

MX2500 • MX3500

Professional Power Amplifiers

OWNER'S MANUAL



Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Minimum distance (5 cm) around the apparatus for sufficient ventilation. The ventilation should not be impeded by covering the ventilation openings with items, such as newspapers, table-cloths, curtains, etc.
9. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
10. No naked flame sources, such as lighted candles, should be placed on the apparatus.
11. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
12. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
13. Only use attachments/accessories specified by the manufacturer.
14. Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
15. Unplug this apparatus during lightning storms or when unused for long periods of time.
16. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
17. This apparatus shall not be exposed to dripping or splashing, and no object filled with liquids, such as vases or beer glasses, shall be placed on the apparatus.
18. Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.



19. This apparatus has been designed with Class-I construction and must be connected to a mains socket outlet with a protective earthing connection (the third grounding prong).
20. This apparatus has been equipped with a rocker-style AC mains power switch. This switch is located on the front panel and should remain readily accessible to the user.
21. The MAINS plug or an appliance coupler is used as the disconnect device, so the disconnect device shall remain readily operable.
22. The use of apparatus is in tropical and/or moderate climates.
23. **NOTE:** 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 the 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.

CAUTION: Changes or modifications to this device not expressly approved by LOUD Audio, LLC could void the user's authority to operate the equipment under FCC rules.

24. This apparatus does not exceed the Class A/Class B (whichever is applicable) limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications.

ATTENTION — *Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de class A/de class B (selon le cas) prescrites dans le règlement sur le brouillage radioélectrique édicté par les ministere des communications du Canada.*

25. Exposure to extremely high noise levels may cause permanent hearing loss. Individuals vary considerably in susceptibility to noise-induced hearing loss, but nearly everyone will lose some hearing if exposed to sufficiently intense noise for a period of time. The U.S. Government's Occupational Safety and Health Administration (OSHA) has specified the permissible noise level exposures shown in the following chart.

According to OSHA, any exposure in excess of these permissible limits could result in some hearing loss. To ensure against potentially dangerous exposure to high sound pressure levels, it is recommended that all persons exposed to equipment capable of producing high sound pressure levels use hearing protectors while the equipment is in operation. Ear plugs or protectors in the ear canals or over the ears must be worn when operating the equipment in order to prevent permanent hearing loss if exposure is in excess of the limits set forth here:

Duration, per day in hours	Sound Level dBA, Slow Response	Typical Example
8	90	Duo in small club
6	92	
4	95	Subway Train
3	97	
2	100	Very loud classical music
1.5	102	
1	105	Matt screaming at Troy about deadlines
0.5	110	
0.25 or less	115	Loudest parts at a rock concert

CAUTION

RISK OF ELECTRIC SHOCK! DO NOT OPEN!

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.

The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure, that may be of significant magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintaining (servicing) instructions in the literature accompanying the appliance.

WARNING — To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

CAUTION — To prevent electric shock hazard, do not connect to mains power supply while grille is removed.

Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan.

Apparatet må tilkoples jordet stikkontakt.

Apparaten skall anslutas till jordat uttag.



Correct disposal of this product: This symbol indicates that this product should not be disposed of with your household waste, according to the WEEE directive (2012/19/EU) and your national law. This product should be handed over to an authorized collection site for recycling waste electrical and electronic equipment (EEE). Improper handling of this type of waste could have a possible negative impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. At the same time, your cooperation in the correct disposal of this product will contribute to the effective usage of natural resources. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, waste authority, or your household waste disposal service.

Contents

- Important Safety Instructions 2
- Contents / Features 3
- Introduction / Getting Started 4
- Hookup Diagrams 5

- MX Series Amplifiers: Rear Panel Features.....10**
 - 1. Power Connection.....10
 - 2. Circuit Breaker10
 - 3. XLR Inputs10
 - 4. XLR Thru Outputs.....10
 - 5. NL4 Speaker Outputs.....10
 - 6. Amp Mode Switch..... 11
 - 7. Sensitivity Switch 11
 - 8. Fan Vents 11

- MX Series Amplifiers: Front Panel Features.....12**
 - 9. Power Switch.....12
 - 10. Level Controls12
 - 11. LEDs12

- General Precautions13**
 - AC Power Requirements13
 - Thermal Considerations13
 - Rack Mounting13
- Care and Maintenance13**

- Appendix A: Service Information14**
- Appendix B: Technical Information16**
 - MX Series Amplifiers Dimensions.....17
 - MX Series Amplifiers Block Diagram.....18

- Limited Warranty19**

Features

- Affordable, reliable power perfect for DRM Series Passive Loudspeakers, installations, and production audio systems
- Ultra-lightweight switching power supply for maximum efficiency and minimal heat
- Forced-air ventilation keeps the amplifier running cool
- MX2500 Power output:
 - o 500W Continuous power @8 Ω per channel
 - o 750W Continuous power @4 Ω per channel
 - o 1500W Continuous power @ 8 Ω bridged
- MX3500 Power output:
 - o 1000W Continuous power @8 Ω per channel
 - o 1350W Continuous power @4 Ω per channel
 - o 2700W Continuous power @ 8 Ω bridged
- Selectable parallel/stereo/bridged operating modes
- Independent level control per channel
- Selectable input sensitivity
- Signal, Clip, and Fault LEDs per channel
- Short, under-impedance, over-current and thermal protection
- XLR Input and Thru per channel
- NL4 outputs
- Robust, impact-resistant, all-steel 2U rackmount chassis

Not available in the USA, Canada, China, Japan and other 100 – 120V countries



Like us



Follow us



Watch our dang videos

Introduction

MX Series Professional Power Amplifiers provide the power and performance needed for installation and portable passive systems.

Utilizing proven Mackie amplifier design history, they deliver clear, punchy sound that's distortion-free even when pushed to the limits.

The MX Series is Built-Like-A-Tank™ but is still easy to lift thanks to a lightweight and ultra-efficient high-current switching power supply.

With optimized performance, super-quiet operation and an array of protection circuits, the MX Series delivers powerful performance at an affordable price.

Combine with DRM Passive Loudspeakers and the SP260 Loudspeaker Processor for a complete Mackie professional system.

How to Use This Manual:

After this introduction, a getting started guide will help you get things set up fast. The hookup diagrams show some typical MX amplifier setups.



This icon marks information that is critically important or unique! For your own good, read and remember them...it is a good idea to pay special attention to these areas in the Owner's Manual marked with the "VERY IMPORTANT" hand icon.



There's an illustration of a microscope, so, of course, you're going to get more detailed information when you see this little guy. There are explanations of features and practical tips listed here.



It's a good idea to pay attention to text displayed next to a note icon, as this icon draws attention to certain features and functions relating to the usage of the MX Series amplifier.

Please write the serial numbers here for future reference (i.e., insurance claims, tech support, return authorization, make dad proud, etc.)

Purchased at:

Date of purchase:

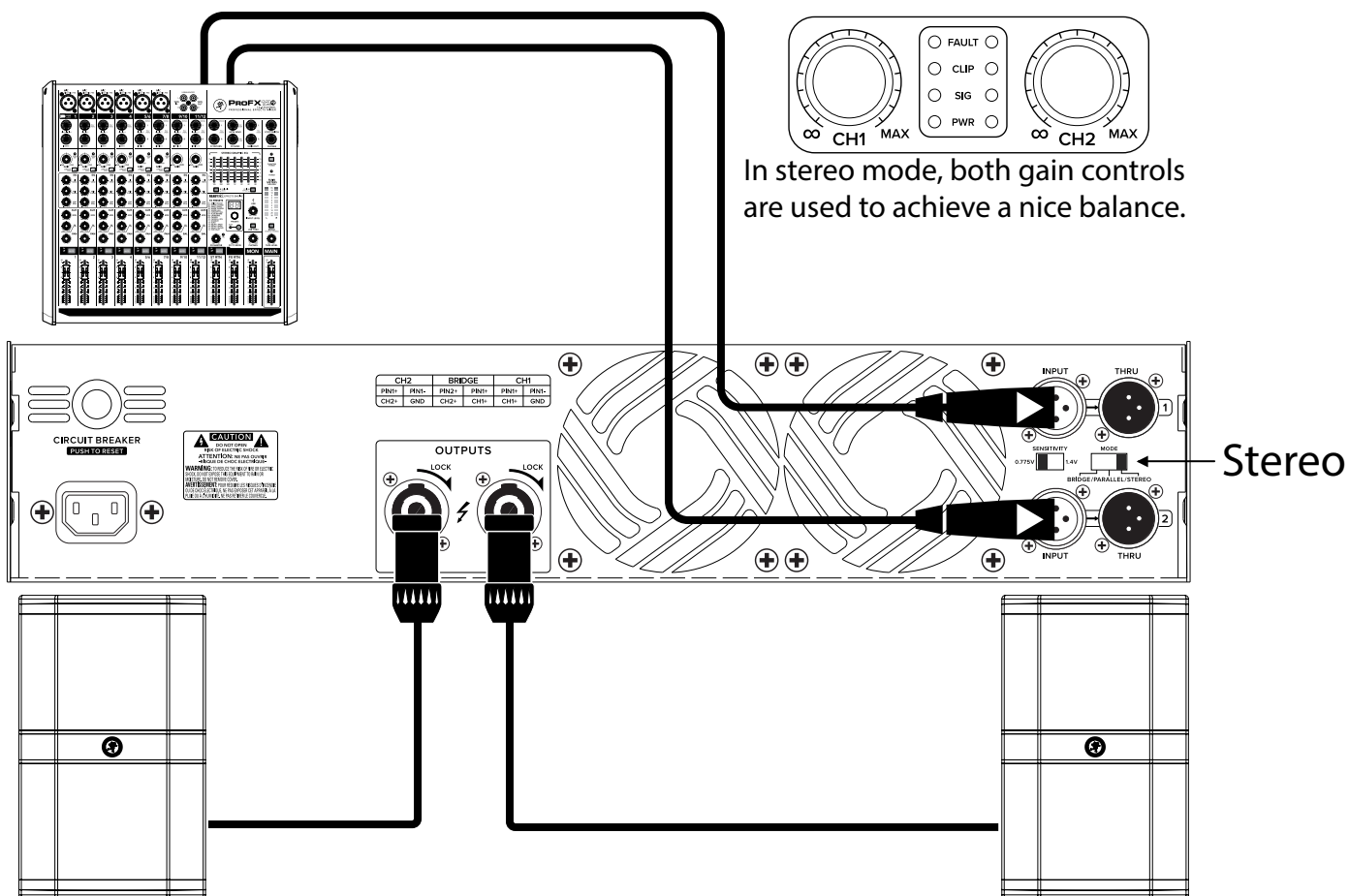
Getting Started

The following steps will help you set up the MX amp quickly.

1. Make all initial connections with the power switches OFF on all equipment. Make sure the master volume, level and gain controls are all the way down.
2. Connect the outputs from the mixing console (or other signal source) to the inputs on the rear panel of the power amplifier.
3. Connect the speaker output from the power amplifier to the input on the rear panel of the loudspeaker.
4. Push the line cord securely into the amplifier's / mixer's IEC connectors and plug the other ends into grounded AC outlets. The amplifier / mixer may accept the appropriate voltage as indicated near the IEC connector.
5. Turn the power amplifier/mixer on. Turn up its volume or gain control(s) as recommended by the manufacturer.
6. Start the signal source and raise the mixer's main L/R fader up to a comfortably loud listening level.

Things to Remember:

- Never listen to loud music for prolonged periods. Please see the Safety Instructions on page 2 for information on hearing protection.
- As a general guide, the mixer (or other signal source) should be turned on first, followed by the amplifier(s). As such, the amplifiers should also be turned off first, followed by the mixer. This will reduce the possibility of any turn-on or turn-off thumps and other noises generated by any upstream equipment from coming out of the speakers.
- Save the shipping boxes and packing materials! You may need them someday. Besides, the cats will love playing in them and jumping out at you unexpectedly. Remember to pretend like you are surprised!
- Save your sales receipt in a safe place.

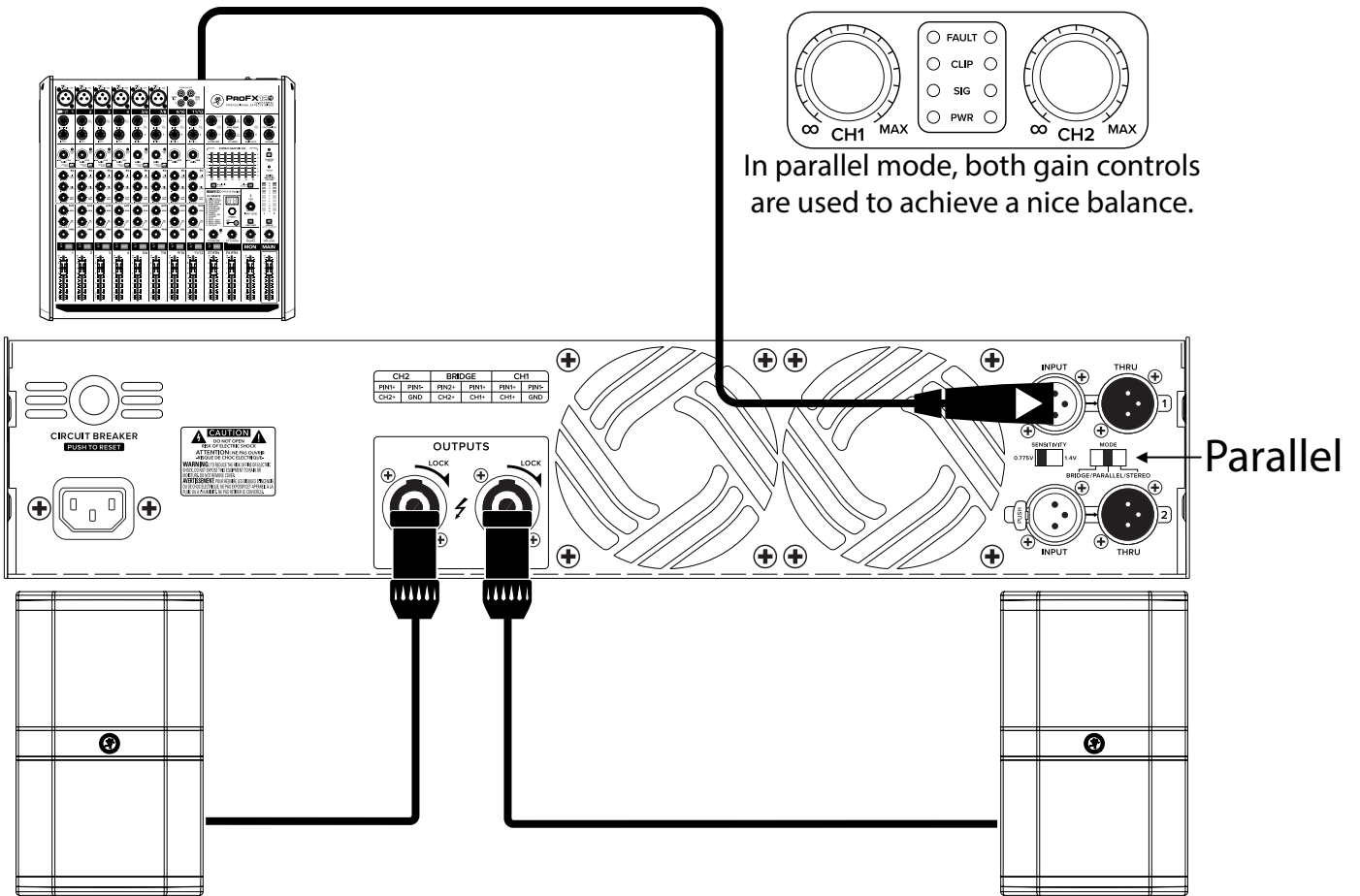


Displayed above is a fairly typical MX Series amplifier setup. In short, it's two ins, two outs.

In this example, cables from the mixer's left and right main output jacks are connected to the ch. 1 and ch. 2 input jacks of the MX Series amplifier. The speaker outputs of the MX amp are then connected to the inputs of a pair of passive loudspeakers [Mackie DRM212-P in this example]. Make sure that the amp mode is set to "stereo".

Stereo Setup

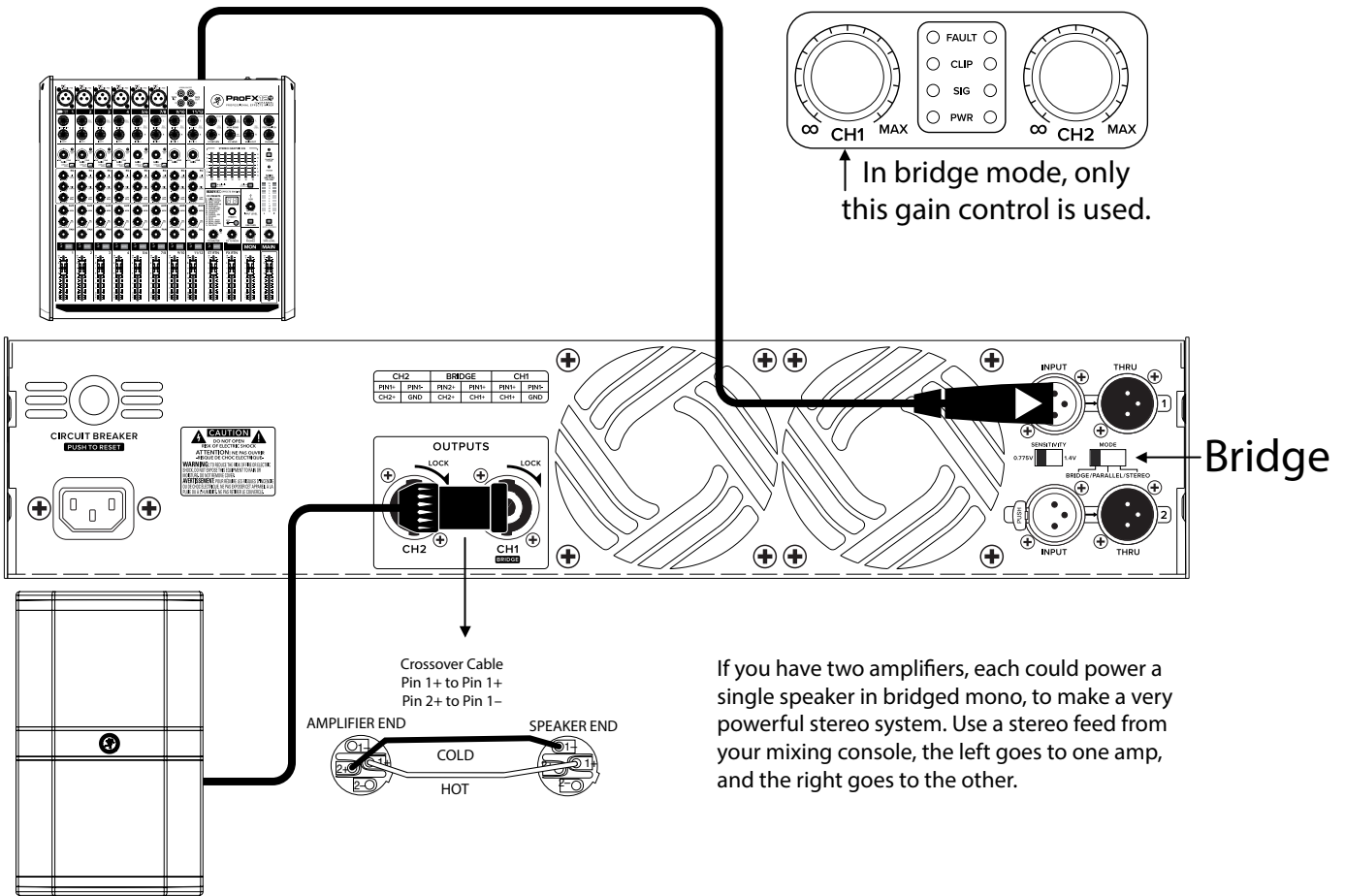
Hookup Diagrams continued...



In this example, we're looking at a parallel setup. You're sending a mono signal to both outputs.

Here, a cable from the mixer's left main output jack is connected to the ch. 1 input jack of the MX Series amplifier. The speaker outputs of the MX amp are then connected to the inputs of a pair of passive loudspeakers [Mackie DRM212-P in this example]. Make sure that the amp mode is set to "parallel".

Parallel Setup

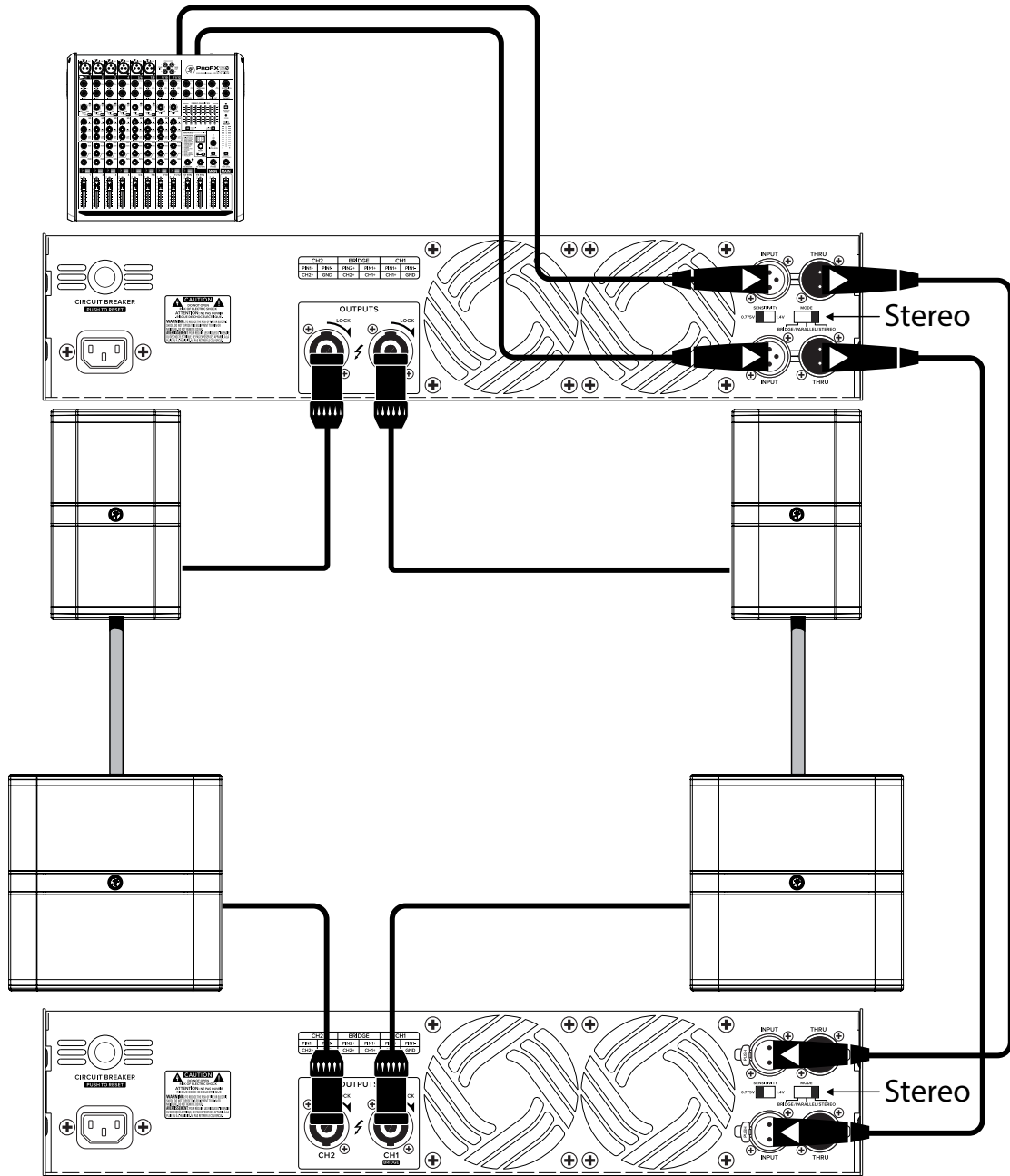


Now we're looking at a bridge setup. Instead of the two ins, two outs of the stereo setup, this is a single in, single out.

A cable from the mixer's left main output jack is connected to the ch. 1 input jack of the MX Series amplifier. The ch. 1 (bridge) speaker output of the MX amp is then connected to the input of a single passive loudspeaker [Mackie DRM212-P in this example]. Make sure that the amp mode is set to "bridge".

Bridge Setup

Hookup Diagrams continued...



This setup starts off looking like the first hookup diagram – Stereo Setup – then gets a little fancy.

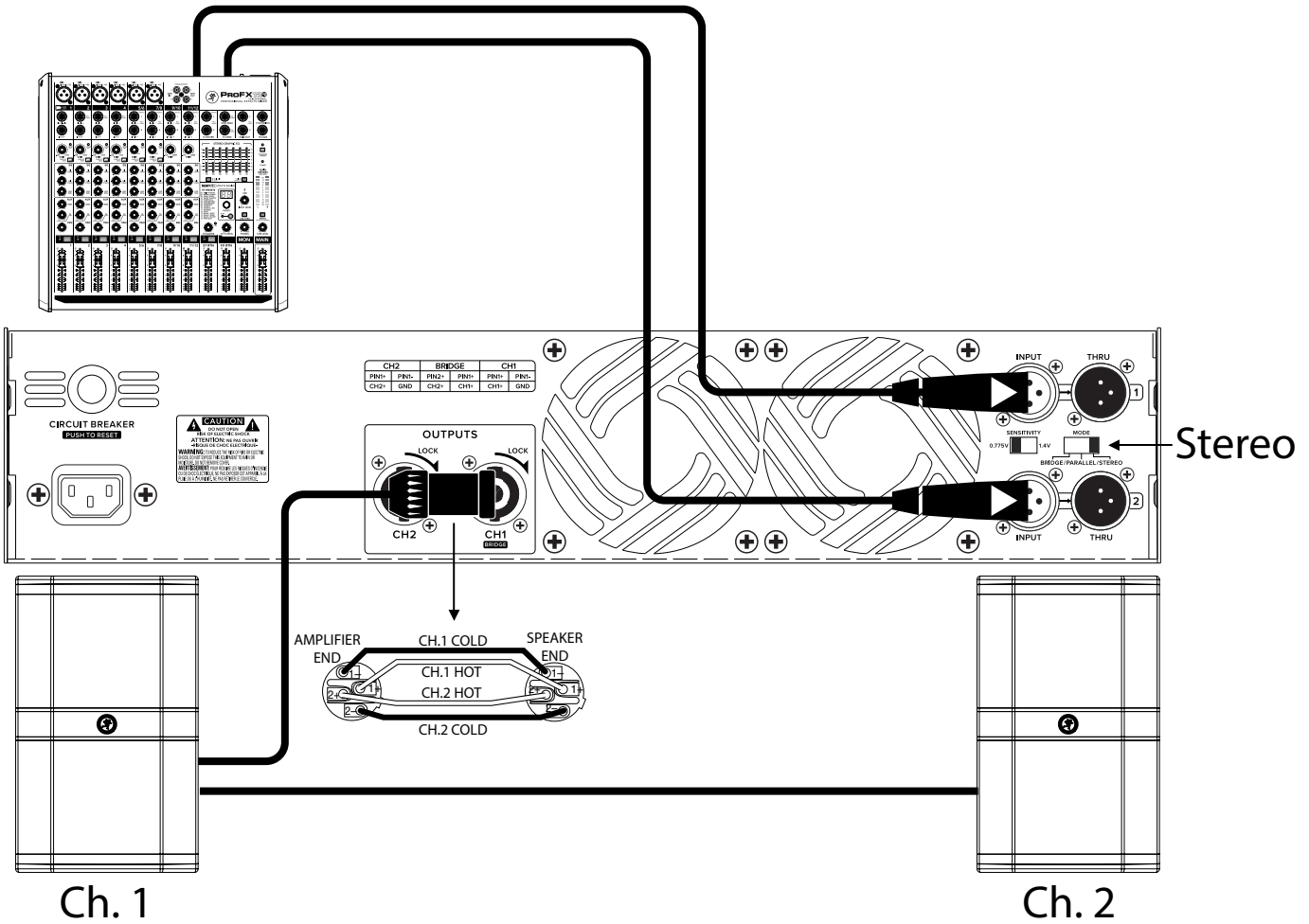
Like before, cables from the mixer’s left and right main output jacks are connected to the ch. 1 and ch. 2 input jacks of the MX Series amplifier. The speaker outputs of this MX amp are then connected to the inputs of a pair of passive loudspeakers [Mackie DRM212-P in this example].

The XLR thru jacks of the first MX amp are then connected to the ch. 1 and ch. 2 input jacks of a second MX amp with the speaker outputs of this MX amp connected to the inputs of a pair of passive subwoofers [Mackie DRM18S-P in this example].

Make sure that the amp mode on both amps is set to “stereo”.

Daisy-Chaining Two Amplifiers

Hookup Diagrams continued...

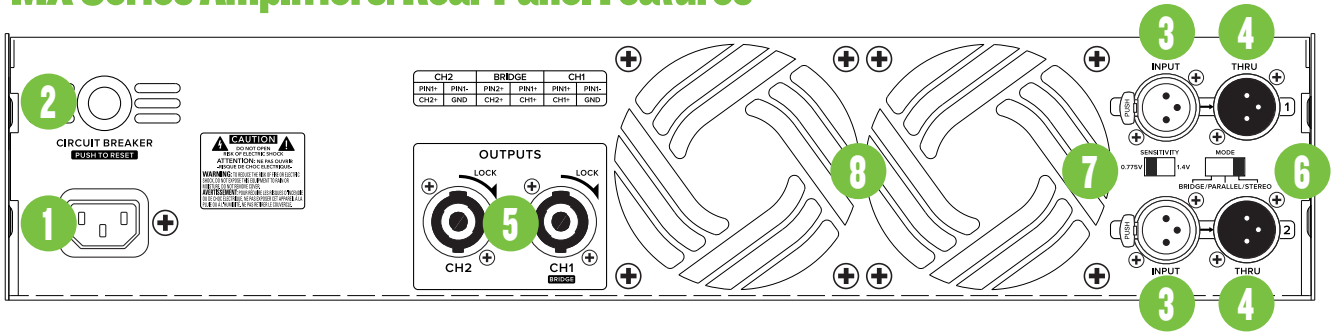


This last hookup diagram probably won't be utilized a whole lot, but it is an option.

In this example, cables from the mixer's left and right main output jacks are connected to the ch. 1 and ch. 2 input jacks of the MX Series amplifier. This time, though, only a single speaker output of the MX amp is connected to the input of a single passive loudspeaker [Mackie DRM212-P in this example]. The output (or thru) jack of the passive loudspeaker is then connected to the input of another passive loudspeaker. This type of setup would be good for loudspeakers used as monitors, for example. Make sure that the amp mode is set to "stereo".

Stereo Speakers with Minimum Length of Speaker Cable Runs

MX Series Amplifiers: Rear Panel Features



1. Power Connection

This is a standard 3-prong IEC power connector. Connect the detachable power cord (included in the packaging with the amplifier) to the power receptacle, and plug the other end of the power cord into an AC outlet.



Make sure that the AC power is matched to the AC power indicated on the rear panel (below the IEC receptacle).



Disconnecting the plug's ground pin is dangerous. Don't do it!

2. Circuit Breaker

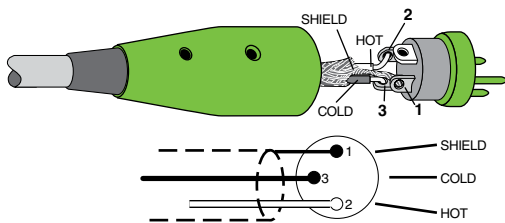
The amplifier might shut down if the small load impedance of the amplifier or the continuous input signal are too high [clipping]. If the amplifier becomes overloaded, reset the levels followed by pressing and releasing the circuit breaker switch so the amplifier can resume normal operation.

3. XLR Inputs

The input channels may accept a balanced mic signal using an XLR connector. They are wired as follows, according to standards specified by the AES (Audio Engineering Society).

XLR Balanced Wiring:

- Pin 1 = Shield (ground)
- Pin 2 = Positive (+ or hot)
- Pin 3 = Negative (- or cold)



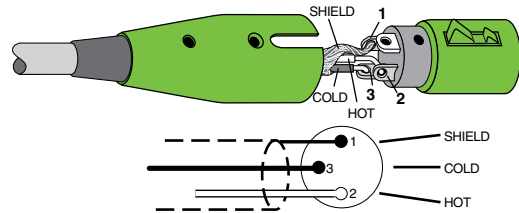
4. XLR Thru Outputs

These male XLR connectors allow you to send the balanced input signals to other amplifiers, powered speakers, mixers, or recorders in the system. The line-level output is a straight copy of what goes in, and the amplifier level controls and switches have no effect.

They are wired as follows, according to standards specified by the AES (Audio Engineering Society):

Balanced XLR Output Connector

- Pin 1 – Shield (ground)
- Pin 2 – Positive (+ or hot)
- Pin 3 – Negative (- or cold)



5. NL4 Speaker Outputs

These NL4 outputs are typically connected to the inputs of passive loudspeakers.

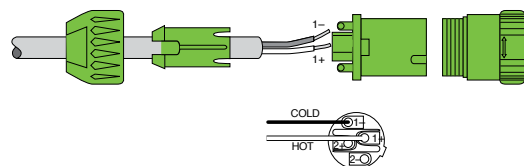
Since the connectors are wired in parallel, you can connect a speaker to each connector, as long as the total impedance per channel is not less than two Ω .

- Two 8 Ω speakers in parallel equals 4 Ω .
- Two 4 Ω speakers in parallel equals 2 Ω .

They are wired as follows, according to standards specified by the AES (Audio Engineering Society):

NL4 Output Connector

- Pin 1+ – Positive (+ or hot)
- Pin 1- – Negative (- or cold)



NEVER connect the output of an amplifier directly to a powered loudspeaker's input jack. This could damage the input circuitry!

MX Series Amplifiers: Rear Panel Features continued...

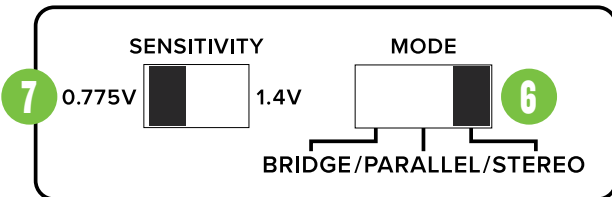
6. Amp Mode Switch

This switch determines the input signal routing within the amplifier. The stereo setting will be used in most applications. However, some applications might be better suited for using either the bridge or the parallel setting.

Stereo: This is the normal position used when amplifying stereo signals. This mode accepts separate left and right inputs (1 and 2), and routes them to the channel 1 and channel 2 outputs. Each channel's level control adjusts the gain for its own channel, and each channel is independent.

Bridge: This mode accepts a single input (Ch. 1), and uses the bridge amplifier output (Ch. 1) to power one speaker. Use the channel 1 level control to adjust the gain (turn the channel 2 level control all the way down). The hookup diagram on page 7 shows how to connect a speaker in bridged mode.

Parallel: This mode is used when you want to send a mono signal to both outputs. It accepts a single input (Ch. 1), and routes it to both the channel 1 and channel 2 outputs. Each channel's level control adjusts the gain for its own channel.



7. Sensitivity Switch

In a sentence, this switch adjusts the amplifier's input to match the equipment's output. You should match it with the output level of whatever is before the amp in the audio chain. In most cases, it's a mixer's outputs, but it could also be a preamp, etc.

The switch positions and corresponding dBu level are listed below:

- 0.775V equals 0 dBu.
- 1.4V equals +4 dBu.

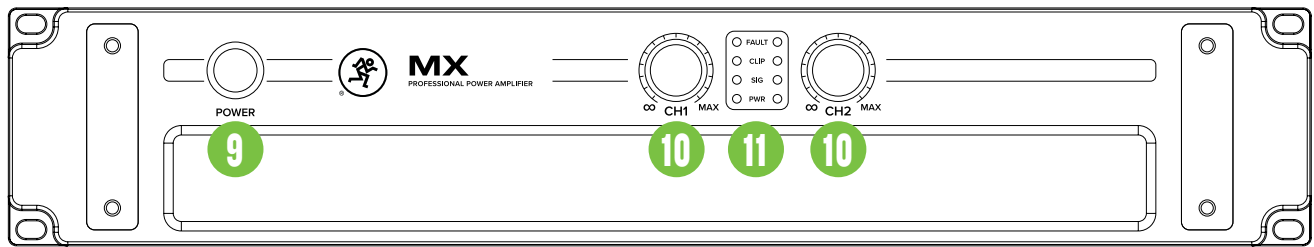
8. Fan Vents

These fans move air over the heatsinks to cool down the power transistors. If these vents are restricted, then the amplifier may overheat and shut down.



Do not obstruct the fan ventilation openings of the amplifier.

MX Series Amplifiers: Front Panel Features



9. Power Switch

Press the top of this rocker switch inwards to turn on the amplifier. Press the bottom of this rocker switch inwards to turn off the amplifier.

The power LEDs [11] will illuminate when the power switch is on.



As a general guide, the mixer (or other signal source) should be turned on first, followed by the amplifier(s). As such, the amplifiers should also be turned off first, followed by the mixer. This will reduce the possibility of any turn-on or turn-off thumps and other noises generated by any upstream equipment from coming out of the speakers.

10. Level Controls

These two knobs control the output levels of channels 1 and 2. The knobs are detented to make it easy to set both controls to the same level. Usually, these are set all the way up.

You might turn them down slightly if you have high-efficiency speakers. Also, you could use them to control the level of line-level sources such as a CD player connected directly to the amplifier without a preamplifier or mixer.

The amplifiers are designed so that a +3.4 dBu (1.15 Vrms) input signal drives the amplifier to full power into 4 Ω:

MX2500 = 750 watts per channel into 4 Ω

MX3500 = 1350 watts per channel into 4 Ω

This equates to a gain of 33 dB and 37 dB respectively.

After you have set the levels for the mixer (or other signal source), adjust the level controls on the amplifier as the final adjustment to set the overall volume for the system.

In stereo and parallel mode, use both level controls to control the levels going to each speaker.

In bridged mode, turn the channel 2 level control down, and just use the channel 1 control.

11. LEDs

From bottom to top, the LED ladder indicates the following:

PWR – PWR is short for “power.” These LEDs illuminate once the amplifier has been powered on.

SIG – SIG is short for “signal present.” These LEDs indicate when a signal is present after the level controls, at the output stage of the power amplifier. If the level controls are turned all the way down (fully counterclockwise), these indicators will not light.

CLIP – CLIP is short for “clipping.” This indicates that the output of the amplifier has reached its maximum and is clipping. Clipping is very bad for speakers and should be avoided to prevent damage.



It is okay if the CLIP LEDs blink occasionally. It means that the transient peaks of the music are just hitting the full output of the amplifier. However, if the CLIP LEDs are blinking frequently or continuously, turn down the source signal (i.e., the mixer’s master faders) or the amplifier’s level controls.

FAULT – MX Series amplifiers are equipped with a thermal protection circuit that monitors the internal temperature of the heatsink. If the temperature exceeds a safe operating level, this indicator lights and the input signal is muted to allow the amplifier to cool. When the temperature cools to a safe level once again, the fault protection circuit deactivates, the fault LED turns off and the MX amplifier returns to normal operation.

When the amp is in fault mode, the power LEDs will remain lit, indicating that the unit is still powered on despite the lack of output.



Activation of the fault LEDs is an indication that you should take steps to avoid continued thermal problems. See “Thermal Considerations” on the following page.

General Precautions

AC Power Requirements

The amplifier's power cord should be plugged into an AC outlet properly configured with the voltage required for your particular model.

Be sure the AC outlet can supply enough current to allow full power operation of all the amplifiers plugged into it.



WARNING: Disconnecting the plug's ground pin is dangerous. Don't do it!

The AC current demand of an amplifier varies depending on several factors, including the load impedance, the crest factor, and the duty cycle of the program material. Under typical conditions reproducing rock music where musical peaks are just below clipping, the amplifiers require the following average currents:

MX2500 = 8 A
MX3500 = 11 A

It is recommended that a stiff (robust) supply of AC power be used because the amplifier places high current demands on the AC line. The more power that is available on the line, the louder the amplifier will play and the more peak output power will be available for cleaner, punchier bass.

If more than one amplifier is sharing an AC outlet, avoid turning them all on at the same time. Rather, sequence them on, one at a time, to prevent popping the circuit breaker (due to in-rush current).

Thermal Considerations

The power amplifier is fan cooled. Air is drawn through the rear panel vents to cool down the amplifier heatsinks.

When installing, be sure to allow sufficient air space around the rear of the amplifier for adequate cooling for the heatsinks. Leave at least one rack space above and below, and at least six inches behind and in front of the chassis to allow proper ventilation.

If the amplifier should overheat, a thermal switch turns off the power amplifier, allowing the heatsink to cool down. Once the amplifier has cooled to a safe operating temperature, the thermal switch resets and reactivates the amplifier. If this should occur, identify the cause of the problem and take corrective action. For example:

- Provide better ventilation
- Install a fan in the rack to move more air
- Make sure the amplifier is not overloaded with too low of a load impedance or by a short circuit on the speaker line

Rack Mounting

MX Series amplifiers are designed to be mounted in a standard 19 inch rack. They require two rack spaces (2U = 3.5"). They also require up to 14.7" depth inside the rack. When designing the rack, put the heavier items at the bottom and the lighter items toward the top.

Secure the front panel of the amplifier to the front of the rack using four screws with soft washers to prevent scratching the panel. In addition, because of the weight of the amplifier, you must secure the rear support brackets of the amplifier to the back of the rack. You could use a support rail or shelf across the back of the rack, or angle brackets attached between the rear support rails and the rear rails of the rack. This is recommended for all components mounted in a rack that is going to be moved frequently.

Care and Maintenance

Your MX Series amplifier will provide many years of reliable service if you follow these guidelines:

- **Testing:** Periodically test the system for proper performance. A simple test is to play a CD through it using well-defined, articulate, wide-range program material. Listen to ensure all drivers are working properly and for any evidence of distortion or other extraneous sounds. Test at several volume levels: very low, normal, and high.
- **Avoid exposing the amplifiers to moisture.** If they are set up outdoors, be sure they are under cover if rain is expected.
- **Use a clean, dry cloth to clean the amplifier.** Only do this when the power is turned off. Avoid getting moisture into any of the openings of the amplifier, particularly where the fans are located.

Appendix A: Service Information

If you think your MX Series amplifier has a problem, please check out the following troubleshooting tips and do your best to confirm the problem. Visit the Support section of our website (www.mackie.com/support) where you will find lots of useful information such as FAQs and other documentation. You may find the answer to the problem without having to part with your amplifier.

Troubleshooting

No power

- Our favorite question: Is it plugged in? Make sure the power cord is securely seated in the IEC socket and plugged all the way into the AC outlet and that the AC outlet is live [check with a tester or lamp].
- Our next favorite question: Is the power switch on? If not, try turning it on.
- Make sure the line cord is securely seated in the line cord socket and plugged all the way into the AC outlet.
- Are the power LEDs on the front panel illuminated? If not, make sure the AC outlet is live. If so, refer to “No sound” below.
- If nothing is illuminated, and you are certain that the AC outlet is live, it will be necessary to have your amplifier serviced. There are no user serviceable parts inside. Refer to “Repair” on the next page to find out how to proceed.

No sound or low output

- Loudspeaker cables or connectors are not wired correctly or they are faulty. Check all cabling, referring to these instructions for the correct connections. The best way to check a suspect cable is to swap it with a known good cable. Read the loudspeaker’s input panel to verify correct cable connections.
- Loudspeaker is not working. Connect the loudspeaker cable to a known good loudspeaker leaving all equipment set to the same levels. If the problem disappears, the loudspeaker is probably not working correctly.
- Is the level knob for the input source turned all the way down? Verify that all the volume controls in the system are properly adjusted. Look at the level meter to ensure that the mixer is receiving a signal.
- Is the signal source turned up? Make sure the signal level from the mixing console (or whatever device immediately precedes the amplifier) is high enough to produce sound in the amplifier. The SIG

LEDs should be blinking to indicate that signal is present.

- If the speakers are wired for bridge mode, make sure the amp mode switch is set to bridge.
- If the amplifier has become extremely hot, the thermal protection circuit may have activated. Allow the amplifier to cool down and normal operation should resume.
- Make sure the mixer does not have a mute on or a processor loop engaged. If you find something like this, make sure the level is turned down before disengaging the offending switch.
- Has it shut down? Make sure there is at least six inches of free space behind each MX amplifier.

Poor or distorted sound

- The power amplifier is clipping. The signal level is exceeding the limits of the system and you must reduce the level from the mixer or signal source.
- The loudspeaker(s) are being overdriven. Turn down the volume to see if the distortion goes away. If not, review the owner’s manual for the loudspeakers to ensure that they are a proper match for the amplifiers.
- Ensure that no equipment in the signal chain is being overdriven. For example: input(s) or summing bus in the mixing console, equalizers, etc.
- Is the input connector plugged completely into the jack? Be sure all connections are secure.
- If possible, listen to the signal source with headphones plugged into the console. If it sounds bad there, the problem is not in the amplifier.

Poor bass performance

- Check the polarity of the speaker cable connections. You may have your positive and negative reversed at one end of one speaker cable.
- Poor bass performance may be the result of bad AC power. See the section titled ‘AC Power Requirements’ on the previous page for further details.

MX Series Amplifiers Service Information Continued...

Noise / Hum

- Check the signal cable between the mixer and the amplifier. Make sure all connections are good and sound.
- Make sure none of the signal cables are routed near AC cables, power transformers, or other EMI-inducing devices.
- Is there a light dimmer or other SCR-based device on the same AC circuit as the amplifier? Use an AC line filter, or plug the amplifier into a different AC circuit.
- If possible, listen to the signal source with headphones plugged into the console. If it sounds noisy there, the problem is not in the amplifier.
- Is there a cable-TV audio feed in your system? An incorrect ground may cause a "ground loop" hum.
- Sometimes it helps to plug all the audio equipment into the same AC circuit so they share a common ground.

One side is louder than the other

- Are both level controls set to the same position?
- Check your source signal to make sure the left and right signals are balanced.
- Are the speaker impedances matched? Different speaker loads can cause different volume levels on each side.
- Try switching sides: Turn off the amp, swap the speaker cables at the amp and turn the amp back on. If the same side is still louder, the problem is with your speaker cabling or the loudspeakers. If the other side is louder now, the problem is with the mixer, the loudspeaker processor, the amp, or the line-level cabling.

As the music gets loud, the amp shuts down

- Make sure the OL LEDs are not lighting continuously. If so, turn down the signal source or the amp level controls.
- Can the amp breathe? It needs plenty of fresh air to stay cool. Do not block the ventilation holes.

Other Issues

- Please email or call Technical Support if you are having any other issue not listed here:
 - o mackie.com/support-contact
 - o 1-800-898-3211

Repair

For warranty service, refer to the warranty information on page 19.

Non-warranty service is available at a factory-authorized service center. To locate the nearest service center, visit www.mackie.com/support/service-locator. Service for MX Series amplifiers living outside the United States may be obtained through local dealers or distributors.

If you do not have access to our website, please call our Tech Support department at 1-800-898-3211 (normal business hours, Pacific Time), to explain the problem. They will tell you where the nearest factory-authorized service center is located in your area.

Appendix B: Technical Information

MX Series Amplifiers Specifications

Continuous Sine Wave Average Output Power, per channel, both channels driven, 20 Hz to 20 kHz

MX2500:	
8 Ω Bridged Power:	1500 W
8 Ω Dual Power:	500 W
4 Ω Dual Power:	750 W
MX3500:	
8 Ω Bridged Power:	2700 W
8 Ω Dual Power:	1000 W
4 Ω Dual Power:	1350 W

Frequency Response

@1 W:	20 Hz – 20 kHz (+0, -1 dB)
-------	----------------------------

Distortion (THD)

20 Hz – 20 kHz:	<0.5%
-----------------	-------

Signal-to-Noise Ratio (20 Hz – 20 kHz)

MX2500:	>104 dB below rated power, A-weighted
MX3500:	>105 dB below rated power, A-weighted

Damping Factor

>200 @ 10 Hz to 400 Hz into 8 Ω

Slew Rate

>10V/us

Input Gain

MX2500:	33 dB
MX3500:	37 dB

Input/Output

Input Type:	Female XLR Balanced
XLR Impedance:	20 kΩ balanced 10 kΩ unbalanced
Output Type:	Speakon® Male XLR Balanced [Thru]
Speakon Out Impedance:	600 Ω balanced
XLR Thru Out Impedance:	600 Ω balanced

Line Input Power

Detachable line cord	
MX2500:	~230–240VAC, 50–60 Hz, 500W @ 8 Ω
MX3500:	~230–240VAC, 50–60 Hz, 1000W @ 8 Ω
AC Connector:	3-pin IEC 250 VAC, 10 A male

Safety Features

Input Protection:	Peak and RMS limiting, power supply and amplifier thermal protection
Cooling:	Variable-speed fans with back-to-front airflow
Channel Display LEDs:	Power, Signal, Clipping, Fault

Physical Properties

MX2500:	
Height:	3.5 in / 88 mm
Width:	19.0 in / 483 mm
Depth:	11.9 in / 303 mm
Weight:	30.4 lb / 13.8 kg
MX3500:	
Height:	3.5 in / 88 mm
Width:	19.0 in / 483 mm
Depth:	14.6 in / 370 mm
Weight:	40.3 lb / 18.3 kg

Disclaimer

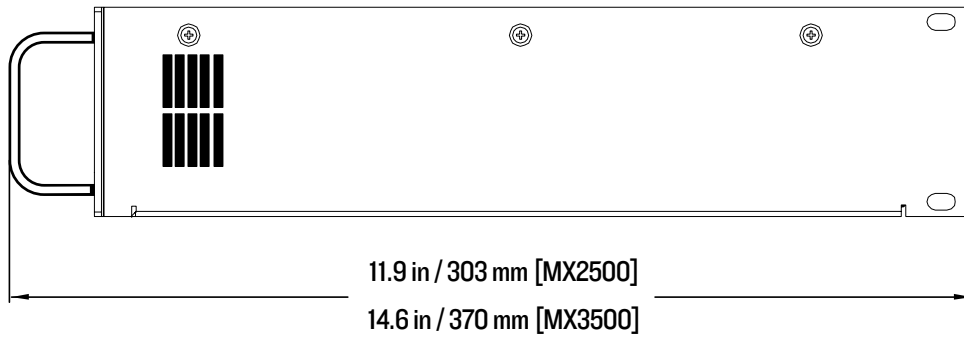
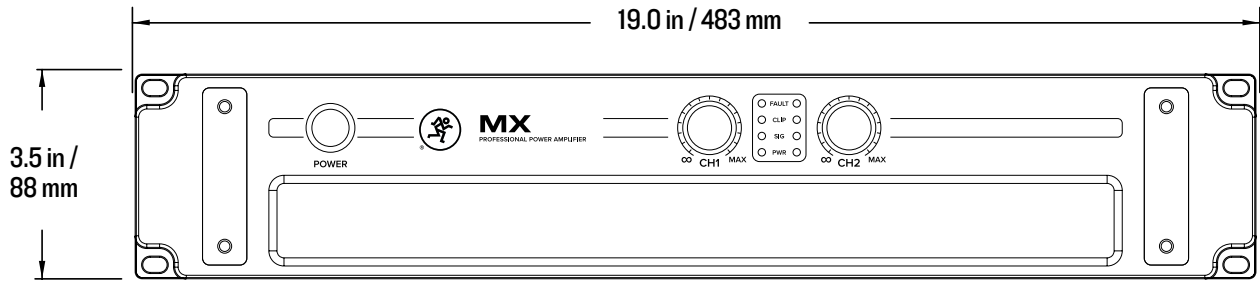
Since we are always striving to make our products better by incorporating new and improved materials, components, and manufacturing methods, we reserve the right to change these specifications at any time without notice.

The “Running Man” figure is a registered trademark of LOUD Audio, LLC.

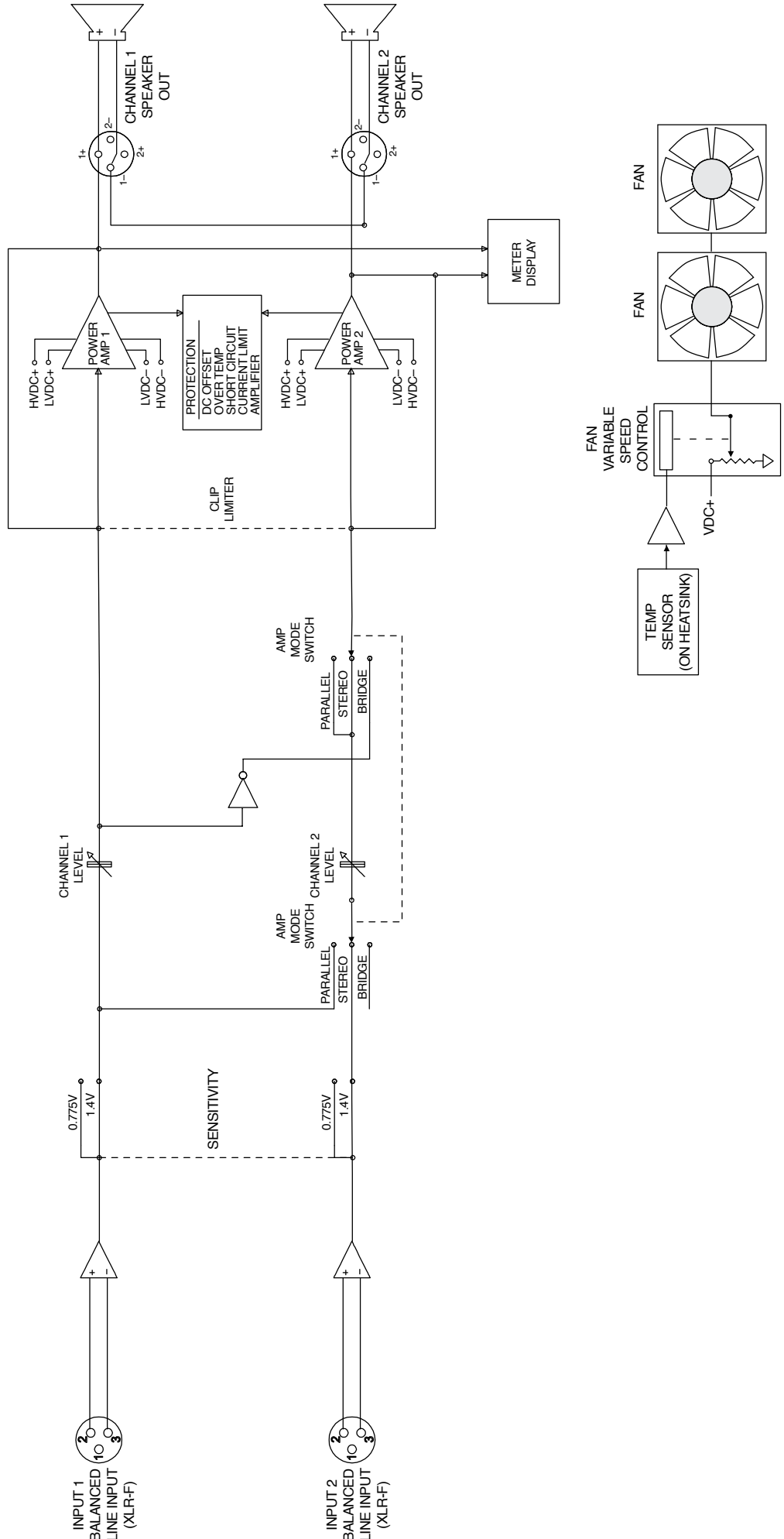
All other brand names mentioned are trademarks or registered trademarks of their respective holders, and are hereby acknowledged.

©2019 LOUD Audio, LLC.
All Rights Reserved.

MX Series Amplifiers Dimensions



MX Series Professional Power Amplifiers



Limited Warranty

Please keep your sales receipt in a safe place.

This Limited Product Warranty ("Product Warranty") is provided by LOUD Audio, LLC ("LOUD") and is applicable to products purchased in the United States or Canada through a LOUD-authorized reseller or dealer. The Product Warranty will not extend to anyone other than the original purchaser of the product (hereinafter, "Customer," "you" or "your").

For products purchased outside the U.S. or Canada, please visit www.mackie.com to find contact information for your local distributor, and information on any warranty coverage provided by the distributor in your local market.

LOUD warrants to Customer that the product will be free from defects in materials and workmanship under normal use during the Warranty Period. If the product fails to conform to the warranty then LOUD or its authorized service representative will at its option, either repair or replace any such nonconforming product, provided that Customer gives notice of the noncompliance within the Warranty Period to the Company at: www.mackie.com or by calling LOUD technical support at 1.800.898.3211 (toll-free in the U.S. and Canada) during normal business hours Pacific Time, excluding weekends or LOUD holidays. Please retain the original dated sales receipt as evidence of the date of purchase. You will need it to obtain any warranty service.

For full terms and conditions, as well as the specific duration of the Warranty for this product, please visit www.mackie.com.

The Product Warranty, together with your invoice or receipt, and the terms and conditions located at www.mackie.com constitutes the entire agreement, and supersedes any and all prior agreements between LOUD and Customer related to the subject matter hereof. No amendment, modification or waiver of any of the provisions of this Product Warranty will be valid unless set forth in a written instrument signed by the party to be bound thereby.

Need help with the MX2500 • MX3500 amplifier?

- Visit www.mackie.com/support to find: FAQs, manuals, addendums, and other documents.
- Email us at: www.mackie.com/support-contact
- Telephone 1-800-898-3211 to speak with one of our splendid technical support chaps (Monday through Friday, normal business hours, Pacific Time).



16220 Wood-Red Road NE
Woodinville, WA 98072 • USA
Phone: 425.487.4333
Toll-free: 800.898.3211
Fax: 425.487.4337
www.mackie.com
