DAYTON AUDIO

# MA SERIES

## Installation Amplifiers
## Product Manual

MA880 | MA1280

1. Read these instructions.
2. Follow these instructions.
3. Comply with all warnings.
4. Follow all instructions.
5. Do not use this device near water.
6. Use only a dry cloth for cleaning.
7. Do not block the ventilation holes.
   Install according to the manufacturer's instructions.
8. Do not install it near heat sources such as radiators, sockets, stoves, or other devices that generate heat (including amplifiers).
9. Do not bypass the safety device of the polarized plug. The polarized plug has two blades, one not wider than the other. Providing large blades is for our safety. If the provided plug is not suitable for your socket, please consult an electrician to replace the outdated socket.
10. Protect the power cord, especially the plug, socket, and point of removal from the device, to prevent stepping on or pinching the power cord.
11. Use only accessories specified by the manufacturer.
12. Remove this device during thunderstorms or prolonged periods of inactivity.
13. Repairs and maintenance shall be carried out by qualified service personnel. When the device is damaged by any of the following types, it must be repaired: power cord or plug damage, liquid overflow or falling into the device, device exposure to rainwater or moisture, malfunction or falling.
14. Bare fire sources, such as illuminated candles, should not be placed on the device.
15. Warning: To reduce the risk of fire or electric shock, do not expose this device to rain or moisture. The device shall not be exposed to dripping or splashing, and objects filled with liquid, such as vases, shall not be placed on the device.
16. Warning: The main plug/device coupler is used as a disconnecting device, and the disconnecting device should be kept operable at any time.
17. Properly handle this product. This mark indicates that the product should not be disposed of together with other house hold waste across the European Union. In order to prevent potential harm to the environment or human health caused by uncontrolled waste disposal, responsible recycling of waste should be carried out to promote the sustainable reuse of material resources. To return the product, please use the return andpayment system or contact the retailer who puchased the product. They can use this product for environmentally safe recycling.
18. The product must be used on an open workbench.
19. Operate the product under the following conditions: Temperature ranging from 0 to 40°C (32 to 104°F), and at altitudes below 5,000m (16,400 feet).


**FCC Statement**
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(a) This device may not cause harmful interference. (b) This device must accept any interference received, including interference that may cause undesired operation.

**NOTE 1:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

• Reorient or relocate the receiving antenna.
• Increase the separation between the equipment and receiver.
• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
• Consult the dealer or an experienced radio/TV technician for help.

**NOTE 2:** Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :
(1) l'appareil ne doit pas produire de brouillage, et
(2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

# Welcome

Thank you for purchasing a Dayton Audio MA Series amplifier. We appreciate your choice and are confident that your new amplifier will deliver reliable, high-quality audio performance for years to come.

The Dayton Audio MA Series installation amplifiers are designed to make whole-home or commercial audio distribution simple and efficient. With 8 or 12 channels of clean Class D power, flexible input routing, and independent channel gain control, they offer a powerful and adaptable solution for any multi-room audio setup.

Installation is straightforward, with clearly labeled RCA inputs and Phoenix-style speaker terminals that ensure quick, secure connections for a hassle-free setup. Built-in auto-on signal sensing and 12V trigger inputs for each zone allow for seamless integration with smart control systems or traditional setups—no complex programming required.

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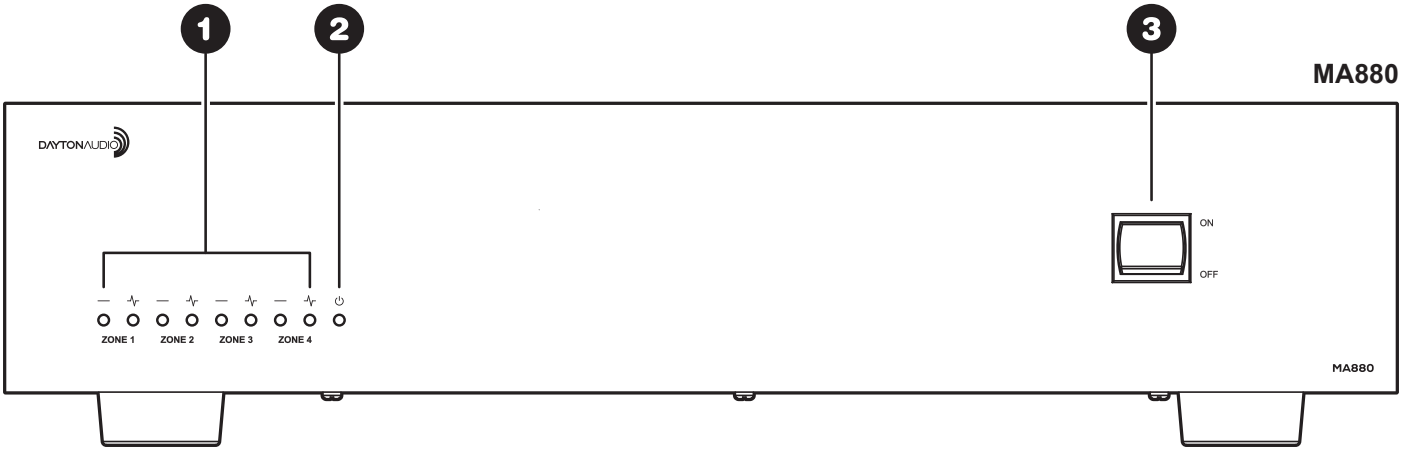
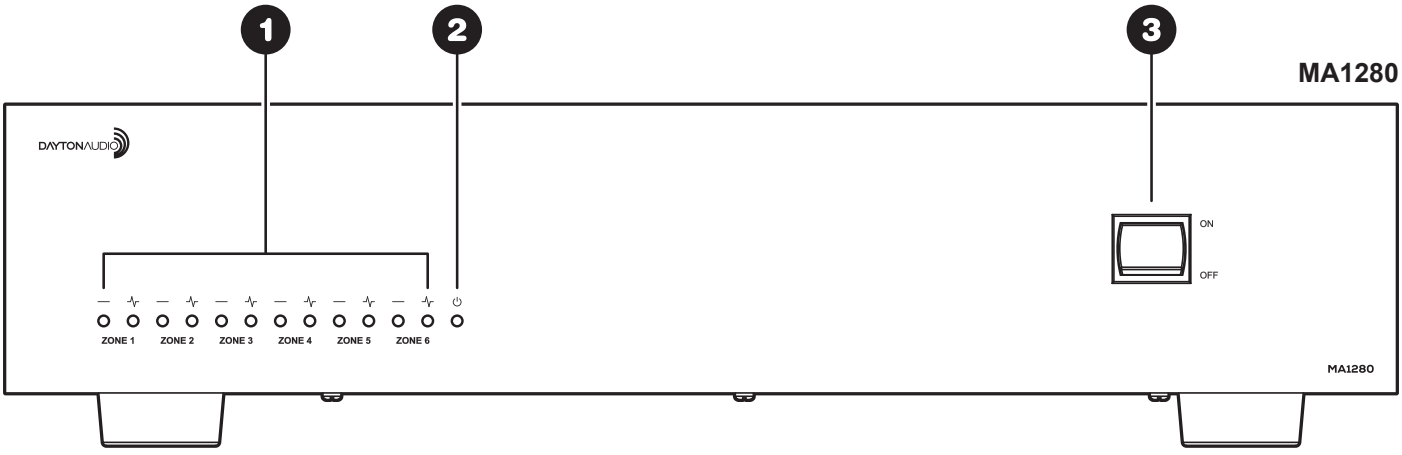
# Panels and Controls

## Front Panel – MA880 | MA1280

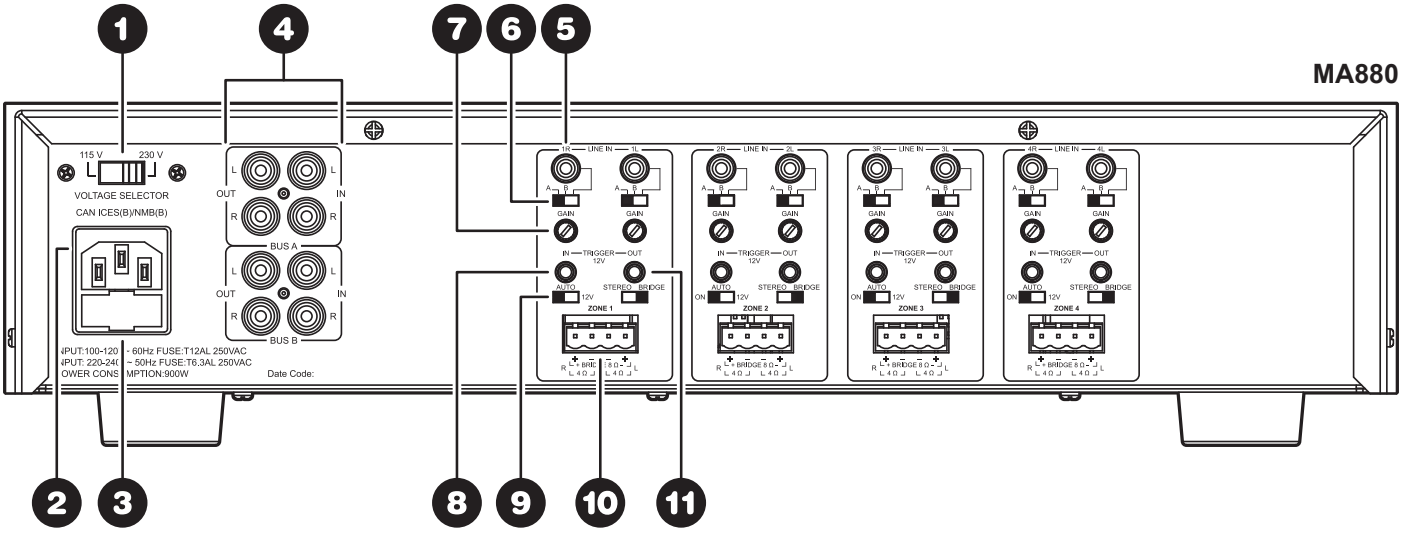


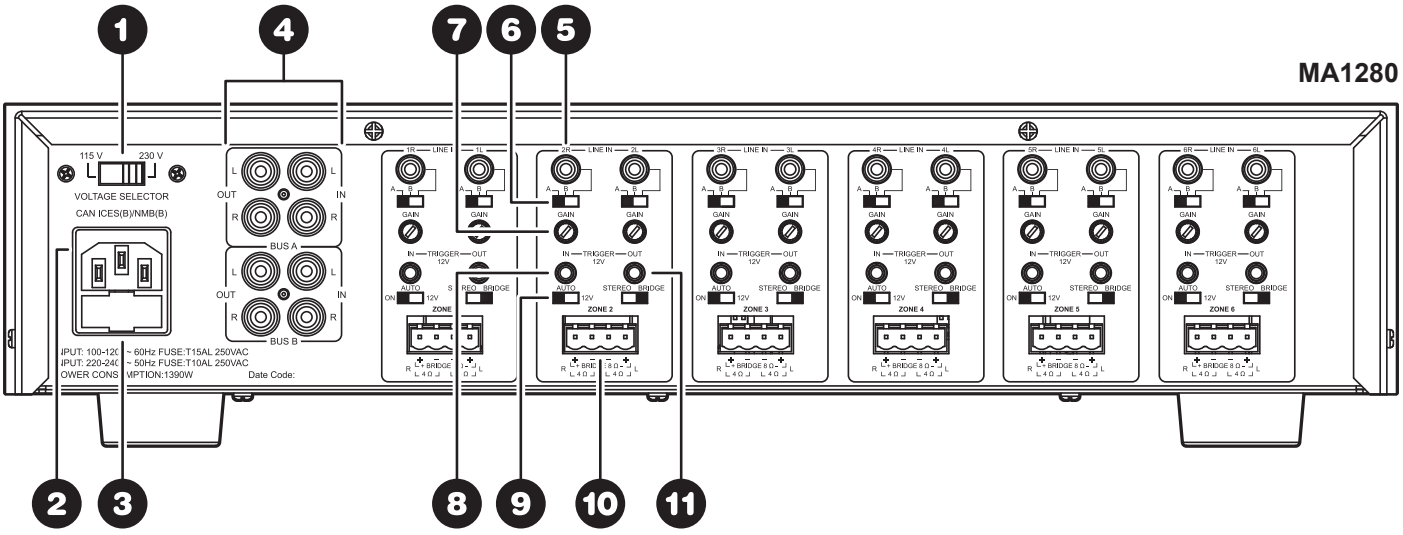




1. **Zone Input LEDs**
2. **Main Power LED**
3. **Main Power Switch**

# Panels and Controls

## Rear Panel – MA880 | MA1280

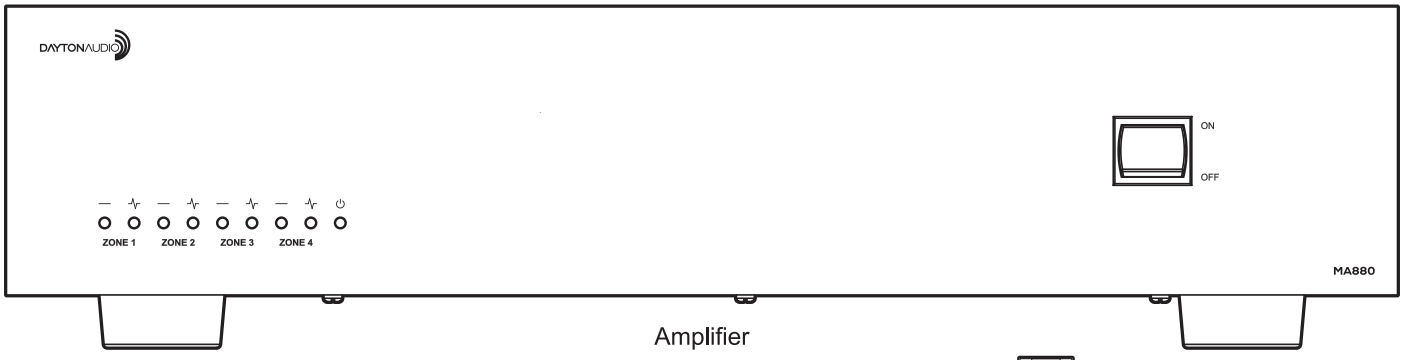


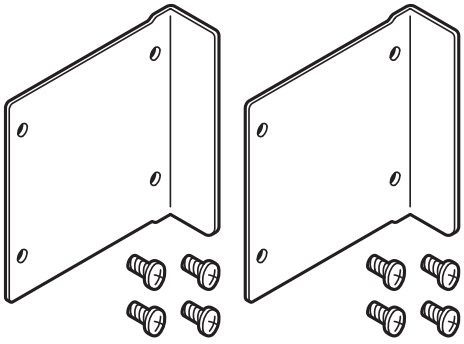

1. **Voltage Input Select**
2. **AC Power Input**
3. **Fuse Holder**
4. **RCA Bus Audio Input/ Output**
5. **RCA Channel Audio Input**
6. **Channel Input Select**
7. **Channel Volume Control**
8. **12V Trigger Input**
9. **Auto On Select Switch**
10. **Amplified Zone Output**
11. **12V Trigger Output**

# What's in The Box

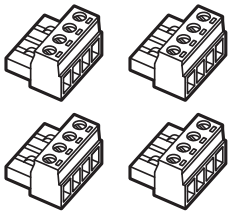
**MA880 or MA1280 Amplifier**



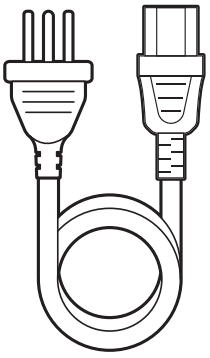

Amplifier



Rack Mounting Hardware



Phoenix Connectors
4x - MA880
6x - MA1280



AC Power Cord


This Manual

# Unpacking

Please unpack the amplifier and carefully examine it for any potential damage that may have occurred during shipping. If damage is discovered, it is important to inform the shipping company promptly.

While Dayton Audio is available and willing to assist as necessary, only the recipient can initiate a claim for any shipping-related damage. If the product shows visible signs of damage upon arrival, be sure to retain the shipping carton for the shipper's inspection.

It is strongly advised to keep all packing materials, as they may be useful in the future if the amplifier ever needs to be transported or stored. Never attempt to ship an amplifier without the original factory carton and the accompanying packing materials.

**CAUTION:** Disconnect the amplifier from any power source before beginning installation.

1. Power off the amplifier and disconnect all cables before installation.
2. Attach the included rack ears to the amplifier chassis using the provided screws.
3. Secure the amplifier to the rack rails using appropriate rack screws.

# Rack Mount Installation

MA Series Amplifiers can be easily mounted in a standard 19” equipment rack with the included rack mount kit.

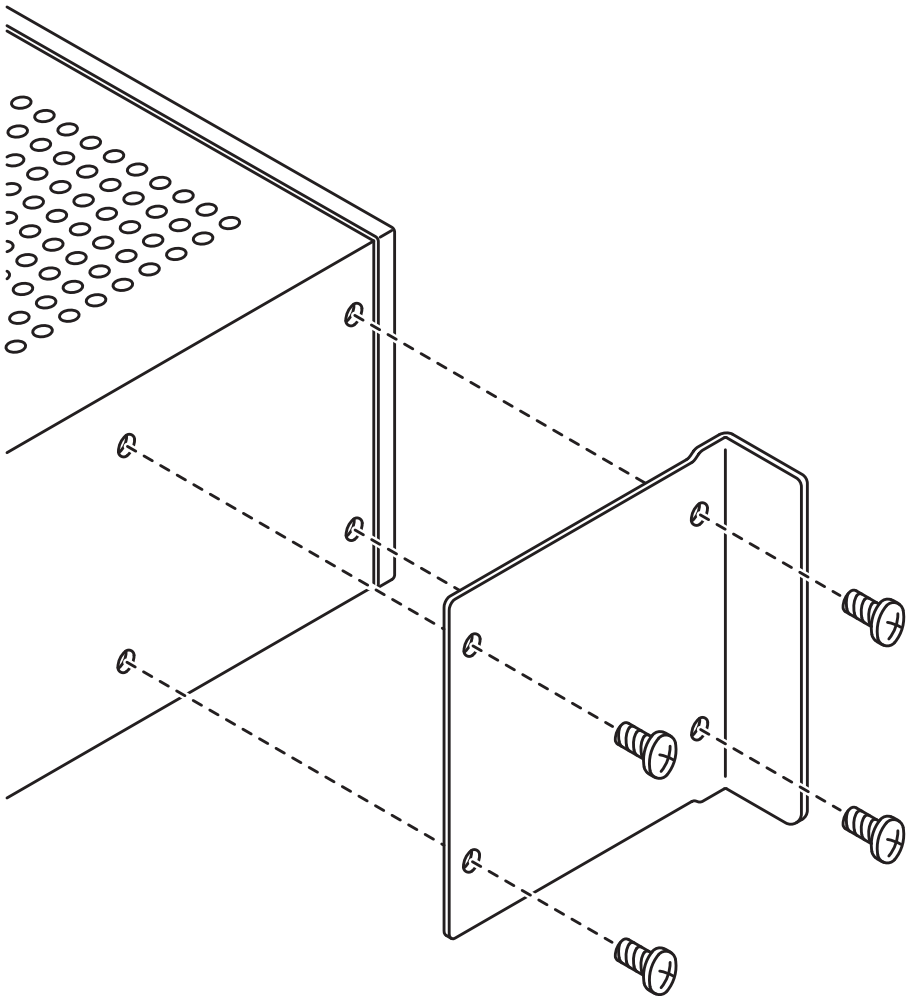
## Rack Mount Kit Contents:

(2) Rack ears

(8) Screws to attach ears to amplifier chassis

**NOTE:** Rack rail screws are not included and must be supplied by the installer.

The screws included in the rack mount kit are longer than the screws preinstalled in the side of the amplifier. Remove the preinstalled screws and use only the screws from the rack kit for mounting the rack ears.

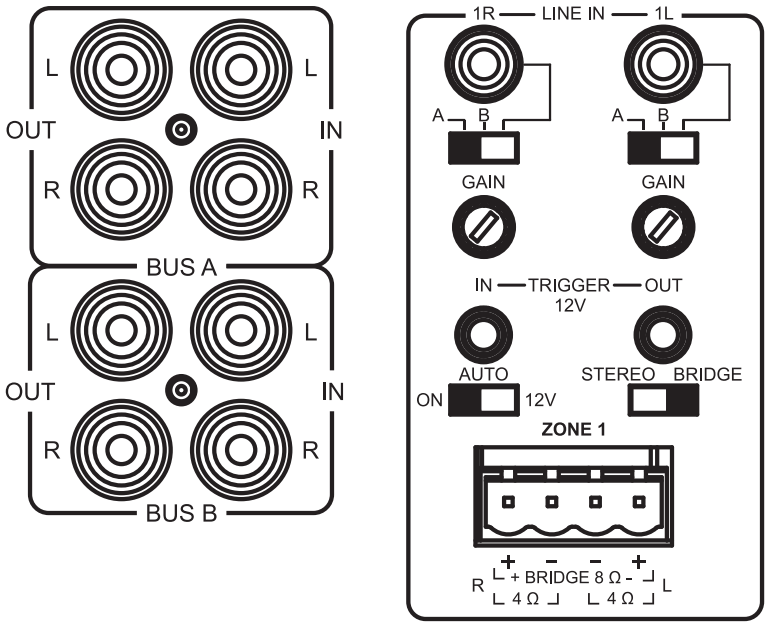


# Proper Cooling

Although the MA Series amplifiers use efficient Class D amplifier modules, proper ventilation is essential to ensure reliable operation. Allow at least 1.5 inches (38 mm) of clearance above and to the sides of the unit to promote adequate airflow. Do not block the top or side ventilation openings under any circumstances. When installing the amplifier in a rack, avoid placing blank or vanity panels directly above or below the unit, as they can restrict airflow and lead to overheating. If multiple amplifiers are installed in the same rack, active ventilation is recommended to maintain safe operating temperatures.

# Audio Inputs

The Dayton Audio MA Series amplifiers offer flexible input routing with both per-channel RCA inputs and shared bus inputs. This allows each zone to receive a dedicated audio source or share a common signal across multiple zones.




## RCA Channel Inputs

Each amplifier channel has its own dedicated RCA input on the rear panel. These inputs accept standard unbalanced line-level signals from sources such as AV receivers, streamers, or audio matrix switchers. When a channel's input selector is set to LINE IN, it will play the signal connected to that channel's RCA jack only.

## RCA Bus Inputs

In addition to the channel-specific inputs, the amplifier includes two sets of bus inputs (A and B). These inputs are designed to distribute a common audio signal to multiple channels or zones. Use high-quality RCA cables to connect a line-level source to either Bus A or Bus B input.

Each channel can be individually assigned to Bus A, Bus B, or its own RCA input using the input selector switch located near the gain control. When a channel is set to BUS A or BUS B, it will play the corresponding shared input.

**TIP:** Use Bus A or B to distribute a central audio source, such as a music streamer, to all zones. Then, use individual LINE IN settings for zones that require separate sources or matrix control.

## Loop Outputs

Both Bus A and Bus B inputs include loop output jacks, which allow the signal to be passed to additional amplifiers or other audio devices. These outputs are unbuffered and passively linked to the corresponding input, so the signal level is the same as the source.

**NOTE:** If connecting multiple amplifiers to the same source via the loop output, make sure the source device can drive the total input load.

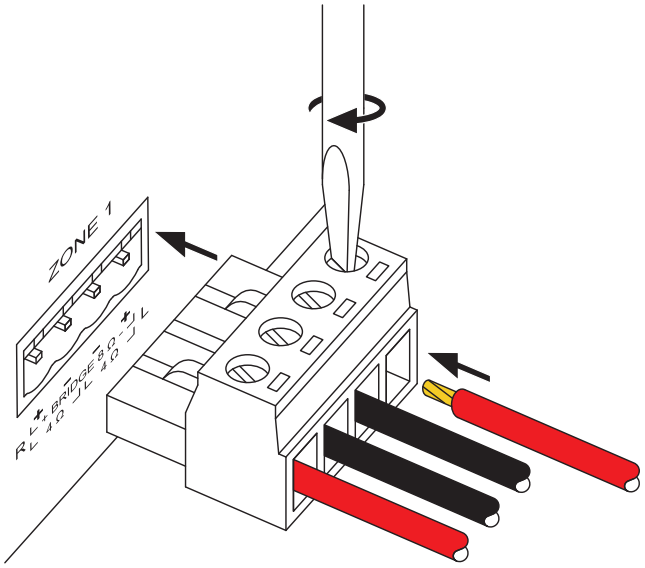
# Connecting Speakers

Speaker connections are made using the Phoenix-style screw terminal connectors included with the amplifier. Each channel has a dedicated output, and channels can be configured for either stereo or bridged operation depending on your system needs.

Each output zone uses a 4-pole Phoenix-style connector that accommodates 14–18 AWG stranded speaker wire.
To connect:

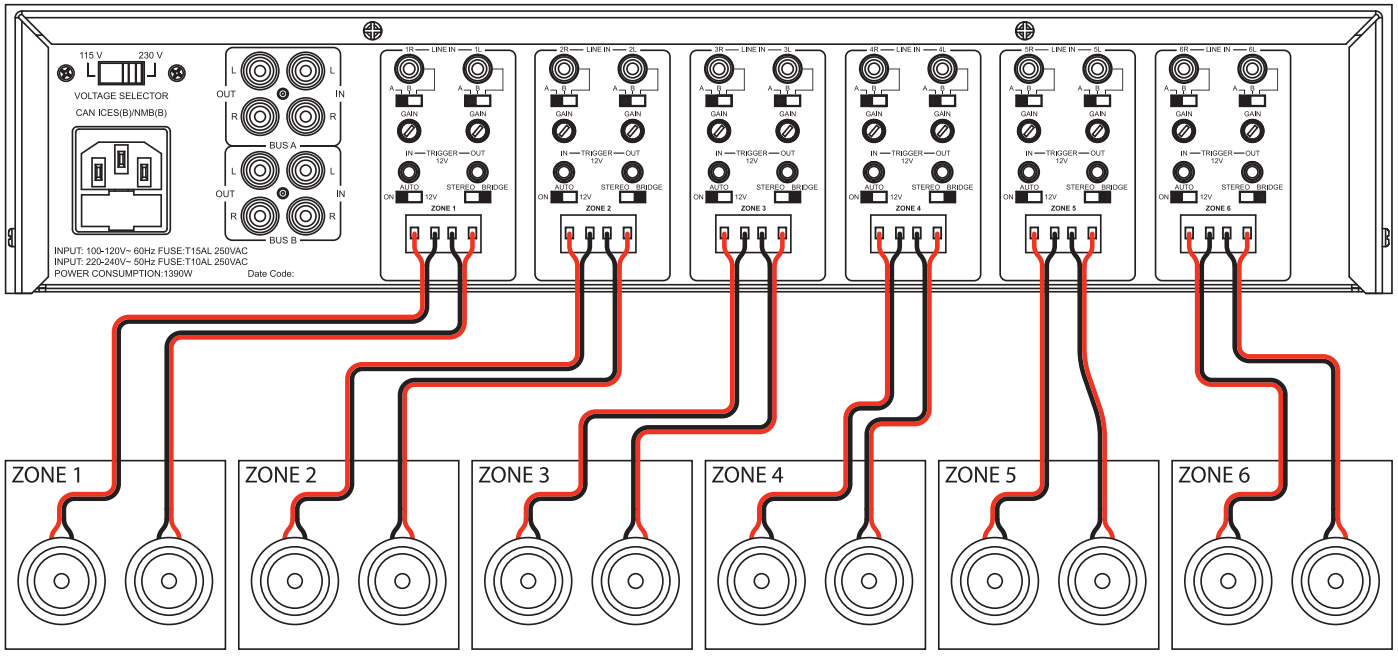
1. Strip approximately 1/4" (6 mm) of insulation from each speaker wire.
2. Insert the bare wire into the appropriate terminal slot, observing proper polarity.
3. Tighten each screw terminal securely. Do not over-tighten.

Polarity is marked on the amplifier's rear panel as "+" and "–" for each channel. Always match the positive and negative terminals from the amplifier to the speaker to maintain the correct polarity.




## Stereo Configuration (Default)

By default, each pair of channels (e.g., Ch 1 & 2 for Zone 1) operates in stereo mode, with one channel driving the left speaker and the other driving the right. Use separate speaker wires from each channel to its corresponding speaker.



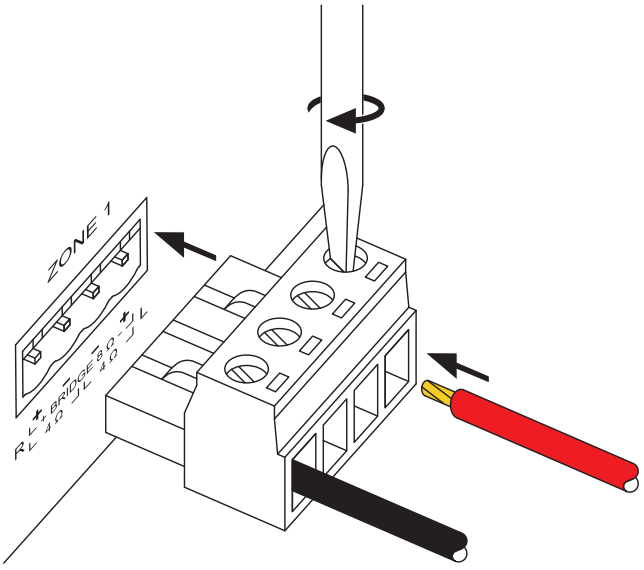
## Bridged Configuration (Optional)

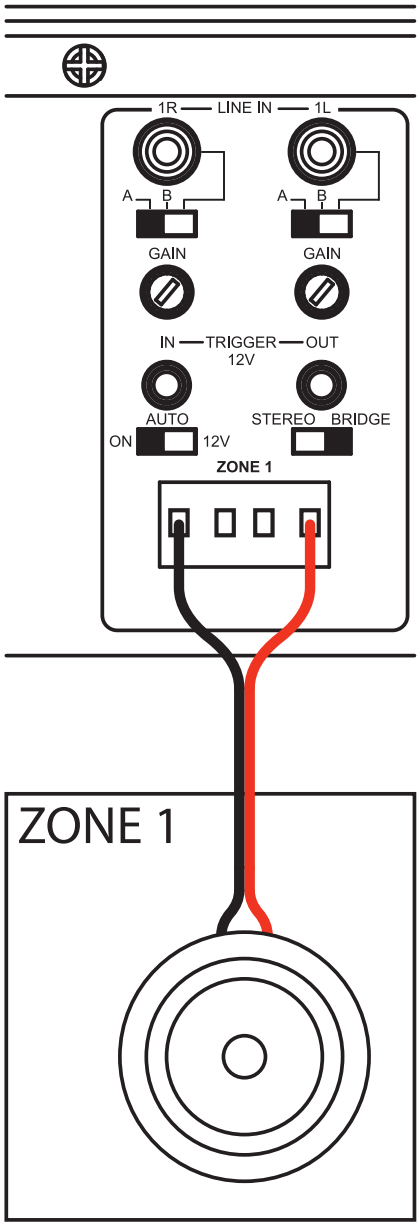
For zones that require more power, a pair of channels can be bridged using the rear-panel switch. Bridging combines two channels to deliver higher output to a single speaker.

- Set the bridging switch to **"BR"** on the left channel of the pair.
- Connect the speaker wire as follows:
  **Positive (+)** to the **+ terminal of the left channel**
  **Negative (–)** to the **+ terminal of the right channel**

  **IMPORTANT:** Do not use the "–" terminals when bridged.

**IMPORTANT:** Bridged channels require an **8 ohm minimum speaker load**. Do not connect a 4 ohm speaker in bridged mode.



## Impedance Guidelines

Each channel is stable down to **4 ohms** in stereo mode. If using volume controls or speaker selectors, ensure the total load per channel does not fall below this limit. When bridged, each channel pair must drive an **8 ohm** minimum load.

Adjust the channel gain carefully, especially when using stereo in-wall volume controls in the various zones. In zones where in-wall volume controls are not used, set the level controls on the two channels of that zone for an average listening level. The setting needed for each zone or channel can vary based not only upon the volume desired in that zone, but by the input level of the audio source.

When in-wall controls are used, care must be taken not to set the channel level controls too high. This can cause “clipping” or distortion in the audio output from the MA series amplifier, resulting in excessive heat and a reduced service life of the amplifier’s outputs. The audibility of this distortion can be greatly reduced by the inductive nature of most in-wall volume controls.

Start with the in-wall volume control set to full volume. With an average-strength audio input (a CD or DVD player is best), set the channel level controls to an average listening level for that zone, or even slightly higher. Then use the in-wall control to reduce the volume level of the audio in that zone. Most in-wall controls can reduce the volume to near silence. Note that the amplifier channel continues to operate and will dissipate power into the volume control even when the volume control is turned all the way down.

**WARNING**

Setting the channel level controls to full volume and then using an in-wall volume control to limit the volume to a lower level is an improper setup. A full-volume adjustment of a channel’s level control will cause extreme clipping of the audio signal by the channel’s amplifier. This can cause overheating and lead to premature failure of the amplifier channel. In-wall volume controls can mask this distortion significantly at the speakers, but do nothing to reduce the risk to the amplifier. If you have questions about the proper setup of your MA Series amplifier, please contact Technical Support before using the system. With a proper setup, the MA Series can provide years of trouble-free operation.

Proper setup of the MA Series amplifier is the sole responsibility of the end-user. Damage resulting from improper setup is not repairable and will not be covered under warranty.

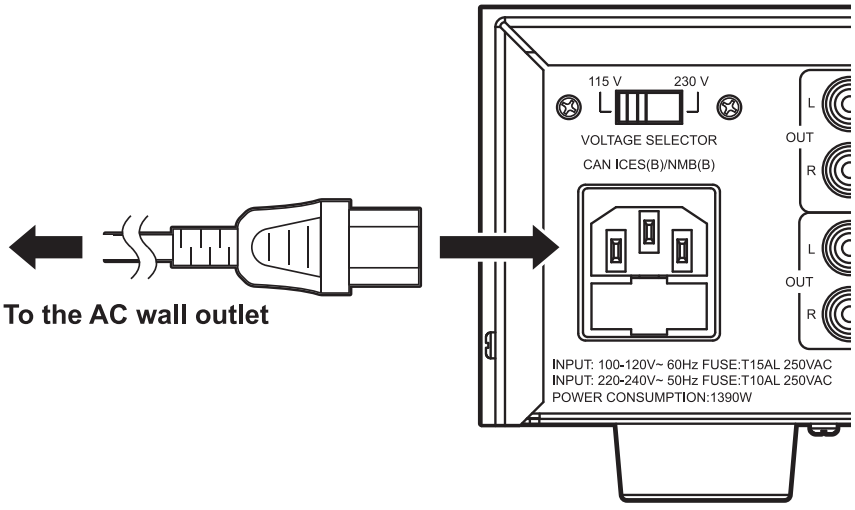
## Powering the Unit

Before powering on the amplifier, ensure all connections have been made and double-checked. Always connect the power cable last during installation to avoid accidental shorts or signal issues.

## AC Voltage Selector

MA Series amplifiers include a rear-panel voltage selector switch for use in different regions. The unit is factory-set for 120V operation (North America). For international use, the switch can be set to 230V. Be sure to set the correct voltage before plugging in the power cord.

**IMPORTANT:** If switching to 230V operation, the fuse located in the IEC power inlet must also be replaced with one rated for 230V use (see Specifications for the correct fuse type and rating). A suitable power cord for 230V operation is not included.




## AC Power Connection

The amplifier uses a standard IEC power connector. Connect the included power cable to the AC input on the rear panel, and then plug the other end into a properly grounded outlet or power conditioner.

**CAUTION:** Do not connect the amplifier to a switched AC outlet, such as those found on some AV receivers. Use the built-in auto-on or 12V trigger features (described in Section 4.5) if you need the amplifier to power on in coordination with another device.

# Gain Control Setup

Each channel is equipped with its own independent gain control. This allows the output level of each speaker to be independently controlled. It can also be used to limit the maximum audio level in a certain area.

# LED Indicators

**Zone Status LED** ——

**Red** - Zone is off or in standby

**Green** - Zone active

**Flashing Green/ Red** – Zone fault detected

**Zone Signal LEDs** ⎍ **(Auto On Only)**

**Green** - Signal present

**Power LED**

**Red** – Amplifier is on

# Power On Modes

The MA series amplifiers offer two methods of remote zone activation: signal sensing (auto-on) and 12V trigger control. These features allow the amplifier to turn on automatically when audio is detected or when controlled by an external system, such as a home automation processor or AV receiver.

## Auto-On Signal Sensing

Each zone (pair of channels) features an auto-on switch on the rear panel. When enabled, the amplifier will monitor the RCA input for an incoming audio signal and automatically turn on the corresponding channels.

- Set the Auto-On switch to “ON” to enable signal sensing for that zone.
- The amplifier will remain active while an input signal is present.
- After approximately 15 minutes of inactivity, the zone will return to standby mode.

**NOTE:** Signal sensing works independently per zone. Some sources, such as cable boxes or streaming devices with a constant low-level output, may prevent the amplifier from going into standby.

## 12V Trigger Input

Each zone also includes a 12V trigger input, allowing external control from compatible systems. When a 12V DC signal is present at the input, the corresponding zone will power on and the zone status light will turn green. When the signal is removed, the zone will return to standby.

## 12V Trigger Output

A 12V trigger output is provided on the rear panel for each zone. This can be used to activate additional amplifiers or system components when the zone is powered on.

- Outputs 12V DC @ 500 mA max while the amplifier is active; regardless of the zone Auto-On setting
- Drops to 0V when all zones return to standby or the unit is powered off.

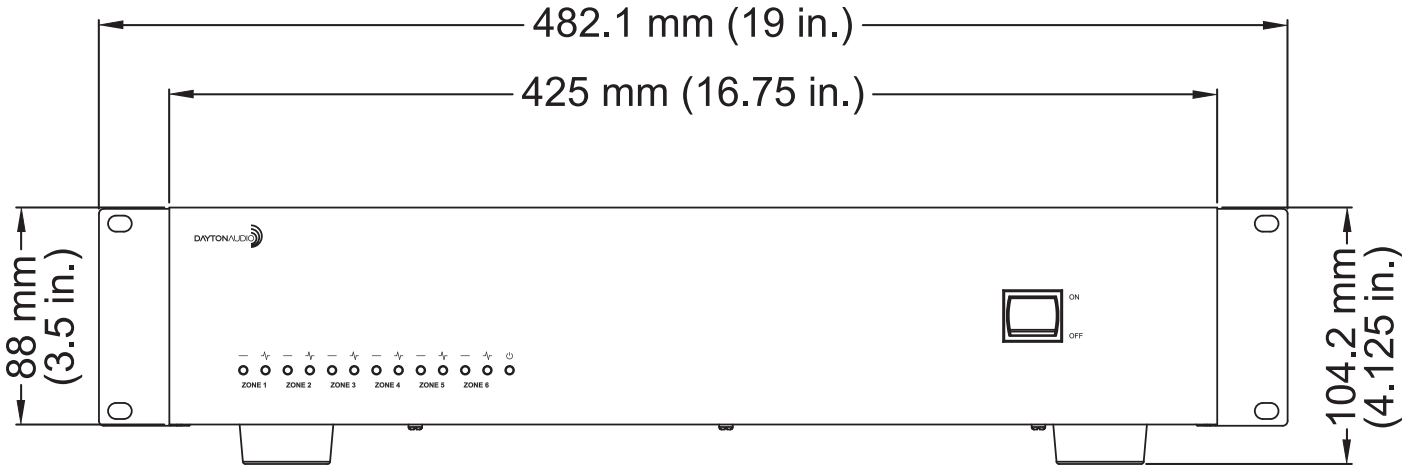
**TIP:** Use the trigger output to chain multiple amplifiers for synchronized zone control, or to activate relay-controlled devices like fans or speaker selectors.

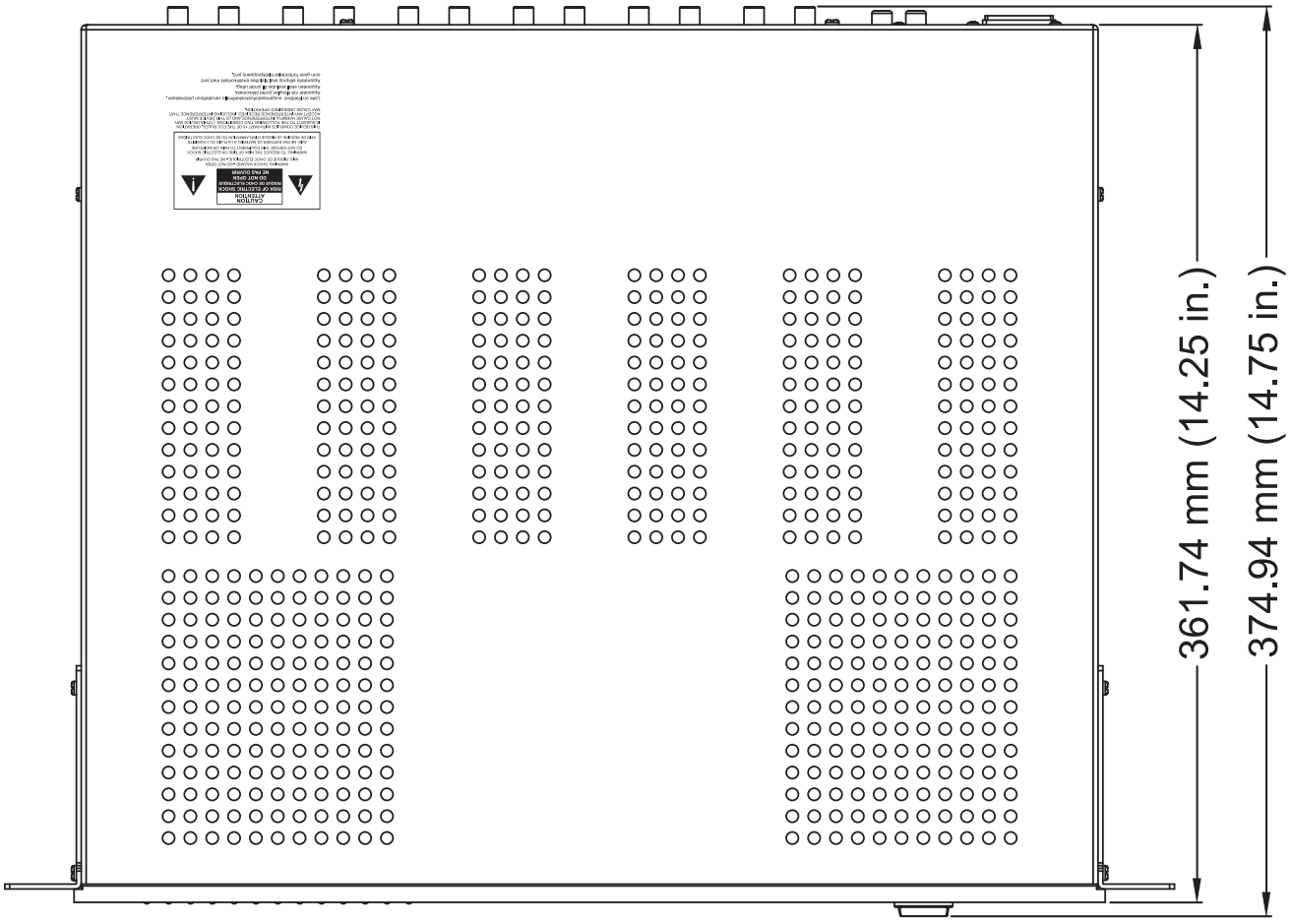
# Troubleshooting

| Problem | Possible Cause | Solution |
|---|---|---|
| No sound from one or more zones | Source not playing | Confirm source is active and playing audio |
| | Input selector switch not set correctly | Verify the input selector is set to LINE IN, BUS A, or BUS B as needed |
| | RCA cable disconnected | Check RCA cables and re-seat as necessary |
| | Speaker wire not connected | Verify speaker wire connections at both amplifier and speaker |
| | Zone is in standby (auto-on not triggered) | Play audio at a sufficient level to trigger auto-on, or use 12V trigger instead |
| | Channel gain set too low | Increase gain setting slightly while monitoring speaker output |
| | Bridging mode wiring incorrect | In bridged mode, connect speaker leads to L+ and R+ terminals only (do not use "–" terminals) |
| Low volume or poor sound quality | Channel gain set too low | Increase gain setting slightly while monitoring speaker output |
| | Input signal too weak | Use a higher-output source or confirm source device settings |
| | Out-of-phase speaker wiring | Check that speaker polarity (+/–) matches on both amp and speaker ends |
| | In-wall volume control not installed properly | Turn in-wall control to full, then set amp gain for desired maximum level |
| | Speaker wire too thin or too long | Use 14–16 AWG wire; avoid excessive wire runs over 75 feet |
| | Bridged wiring error | Confirm bridged wiring uses only the + terminals and that speaker load is 8 ohms minimum |
| Audio is distorted or clipping | Input signal too hot | Lower the source output level or reduce amp gain |
| | Channel gain set too high | Turn down the gain knob for that channel to reduce distortion risk |
| Amplifier does not power on | Power cable not connected | Connect IEC power cable securely at both ends |
| | AC outlet not live | Test outlet with another device |
| | Voltage switch set incorrectly | Set voltage selector to match your region (120V or 230V) |
| Zone turns on, then shuts off | Speaker impedance too low | Ensure speaker load is 4 ohms or higher in stereo mode, 8 ohms if bridged |
| | Short circuit in speaker wiring | Inspect all speaker wire runs for shorts or damaged insulation |
| Zone status LED flashes green/red | Channel fault (thermal or short) | Power off amplifier, inspect wiring, and allow unit to cool before restarting |
| Auto-on not working | No audio present | Confirm the source is active and playing audio |
| | Source output too low | Use a different source or increase volume at the source |
| | Auto-on switch set to 12V | Enable the auto-on switch for that zone on the rear panel |
| 12V trigger not activating zone | Trigger voltage too low | Confirm the trigger source outputs 12V DC |
| | Incorrect cable type | Use a mono 3.5mm cable, tip-positive |
| Zone does not go into standby | Source has constant low-level output | Disconnect or mute idle sources, or use 12V trigger control instead |

# Dimensions

**MA880 / MA1280**



# Specifications

| | MA880 | MA1280 |
|---|---|---|
| Channels | 8 (4 Stereo Zones) | 12 (6 Stereo Zones) |
| Output Power (WPC) 8 Ω | 80W | 80W |
| Output Power (WPC) 4 Ω | 160W | 160W |
| Output Power (Bridged) 8 Ω | 160W | 160W |
| Amplification | Class D | Class D |
| THD+N @ Rated Power | 1% | 1% |
| SNR, A-Weighted | 106.1 dB | 102.5 dB |
| Frequency Response (+/- 0.5 dB) | 20 Hz - 20 kHz | 20 Hz - 20 kHz |
| Input Sensitivity | 680 mV | 680 mV |
| Channel Separation | -60 dB | -60 dB |
| Minimum Speaker Impedance | | |
| Stereo | 4 Ω | 4 Ω |
| Bridged | 8 Ω | 8 Ω |

**Inputs and Control**

| | | |
|---|---|---|
| Line Level Inputs | 8 x RCA Channel Inputs<br>2 x Stereo RCA Bus Inputs | 12 x RCA Channel Inputs<br>2 x Stereo RCA Bus Inputs |
| Line Level Outputs | 2 x Stereo RCA Bus Output | 2 x Stereo RCA Bus Output |
| Amplifier Outputs | 4 x 4-Pole Phoenix-Type Connectors | 6 x 4-Pole Phoenix-Type Connectors |
| Auto On Voltage | 5 mV | |
| 12V Trigger Input | Independent per zone | |
| 12V Trigger Output | Independent per zone | |

**General**

| | | |
|---|---|---|
| Power Requirements | | |
| USA | 100-120VAC/60Hz | |
| EC | 220-240VAC/50Hz | |
| Internal Fuse Rating | | |
| 110V | 100-120VAC/T12AL 250V | 100-120VAC/T15AL 250V |
| 220V | 220-240VAC/T6.3AL 250V | 220-240VAC/T10AL 250V |
| Amplifier Protection | Overload, Short Circuit, Thermal | |
| Standby Power Consumption | 5W | 5W |
| Dimensions (each)<br>W x D x H | 19 x 14-1/4 x 4 in.<br>(482.1 x 361.74 x 104.02 mm) | |
| Weight (each) | 15.79 lbs. (7.16 kg.) | 17.13 lbs. (7.77 kg.) |

**5-Year Limited Warranty**
See daytonaudio.com for details

**daytonaudio.com**
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