

# ASSEMBLY INSTRUCTIONS



## F6 MKII Tower

Loudspeaker Kit

Designed and manufactured in Australia by: The Loud Speaker Kit (ABN 39 089 764 616).

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F5 MKII V1.0



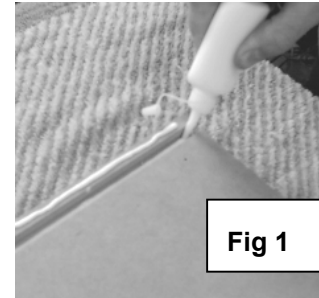
# Assembly Instructions – F6 MKII Kit

Congratulations on the purchase of your new loudspeaker kit. By following these simple instructions you'll have your new high performance loudspeaker up and running in no time. Visit us on the web at [www.theloudspeakerkit.com](http://www.theloudspeakerkit.com) to get more detailed assembly instructions and step-by-step guides to painting, veneering and lacquering your new speaker.

You'll need a Philips head screwdriver and a small tube of PVA woodworking glue to assemble this kit. The glue can be purchased from any hardware store or supermarket. You'll also need a damp cloth and some fine-grade sandpaper.

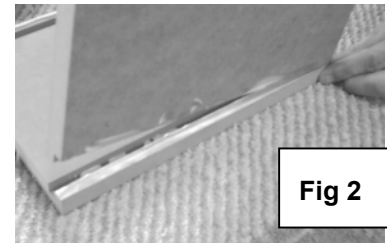
## Step 1 - Preparation

Lay the contents of the box out and check you have everything you need to complete the kit (see contents list on back page). Find a suitable work surface and make sure it won't be ruined if you spill some glue. Avoid placing newspapers under the kit whilst constructing it as newsprint may rub off onto your kit, especially when mixed with glue, and mar the finish.



Lay out all the parts and try test fitting the 7 MDF panels together to make sure you understand where everything goes before you start. The parts should fit together snugly without having to be forced. Be careful when pulling the box apart to ensure you don't damage the edges of the panels. **Please read ahead before commencing.**

The end panels (top and bottom) are about 342mmx200mm in size and have twin 8mm wide, 6mm deep grooves down their edges. The two side panels are the largest and have no cut-outs, just a ridge along the top and bottom that slots into the 8mm wide grooves.

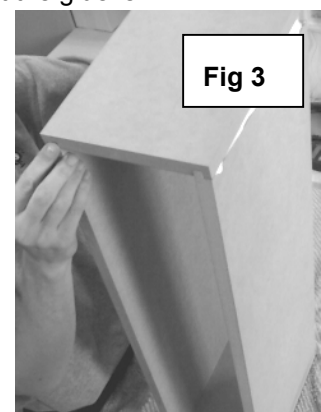


The front panel has three circular cut-outs for the tweeter, and dual woofers. The back panel has a small hole near the bottom for the input terminal and port hole above. The internal brace has an oval shaped cut-out and is designed to slot into the rebate on the inside of the cabinet.

## Step 2 – End and Side Panels

Place the bottom panel on a level surface and squeeze a generous amount of glue into the channels along the edge of the panel (as shown in Figure 1).

Apply a thin layer of glue to the bottom rail of each side panel, ensuring that the glue is spread evenly over all surfaces of the slot. Insert the rails of the side panels into the cut-out channels on the bottom panel (Fig 2), ensuring that the edge of the side panel aligns with the outside edge of the bottom panel. If there is an 8mm step then you have inserted the side wall back to front. Be careful not to apply sideways force to the side walls until the rest of the box is assembled.



Squeeze a generous amount of glue into the channels of the top panel and coat the two remaining rails on the side panels as before. Place the top onto the channels and push down carefully. You should now have an open sided rectangular box (Fig 3).

Wipe off any excess glue with the damp rag.

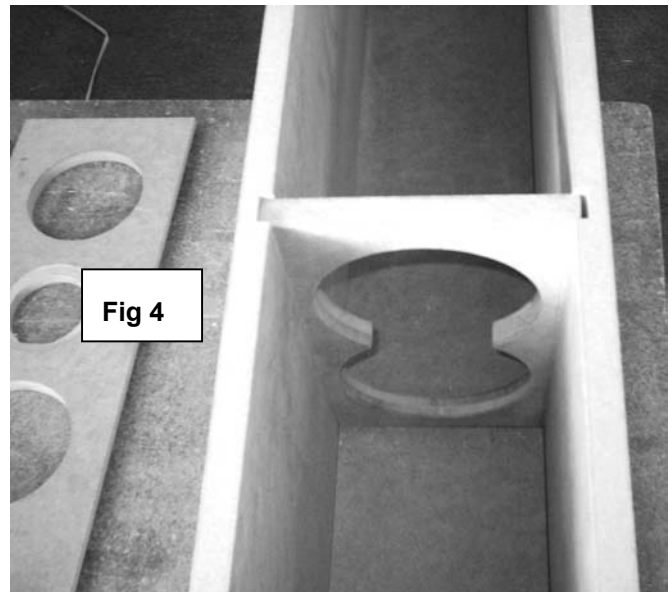
## Step 3 – Front, Brace and Back panels

Lay the box on its back and apply a thin layer of glue to the front edge of the open box and the edges of the back panel, taking care to smooth the glue out evenly. Make sure you get the glue on both of the contact surfaces of the rebate in this back panel as this will ensure an airtight fit. Press the rear panel into place ensuring that each corner aligns. Wipe off any excess glue with the damp rag.

Carefully turn the box over and note the 18mm wide, 5mm deep rebate that runs around the inside of the box half way along its length. Coat all four edges of the brace panel and slide it into this rebate (Fig 4).

Now coat the remaining surfaces of the front of the speaker with glue (including the front of the brace panel) and mount the front panel as per the rear panel. (Figures 5 and 6).

**Important:** make sure that the pre-drilled 20mm wide hole on the rear panel for the gold plated input binding terminals is aligned towards the bottom of the speaker. The dual port holes on the front panel and the speaker terminal on the back panel should both be at the bottom of the tower when fully assembled.



#### Step 4 – Clamping

Leave the cabinet to dry for at least 2 hours, clamping overnight is advised. If you have them, clamp the box using woodworking clamps (Fig 7); otherwise an improvised clamp can be made from any heavy object such as a brick or use of a cable type clamp. Before clamping, make sure each edge is carefully aligned - a little care here will ensure the best result. Once you have clamped the box, ensure you wipe off any excess glue that has been squeezed out. Once the glue has dried remove the clamps. To obtain a smooth finish, lightly sand the edges of the panels with a fine grade sandpaper, about 180 grit works best. If you plan to paint or varnish the box a little extra effort now to remove all traces of glue and rough edges will be well worth it.

If you want to finish the speakers in one of the optional finishes shown on our web site, now is the time to do this.

## Step 5 - Wiring

The crossover circuit connects the speaker drivers to the amplifier via the terminal mounted on the rear of the box.

Take the circuit and observe the four sets of wires attached to it. The wires with the larger red/blue plastic spade clips connects to the input (marked 'IN' on the crossover board). The wires with the small brass clips connect to the tweeter (marked 'T'), and the pair of wires with one red spade connector and one brass connector each connects to a woofer (marked 'W'). The woofer wires are interchangeable and may be connected to either woofer. You will note that each set of wires has a "stripe" on one of them, these stripes denote the positive connection, usually marked on the woofers & tweeters with either a + sign or by being red in colour.

The crossover circuit itself sits inside the box, you may choose to glue or blue-tack this in place to prevent it rattling around. You can use the shelf created by the internal brace for this purpose.

Insert the crossover through the *bottom* woofer cut-out. Pass the terminal wires (larger plastic clips) through the terminal cut-out in the back panel. You will need to reach through the cut-out in the internal brace to do this. Push the connectors onto the gold terminal wiring posts. These terminals may need to be tightened with some pliers (Fig 8) or else they can be soldered on for a more secure fit. Using two of the supplied 25mm black screws, attach the terminal block to the rear panel. Carefully tighten the screws until the foam backing of the terminal pad just starts to compress, ensuring you don't over-tighten it. Now insert the Plastic turning port into the cut out just above the rear terminal.

At this stage, insert about half of the supplied acoustic stuffing into the lower chamber of the cabinet through the bottom woofer cut-out on the front panel and through the oval shaped hole in the internal brace. The exact amount that goes into the bottom chamber is not critical. It is usually easiest to "break up" the stuffing into smaller pieces and "tease" it apart to ensure it fills as much of the space in the lower chamber as possible. Double handful size is about right. Try to ensure that the stuffing doesn't block the input to the two ports.

Next, pass the tweeter wire through the middle tweeter hole, and the two woofer wires through each woofer hole. Turn the speaker onto its back and spread the remaining acoustic fibre inside the top half of the speaker box. It is not necessary to glue the fibre to the walls. It usually helps to break the fibre apart into several smaller pieces.

Next, connect the woofers, ensuring that the wires with the stripe go to the positive terminals marked with a + sign. Do the same for the tweeter, ensuring that the wire with the stripe connects to the tweeter positive (marked with a red dot) (Fig 9).

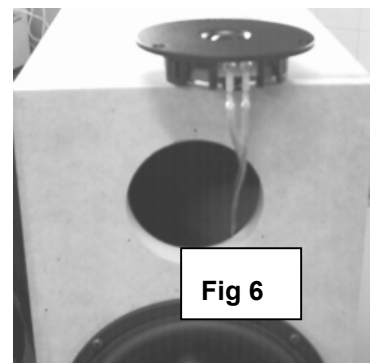
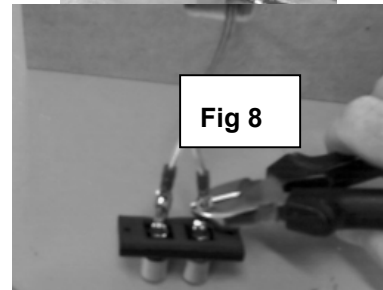
## Step 6 - Final Assembly

Now that you have wired up the drivers all that's left is to mount them.

Line up the tweeter and woofer with their mounting holes and screw these in using the remaining screws.

Take care not to over-tighten these screws or you may damage the speaker driver surrounds, they should be tightened until they just start to bind into the MDF and no more.

Wire up the speaker to your amplifier and you're ready to rock! Like all true Hi-Fi speakers, the drivers in your new kit will take some time



to break in so don't play it too loudly at first. After about 8 hours you should notice the sound improves and you can gradually increase the volume. Make sure you visit us on the web at [www.theloudspeakerkit.com](http://www.theloudspeakerkit.com) for more information, tips and ideas.



## Parts List:

- 18mm MR MDF Box (7 pieces)
- 2 x Peerless Acoustic Engineering Woofers (x2)
- Vifa D27TG Tweeter
- Acoustic Stuffing (Qty)
- Crossover Network
- 1 x 68mm Tuning Ports
- Black 25mm Screws (20)



## Specifications:

|                       |                                     |
|-----------------------|-------------------------------------|
| Woofer Size:          | Peerless 165mm x2 NRSC Coated Paper |
| Tweeter:              | Vifa Mylar Dome                     |
| Frequency Response:   | 37Hz -20,000Hz +/-3dB               |
| Power Handling (IEC): | 150W RMS                            |
| Impedance:            | 4 Ohms                              |
| Shielded for AV Use:  | Yes                                 |
| Woofer Cone:          | Treated Paper                       |
| Sensitivity:          | 90dB 1W @ 1M                        |