



## XPL™ C-SERIES HIGH OUTPUT SUBWOOFERS

CONGRATULATIONS! The new c-Series KICKER XPL™ subwoofers feature the latest advancements in loudspeaker design from Stillwater Designs, the most famous name in car audio subwoofers.

### FEATURES OF KICKER C-SERIES XPL

- Cast Aluminum Basket - Precision alignment and motor structure support
- Hemispherical Polym mineral Cone w/ ISD™ (Inverted Structural Dome) - High rigidity under pressure for accurate linear control
- Stops enclosure pressure loss to reduce "pump-down"
- High internal dampening
- Excellent sunlight, pollution and moisture resistance
- Double Stitched Surround - Prevents cone/surround separation at high excursions
- Blackened Pole Piece - Improved heat transfer
- Uniplate™ - Improved thermal and magnetic transfer between pole and backplate
- Extended Pole Piece - Cooler operation increases power handling
- Improved magnetic field linearity around the voice coil gap
- Vented Pole Piece - Pressure relief under the center dome improves low bass
- Extended Backplates - Prevent damaging voice coil "bottoming"
- Perimeter Venting - Measurably lower operating temperature and freer cone motion
- Hi-Temp Kapton Voice Coil Formers - Protects against warped, rubbing voice coils
- Long Throw Voice Coil - Enormous cone excursion capabilities
- High Power Lead Wires - Stops lead breakage
- Reduces power robbing resistance losses

### RECOMMENDED ENCLOSURES

The c-Series XPL subwoofers are designed to be installed in small sealed enclosures. Stillwater Designs has been using sealed enclosures in its show vehicles for a number of years. They have proven to be very reliable, with highly predictable performance, even under extreme power demands. The sealed enclosure sound is very tight and controlled, yet very "full" and solid, with extended low bass response.

The table on the following page shows suitable enclosure volumes for XPL drivers. Note: a larger box improves low bass performance; a smaller box produces more mid-bass "bump". Consider the type of "sound" you want, and the amount of space in your vehicle, then you can choose the appropriate enclosure to produce it.

**AMERICA'S MUSIC MACHINES<sup>SM</sup>**

## BUILDING YOUR ENCLOSURE

Your enclosure should be made of 3/4" wood, minimum. Avoid low density material such as common particle board and low grades of plywood. The recommended materials are MDF (medium density fiberboard), high density particle board or high quality void free 7 to 13 ply plywood such as marine plywood.

When assembling the box use a good grade of wood glue (such as Elmer's Professional or Titebond) on all joints. Do not use silicone, hot glue or caulk in place of glue. When the glue has set, seal all the inside joints with a liberal application of silicone sealer. This is important to ensure an airtight seal.

The use of terminal cups is the preferred means for getting wires to the woofer. If cups are not available drill a hole slightly larger than the wire used and carefully seal around the wire with silicone sealer. This is also very important to maintain a perfect seal in the box. All the recommended enclosure specs require a 50% fill of polyester fiber. Commonly called fiberfill, it is normally used as pillow stuffing.

If the woofer mounting hole is not cut exactly to specifications there is a good chance that air can leak out through the screw holes. To remedy this problem you can use a non-hardening sealer such as rope caulk or plumber's putty.

DO NOT USE SILICONE PRODUCTS TO SEAL THE WOOFER TO THE ENCLOSURE AS THIS WILL VOID YOUR WARRANTY.

Be sure to observe polarity when wiring up any speakers. Incorrect polarity will cause a loss of sound quality and in the case of woofers it can decrease output dramatically.

## RECOMMENDED ENCLOSURE VOLUMES

### XPL™ C-Series Drivers

Model	Box Volume (cubic feet/liters)
X15c	1.8/50.9 Minimum 2.7/76.4 Maximum
X12c	1.0/28.3 Minimum 1.5/42.5 Maximum
X10c	0.8/22.6 Minimum 1.2/34.0 Maximum

## POWER HANDLING

The power handling of any woofer is dependent on the type of enclosure used. Although the thermal power handling figures are listed, there will be other limiting factors such as over-excursion. It is possible to build an enclosure small enough to control excursion to the point where the speaker will handle as much power as the thermal rating, however low bass and sound quality will suffer. Therefore the excursion limited power rating should be considered the most power that the woofer should ever receive.

It is also possible to damage a speaker by using too little power if the amplifier is run into clipping. A clipped signal contains a lot of direct current which the speaker is not capable of dissipating. This will cause burned voice coils. It is difficult to tell when a woofer is getting a clipped signal because the larger speakers don't reproduce distortion very well. Any time the sound quality changes as you turn the volume past a certain point, you can be assured that the amplifier has reached its limitations and should be turned down.

## SPECIFICATIONS

MODEL	Size (inches)	Impedance (ohms)	Maximum Power (watts)*	Amp Sensitivity (dB 1w/1m)	Frequency Response (Hz)	Mounting Depth (inches)	Mounting Hole Diameter (in., mm)
X15c	15	2,4 & 8	600	90.0	23-500	7, 178	14-1/16, 357
X12c	12	2,4 & 8	500	88.5	25-500	5-1/2, 140	11-1/8, 283
X10c	10	2,4 & 8	350	88.5	25-500	5, 127	9-3/8, 234

\*Assumes typical musical program; varies with enclosure size, see your dealer for complete details.

Based on measurements of 4 ohm models.

**If you have more questions about the installation of your new KICKER component, see the Authorized KICKER Dealer where you purchased your component. You may also call our Technical Services Line at 405 624-8583 for technical assistance.**

# 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**, 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/Impulse) 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 one (1) year 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.

**STILLWATER**  
Designs®

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

# 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!**

**MARCH 2000**