

KICKER®



CVR8/CVR10/CVR12/CVR15/CVR18

Congratulations! You have just purchased one of the most flexible subwoofers yet from KICKER. Your CompVR 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 damping, 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 Kaptonfi Voice Coil Former protects against warped, rubbing voice coils.

Dual Long-Throw Voice Coils A speaker can obtain extreme Xmax only when the voice coil is long enough and can sustain the stress.

Spring-Loaded Nickel Plated Terminals for solid connections with large gauge speaker wire.

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

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.

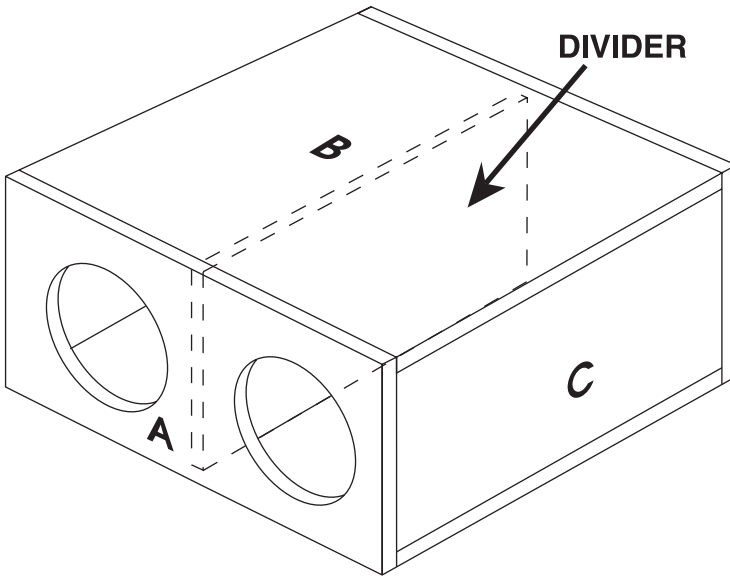
On a sealed enclosure it is easy to test the seal of the box. Push the cone in all the way and let it go. If the seal is good, the cone should take at least five seconds to return to the center position. If the cone spring back faster that that you have a leak somewhere in the enclosure. Sometimes you 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.

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.



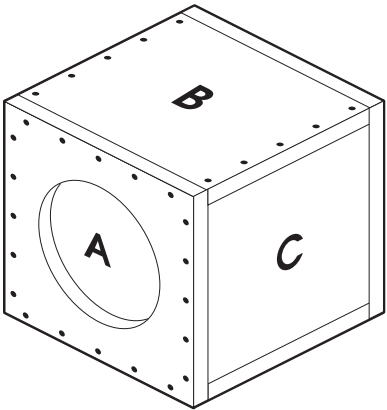
Sealed box mounting

A very smooth bass response with good low bass extension is achieved when the Kicker CompVR 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 CompVR 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 CompVRs are CVR8-1.8cf, CVR10-3.0 cf., CVR12-4.6 cf., CVR15-5.2 cf. and the CVR18-5.4 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
CVR8	.4 cf	7"	11 x 11"	11 x 8-1/8"	9-1/2 x 8-1/8"
CV10	.8 cf	9-5/32"	13-1/2x13-1/2"	13-1/2x10-1/8"	12x10-1/8"
CVR12	1.0 cf	10-15/16"	14-1/2x14-1/2"	14-1/2x11"	13x11"
CVR15	1.8 cf	13-11/16"	17-1/4x17-1/4"	17-1/4x13-1/2"	15-3/4x13-1/2"
CVR18	2.2 cf	16-5/16"	19-1/2x19-1/2"	19-1/2x13"	14-1/2x13"



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 CVR8, 1.25-1.75 cf for the CVR10, 1.75-2.25 cf for the CVR12, 3.0-5.0 cf for the CVR15 and 4.0-6.0 cf for the CVR18. 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 (Minimum) Vented Volume	SPL/Deep Bass (Maximum) Vented Volume
CVR8	.8 cu.ft. + port Port 1-1/2 x 8 x 20-3/4" Power Handling = 75W	1.20 cu.ft. + port Port 2 x 8 x 19-1/8" Power Handling = 75W
CVR10	1.25 cu.ft. + port Port 2 x 10-1/2 x 20" Power Handling = 200	1.75 cu.ft. + port Port 2-1/2 x 10-1/2 x 20" Power Handling = 200
CVR12	1.75 cu.ft. + port Port 2-1/2 x 12-1/2 x 20" Power Handling = 300	2.25 cu.ft. + port Port 3 x 12-1/2 x 20-1/2" Power Handling = 300
CVR15	3 cu.ft. + port Port 2-3/4 x 15-1/2 x 25-3/4" Power Handling = 500	5 cu.ft. + port Port 3 x 15-1/2 x 22" Power Handling = 500
CVR18	4.0 cu.ft. + port Port 3 x 18 x 24-1/4" Power Handling = 1000	6 cu.ft. + port Port 3 x 18 x 20-3/4" Power Handling = 1000

Specifications

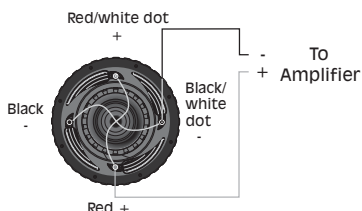
Model	CVR8	CVR10	CVR12	CVR15	CVR18
SPL 1W/1M	83.0dB	85.6dB	86.4dB	88.5dB	89.5dB
Displacement, cc	673.5	982.3	2001.2	3992.6	6513.39
Displacement, cu in	41.1	75.3	122.1	243.6	397.4
Hole cutout, in. dia.	7	9-5/32	10-15/16	13-3/4	16-5/16
Mounting Depth, in.	3-15/16	5-7/16	6	7-1/2	8-1/4
Revc	7.58 Ohms	7.75 Ohms	7.81 Ohms	7.18 Ohms	7.38 Ohms
Sd, SqM	.0214	.0379	.05321	.0881	0.1178
BL, TM	11.79	17.65	18.3	19.78	25.69
Vas, Liters	14.11	40.40	92.82	257.3	441.9
Vas, CuFt.	.498	1.42	3.28	9.08	15.6
Mms, gms	60.17	116.29	151.47	227.92	340.43
Fs, Hz	44.1	33.1	26.8	21.8	18.2
Qms	9.34	8.703	9.38	10.689	10.412
Qes	.908	.603	.596	.573	0.436
Qts	.828	.564	.561	.544	0.418
Pmax, watts	200	300	400	500	1000
Xmax, mm	8.5	11.5	11.5	12.75	14.5
Freq Response, Hz	30-500	25-500	25-500	25-500	23-500
Magnet weight, oz	25	43	45	100	138
Voice coil (Kapton), In.	1-1/2	2	2	2	2-1/2

**Based on 4-Ohm models*

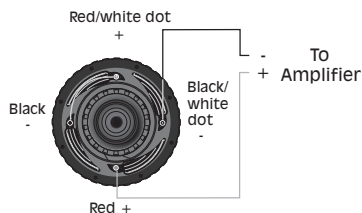
Wiring

Comp VR woofers are available with dual 2 Ohm or dual 4 Ohm voice coils. Both coils should always be hooked up. The dual 2 Ohm woofer will give you a 1 Ohm or a 4 Ohm load depending on if the coils are wired in parallel or in series. The dual 4 Ohm woofer will give a 2 Ohm or 8 Ohm load depending on how they are wired. The terminals with solid red and black markings are for one voice coil. The terminals with the white dots are for the second voice coil.

Parallel



Series



SPEAKER SYSTEMS LIMITED WARRANTY

Kicker warrants this product to be free from defects in material and workmanship under normal use for a period of **THREE (3) MONTHS** from date of original purchase. When purchased from an Authorized KICKER Dealer it is warranted for **ONE (1) YEAR** from date of original purchase. If the product is labeled "B Stock" and purchased from an Authorized KICKER Dealer, it is warranted for **THREE (3) MONTHS** from date of purchase, regardless of place of installation. Should service be necessary under this warranty for any reason due to manufacturing defect or malfunction during the warranty period, Kicker will replace or repair (at its discretion) the defective merchandise with equivalent merchandise at no charge. Warranty replacements on "B-Stock" merchandise may have cosmetic scratches and blemishes. Discontinued products may be replaced with more current 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 (RMA) 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 RMA 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** stating the Customer name, Dealer name, product purchased and date of purchase. Warranty expiration on items without proof-of-purchase will be determined from type of sale and the manufacturing date code. 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:

- Damage due to improper installation
- Subsequent damage to other components
- Damage caused by exposure to moisture, excessive heat, chemical cleaners, and/or UV radiation
- Damage through negligence, misuse, accident or abuse. Repeated returns for the same damage may be considered abuse.
- Any cost or expense related to the removal or reinstallation of product
- Speakers damaged due to amplifier clipping or distortion
- Items previously repaired or modified by any unauthorized repair facility
- Return shipping on non-defective items
- Products with tampered or missing barcode labels
- Products returned without a Return Authorization (RMA) number
- Freight Damage
- The cost of shipping product to Kicker
- Service performed by anyone other than Kicker
- Speaker with any foreign caulk used for gasket material

HOW LONG WILL IT TAKE?

Kicker strives to maintain 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 Kicker 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!

