



MR1250a

MR1250f

12 Channel
Power Amplifier

OPERATION MANUAL

Version 2.4

Congratulations and thank you for choosing the Knöll MR1250a power amplifier. The MR1250a is designed to meet the amplifier needs of multi-zone systems where high quality sound is a specific requirement.

Key Features:

1. **Size efficiency.** The MR1250a consists of a total of 12 power amplifiers in one 3-1/2" high enclosure. Each power amplifier channel can deliver 50 watts RMS.
2. **Automatic protection circuitry.** Each MR1250a channel is individually and fully protected against low impedance, overheating, overloading, overvoltage and undervoltage. The protection circuitry automatically restores the amplifier channel as soon as its parameter returns to the safe operating area.
3. **Individual input gain adjustment.** Each channel features an input gain adjustment pot to adjust each channel for gain and speaker sensitivity variations. The gain adjustments are on the rear of the MR1250a so installers normally set the gain.
4. **External power on/off.** The MR1250a can be turned off and on by external controllers such as the MR640. To activate external power on, apply a 12VDC current to the trigger jack (the MR1250a power switch is in the off position for external power control).
5. **Stackable 17" chassis.** Optional RK1250 rack kit.
6. **Link Feature.** Certain installations require that some or all of the stereo channels play the same content. Instead of using Y cords, "link" cascades any or all of channels 2-6 to channel 1 (l/r).
7. **Optional fan version.** For installations that require a lot of "heavy" use we recommend the MR1250F with an internal fan. A fan will help to avoid early protection system distortion.

Installation

Installing the MR1250a should be relatively easy. With a bit of planning, the MR1250a will give trouble free service for years.

1. The most important consideration when installing the MR1250a/f is cooling. The MR1250a 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 needs at least 3"-5" of space above the amplifier to allow for adequate convection cooling.

2. When installing the MR1250a in a rack we suggest adding a 3-1/2" blank above and below the MR1250a. In multiple MR1250a installations, plan for a 3-1/2" blank (double) between each MR1250a and a 3-1/2" blank on the top and bottom. Amplifiers should always be the top components in a rack system.

3. The RK1250 is an optional 19" EIA rack mount kit for the MR1250a and MR1250f.

4. If MR1250a channels frequently shut down due to overheating, install a fan directed up from the MR1250a bottom center or change it for a MR1250f.

5. Never operate the MR1250a in its side, as the cooling potential drops significantly when operated on the side.

6. Connect the MR1250a inputs to the source component outputs with good quality, short as possible RCA jack cables. Connect each channel individually.

7. Connect the MR1250a speaker outputs to speakers using good quality speaker wire. Minimum 16 gauge copper wire is recommended with 14 gauge minimum for runs over 30' (10m).

Note: Ideally the MR1250a/f likes 6-8 ohm loads. Connecting to 4 ohm loads won't hurt the MR1250a but those channels connected to 4 ohm loads may occasionally shut down due to overloading. Never connect the MR1250a to less than 4 ohms.

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

installation continued...

9. 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.

10. Connect trigger if being used to a 12VDC source (about 35mA) using a 3.5mm mono jack. 5VDC triggers will not work.

11. Connect the AC power into an outlet that can supply at least six amps (750 watts) dedicated to each MR1250a.

MR1250a/f 12 Channel Power Amplifier

Inputs:	12 gold RCA style with adjustable gain
Input impedance:	24 k ohms
Outputs:	Gold 5 way Binding posts
Output power:	50 watts RMS per channel (8 ohms)
Peak output power:	100 watts RMS per channel (8 ohms)
Ideal impedance:	4-8 ohms
Freq. response:	10 Hz - 40 kHz +/- 1 dB (1w)
S/N ratio:	over 105 dB A weighted 50 watts
THD distortion:	<0.1% 20 Hz to 20 kHz
IMD distortion:	<0.01% 60 Hz 7 kHz 4:1 (SMPTE)
Trigger control:	12VDC on 3.5mm input jack.
Power:	750 watts 117 VAC
Dimensions:	17" x 3.5" x 10.5"
Weight:	21 lbs (9.6 kg)

Caution: Never listen to sound that is distorted. If distorted sound is heard, turn the volume down immediately or speaker and/or amplifier damage could 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 MR1250a. Your installer may make certain gain level adjustments on the rear panel.

Caution: The MR1250a contains no user serviceable parts, so do not attempt to open or repair the MR1250a. Refer servicing to a qualified technician only or contact the factory for information.

Troubleshooting

If a problem is encountered with the MR1250a or MR1250f, 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 MR1250 is plugged in.
2. Test the AC outlet with a lamp.
3. If remote on/off is used, check that the trigger voltage is at 12 VDC.
4. Check MR1250 power button on (in).

Sound cuts out ohms. required.

1. Verify speaker impedance is 4-16 ohms. Changing speakers may be required.
2. Check if the MR1250 feels hot. If it's hot increase cooling - see

Installation.

Sound is distorted

1. Turn the volume down
2. Check speakers for damage.
3. Check inputs for proper levels. MR1250 gain and source output level may have to be adjusted.
4. Speakers may be less than 4 ohms.

MR1250a/f does not turn off

1. Push MR1250 power switch off (out)
2. If trigger is being used, power switch needs to be set to off (out) position or amp is on all the time.
3. Try disconnecting trigger jack.

Trigger does not work

1. Measure trigger voltage with a volt meter. It needs to be 11-15 volts DC to work (current is about 35mA total per amp). See page 5 for details.

Speaker pops when amp turned on or off

1. Speaker may need resistor placed across terminal. Suggest 2k0 1/4 w. Discharges speaker internal cap.

Limited Warranty

Knöll Systems warrants MR1250a and MR1250f amplifiers sold in the USA or Canada by authorized Knöll dealers to be free from defects in materials and workmanship. This warranty extends for three full years from the date of purchase by the consumer. Any products returned freight prepaid to Knöll Systems and found to be defective by Knöll Systems within the warranty period will be repaired or replaced at Knöll Systems option, at no charge. Knöll Systems will not be responsible for the actual cost of installation or removal of the product, nor for any consequential or incidental damages. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights. You may have additional rights which vary from state to state. Knöll products sold outside of the USA and Canada may be covered by warranties provided by an authorized Knöll distributor. Please contact the distributor in the country that the Knöll product was purchased.

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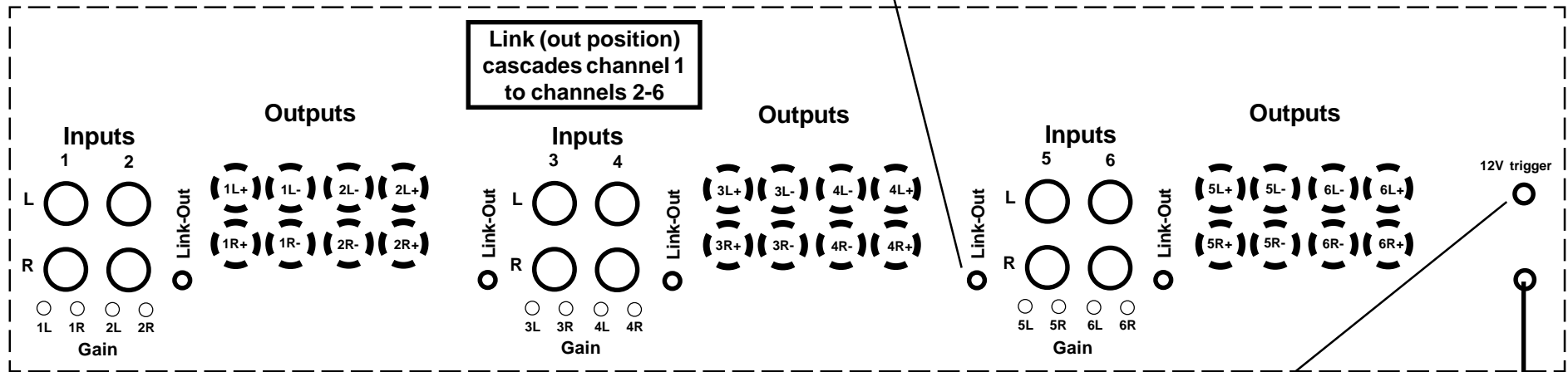
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MR1250a/f Rear Panel

The Link button is normally set to the in position to give all six stereo inputs individual sources. When the Link button is set to the out position, that input Left/Right is linked or cascaded to input #1 (without the use of Y cords). Any or all combination of linked inputs 2 to inputs 6 are possible. When all inputs are linked to input 1 the input impedance is about 4000 ohms.



Note 1: Ideal speaker impedance is 8 ohms. When using 4 ohm speakers, MR1250f with fan may be needed to obtain full power with out distortion caused by protection system.

Caution: NEVER connect the MR1250a or MR1250f to impedances less than 4 ohms or amplifier damage not covered by the warranty may occur.

Trigger is 12 VDC (35mA per MR1250a and/or MR1250f) via 3.5mm mono jack. 5 VDC trigger outputs will not work. To connect the trigger to a receiver use a 12 VDC power supply (we suggest Knöll PS1202 power supply). Plug the power supply into the switched outlet on the rear of the receiver. Connect the 12 volt wire to a 3.5mm mono jack. Plug the jack into the rear of the MR1250a or MR1250f. 12 VDC polarity is not important. When the receiver is switched on, the MR1250 amplifier is switched on.

