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Navigation: [DIY Audio Projects](#) / [DIY Speakers and Subwoofer Projects and Kits](#) / [Zigmahornet Speakers with Fostex FE103E / FE103En Driver](#)

[DIY Audio Projects](#)

[DIY Tube Projects](#)

[DIY Tube Amp Kits](#)

[DIY Speaker Projects](#)

[Speaker Drivers / Tweeters](#)

[DIY Solid State Projects](#)

[DIY IC / Opamp Projects](#)

[DIY Phono Projects](#)

[DIY Cable Projects](#)

[Misc. Audio Projects](#)

[Hi-Fi Audio Schematics](#)

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Zigmahornets with Fostex FE103E / FE103En Speakers

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Zigmahornets with Fostex FE103E / FE103En

I first came across the Zigmahornets in a [6moons audio review](#). The [original Zigmahornet speakers](#) were designed for use with the Fostex FE103 driver, but many have also reported good results with the [Fostex FE103En fullrange speaker driver](#) and the [Fostex FE103E](#) which is what I used. Enclosure plans for the Zigmahornet are available from the [planet 10 box plan library](#) and are shown below.

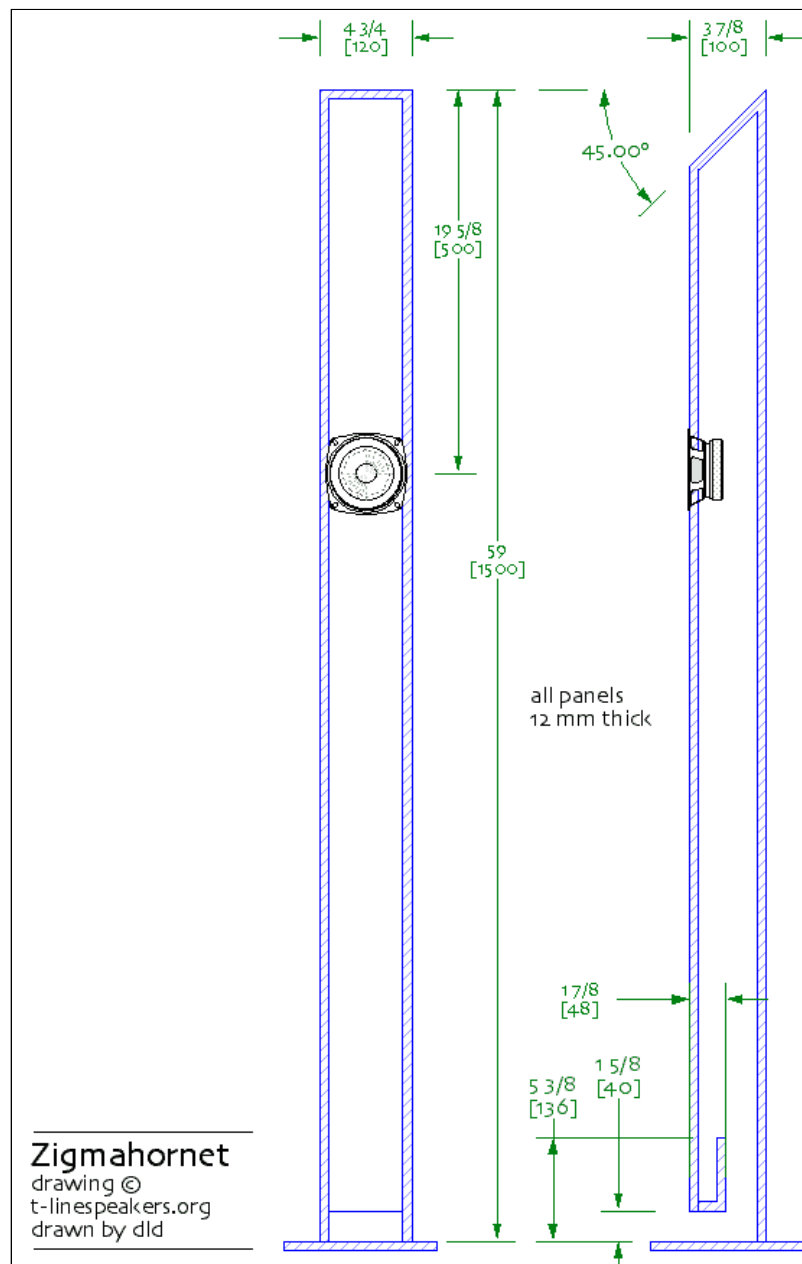


Figure 1: Fostex FE103E / FE103En Zigmahornet Speaker Box Plan

This page summarizes my construction and experience with the Zigmahornets and shows how easy they are to build. Hopefully some of you will try this simple and rewarding project.

Construction - Zigmahornets with Fostex FE103E / FE103En Speaker

The enclosure construction is very simple. I had the lumber yard cut a standard 4x8 sheet of 1/2" thick birch plywood into 8 strips. 4 strips at 4-3/4" wide for front and back panels and 4 strips at 2-7/8"x 8' for the sides. Their panel saw cuts were very accurate and straight.

Cut the end one of the 4-3/4" strips at 45 degrees to serve as the back, while making sure it is at least 58.5" long as measured from the top of the 45 to bottom. I cut it a few inches longer and later trimmed it to size.

With the remaining piece from the back panel, cut a 6" length for the top at 22.5 degrees.

Next, cut the 2-7/8" wide side panels at 45 degrees. Again, I left extra length at the bottom and later trimmed it to size.

With your back panel at the correct length mark your sides to get their final length. Take time to get this as accurate as possible. You want to avoid any gaps in your speaker and ensure they sit flat and straight on the base at the final size.

Now with your back and side panels at the correct length and aligned, cut your front panel at 22.5 degrees and match it up with the top panel.

Measure your front panel to have the 1 5/8" slot (port) at the bottom. Now all you have to make is your internal baffle and a base and you are done.

For the driver cutout, I used a 3.5" (89 mm) hole saw and then a rasp file to make the 94 mm opening.

I used 7" length of foam directly behind the driver for dampening.



Photograph 1: Construction of Zigmahornet Speaker Enclosures

The FE103En use a stamped steel frame. The lightweight stamped frame is prone to "ring" and efforts to "damp" the frame will improve performance. See some of the [modifications and tweaks for the Fostex FE103En fullrange speaker](#).

Impressions - Zigmahornets with Fostex FE103E

The Zigmahornets sound very good and produce a surprising amount of bass from the small [Fostex FE103E Fullrange Drivers](#). They are very detailed and I am hearing sounds that I have only picked up on headphones before. Be patient with them as they need a fair amount of time to break in.





Photograph 2: Finished Zigmahornet Speakers with Fostex FE103E Drivers

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- [Fostex FE103En Bass Reflex Bookshelf Speakers \(Nearfield Monitors\)](#)
- [Fostex FX120 DIY ML-TQWT Speakers](#)
- [Fostex FX120 DIY Bass Reflex Bookshelf Speakers](#)
- [Fostex FE206En Double Bass-Reflex Speakers](#)

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