



# S8 Assembly Instructions

---



---

Designed and manufactured in Australia by The Loudspeaker Kit  
[www.theloudspeakerkit.com](http://www.theloudspeakerkit.com)

Email: [sales@theloudspeakerkit.com](mailto:sales@theloudspeakerkit.com)



## You will need:

- Phillips head screwdriver
- Woodworking glue
- Damp cloth
- Good quality masking tape
- Ratchet tie down strap (optional)
- Bricks or other weight (optional)

## Preparation

Lay the contents of the box out and check you have everything you need to complete the kit (see parts list on back page). Find a suitable work surface and make sure it won't be ruined if you spill some glue. If covering the work surface, avoid using newspaper as newsprint may rub off onto your kit. Baking paper is a good choice.

## Easier assembly with mitres

LSK kits now employ mitre construction, which offers greater ease of assembly with much less sanding. Butt joints are eliminated, avoiding visible hairline cracks that often appear after painting. Mitre construction puts the join right on the edge where it is less visible. Most constructors avoid using mitres due to the difficulty in getting the angles correct. Our manufacturing process provides a level of accuracy that is very difficult to achieve in a home workshop.

## Masking tape

We recommend avoiding cheap masking tape, which tends to break when applied under tension. If you aren't using the weight and ratchet strap, you are relying on the masking tape along to apply pressure to the join as the glue sets.

Lay out the front panel and apply strips of masking tape as shown below.



Flip over the panel to expose the mitres. Carefully position the four adjacent panels and press firmly each panel along the join to adhere the tape, as shown below.

**Tip:** Overhang a small strip of masking tape on each of the four panels. These strips will make it easy to lift the panels.





Now rotate up each of the four panels and firmly press the masking tape onto the join to ensure good adhesion, as shown above.

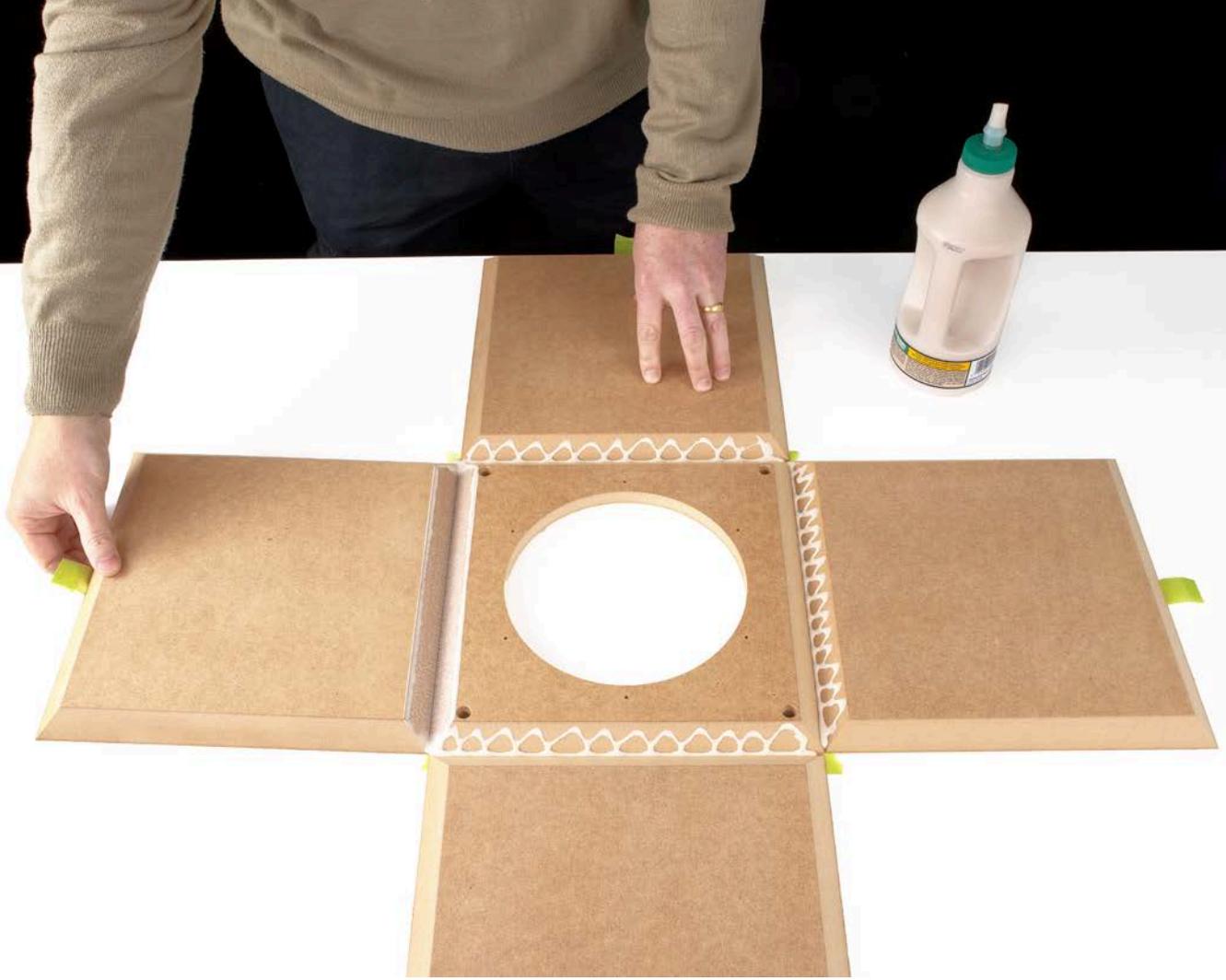
Apply a glue bead to all four joints between the rear and adjacent panels. This first bead of glue should be applied to the bottom of the mitre.





Apply glue in a zig zag pattern to cover the mitre. Confirm that the glue adequately covers the entire surface of the joints by folding up each pair of panels.





Repeat this process with the vertical joins on the four panels adjacent to the baffle. Fold up the first pair again, wipe excess glue then firmly press the panels together as you hold them in place with masking tape. Initially, one strip of tape across the join will hold them in position. Continue with the other three panels.





The rear baffle is symmetrical across both the width and height, so there is no correct orientation.

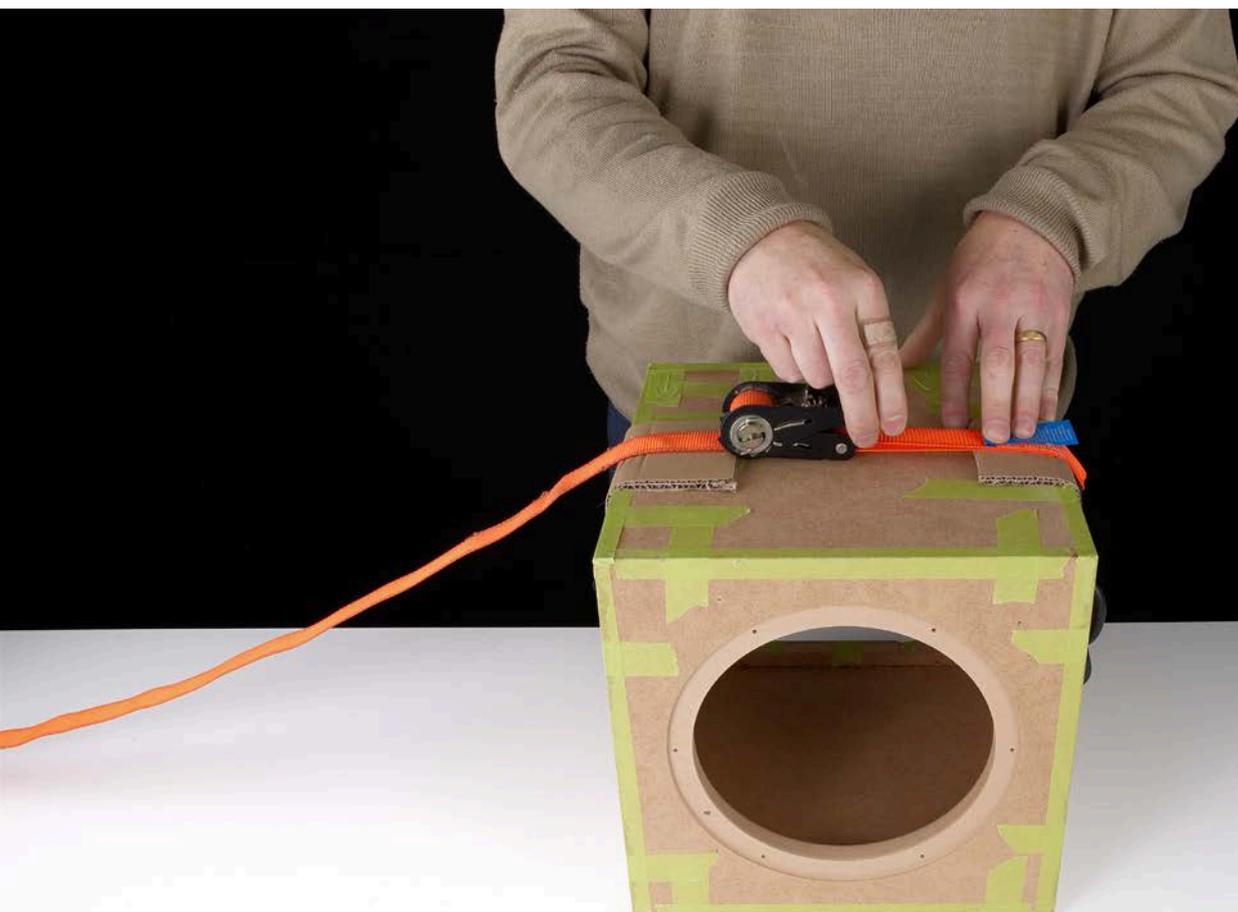
Apply one thick glue bead with a zig zag pattern to the mitres on the rear baffle. Confirm the amount of glue by pressing into position. The entire joint should be covered in glue – apply more glue where necessary. Now press the baffle firmly into place.

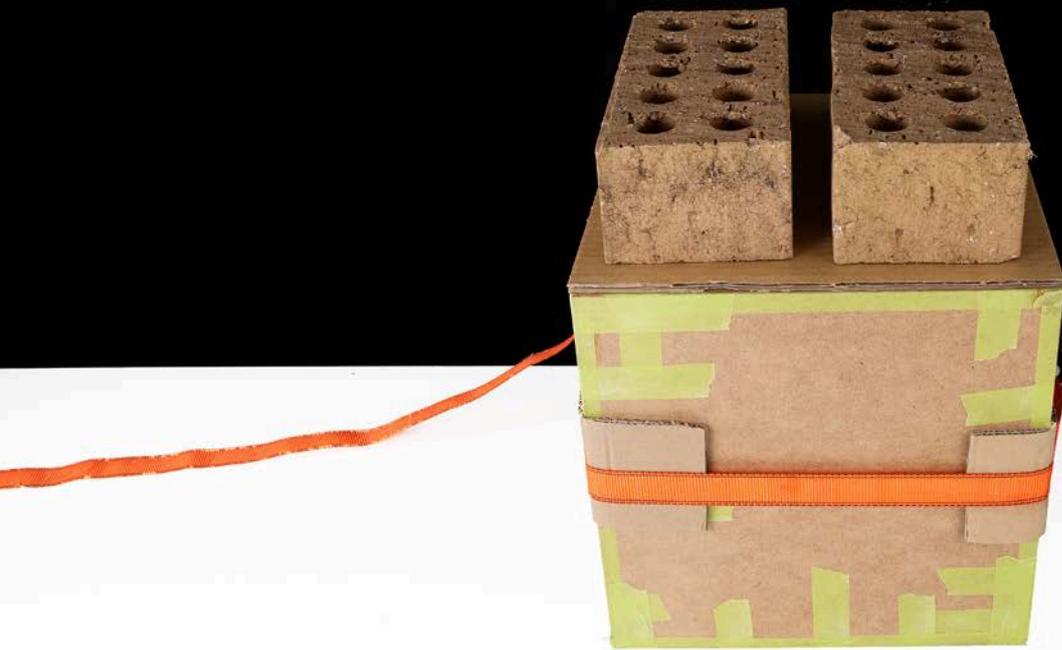




Wipe excess glue and secure with masking tape. Use firm pressure when applying the tape. The tape holds the panels together as the glue sets and should cover all joints.

An optional step for improved clamping pressure is to secure top, bottom and side panels with a tie down ratchet strap. Avoid damage to the surface of the MDF by placing cardboard strips under the straps at all four corners. Be careful to avoid applying excessive force, which can damage the corners of the MDF or even collapse the cabinet.





Lay the enclosure down with the driver cut out facing up, then protect the surface with cardboard. Then place bricks or any suitable weights to apply downward pressure. This avoids the need to purchase F clamps.

## Drying time

Typical wood glues can achieve moderate strength in as little as 30 minutes. If you are using PVA glue then a good indicator that it has set is the transparency. PVA becomes transparent once set. Ideally it's best to leave the enclosure clamped over night before moving on to assembly or finishing.

## Grille assembly

This kit uses a clever neo magnet attachment system that avoids the use of traditional grille clips. Flat packs contain neo magnets which have been concealed in the front baffle and grille.

## Sequence tip

Final assembly should be done after you have applied your chosen finish. Otherwise, drivers and terminals will get damaged and the internal lining will be covered in MDF dust.



## Acoustic lining

The acoustic lining provided with the kit covers top, bottom and side internal cabinet walls. Each of the smaller pieces cover the side walls. No glue is necessary to hold in the lining in place. Insert the lining prior to installation of driver and amplifier.

## Amplifier installation

Lay the enclosure down with the amplifier cutout facing up, as shown below. We recommend installing the amplifier before the driver to prevent damage to the finish during installation. Lower the amplifier into the cutout and align the pilot holes. Using a Phillips head screwdriver, fix the amplifier in place using the provided screws. Tighten screws sufficiently to avoid any air leaks around the amplifier. Avoid excessive force which could damage the anodizing on the amplifier.

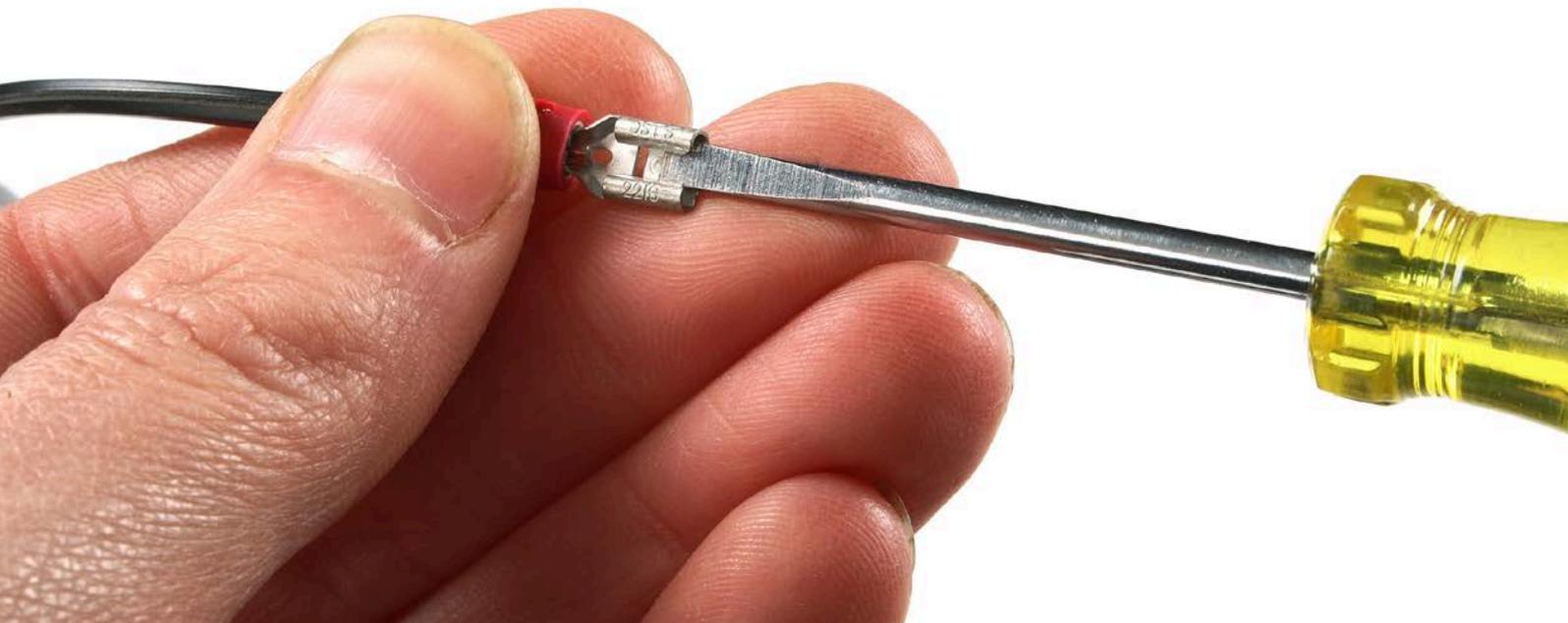




Lay the rear side of the subwoofer face down with padding to protect the amplifier from damage. A thick blanket or towel folded into multiple layers is ideal.

Find the wire loom from the amplifier and press each space onto the driver terminals. Avoid excessive force which can damage the terminals.

Where there is a tight fit with the spades, they can be opened out slightly with a flat head screwdriver as shown below. This is typically necessary with our speaker kits, however, it isn't essential with our S8 sub kit. If you aren't opening out the spades, use a little extra care when pushing the cables onto the terminals.





## Installing drivers

We recommend using a Phillips head screwdriver, as some powered drivers are more likely to cause damage if the head slips off the screw head. Impact drivers should be avoided. If using a powered driver, it's best to use one which has a clutch, so that once the screws are adequately tightened, the driver will not over-tighten. Choose the lowest setting on the clutch and then increase as needed for the right amount of force. This avoids stripping the MDF pre drilled holes or damage to the screw heads. If using a screwdriver, your left hand can hold the shaft to prevent the head slipping off and damaging the drivers.



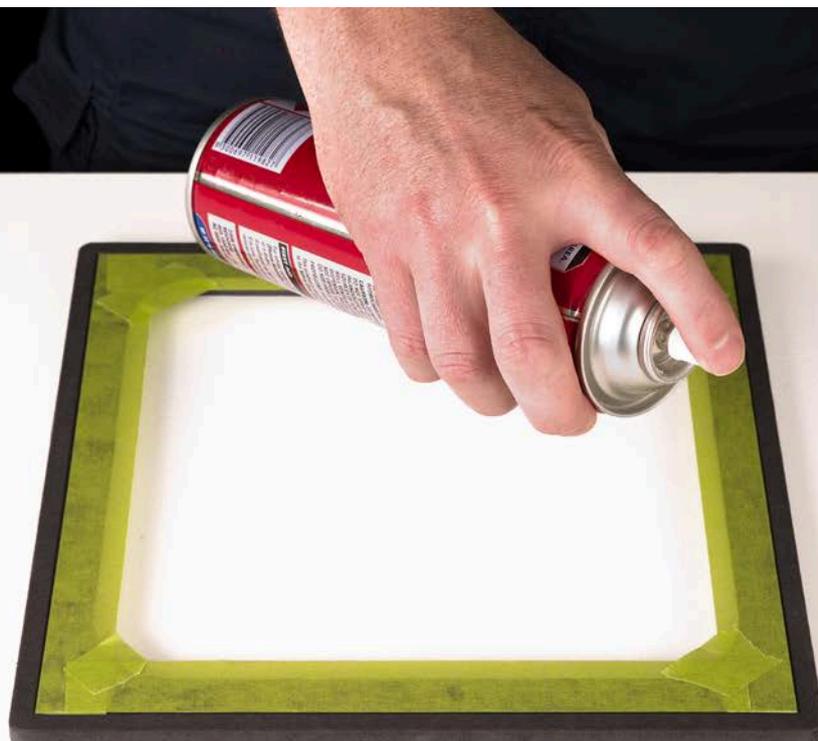
## Grille assembly

### Masking

On the backside of the grille, you will notice a cut line inset from the edges defines the area where the cloth will be glued to the frame. The area inside this line needs to be masked, so the spray adhesive is applied only to the strip around the edge. This allows you to use spray contact adhesive, which provides flat and even coverage in addition to a fast application. To protect from overspray, cover your work surface.

### Adhesive

Spray contact adhesive is the simplest and quickest to use and it goes on evenly. Be sure to carefully read the instructions on the can as each one is slightly different. Shake the can for at least one minute or longer if specified on the can. Spray contact adhesive onto the small strip (approx 8mm wide) between the cut line and edge. Hold the can at a distance indicated on the can and move fairly quickly, applying two or three passes until you get good coverage.





When you've finished spraying, turn the can upside down and spray briefly until you notice the amount of spray reduces. Usually after about one second, the paint stops but the solvent continues. This cleans out the nozzle and avoids blocking next time you want to continue using it. Check the nozzle to ensure that it looks clear. If you see any glue there, wipe with a clean cloth with mineral turpentine to clean.

Glue is only required on the back surface as shown here – no glue is required to the sides or the front.

You can start applying the grille cloth right away but we recommend waiting 2 minutes. Peel off the mask with care. A small flat head screwdriver is helpful here to prevent the frame from lifting up or flipping over as you remove the masking tape. Hold the frame down with the screwdriver in one hand, gently pulling back the tape with the other. Then lay the frame over the grille cloth as shown below.

Now press the cloth onto the glue on the back of the frame. Start with one side as shown below but avoid the corners, which should be pressed on last. It's critical that the corners are done as the final step to avoid wrinkles bunching up. Now move onto the opposing side, stretching the cloth so that wrinkles are seen, indicating the tension is adequate. These will be removed when tension is applied in the next step over the page.





Now press the grille cloth to the frame on the third side, avoiding contact around the corner. Then finally, press the cloth to the final side of the frame. In this step, all wrinkles from the tension should be gone.





## Wrinkle free corners

The biggest challenge in assembling a grille is the corners. If not done correctly, these will bunch up. With a little care, you can avoid this problem and get a professional looking grille.

Gather the fabric at the corners with both hands, as shown above. Pull the cloth at a 45 degree angle to each edge, stretching the fabric to eliminate as many wrinkles as possible. You can see in the photo above that there are some potential wrinkles here, which we can remove in the next step.

Keeping the tension on the cloth, transfer the fabric to one hand, so that your other hand is free. Press out any wrinkles with your finger as shown below.

If there are some wrinkles you can't press out this way, the adhesive provides some work time during which you can lift up the cloth and press it down again. When lifting up the cloth from the frame, stretch the cloth more tightly than before. Then press it down again. Avoid lifting any more of the cloth than necessary.

You may have several wrinkles around each corner. Work through each one until you have pressed out all wrinkles.

Now at this point, you should have removed all wrinkles between the edge of the frame and the cut line.



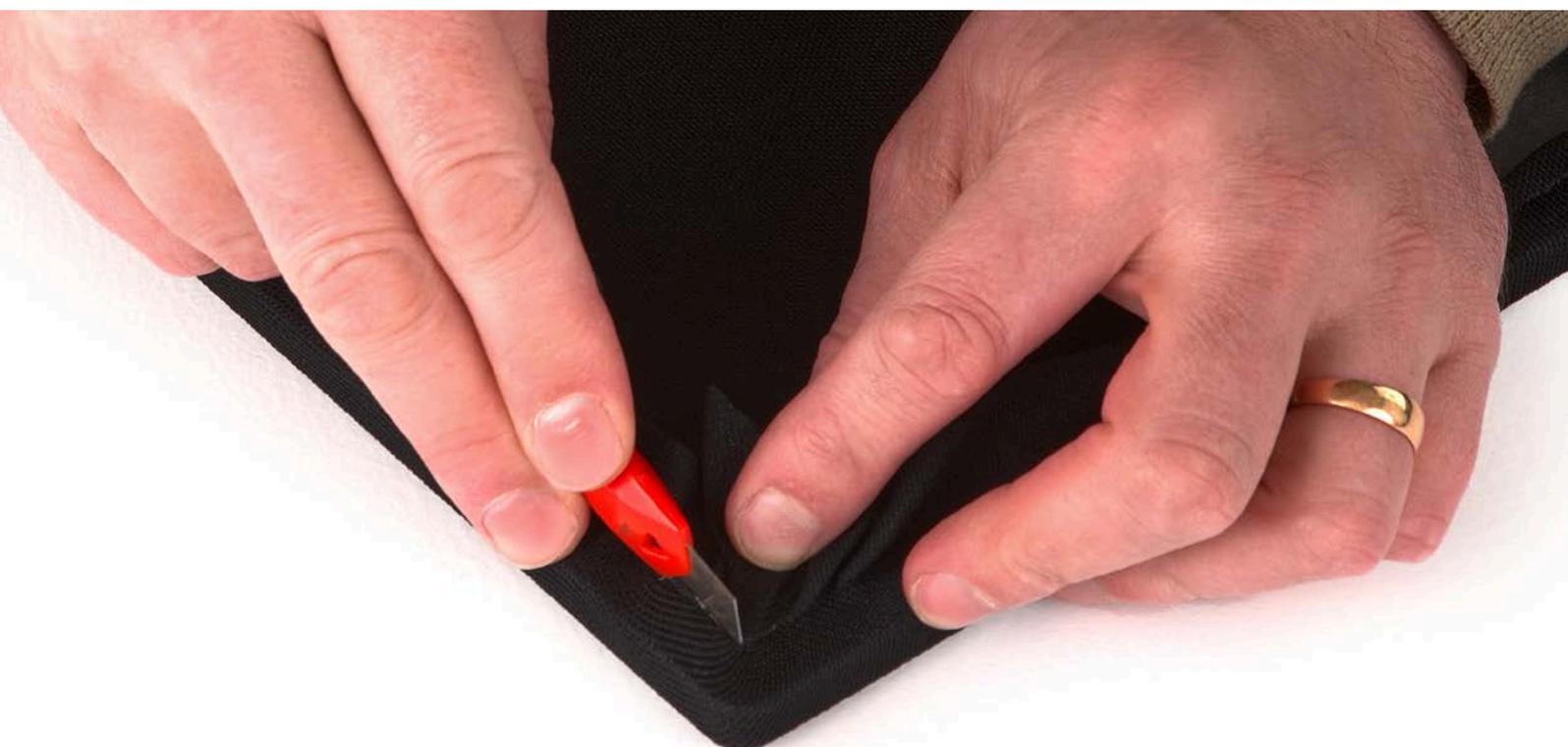


## Trim the cloth

Now you can use your thumbnail to find the cut line. Pressing your nail into the trench, score all the way around. This helps to confirm that you've effectively avoided wrinkles. Then with a sharp blade, slowly and carefully cut away the grille cloth, using the trench as a guide.

### Tips for a better cut:

- Choose a knife with snap off blades like the one below – Stanley knives are usually too blunt for the job
- Start with a new blade – snap off the previously used part of the blade
- Cut with multiple passes – avoid the temptation to try to cut all the way through in one pass
- Cut slowly and carefully, ensuring that the blade stays on track
- Cut with a shallow angle as shown below – this avoids any tearing away at the fabric





## Parts List:

- 1 x 8" Sub driver LSK-S215WA01-01 4 ohm
- 1 x Dayton SPA250 plate amplifier
- 1 x IEC power cord
- 6 x Panels CNC machined 18mm MDF
- 1 x CNC machined 12mm MDF grille frame
- 1 x Grille cloth (340mm W x 340mm H)
- 18 x Self tapping Screws (18mm length)
- 1 x Piece of Acoustic Lining (220mm W x 880mm L)

## Specifications:

Woofer Size:	8" / 203mm
Amplifier power:	250W continuous Into 4 ohms @ 1.0% THD
Bass extension (-3dB):	23.5 Hz
Variable low pass filter:	4 <sup>th</sup> order (40 – 180 Hz)
Weight:	12.6 kg
Dimensions:	280 x 280 x 330 mm (W x H x D)