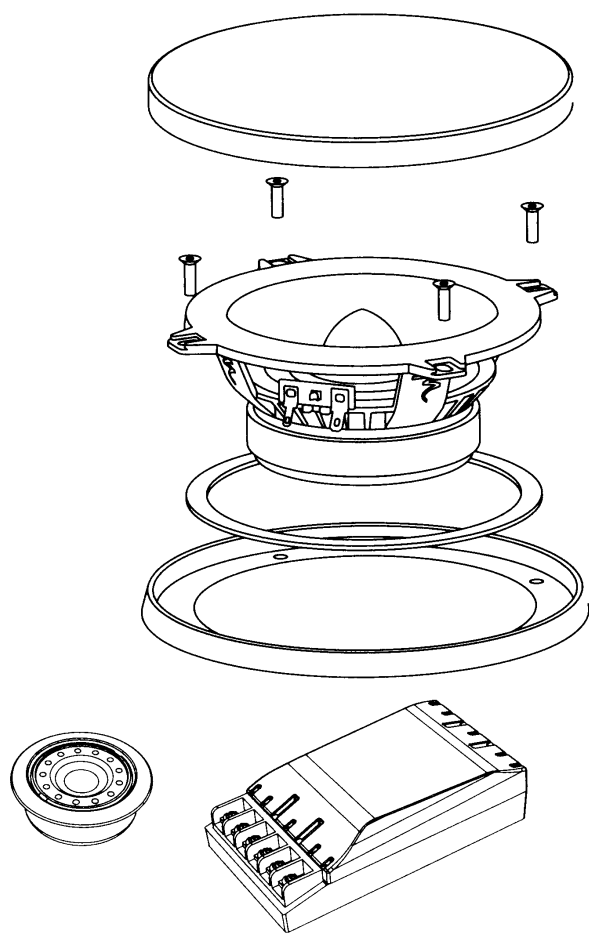


Congratulations on choosing Focal automobile speakers.

Focal speakers remain high quality products, due to the multitude of advanced materials used. Detailed research and development in the laboratory, from dedicated engineers and technicians, played a major role in producing such high performing products. To gain the best results from your speakers, please ensure you follow these recommendations. If not followed correctly any fault observed, may not be covered by the guarantee.



Technical advances, included in the Polyglass range

- Polyglass cones woofer
- TNB aluminum / magnesium inverted dome tweeter
- Separated crossover, fully optimised with adjustable level control. High quality components used throughout.
- Butyl surround

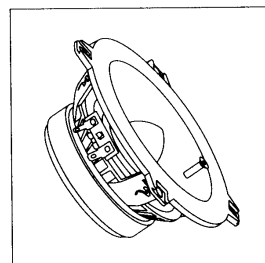
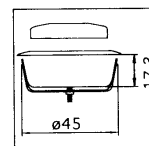
Included

- 2 x woofer / midrange (2-way kits)
- 2 midrange (3-way kits)
- 2 woofer (3-way kits)
- 2 x TNB tweeters
- 2 x gaskets
- 2 x crossovers
- fixing screws
- 2 x grilles

THE FOCAL GUARANTEE ONLY APPLIES IF PAGE 16 IS RETURNED TO US WITHIN 10 DAYS OF PURCHASE.



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Important recommendations

Before attempting any installation work, it is very important to verify how much space is available to fit the speakers into the vehicle.

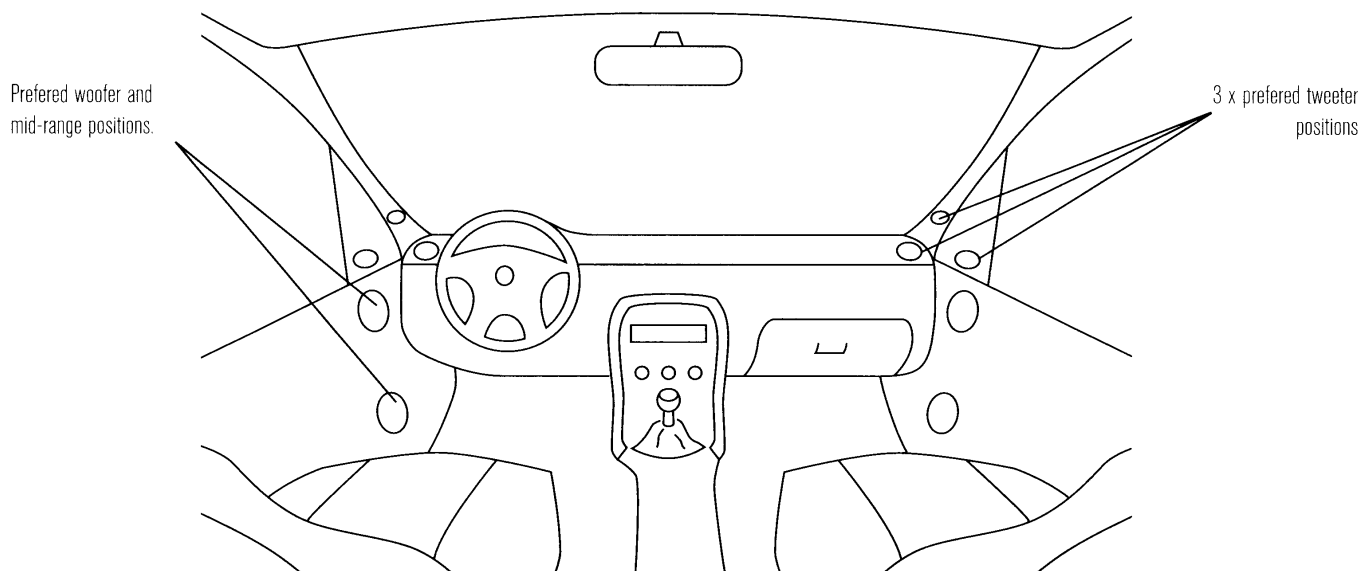
Key points:

- For direct replacement of original speakers, please check there is enough space for your new Focal speakers and grilles.
- Ensure the speaker is clean from debris and metallic particles that maybe attached (especially after drilling)
- Use the foam gasket supplied (inside the grille), for airtight placement of the speaker into the panel.
- Do not touch the tweeter cone.

Choice of installation and positioning the tweeter

To achieve best results for your installation, please follow these simple guidelines

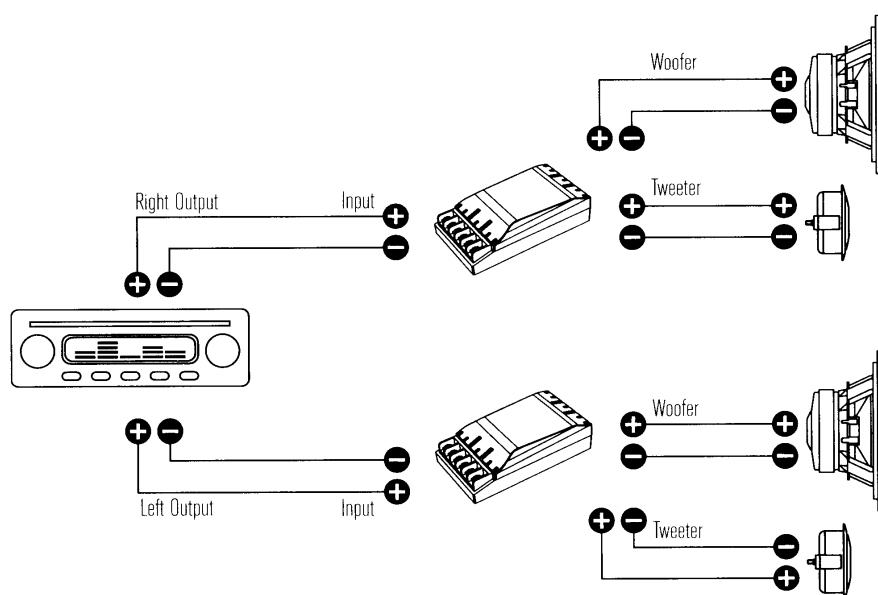
- Use a variety of speakers to achieve a large bandwidth, the most central possible.
- Speakers positioned in the most forward location possible, for correct staging.
- Tweeters positioned preferably high in the doors or in the dash (if space permitting), to obtain un-muddled high and midrange frequencies. These being directive to the listener.
- To position the tweeters direct in-line to the listeners ears, for improved imaging.



Cables and connections

For best results with your speakers, we recommend you include the use of Focal cables. Alternatively, other high quality cable can be used, if sufficient section thickness is available (minimum thickness = 1mm²). This is particularly important for long lengths of cable to ensure a strong efficient signal is maintained. Always ensure the polarity is respected, (+ is connected to + and - is connected to -). Maintain correct connections, from principal source radio/amplifier (left/right/front and rear), and crossover to speakers (tweeter to tweeter, mid to mid, woofer to woofer), is always observed.

2-way kits connections

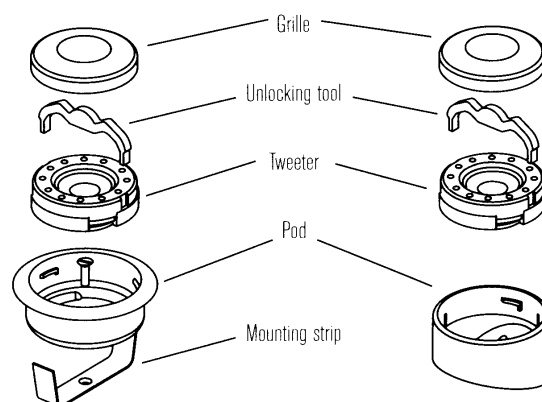


Fitting the tweeter

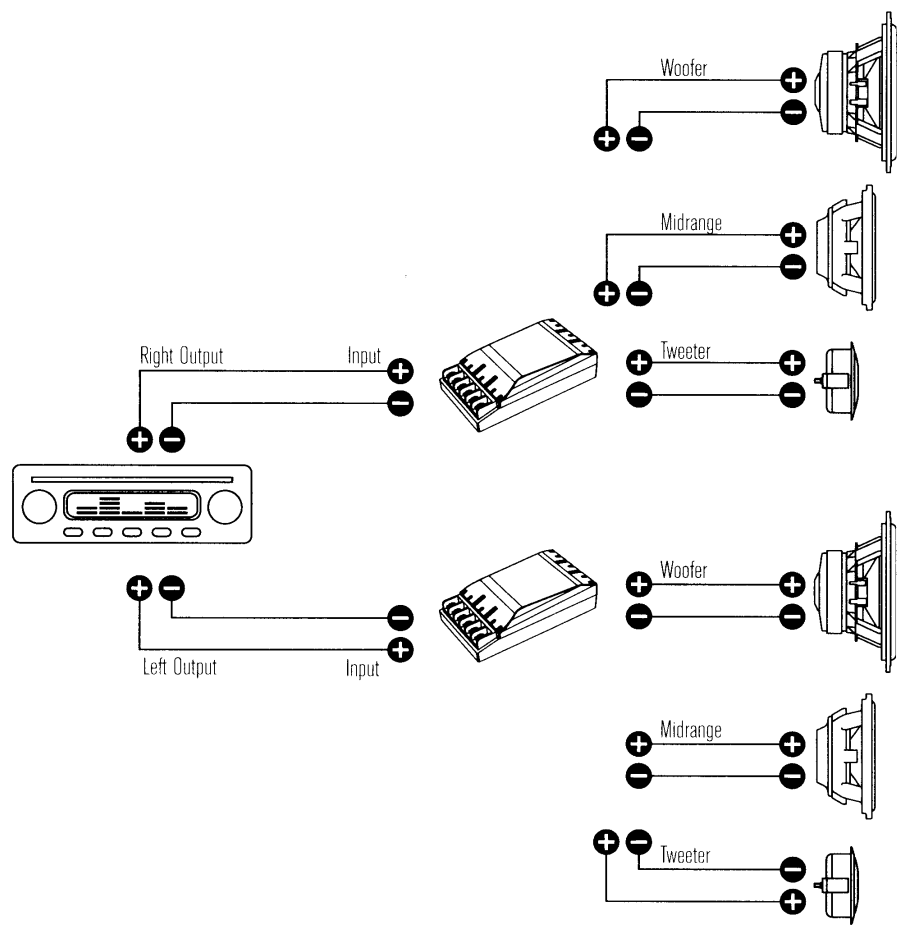
There are two mounting possibilities available: surface or flush mount. The tweeter arrives supplied in its flush-mounting pod. Very carefully, remove the grille, by gently prizing it off (using a paper clip will help).

Surface mounting: choose the angle that best suits your installation (10° or 30°) and mount the pod firmly using the screws supplied. Feed the wire through the hole in the pod and refit the tweeter and grille in place.

Flush mounting: cut a neat 45mm diameter hole in the panel where you want to place the tweeter. Then with the metal mounting strip held from behind (ensuring the ends are pointing towards the hole), insert the screw through the flush-mount pod from the front and tighten the two parts together. Feed the wire through the hole in the pod and refit the tweeter and grille in place.



3-way kits connections

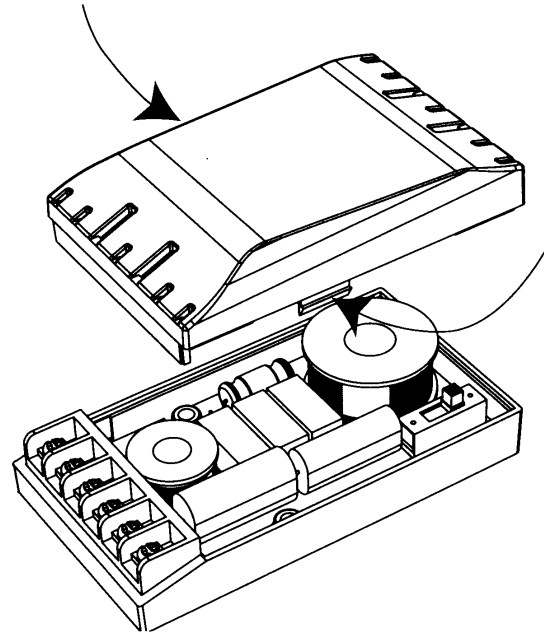


Fitting the crossover

Locate the crossovers in a dry, preferably ventilated area, using either the screws supplied or double-sided tape.

To open the box, squeeze the middle on the side, and remove the cover.

In some cases, depending on your installation and the space available, it maybe easier to route the cables and connect to the crossover, before securing the crossover to the vehicle. Please check before.



Level adjustment of tweeter and midrange

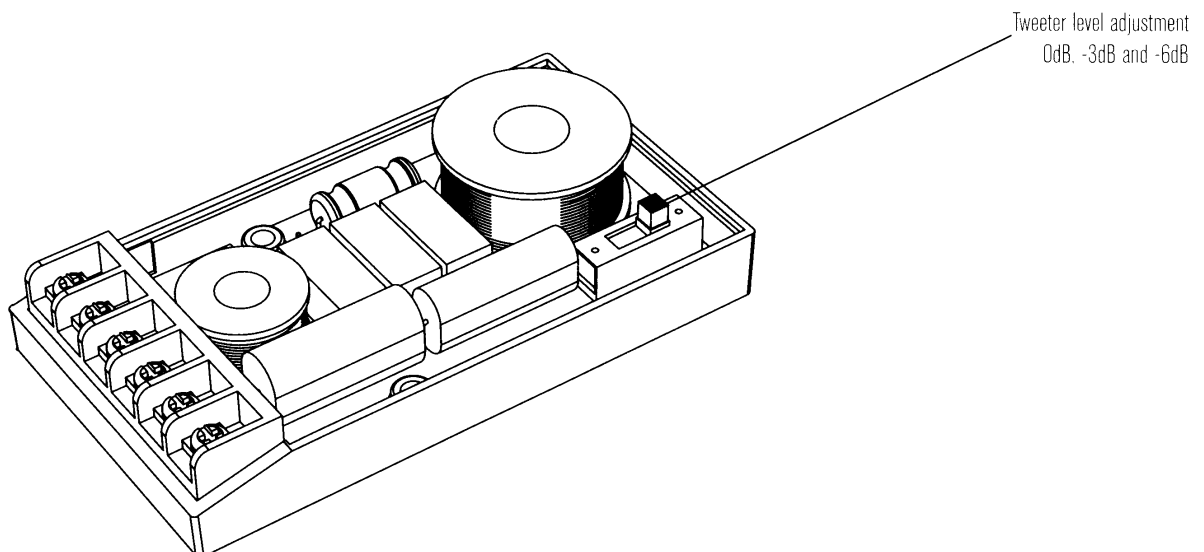
The toggle switch found inside the crossover, allows the user to adjust the tweeter level. This user-friendly option allows effective adjustments to be made, to your own personal listening pleasure, plus optimising the infinite amount of speaker installation locations available. This allows the system to be "tailor made" to your vehicle, effectively ensuring the best acoustics are possible. Remember too much treble and your system may sound aggressive, thus suffer a lose of dynamics, resulting in poor definition.

Level position 0 or -3dB, if the tweeter is located very close to woofer-midrange.

Level position -3 or -6dB, if the tweeter is located high in the vehicle (in the dash or high in the doors) with the woofer positioned comparatively low.

Level position 0 or -3dB, if the tweeter is located in kick panel.

The 165 VR crossover also integrates a filtering slope setting (6dB or 12dB) in order to optimize the integration of the kit. We advise you to begin with the 6 dB setting which suits most of the cars.



Specifications

	130 VR	165 VR	100 VRS
Type	2-way kit	2-way kit	2-way kit
Diameter	130mm (5")	165mm (6-1/2")	100mm (4")
Maximum power	100W	150W	80W
Nominal power	50W	75W	40W
Sensitivity (2.8 V/1 m)	94dB	94,5dB	91dB
Frequency response	80Hz – 28kHz	70Hz – 28kHz	90Hz – 28kHz
Impedance	4 ohms	4 ohms	4 ohms
Fitting diameter	116mm (4.57")	141mm (5.55")	93mm (3.66")
Mounting depth	61mm (2.40")	72mm (2.83")	39.5mm (1.56")

	130 VRS	165 VRS	165 VR3
Type	2-way kit	2-way kit	3-way kit
Diameter	130mm (5")	165mm (6-1/2")	165mm (6-1/2") 100mm (4")
Maximum power	100W	120W	160W
Nominal power	50W	60W	80W
Sensitivity (2.8 V/1 m)	91dB	93dB	93dB
Frequency response	80Hz – 28kHz	70Hz – 28kHz	55Hz – 28kHz
Impedance	4 ohms	4 ohms	4 ohms
Fitting diameter	115mm (4.53")	141mm (5.55")	141mm (5.55") 93mm (3."66
Mounting depth	48.5mm (1.91")	56mm (2.20")	68mm (2.68") 40mm (1.57")

How can you improve the sound quality of your speakers?

Easy. To improve the sound quality of your speakers notably those installed into the doors, Focal has the answer. Known as "Plain-Chant", this material acts as a sound absorber, to effectively reduce unwanted resonances and ensure your speakers produce a more full sound. No-fuss installation ensures this accessory, proves to be a real asset for your Focal speakers/installation. Consult your Focal retailer for further information/advise.

Which power for your amplifier?

These speakers are already highly efficient, with improved sensitivity. Therefore, their use with a high power head unit will produce comfortable listening pleasure.

However, if used with a more high-end system, with Focal amplification, the audio quality will be greatly improved. It is very important to ensure that the rated power of the amplifier suits the speakers used. Otherwise, your speakers may distort or possible damage may occur.

Always consult the owners manual of the principal source (head unit/amplifier), to ensure the power rating is compatible. A safe guide is to ensure the maximum power of the amplifier is not greater than the nominal power of the speakers.

Installation upgrade (with the help of a subwoofer)

If you want your system to have bass, with real punch and power, we recommend the inclusion of a subwoofer. This will greatly improve your listening pleasure and give your system, some real physical dimension.

Focal has therefore developed a range of subwoofer drivers and complete subwoofer systems, to compliment your Polyglass speakers.

Consult your local dealer, or check out these exciting products on the Focal Internet site : www.focal-fr.com.

Guarantee

All Focal loudspeakers are covered by guarantee drawn up by the official Focal distributor in your country.

Your distributor can provide all details concerning the conditions of guarantee. Guarantee cover extends at least to that granted by the legal guarantee in force in the country where the original purchase invoice was issued.

In addition to Car hi-fi systems, Focal offers personalized solutions for the equipment of your house. Enjoy at home the hi-fi and home cinema sensations provided by the Focal sound. Several product lines by the French leading loudspeaker manufacturer, are at your disposal to share with you our passion : the Spirit of Sound / www.focal-fr.com.

For the validation of the Focal guarantee, send back this sheet within 10 days to the following address:

Focal-JMLab - BP 374 - 108, rue de l'Avenir - 42353 La Talaudière cedex - FRANCE

About yourself:

Your name: _____ Your age: _____ Your job: _____

Your full address: _____

Your e-mail address: _____

Your hobbies:

At home, do you own Hi-Fi loudspeakers? ☐ - Yes ☐ - No

If yes, specify the brand: _____

Do you read the press? ☐ - Yes ☐ - No

If yes, which magazine(s)? _____

Your audio/video equipment (brands and models) before the acquisition of Focal products:

CD player/tuner: _____ Multimedia player: _____

Navigation system: _____ Amplifier: _____

Speakers: _____ Enclosure/subwoofer: _____

Other elements: _____

Your choice for the purchase of this Focal model was made according to:

- | | |
|---|--|
| ☐ - Dealer's advice | ☐ - Friend's or family's advice |
| ☐ - Visiting an exhibition/a show | ☐ - Quality-price ratio |
| ☐ - Sound quality/listening room | ☐ - Already own Focal products |
| ☐ - Reliability/manufacturing quality | ☐ - Catalogues |
| ☐ - Design/Finish | ☐ - French product |
| ☐ - Article in the press (if yes, specify the title of the magazine) _____ | ☐ - Other : _____ |

Your Focal product:

Model: _____ Serial number: _____

Dealer's name: _____ City: _____

Date of your purchase: _____ Price of your purchase: _____

Did you leave the product installation to your dealer's care? ☐ - Yes ☐ - No

If not, why? _____

This information is necessary to our company to deal with your request. It is registered in our customer file and can give you the right to have access to and correct the information that concerns you through our customer service (+33 477 435 700).

If you do not wish to have your data used by our partners on commercial purpose, tick this box. ☐

If you do not wish to receive commercial propositions from our partners by e-mail, please tick this box. ☐

You may receive commercial offers from our company for products similar to those you have bought.

If you do not wish to, tick that box. ☐

The information given on this page will remain confidential.



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