

O W N E R ' S M A N U A L

**polk**

**mmo**

**MMC5250 5.25" System**

**MMC6500 6.5" System**

Attach your receipt  
here and file for future  
reference. It may  
be required for  
warranty service.

**X**

## **All Polk Audio/MOMO Drivers Feature:**

- Cast aluminum baskets that mimic MOMO wheel designs
- Elegant matching motor cup conceals a beefy magnet structure
- Carbon Fiber composite cones
- Aramid fiber spiders for greater dynamic range
- Woven carbon-fiber dustcaps

## **Polk Audio/MOMO Tweeters Feature:**

- Lightweight fabric dome tweeters for flat response, great inner detail and low distortion
- Neodymium magnets that are small and powerful
- Low viscosity ferro-magnetic cooling fluid for superior power handling
- Surface and flush-mount swivel cups allow fine tuning of the tweeter angle for better soundstaging

## **Component System Crossovers Feature:**

- Nickel plated terminals
- Air-core inductor for low distortion
- Mylar capacitors for cleaner, more transparent highs
- 3 Level tweeter control to fine-tune the tonal balance of your system
- Bi-wirable/bi-ampable input terminals on passive crossover

## **Getting Started**

Please inspect each loudspeaker carefully. Notify your Polk dealer if you notice any damaged or missing items. Keep the carton and packing material. They will do the best job of protecting your speakers if they need to be transported.

## Check that you have the following parts:

### Component Systems Include

- 2 mid/woofers
- 2 crossover networks
- 2 tweeter flush mount cups
- 2 flush mount cup clamps
- 2 tweeter surface mount cups
- 2 grilles
- 8 - #8 screws with 9/64" Allen head
- 8 - screw clips
- 2 - #6 Phillips head screws
- Tweeter hook-up wire
- Mid/woofer hook-up wire
- Registration card

MMC5250 includes:  
4 - #8 Phillips head screws

MMC6500 includes:  
12 - #8 Phillips head screws  
2 - Spacer Rings

Read this manual thoroughly first. If you have any doubts about your ability to execute any of the installation steps, save yourself a lot of grief and contact a professional installer (your Polk dealer is a good place to find one).

If you intend to do the installation yourself we assume that you possess some skill in the proper use of hand and power tools. No matter how much installation experience you have, it's always a good idea to:

- Read this manual thoroughly before you begin.
- Plan your installation carefully.
- Allow enough time to complete the installation without rushing.
- Protect your car from unwanted scratches.

## Necessary Tools

- Phillips head screwdriver
- 9/64" Allen wrench
- Flat blade screwdriver or door panel removal tool
- Electric drill
- 1/4" and 1/8" drill bits
- Reciprocating saw or razor knife
- Magic marker for marking the cutout (new location only)
- Metal cutting tool (hole saw, if you intend to cut metal)
- Metal file
- A supply of solderless connectors
- Safety glasses
- Wire strippers and cutters
- Crimping tool

## Installing the Components

### The Polk/MOMO System Crossovers

You will need to make wiring connections from your amp or radio to the crossovers and from the crossovers to your mid/woofers and tweeters. Choose crossover box locations that are convenient for making these connections. As there are adjustments on and in the crossover networks which you will need to access during the “fine tuning” stage of the installation, place them in a spot that’s easy to get to. Once you’re done fine-tuning the system, the crossovers can be hidden away and secured. **Do not install into doors due to potential water damage. This is not covered under Manufacturer’s Warranty.**

Your Polk/MOMO Series crossovers have clearly marked terminals. The wires provided with your Polk/MOMO System have one red as the positive (+) lead and one black as the negative (–) lead. Connect the red to the positive (+) terminals on your crossovers as well as to the positive (+) terminals of each speaker. Connect the black to the negative (–) terminals on your crossovers as well as to the negative (–) terminals of each speaker.

## Installing the Polk/MOMO System Mid/Woofers in Factory Locations

Most cars have speaker grilles that blend with the rest of the car's interior. Sometimes it is difficult to determine how to remove these grilles to gain access to the speaker that you intend to replace. If you have one of these grilles, you may want to consider using a professional installer. On some cars, the grilles are held by screws or spring clips. The screws will be obvious, the spring clips won't.

If there are screws, remove them, put them in a safe spot, and remove the grilles. To remove a clip-on grille, use your flat-blade screwdriver to gently pry up the grille. If it resists, back off and think again about the professional install. The cost of one of these can sometimes be less than the cost of new door panels. Some grilles are integral parts of the door panel and are not removable. In these cases you will need to remove the entire door panel to gain access to the speaker location. This will usually require removal of door handles, window mechanisms, and other parts such as door pulls and lock buttons.

1. Once you get the grille off, remove the factory speakers. Save the hardware. You may be able to reuse it to mount your new speaker.
2. Cut the supplied speaker wire in half.
3. To mount the passive crossover gently pry up on one end of the silver crossover cover. This will expose the two center mounting holes for installation.
4. Reattach silver cover to crossover.
5. Connect speaker wires to the crossover "woofer" terminals. Attach the red wire to the positive (+) terminal screw, and the black wire to the negative (-) terminal screw.
6. Route the driver wire from the crossover location through grommets to the mid/woofer location.
7. Attach the red wire to the positive terminal (larger terminal) on the driver. Then attach the black wire to the negative terminal (smaller terminal) on the driver.
8. Attach the red wire to the positive red wire on the tweeter. Then attach the black wire to the negative wire on the tweeter. Make sure the clear plastic insulators fully cover the Faston connectors otherwise you may short the tweeter leads and possibly damage your amplifier.
9. Strip 1/4" (6 mm) of plastic insulation from the cut ends of the driver and tweeter wires. Connect the positive and negative wires to the woofer and tweeter out on crossover.
10. Drilling may be required to accommodate the installation of your MOMO MMC Component Series Drivers.
11. Using the hardware retained from the factory speaker or the screw clips supplied with the Polk/MOMO speaker, secure your new speaker to the car panel.

## Installing the Mid/Woofers in Non-Factory Locations

If you have decided to install your Polk/MOMO Series mid/woofers in locations other than those provided by the automobile manufacturer, make certain that the location you choose is clear of all obstructions, both in front of and behind the panel, before you proceed. Pay particular attention to window mechanisms and any body panels critical to the structural integrity of the vehicle. The mounting depths and cutout diameters of your Polk/MOMO Series mid/woofers are listed with all the other important specifications at the end of this manual.

1. Cut a hole in the panel (5 inches or 12.7 cm hole for the MMC6500, 4-5/8 inches or 11.75 cm hole for the MMC5250).
2. Use the speaker grille as a template for marking the locations of the four screw holes.
3. Drill the holes with a 1/8" bit.
4. Attach the screw clips to the car panel at the hole locations.
5. Cut the supplied speaker wire in half.
6. To mount the passive crossover gently pry up on one end of the silver crossover cover. This will expose the two center mounting holes for installation.
7. Reattach silver cover to crossover.
8. Connect speaker wires to the crossover "woofer" terminals. Attach the red wire to the positive (+) terminal screw, and the black wire to the negative (-) terminal screw.
9. Route the driver wire from the crossover location through grommets to the mid/woofer location.
10. Attach the red wire to the positive terminal (larger terminal) on the driver. Then attach the black wire to the negative terminal (smaller terminal) on the driver.
11. Attach the red wire to the positive red wire on the tweeter. Then attach the black wire to the negative wire on the tweeter. Make sure the clear plastic insulators fully cover the Faston connectors otherwise you may short the tweeter leads and possibly damage your amplifier.
12. Strip 1/4" (6 mm) of plastic insulation from the cut ends of the driver and tweeter wires. Connect the positive and negative wires to the woofer and tweeter out on crossover.
13. Drilling may be required to accommodate the installation of your MOMO MMC Component Series Drivers.
14. Using the hardware retained from the factory speaker or the screw clips supplied with the Polk/MOMO speaker, secure your new speaker to the car panel.

## Polk/MOMO MMC System Tweeters

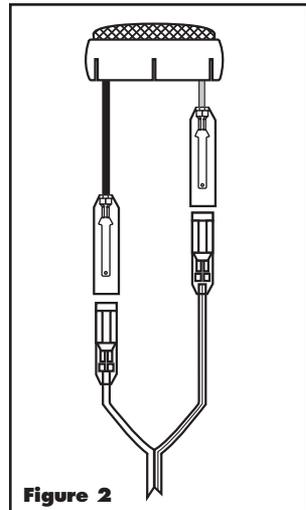
One important advantage of component systems is their ability, when properly installed, to improve the soundstage created by the music in your car. The soundstage is the musical “picture” made up of the instruments and vocalists. The difference in the soundstage will be dramatic depending on where you mount your tweeters. We recommend a simple experiment that will help you decide the best spot for your tweeters in your car. Here are the steps:

1. Complete the installation of your entire system except for the MMC tweeters.
2. Connect the wires provided with your tweeters to the tweeter terminals on your Polk/MOMO crossovers. (See detailed instructions below.)
3. Without running the wires through doors or under upholstered panels, connect your Polk/MOMO tweeters to these wires. (See detailed instructions below.)
4. Have a friend sit in the passenger’s seat while you sit in the driver’s seat, each holding a tweeter in hand, or use double stick tape.
5. With music playing, position the tweeters in different locations around the passenger compartment, listening for the differences caused from these placements. We recommend using vocals for this test. You will be able to determine in a short time the best location for your tweeters. The soundstage or image should “float” above the dash and not be localized to the physical location of the drivers or tweeters. Both passenger and driver should be able to hear both channels and a stereo image.

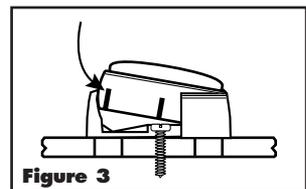
### The Polk MMC Component tweeter offers two mounting options for installation flexibility.

#### *Mounting Option #1—Surface mounting the MMC Component Tweeter*

1. Using the base of the surface mount cup as a template, mark the screw hole and drill it using a 1/8 inch drill bit. Mark the wire holes (for the tweeter wires), drill using the 1/4-inch drill bit.
2. Attach the surface mount cup to the panel using supplied #4 screw.
3. Cut the supplied speaker wire in half.
4. Strip 1/8" - 1/4" (3-6 mm) of plastic insulation from the cut ends of the tweeter wire. Connect this end of the wire to the tweeter terminals of the crossover. Connect the red wire to the positive (+) terminal of the crossover tweeter output and the black wire to the negative (-) tweeter terminal.



**Figure 2**

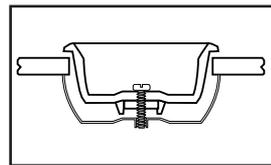


**Figure 3**

5. Route the tweeter wire from the crossover through grommets to the tweeter location. Push the red and black tweeter wires through the holes in the bottom of the tweeter cup and through the panel.
6. Slip the male fast-on connector on the red tweeter wire onto the female connector on the red wire from the crossover and the black tweeter wire to the black wire (Figure 2). Make sure the clear plastic insulators fully cover the fast-on connectors otherwise you may short the tweeter leads and possibly damage your amplifier.
7. Mount the tweeters by gently pushing them into the surface mount cup. Be careful not to pinch the wires.
8. Once the tweeter is mounted and connected, swivel the tweeter to fine-tune the soundstage image of the system. (Figure 3)

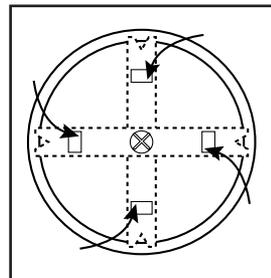
*Mounting Option #2 - Flush mounting the MMC Component Tweeter*

1. Remove the panel on which you are going to mount the tweeter and check for proper clearance behind it. The flush mount kit is 1-3/16 inch deep. Measure to make sure there is sufficient depth behind the spot you choose the final location.
2. Use the hole that is punched into the cardboard packing insert as a template to mark the location and size of the mounting hole.
3. Mark the center of the spot and cut a hole with the 2-3/16-inch hole-saw attachment for your power drill. Go slow. Or you can use a razor knife instead of a drill.



**Figure 4**

4. Cut the supplied speaker wire in half.
5. Strip 1/8" - 1/4" (3-6 mm) of plastic insulation from the cut ends of the tweeter wire. Connect this end of the wire to the tweeter terminals of the crossover. Connect the red wire to the positive (+) terminal of the crossover tweeter output and the black wire to the negative (-) tweeter output terminal.

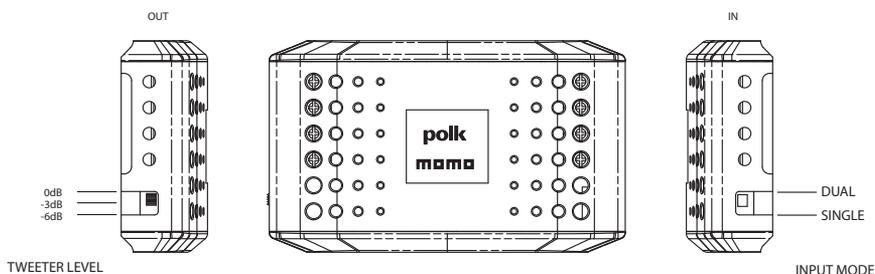


**Figure 5**

6. Route the tweeter wire from the crossover through grommets location to the tweeter location.
7. Assemble cup, clamp, and machine screw loosely.
8. Route the red and black tweeter wires through the holes in the bottom of the cup.
9. Slip the male fast-on connector on the red tweeter lead wire onto the female connector on the red wire from the crossover and the black tweeter lead wire to the black wire (Figure 2 page 8). Make sure the clear plastic insulators fully cover the fast-on connectors otherwise you may short the tweeter leads and possibly damage your amplifier.
10. Press the assembly into the 2-3/16" hole until the clamp edge is below the mounting surface, then tighten the screw. The cup will clamp down to the surface as the screw is tightened (Figure 4 page 9). In the case of a thick mounting surface, the legs of the clamp can be bent outward by inserting a screwdriver through the four rectangular holes in the cup while still mounted (Figure 5 page 9).
11. Snap the tweeter into the mounting cup, being careful not to pinch the wires.
12. Once the tweeter is mounted and connected, swivel the tweeter by applying firm pressure to the edge of the tweeter module. **DO NOT** apply pressure to the grille.
13. Connect positive and negative leads to the crossover.

*NOTE: To remove the tweeter assembly, place a small screwdriver into the side slot and pry carefully upwards*

**Damage to the tweeter from thermal overload will result without the protection provided by a crossover and will void your warranty.**



**Figure A**

Location of Tweeter Level Attenuation and Input Mode Switch.

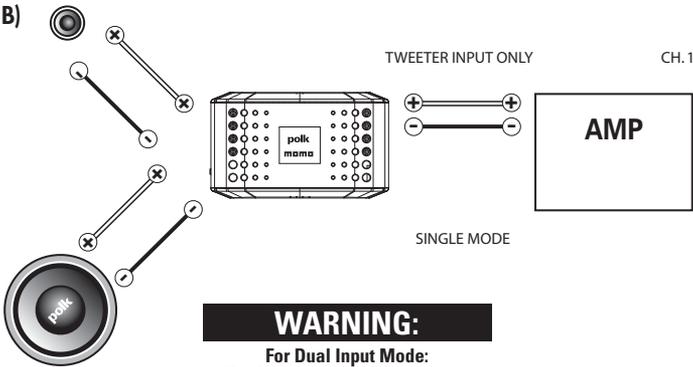
(Note: Crossover is not weatherproof. Do not install in areas of potential water exposure.)

## Making Dual (Bi-Wire) Connections To Your Passive Crossover

- Using a 2-channel amp, choose SINGLE input mode and wire your speakers to the tweeter Inputs ONLY. (Figure B)
- Using a 4-channel amp (or two 2-channel amps), choose DUAL input mode and wire driver level amp outputs to the Woofer Inputs, and tweeter level amp outputs to the Tweeter Inputs. (Figure C)

- For use with Polk/MOMO C400.4 Amplifier ONLY: When using the Polk/MOMO C400.4 four-channel amplifier – and ONLY then – you may omit this passive crossover and wire your speakers directly from their amp outputs on the C400.4 Amplifier, being sure to engage the C400.4's Polk/MOMO Pre-EQ Switch allowing the C400.4 to become your system's active crossover. THIS INSTRUCTION IS ONLY FOR THE C400.4 POLK/MOMO AMPLIFIER. With all other amps, you MUST use the passive crossover network included with this product. Any other use will VOID THE WARRANTY.

### Single Input Mode (Figure B)



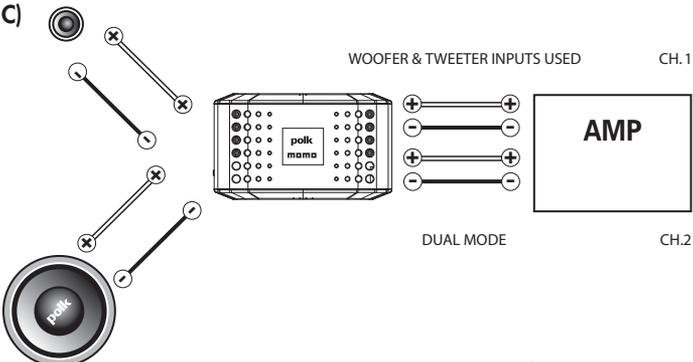
#### **WARNING:**

**For Dual Input Mode:**  
Use Woofer +/- and Tweeter +/-

**For Single Input Mode:**  
Use Tweeter +/- ONLY

**IMPROPER HOOK UP  
CAN SERIOUSLY DAMAGE  
SPEAKERS AND/OR AMPLIFIERS!**

### Dual (Bi-wire) Input Mode (Figure C)



### **Tweeter Level**

The slide switch on the side of the crossover box adjusts the level (volume) of the tweeter relative to the mid/woofer. Start with the switch in the bottom position and listen. If you want a “brighter” sound, move the switch to the middle position and listen again. The “0 dB” setting provides the greatest amount of tweeter output. -3dB and -6dB reduce output to a greater degree. (Figure A page 10)

### **Polarity / Blending**

If it seems that the tweeters and mid/woofers are not “blending” or working together in harmony, try changing the polarity of both the tweeters by reversing the positive (+) and negative (-) tweeter wires at the crossover. Reversing the absolute phase of the tweeters may help the blending or integration of the system components, particularly if the tweeters and mid/woofers are on different planes. In your car, that is, not your plane.

### **Tweeter Angle**

The MMC Component tweeters may be pivoted to get the best high frequency response and soundstage. Generally, pointing the tweeters toward the listening position will yield the best results. But don't be afraid to try other angles. Use the position that sounds best to you.

Pivot the tweeter module by applying firm pressure on the edge of the tweeter module.

DO NOT APPLY PRESSURE TO THE DOME ITSELF.

## **Amplifier Power Requirements**

Your speakers will work well with a variety of electronic components. As little as 25 watts (RMS) per channel will deliver adequate listening levels in most cars. If you have a noisy car or intend to play your system at loud listening levels, more power is necessary to achieve the best performance. Consult your Polk Audio dealer for specific recommendations. We recommend using an external power amplifier that has a power rating of 50 - 100 Watts per channel to get the best possible performance.

## **Safe Limits Of Operation**

Your Polk loudspeakers are made with the highest quality materials for years of trouble-free performance. However, damage to loudspeakers can occur when an amplifier, regardless of its wattage, is made to play at higher listening levels than its power can cleanly produce (usually beyond the “1 to 2 o’clock” position on the volume control).

This results in very high levels of audible distortion, originating in the amplifier, which adds a harsh, gritty sound to the music. Contrary to popular belief, a speaker is more likely to be damaged by trying to get too much volume from a low-powered amp or receiver than from a high-powered one.

## **Technical Assistance Or Service**

If, after following the hook-up directions, you experience difficulty, please double check all wire connections. Make sure that your electronic equipment is operating correctly by hooking up another speaker to the speaker output. For example, if you are not getting sound from the left channel speaker, connect the right channel speaker to the left output. If you still get no sound from that side, the problem is in your amp or source electronics. Should you isolate the problem to the speaker, contact the authorized Polk Audio dealer where you made your purchase. Authorized Polk Audio dealers are the best source for advice and assistance.

Call Polk Audio’s Customer Service Department at 1-800-377-7655 from 9am to 6pm, Eastern Time, Monday through Friday, or e-mail us at [polkcs@polkaudio.com](mailto:polkcs@polkaudio.com). Please do not hesitate to call us if you have questions about your speaker system.

Visit <http://www.polkaudio.com>

## Specifications

	MMC6500 System	MMC5250 System
Peak Power Handling	250 Watts	200 Watts
Continuous Power Handling (RMS)	125 Watts	100 Watts
Impedance(Nominal)	4.0 $\Omega$	4.0 $\Omega$
Frequency Response (+/-3dB)	43 Hz-25 KHz	53 Hz-25 KHz
Sensitivity (1w/1m)	90 db	89 db
Driver Mounting Diameter	5" (127mm)	4 <sup>5</sup> / <sub>8</sub> " (117.5mm)
Tweeter Mounting Diameter	2 <sup>3</sup> / <sub>16</sub> " (55.56mm)	2 <sup>3</sup> / <sub>16</sub> " (55.56mm)
Mounting Depth top mount	2 <sup>7</sup> / <sub>16</sub> " w/o cup (61.9mm) 2 <sup>1</sup> / <sub>4</sub> " w/cup (68.3mm)	2 <sup>5</sup> / <sub>16</sub> " w/o cup (57.96mm) 2 <sup>5</sup> / <sub>8</sub> " w/cup (65.91mm)
Mounting Depth bottom mount	2 <sup>9</sup> / <sub>16</sub> " w/o cup (65.1mm) 2 <sup>13</sup> / <sub>16</sub> " w/cup (71.4mm)	2 <sup>1</sup> / <sub>2</sub> " w/o cup (50.8mm) 2 <sup>3</sup> / <sub>4</sub> " w/cup (69.9mm)
Grille Height	.543" (13.8mm)	.439" (11.2mm)
Grille Diameter	6.575" 167mm	5.9" 149.9mm
Crossover Frequency	2600 Hz	2750 Hz
Crossover	2nd order (12db/octave) High Pass & Low Pass	2nd order (12db/octave) High Pass & Low Pass
Tweeter Attenuation	0, -3, -6 db	0, -3, -6 db

## Polk/MOMO Mid/Woofers Technical Sheet

### THIELE/SMALL PARAMETERS

	MMC6500 Driver	MMC5250 Driver
Freq. Response	43 Hz-3 KHz	53 Hz-3 KHz
Resonant Freq. (Fo, Fs)	86 Hz	107 Hz
Qms	10.95	12.72
Qes	0.98	1.24
Qts	0.90	1.13
Vas	5.52 L	2.43 L
Cms	288 $\mu\text{m}/\text{N}$	240 $\mu\text{m}/\text{N}$
BL	4.6 TM	4.0 TM
Sd	116.9 $\text{cm}^2$	85 $\text{cm}^2$
Mms	11.72 g	9.14 g

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# NOTES:

## **POLK MOMO LIMITED Warranty**

Polk Audio, Inc., warrants to the original retail purchaser only. This warranty will terminate automatically prior to its stated expiration if the original retail purchaser sells or transfers the Product to any other party.

Polk Audio, Inc., warrants, to the original retail purchaser only, that the Polk Momo LOUDSPEAKER(S), PASSIVE CROSSOVER COMPONENT(S) and ENCLOSURE on this Polk Audio Loudspeaker Product will be free from defects in material and workmanship for a period of three (3) years from the date of original retail purchase from a Polk Audio Authorized Dealer.

To allow Polk Audio to offer the best possible warranty service, please register your new product online at: [www.polkaudio.com/registration](http://www.polkaudio.com/registration) or call Polk customer service 800-377-7655 in the USA and Canada (outside the USA: 410-358-3600) within ten (10) days of the date of original purchase. Be sure to keep your original purchase receipt.

Defective Products must be shipped, together with proof of purchase, prepaid insured to the Polk Audio Authorized Dealer from whom you purchased the Product, or to the Factory at 2550 Britannia Boulevard, Suite A, San Diego, California 92154. Products must be shipped in the original shipping container or its equivalent; in any case the risk of loss or damage in transit is to be borne by you. If upon examination at the Factory or Polk Audio Authorized Dealer it is determined that the unit was defective in materials or workmanship at any time during this Warranty period, Polk Audio or the Polk Audio Authorized Dealer will, at its option, repair or replace this Product at no additional charge, except as set forth below. All replaced parts and Products become the property of Polk Audio. Products replaced or repaired under this warranty will be returned to you, within a reasonable time, freight prepaid.

This warranty does not include service or parts to repair damage caused by accident, disaster, misuse, abuse, negligence, inadequate packing or shipping procedures, commercial use, voltage inputs in excess of

the rated maximum of the unit, cosmetic appearance of cabinetry not directly attributable to defect in materials or workmanship, or service, repair, or modification of the Product which has not been authorized or approved by Polk Audio. This warranty shall terminate if the Serial number on the Product has been removed, tampered with or defaced.

This warranty is in lieu of all other expressed Warranties. If this Product is defective in materials or workmanship as warranted above, your sole remedy shall be repair or replacement as provided above. In no event will Polk Audio, Inc. be liable to you for any incidental or consequential damages arising out of the use or inability to use the Product, even if Polk Audio, Inc. or a Polk Audio Authorized Dealer has been advised of the possibility of such damages, or for any claim by any other party. Some states do not allow the exclusion or limitation of consequential damages, so the above limitation and exclusion may not apply to you.

All implied warranties on this Product are limited to the duration of this expressed Warranty. Some states do not allow limitation on how long an implied Warranty lasts, so the above limitations may not apply to you. This Warranty gives you specific legal rights, and you also may have other rights which vary from state to state.

This Warranty applies only to Products purchased in Canada, the United States of America, its possessions, and U.S. and NATO armed forces exchanges and audio clubs.

The Warranty terms and conditions applicable to Products purchased in other countries are available from the Polk Audio Authorized Distributors in such countries.

**polk**

**momo**

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[www.polkmomo.com](http://www.polkmomo.com)

Contact Polk Audio Customer Service 800-377-7655 (M-F, 9-6 EST, US only) or via email [polkcs@polkaudio.com](mailto:polkcs@polkaudio.com). Outside the US, call 410-358-3600.

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