



Penultimate Gaming Table / TARDIS Control Column

by [Lt. Rooney](#) on July 1, 2011

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Intro: Penultimate Gaming Table / TARDIS Control Column

A little while ago a friend of mine sent me a link to this website:

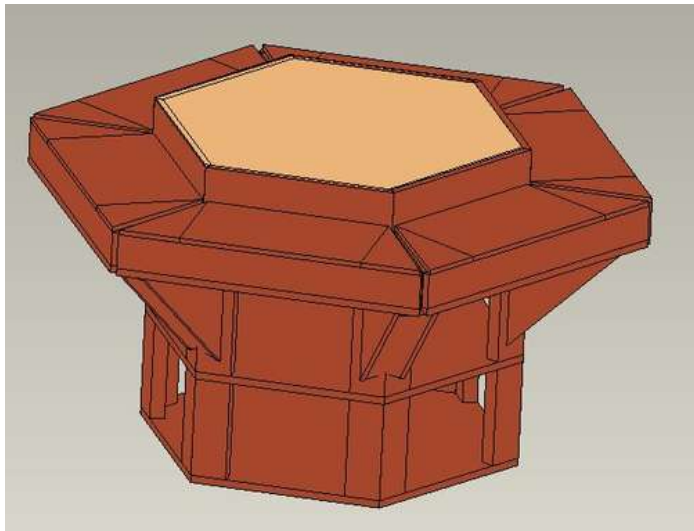
<http://epicgamingtable.wordpress.com/>

He said he wanted one and so the design process began. Like all great ideas this started with four of us later that evening having dinner and most of the requirements and basic shape were hacked together while we waited for our food. Over the next few days I refined the design on graph paper and put the whole thing together. Once that was done I put the design into Pro-Engineer Wildfire to come up with finished sketches and final designs.

Our design has six place settings, each composed of a 3.5" deep cubby with space for two rulebooks side by side. This is covered by a hinged lid. On either side is a triangular inset to hold dice, minis, snacks, or what-have-you. The central support has 12' of shelf space specifically sized for RPG rulebooks. The center of the table is raised 3" above the place settings and will have a standard square grid on one side. The top piece can be removed, will be reversible, and will have 10" of additional storage space beneath it. It was also necessary that the final product can be easily fabricated in parts and assembled in its final location. In keeping with this the cubbies, support arms, and central column are all designed to be built individually and then fixed in place.

While we were talking about our design the name TARDIS started getting thrown around because of the hexagonal shape and central support. Someone pointed out that this was similar to the Doctor's control console layout, and the name stuck.

NOTE: We haven't actually built it yet. I have the designs, parts list, and price estimate but unfortunately no one in our group has a table saw and of the four of us I'm the only one with any carpentry experience. Your mileage from these prints may vary.



Step 1: Parts List and Prints

8 total 8' 1x4 pieces are needed

12x 10" long

12x 11.54" long with 30 and 60 degree widths

6 30.5" long

6 17.5"

6 11.5" with a 120 degree notch and a 45 degree width

6 15" with 45 degree widths and a 120 degree notch

2 8' 2x4 's

24 12" long with 60 degree lengths

12 10" long with 60 degree lengths

2 8'x4' 3/4" plywood sheets

3 38"x33" cut into 19" sided hexagons

6 30.5"x10.75" cut into trapezoids with one 19" side

6 19"x10.5" with 60 degree widths

1 36"x32" cut into 18.5" sided hexagon

6 18.25"x10.75"

12 11.5"x11.5" right triangles (6 11.5" squares cut along diagonals)

6 irregular quadrilaterals with sides 11.4"-11.4"-6.6"-6.6" with 120 degree notch at long end and corner trim at short

12 hinges

nails, screws, glue

The finished prints are attached.

File Downloads



drw0001.pdf (39 KB)

[NOTE: When saving, if you see .tmp as the file ext, rename it to 'drw0001.pdf']

Step 2: Place Settings

The six cubby/place settings are composed of the following parts:

1x4:

2x 10" long

2x 11.54" long with 30 and 60 degree widths

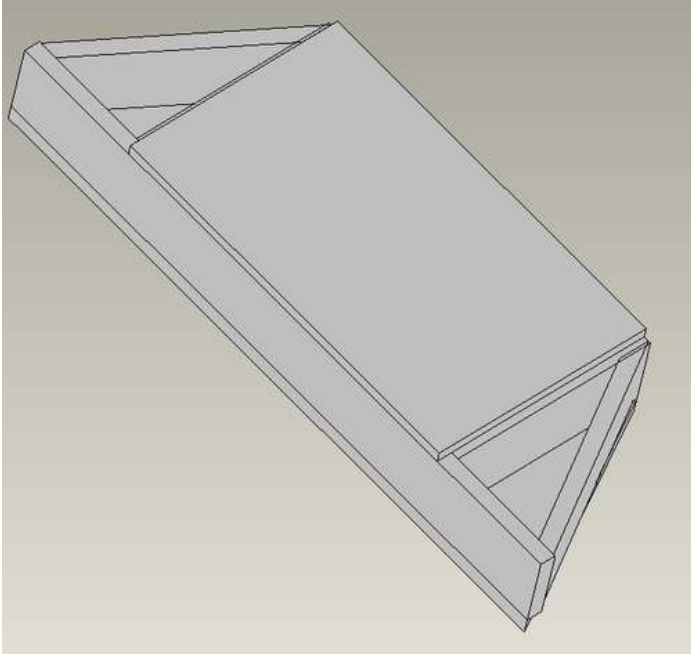
130.5" long

1 17.5"

3/4 ply 30.5"x10.75" cut into trapezoid with one 19" side

1/2 ply 18.25"x10.75" square

I recommend putting the 1x4 supports together first (they are all in plane and so should be flat) then tracing the outline for the 3/4" bottom piece. Normally I'd favor screws, but for this case I'm planning to use nail reinforced glue. It will be necessary to cut notches for the two hinges for the 1/2" lid. This fits over the central rectangular area, removable covers for the sides can be added latter.



Step 3: Central Column Bottom

The central column has ample shelf space for books, minis, mats, and whatever else you may want to keep readily on hand during your game / madcap adventures through time and space.

The column is composed of

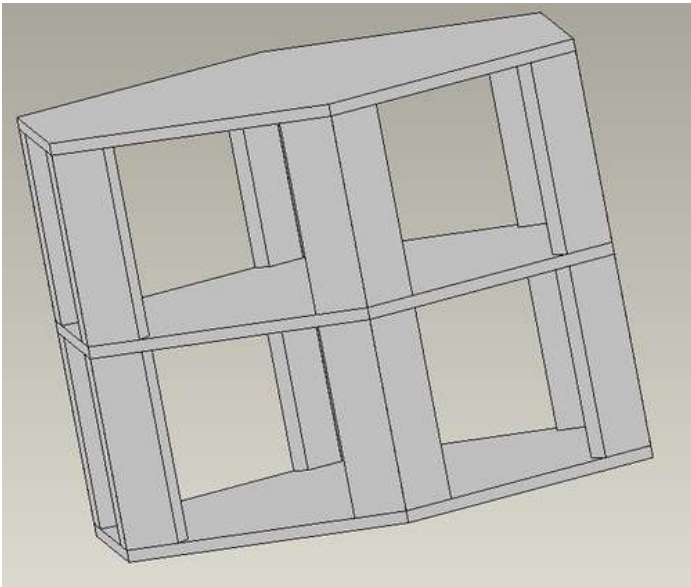
2x4

24 12" long with 60 degree lengths

3/4 ply

3 38"x33" cut into 19" sided hexagons

Attaching these will require some finesse since the 2x4's stack directly over each other. You could of course settle for putting them together with glue, since this portion will always be loaded in simple compression that may be sufficient. Angled screws would give me a little peace of mind though. Drill in through the bottom (it's symmetric so just pick a side and stick with it) at a slight angle through the plywood into the 2x4 when another piece prevents going in straight. This will look best done from the inside so leave the bottom piece off until after finishing this part.

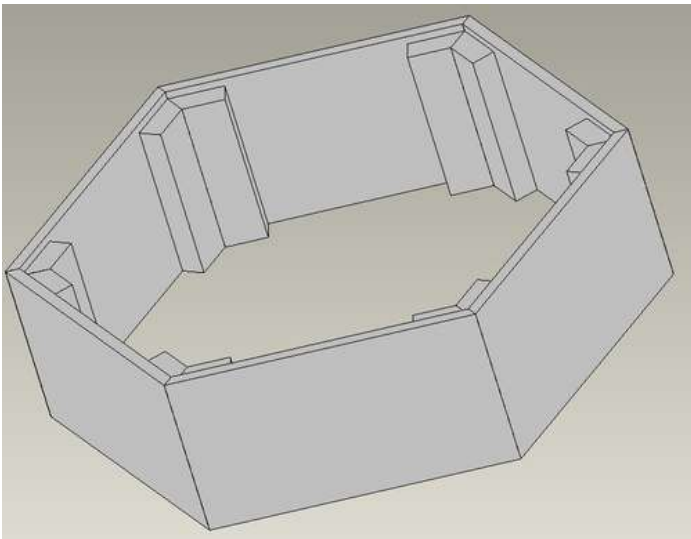


Step 4: Central Column Top

The top portion of the central column provides backing for the place settings, supports the top piece, and can be used for additional, hidden storage space for things the Cybermen must definitely not find.

12 10" long with 60 degree lengths
6 3/4" ply 19"x10.5" with 60 degree widths

This is fairly simple, attach the 2x4 to the plywood to form a continuous surface with their angled sides. There will be 1/2" between the top of the ply and the 2x4, the top fits here. Once you have six such pieces simply attach them together along their angled sides.

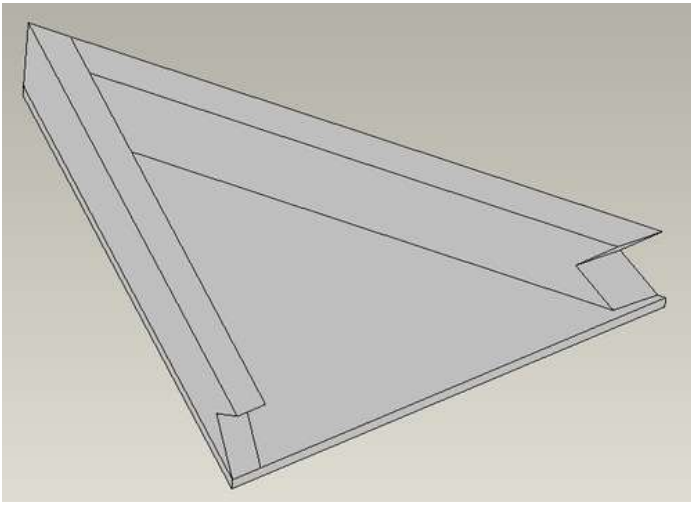


Step 5: Side Arms

The side arms support the place settings from the central column. These pieces use 1/2" facing left over. If you don't have enough 1/2" ply don't get a new sheet, luon will suffice. Cut the facing into 12 11.5"x11.5" right triangles (6 11.5" squares cut along diagonals). Also needed:

6 11.5" with a 120 degree notch and a 45 degree width
6 15" with 45 degree widths and a 120 degree notch

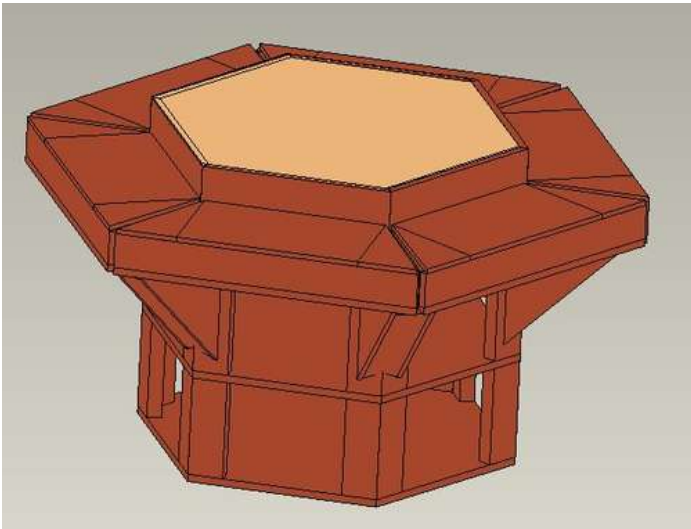
Each arm is made with the 15" piece attached to the inside (bottom) of the 11.5" piece. The 120 degree notches with affix to the central column.



Step 6: Assembly

Attach the column top to the column bottom. Using angled screws from the inside will be tricky but not impossible if someone else holds the whole column steady and one of your group is relatively small. Since this part won't be visible you could also settle for angle screws from the outside, though it will require care to ensure the screw penetrates the 2x4 into the plywood without going into the shelf space. If it does bend or grind it off to protect the books that will go onto this shelf from being scratched. The finished arms attach 17" from the bottom of the column and should end ~7.75" from the top. Once the arms are attached set the place settings on top, make sure everything sits correctly, and then screw or nail everything down.

Note: for increased portability instead of screws you could use bolts to attach the arms and settings, in that case you'll want to make sure the facing can also be easily removed.

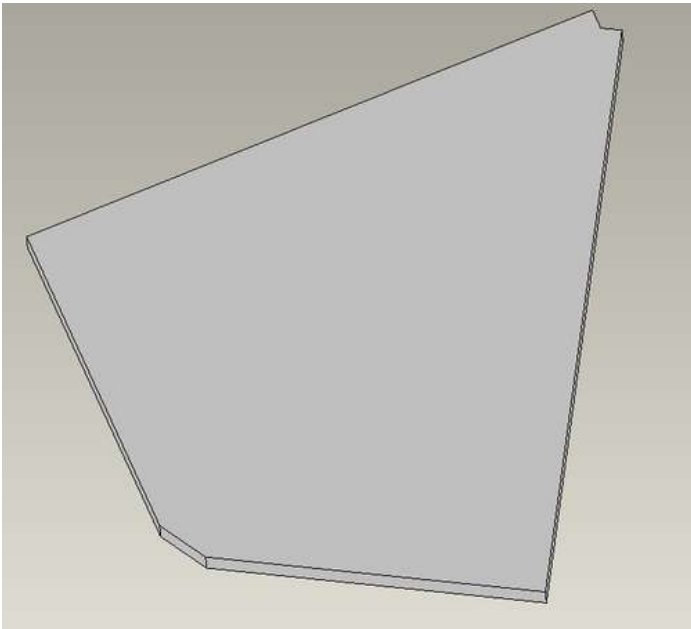


Step 7: The Top and Side Covers

Since this is a gaming table you'll want a grid on the top piece. We are considering two methods to do this. You can carefully etch the grid down with 1" spacing between lines directly onto the wood. Put down a thick coat of stain and then wipe it up. It will linger in the creases creating dark lines there which will act as your grid. Put down a thin piece of plexiglass so that you can draw on the table. Another option is to take glue down floor tiles of two colors, cut them into 1" squares, and affix them to the top.

The top itself is a piece of 1/2" plywood 36"x32" cut into a 18.5" sided hexagon. It may be desirable to trace the space that this piece will be filling rather than use that exact measurement however. Before placing the top part of the column lay it down upside down on your 1/2" sheet and trace the inside.

Finally six pieces are placed down to cover the corners of the place settings. These pieces should be 6 irregular quadrilaterals with sides 11.4"-11.4"-6.6"-6.6" with 120 degree notch at long end and corner trim at short. However you should put a piece of paper down and close the two lids. Trim the paper with scissors until it fits around the corner neatly then trace out the remaining sides and trim them off. Take this stencil and cut out the piece. If any of your place settings turned out off do this again for each of them.



Step 8: Sand and Stain

If you didn't while you were putting each piece together sand down all the rough spots and stain the whole thing. Remember to follow the instructions on the stain, and if you've already put the table in place put down a dropcloth or newspapers. Even if you were finishing everything as you went you should still touch up the final piece.

And that should be it. You're ready for a game with no books, laptops, or snacks covering up the game grid, plenty of elbow room, shelf space for everything, and it all fits easily in your apartment. You're also ready to control your Time And Relative Dimensions In Space vehicle, as much as it ever lets you control it anyway.

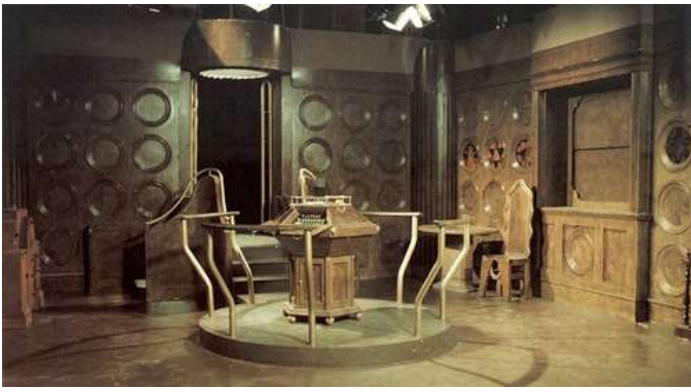
Sorry about no pictures, my camera kind of works again so as soon as we actually begin construction I'll get some up along with all the lessons learned.



Step 9: Preparing it for the TARDIS

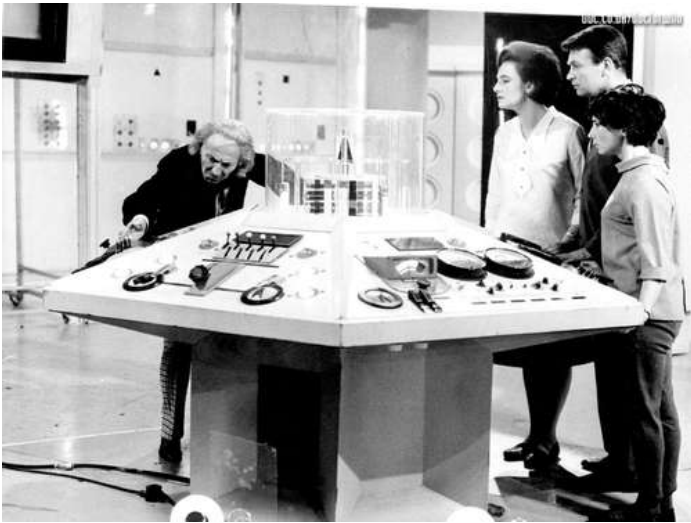
Instead of a game table you want to control your Time And Relative Dimensions In Space vehicle. Well instead of sanding cover every surface in a generous coat of primer before painting it the desired color (unless your TARDIS happens to be using the wood theme). This will help give it a more artificial texture rather than wood grain. Only the basic shape is a constant giving a great deal of leeway on design. Here are a few suggestions on altering the previous instructions to give it a more Doctor Who feel:

1. The center column usually glows and moves up and down. A clear plastic cylinder with something even as simple as rope lights inside can easily produce this effect if you use the hollow area under the top to install a small moving base. A few inches of movement can go a long way to producing the desired effect. You may want to add a separate switch for this function if your column also supports other hardware.
2. You'll want more slope on the cubbies. A flat surface is given for play, instead trim the cubby supports at an angle before attaching the lid. 30 degrees should be enough to give the right look.
3. Install doors over the bottom shelves.
4. To do more than be a looker at this point turn your control column into a computer desk. You can install a keyboard and track pad inside one of the cubbies (or attached to the lid if you prefer) with a flat monitor above or to the side. Other cubbies can conceal slates, printers, scanners, projectors, or additional workspaces. The bottom shelves can accommodate the tower and any other support hardware. It will be necessary for you to drill holes for all the wires to be fed inside.
5. Once you have everything you want inside the column you can connect it all to a single surge protector labeled "Main Power" or something similar. Drill a few holes and one extension cord later you can have all of it running. Just for the look of things you might not want that one cord too visible. Or you could run it along hooks on the ceiling and be very visible, the TARDIS look changes a lot.
6. Anything else in your room controlled by the control column (maybe everything?) can also follow a similar philosophy. For the older TARDIS clean look wireless control and carefully hidden wires are preferable. For the newer messy look run very visible wires all over the place, the only limit is what you can easily move around.
7. Add silly labels and fiddly bits everywhere.

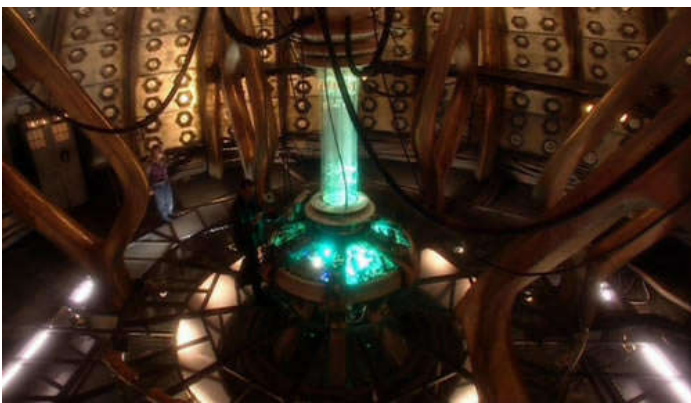


Doctor Who © BBC

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Related Instructables



Tardis Key
(Photos) by sir-zeke



"Doctor Who" Sonic Screwdriver
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K'nex RPG-7 (Preview)
(Photos) by willdebeers



Steampunk K-9 robot
(Photos) by sir-zeke



Radio Box
(Photos) by sir-zeke

Comments

3 comments [Add Comment](#)



mfontaine1 says:

Jul 6, 2011. 1:44 PM [REPLY](#)

Well, this really is an awesome idea! If only my gaming group was smaller :S Well, I guess I'll just have to make some calculations to find the right angles and size for 8 side :P

Thanks for the instructable!



Lt. Rooney says:

Jul 6, 2011. 7:14 PM [REPLY](#)

There are generalized formulas for the radius, apothem (in-radius), and angle for any n-sided regular polygon. This should give a good branching off point, it's what I used as a reference for my calculations:

<http://www.mathopenref.com/apothem.html>

You could also ditch my cubby based design and use a flat circular top which could fit as many members around it as convenient. This could then be designed with a 3 inch shelf space inside the table itself for convenient note and book storage. There are other possible modifications, this is after all just what I used.

As to your other comment, I'm considering using the hinges that will remain in their open/semi-open positions rather than ordinary cabinet hinges. This will allow the GM to use his cubby lid as a screen if he wants



mfontaine1 says:

Jul 6, 2011. 1:53 PM [REPLY](#)

By the way, simple idea: You could modify one of the "cubby" to be the GM by making the lid open towards him and making a little support to keep it up, this way the game master could keep his books and infos hidden much more easily. If you really want to make it better, you could even make it so that there will be a little space for him to throw his dices out of curious eyes.

Sorry if anything I said sounds strange, english isn't my first language.