

## Mercedes C220CDI (W205) – replace front standard speakers with [Focal K2 Power 100 KRS component speakers](#).

Content is provided for information purpose only - no warranty of any kind is given – perform on your own risk.

These Focal speakers have a relative high sensitivity (90 dB) - so can be used with factory head unit (Audio 20) quite well (although a seperate amplifier would get the best out of these speakers – but I chose not to go this way.

### AS-IS

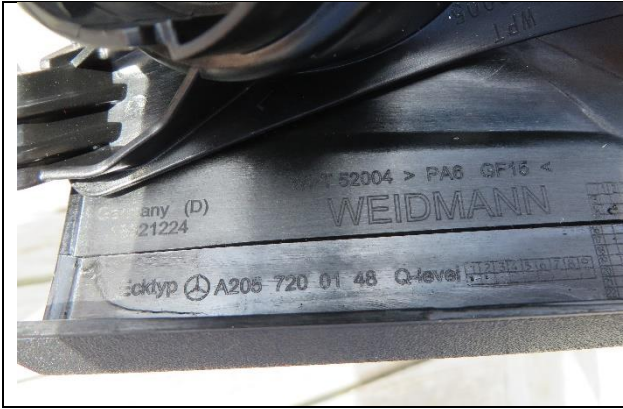
Standard speaker system marketed as 'Speakers with frontbass'. There are 5 speakers – 4x 100 mm (3" 15/16) in each door and 1x on the right side of the central console (below the steering wheel).

In the standard speaker system there is no frontbass support- all marketing ... only Burmester uses it.

Some pictures :

### Tweeterfronts

	Tweeterfronts click/turn out easily
	No tweeters present in standard speaker setup.



Partnumber of tweeterfronts

### Central Dashboard grill



Central Dashboard grill has clicksystem



Perforation of central dashboardgrill



Took out the foam that was in the central speakerhole - this is what it looks like



Partnumber of central dashboardgrill

### Interior front door speakers



Frontdoor interior with doorpanel removed



Close up connector box



Speaker connector

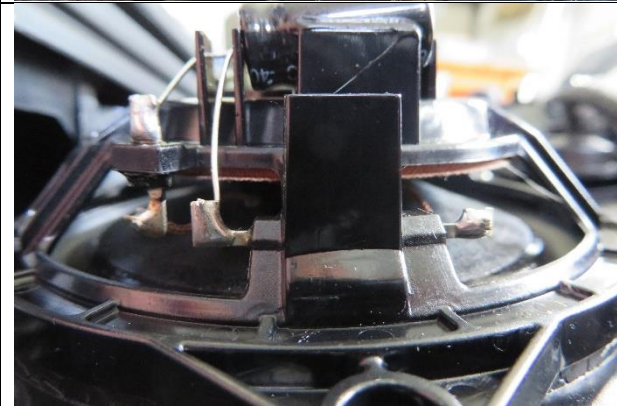




Doorpanel



Close up standard speaker in doorpanel (back)



Close up standard speaker in doorpanel (side)



Close up removed standard speaker (front)



Close up removed standard speaker (back)



100 mm speaker



38 mm depth



Perforated grill in doorpanel is 80 mm

## 5th speaker on the right side of central console



Loosened panel below steering wheel shows 5th speaker – no frontbass support whatsoever – my 5th speaker doesn't output anything (to be checked - why ?)

## TO BE

As there is limited depth ... I opted for **Focal K2 Power 100 KRS** which have a depth of 40 mm which is only 2 mm more than the standard speakers.

### Tools you need

- Screwdrivers (TX30, ...)
- Dremel-tool
- Plastic flat handle to loosen the doorpanel a bit
- Bar to unclick the clickbuttons of the doorpanel



- Small pliers
- Solder-gear
- Blanket to put the doorpanel on
- Speakerwire
- Electrical tape
- Mouth-Nose protection to avoid inhaling plasticparticles when grinding
- Vacume cleaner

### Preparation

- Lower your frontdoor windows
- Power off the car - to be sure unhook the battery power (I did the intervention in the powered off state)
- Remove the tweeterfront (unhook the two windowfacing hooks – also unhook the other side and then bring the top towards you so the two hooks at the bottom of the tweeterfront can roll out.
- Remove the frontdoorpanel
  - o Remove two screws
    - Use screwdriver TX30 and remove the two screws below the doorhandle
  - o Unclick the 8 clickbuttons (see yellow circles on picture below)
    - Use a plastic flat handle and insert it between the doorpanel and the door and look for the clickbuttons and use a metal bar to unclick








- Pull the doorpanel on the top side towards you (clicks also)
- Unhook the doorpanel (see yellow arrows on picture above)
  - Unhook the speaker connector
  - Unhook the doorcable (retract the cableprotection so you can move the cable out of the slider. Then pop up the cable-end to unclick it from the doorpanel.
  - Unhook the blue (number 5) connector
- Your doorpanel is now free
- Put it onto a blanket to protect
- Make sure the black rubberrings remained on your clickbuttons – sometimes the black rubber stucked to the door itself – doublecheck that.

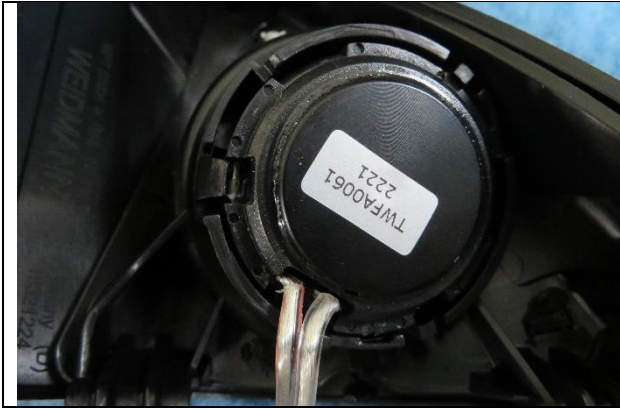


- To get an idea how it's done – see <http://www.youtube.com/watch?v=nkeBwxiBCHK>



## Tweeter speaker install

	<p>Focal Tweeter with the casing</p>
	<p>Securely grind off the casing of the focal tweeters. I used a three step approach : grind off the back, grind vertical stripes on the side every 1 cm, grind the 1 cm pieces at the bottom so the 1 cm pieces become free (use pliers on the 1 cm pieces) ... eventually the tweeter comes free.</p> <p>Make sure in this proces you <b>DO NOT GRIND THE TWEETER ITSELF</b> and only the casing – take your time and don't rush 😊</p>
	<p>Focal tweeter without the focal casing – the wire with the red stripe is the +</p>
	<p>Click the tweeter in the tweeterfront – as you can see it fits perfectly.</p>

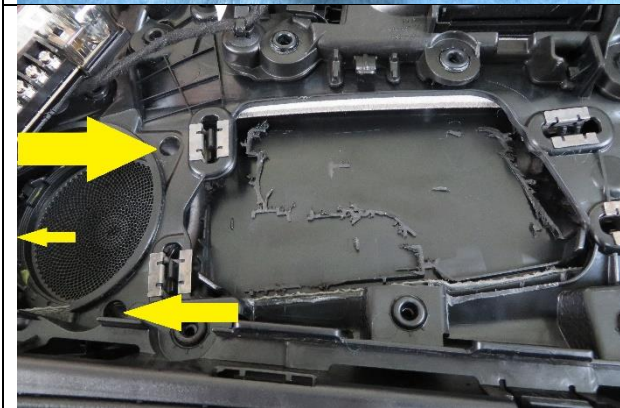


Close up of Focal tweeter in Mercedes tweeterfront

### Midrange speaker & Crossoverbox install

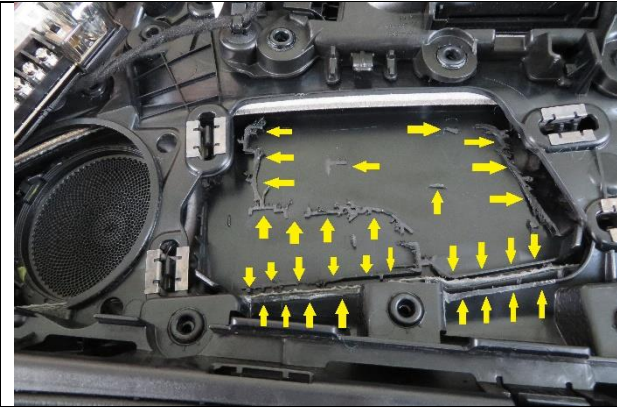


Unclick the speaker from the doorpanel (3 rubberhosted clickpoint – see yellow arrows)



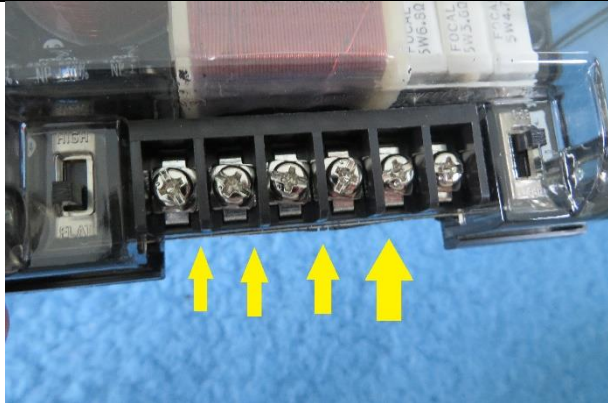
Remove the 3 rubbers where the speaker clicked in the doorpanel (see yellow arrows) – this to ease the mounting of the Focal speaker.



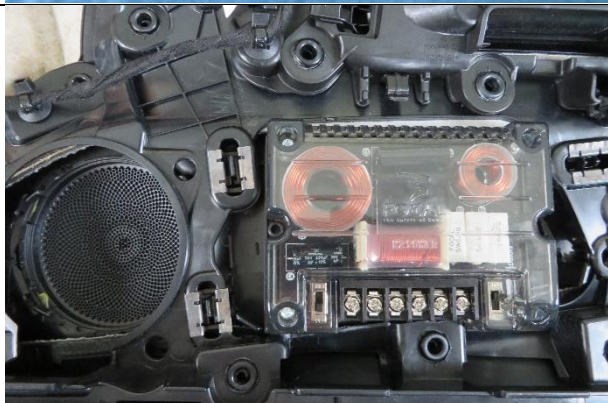


Before mounting the speaker grind off the pieces of plastic sticking out – this to be able to place the crossoverbox. Do this now to avoid griddust getting into the speaker.

Be careful this is the back of the interior black high gloss panel. DO NOT GRIND THROUGH IT !! Take your time and be patient in your actions !



Grind off the yellow arrow indicated area off the crossoverbox so it can fit.



Doublecheck the fitting of the crossoverbox – make sure the right bottom side of the crossoverbox is as deep as possible – as this is the most sticking out part. Do this right otherwise you doorpanel won't fit back in again. Easy to do but do it right !

Vacume clean everything to remove plasticparticles.





Grind off some plastic at the yellow arrow to be able to fit the Focal speaker and then mount the Focal speaker (don't forget to use the rubber ring between the focal speaker and the doorpanel).

There are 4 mounting screwholes on the Focal speaker. The two on the right fit the location where the rubbers where. Here some DIY is needed to secure the speaker (see picture).

**Be careful !! Watch out not to screw things right through your doorpanel !!!**

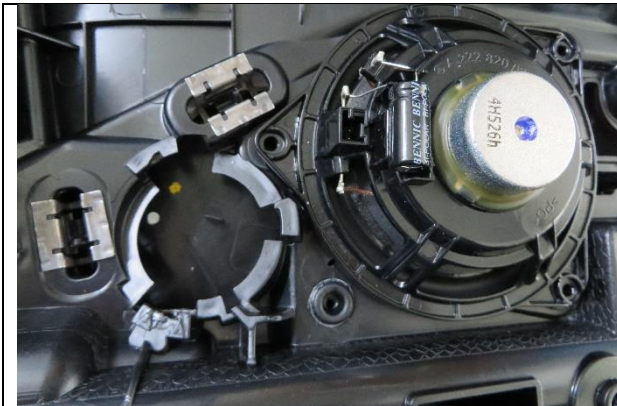


## Wiring, test & finalisation

	<p>On your cardoor find the speaker connector.</p>
	<p>Cut the connector off and strip some cable protection. The blue wire with the black stripe is the -.</p> <p>Extend this speakerwire with some extra (50-75 cm) speakercable so you are able to attach it to the Focal crossoverbox.</p>
	<p>Connect the tweeter to the Focal crossoverbox. The red stripe is the + cable.</p> <p>Solder some speakerwire to the midrange speaker + &amp; - and connect that to the Focal crossoverbox.</p> <p>Connect the above extended speakercable to the Focal crossoverbox (see Focal Manual for connections).</p> <p>I soldered all speakercable endpoints for rubustness.</p> <p>Make sure you tape all connectionpoints with electrical tape.</p> <p>Before putting back the doorpanel do a test to ensure everything works well.</p>

## Backdoors speaker replacement ?

I checked the interior of the backdoors



Same speaker as front doors

Empty space for tweeter present though – of course behind a non perforated high gloss doorpanel – as in a standard speaker setup there are no tweeters. So Mercedes uses uniform doorpanels to use with Burmester.



No space for a similar crossover box installation as in the front doors because of another less spacious design of the back door panel.

I purchased Focal PC100 (PERFORMANCE) to replace the backdoor speakers ... but they don't fit. The depth of these speakers is 51,5 mm and that is way too much.

So I will leave the backdoor speakers standard – too (?) hard to retrofit something because of lack of space.