



MONOLITH™

Monolith™ 11X Multi-Channel Power Amplifier



Model 33307

User's Manual

CONTENTS

SAFETY WARNINGS AND GUIDELINES	3
INTRODUCTION.....	4
FEATURES.....	4
CUSTOMER SERVICE.....	5
PACKAGE CONTENTS	5
PRODUCT OVERVIEW.....	6
CABLE PREPARATION.....	7
Speaker Wires.....	7
RCA or XLR Cables	8
Trigger Cables	8
REMOTE POWER ON.....	8
INSTALLATION.....	9
MAIN CIRCUIT BREAKER	10
PROTECTION CIRCUITRY	10
TROUBLESHOOTING	11
TECHNICAL SUPPORT.....	11
SPECIFICATIONS.....	12
REGULATORY COMPLIANCE.....	13
Notice for FCC.....	13
Notice for Industry Canada.....	14

SAFETY WARNINGS AND GUIDELINES

- This device is intended for indoor use only.
- Do not expose this device to water or moisture of any kind. Do not place drinks or other containers with moisture on or near the device. If moisture does get in or on the device, immediately unplug it from the power outlet and allow it to fully dry before reapplying power.
- Do not touch the device, the power cord, or any other connected cables with wet hands.
- Do not expose this device to excessively high temperatures. Do not place it in, on, or near a heat source, such as a fireplace, stove, radiator, etc. Do not leave it in direct sunlight.
- This device ventilates excessive heat through the slots and openings in the case. Do not block or cover these openings. Ensure that the device is in an open area where it can get sufficient airflow to keep from overheating.
- Do not place or install this device in an area where it can be exposed to excessive amounts of dust, humidity, oil, smoke, or combustible vapors.
- Prior to operation, check the unit and power cord for physical damage. Do not use if physical damage has occurred.
- Take care to prevent damage to the power cord. Do not allow it to become crimped, pinched, walked on, or become tangled with other cords. Ensure that the power cord does not present a tripping hazard.
- Before plugging the unit into a power outlet, ensure that the outlet provides the same type and level of power required by the device.
- This device uses a grounded power cord and requires a ground connection for safe operation. Ensure that the power source has a proper ground connection. Do not modify the plug or use a "cheater" plug to bypass the ground connection.
- Ensure that power is turned off and disconnected before making any electrical connections.

- Do not plug this device into the switched output of a preamplifier or other audio component. This amplifier requires higher current levels than these devices are designed to handle.
- Unplug this device from the power source when not in use.
- Never unplug the unit by pulling on the power cord. Always grasp the connector head or adapter body.
- Clean using a soft, dry cloth only. Do not use chemical cleaners, solvents, or detergents. For stubborn deposits, moisten the cloth with warm water.
- This device has no user serviceable parts. Do not attempt to open, service, or modify this device.

INTRODUCTION

Thank you for purchasing this Monolith Multi-Channel Power Amplifier!

This power amplifier features eleven independent channels, three of which deliver 200 watts and eight of which deliver 100 watts of power into 8 ohm loads. A trigger input jack allows for remote power on/power off when a source device is powered on. Each channel features an optically coupled protection circuit, to prevent damage to the amplifier or speakers.

FEATURES

- Three 200-watt and eight 100-watt amplifier modules
- Full rated power at 8 ohm loads
- Rated for 4 ~ 16 ohm loads
- 20Hz ~ 20kHz ± 0.1 dB frequency response
- Gold plated RCA input and speaker output connectors
- Remote power-on trigger option
- Optically coupled short circuit protection

CUSTOMER SERVICE

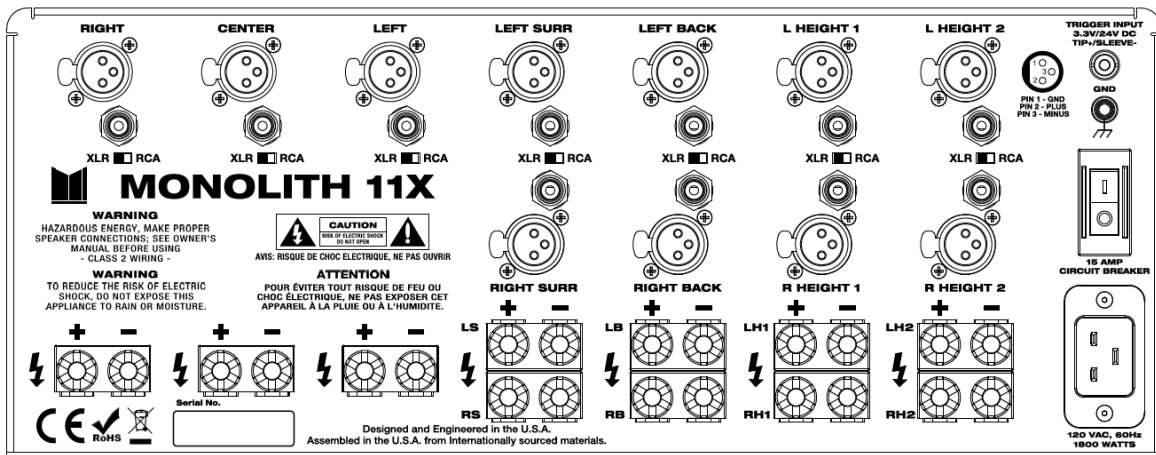
The Monoprice Customer Service department is dedicated to ensuring that your ordering, purchasing, and delivery experience is second to none. If you have any problem with your order, please give us an opportunity to make it right. You can contact a Monoprice Customer Service representative through the Live Chat link on our website www.monoprice.com during normal business hours (Mon-Fri: 5am-7pm PT, Sat-Sun: 9am-6pm PT) or via email at support@monoprice.com

PACKAGE CONTENTS

Please take an inventory of the package contents to ensure you have all the items listed below. If anything is missing or damaged, please contact Monoprice Customer Service for a replacement.

- 1x Monolith 11x multi-channel power amplifier
- 1x AC power cord (NEMA 5-15 to IEC 60320 C19)
- 1x User's manual

PRODUCT OVERVIEW



INPUTS: XLR and RCA line-level inputs for connection to the preamplifier outputs on a dedicated preamplifier or AV receiver. The **XLR/RCA** switches switch between the XLR and RCA inputs. You can use a mix of XLR and RCA inputs.

OUTPUTS: Paired 5-way binding posts for connecting the speakers.

TRIGGER INPUT: 3.5mm TS jack for connection to the trigger output of a source device. The presence of voltage on this input will cause the amplifier to power on. The amplifier will automatically power down into standby mode after the trigger signal has been removed.

GND: Chassis ground. While a grounding wire is rarely needed, occasionally there is a hum issue when components are interconnected. This can be remedied by tying their chassis grounds together.

CIRCUIT BREAKER: The switch is used to apply or remove power to the amplifier. By contrast, the **Power** switch on the front panel is used to switch the amplifier between standby mode and full power on.

POWER INPUT: The IEC 60320 C20 panel connector connects to the included high-current AC power cable.

POWER SWITCH (Front Panel, not pictured): Switches the amplifier between standby mode and full power on.

CABLE PREPARATION

You will need several cables for this installation. None of the cables or connectors mentioned in this section are included with the system.

Important Safety Note! If you plan on running any of these cables through the walls, through a connecting floor, or inside an air duct, they should be rated for In-Wall, Riser (between floors), or Plenum (air duct) use in commercial installations. For residential installations, an In-Wall rating is sufficient for all circumstances. Using unrated or improperly rated cables could accelerate the spread of any fire and could nullify insurance claims.

Speaker Wires

You will need speaker wires to connect each speaker to the amplifier. The size (AWG) of wire you choose depends on the distance from the amplifier to the speakers, the speaker impedance, and the physical limits of the terminals at each end.

Other than saving a few pennies of cost or grams of weight per foot, there is no reason to use anything other than the thickest wire possible. This amplifier uses 5-way binding post connectors, which can accept bare wire, spade lugs, banana plugs, and pin plugs. For anything other than extremely short speaker wire runs, you should use at least 14AWG wire, but preferably 12AWG or 10AWG, depending on which gauges your speakers can accept.

Whichever speaker wire you get, make sure that it has marks to identify one conductor from another. Most speaker wire uses a colored stripe to identify one of the conductors. The identified conductor is usually used for the positive (+/red) connection and the other for the negative (-/black) side.

Note: When cutting speaker wire, ensure that the length of each wire is the same. This ensures that the overall impedance of each channel is identical. If there is any excess speaker wire, it should not be coiled, as it could create an antenna to receive stray radio signals. Instead, snake the excess wire back and forth.

RCA or XLR Cables

You will need RCA or XLR cables to connect the preamp outputs on your preamplifier to the inputs on this amplifier. In most cases, ordinary RCA cables are sufficient. However, if there is a significant distance between the amplifier and the preamplifier, it is recommended to use RCA cables manufactured using shielded RG6 or RG59 cable. For long distance cable runs, balanced XLR cables are highly recommended.

Trigger Cables

This amplifier features a low voltage trigger input, which can switch the amplifier from standby mode into full power on mode whenever the trigger signal is detected. The trigger signal consists of a low-current, low-voltage signal (between 3.3 and 24 VDC) applied to the input, which is carried between components with a cable that terminates in a 3.5mm TS plug.

REMOTE POWER ON

This amplifier features a trigger input, which is used to switch the amplifier between standby mode and full power on mode. The input is a 3.5mm TS jack that accepts a voltage level from 3.3 to 24 VDC. Some source devices feature a trigger output, which can be used to trigger the amp.

If your source device does not contain a trigger output, but does have a switched AC outlet, you can obtain a trigger adapter, which consists of an AC adapter with a 3.5mm TS plug on the end of the cord. This adapter can then provide the necessary trigger signal whenever the component it is plugged into is turned on.

To use the amplifier with remote power on, the **Circuit Breaker** switch on the rear panel should be in the **ON** position and the Power switch on the front panel in the **Standby** position.

To override the remote power on feature or to use the amp without it, simply use the **Power** switch on the front panel to turn the amp on and off (standby).

INSTALLATION

Perform the following steps to install this amplifier into an audio system.

1. Power off and unplug all equipment that will be connected to this amplifier.
2. Prepare lengths of speaker wire (not included) to connect each of the output channels to its respective speaker.
3. Using a two-conductor speaker wire, connect one end to the input terminals on the speaker, then connect the other end to the **Output** terminals on the amplifier. Take care to maintain polarity with positive to positive and negative to negative.
4. Repeat step 3 for each of the other speakers.
5. Using a single XLR or RCA interconnect cable (not included), plug one end into the **Input** on the amplifier, then plug the other end into the preamplifier output of the same name.

Example: Connect the Center channel input on the amplifier to the Center channel output on the preamplifier.

6. Repeat step 5 for each of the other channels.
7. For each channel, set the **XLR/RCA** switch to the appropriate position, depending on which type of cable is used.
8. (Optional) Using a two-conductor 3.5mm TS cable (not included), plug one end into the **Trigger Input** on the amplifier, then plug the other end into the trigger output on your source device.
9. Ensure that the **Circuit Breaker** switch is in the **OFF** position and that the **Power** switch on the front panel is in the **Standby** position.
10. Using the included AC power cable, plug the C19 connector on the cable into the C20 panel connector on the amplifier, then plug the other end into a nearby AC power source.

Warning! Do not plug the amplifier into a switched outlet on a preamplifier or other audio component. The amplifier should be plugged directly into an AC wall outlet.

11. Ensure that the volume on the preamplifier is set to the minimum level.

12. Power on all equipment connected to the amplifier, then flip the **Circuit Breaker** on the amp to the **ON** position. The power button LED will blink until the circuitry is properly warmed up. Once the LED stops blinking and illuminates steadily, the amplifier has finished the start-up process and is ready for operation.

Note: It is recommended to always turn the amplifier on last and to turn it off first whenever powering your audio system on or off. This ensures that any pops or transient spikes, which could cause damage to the delicate speaker coils, are not sent to your speakers.

Congratulations, your amplifier is connected and ready for use!

MAIN CIRCUIT BREAKER

The **Circuit Breaker** switch on the rear panel doubles as a master power switch. If the circuit breaker trips into the off position, try flipping it back on. If it immediately trips back off, unplug the amplifier from the power source and have it serviced.

PROTECTION CIRCUITRY

If the amplifier senses a short on one of the speaker wires the built-in protection circuit will cut off audio output. The circuit will continue to monitor the line and will stay cut off as long as the short continues to exist. If this occurs, inspect the speaker wire connections at each end and fix any shorts that exist. Once the short is repaired, the amplifier will continue to operate as normal.

TROUBLESHOOTING

Q1. The amplifier will not power on.

A1. Verify that the **Circuit Breaker** switch on the rear panel is in the **ON** position. Check to ensure that the AC power cord is fully plugged in at each end. Verify that the AC power outlet is live by plugging in another device, such as a lamp.

Q2. Audio from some channels, but not others.

A2. Try swapping the speaker from a good channel to the output of the bad channel to see if the problem is with the input or output. Check that the RCA input cable is firmly seated on the connector at each end. Try swapping out the input RCA cable with a known good cable. Check the speaker wire connections at each end. Try swapping out the speaker wire with a known good one.

Q3: Audio plays, then cuts off.

A3: Check the speaker wire connections for stray wire strands, which could cause a short circuit.

TECHNICAL SUPPORT

Monoprice is pleased to provide free, live, online technical support to assist you with any questions you may have about installation, setup, troubleshooting, or product recommendations. If you ever need assistance with your new product, please come online to talk to one of our friendly and knowledgeable Tech Support Associates. Technical support is available through the online chat button on our website www.monoprice.com during regular business hours, 7 days a week. You can also get assistance through email by sending a message to tech@monoprice.com

SPECIFICATIONS

Model	33307
Total Number of Channels	11
EIA 1kHz Output Power at 8 Ohms*	250 watts (3 channels)
EIA 1kHz Output Power at 4 Ohms*	375 watts (3 channels)
FTC Full Bandwidth Output Power at 8 Ohms**	200 watts (3 channels) or 100 watts (8 channels)
FTC Full Bandwidth Output Power at 4 Ohms**	300 watts (3 channels)
Input Sensitivity for Full Rated Power	1.6 Volts
Frequency Response at Rated Output	20Hz ~ 20kHz \pm 0.1dB
Phase Response	+5 to -15 degrees from 20Hz to 20kHz at 1 watt
Signal-to-Noise Ratio "A-Weighted"	Greater than 120dB below rated FTC Full Bandwidth Power
Total Harmonic Distortion (THD)	Less than 0.03% at full rated FTC power Less than 0.005% at full EIA power at 1kHz
Intermodulation Distortion (IMD)	Less than 0.03% at full rated FTC power Less than 0.005% at full EIA power at 1kHz
Toroidal Transformers	1025VA (3 channels) or 940VA (8 channels)
Total Capacitance	22,400 μ F
Load Impedance	Safe with all types of loads Rated for 4 to 16 ohms
Power Bandwidth	FTC +0, -3dB from 5Hz ~ 100kHz
Damping Factor	Greater than 400 from 10Hz ~ 400Hz
Crosstalk	Greater than 100dB from 20Hz ~ 20kHz
Gain	Voltage gain of +28dB

Slew Rate	> 50V/ μ s
Input Impedance	28 kilohms (nominal)
Remote Trigger Voltage	3.3 ~ 24 VDC at 5mA or greater
DC Output Offset	Less than \pm 5mV
Input Power	120 VAC (nominal)
Chassis Dimensions	17.0" x 7.0" x 16.5" (432 x 178 x 419 mm)
Net Weight	93.2 lbs. (42.3kg)

* EIA 1kHz Power refers to maximum average power in watts RMS at 1kHz with 1% THD +N. This test is performed with one channel at this maximum power with all other channels driven to 1/8th power.

** FTC Full Bandwidth Power refers to maximum average power in watts RMS from 20Hz to 20kHz with 0.03% THD+N. This test is performed with all channels driven to full power.

REGULATORY COMPLIANCE

Notice for FCC



This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Modifying the equipment without Monoprice's authorization may result in the equipment no longer complying with FCC requirements for Class B digital devices. In that event, your right to use the equipment may be limited by FCC regulations, and you may be required to correct any interference to radio or television communications at your own expense.

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.

Notice for Industry Canada

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Monolith™ and the Monolith logo are trademarks of Monoprice Inc.