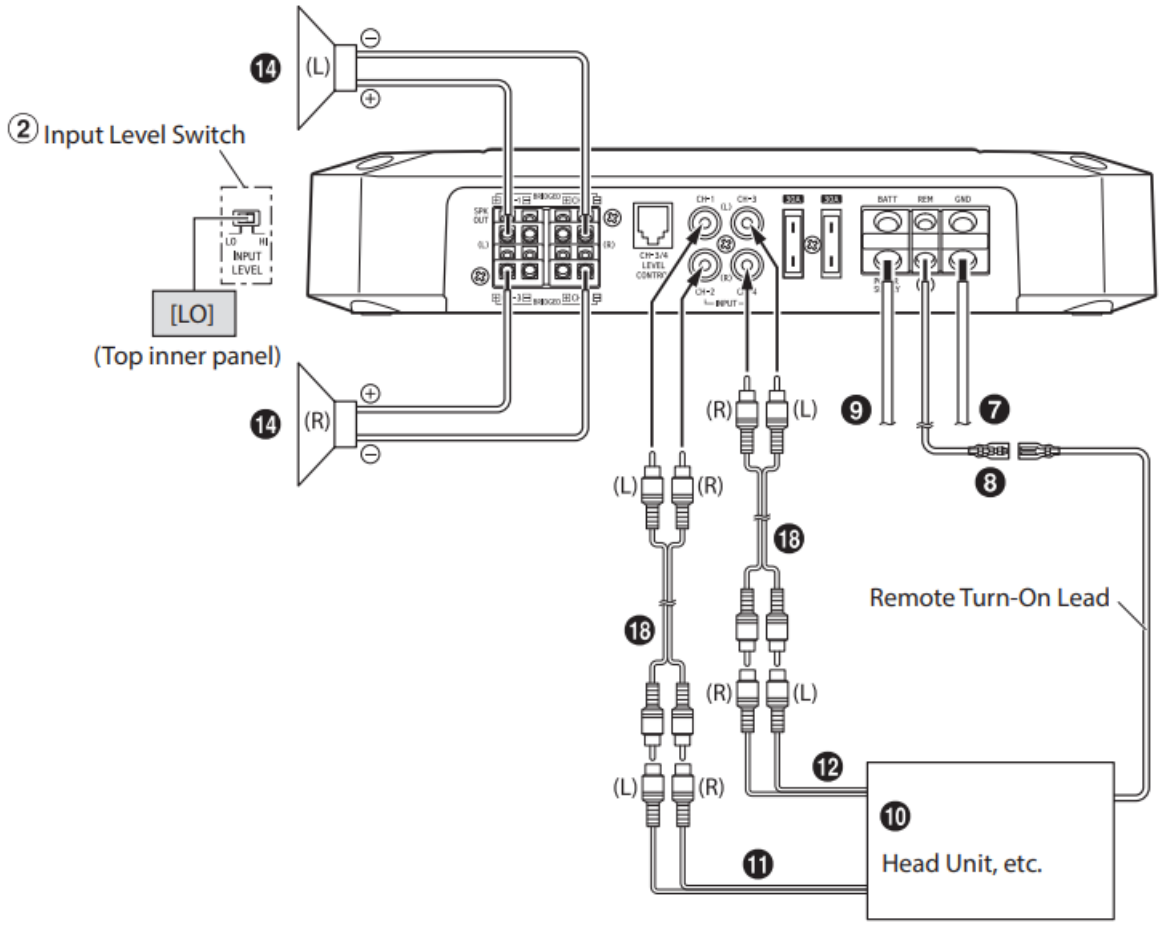


If the connected head unit does not have an RCA Output and RCA Extension Cable **(18)** cannot be used, you can use the Speaker-RCA Conversion Cable **(19)** (sold separately). For details on how to make a connection, see “About Connecting to the Speaker Input Level System” (page 19).

2 Speaker + Subwoofer System (Bridged Connections)



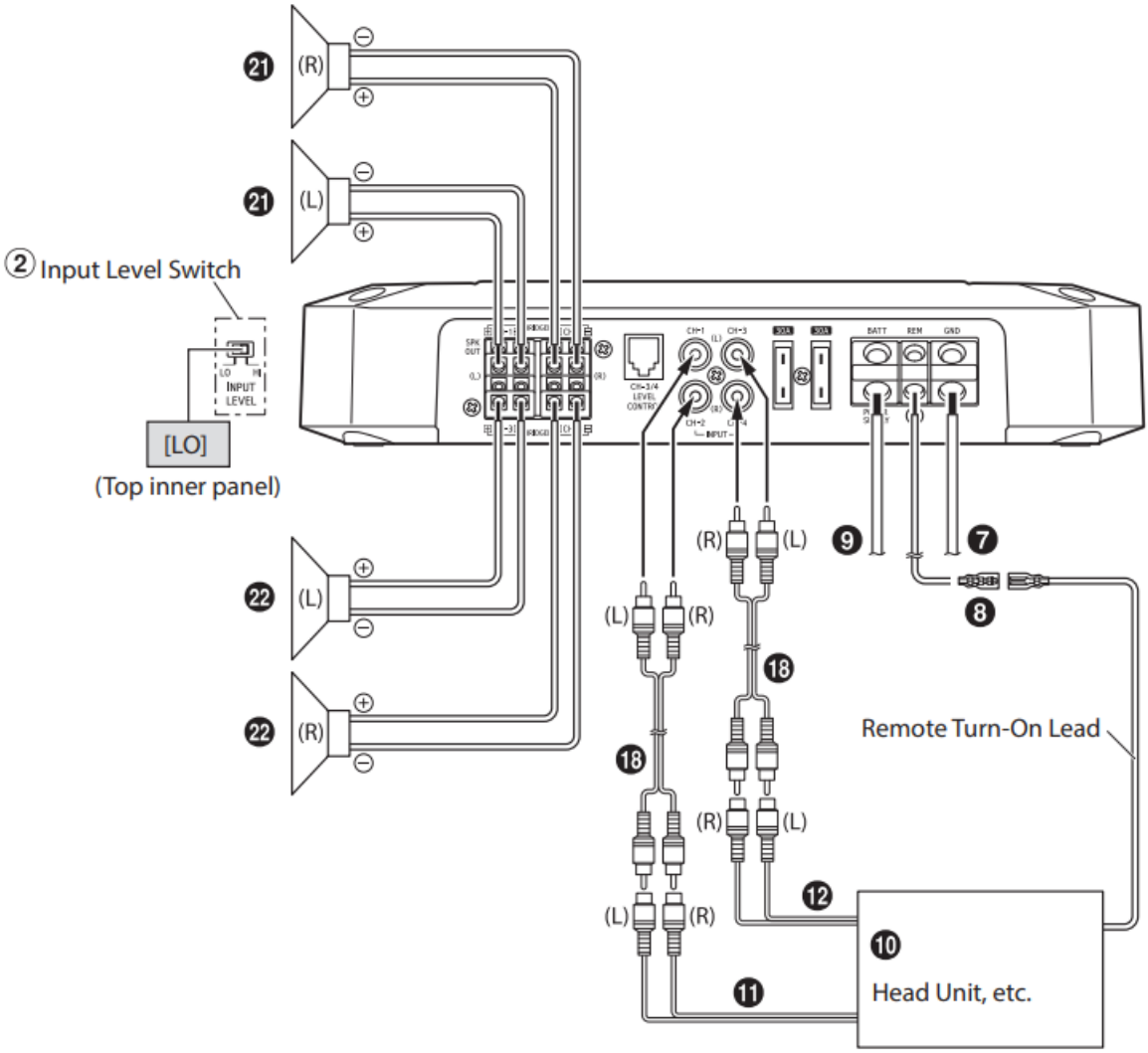
2 Speaker System (Bridged Connections)



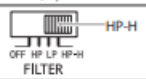
Front 2-Way System

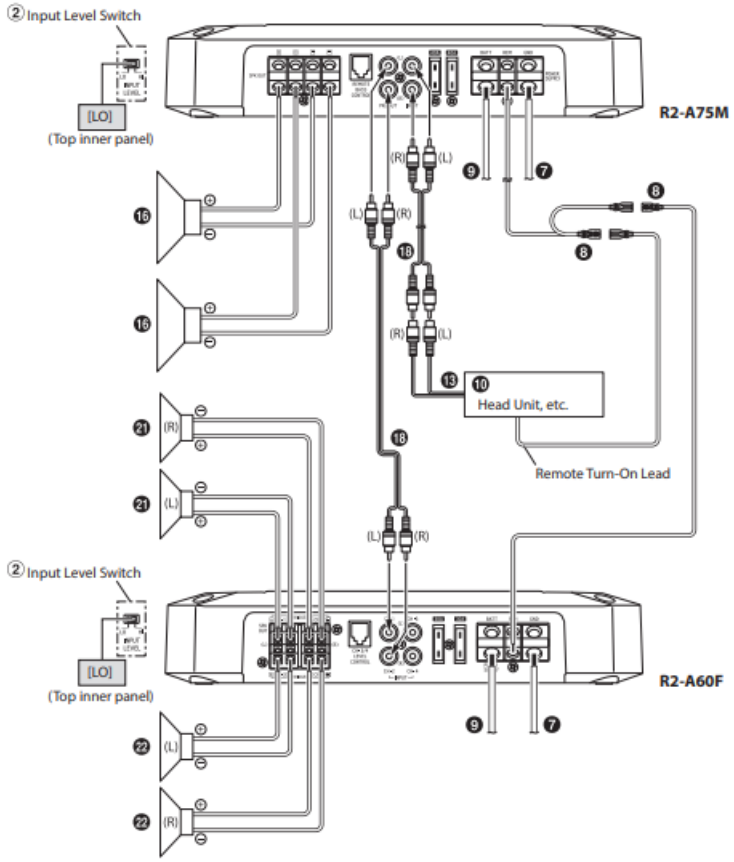
When using the Front 2-Way System, set each switch as follows.

⑦ Crossover Mode Selector Switch (CHANNEL-1/2)	⑩ Input Channel Selector Switch (CHANNEL-3/4)	⑪ Crossover Mode Selector Switch (CHANNEL-3/4)
HP-H OFF HP LP HP-H FILTER	3/4 1/2 3/4 INPUT CHANNEL	BP OFF HP LP BP FILTER



Front 2-Way + Subwoofer / 2 Amplifier System (Connection example with R2-A75M)
When using the Front 2-Way + Subwoofer / 2 Amplifier System, set each switch as follows.

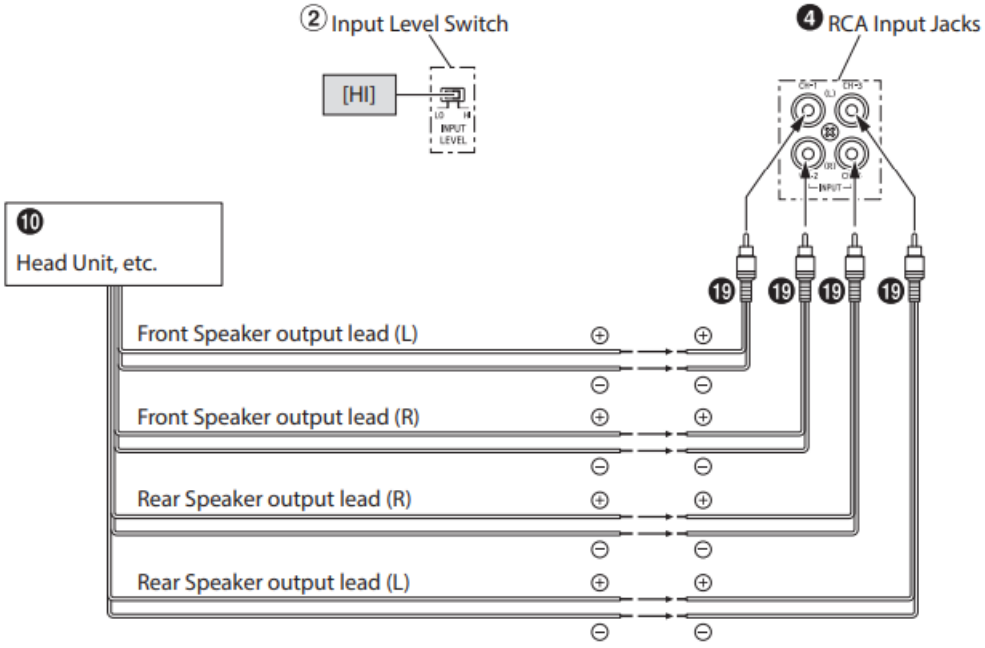
⑦ Crossover Mode Selector Switch (CHANNEL-1/2)	⑩ Input Channel Selector Switch (CHANNEL-3/4)	⑪ Crossover Mode Selector Switch (CHANNEL-3/4)
		



About Connecting to the Speaker Input Level System

When connecting by using the Speaker-RCA Conversion Cable ( ) (sold separately), switch the Input Level Switch ( ) to “HI”.

e.g. R2-A60F

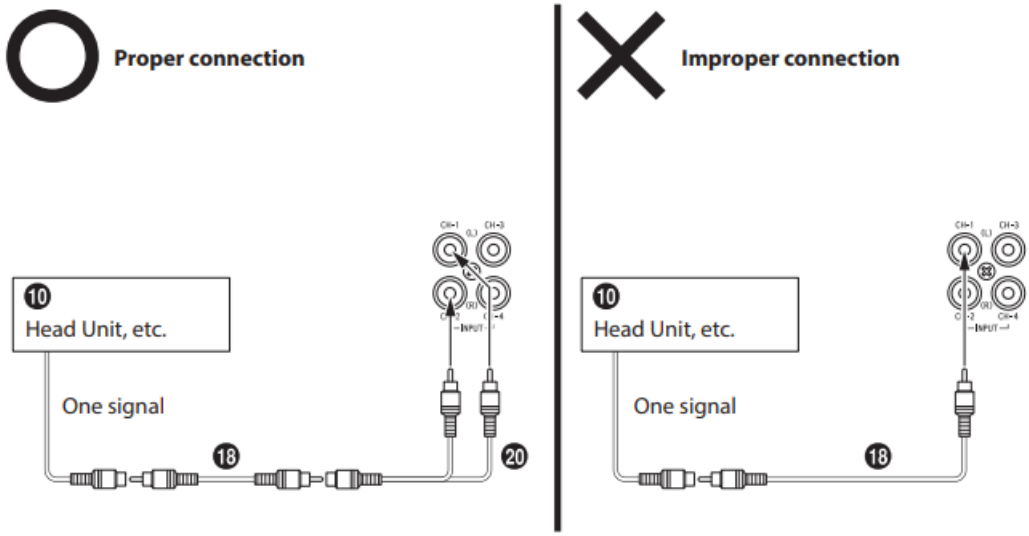


- Do not mistake the Speaker Output Lead on the head unit side connected to this unit.
- Front Speaker output (L)/(R) to CH1/CH2, Rear Speaker output (L)/(R) to CH3/CH4

- For the “Speaker Input Level System” setting, connecting the Remote Turn-On Lead is not required due to the “REMOTE SENSING” function of this product.
- However, the “REMOTE SENSING” function may not work depending on the signal source connected. In such a case, connect the Remote Turn-On Lead to an incoming power supply cord (accessory power) in the ACC position.

Important Tips on Bridging an Amplifier

- Low output will result if only one channel input is used. The Y-adapter is not required if a stereo/mono pair line output is used to drive both inputs of the bridged amp.

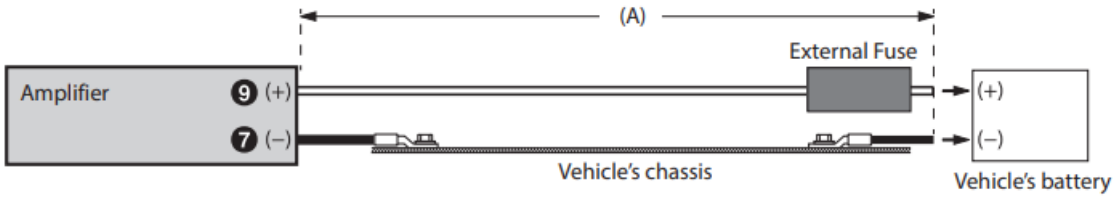


Cautions on Power Supply Wires

- Use the specified wire size according to the total fuse capacity of the amplifier to be installed and the wire length.
- For details on the wire size to be used, refer to the supplied “Cautions on Power Supply Wires Connection” and the following connection example.

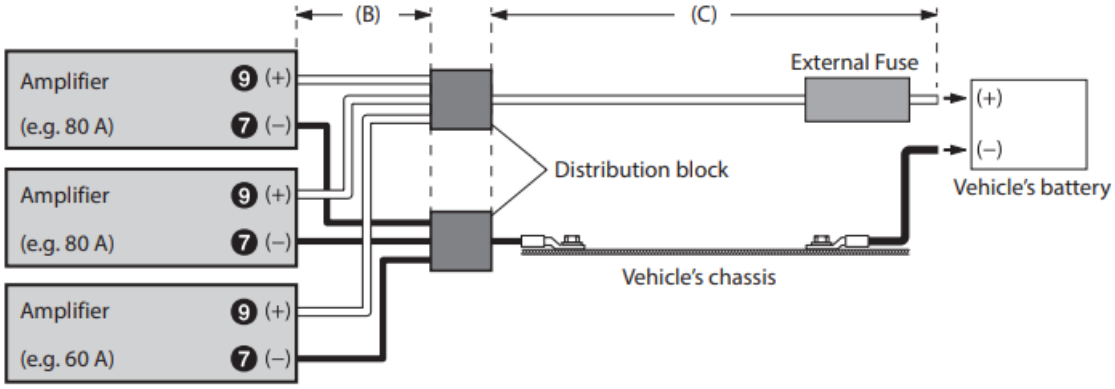
Connection example when installing an amplifier alone

- When the wire length from the amplifier to the vehicle’s battery is (A)
- Wire size used for (A): 4 AWG/21 mm2 (Max. length 8 m)
- External Fuse capacity: Make it equal to or larger than the fuse capacity of the amplifier
  - **R2-A75M:** equal to or larger than 80 A
  - **R2-A60F:** equal to or larger than 60 A



Connection example when installing two amplifiers with a fuse capacity of 80 A and one amplifier with 60 A

- When the wire length from each amplifier to the distribution block is 1 m
- Wire size used for (B): 4 AWG/21 mm2
- When the wire length from the distribution block to the vehicle's battery is 5 m
- Wire size used for (C): 1/0 AWG/53 mm2 or 4 AWG/21 mm2 x 2
- External Fuse capacity: Make it equal to or larger than the total fuse capacity of the number of amplifiers installed 80 A + 80 A + 60 A = equal to or larger than 220 A



NOTE:

- If the length of the power and ground cables exceed 1 m, or if you connect more than one amplifier, a distribution block should be used.

SPECIFICATIONS

R2-A75M

Performance		
Power Output	Per Channel, Ref.: 4 Ω, 14.4 V	500 W RMS × 1
	Per Channel, Ref.: 2 Ω, 14.4 V	750 W RMS × 1
THD+N	Ref.: 10 W into 4 Ω	≤0.04%
	Ref.: 10 W into 2 Ω	≤0.06%
	Ref.: Rated Power into 4 Ω	≤1.0%
	Ref.: Rated Power into 2 Ω	≤1.0%
S/N Ratio	IHF A-wtd + AES-17 Ref.: 1 W into 4 Ω	>75 dB
	IHF A-wtd + AES-17 Ref.: Rated Power into 4 Ω	>102 dB
Frequency Response	+0/–3 dB, Ref.: 1 W into 4 Ω	10 Hz – 400 Hz

	+0/–1 dB, Ref.: 1 W into 4 Ω	15 Hz – 325 Hz
Damping Factor	Ref.: 10 W into 4 Ω at 100 Hz	>250
Control		
Input Sensitivity	RCA Input Ref.: Rated Power into 4 Ω	Hi: 0.4 – 10 V Lo: 0.1 – 4.0 V
Crossover	Variable LPF	50 Hz – 400 Hz (–24 dB/Oct.)
	Variable Subsonic	8 Hz – 40 Hz (–24 dB/Oct.)
Equalizer	Bass EQ (fc=50 Hz)	0 to +12 dB (Variable)
Remote Level*	Linear Attenuation	0 to –20 dB
General		
Input Impedance		>10 kΩ
Preamp Output	CH-1/2 Input Pass-through, Buffered	4 V max
Dimensions	Width	282 mm (11-1/8”)
	Height	55 mm (2-3/16”)
	Depth	165 mm (6-1/2”)
Weight		3.5 kg (7 lb 10 oz)

- Requires optional RUX-KNOB.2.

NOTE:

- Specifications and design are subject to change without notice.

R2-A60F

Performance		
Power Output	Per Channel, Ref.: 4 Ω, 14.4 V	100 W RMS × 4
	Per Channel, Ref.: 2 Ω, 14.4 V	150 W RMS × 4
	Bridged, Ref.: 4 Ω, 14.4 V	300 W RMS × 2

THD+N	Ref.: 10 W into 4 Ω	≤0.04%	
	Ref.: 10 W into 2 Ω	≤0.06%	
	Ref.: Rated Power into 4 Ω	≤0.5%	
	Ref.: Rated Power into 2 Ω	≤1.0%	
S/N Ratio	IHF A-wtd + AES-17 Ref.: 1 W into 4 Ω	>80 dB	
	IHF A-wtd + AES-17 Ref.: Rated Power into 4 Ω	>100 dB	
Frequency Response	+0/–3 dB, Ref.: 1 W into 4 Ω	10 Hz – 45 kHz	
	+0/–1 dB, Ref.: 1 W into 4 Ω	20 Hz – 20 kHz	
Damping Factor	Ref.: 10 W into 4 Ω at 100 Hz	>100	
Control			
Input Select	Selectable Input Signal Configuration (2ch/4ch Input)	CH-3/4: CH-1/2 or CH-3/4	
Input Sensitivity	RCA Input Ref.: Rated Power into 4 Ω	Hi: 0.5 – 10 V Lo: 0.2 – 4.0 V	
Crossover	Variable HPF/LPF/HPF-H	CH-1/2	HPF/LPF: 50 Hz – 400 Hz (–12 dB/oct.)
			HPF-H: 400 Hz – 6 kHz
	Variable HPF/LPF/BPF	CH-3/4	HPF/LPF/BPF-L: 50 Hz – 400 Hz
			BPF-H: 400 Hz – 6 kHz (–12 dB/oct.)

Remote Level*	Linear Attenuation	CH-3/4: 0 to –20 dB
General		
Input Impedance		>10 kΩ
Dimensions	Width	282 mm (11-1/8”)
	Height	55 mm (2-3/16”)
	Depth	165 mm (6-1/2”)
Weight		3.3 kg (7 lb 3 oz)

- Requires optional RUX-KNOB.2.

NOTE:

- Specifications and design are subject to change without notice.

To customers

- Information on Disposal of Old Electrical and Electronic Equipment and Battery (applicable for countries that have adopted spearate waste collection systems) If you want to dispose of this product, do not mix it with general household waste.
- There is a separate collections system for used electronic products per legislation that requires proper treatment, recovery, and recycling. Contact your local authority for details on locating a recycling facility nearest to you.
- Proper recycling and waste disposal will help conserve resources whist preventing detrimental effects on our health and the environment.

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- 68-44781Z33-B (Y-A5)

Please read before using this equipment.

Documents / Resources

	ALPINE R2-A75M R-Series Class D Car Amplifier [pdf] Owner's Manual R2-A75M R-Series Class D Car Amplifier, R2-A75M, R-Series Class D Car Amplifier, Class D Car Amplifier, Car Amplifier, Amplifier

References

- Alpine.com - Alpine Europe
- User Manual