

Warranty

Knoll Systems warrants MX2275e amplifiers sold in the USA and Canada by authorized Knoll dealers to be free of defects in materials and manufacturing. This warranty extends for three full years from the date of purchase by the original consumer. Any products returned to Knoll Systems and found to be defective by Knoll Systems within the warranty period will be repaired or replaced at Knoll Systems decision, at no charge. Knoll Systems will not be responsible for the actual cost of installation or removal of the product, nor for any incidental or consequential damages. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you. This warranty gives you specific legal rights. You may have additional legal rights that vary from state to state.

Specifications:

Inputs	Gold RCA jacks with adjustable gain
Input impedance	50k Ω
Outputs	detachable plug
Output power	275 watts RMS per channel (4 Ω)
	205 watts RMS per channel (8 Ω)
Peak output power	350 watts per channel (8 Ω)
Ideal impedance	4 - 8 Ω
Frequency response	10 Hz - 40 kHz +/- 1dB (1w)
S/N ratio	over 108 dB A weighted (250 watts)
THD distortion	less than 0.1% 20 Hz to 20 kHz
IMD distortion	less than 0.01% 60 Hz 7 kHz 4:1 (SMPTE)
Dimensions	17" x 3.5" x 11.5" (432 x 89 x 292mm)
Fan Noise	quiet 26 dBA
Power	850 watts at 117 VAC or 230 VAC
Weight	21 lbs (9.5 kg)

Note: Specifications subject to change without notice.

Knoll Systems

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MX2275e

High Current Stereo Amplifier Installation Instructions v1.0



Warning: To be installed and/or used in accordance with appropriate electrical codes and regulations.

Description: Designed primarily for the custom install industry, the MX2275e is for use with high power speakers. It features excellent sound quality thanks to advanced class A/B circuitry. To save power, it features an internal Eco-SYSTEM circuit to automatically turn off power to the amplifier when it is not needed. The automatic turn on time is less than 20/1000 of a second, so no music is ever lost. Two optional modules are available for the MX2275e. One allows the use of a wall mounted rotary volume control. The other is a RS232 controller board that controls the amplifier power off/on, volume, balance, bass and treble allowing it to be controlled by whole home controllers, tablets, smart phones etc. The MX2275e amplifier is designed to meet the amplifier needs of custom installed systems where high-quality sound is a specific requirement.

Key Features:

- **Automatic protection circuitry.** Each MX2275e channel is individually and fully protected against low impedance, overheating, overloading, over voltage and under voltage. The protection circuitry automatically restores the amplifier channel as soon as its parameter returns to the safe operating area.
- **Individual input gain adjustment.** Each channel features an input gain adjustment pot to adjust each channel for gain and speaker sensitivity variations.
- **Eco-System power on/off.** The MX2275e has defeatable circuitry to automatically turn the power off and on as needed, saving energy.
- **Stackable 17" chassis.** 19" rack ears available.
- **Two optional control modules.** MX2275v attaches to a rotary decora style wall mounted volume control (available in white, light almond, almond, ivory and black colors). MX2275rs has a RS232 port that controls the amplifier power off/on, volume, balance, bass and treble allowing it to be controlled by whole home controllers, tablets, smart phones etc.

Important Safety Instructions:

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Read all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with dry cloth.
- 7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) 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 prongs are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11) Only use attachments/accessories specified by the manufacturer.
- 12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, exercise caution when moving the cart/apparatus combination to avoid injury from tip-over.
- 13) Unplug this apparatus during lightning storms or when not used for long periods of time.
- 14) 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.
- 15) Under no circumstances should the output terminals of the amplifier be short-circuited.
- 16) Be sure that the loudspeakers connected can handle the output power of the amplifier at the loudspeakers rated impedance. The warranty on the amplifier does not cover damage to loudspeakers that have inadequate power handling capabilities.
- 17) Where an all-pole MAINS SWITCH is used as the disconnect device, the location on the apparatus and the function of the switch shall be described, and the switch shall remain readily operable.
- 18) A push button is used to turn the power off and on.
- 19) A LED is used to show when the apparatus is powered on.

CAUTION: These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

WARNING: This product may contain chemicals, including lead, known to the State of California to cause birth defects or other reproductive harm.
Wash hands after handling.

Hum and noise

In most cases, one of the following suggestions should help you solve a hum noise in your system. Please try these steps in the order shown; proceeding from one step to the next if the prior suggestion does not eliminate the problem.

Suggestion #1

To determine if a cable TV connection is responsible for the hum, first turn off all the components. Disconnect the cable TV feed to your system at the first place where it connects to your components. Alternatively, disconnect the cable TV wire where it is connected at the wall outlet. Turn your system back on, and listen if the hum has disappeared. If removing the cable TV feed has eliminated the hum, you will need to insert a Ground Loop Isolator (Knoll model GB634) before reconnecting the cable TV feed, or contact your cable TV operator to see if they can better isolate your cable feed.

Suggestion #2

Turn off all components in your system and then disconnect the input cables at the amplifier. Turn the amplifier back on to see if the hum is still present. If the hum disappears, the fault may be in the input cables used. Try replacing them with cables that have better shielding, and make certain that the input cables are not running on top of any AC power cords. Change the cables one at a time to determine if one or all cables are responsive. If the hum disappears when the input cables are disconnected but returns after the cables are changed and the system reconnected, your source device may be causing the problem.

Suggestion #3

Poor grounding of the electrical system in your home may also cause ground loop problems, particularly when there are multiple components with three prongs, grounded, power cords. Unplug these components one at a time, and see if one or all of them is causing the problem. The ultimate solution to this type of problem is to rewire your house with an isolated, star type-grounding configuration. Knoll understands that this may be impractical and expensive. In some instances, the use of an approved AC power isolation transformer of sufficient capacity may solve this problem.

Warning: If you suspect that the grounding system in your home's electrical wiring is causing the hum problem, it is important that you do not make any changes to the wiring. Only a licensed electrician should make any changes to household wiring and they must be made in full compliance with all local building, safety and electrical codes.

Knoll Systems service information

The MX2275e amplifier does not contain any user serviceable parts inside. If you suspect a problem that may require servicing, contact us at www.knollsystems.com/contact.html, or by phone at 604 940 1689.

Troubleshooting

If a problem is encountered with the MX2275e, the most expedient procedure is to locate the problem and if possible repair it before requesting service. Be sure to carefully check other system components such as controllers, CD players, volume controls, wiring, speakers, etc. that may be at fault.

Problem	Action
Power LED does not light - no sound	1. Check that the MX2275e is plugged in. 2. Test the AC outlet with a lamp. 3. Try adjusting the "SENS" on the amplifier back. 4. Check MX2275e power button on (in).
Sound cuts out	1. Verify speaker impedance is 4-16 Ω. Changing speakers may be required. 2. Check if the MX2275e feels hot. If it is hot; increase cooling - see Installation.
Sound is distorted	1. Turn the volume down. 2. Check speakers for damage. 3. Check inputs for proper levels. MX2275e gain and source output level may have to be adjusted. 4. Speakers may be less than 4 Ω.
MX2275e does not turn off	1. Push MX2275e power switch off (out). 2. Eco-System may need "SENS" adjustment on amplifier back.
Speaker pops when amp turned on or off	1. Speaker may need resistor placed across terminal. Suggest 2k0 1/4 w. Discharges speaker internal capacitor.

Installation

Installing the MX2275e should be relatively easy. With a bit of planning, it will give trouble free service for years.

1. The most important consideration when installing the MX2275e is cooling.

The MX2275e has a lot of power packed into a small chassis size. When installing it in an equipment stack, it should be the top component. It requires at least 3"-5" of space above the amplifier to allow for adequate convection cooling.

2. Amplifiers should always be the top components in the system.

3. If MX2275e channels frequently shutdown due to overheating, install a fan directed up from the MX2275e bottom center.

4. Never operate the MX2275e on its side, as the cooling potential drops significantly when operated this way.

5. Connect the MX2275e inputs to the source component outputs with good quality, short as possible RCA jack cables.

6. Connect the MX2275e speaker outputs to speakers using good quality speaker wire. Minimum 14 gauge copper wire is recommended with 12 gauge minimum for runs over 30' (10m).

Note: Ideally the MX2275e likes 6-8 Ω loads. Connecting to 4 Ω loads won't hurt the MX2275e but it may occasionally shutdown due to overloading. Never connect to speaker loads less than 4 Ω .

7. Individually adjust the channel gains as required. Ideally, all gains are fully on (fully clockwise).

8. Make sure the speakers in each room are connected in phase with the amplifier + going to the speaker +. Out of phase speakers give unstable imaging and poor bass response.

9. Connect the AC power into an outlet that supplies at least 8 amps (120 VAC mains) or 4 amps (230 VAC mains), 1000 watts, dedicated to each MX2275e.

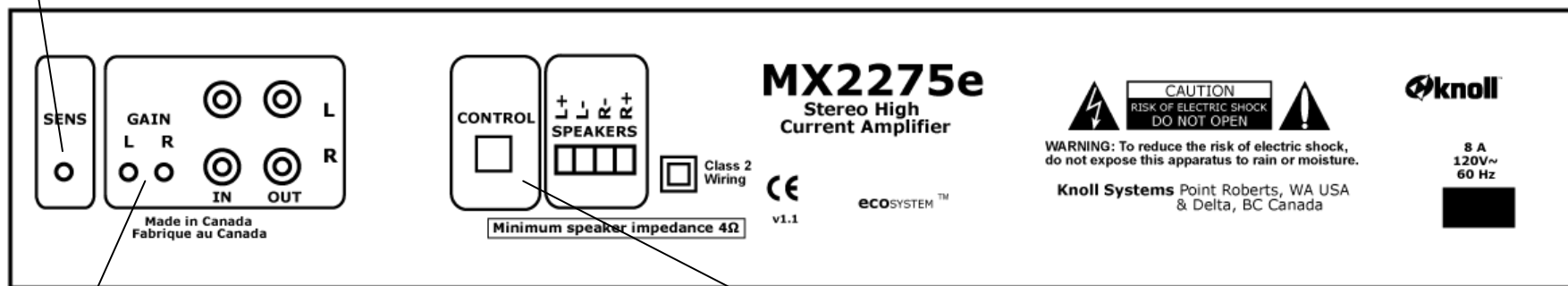
Caution: Never listen to sound that is distorted. If distorted sound is heard, turn the volume down immediately or speaker and/or amplifier damage can occur that is not covered by the warranty. If this problem persists, contact your dealer.

User adjustments and service: There are no user adjustments on the MX2275e. Your installer may make certain gain level adjustments on the rear panel.

Caution: The MX2275e contains no user serviceable parts, so do not attempt to open or repair the MX2275e. Refer servicing to a qualified technician only or contact the factory for information.

Start with the "SENS" Adjusted to the middle. If the amp takes too long or too little time to shut down adjust the "SENS" pot.

Speaker wire should be 14 gauge minimum and if the wire runs are longer than 30' (10 meters) the wire should be larger, typically 12 gauge or larger.



Gains are normally left on full (clockwise), but may be adjusted down. Line level inputs are directly connected to the line level outputs to the left.

Caution: NEVER connect the MX2275e to impedances less than 4 Ω or amplifier damage not covered by the warranty may occur.

The MX2275e is designed to work in three modes. Without an optional internal module it is an amplifier with Eco-System power savings. With one module an external wall mounted rotary volume control controls the volume (connected by a single cat5e wire). With the second module, control is from an RS232 port and the amplifier can be completely controlled by a laptop, smart phone, tablet or whole house controller.