

# EDGE

Setting the streets alight...

# STREET STREET

SERIES

Component subwoofer

ED510-E2

ED512-E2



## OWNERS MANUAL

Congratulations on purchasing your EDGE subwoofer. Please read this manual in order to fully understand how to get the best results from this product and ensure that all advice on how to look after the product is followed.

Thank you for buying EDGE, we hope you enjoy listening to your product as much as we enjoyed creating it.

### CAUTION



**DO NOT EXPOSE THIS PRODUCT TO DAMP OR MOISTURE** - doing so may result in fire, shock or damage to the product.

**BEFORE WIRING DISCONNECT THE CABLE FROM THE POSITIVE BATTERY TERMINAL** - failure to do so may result in electric shock or injury.

**ENSURE GOOD AND CORRECT CONNECTIONS** - failure to make the correct connections may result in fire or damage to the product.

**DO NOT USE ANY FUNCTIONS OF THIS EQUIPMENT THAT MAY TAKE YOUR CONCENTRATION AWAY FROM DRIVING YOUR VEHICLE** - do not set up your amplifier whilst driving, doing so may result in an accident. For prolonged setting up, make sure that your vehicle is stationary and in a safe location.

**KEEP THE VOLUME AT A LEVEL SO YOU CAN STILL HEAR OUTSIDE NOISE** - failure to do this may result in an accident. EDGE equipment is capable of producing sound levels that can permanently damage your hearing. EDGE recommends caution when listening at high volume. For safe and enjoyable listening the sound should be comfortable and clear without distortion.

### CAUTION

Never connect any speaker lead to the car chassis. This can cause severe damage to your speaker /car radio /amplifier.

Before drilling or cutting any holes, investigate the layout of your vehicle thoroughly.

Use caution when working near the fuel / hydraulic lines and electrical wiring.

Observe the correct polarity when wiring, improper phasing may cause a loss of bass response.

Ensure that no moving parts catch on the speaker or grill (e.g. window or door handles, or window glass inside the door)

## INSTALLATION

- The quality of the installation will affect the system performance and reliability.
- Contact your nearest authorised EDGE dealer if you are unsure about the installation of this product.
- Please mount this unit away from any potential hazards.
- Minimising the length of wires will provide higher audio output from the system.
- The speaker should be securely fastened to the mounting position using the screws provided.
- Pre drill your mounting holes using a drill and position with the template provided.
- Be sure to investigate your mounting area thoroughly for electrical wires, brake or fuel lines or fuel tank to prevent causing any damage.

## LIMITED WARRANTY

All EDGE products carry a full 12 month warranty, valid from the date of the original receipt and proof of purchase. In order to validate this warranty, the online warranty card should be completed within seven days of the original purchase date. The original receipt and packaging should be retained for this twelve month period. If the product develops a problem any stage during the warranty period, it should be returned to the point of purchase in it's original packaging, and complete with no items missing. If the store is unable to repair the product it may have to be returned to EDGE.

A full description of EDGE warranty information can be found on our website:

**[www.edgecaraudio.co.uk/warranty](http://www.edgecaraudio.co.uk/warranty)**

### WHAT IS NOT COVERED

- Damage to product 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 fault may be considered abuse.
- Any cost or expense related to the removal and / or re-installation of the product.
- Damage caused by amplifier clipping or distortion.
- Items repaired or modified by any unauthorised repair facility.
- Return shipping on non defective items.
- Products returned without a returns authorisation number.
- Damage to product due to use of sealant.

### INTERNATIONAL WARRANTY

Contact your international EDGE dealer or distributor concerning specific procedure for your country's warranty policies.

### WARNING

EDGE Equipment is capable of sound pressure levels that can cause permanent damage to your hearing and those around you. Please use common sense when listening to your audio system and practice safe sound.

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## RUN IN PROCEDURE

EDGE recommends that you follow the run in procedure for the subwoofer detailed below.

When your Subwoofer is used for the first time, like most brand new items it is naturally very stiff and rigid. It will take time for the moving parts of this Subwoofer to loosen up before the Subwoofer will be ready to deliver its full potential.

For the first 30 hours it is recommended that you play the Subwoofer initially at low to medium volumes, gradually increasing the volume level as time progresses.

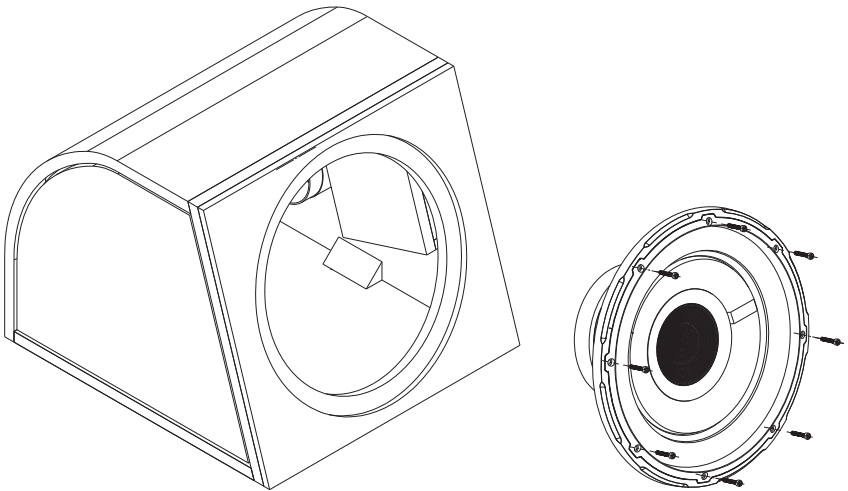
As a guide, if you listen to your Subwoofer for 1 hour every day it will take a month for the subwoofer to run in properly.

You will notice a big change in the sound of the Subwoofer over this period. As the spider and surround begin to run in the sound will get deeper and harder, also the output of the Subwoofer will increase as the suspension loosens up.

The Subwoofer is like your car's engine, it needs a few thousand miles before you can drive it to its full potential. Driving it into the redline from the first day will mean engine damage is certain and will not be covered by warranty.

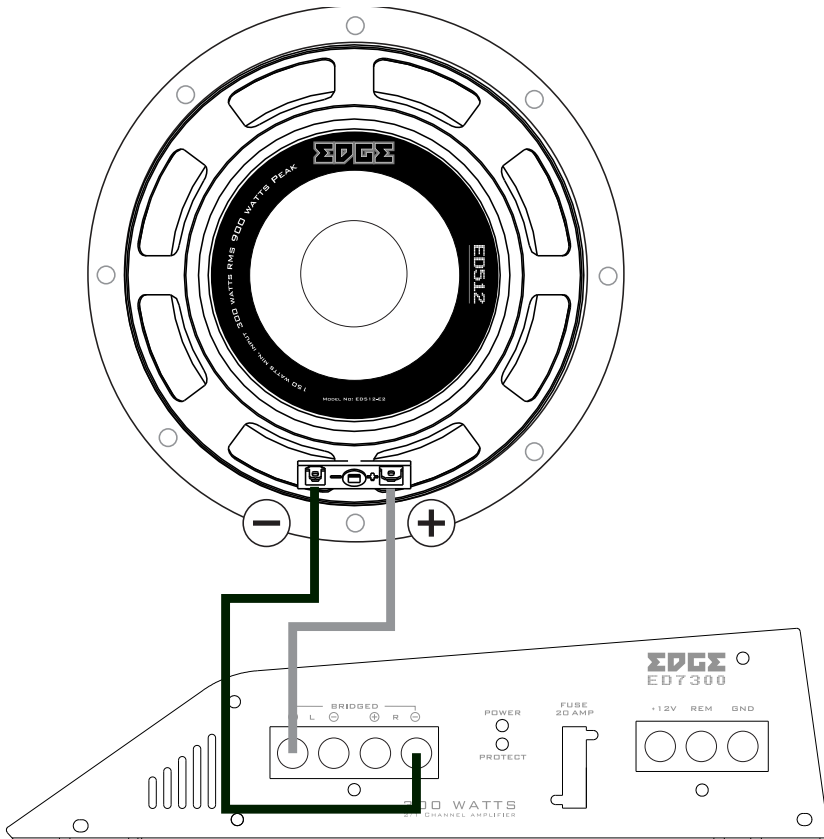
Failure to follow this simple procedure is the most common reason for a Subwoofer to fail after a very short period of time.

## INSTALLATION



## WIRING

Please follow the wiring diagram below and ensure that correct polarity is observed as incorrect wiring may cause the subwoofer to be out of phase with the rest of the system and result in a loss of bass.



## SEALED ENCLOSURE INSTALLATION

The most basic and simple of all speaker enclosures is the sealed enclosure otherwise referred to as an acoustic suspension design. They are called acoustic suspension enclosures because the air inside the box acts like a brake to control the woofer.

The sealed enclosure is the easiest design to build and tune, as long as you work within the minimum and maximum recommended volumes you cannot get it wrong. The smaller enclosures produce a tighter punchy bass, the larger enclosures produce a deeper bass. Sealed enclosures offer high power handling, tight response and smooth low end roll off and cone motion is better controlled at all frequencies because of the constant pressure on the back of the woofer.

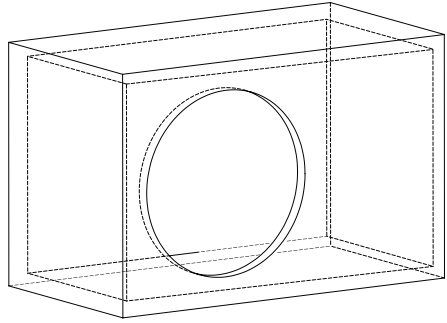
Sealed enclosures are ideally suited to rock, jazz and live music.

### ED510-E2

**Tight bass:** 1 cubic feet  
**Deep bass:** 1.5 cubic feet

### ED512-E2

**Tight bass:** 1.25 cubic feet  
**Deep bass:** 2 cubic feet



## VENTED ENCLOSURE INSTALLATION

A vented (also known as ported) enclosure is not much more complex than a sealed design. It consists of a box with a hole in it.

The vented enclosure has to be correctly designed in order to function correctly. The vent in the enclosure interacts with the air in the cabinet and the woofer to increase output and reduce cone excursion at and around the tuning frequency.

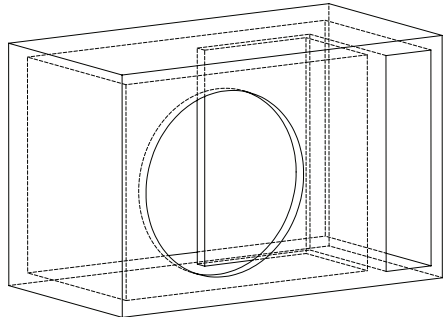
At the tuning frequency of the enclosure almost all of the bass is being produced by the vent, not the woofer. It is more difficult to achieve good performance as the enclosure volume and port volume are critical but the results are worth it as the ported box is up to 3 times as loud as the same woofer in a sealed box. It is also possible with the correct tuning to add a "bump" in the response of the enclosure to boost bass at a preferred frequency. Vented enclosures are best suited to dance, R&B, electronically produced music and high SPL applications.

### ED510-E2

**Volume:** 1.75 cubic feet  
**Port area:** 25 square inches  
**Port length:** 20 inches  
**Port volume:** 0.3 cubic feet  
**Total enclosure volume:** 2.05 cubic feet

### ED512-E2

**Volume:** 2 cubic feet  
**Port area:** 30 square inches  
**Port length:** 20 inches  
**Port volume:** 0.35 cubic feet  
**Total enclosure volume:** 2.35 cubic feet



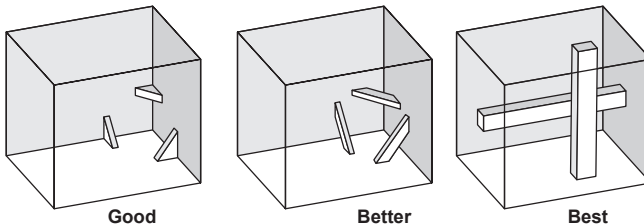
## ENCLOSURE CONSTRUCTION

Use at least 3/4 inch MDF (medium density fibreboard) or birch ply to construct your enclosure and at least 1 inch is recommended for the baffle. It is recommended that the panels are glued, screwed and braced with sections of the same material you have used to build the enclosure from. The FLI ACID subwoofer is capable of producing internal pressures that can literally blow apart badly made enclosures, so great care needs to be taken with the construction and bracing of your enclosure. It is also worth sealing the joints with a silicone sealer once the glue has dried to make a perfect airtight seal.

NOTE- Do not screw the Subwoofer into the enclosure within 24 hours of applying silicone sealer to the joints.

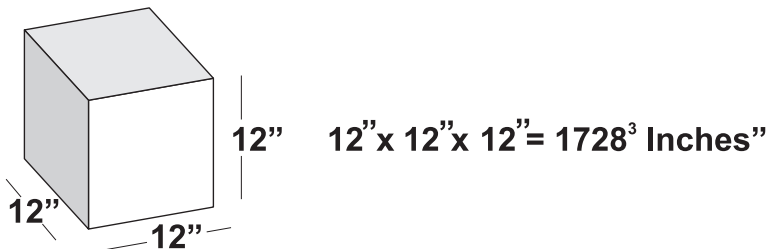
The gases given off as the silicone cures can perish the surround of the subwoofer causing a non warranty failure.

## BRACING RECOMMENDATIONS



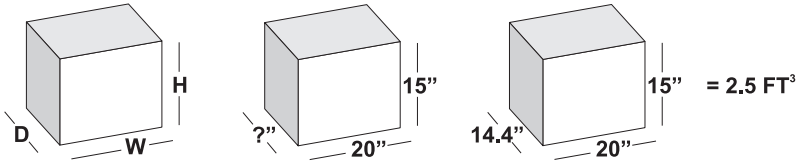
## ENCLOSURE VOLUME

To calculate the volume required for your enclosure please refer to recommended enclosure volumes specified for your subwoofer. These are listed in cubic feet. To convert cubic feet to litres multiply the cubic feet by 28.3. If you use this formula calculating your enclosure size will be easy .1 cubic foot is expressed as  $12'' \times 12'' \times 12'' = 1728$  cubic inches



## ENCLOSURE VOLUME (CONT)

If we require a volume of 2.5cuff then we multiply this by 1728  $2.5 \times 1728 = 4320$  cubic inches. We now take 2 known enclosure dimensions that we will use, e.g height and width and divide this figure by them which will give us the depth, for example our height is 15", our width is 20".

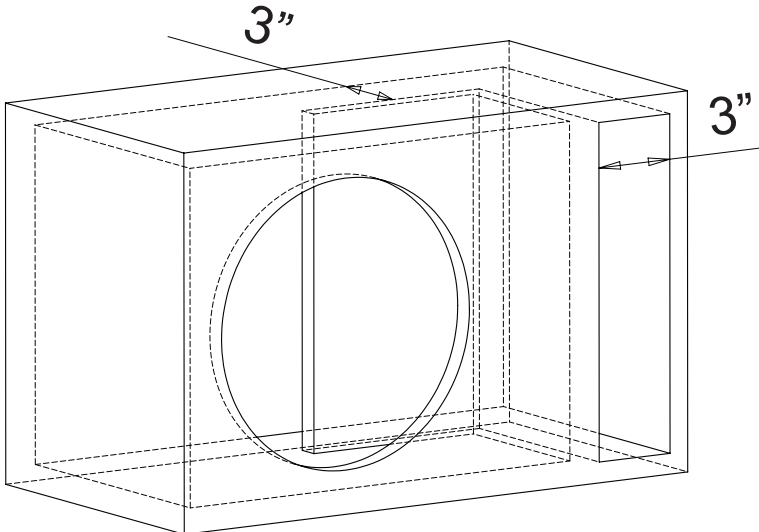


So our depth is 14.4" for this enclosure.

**Note :** this formula is for the INTERNAL dimensions, please add the thickness of the material used to construct the enclosure to the formula to give you the outside dimensions.

So assuming we are using one inch material we need to add two thicknesses to each internal dimension to allow for material top and bottom, so the external dimensions for this enclosure would be 17 x 22 x 16.4 inches.

The displacement of the woofer and the displacement of the port must also be added to the required volume before you calculate the required sizes needed to build your enclosure.



**Note:**

When using a port you must leave a gap at least equal to the shortest measurement of the port between the rear of the enclosure and the port.

So for a 3" port there must be at least a 3" gap between the port and the rear of the enclosure.



## TS PARAMETERS

Parameter	ED510-E2	ED512-E2
Revc	4Ω	3.9Ω
F0	39.8Hz	34.1 Hz
Sd	33 cm <sup>2</sup>	51.47 cm <sup>2</sup>
Md	75g	110g
BL	9.9 Tm	10.49 Tm
Qms	7.17	6.251
Qes	1.040	1.051
Qts	0.908	0.900
NO	0.283 %	0.321 %
SPL	85.6dB	86.5 dB
Vas	30.8 Ltr	58.8 Ltr
Cms	189.973 uM/N	161.588 uM/N
Krm	1.727mΩ	1.748mΩ
Erm	0.912	0.908
Mms	84.154g	135.096g
Mmd	80.552g	128.382g
Kxm	30.072mH	30.601mH
Exm	0.671	0.667

## SPECIFICATION

Model	ED510-E2	ED512-E2
Type	subwoofer	subwoofer
Speaker Size	10" (275mm)	12" (323mm)
RMS Power	250 watts	300 watts
Peak Power	750 watts	900 watts
Minimum Input (RMS)	125 watts	150 watts
Sensitivity	85.6dB	86.5dB
Frequency Response	30Hz - 1.7kHz	25Hz - 1.5kHz
Impedance	4Ω	4Ω
Mounting Depth	4.4" (112mm)	4.9" (125mm)
Mounting Diameter	9.1" (232mm)	10.9" (276mm)
X-MAX	5mm	7mm
Required Enclosure Volume	1 - 1.75ft <sup>3</sup>	1.25 - 2ft <sup>3</sup>
Recommended Amplifier	ED7300-E2	ED7300-E2

## UK TECHNICAL ENQUIRIES

### Call 09067031420

Calls cost 50p per minute. Call costs correct at date of publication (01/02/12)

Hours of business 9.00am - 5.30pm GMT Monday - Friday.

All calls are recorded for training purposes.

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Please visit [www.edgecaraudio.co.uk/contact-us](http://www.edgecaraudio.co.uk/contact-us) for more details.





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