NEMESIS AUDIO

# AMPLIFIER
# OWNER'S MANUAL




## Models:

**FR-M1200.1D / FR-M1800.1D / FR-M3000.1D**
**FR-M5000.1D / FR-M8000.1D / FR-M1900.5D**
**FR-M800.4D / FR-M1200.4D / FR-M2200.4D**

Designed in U.S/www.nemesisaudio.com

## BEFORE YOU START

Thank you for choosing a **Nemesis Audio FR-M** series amplifier. Your purchase reflects a desire for high-quality audio reproduction and dependable performance.
Nemesis Audio products are built to provide years of reliable service when installed and operated properly.
This manual has been prepared to help you get the best performance from your new amplifier. Please take a few minutes to read through the instructions before beginning installation.
Following the recommended setup and installation procedures will help ensure proper operation and long-term reliability.If, after reading this manual, you have questions about installation or operation, please contact your authorized Nemesis Audio dealer for assistance. Their expertise can help you get the most from your system.
With Nemesis Audio, you are headed in the right direction.

## INTRODUCTION

The Nemesis Audio FR-M amplifier series offers high-output performance and flexible installation options for a wide range of audio systems. These amplifiers are engineered with advanced crossover controls, variable input sensitivity, and multiple protection circuits to deliver strong, consistent performance.
Key features include 12 dB per octave crossover slopes, selectable high-pass, low-pass, and full-range operation, and adjustable bass boost on select mono models. These controls allow the amplifier to be tuned to match your speakers, enclosure, and listening preferences.
Each amplifier is equipped with built-in protection circuitry for thermal overload, short circuit, low voltage, high voltage, and reverse polarity conditions. These features help protect both the amplifier and your system during operation.

## INSTALLATION

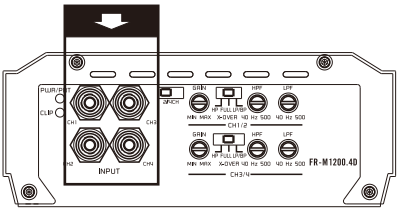
Professional installation by an authorized Nemesis Audio dealer is strongly recommended. Proper installation will help ensure optimal performance, reliability, and safety. If you choose to install the amplifier yourself, read this manual carefully before beginning and follow all instructions closely.
Improper installation may result in poor performance, damage to the amplifier, or voiding of the warranty. Always use the proper tools, wiring, and fusing for your application. Mount the amplifier securely in a location with adequate ventilation, and never mount it where it may be exposed to moisture, excessive heat, or physical damage.
Inspect the proposed mounting area carefully before drilling or cutting. Avoid fuel lines, brake lines, hydraulic lines, factory wiring, and other critical vehicle components.

## INPUT CONFIGURATION

Before mounting the amplifier, inspect the installation area carefully to ensure that no vehicle components will be damaged during installation.

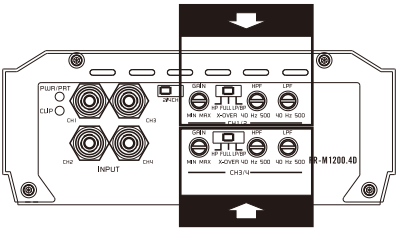
Because head units and source units can vary widely in output voltage, all Nemesis Audio NA-X amplifiers include adjustable input sensitivity. This control allows the amplifier to match the signal level coming from your source unit.
It is important to understand that the input sensitivity control is not a volume control. It is used to match the amplifier to the source unit for proper operation. A higher gain setting does not always mean better performance. In fact, setting the gain too high can increase noise, distortion, and stress on the vehicle's electrical system. For best results, use the lowest gain setting necessary to achieve clean output.

There is no single "correct" gain setting for every system. Speaker type, power handling, source unit output, and enclosure design all affect the final setting. Take your time and adjust the amplifier carefully for the cleanest sound possible.



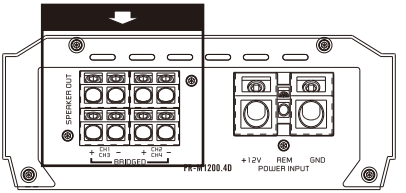
## CROSSOVER CONTROLS

A crossover is a circuit that removes unwanted frequencies from reaching a speaker or amplifier channel. Proper crossover settings are essential for good sound quality and speaker protection.
For example, midrange and high-frequency speakers can be damaged by excessive bass if low frequencies are not filtered out. Likewise, a subwoofer will not sound natural if it is asked to reproduce too much midrange information.
Use the crossover controls to send the correct frequency range to each speaker. Proper adjustment will improve clarity, reduce distortion, and help create a balanced system response without unwanted gaps or overlap in sound.



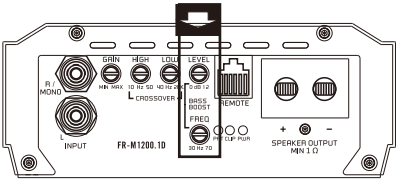

## SPEAKER OUTPUTS

This amplifier is designed to drive multiple speaker configurations, depending on the model and application. Use properly sized speaker wire and make all connections carefully and securely.
Strip the wire ends cleanly and fully insert them into the terminal openings. Tighten the terminal screws firmly, making sure that no loose or frayed wire strands are exposed. Loose strands may cause a short circuit and place the amplifier into protection mode.
Always verify the total speaker impedance before making any connections. Operating the amplifier below its rated load may cause overheating, shutdown, or permanent damage. Know your total ohm load before powering the system.




## BASS BOOST AND CONT

Selected Nemesis Audio mono amplifiers include an adjustable bass boost feature that allows you to enhance low-frequency output at a chosen frequency.
If your system already provides the bass response you want, additional bass boost may not be necessary.
Excessive bass boost can increase distortion, reduce sound quality, and place unnecessary strain on both the amplifier and the speakers.




Begin with the bass boost set to minimum. Then adjust the bass boost frequency and level slowly while listening carefully. Use only the amount needed to achieve the desired response.
If more bass is needed than the system can produce cleanly, consider improving the enclosure design, subwoofer placement, or overall system tuning rather than relying heavily on bass boost.

## INSTALLATION INSTRUCTIONS

1. Disconnect the negative battery terminal before beginning installation. Tape or cover the terminal to prevent accidental contact.

2. Run a power wire from the battery to the amplifier location. Plan this route carefully and avoid areas where the wire could be pinched, damaged, or exposed to excessive heat.

3. Connect the power wire to the battery using an inline fuse or circuit breaker located close to the battery. Leave the fuse out until the installation is complete.

4. Find a clean, solid metal grounding point close to the amplifier. Remove any paint or coating so the ground connection makes direct contact with bare metal.

5. Keep the ground wire as short as possible. A poor ground connection can cause noise, low output, or amplifier malfunction.

6. Mount the amplifier securely in a location with adequate airflow. Do not mount the amplifier upside down or in a location with excessive heat or moisture.

7. Route RCA cables away from power wires whenever possible to reduce the chance of noise entering the system.

8. Connect the remote turn-on wire from the head unit to the amplifier remote terminal.

9. Connect the RCA signal cables to the amplifier inputs.

10. Connect the speaker wires to the amplifier, making sure polarity and impedance are correct.

11. Recheck all wiring connections before inserting the main fuse at the battery.

12. Insert the fuse at the battery and reconnect the negative battery terminal.

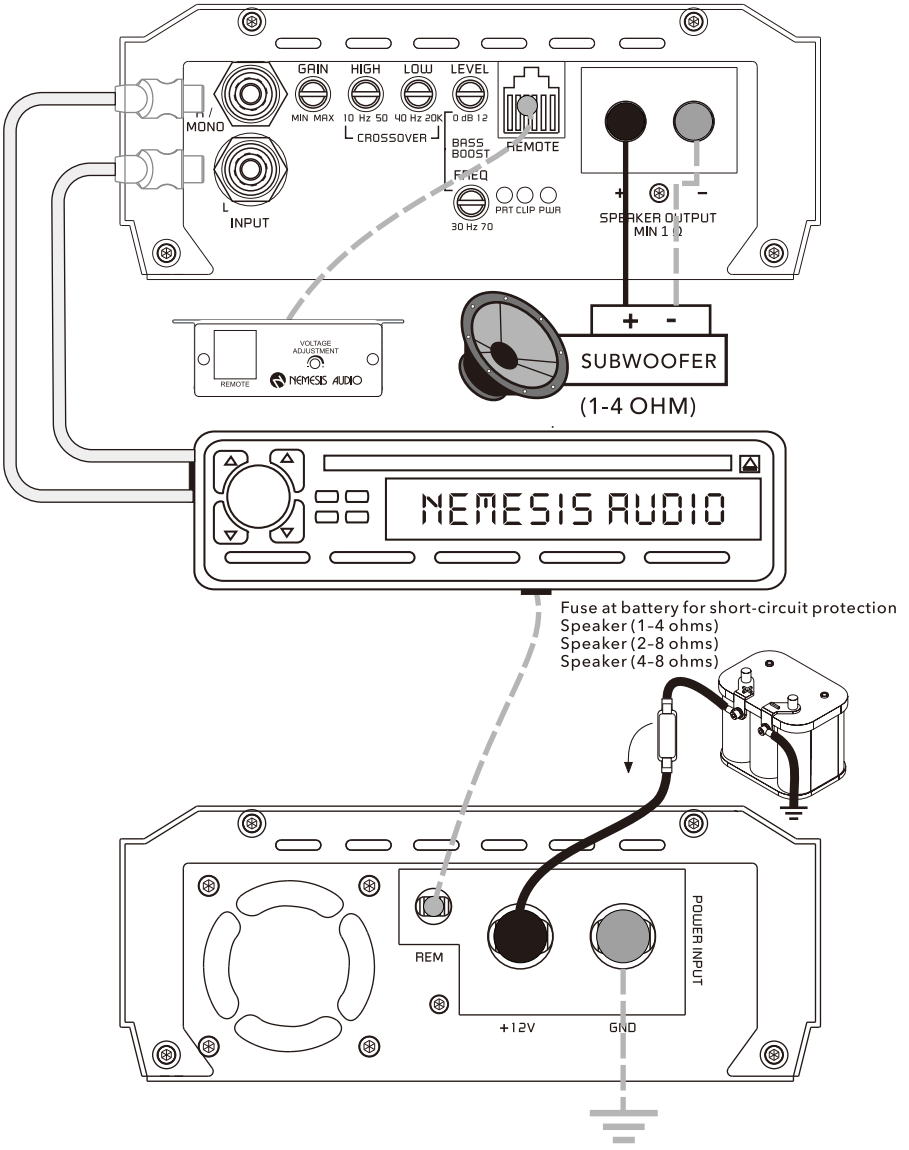
13. Turn the system on and verify that the amplifier powers up correctly. Check all controls and settings before playing the system at high volume.

14. Adjust crossover, gain, and bass boost settings carefully. Make only one adjustment at a time and listen for clean, undistorted output.

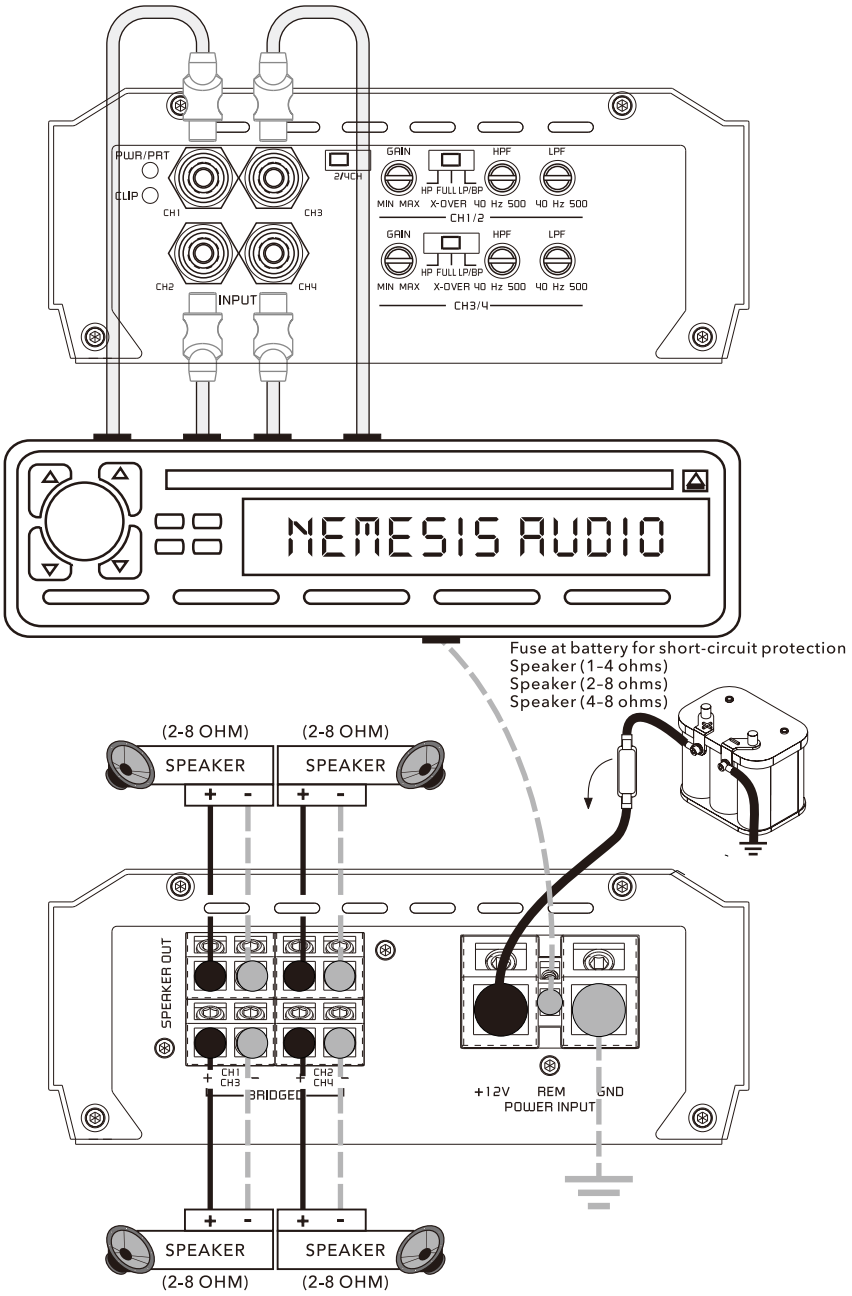
15. After setup is complete, recheck the charging system voltage and confirm that all wiring is secure.

That's it. Your amplifier is now ready for operation.

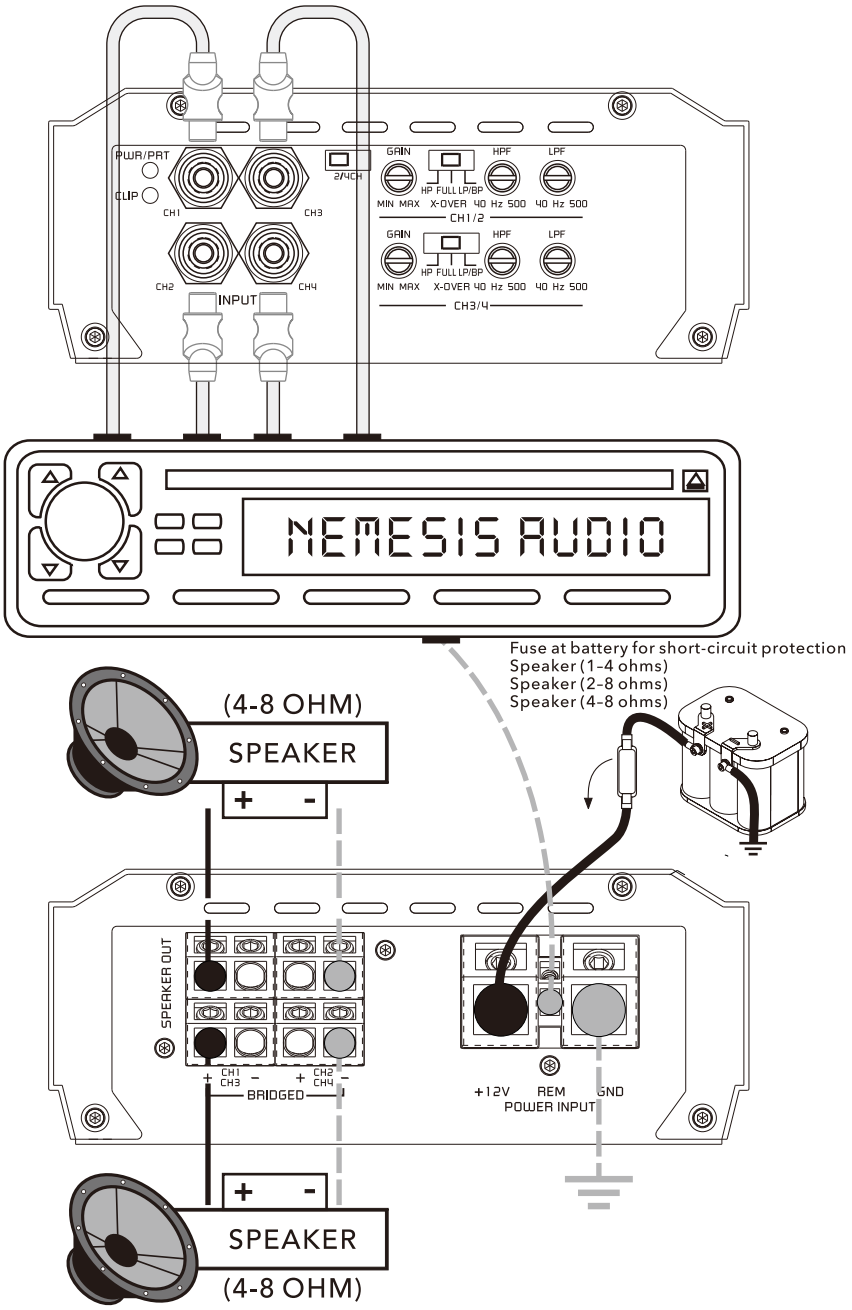
## NORMAL INSTALLATION ( FR-M1200.1D / FR-M1800.1D / FR-M3000.1D/FR-M5000.1D / FR-M8000.1D)



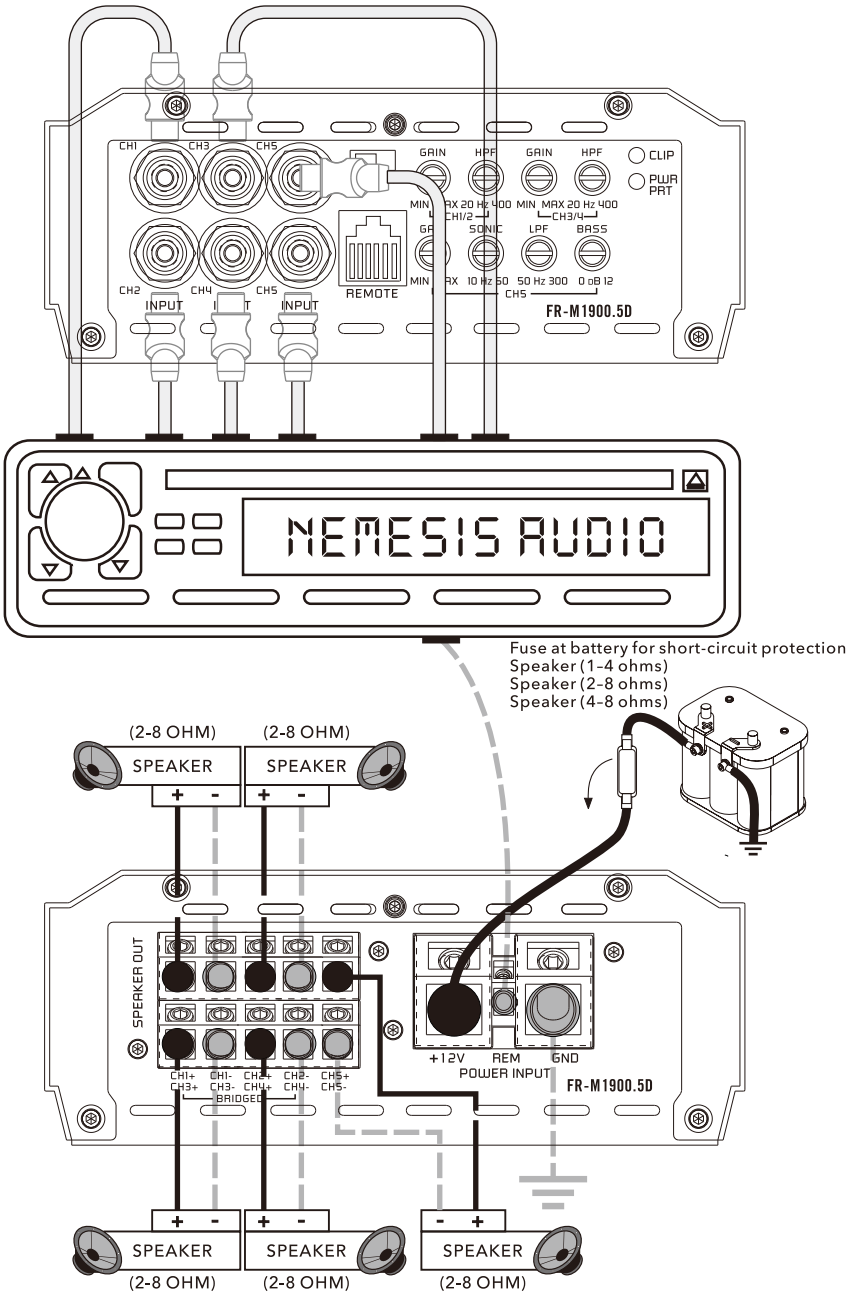
## NORMAL INSTALLATION (FR-M800.4D / FR-M1200.4D / FR-M2200.4D)



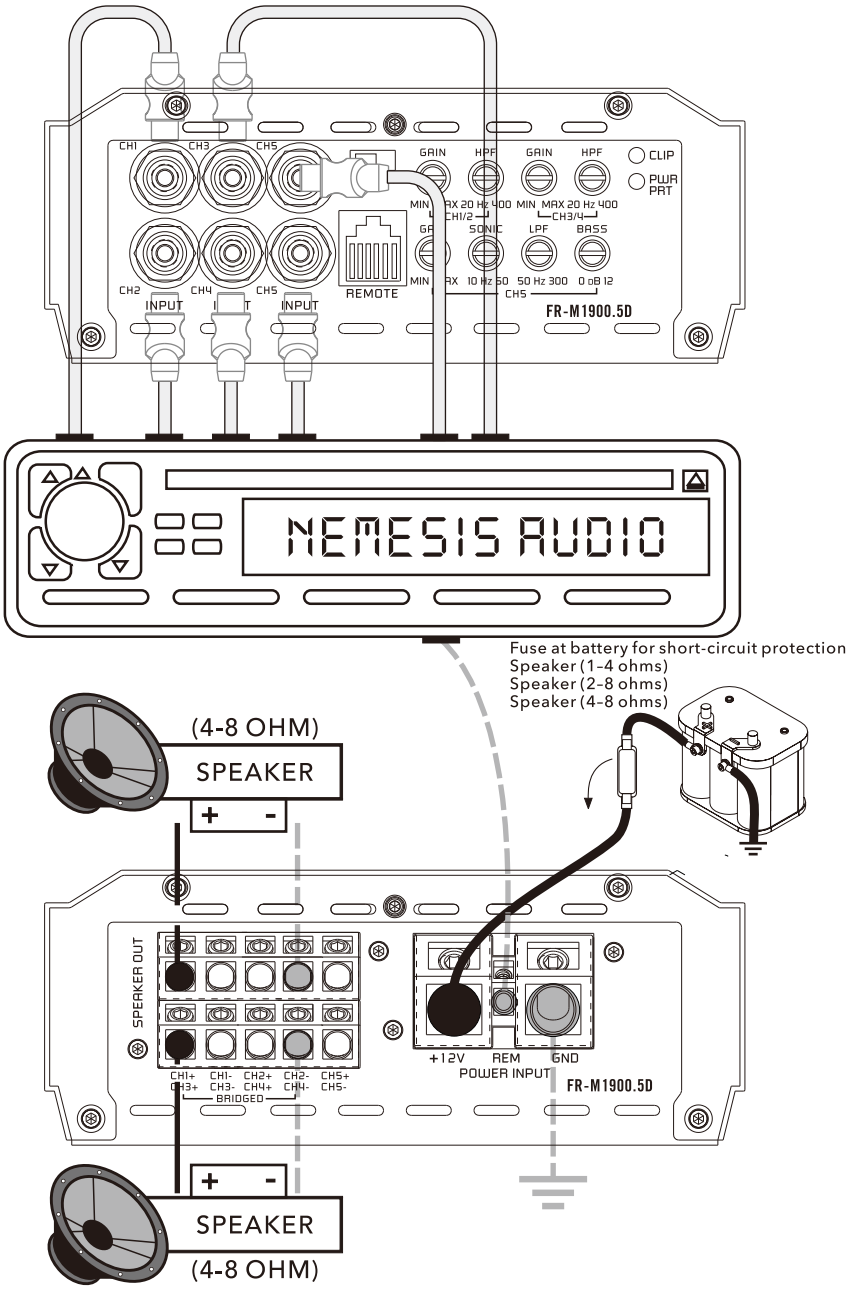
## BRIDGE INSTALLATION (FR-M800.4D / FR-M1200.4D / FR-M2200.4D)



## NORMAL INSTALLATION (FR-M1900.5D)



## BRIDGE INSTALLATION (FR-M1900.5D)



## FEATURES

- IRS(International Rectifier) Class-D Topology
- Compact Size footprint for easy installation of Many Applications
- Variable Full Crossover Filter: LPF / FULL / HPF
- Surface Mount Component Technology
- Audio Precision Quality Control Verification
- Stable&Reliable Four Layers PCB Trace Layout
- Power & Protection Led Lights Status Indicator
- Short, Thermal,DC, Overload and Voltage Protections
- LCD Monitor Bass Knob Controller(Except FR-M800.4D/1200.4D/2200.4D )
- High Gloss CNC Machined Engraved "NEMESIS AUDIO" Logo and Glowing Up N Symbol Logo

## SPECIFICATIONS

| MODEL NO. | FR-M1200.1D | FR-M1800.1D | FR-M3000.1D | FR-M5000.1D | FR-M8000.1D |
|---|---|---|---|---|---|
| Circuit Topology | Mono Block Class-D | Mono Block Class-D | Mono Block Class-D | Mono Block Class-D | Mono Block Class-D |
| RMS POWER OUTPUT AT 1 Ω | 1280Wx1CH | 1870Wx1CH | 3090Wx1CH | 5100Wx1CH | 8050Wx1CH |
| RMS POWER OUTPUT AT 2 Ω | 800Wx1CH | 1050Wx1CH | 2070Wx1CH | 2800Wx1CH | 4400Wx1CH |
| RMS POWER OUTPUT AT 4 Ω | 430Wx1CH | 510Wx1CH | 1020Wx1CH | 1500Wx1CH | 2200Wx1CH |
| RMS POWER OUTPUT AT 4 Ω BRIDGED | N/A | N/A | N/A | N/A | N/A |
| TOTAL HARMONIC DISTORTION | <0.3% | <0.3% | <0.3% | <0.3% | <0.4% |
| S/N RATIO REF 1W AT 4Ω | >90dB | >90dB | >90dB | >90dB | >90dB |
| GAIN RANGE | 0.4-4V | 0.4-4V | 0.4-4V | 0.4-4V | 0.4-4V |
| PER OCTAVE SLOPES | 12dB | 12dB | 12dB | 12dB | 12dB |
| COOLING FAN | N/A | N/A | YES | YES | YES |
| CROSSOVER RANGE | 10-20KHz | 10-20KHz | 10-20KHz | 10-20KHz | 10-20KHz |
| OPERATION FREQUENCY RANGE | 40-20KHz | 40-20KHz | 40-20KHz | 40-20KHz | 40-20KHz |
| INPUT MODE | N/A | N/A | N/A | N/A | N/A |
| BASS BOOST | 0-12dB | 0-12dB | 0-12dB | 0-12dB | 0-12dB |
| BASS KNOB | INCLUDED | INCLUDED | INCLUDED | INCLUDED | INCLUDED |
| DIMENSIONS(MM) | 182x140x55 | 201x140x55 | 258x140x55 | 307x140x55 | 386.5x140x55 |
| DIMENSIONS( IN ) | 7.17x5.51x2.17 | 7.91x5.51x2.17 | 10.16x5.51x2.17 | 12.09x5.51x2.17 | 15.22x5.51x2.17 |

## SPECIFICATIONS

| MODEL NO. | FR-M800.4D | FR-M1200.4D | FR-M2200.4D | FR-M1900.5D |
|---|---|---|---|---|
| Circuit Topology | Full Range Class-D | Full Range Class-D | Full Range Class-D | Full Range Class-D |
| RMS POWER OUTPUT AT 1 Ω | N/A | N/A | N/A | NA+1060Wx1CH |
| RMS POWER OUTPUT AT 2 Ω | 210Wx4CH | 300Wx4CH | 540Wx4CH | 250Wx4CH+720Wx1CH |
| RMS POWER OUTPUT AT 4 Ω | 130Wx4CH | 180Wx4CH | 350Wx4CH | 150Wx4CH+400Wx1CH |
| RMS POWER OUTPUT AT 4 Ω BRIDGED | 400Wx2CH | 600Wx2CH | 1080Wx2CH | 530Wx2CH |
| TOTAL HARMONIC DISTORTION | <0.2% | <0.2% | <0.2% | <0.2% |
| S/N RATIO REF 1W AT 4Ω | >90dB | >90dB | >90dB | >90dB |
| GAIN RANGE | 0.36-7.5V | 0.36-7.5V | 0.36-7.5V | 0.36-7.5V |
| PER OCTAVE SLOPES | 12dB | 12dB | 12dB | 12dB |
| COOLING FAN | N/A | N/A | N/A | N/A |
| CROSSOVER RANGE | 10-30KHz | 10-30KHz | 10-30KHz | CH1-CH4 10-30KHz<br>CH5 10-300Hz |
| OPERATION FREQUENCY RANGE | 40-500Hz | 40-500Hz | 40-500Hz | 20-400Hz |
| INPUT MODE | 2CH/4CH | 2CH/4CH | 2CH/4CH | 4CH/5CH |
| BASS BOOST | N/A | N/A | N/A | 0-12dB |
| BASS KNOB | OPTIONAL | OPTIONAL | OPTIONAL | OPTIONAL |
| DIMENSIONS(MM) | 168x140x55 | 209x140x55 | 242x140x55 | 295x140x55 |
| DIMENSIONS( IN ) | 6.16x5.51x2.17 | 8.23x5.51x2.17 | 9.53x5.51x2.17 | 11.61x5.51x2.17 |

## WARRANTY

**Should your amplifier require service,** please contact the authorized dealer from whom it was purchased, or contact **Nemesis Audio** directly.
Do not return your amplifier directly to us without first obtaining a Return Authorization Number. Units received without an authorized Return Authorization Number will not be processed.
To obtain warranty service, you must include a copy of your original purchase receipt showing the date of purchase and the authorized dealer's information.
Warranty coverage applies only to the original purchaser and only to products purch ased through an authorized dealer.
Units received without proof of purchase may be subject to non-warranty service charges. If a unit is received without the required documentation, it may be held for up to 30 days while we attempt to contact you. After 30 days, unclaimed units may be returned.

NEMESIS AUDIO

Copyright ©**2026** Nemesis Audio.