

KICKER®



COMP™

C8/C10/C12/C15 Subwoofers

Congratulations! You have just purchased one of the most flexible subwoofers yet from KICKER. Your Comp sub is designed to give you great bass performance in a wide variety of applications. These installation instructions will help you get the most out of your new KICKER sub. Thanks for buying KICKER. Enjoy!

Features

Hemispherical Polymineral Cone with Inverted Structural Dome™ (ISD) means high rigidity under pressure for accurate linear control, low enclosure pressure loss to reduce "pump-down", high internal dampening, and excellent sunlight, pollution and moisture resistance

Double-Stitched Surround prevents cone/surround separation at high excursions

Blackened Pole Piece maximizes heat transfer for long voice coil life

Extended Pole Piece allows cooler operation for superior power handling and magnetic field linearity around voice coil gap for enhanced control

Vented Pole Piece relieves low bass-robbing pressure under the center dome

Extended Backplate prevents damaging voice coil "bottoming"

Perimeter Venting for measurably lower operating temperature and freer cone motion

Hi-Temp Kapton® Voice Coil Former protects against warped, rubbing voice coils

Long-Throw Voice Coil for enormous cone excursion capabilities

High Power Lead Wires resist lead breakage and reduce power robbing resistance losses

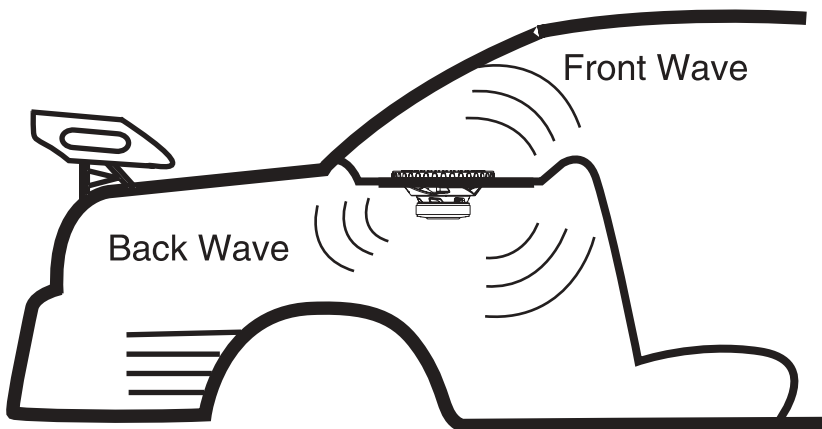
Installation Instructions

The Comp subs are designed to be as universal as possible. Great performance can be obtained when using them in sealed or vented boxes as well as on an Infinite Baffle (freeair).

Infinite Baffle Mounting

The infinite baffle or freeair mounting method is very effective in a sedan type of vehicle. The easiest way to do this is to cut out the parcel shelf just big enough for your chosen driver(s). The parcel shelf is usually not very strong and any flexing will decrease the bass response. To reinforce this area and to give you something to mount the woofer(s) to, a piece of strong wood needs to be cut and mounted to the bottom of the shelf. We recommend a medium to high density fiberboard (MDF or HDF) 3/4" thick. Common particle board is not very good for use in a car stereo. If a good grade of fiberboard is not available in your area, use a good grade of marine plywood.

The key factor in utilizing the freeair method is to make sure the information coming off the back of the woofer doesn't have a chance to mix with the information coming off the front. If the front and back are not sealed from each other a big part of the bass will get cancelled out.



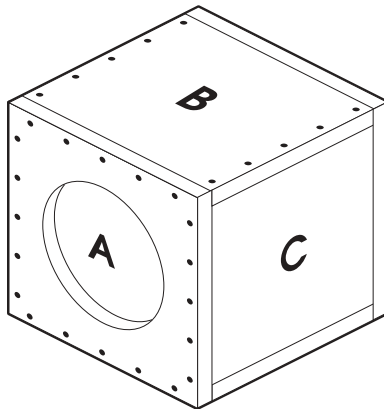
Sealed box mounting

A very smooth bass response with good low bass extension is achieved when the Kicker Comp woofers are mounted in a correctly built sealed box with the correct airspace. Sealed (acoustic suspension) designs have been a favorite here at Kicker since the original Competition Series was introduced. We build just about all of our show vehicles with sealed boxes for the smooth response, good power handling and great sound quality they offer.

Of all the enclosures possible the sealed box is the easiest to build. The two most important rules are to make it very solid and to seal all the joints perfectly. If the panels of an enclosure can flex or vibrate you will experience a loss of bass output. You don't want to throw away any of the output capability of your Kicker Comp woofers. Sealing all the joints in the enclosure is necessary to avoid loss of output and driver failure.

The following information will give you examples of compact sealed enclosures for the Kicker Comp woofers. They have very high power handling and massive amounts of high impact bass. The given volumes are the minimum recommended and include driver displacement. Maximum volumes for KICKER Comps are C8-1.2cf, C10-2.4 cf., C12-3.5 cf., and C15-5.0 cf. As the sealed enclosure volumes increase, the response will shift from high impact bass to a smoother and more extended low end.

Model	Compact Enclosure Volume	Woofers Cutout	A panel	B panel	C panel
Comp 8	.5 cf	6-7/8"	11 x 11"	11 x 9-1/2"	9-1/2 x 9-1/2"
Comp 10	1.0 cf	9-3/16"	13-1/2x13-1/2"	13-1/2x12"	12x12"
Comp 12	1.25 cf	10-15/16"	14-1/2x14-1/2"	14-1/2x13"	13x13"
Comp 15	2.25 cf	13-11/16"	17-1/4x17-1/4"	17-1/4x15-3/4"	15-3/4x15-3/4"



Vented Box Mounting

Almost as easy to build as the sealed box, the vented or ported enclosure can give you more output at certain bass frequencies. Although this design has an output advantage at some frequencies it also has a sharper rolloff characteristic which will only affect the lowest of bass frequencies. Overall a correctly designed vented enclosure will have some "free" output provided by the port itself.

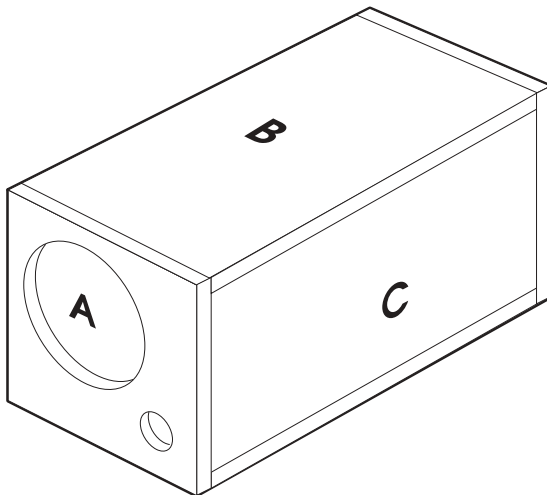
One major disadvantage to the vented design is the "unloading" of the woofer at very low frequencies. At a frequency 1/2-octave below the tuning frequency of the enclosure the woofer acts like it has no box to work in and can go to full excursion. This will be harmful to the woofer's mechanical integrity. It is therefore very important to stay with the recommended designs.

Since the peak pressure inside a vented enclosure can actually be higher than that of a sealed box, the same precautions must be taken to assure that the enclosure is rigid and sealed around all the joints.

Recommended vented enclosure volume ranges are .8-1.2cf for the C8, 1.25-1.75 cf for the C10, 1.75-2.25 cf for the C12, and 3.0-4.0 cf for the C15. As with the sealed boxes, as enclosure volume increases the response shifts from high impact to a smoother and more extended bass sound.

Below are specifications for a simple compact vented box for each sub.

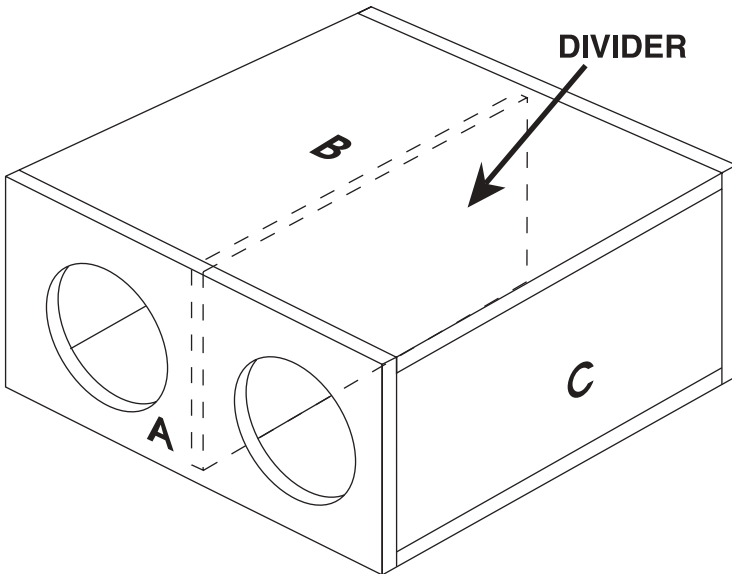
Model	Compact Enclosure Volume	Woofer Cutout	A panel	B panel	C panel	Port
Comp 8	.8 cf	6-7/8"	9-1/2x13-1/2"	13-1/2x 15"	8x15"	3"dx7"L
Comp 10	1.5 cf	9-3/16"	12x18"	18x15"	15x10-1/2"	4"dx11-3/4"L
Comp 12	1.75 cf	10-15/16"	14x20"	20x13"	13x12-1/2"	4"dx9-1/4"L
Comp 15	3.5 cf	13-11/16"	17x25-1/2"	25-1/2x16-1/4"	15-1/2x16-1/4"	6"dx9"L



Multiple Woofer Enclosures

If you are building enclosures for more than one woofer, they should always be divided to maintain the correct airspace for each woofer. There are a couple of reasons for this. First of all, not all woofers are exactly the same. If there are slight differences between the woofers in a common enclosure, at certain frequencies one woofer may think it's in a larger enclosure than intended. This can affect the power handling capability. Second, if one woofer fails, the remaining woofers will have more airspace to work in than what was designed. Again, this will severely affect the power handling capability of the woofers that are still working.

Another benefit of a divided enclosure is that the divider helps strengthen the enclosure. A large common enclosure will have much bigger panels than one that is divided. Large panels tend to flex more and can cancel some of the woofer's output.



Box Building Tips

The material of choice for building a strong box is 3/4" MDF (Medium Density Fiberboard). Cross bracing is a good idea to help reduce panel vibration. Strips of 3/4" by 2" wood work well for tying the panels together. HDF (High Density Fiberboard) is also good as is a really good grade of plywood (such as marine grade 7 or 13 ply). Regular particle board is not very good for speaker enclosures. It is flexible and will crumble when you try to screw the woofer in.

A good grade of wood glue is recommended for joining two pieces of wood together along with 1-1/4 to 1 1/2" drywall screws or 1-1/2" staples. A fastener placed about every 3" will hold the box together good enough until the glue dries. After assembling the box and allowing the glue to set up, use silicone sealer to make absolutely sure the corners are perfectly sealed.

Hint: When assembling the enclosure, build the whole enclosure except for the rear baffle opposite the woofer cutout. This way you can easily reach inside to apply the silicone sealer. Once this is done, put the rear panel on and seal it by reaching through the woofer cutout.

A common source of air leaks is the connecting wire for the woofers. Terminal cups are commonly available and are recommended. They provide an airtight means for bringing the wire into the enclosure and allow for easy wiring changes. An alternative is to drill a hole slightly larger than the wire and seal carefully with silicone sealer. Do not disturb the silicone until it has set up. Moving the wire before the silicone has set up will usually cause an air leak.

If you carpet the enclosure it is important to cut the carpet around the woofer opening. It is hard to get a good seal if you have both the gasket and the carpet between the woofer and the wood.

On a sealed enclosure it is easy to test the seal of the box. Push the cone in all the way and let it go. If the seal is good, the cone should take at least five seconds to return to the center position. If the cone springs back faster that that you have a leak somewhere in the enclosure. Sometimes you can hear air escaping around the woofer or at one of the joints in the enclosure. If the box itself leaks take the woofer out and check the silicone seal all around the inside. If the air is leaking out around the woofer try adding a flexible sealer like plumber's putty or rope caulk. Don't use silicone sealers around the woofer.

For more information and additional box plans, see the KICKER Comp Technical Brief on kicker.com or call the Technical Services Line at (405)624-8583.

Specifications

Model	Comp 8	Comp 10	Comp 12	Comp 15
SPL 1W/1M	84.5dB	87.7dB	88.6dB	89.2dB
Displacement, cc	620.0	982.3	1718.6	3256.8
Displacement, cu in	38.0	60	104.9	198.7
Hole cutout, in. dia.	6-7/8	9-3/16	10-15/16	13-11/16
Mounting Depth, in.	3-13/16	4-9/16	5-1/2	7-1/8
Revc	4.09 Ohms	3.65 Ohms	3.79 Ohms	3.23 Ohms
Sd, SqM	.0206	.0370	.0532	.0856
BL, TM	9.08	10.17	11.69	15.84
Vas, Liters	21.99	59.48	133.27	301.02
Vas, CuFt.	.75	2.10	4.71	10.63
Mms, gms	49.55	75.81	107.37	254.86
Fs, Hz	36.8	31.2	25.8	18.03
Qms	10.179	10.534	11.298	13.136
Qes	.578	.555	.499	.390
Qts	.547	.527	.478	.379
Pmax, watts	100	125	150	250
Xmax, mm	7.5	7.5	7.5	13.0
Freq Response, Hz	30-500	30-500	27-500	25-500
Magnet weight, oz	24	32	44	74
Voice coil (Kapton), In.	1-3/8	1-1/2	1-1/2	2

*Based on 4-Ohm models



SPEAKER SYSTEMS LIMITED WARRANTY

Stillwater Designs warrants this product to be free from defects in material and workmanship under normal use for a period of **one (1) year from date of original purchase from an authorized Kicker Dealer**, unless this product is labeled "B Stock", in which case it is warranted for ninety (90) days from date of purchase. Should service be necessary under this warranty for any reason due to manufacturing defect or malfunction during the warranty period, Stillwater Designs will replace or repair (at its discretion) the defective merchandise with equivalent merchandise at no charge. Warranty replacements on "B-Stock" may have cosmetic scratches and blemishes. Discontinued products may be replaced with equivalent products.

This warranty is valid only for the **original purchaser** and is not extended to owners of the product subsequent to the original purchaser. Any applicable implied warranties are limited in duration to a period of the express warranty as provided herein beginning with the date of the original purchase at retail, and no warranties, whether express or implied, shall apply to this product thereafter. Some states do not allow limitations on implied warranties, therefore these exclusions may not apply to you.

This warranty gives you specific legal rights; however you may have other rights that vary from state to state.

WHAT TO DO IF YOU NEED WARRANTY OR SERVICE

Defective merchandise must be returned to your local Authorized Stillwater Designs (Kicker) Dealer for warranty. Assistance in locating an Authorized Dealer can be obtained by writing or calling Stillwater Designs direct. You can confirm that a dealer is authorized by asking to see a current authorized dealer window decal.

If it becomes necessary for you to return defective merchandise, call the Kicker Customer Service Department at (405)624-8510 for a Return Authorization (RA) number. Package all defective items in the original container or in a package that will prevent shipping damage, and return to

Stillwater Designs, 5021 North Perkins Road, Stillwater, OK 74075

The RA number must be clearly marked on the outside of the package. Return only defective components. Return of entire cabinets, system packs, pairs, etc. increases your return freight charges. Non-defective items received will be returned freight collect.

Include a **dated proof-of-purchase** from an Authorized Dealer. Warranty expiration on items returned without proof-of-purchase will be determined from the manufacturing date code. Coverage may be invalidated if this date is greater than 18 months previous to the date item is sent in. Freight must be prepaid; items received freight collect will be refused.

Failure to follow these steps may void your warranty. Any questions can be directed to the Kicker Customer Service Department at (405)624-8510.

WHAT IS NOT COVERED?

This warranty is valid only if the product is used for the purpose for which it was designed. It does not cover:

- Install slips (screwdriver holes)
- Damage caused by exposure to water and/or excessive heat.
- Damage through negligence, misuse, or accident.
- Items physically damaged due to abuse.
- Freight damage.
- The cost of shipping product to Stillwater Designs Service.
- Items previously repaired by any unauthorized repair facility.
- Items returned from unauthorized individuals or dealers.
- Return shipping on non-defective items.
- Speakers damaged due to amplifier clipping or distortion.
- Speakers with silicon caulk used for gasket material.

HOW LONG WILL IT TAKE?

Stillwater Designs maintains a goal of 24-hour service for all returns. Delays may be incurred if lack of replacement inventory or parts is encountered.

INTERNATIONAL WARRANTY

Contact your International Stillwater Designs dealer or distributor concerning specific procedures for your country's warranty policies.



P.O. Box 459 • Stillwater, Oklahoma 74076 • U.S.A. • 405 624-8510

STILLWATER
Designs®

WARNING:

KICKER drivers are capable of producing sound levels that can permanently damage your hearing! Turning up a system to a level that has audible distortion is more damaging to your ears than listening to an undistorted system at the same volume level. The threshold of pain is always an indicator that the sound level is too loud and may permanently damage your hearing. Please use common sense when controlling volume!

February 2002

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