KICKER

Solo-Baric L5

Subwoofer

Livin' Loud

Owner's Manual

S15L5, S12L5, S10L5, S8L5

KICKER®

Solo-Baric L5 Subwoofer Owner's Manual

Models: S15L5 / S12L5 / S10L5 / S8L5

Attention:

Please record your purchase information in the area below. We recommend attaching the original sales receipt to this manual for future reference.

If you require service on this speaker during the warranty period, you will need to provide this information and a copy of the original sales receipt to Kicker for validation of warranty repairs.

ALWAYS KEEP YOUR RECEIPT!

Congratulations!

You have purchased one of the most technically advanced subwoofers in car audio. The Solo-Baric L5 was designed by the award-winning KICKER speaker design team, tested in the judging lanes of International Sound Competitions, and proven on the Street to deliver the ultimate in low bass output, durability and outrageous SPL.

This is your **"fuel for Livin' Loud™"!**

Authorized Kicker Dealer: _____

Purchase Date: _____

Speaker Model Number: _____

Speaker Serial Number: _____

Features

- **SoloKön™** is an ultra high performance composite, which remains rigid, minimizes cone flex and lowers harmonic distortion. The SoloKön™ consists of a unique one-piece, aluminum vapor-deposit material that moves as a light weight piston, exhibiting power and control.

- **Rear Cone Brace** integrates into the SoloKön™ with a continuous contact perimeter weld, which offers unmatched strength and resistance to deformation under pressure.

- **Increased Santoprene™ Surround Radius** allows extended cone excursion for additional bass output and higher SPL. Santoprene™ is the next generation of surround material. It offers unmatched UV protection and gives the SoloKön™ maximum EXmax™ (effective excursion) potential.

- **Stitched Surround** adds a mechanical fastener to the chemical adhesives. This duo prevents the cone and surround from separating in the harshest conditions.

- **New Enhanced BAM (Basket and Motor) Assembly** utilizes a high strength steel basket, features a low-profile open design, and provides a solid foundation for the precision-aligned motor assembly.

- **Perimeter Venting in the BAM** relieves pressure from under the spider, supports a linear excursion, and helps dissipate heat from the voice coil and motor structure.

- **Dual Ultra-Length Voice Coils** sustain enormous cone excursion and provide flexible impedance matching options.

- **High-Temp Polyimide Film Voice Coil Former** improves sonic and conductive properties, and prevents thermal-electrical meltdown.

- **One-Piece Uniplate™ with Vented Hyper-Extended Pole Piece and Backplate**

    1. Optimizes heat transfer efficiency for cooler operation and maximum power handling ability.

    2. Eliminates erratic magnetic flux from the voice-coil gap.

    3. Releases pressure under the suspension for uniform cone movement and responsive low bass.

    4. Prevents the voice-coil from bottoming out and corresponding damage.

- **Sleeved High-Power Tinsel Lead Wires** eliminate broken leads and power loss, due to the common use of “insufficient-gauge” lead wires. The lead wires are terminated with multiple polymer-based strain-relieving mechanical fasteners.

- **Spring-Loaded Nickel Plated Terminals** flawlessly connect medium to heavy gauge speaker wire to the sleeved high-power tinsel lead wires.

Performance

Model:	S8L5	S10L5	S12L5	S15L5
Nominal Impedance [Zn], ohm [per coil]	2 or 4	2 or 4	2 or 4	2 or 4
Resonance Frequency [fs], Hz	43.4	34.9	32.2	23.4
Sensitivity [SPLo], dB @ 1W, 1m	83.1	86.5	87.9	88.8
Effective Piston Area [Sd], in^2 (m^2)	42.32 (.0273)	68.05 (.0439)	99.98 (.0645)	163.7 (.1056)
Power Handling Watts, Peak (RMS)	600 (300)	900 (450)	1200 (600)	1500 (750)
Effective Frequency Range, Hz	28-100	24-100	20-100	18-100
Effective Excursion [EXmax™], in (mm)	.433 (11.0)	.51 (12.9)	.51 (12.9)	.59 (15.1)
DC Resistance [Re], ohm [coils in series]	7.78	7.1	7.0	7.53
Voice Coil Inductance [Le], mH	5.36	5.9	6.05	7.69
Voice Coil Diameter [d], in (mm)	2 (50.8)	2 (50.8)	2 (50.8)	2.5 (63.5)
Voice Coil Length [h], in (mm)	1.24 (31.5)	1.36 (34.5)	1.36 (34.5)	1.59 (40.5)
Mechanical Q-Factor [Qms]	9.925	10.764	11.884	12.847
Electrical Q-Factor [Qes]	.850	.523	.594	.547
Total Q-Factor [Qts]	.783	.499	.566	.524
Force Factor [BL], Tm	15.9	22.38	22.43	25.72
Equivalent Volume [Vas], ft^3 (L)	.498 (14.1)	1.19 (33.75)	2.41 (68.27)	7.93 (224.67)
Moving Mass [Mms], oz (g)	3.56 (101.0)	5.93 (168.2)	7.44 (210.9)	11.54 (327.2)
Net Displacement, in^3 (cc)	52.3 (857)	97.7 (1601)	135.2 (2215)	229.3 (3757)
Outer Frame Dimension, in (cm)	8 13/16 (22.4)	10 11/16 (27.1)	12 9/16 (31.9)	15 5/8 (39.7)
Mounting Depth, in (cm)	4 3/4 (12.1)	6 (15.2)	6 3/4 (17.1)	8 1/2 (21.6)
Magnet Weight, oz (kg)	41.27 (1.17)	77.25 (2.19)	77.25 (2.19)	114.64 (3.25)

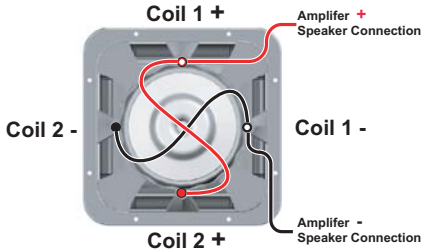
Measurements based on 4 ohm dual voice coil models.

Wiring Options

Solo-Baric L5 subwoofers are available with dual 2 Ω (ohm) or dual 4 Ω voice coils. Both coils must be connected to a source of amplification.

The dual 2 Ω woofer will generate a 1 Ω load if the coils are wired in parallel or a 4 Ω load in series. The dual 4 Ω woofer will provide a 2 Ω load wired in parallel or 8 Ω load wired in series.

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.

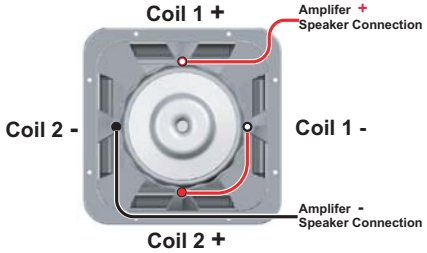


Parallel Wiring

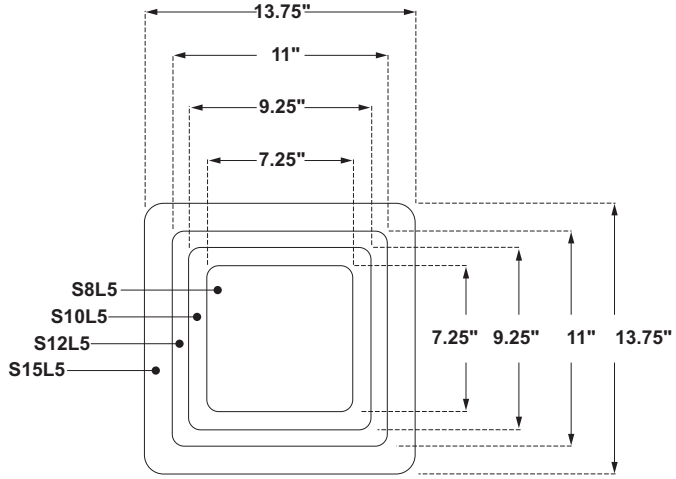
Dual 2 Ω = 1 Ω Load
Dual 4 Ω = 2 Ω Load

Series Wiring

Dual 2 Ω = 4 Ω Load
Dual 4 Ω = 8 Ω Load



Cutout Dimensions



Corner Radius:
S8L5 - 1.5”
S10L5 - 1.5”
S12L5 - 1.75”
S15L5 - 1.7”

1 in = 2.54 cm
1 in = 25.4 mm

Note: To get the best performance from your Solo-Baric L5 subwoofer, we recommend using *genuine* Kicker Accessories and Wiring.

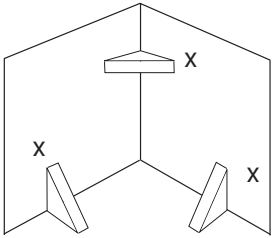
Box Building Notes

The cardboard "Template" inside your Solo-Baric's shipping carton can be used as a pattern for cutting the speaker mounting hole in your enclosure. The cardboard template is the same size as the L5 basket. After marking your baffle with the template, make sure to cut directly on the line. This will maintain the proper baffle cut-out size for the L5 basket.

All the cubic feet numbers given in the following pages include the displacement of the woofer. For the ported enclosures the displacement of the port must be added to the final design. It will be impractical to use round ports for these designs. The listed rectangular port information will yield the best results.

Always use 3/4" (1.9 cm) or thicker MDF (Medium Density Fiberboard) and make sure all the joints are fastened and well sealed. The peak pressure in a ported box can exceed that of a sealed enclosure. All of these designs need some internal bracing. Add 2" x 2" (5 cm x 5 cm) to 3" x 3" (8 cm x 8 cm) triangle braces between each of the larger unsupported panels.

Kicker recommends using a high-grade wood glue and silicone sealer for an airtight box.



x = 3" x 3" for S15L5, S12L5
x = 2" x 2" for S10L5, S8L5

Note: If you prefer an ultra-smooth bass response, you should loosely fill your Solo-Baric enclosure with poly-fil (polyester fiberfill) stuffing. Ported designs will require covering the end of the port (located inside the box) with grill cloth, chicken wire, or expanded metal to prevent the poly-fil from being blown out of the port. The use of poly-fil stuffing will slightly decrease efficiency, but will deepen and extend the low frequency output.

Do not install a port opening against a solid surface, such as an internal brace, back-panel or trunk wall, seat or interior panel of your vehicle. The port opening must remain unobstructed. Use the smallest dimension of the rectangular port or the diameter of the round port as the minimum amount of space between the port opening and any solid surface to insure unrestricted airflow.

For more advice on box building, click on the SUPPORT tab on the Kicker homepage, *www.kicker.com*. Choose the Technical Support tab, choose the Tech Manuals tab, and then download or view the corresponding information. Please E-mail support@kicker.com or call Technical Services (405) 624-8583 for specific or unanswered questions.

A Note on Power Handling Capacity

Solo-Baric subwoofers will handle massive amounts of power in any of the recommended enclosures, minimum or maximum. The smaller enclosures are best for use in limited-space applications. The larger recommended enclosures will yield slightly more bass at the lowest frequencies. The listed Power Handling capacities assume that both voice coils are in use. Always connect both coils in a dual voice-coil speaker.

Solo-Baric L5 Sealed Enclosure Applications

The Kicker Solo-Baric L5 is designed to give more output than an equivalent round speaker and excels when used in the recommended sealed boxes. These sealed enclosure designs will give the smoothest response with increased energy at the lowest frequencies, 20 to 30 Hz. These designs deliver massive amounts of high impact bass and can be driven with punishing levels of amplifier power.

The Solo-Baric L5 high performance suspension system can operate in a larger sealed enclosure without sacrificing its power handling ability. This maximum enclosure volume application is ideal for SQ (ultra sound quality) installations. The SQ enclosure generates a very flat response curve and superbly extends sub bass.

Solo-Baric L5 woofers perform well in any size sealed enclosure between the Compact and SQ volume recommendations. These systems will exhibit benefits of both designs: Compact produces high impact bass and SQ generates low bass frequency protraction. Overall, the system will sound more like the recommended enclosure design it is closest to in enclosure volume.

These enclosure recommendations have been calculated with the airspace inside the enclosure and include the displacement of the woofer. Do not make the airspace greater than the SQ (Maximum Enclosure Volume) recommendation.

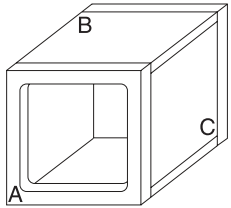
Recommended Sealed Enclosures - Moderate Efficiency

Model	Compact (Minimum Enclosure Volume)	SQ (Maximum Enclosure Volume)
S8L5	.33 ft^3 Power Handling = 80W RMS 9.34 L	.75 ft^3 Power Handling = 55W RMS 21.24 L
S10L5	.66 ft^3 Power Handling = 450W RMS 18.69 L	1.0 ft^3 Power Handling = 450W RMS 28.32 L
S12L5	.88 ft^3 Power Handling = 600W RMS 24.92 L	2.0 ft^3 Power Handling = 500W RMS 56.64 L
S15L5	1.5 ft^3 Power Handling = 750W RMS 42.48 L	6.0 ft^3 Power Handling = 450W RMS 69.92 L

Panel Dimensions for Minimum Recommended Sealed Enclosures using 3/4" (1.9 cm) thick MDF:

Model	Volume, ft^3 (L)	Panel A, in	Panel B, in	Panel C, in
S8L5	.33 (9.34)	10 x 10	10 x 8	8 x 8.5
S10L5	.66 (18.69)	12 x 12	12 x 10.5	10.5 x 10.5
S12L5	.88 (24.92)	13 x 13	13 x 11.5	11.5 x 11.5
S15L5	1.50 (42.48)	16.5 x 16.5	16.5 x 11.5	15 x 11.5

1 in = 2.54 cm
1 in = 25.4 mm
1 ft^3 = 28.32 L



Note: All sealed box airspace should be filled to 50% loose poly-fil stuffing. Please allow two weeks of break-in time for the Solo-Baric L5 subwoofer to reach optimum bass performance.

Solo-Baric L5 Ported (Vented) Enclosure Applications

Ported Solo-Barics? Absolutely...and with a vengeance! These enclosures incorporate massive slot-loaded (rectangular) ports with ultra low air velocity for ground pounding street bass that will make your "skin bounce on your bones!" These boxes are the enclosure of choice for outrageous street bass and high performance SPL contests.

The ported Compact design increases bass efficiency and fits in many space-limited applications. Although it is the smallest recommended ported enclosure, the output from 30 to 80 Hz will be considerably higher than that of any sealed box. The two other ported designs have proportionately more output in this crucial frequency band.

The ported Street Bass design "kicks out" even deeper bass, which can be heard from several street blocks away.

The SPL / Deep Bass is the largest and most efficient enclosure design. The SPL / Deep Bass delivers the sonic output needed to win SPL contests and it produces bass notes "all the way down to tha cella". This design turns heads and jump starts your heart.

If space is not a problem and you want to get the most from your Solo-Baric L5, try one of these ported designs. You will not be disappointed.

The following page shows a chart with the three Recommended Rectangular Port Enclosure sizes for each Solo-Baric driver.

Recommended Rectangular Port Enclosures – High Efficiency

Model	Compact	Street Bass	SPL / Deep Bass
S8L5	.66 ft^3 + port displacement 1.5” x 9.5" port, 19.25" long Power Handling = 275W RMS	.8 ft^3 + port displacement 1.75” x 9.5" port, 19.75" long Power Handling = 275W RMS	1.0 ft^3 + port displacement 2” x 9.5" port, 21.25" long Power Handling = 275W RMS
S10L5	1.25 ft^3 + port displacement 2.5” x 11.25” port, 19.75” long Power Handling = 450W RMS	1.75” ft^3 + port displacement 2.75 x 11.25” port, 17.75” long Power Handling = 450W RMS	2.25 ft^3 + port displacement 3” x 11.25” port, 18” long Power Handling = 450W RMS
S12L5	1.75 ft^3 + port displacement 2.5” x 13.25” port, 22.5” long Power Handling = 600W RMS	2.5 ft^3 + port displacement 2.5” x 13.25” port, 16.5” long Power Handling = 600W RMS	3.25 ft^3 + port displacement 3” x 13.25” port, 14.5” long Power Handling = 600W RMS
S15L5	3.0 ft^3 + port displacement 2.5” x 16.25” port, 19.5” long Power Handling = 750W RMS	4.5 ft^3 + port displacement 3.0” x 16.25” port, 14.75” long Power Handling = 750W RMS	6.0 ft^3 + port displacement 3.5” x 16.25” port, 13.75” long Power Handling = 750W RMS

Note: The use of a subsonic filter will significantly increase the power handling. The power handling specifications in this chart are calculated using a 25 Hz, 24 dB per octave subsonic filter. All specifications and performance figures are subject to change. Please visit **kicker.com** for the most current information.

ACOUSTICS 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 with receipt. When purchased from an Authorized KICKER Dealer it is warranted for **ONE (1) YEAR** from date of original purchase with receipt. In all cases you **must have** the **original receipt!** Should service be necessary under this warranty for any reason due to manufacturing defect or malfunction during the warranty period, Kicker will repair or replace (at its discretion) the defective merchandise with equivalent merchandise at no charge. Warranty replacements 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 should be returned to your local Authorized Stillwater Designs (Kicker) Dealer for warranty. Assistance in locating an Authorized Dealer can be obtained by writing, calling, or by visiting **kicker.com**. 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 directly to Stillwater Designs (Kicker), 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. Please return **only defective components** (subwoofer, speaker-wire connector, etc.). The return of functioning items increases your return freight charges. Non-defective items received will be returned freight collect.

Include a copy of the original receipt with the purchase date clearly visible, and a **"proof-of-purchase"** statement listing the Customer's name, Dealer's name and invoice number, and product purchased. 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 sent freight collect, or COD, 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 bar code 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.

HOW LONG WILL IT TAKE?

Kicker strives to maintain a goal of 24-hour service for all acoustics (subwoofers, midrange drivers, tweeters, crossovers, etc) 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 and service policies.

CE

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!

Notes

Tech Lines