KICKER CompC-Series DVC Subwoofer Owner's Manual

Contents

KICKER CompC-Series DVC Subwoofer

Specifications

Model	Woofer [in, mm]	Recommended Amplifier Power [Watts RMS]	Peak Power Handling [Watts]	Sensitivity [1W, 1m]	Rated Impedance []	Fs [Hz]	Outer Frame Dimension [in, cm]	Mounting Depth [in, cm]	Mounting Cutout [in, cm]	Frequency Response [Hz]
CWCS8	8, 20	400	83.3	4	42.2	8-9/16, 21.7	4-3/16, 10.5	6-15/16, 17.7		

Overview

IMPORTANT SAFETY WARNING
PROLONGED CONTINUOUS OPERATION OF AN AMPLIFIER, SPEAKER, OR SUBWOOFER IN A DISTORTED, CLIPPED OR OVER-POWERED MANNER CAN CAUSE YOUR AUDIO SYSTEM TO OVERHEAT, POSSIBLY CATCHING FIRE AND RESULTING IN SERIOUS DAMAGE TO YOUR COMPONENTS AND/OR VEHICLE. AMPLIFIERS REQUIRE UP TO 4 INCHES (10CM) OPEN VENTILATION. SUBWOOFERS SHOULD BE MOUNTED WITH AT LEAST 1 INCH (2.5CM) CLEARANCE BETWEEN THE FRONT OF THE SPEAKER AND ANY SURFACE. KICKER PRODUCTS 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.

The KICKER CompC-Series are the classic that never goes out of style. We've introduced our latest technology, Forced Air Cooling™, for maximum efficiency and product longevity from a 20% reduction in heat, while offering 8, 10, 12 and 15 inch subs with a choice of Dual or Single voice coils so that you always have the perfect subwoofer to meet your needs or fit in your vehicle. For peak performance and sound quality, use these subwoofers with KICKER accessories and amps to get the best results.

Specifications

Single Voice Coil Models	***CWCS8***	***CWCS10***	***CWCS12***	***CWCS15***
Woofer [in, mm]	8, 20	10, 25	12, 30	15, 38
Recommended Amplifier Power [Watts RMS]	100–200	125–250	150–300	225–450
Peak Power Handling [Watts]	400	500	600	900
Sensitivity [1W, 1m]	83.3	85.9	87.3	89.2
Rated Impedance [Ω]	4	4	4	4
Fs [Hz]	42.2	33.9	30.4	30.7
Outer Frame Dimension [in, cm]	8-9/16, 21.7	10-11/16, 27.2	12-5/8, 32	15-1/2, 39.3
Mounting Depth [in, cm]	4-3/16, 10.5	5-3/16, 13.2	5-3/4, 14.6	7-3/8, 18.7
Mounting Cutout [in, cm]	6-15/16, 17.7	9-3/16, 23.3	11, 27.9	13-3/4, 35
Frequency Response [Hz]	30–500	30–500	27–500	25–500

Dual Voice Coil Models	***CWCD8***	***CWCD10***	***CWCD12***	***CWCD15***
Woofer [in, mm]	8, 20	10, 25	12, 30	15, 38
Recommended Amplifier Power [Watts RMS]	100–200	125–250	150–300	225–450
Peak Power Handling [Watts]	400	500	600	900
Sensitivity [1W, 1m]	83.6	85.2	87.1	88.8
Rated Impedance [Ω]	4	4	4	4
Fs [Hz]	49.7	35.1	30.6	29.8
Outer Frame Dimension [in, cm]	8-9/16, 21.7	10-11/16, 27.2	12-5/8, 32	15-1/2, 39.3
Mounting Depth [in, cm]	4-3/16, 10.5	5-3/16, 13.2	5-3/4, 14.6	7-3/8, 18.7
Mounting Cutout [in, cm]	6-15/16, 17.7	9-3/16, 23.3	11, 27.9	13-3/4, 35
Frequency Response [Hz]	30–500	30–500	27–500	25–500

Note: All specifications and performance figures are subject to change. Please visit **www.kicker.com** for the most current information. To get the best performance from your new KICKER speakers, we recommend using genuine KICKER accessories and wiring. Please allow two weeks of break-in time for the speakers to reach optimum performance

Pro Tip: You're a KICKER amplifier and a few cables away from a full system upgrade that will dominate any factory system! KICKER line of amplifiers make it easy to upgrade to solid bass with your existing or stock source unit. Also, ask your dealer about KICKER Speaker upgrades.

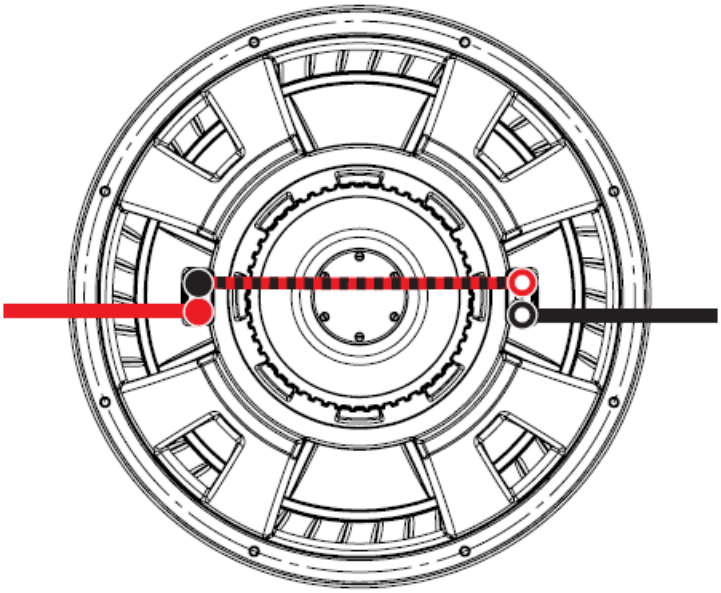
Installation

Wiring Configuration

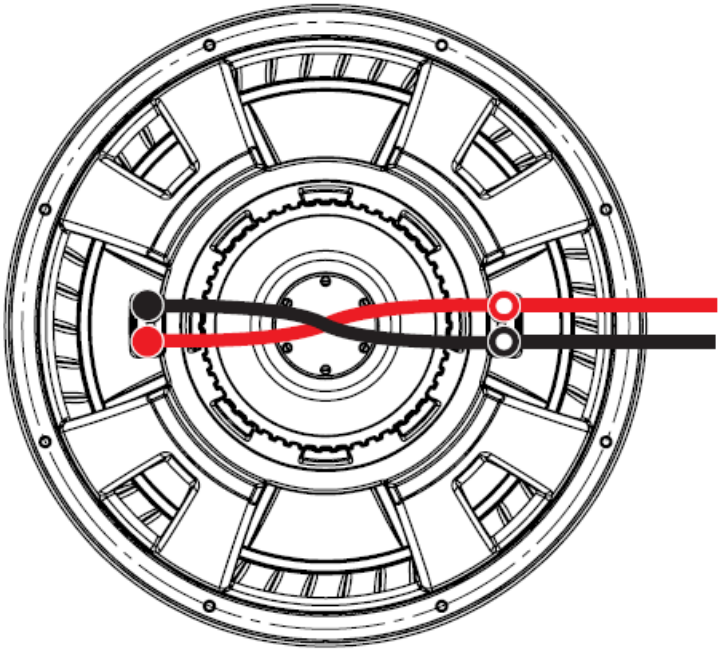
CompC-Series subwoofers are made with single and dual 4Ω voice coils. Voice coils must be connected to a source of amplification. The dual voice coil models will provide a 2Ω load wired in parallel or 8Ω load wired in series. Make sure your source unit or amplifier is rated at the correct ohm load for operation.

The speaker wire should be kept away from sharp edges and avoid the possibility of getting pinched by the trunk. If a factory hole and grommet do not exist or are inaccessible, you must drill a hole through which to run the wire. Be careful not to drill into other wiring or existing mechanisms. Any time a wire is run through a hole, it is necessary to insert a rubber or plastic grommet to protect the wire from damage.

Series Wiring
Dual 4Ω Voice Coils = 8Ω Load



Parallel Wiring
Dual 4Ω Voice Coils = 2Ω Load

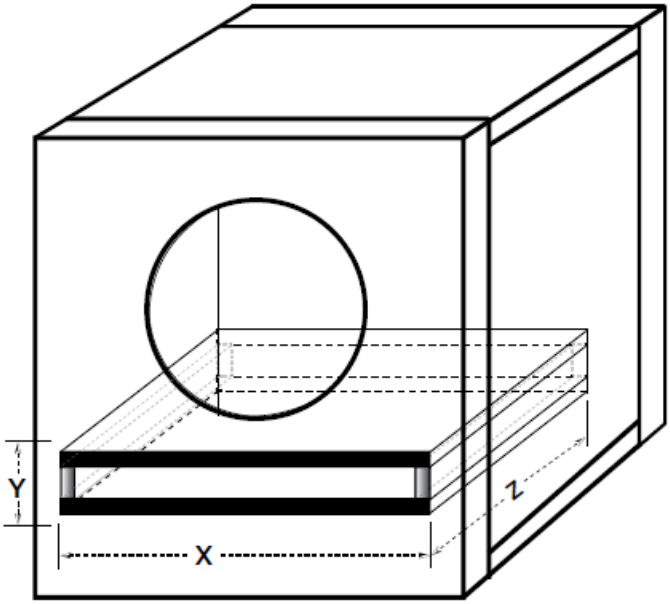


Box Building Notes

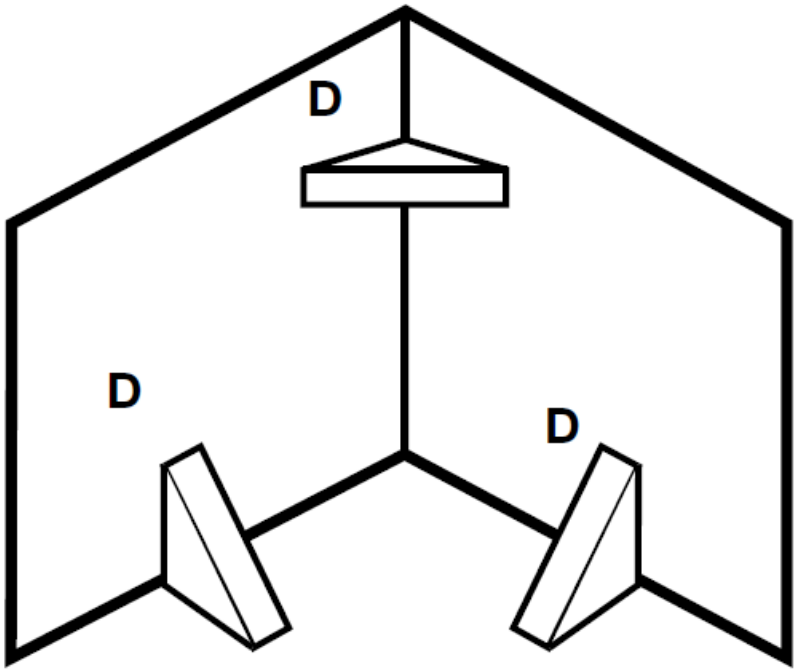
- Use 3/4” (1.9cm) or thicker MDF (medium density fiberboard) and seal the joints with silicone. Use the

“template” inside your CompC subwoofer’s shipping carton to mark the mounting hole, then cut directly on the line. These designs need internal bracing. Add triangular bracing between each of the larger unsupported panels.

- All the cubic feet (L) measurements in this manual include the displacement of the woofer. For the vented enclosures the displacement of the port must be calculated and added to the internal volume of the final design. Use the outer dimensions of the port and multiply “X x Y x Z”, convert to cubic feet, for example the CompC12 Vented Minimum design’s external port dimensions are, using 3/4” (1.9cm) MDF:
  - (12.5” + 1.5” total MDF wall thickness) x
  - (2.5” + 1.5” total MDF wall thickness) x
  - (20”) x (1 ft3 / 1728 in3) = .65 ft3
- Then, add this number to the internal volume of the enclosure. 1.75 ft3 + .65 ft3 = 2.4 ft3
- Due to the necessary length of these ports, you may want to fold the port along the bottom and back walls. It will be impractical to use round ports for these designs.



- 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 as the minimum amount of space between the port opening and any solid surface to insure unrestricted airflow.
- You can loosely fill your enclosure with poly-fil 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 exiting the port. The use of poly-fil will slightly decrease efficiency, but will deepen and extend the low frequency output by making your subwoofer think it’s in a bigger box.
- Add triangular bracing between each of the larger unsupported panels.



CWC12, CWC15: D = 3” x 3” (8cm x 8cm) CWC8, CWC10: D = 2” x 2” (5cm x 5cm)

For more advice on box building, refer to your Authorized Kicker Dealer, or click on the Support tab on the Kicker homepage, **www.kicker.com**. Please e-mail **support@kicker.com** or call Technical Support at **405-624-8583** for specific or unanswered questions.

Sealed Enclosures

- These sealed enclosure designs give the smoothest response with increased energy at the lowest frequencies, 20 to 30Hz. These designs deliver massive amounts of highly-accurate bass and can be driven with punishing levels of amplifier power.
- The CompC-Series high performance suspension system can operate in a larger sealed enclosure. This maximum enclosure volume application is ideal for SQ (ultra sound quality) installations. The Maximum enclosure generates a very flat response curve and superbly extends the sub-bass response.

Minimum Sealed

Model	Volume ft*3* (L)	Power Handling
CWC8	.5 (14.2)	200W RMS
CWC10	1 (28.3)	250W RMS
CWC12	1.25 (35.4)	300W RMS
CWC15	2.25 (63.7)	450W RMS

Maximum Sealed

Model	Volume ft*3* (L)	Power Handling
CWC8	1.2 (34)	200W RMS
CWC10	2.4 (68)	250W RMS
CWC12	3.5 (99.1)	300W RMS
CWC15	5 (141.6)	450W RMS

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

	CWC8	***CWC10***	***CWC12***	***CWC15***
Volume ft3 [L]	.5 [14.2]	1 [28.3]	1.25 [35.4]	2.25 [63.7]
Panel A in. [c m]	11X11 [27.9X27.9]	13.5X13.5 [34.3X34.3]	14.5X14.5 [36.8X36.8]	17.25X17.25 [43.8X43 .8]
Panel B in. [c m]	11X9.5 [27.9X24.1]	13.5X12 [34.3X30.5]	14.5X13 [36.8X33]	17.25X15.75 [43.8X40]
Panel C in. [c m]	9.5X9.5 [24.1X24.1]	12X12 [30.5X30.5]	13X13 [33X33]	15.75X15.75 [40X40]

CompC-Series subwoofers perform well in any size sealed enclosure between the Minimum and Maximum volume recommendations. These systems will exhibit benefits of both designs. 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. All sealed-enclosure airspace should be filled to 50% loose poly-fil (polyester fiberfill) stuffing. Do not make the airspace greater than the SQ, maximum enclosure volume, recommendation.

Vented Enclosures
These boxes are the enclosure of choice if space is not a problem and you want to get the most output and low frequency extension from your CompC subwoofer. CompC 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.

Vented Minimum	***CWC8***	***CWC10***	***CWC12***	***CWC15***
Box Volume, ft3 [L]	.66 [18.7]	1.25 [35.4]	2.25, 63.7	3 [85]
Port Opening, in. x in. [cm x cm]	1.5X8 [3.8X20]	1.5X10.5 [3.8X26.7]	2X12.5 [5.1X31.8]	3X15.5 [6.4X39.4]
Port Length, in. [cm]	18, [45.7]	14.5, [36.8]	16, [40.6]	17, [43.2]
Power Handling, RMS	200	250	300	450
Vented Maximum	***CWC8***	***CWC10***	***CWC12***	***CWC15***
Box Volume, ft3 [L]	1.2, [34]	1.75 [49.6]	2.25 [63.7]	4, [113.3]
Port Opening, in. x in. [cm x cm] Port Length, in. [cm]	1.5X8 [3.8X20.3] 12.25, [31]	1.5X10.5 [3.8X26.7] 13.25, [33.7]	2X12.5 [5.1X31.8] 16.375, [41.6]	3X15.5 [7.6X39.4] 16.25, [41.3]
Power Handling, RMS	200	250	300	450

The Vented Minimum 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 Vented Maximum design has even more output in this frequency band. The Maximum is the largest and most efficient enclosure design.

Warranty

When purchased from an Authorized KICKER Dealer, KICKER warrants this product to be free from defects in material and workmanship under normal use for a period of ONE (1) YEARS from date of original purchase with receipt. If this product is identified as “Refurbished” or “B Goods”, the warranty is limited to a period of THREE (3) MONTHS from the date of original purchase. 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. 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 service. Assistance in locating an Authorized Dealer can be found at **www.KICKER.com** or by contacting Stillwater Designs directly.

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 Merchandise Authorization (RMA) number. Package only the defective items in a package that will prevent shipping damage, and return to:

- Stillwater Designs
- 3100 North Husband St
- Stillwater, OK 74075

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

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Small Parameters

Electrical Parameters Re	3.375	Ohm	electrical voice coil resistance at DC
Krm	0.0033	Ohm	WRIGHT inductance mode
Erm	0.995		WRIGHT inductance mode
Kxm	0.0248	Ohm	WRIGHT inductance mode
Exm	0.805		WRIGHT inductance mode
Cmes	1124.72	µF	electrical capacitance representing moving mass
Lces	31.43	mH	electrical inductance representing driver compliance
Res	39.135	Ohm	resistance due to mechanical losses
fs	26.8	Hz	driver resonance frequency
Mechanical Parameters			
Mms	231.586	g	mechanical mass of driver diaphragm assembly including air load and voice coil
Mmd(Sd)	204.5865	g	mechanical mass of voice coil and diaphragm without air load
Rms	5.2735	kg/s	mechanical resistance of total-driver losses
Cms	0.153	mm/N	mechanical compliance of driver suspension
Kms	6.555	N/mm	mechanical stiffness of driver suspension
Bl	14.3505	Tm	force factor (Bl product)

Loss Parameters

Qtp	0.659	total Q-factor considering all losses
Qms	7.4015	mechanical Q-factor of driver in free air considering Rms only
Qes	0.639	electrical Q-factor of driver in free air considering Re only
Qts	0.588	total Q-factor considering Re and Rms only

Other Parameters

Vas	148.76935	l	equivalent air volume of suspension
n0	0.429		reference efficiency (2 pi-radiation using Re)
Lm	88.525	dB	characteristic sound pressure level (SPL at 1m for 1W @ Re)
Lnom	89.26	dB	nominal sensitivity (SPL at 1m for 1W @ Zn)
Sd	829.58	cm^2	diaphragm area
Xmax	16.1	mm	

https://www.kicker.com/app/tsparam/50CWCS154.html[9/10/20242:35:21PM]

FAQ

Q: Where can I find the most current information on specifications?
A: For the latest specifications and performance figures, visit www.kicker.com.

Documents / Resources

	KICKER CompC-Series DVC Subwoofer [pdf] Owner's Manual 50CWCD84, 50CWCS154, CompC-Series DVC Subwoofer, CompC-Series, DVC Subwoofer, Subwoofer

References

- Car Audio, Home & Personal Audio | KICKER®
- Car Audio, Home & Personal Audio | KICKER®
- Thiele/Small Parameters for 50CWCS154 subwoofer
- User Manual