Ian Gardner

Voice Over Production

HOME STUDIO VOICE BOOTH

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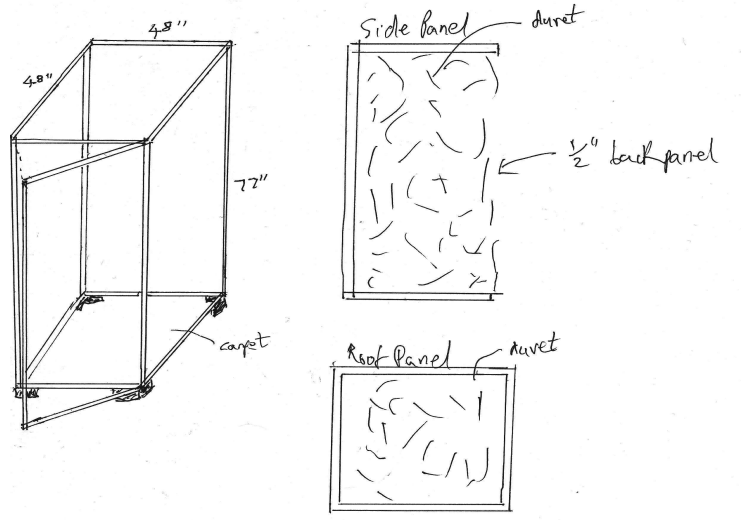
About:

I've been in the broadcasting industry since the early 90s but never had the space to record and produce audio from home. After moving from a tiny house in the UK to a more spacious house in America, I finally had room in the basement for my own voice booth and studio. The story begins with a badly drawn sketch of what I was trying to achieve...

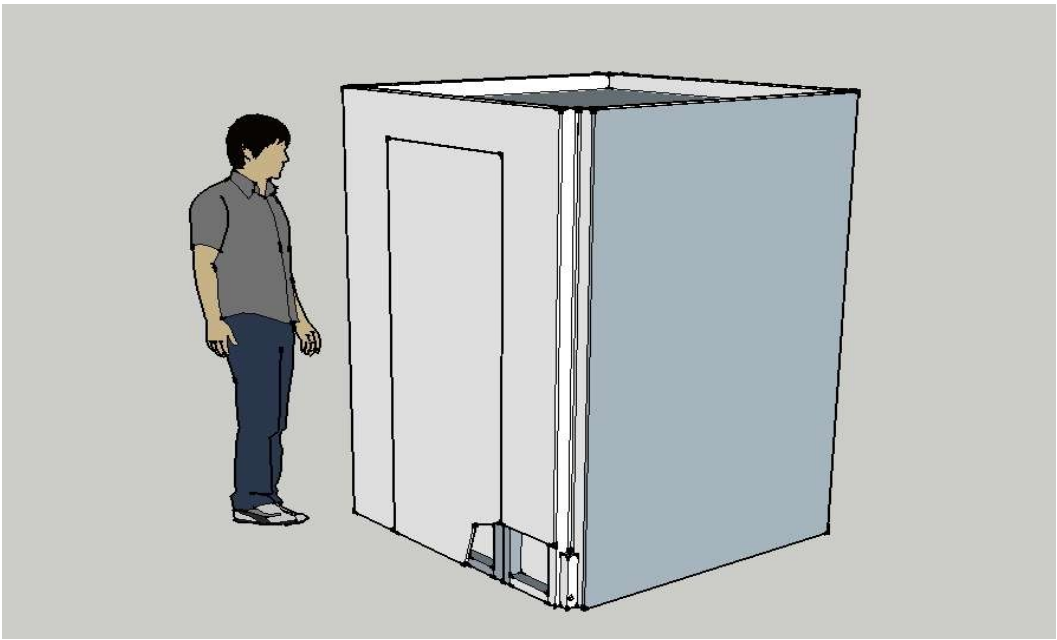


At this point, enormous thanks go to the real brains behind this project, my father-in-law, Wayne Moen.

Wayne's a retired architect so he was able to take my terrible sketch and turn it into a proper design as well spend hours building the booth.

Thank you Wayne for your enormous help and expertise with this voice booth.

Design:



The initial design was based on a space with an internal floor space of 16 square feet or 4' x 4'. This is just enough room for a script stand, mic stand and stool. The design didn't have any windows as I felt the space was too small to have an area of glass or perspex that couldn't be acousically treated. A larger design would probably be able to accommodate at least one window. Internal lighting was therefore essential.

Height was limited to my low basement ceiling height. The final design was 53” length x 53” width x 78.5” height for external dimensions and 48” length x 48” width x 75” height for internal dimensions.

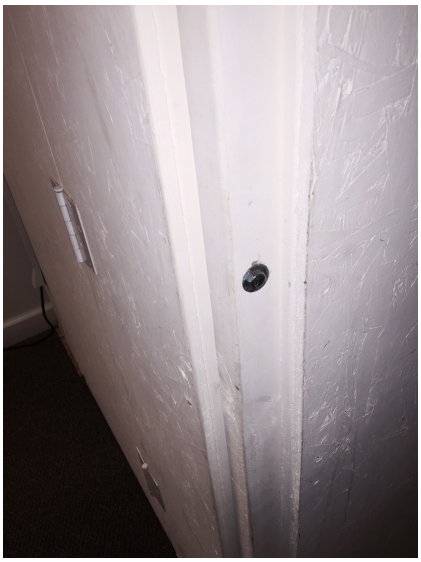
Construction:

The design shape allowed construction to be straightforward. There were four identical insulated panels, one of which would eventually house the door and a square ceiling section designed to rest on a lip at the top of the wall panels.

Chipboard panels for both inside and outside walls were nailed and glued to a basic framework of 2” x 1” pieces.

I wanted to insulate the walls as much as possible so the wall space was filled with some old king size duvets I had from a previous project (a green screen studio space). These were folded and stapled into the four wall sections and square ceiling section.

The panels were held together with 3 bolts on each side. The ceiling panel rested on a lip at the top of the walls.

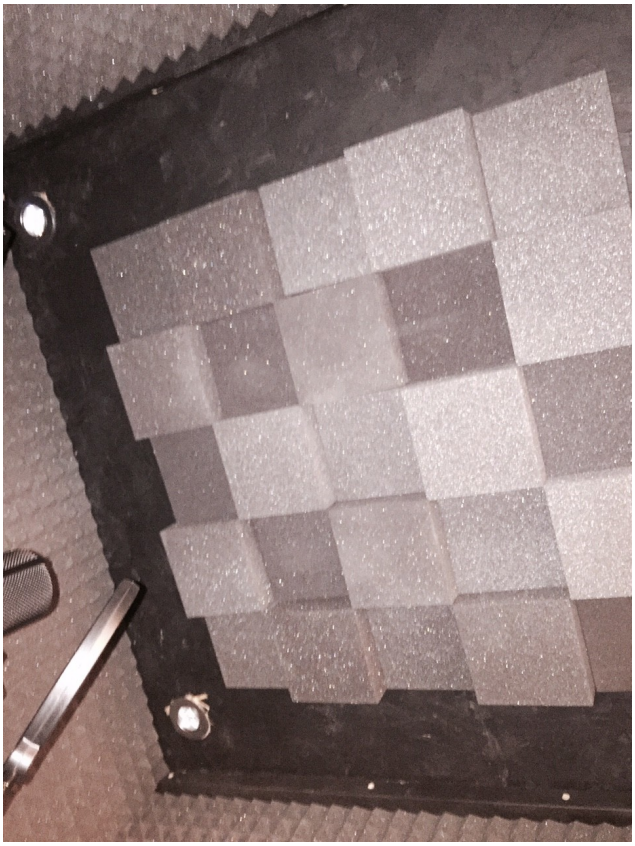


Acoustic Treatment:

The acoustic foam sheets for the walls were bought online and came in 4' x 3' panels. This means that two opposite walls will accomodate three panels perfectly. Use a recommended spray glue (this sometimes comes with the foam panels) and apply generously to the walls. A generous glue coating on just the walls is usually enough. Glueing the foam back at the same time creates a tighter bond but it's much harder to fine adjust the panels when positioning.

Allowing for the thickness of the foam, the other two sides will need subtle trimming before attaching. However, only trim a minimum amount. As long as you don't glue all the way to the outer edges and leave a 1.5” gap, the foam will squash into itself at the corners creating a tight and neat look.

The hardest panel to treat is the door, because the best way is to glue the panels to the closed door from inside and then cut around the door shape using a long and sharp knife. It can be claustrophobic and hot doing this which is why you want to leave fixing the ceiling panel until last!



The ceiling acoustic foam came in 25 squares over a 3' x 3' design.

I wasn't particularly concerned with the 6” gap around the ceiling edge. It is possible to over deaden a space with too much sound absorption.

Also the gap at the edge allowed space for the lights to be inserted.

The ceiling panel should be the last part of the construction to be installed. And it's best to fit the lights before dropping the panel in place.

For my location, there wasn't the head room to screw the panel into place but fortunately, the sides were solid enough to ensure it was completely secure.

Floor:

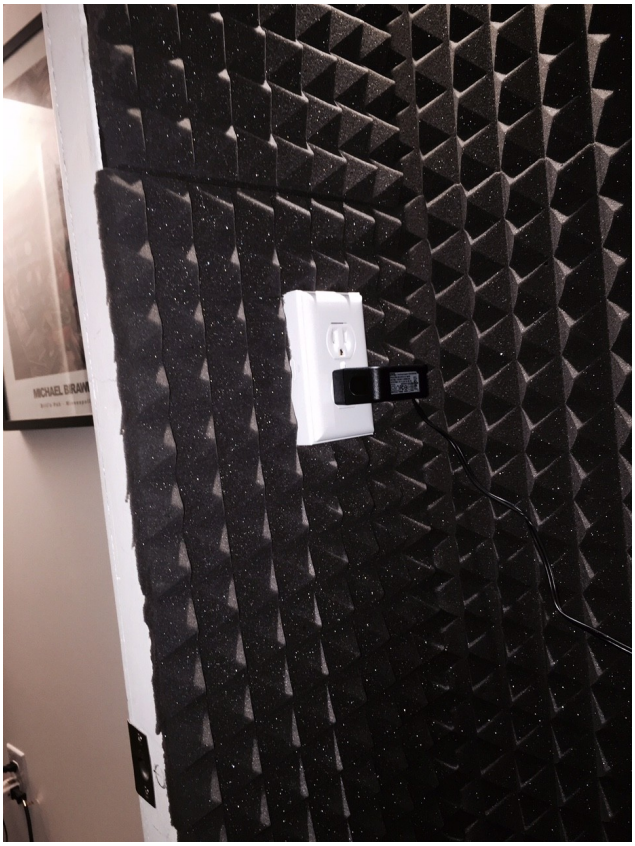
The original design had a 4' x 4' floor panel covered with a plastic mat found in many laundry rooms. However, the final positioning was in a newly carpeted studio and the carpet not only kept the entire floor on the same level but also served as a great acoustic treatment.

If you have a carpet floor already, my advice is to keep it as the floor of your booth. If you're building onto a wooden or concrete floor then a carpet or mat is essential to avoid echoes and noise.

Power and Lighting:

I used four low voltage LED downlighters available online. The LEDs not only have a low power rating but more importantly don't give off much heat which is vital in such a confined

space. Each light is designed to be dropped into a 2” diameter hole and each comes with its own mini transformer that sits on top of the ceiling panel.



Run each pair of cables from the transformers back to a lighting switch and connect them in parallel. At the same time I connected a power outlet on the opposite side of the switch to provide power for inside the booth. It goes without saying that you should consult a qualified electrician if this part of the project is beyond your means.

Equipment:

I use and recommend the Focusrite 2i2 audio adapter. This provides phantom power (48v) for your microphone and has a great visual input monitor of green, orange and red LEDs so you can adjust for the perfect input level. The device doesn't have its own power supply as it uses the USB power from your computer. However, USB doesn't work well over long distance as the voltage drops rapidly after about 6 feet. If you have your 2i2 next to your computer that's fine but for most applications you need a longer run of cable from your booth to the edit suite.

In my case, I required about 20 feet of cable to run up and out of the booth and around the walls back to my computer.

The solution is to use a powered USB 3.0 hub. This provides power to the 2i2 and at the same time boosts the signal back to your computer. The hub is deliberately overspecced for USB 3.0 even though the 2i2 is a USB 2.0 device. To keep digital noise to a minimum, it's vital you use top quality USB cables for every connection. I actually replaced the USB A to USB B cable that came with the 2i2 for improved results.

The hub also powers a USB headphone amplifier that gives the headphones an extra boost.

Summary:

I hope this inspires you to create some great voice booth designs! Please visit *www.garders.co.uk* for further info and ways to contact me if you have any questions.

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