MR1250v
MR1250vf

Six stereo power amplifiers with individual volume control electronics

INSTALLATION MANUAL

Version 3.4

Congratulations and thank you for choosing the Knöll MR1250v power amplifier. The MR1250v is designed to meet the amplifier needs of custom installed multi-zone systems where high quality sound is a specific requirement.

Key Features:

1. **Individual mute, volume, bass, treble and balance adjustment.** Each of the six stereo channels feature adjustments for bass, treble and balance. Individual room keypads control volume and mute. Any keypad or RB8 remote can turn the system off.
2. **Cost and size efficiency.** The MR1250v consists of a total of 6 stereo power amplifiers with individual volume control electronics in one 3-1/2" high enclosure. Each power amplifier channel can deliver 50 watts RMS.
3. **Automatic protection circuitry.** Each MR1250v 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.
4. **External trigger out.** An 12VDC trigger output is provided to turn other components on or off.
5. **Stackable 17" chassis.** The MR1250v can be stacked or placed in a 19" EIA equipment rack (requires RM1250 kit).
6. **Link Feature.** Certain installations require that some or all of the stereo channels play the same source. Instead of Y cords, "link" cascades any or all of channels 2-6 to channel 1 (left and right).
7. **Data cascade**. For larger systems, multiple MR1250v's can operate in tandem so all MR1250v's turn off and on together and share infrared signals.
8. **Optional fan version.** For installations that require a lot of "heavy" use we recommend the MR1250vf with an internal fan. Some speakers that claim to be 4 ohms will cause the MR1250v protection system to activate after mild usage. A fan will help to avoid early protection system distortion.

Installation

Installing the MR1250v should be relatively easy. With a bit of planning, the MR1250v will give trouble free service for years.

1. The most important consideration when installing the MR1250v is cooling. The MR1250v 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 MR1250v in a rack we suggest adding a 3-1/2" blank above and below the MR1250v. In multiple MR1250v installations, plan for a 3-1/2" blank (double) between each MR1250v and a 3-1/2" blank on the top and bottom. Amplifiers should always be the top components in a rack system.
3. If MR1250v channels frequently shut down due to overheating, install a fan directed up from the MR1250v bottom center.
4. Never operate the MR1250v in its side, as the cooling potential drops significantly when operated on the side.
5. Connect the MR1250v inputs to the source component outputs with good quality, short as possible RCA jack cables. Connect each channel individually. The internal link feature can only be used if the source component(s) are rated for a 4k ohm load.
6. Connect the MR1250v 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 MR1250v likes 6-8 ohm loads. Connecting to 4 ohm loads won't hurt the MR1250v but those channels connected to 4 ohm loads may occasionally shut down due to overloading.
Never connect the MR1250v to 2 ohm loads.

7. Install one or two VC201 or one VC201e or one VC201f keypad in the rooms with the speakers. For rooms with two VC201's, connect the two keypads together using a run of cat 5 wire with RJ45 connectors. See guide next page. Connect all eight individual wires. From each room make a home run of cat 5 wire from one VC201 to the MR1250v. The infrared signal travels on the same cat 5 wire.

installation continued...

8. Make sure the speakers in each room are connected in phase.
9. When installing VC201e or VC201f keypads you may need to connect up to 4 emitters to the IR Emitter ports on the rear of the MR1250v.
10. When connecting two or more MR1250v's in the same home, connect the amps together using stereo 3.5mm plugs (all three wires are used) to the data plug on the rear of the MR1250v. The MR1250v's share power on and off data as well as infrared signals.
11. Connect the AC power into an outlet that can supply at least six amps (700 watts) dedicated to each MR1250v.

MR1250v 12 Channel Power Amplifier

Inputs:	12 gold RCA jacks
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:	6-8 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 output 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 adjustments in the MR1250v. Your installer may make certain bass, treble and balance adjustments on the MR1250v rear panel.

Caution: The MR1250v contains no user serviceable parts, so do not attempt to open or repair the MR1250v. Refer servicing to a qualified technician only or contact the factory for information.

Troubleshooting

If a problem is encountered with the MR1250v, 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 indicator does not light - no sound	1. Check that the MR1250v is plugged in. 2. Test the AC outlet with a lamp.. 3. Check that the MR1250v power button is on (in).
Sound cuts out	1. Verify speaker impedance is 4-16 ohms. Changing speakers may be required. 2. Check if the MR1250v 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. Source output levels may need adjustment. 4. Speakers may have less than 4 ohm rating
MR1250v does not turn off	1. Press any VC201 keypad "down" button all the down until the bottom VC201 led blinks three times. The MR1250v should power down and the MR1250v led turns red (idle). Before turning the MR1250v power switch to off (out) we always suggest the MR1250v be idling.
Speaker pops when amp turned on or off	1. Speaker may need resistor placed across terminal. Suggest 2k0 1/4 w resistor. Discharges speaker internal capacitor.

Keypads and Remote Control

RB8 Eight button remote control. For use with VC201f keypad to control functions of MR1250v. Power, mute, volume up and volume down functions enabled. Inputs 1 thru 4 disabled.

VC201 Basic paddle style keypad to control: room power on, room power off, all power off, volume up, volume down, mute and unmute. Includes green led status indicator and six green led volume level indicators. Available in white, ivory (bone) and almond colors.

VC201e Same as VC201 with internal pass through infrared receiver. Allows use of component (DVD, CD, tuner satellite dish, etc.) remote controls to adjust (component only) settings. Available in white, ivory (bone) and almond colors.

VC201f Same as VC201 with internal infrared receiver capable of controlling MR1250v and pass through. Designed for use with RB8 remote control. Remote control can do even more MR1250v functions than keypad.

Limited Warranty

Knöll Systems warrants its electronic products sold in Canada and the USA 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 Canada and the USA 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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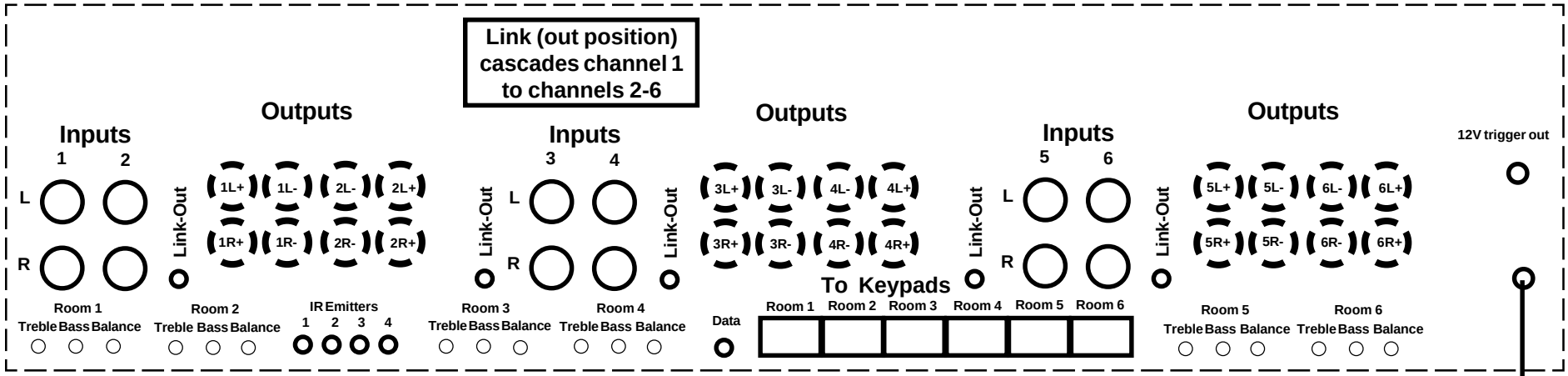
MR1250v Rear Panel

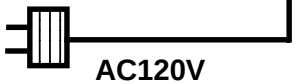


Note 1: Ideal speaker impedance is 6-8 ohms. When using 4 ohm speakers, MR1250vf with fan may be needed to obtain full power with out distortion caused by protection system.

Note 2: With channels 2 to 6 linked to channel 1 the input impedance is 4000 ohms.

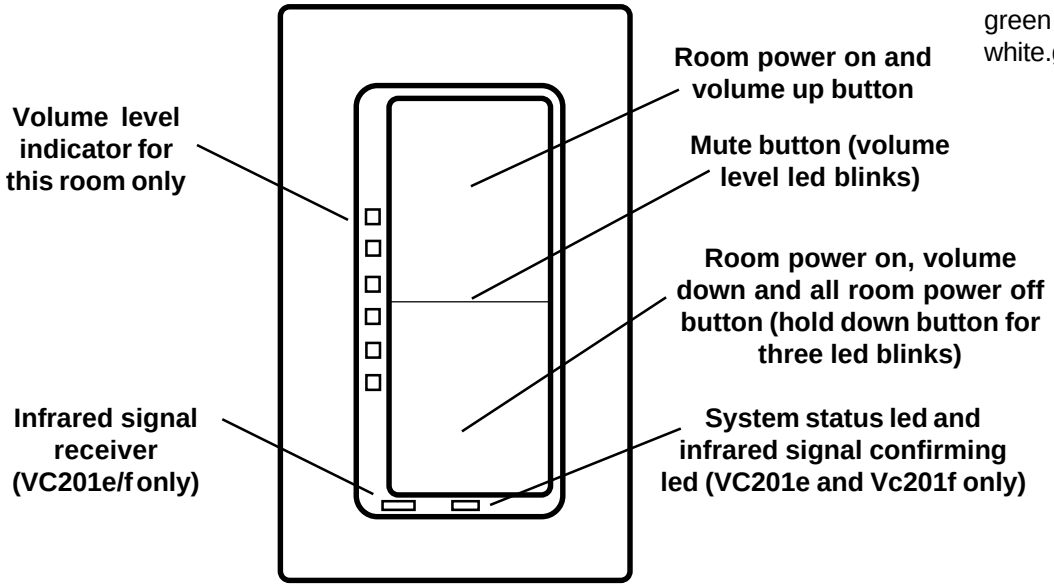
Note 3: Keypad wire code:

brown	c1 (led control)
white/brown	c0 (led control)
orange	infrared signal (hot)
white/blue	down signal (normally 5VDC)
blue	up signal (normally 5VDC)
white/orange	ground
green	c2 (led control)
white.green	c3 (led control)



AC120V
8 amps

VC201 Keypad functions



RJ45 plug wiring guide