

ANHEM

MCA SERIES AMPLIFIERS OPERATING MANUAL



We at Sonic Frontiers International hope you will derive many years of listening pleasure from your new Anthem MCA Amplifier. This Operating Manual contains important information regarding the operation and care of the MCA Series. Be sure to read this manual carefully and follow these instructions in order to keep your unit performing and sounding its best. Please contact Sonic Frontiers if you have any questions, a Customer Service Representative will be pleased to assist you.

READ THIS SECTION CAREFULLY BEFORE PROCEEDING!



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user of uninsulated "dangerous voltage" within the products enclosure, of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operation and maintenance (servicing) instructions in the literature accompanying the amplifier.

Before operating your MCA Amplifier, read and follow all instructions and warnings! Retain these instructions for future reference.



CAUTION!

To protect against electrical shock and risk of fire do not expose to rain or moisture and do not use amplifier near sinks, showers, bathtubs, swimming pools, saunas, in wet basements or near any source of water. Always unplug before cleaning, and use a damp soft cloth.

To protect against electrical shock do not remove the amplifier cover. There are no user serviceable parts inside. If the unit has been dropped, damaged, exposed to water or does not operate normally, it must be serviced. Refer any servicing to your Authorized Anthem Dealer, who will return the product to Sonic Frontiers International.



CAUTION!

This amplifier has a polarized electrical plug. To protect against electrical shock do not use with any receptacle, extension cord or any other outlet unless the metal arms of the plug can be fully inserted so that they are not exposed.

Use only with the AC voltage rating indicated on the rear panel. Do not overload outlets or extension cords, as this can result in a risk of fire or electrical shock. Install so that the power cord will not get damaged over time. Unplug the amplifier when not using it for an extended period of time to prevent damage due to lightning and power surges.

To protect against risk of fire and electric shock, do not allow any liquids or objects to penetrate the amplifier enclosure.

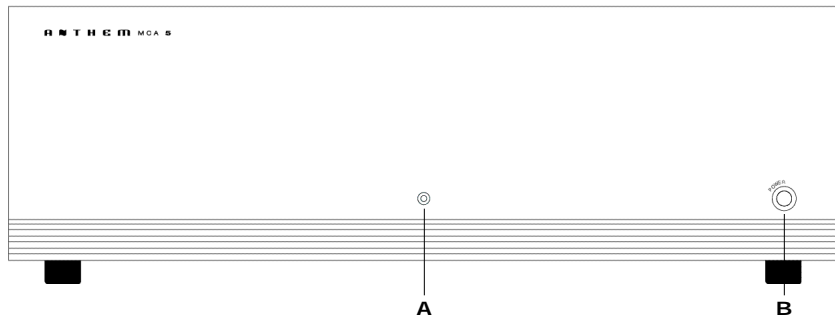


FIGURE 1 MCA front panel.

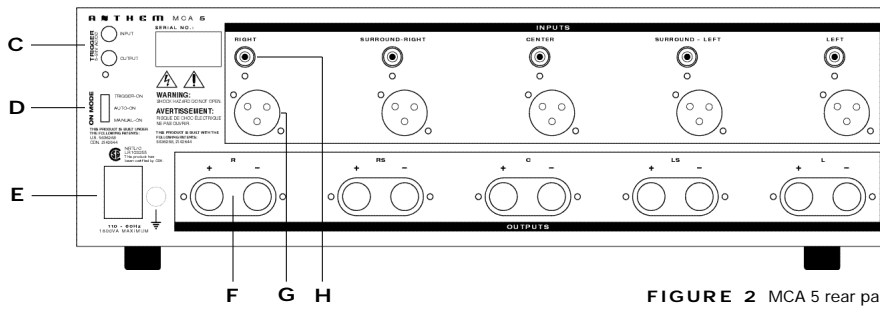


FIGURE 2 MCA 5 rear panel.

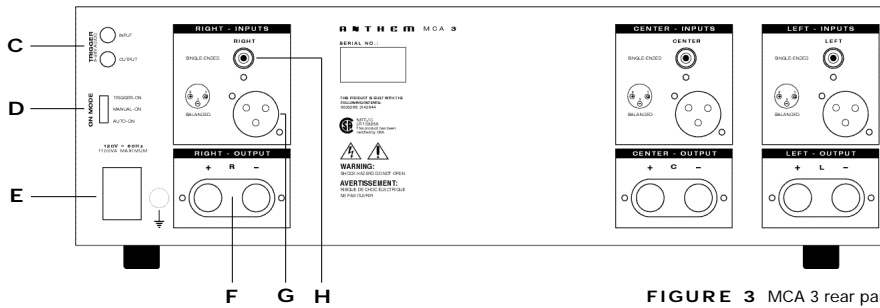


FIGURE 3 MCA 3 rear panel.

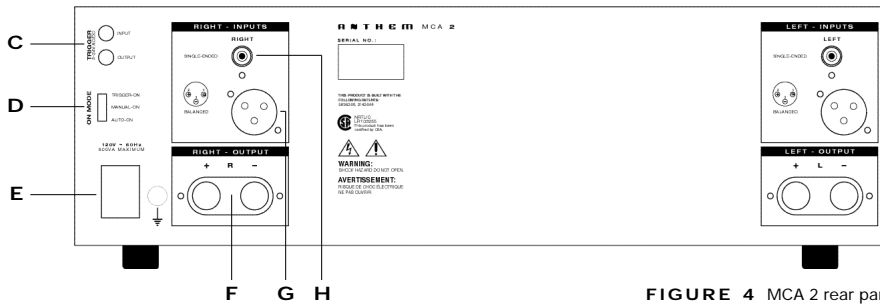


FIGURE 4 MCA 2 rear panel.

CONTROL FUNCTIONS

A 2-COLOUR LED

In MANUAL mode, the LED is lit "green" when the amplifier is "ON", receiving power from the power supply. In TRIGGER or AUTOMode, the LED will be lit "red" until the amplifier receives a music signal (auto) or a trigger voltage (trigger), at which point it will turn "green".

B POWER BUTTON

When in the ON position (button depressed), high voltage power is received by the amplifier circuitry from the power source. When in the OFF position (not depressed), the amp is not receiving power and is not operational.

CONNECTION FUNCTIONS

C TRIGGER (INPUT & OUTPUT)

These 3.5mm (.125") mini-jacks receive (input) a 5-24V AC/DC trigger signal and deliver (output) the same trigger signal (throughput) from an upstream component (preamplifier, surround sound processor (SSP), system controller etc.).

D ON MODE

With this three way switch, you may select the way in which your amplifier is turned ON/OFF:

- TRIGGER ON:
This feature will allow your amplifier to be turned on or off remotely via the Trigger described above (C).
- AUTO ON:
This innovative feature eliminates the need for a manually operated power switch. AUTO ON simply turns the amplifier on whenever there is an input signal on any one of the channels. If no input signal is sensed after a period of time, the amplifier will switch off automatically.
- MANUAL ON:
When in this position, the amplifier can only be turned ON/OFF via the power switch on the front panel (B).

E DETACHABLE AC POWER CORD SOCKET

Plug the Detachable Power Cord into this socket. The MCA Amplifiers are factory built for the correct operating voltage for the area in which it is sold (see shipping box for voltage setting). If a different operating voltage is required, please contact an authorized Anthem dealer, distributor or the factory directly to return your unit.

F SPEAKER CONNECTION POSTS

Each custom 5-way binding post accepts a connection from one speaker. The negative/black (-) connection on the speaker is to be made to the negative/black (-) binding post on the appropriate amplifier channel. As well, the positive/red (+) connection on the speaker is to

be made to the positive/red (+) binding post on the same amplifier channel. Connect the L, LS, C, RS or R speakers to the appropriate set of binding posts.

Be careful not to overtighten the binding posts.

G BALANCED XLR INPUT

This input accepts balanced XLR input connections from an external preamp or SSP unit.

H SINGLE-ENDED (UNBALANCED) RCA INPUT

This input accepts unbalanced RCA input connections from an external preamp or SSP unit.

OPERATION

Before plugging in the MCA Amplifier, check to see that the unit is configured for the correct AC line voltage for country of use. The operating AC line voltage is indicated on the side of the shipping box. If the amplifier is set incorrectly for the country in which it is to be operated, contact the dealer or distributor in your area. If the unit is configured properly, continue with operation.

Connect the Detachable Power Cord to the AC Power Cord Socket (E). Plug your amplifier into the AC power source.

Connect loudspeakers to the appropriate post as described in the Speaker Connection Posts section above.

The remaining input signal connection is made with either Balanced (XLR) or Unbalanced (RCA) connectors from a suitable Preamp or SSP such as the Anthem AVM 1.

Connect the preamp/SSP outputs to the appropriate amplifier inputs (G or H) for each channel. If available, the XLR balanced inputs are preferred. Regardless, choose one or the other input formats per channel.

Note: If both types of inputs are connected simultaneously (per channel), the MCA Series Amplifiers will automatically default to the RCA unbalanced input format bypassing the XLR balanced input.

Select an appropriate ON MODE for your MCA amplifier. If TRIGGER mode is selected connect a trigger cable between your MCA amplifier and the upstream control component.

After you ensure your preamp or SSP has the volume turned down or muted, you can power up your MCA Amplifier, which is now ready for operation.

BREAK-IN TIME

As with all audio electronic products, the ultimate sonic character of the MCA Amplifiers will not be realized until and unless the unit receives a minimum of approximately 70 hours of signal break-in time (i.e. the amplifier is on and outputting a signal).

PLACEMENT FOR PROPER VENTILATION

The MCA Series require a minimum of 12" (30cm) above, of unobstructed air space. Make sure that the ventilation slots on the top and bottom remain unobstructed by any object. Do not stack any other component on top of the amplifier or block the ventilation slots in any way. Also, be sure that the amplifier is placed on a secure, hard and level surface, **NOT** on carpet.

In the event of overheating, your MCA amplifier is equipped with a thermal shut off feature. The amplifier will remain off until the temperature falls below the shut off threshold. Once this condition is met, the amplifier will reset itself and it can be powered on again.

PACKING MATERIALS

Please retain all of the packing material and shipping boxes for your MCA Amplifier. They are custom designed to prevent shipping damage from occurring. Sonic Frontiers Int'l will accept no responsibility for any damage occurring to an MCA Amplifier that is shipped in packing material other than the original Sonic Frontiers packing material.

DISCLAIMER OF LIABILITY

Under no circumstances does Sonic Frontiers Int'l assume liability or responsibility for injury or damages sustained in the use or operation of this equipment or for damages to any other equipment connected to it.

Sonic Frontiers Int'l reserves the right to make design changes or improvements without the obligation to revise prior versions. All specifications are subject to change without notice.

TROUBLESHOOTING

If at any time the MCA Amplifier fails to work properly, consult this checklist:

1. Check that the AC Detachable Power Cord is plugged into the Detachable Power Cord Socket (E) and is connected to a live source of AC power. For instance, if using a power bar, check that the bar is turned on.
2. Ensure that all Input and Output connections are secure for a proper electrical contact.
3. Ensure that the amplifier is configured for the appropriate ON MODE in your system setup.

If a problem still persists, please contact your authorized Anthem Dealer or the Factory directly.

TECHNICAL SPECIFICATIONS

INPUTS	MCA 2	2 Balanced, 2 Single-ended, 1 Relay Trigger (3.5mm Stereo Jack)
	MCA 3	3 Balanced, 3 Single-ended, 1 Relay Trigger (3.5mm Stereo Jack)
	MCA 5	5 Balanced, 5 Single-ended, 1 Relay Trigger (3.5mm Stereo Jack)
OUTPUTS	MCA 2	2 Pairs Speaker Binding Posts, 1 Relay Trigger (3.5mm Stereo Jack)
	MCA 3	3 Pairs Speaker Binding Posts, 1 Relay Trigger (3.5mm Stereo Jack)
	MCA 5	5 Pairs Speaker Binding Posts, 1 Relay Trigger (3.5mm Stereo Jack)
SWITCHES (2)	Power On/Off, 3 Way On Mode (Auto-on, Manual-on, Trigger-on)	
DIMENSIONS	MCA 2	17.25" (44 cm) W x 5.25" (13.5 cm) H x 12" (30.5 cm) D
	MCA 3	17.25" (44 cm) W x 5.25" (13.5 cm) H x 12" (30.5 cm) D
	MCA 5	17.25" (44 cm) W x 5.25" (13.5 cm) H x 17" (43 cm) D
NET WEIGHT	MCA 2	36 lbs, (16 kg) - unpacked
	MCA 3	42 lbs, (19 kg) - unpacked
	MCA 5	56 lbs, (25.5 kg) - unpacked
POWER OUTPUT * (Continuous, RMS, 20Hz - 20kHz, < 1.0%THD)	MCA 2	2 x 200 Watts into 8 ohms; 350 Watts into 4 ohms
	MCA 3	3 x 200 Watts into 8 ohms; 350 Watts into 4 ohms
	MCA 5	5 x 200 Watts into 8 ohms; 350 Watts into 4 ohms
HEADROOM	267W (8 ohms); 479W (4 ohms)	
POWER BANDWIDTH	10Hz - 80kHz (-3dB)	
FREQUENCY RESPONSE	0.5Hz - 80kHz (-0.15dB)	
THD&N	0.002% (200W)	
	0.0015% (half power)	
INPUT SENSITIVITY	1.5VRMS for full output	
INPUT IMPEDANCE	21 kOhms - RCA; 15 KOhms XLR	
DAMPING FACTOR	130 @ 8 Ohms	
HUM & NOISE	-122dBW, A-Weighted @ 200W	
VOLTAGE GAIN	27dB	
SLEW RATE	30V/μs	
POWER REQUIREMENTS	MCA 2	800VA @ maximum power output
	MCA 3	1100VA @ maximum power output
	MCA 5	1800VA @ maximum power output

All tests were performed with the Audio Precision System Two @ 120VAC.

* Power output is one channel driven. In addition, each MCA amplifier exceeds 170 w/ch "all channels driven simultaneously" into 8 ohms.

WARRANTY (USA & CANADA)

LIMITED FIVE YEAR WARRANTY

Sonic Frontiers International warrants to the purchaser that each component is free of manufacturing defects for a period of five (5) years from the date of purchase. This five (5) year limited warranty excludes all vacuum tubes and CD Transport mechanisms, which are warranted for a period of twelve (12) months. To receive this warranty, the original purchaser must complete and mail to Sonic Frontiers International, within thirty (30) days from the date of purchase, the enclosed Warranty Registration Card which validates the warranty. This warranty is subject to the following conditions and limitations:

DISCLAIMER OF LIABILITY

Under no circumstances does Sonic Frontiers International assume liability or responsibility for injury or damages sustained in the use or operation of this equipment or for damages to any other equipment connected to it. Sonic Frontiers International reserves the right to make design changes or improvements without the obligation to revise prior versions. All specifications are subject to change without notice.

Warranty applies only to the original purchaser and is non-transferable.

This warranty is void and inapplicable if the product has been handled other than in accordance with the instructions of our Owner's Manual, abuse or misused, damaged by accident or neglect or in being transported, or the defect is due to the product being tampered with, modified or repaired by anyone other than Sonic Frontiers International, or an authorized Sonic Frontiers International repair service center.

Warranty does not cover normal maintenance.

Sonic Frontiers International shall not be responsible in any way for consequential or indirect damages or liabilities resulting from the use and operation of the product covered herein or resulting from any breach of this warranty or any implied warranty relating to said product.

During this period, Sonic Frontiers International will repair or replace any defective components free of charge. If a problem or defect is discovered in your product, please contact the dealer or distributor from which it was purchased. It is the responsibility of the dealer/distributor to determine the nature of the problem and arrange for either the appropriate replacement parts or, the return of the product to the factory.

All other warranties or conditions either written or implied are void.

Sonic Frontiers International reserves the right to improve the design of any product without assuming any obligation to modify any product previously manufactured. This warranty is in lieu of all other warranties expressed or implied, of merchantability, fitness for any particular purpose and may

not be extended or enlarged by anyone. In no event shall Sonic Frontiers International, their agents or representatives be responsible for any incidental or consequential damages. Some jurisdictions do not allow limitations of incidental or consequential damages, so this exclusion may not apply to you.

INTERNATIONAL WARRANTY

Outside of Canada and the USA, SFI sells to exclusive distributors who are responsible for the service and support of our equipment. Your warranty in these countries are provided by the local distributor, not SFI. Sonic Frontiers will provide parts to the original purchaser of our components via the distributor, for 5 years on electronics and one year on CD mechanisms and vacuum tubes. All repairs and labor charges in international markets are the responsibility of the distributor.

Units returned to SFI for repair at our factory in Oakville must have an accompanying original bill of sale from an authorized retailer to receive our warranty service. Under warranty, SFI will provide parts and labor to the original purchaser but will not cover freight or duties to or from, our factory. A Return Authorization number must be obtained in advance by calling 1-905-829-3838. All other repairs will be at our regular bench rates for labor plus parts cost.

FREQUENTLY ASKED WARRANTY QUESTIONS

WHAT IS THE FLOOR MODEL WARRANTY?

Display equipment sold by an authorized dealer has a full 5 year Parts & Labor and 30 day Tube & Transport Mechanism warranty (as of the date of the customers invoice) or the balance of the 1 year Tube & Transport Mechanism warranty (as of the date of the dealer invoice) - which ever is longer.

WHAT IS THE USED EQUIPMENT WARRANTY?

The balance of the 5 year Parts & Labor and 1 year Tube & Transport Mechanism warranty can be transferred on used equipment only if the unit is traded in to an authorized Sonic Frontiers/Anthem Dealer. An authorized SF/ Anthem dealer can resell the unit with the remaining warranty if it is cosmetically acceptable, in perfect working condition, and has not been internally or externally altered in any way. We ask that the dealers call the factory and advise us of the serial number of the unit to register the warranty of the new owner.

WHAT IS THE USED EQUIPMENT WARRANTY - FROM A NON-AUTHORIZED DEALER?

Used equipment purchased from a non-authorized dealer or private sale has no SFI warranty.

PLEASE READ CAREFULLY!

A N T H E M

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