



# MA205

Stereo Power Amplifier

## INSTALLATION AND OPERATION MANUAL

Version 1.1

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Congratulations and thank you for choosing the Knöll MA205 power amplifier. The MA205 is designed to meet the amplifier needs where high quality sound is a specific requirement.

### Key Features:

- 1. Manual and Automatic Power On and Off.** The MA205 stereo power amplifier is designed to be turned on when a video signal is detected, music inputs are sensed, a 12 volt trigger is activated or the front panel power switch is pushed on. Power off is automatic in all modes except the front panel power button.
- 2. Whole house music override.** In homes, yachts, businesses and motorhome applications (typically with plasma or large screen TV's) the MA205 features amplifier inputs so that whole house music system can be heard on the local speakers (without the MA205 turned on). When the local source (TV, dish, etc.) needs amp power, the whole house music is automatically switched off, the MA205 amplifier turns on and plays the local source.
- 3. Automatic protection circuitry.** Each MA205 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. 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 MA205 so installers normally set the gain.
- 5. Stackable 17" chassis.** Two MA205's can fit side by side and stacked for applications requiring more than two amplifier channels.

## Installation

Installing the MA205 should be relatively easy. With a bit of planning, the MA205 will give trouble free service for years.

1. The most important consideration when installing the MA205 is cooling. 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 MA205 in a rack we suggest adding a 3-1/2" blank above and below the MA205. In multiple MA205 installations, plan for a 3-1/2" blank (double) between each MA205 and a 3-1/2" blank on the top and bottom. Amplifiers should always be the top components in a rack system.
3. If MA205 channels frequently shut down due to overheating, install a fan directed up from the MA205 bottom center.
4. Never operate the MA205 on its side, as the cooling potential drops significantly when operated on the side.
5. Connect the MA205 inputs to the source component outputs with good quality, short as possible RCA jack cables.
6. Connect the MA205 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 MA205 is operated into 4-8 ohm speaker loads. The MA205 will not operate into 2 ohm loads. Do not attempt to mono bridge the MA205

7. 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.
8. If connecting the MA205 to the whole house sound system, connect the whole house amplifier outputs to the MA205 speaker terminals labeled "AMP INPUTS" using good quality speaker wire.
9. If you are planning to use a video signal to trigger the MA205 power on and off, connect a good quality video wire with an RCA jack to the MA205 input labeled "Video Input". Make sure the music sense button is in the "OUT" position.
10. If the music sense or video input is being used to turn the MA205 power on and off, switch the music sense button to the "OUT" position. Adjust the "Sensitivity" pot on the MA205 so the amp turns on when quieter passages are playing via the RCA line level inputs. Adjust the "Delay" pot so the amp turns off a reasonable time after the music has stopped.

## installation continued...

11. To use the 12VDC trigger to turn the MA205 on/off, connect the trigger to the 3.5mm trigger jack. Set the music sense switch to "IN". The front panel power switch is normally off (out position).
12. Individually adjust the channel gains as required. For best noise and hum cancellation, all MR205 gains should be on full (fully cw).

## MA205 2 Channel Power Amplifier

Inputs:	Gold RCA style with adjustable gain
Input impedance:	20 k ohms
Outputs:	Gold 5 way Binding posts
Output power:	50 watts RMS per channel (8 ohms)
Peak output power:	70 watts RMS per channel (4 ohms)
Ideal impedance:	4-8 ohm speakers
Freq. response:	10 Hz - 40 kHz +/- 1 dB (1w)
S/N ratio:	over 95 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:	12 VDC 35mA (3.5mm input jack)
Power:	140 watts 117 VAC
Dimensions:	8.5" x 3.5" x 10.5"
Weight:	8 lbs (3.6 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 MA205. Your installer may make certain level and delay adjustments on the rear panel.

**Caution:** The MA205 contains no user serviceable parts, so do not attempt to open or repair the MA205. Refer servicing to a qualified technician only or contact the factory for information.

## Troubleshooting

If a problem is encountered with the MA205, 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.

<b>Problem</b>	<b>Action</b>
Power indicator does not light - no sound	<ol style="list-style-type: none"><li>1. Check that the MA205 is plugged in.</li><li>2. Test the AC outlet with a lamp.</li><li>3. Confirm the MA205 front power button is on</li></ol>
Sound cuts out	<ol style="list-style-type: none"><li>1. Verify speaker impedance is 4-16 ohms. Changing speakers may be required.</li><li>2. Check if the MA205 feels hot. If it's hot, increase cooling - see <b>Installation</b>.</li><li>3. If music sense is selected on the rear, the music level may be too low to activate and hold the amp on. Turn the source volume up and the MA205 gain controls down to compensate. Connect a 12 VDC trigger (trigger mode) or contact the Knöll factory for information on defeating the music sense mode.</li><li>4. In music or video sense mode, the MA205 rear delay time may have to be increased.</li></ol>
Sound is distorted	<ol style="list-style-type: none"><li>1. Turn the volume down</li><li>2. Check speakers for damage.</li><li>3. Check inputs for proper levels. MA205 gain and the music source output levels may have to be adjusted.</li><li>4. Speakers may have less than 4 ohm rating and may need to be changed.</li></ol>
MA205 does not automatically turn off	<ol style="list-style-type: none"><li>1. In trigger mode, make sure trigger power is turning off by removing trigger plug on rear. Make sure front panel power switch is OUT.</li><li>2. In music sense mode turn off source music components. If the MA205 doesn't turn off after about 2 minutes remove RCA input plugs. If the MA205 turns off, reconnect the RCA plugs and try adjusting the sensitivity down.</li></ol>

## Limited Warranty

Knöll Systems warrants MA205 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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# MA205 REAR PANEL

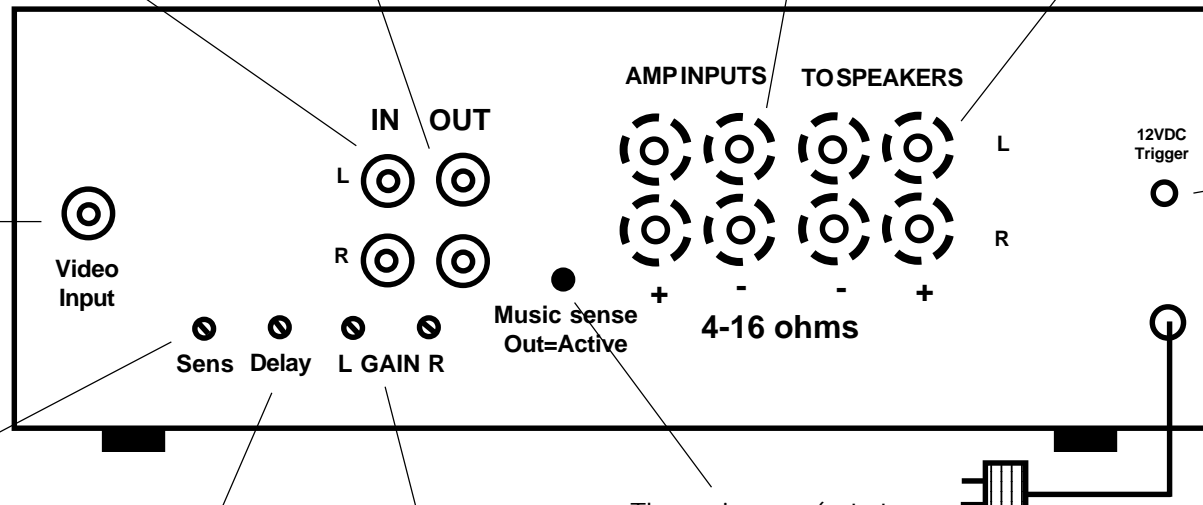
Connect the "Amp Inputs" speaker level inputs to the whole house audio system or other amplifier output. The signal here passes directly to the speakers when the MA205 amp isn't triggered or turned on

Connect the "To Speakers" terminals to the 4-8 ohm speakers

Connect stereo line level inputs here

Connect these unbuffered stereo line outs to other amplifier inputs as needed

Connect a video output such as VCR or plasma TV to here if the amp is to be triggered on when a video signal is present. Make sure the music sense button is in the out position. For video sensing without music sensing turn the "Sens" pot fully counterclockwise.



Connect this 3.5mm trigger jack if the amp is to be triggered on when a 12 VDC signal is present. Polarity can be reversed.

When using music sense only, adjust Sens so the amp turns on when source music is at a medium low volume. Sens is not used for video on or trigger on. For video sensing without music sensing turn the pot fully counterclockwise.

After amp is on, delay is used to turn off amp after source music ends. Ideal delay adjustment is about 20-40 seconds. This feature is used with video on or music sense only.

Adjust the gain when the system is on. Best signal to noise ratio is when amp gains are on full (clockwise).

The music sense (auto turn on when music is present) button should be OUT (active) when the MA205 power is to be triggered either from music sense from the video signal.

The music sense button should be IN when the amp is turned on and off with either the front panel power switch or the 12 VDC trigger.

**AC120V  
140 watts**

**Note 1: Ideal speaker impedance is 4-8 ohms.**