



SIGNATURE
R E F E R E N C E

SR6500

6 1/2" COMPONENT SYSTEM

OWNER'S MANUAL

BEFORE YOU START

Please inspect each loudspeaker carefully. Notify your Polk Audio 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.

COMPONENT/ COAXIAL SYSTEM INCLUDES:

- 1 Letter
- 1 Owner's Manual
- 1 Online Registration Card
- 1 12" Polk Audio Vinyl Cut Decal
- 1 Tweeter Install Tool
- 1 Driver Mounting Template
- 1 Tweeter Mounting Template
- 2 6 1/2" Drivers
- 2 22mm Ring Radiator Tweeters
- 2 Tweeter Flush Mount Cups
- 2 Tweeter Angle Mount Cups
- 2 Crossover Networks
- 2 Straight Coaxial Tweeter Posts
- 2 Angled Coaxial Tweeter Posts
- 2 Driver Grilles with Logos
- 2 Driver Grille Mounting Rings
- 2 Tweeter Grilles with Logos
- 2 Driver 6" x 9" Adapters
- 2 Tweeter Flush Mount Clamps
- 2 Tweeter Angle Mount Clamps
- 2 #6 x 1/4" Pan Head Machine Screws for Mounting Tweeter Cup
- 2 Driver Mounting Gaskets
- 2 Rubber Grommets for Driver In Coax Mode
- 2 #6 Split Ring Lock Washers for Tweeter Cups
- 2 Tweeter Post Thumbscrews
- 4 Driver Spacer Rings
- 4 #8 x 1" Flat Head Sheet Metal Screws for Mounting Crossover
- 8 #8 x 1/2" Pan Head Sheet Metal Screws for Driver Mounting
- 8 #8 x 3/4" Pan Head Sheet Metal Screws for Driver Mounting
- 8 #8 x 1 1/2" Pan Head Sheet Metal Screws for Driver Mounting
- 8 Driver Mounting Clips

NECESSARY TOOLS

- Phillips Head Screwdriver
- Flat Blade Screwdriver or Door Panel Removal Tool
- Electric Drill
- 1/4" & 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
- Speaker Wire: 16-Gauge or Larger
- Safety Glasses
- Wire Strippers & Cutters
- Crimping Tool

TWEETERS

WARNING: Do not operate the tweeters without crossover networks. Damage to the tweeter from thermal overload will result without the protection provided by a crossover and will void your warranty.

The Polk Audio Signature Reference tweeter, in component setup, offers two mounting options for installation flexibility. (See Figure 6)

NOTE: If you choose to operate the system with an active crossover, the crossover frequency for the tweeter must be greater than or equal to 3.5kHz with a minimum 3rd order (18dB/octave) slope. Please note that the tweeter could be damaged at excessive listening levels. For the best tweeter protection, use the crossovers supplied with the systems.

TWEETER LEVEL

The jumper levels inside the crossover box adjusts the level (volume) of the tweeter relative to the mid/woofer. Start with the jumper in the "0dB" position and listen. If you want a "brighter" sound, move to the left position, "+1dB," and listen again. The "+1 dB" setting provides the greatest amount of tweeter output. -1.5dB and -3dB reduce output to a greater degree. (See Figure 10)

POLARITY / BLENDING

If it seems that the tweeters and drivers are not "blending" seamlessly, change the polarity of both tweeters by reversing the positive (+) and negative (-) tweeter wires at the crossover. Reversing the phase of the tweeters will usually optimize the blending of the system components when the tweeters and drivers are located far apart from each other.

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 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 - 150 Watts per channel to get the best possible performance.

SAFE LIMITS OF OPERATION

Your Polk Audio 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 amplifier than from a high-powered one.

FOR TECHNICAL ASSISTANCE OR SERVICE

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. Please do not hesitate to call us if you have questions about your speaker system. Visit <http://www.polkaudio.com/car>

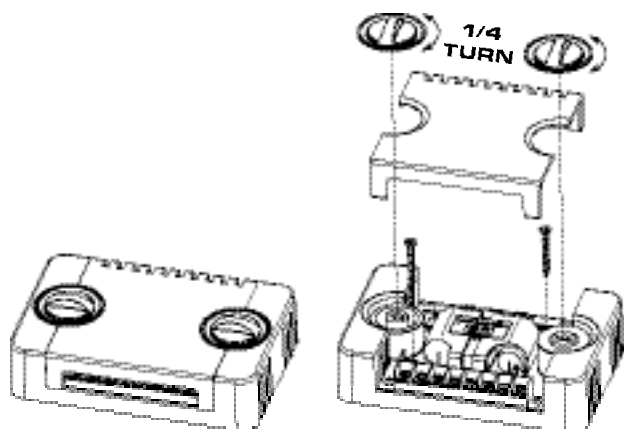
SPECIFICATIONS

Continuous Power Handling	125 Watts
Peak Power Handling	250 Watts
Impedance (Nominal)	4 Ohms
Frequency Response (+/-3dB)	40 Hz - 30 kHz
Sensitivity (1w/1m)	90 dB
Driver Mounting Diameter	5 5/8" (142.9mm)
Driver Mounting Depth	2 9/16" (64.9mm)
Tweeter Flush Cup Mounting Diameter	2" (50.8mm)
Tweeter Angle Mount Cup Mounting Diameter	1 3/4" (44.5mm)
Tweeter Flush Cup Mounting Depth	1" (25.4mm)
Tweeter Angle Mount Cup Mounting Depth	5/8" (15.87mm)
Grille Height	1 1/8" (28.7mm)
Grille Diameter	6 15/16" (176.2mm)
Crossover Frequency	3100 Hz
Driver Crossover Slope (Low Pass)	2nd Order, 12 dB/Octave
Tweeter Crossover Slope (High Pass)	3rd Order, 18 dB/Octave
Tweeter Attenuation Level Settings	+1 dB, 0 dB, -1.5 dB, -3 dB

THIELE/SMALL PARAMETERS SR6500 DRIVER

Fs	60 Hz
Re	3.5 Ohms
Z	4 Ohms
Qms	10.3
Qes	0.7
Qts	0.65
Le	0.38 mH
Vas (Cubic Feet & Liters)	0.4 Cu. Ft., 11.3 L
Cms	440 um/N
BL	5.6 T-m
Sd (sq. in. & sq. cm.)	21 sq. in., 135 sq. cm.
Xmax Linear (in. & mm.)	0.16", 4mm Peak (Double for Peak to Peak)
Xmax—Mechanical (in. & mm.)	0.32", 8.1mm Peak (Double for Peak to Peak)
Voice Coil Diameter (in. & mm.)	1.5", 38.1mm

**FIGURE 1
CROSSOVER INSTALLATION**

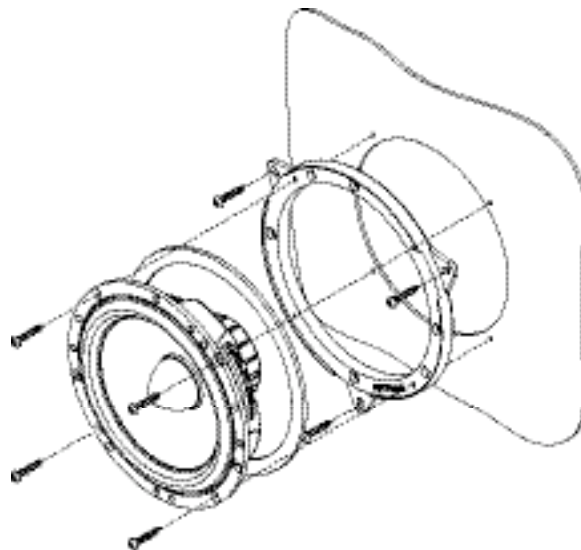


WARNING:

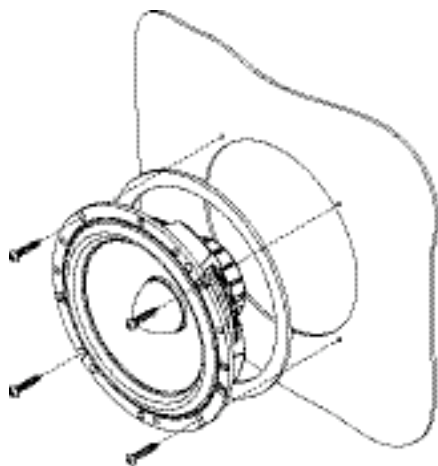
CROSSOVER IS NOT WATERPROOF. DO NOT INSTALL IN AREAS OF POTENTIAL WATER EXPOSURE. THIS IS NOT COVERED UNDER MANUFACTURER'S WARRANTY.

**FIGURE 3
DRIVER INSTALLATION
SUPPLIED SPACER RING**

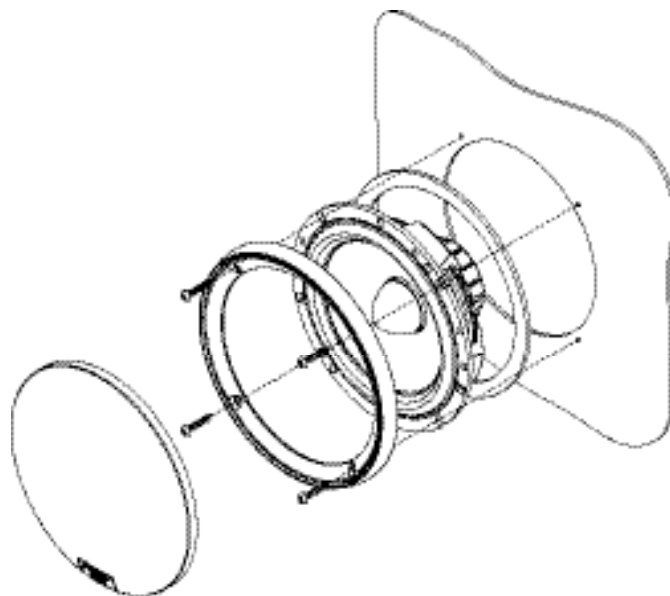
(IF ADDITIONAL CLEARANCE IS REQUIRED USE TWO SPACER RINGS.)



**FIGURE 2
DRIVER INSTALLATION
FACTORY LOCATION**



**FIGURE 4
DRIVER INSTALLATION
SUPPLIED GRILLE**



**Seating The Driver
& Spacer Ring:**

When the screw holes on the adapter ring/spacer line up with the holes on the driver's basket, you will hear and feel them "click" into place.

FIGURE 5
DRIVER INSTALLATION
 6" x 9" COAXIAL MODE

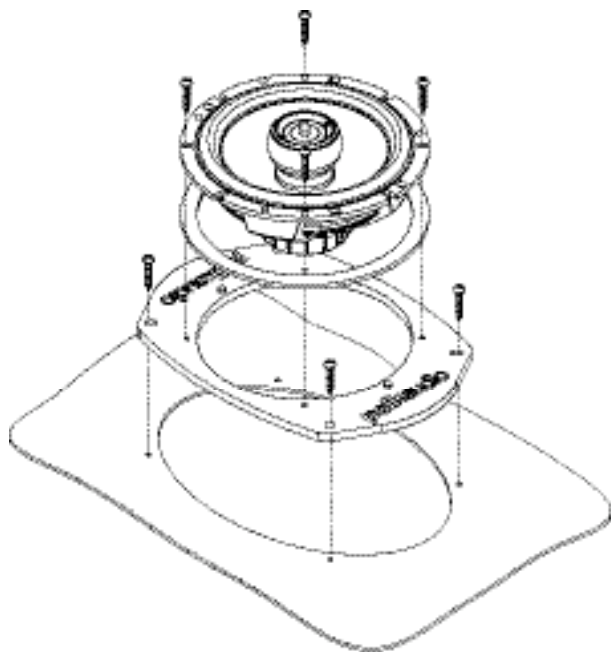


FIGURE 7
TWEETER INSTALLATION
& REMOVAL
 FLUSH MOUNT CUP &
 TWEETER POST (COAXIAL MODE)

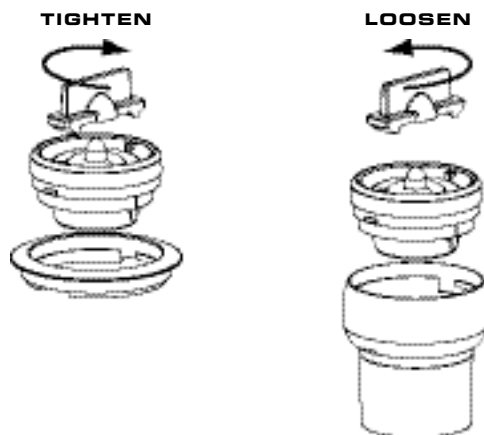


FIGURE 6
TWEETER INSTALLATION
 FLUSH & ANGLE FLUSH MOUNT

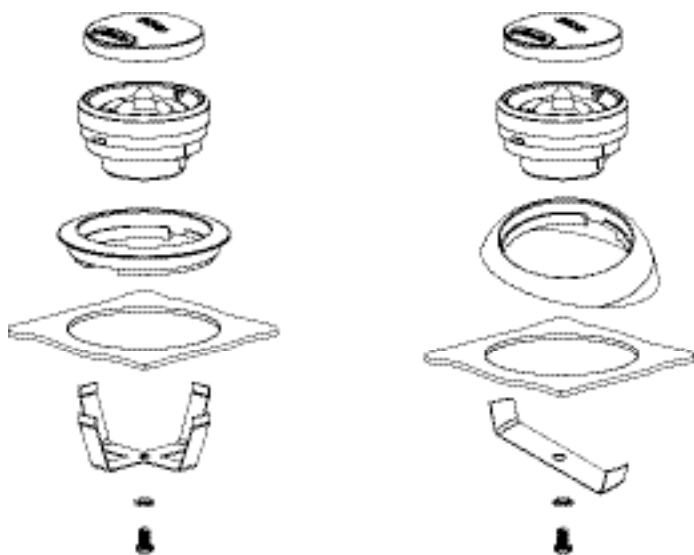
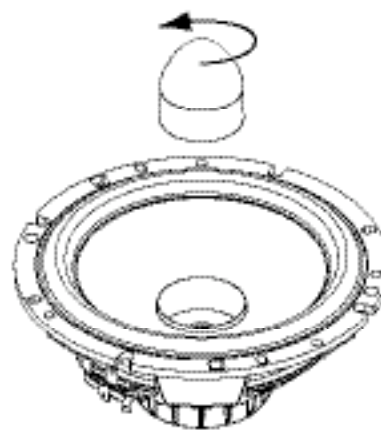


FIGURE 8
COAXIAL SET-UP & INSTALLATION
 PHASE PLUG REMOVAL



Angle Mount Installation Note:

SignatureReference tweeters may be swiveled to get the best high frequency response and soundstage. Generally, pointing the tweeters toward the listening position will yield the best results. Use the position that sounds best to you. Swivel the tweeter module by applying pressure on the edge of the tweeter module. DO NOT APPLY PRESSURE TO THE DOME ITSELF.

FIGURE 9
COAXIAL SET-UP & INSTALLATION
 STRAIGHT OR ANGLED TWEETER POST

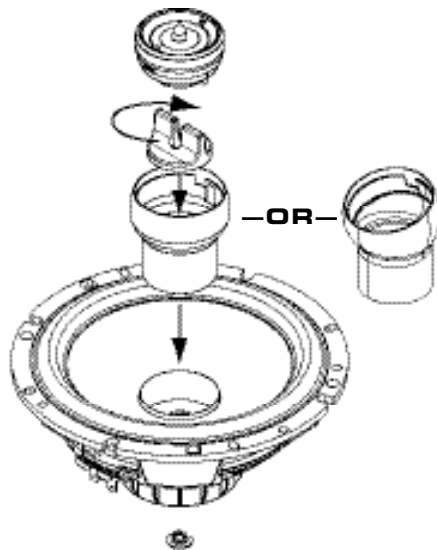


FIGURE 10
TWEETER LEVEL ADJUSTMENT

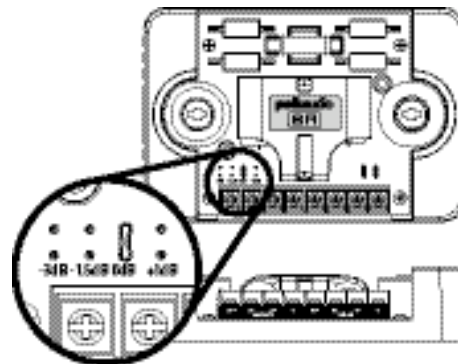
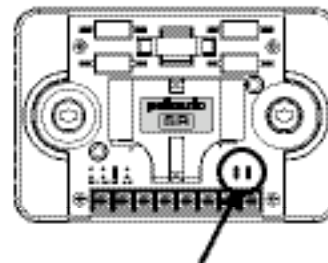
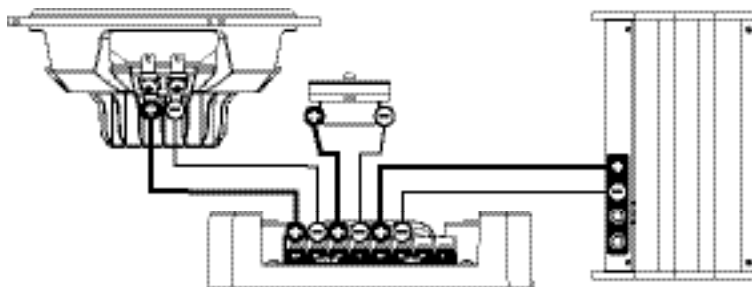
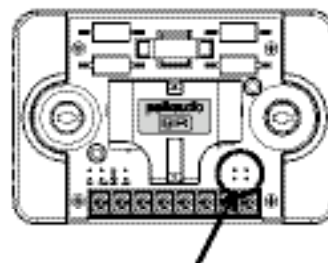
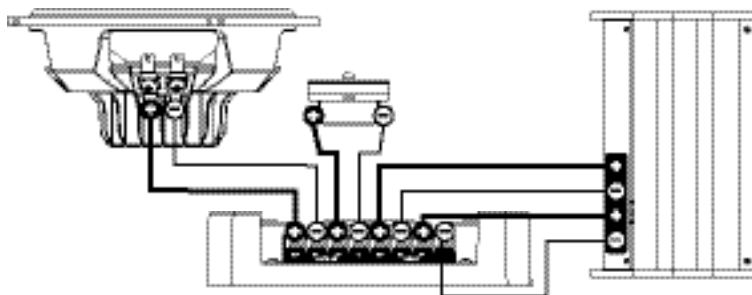


FIGURE 11 A
SINGLE AMPLIFIER WIRING



NOTE:
 JUMPERS REMAIN IN PLACE
 FOR SINGLE AMPLIFIER WIRING

FIGURE 11 B
BI-AMPLIFIER WIRING



NOTE:
 REMOVE JUMPERS
 FOR BI-AMPLIFIER WIRING

POLK AUDIO SIGNATURE REFERENCE SERIES 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 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, Inc. to offer the best possible warranty service, please register your new product online at: www.polkaudio.com/registration or call Polk Audio 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 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 USA 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.

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the speaker specialists®



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