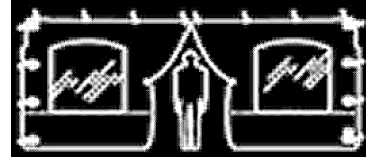


This document is about how to make sidewalls and import tents from manufacturers for use with PartyCAD 12. This is a technical document and meant as much to remind us how to do these things as to explain them to you. You will have to be quite familiar with PartyCAD and with CAD in general to make much progress at using the instructions that follow, but if you run into problems, give us a call and we will do what we can to help. You should print this document on a color printer to get the maximum benefit from the instructions it contains.

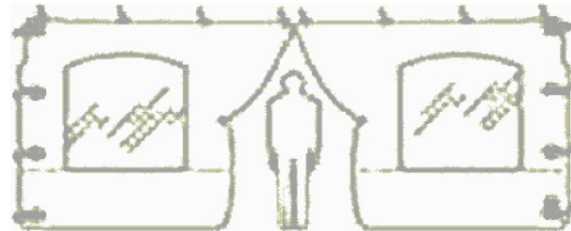
Hank Hufnagel 8/19/2011

Making Sidewalls for Use with the Tent Wizard

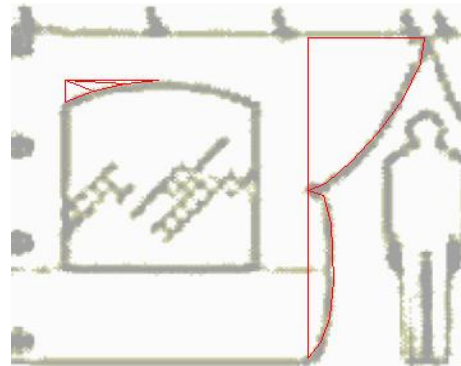
1. The first step is to acquire a picture or drawing of the sidewalls you wish to create. This should be to scale and the dimensions must be known if you hope to create an accurate model for use with the Tent Wizard. For the example we will use the picture at the right, which is just a sidewall diagram for Tentology tents that was found on the internet. Really this is pretty crude, but should be good enough for our purposes if we guess at a few dimensions. In order to create sidewalls of this type for the Tent Wizard, we will have to add two pieces -- the window and the door.



2. Create a new project in PartyCAD, say Sidewalls, and then leave the program and use a paint program to create a lightened version of the picture above. Save this as a bitmap into the Sidewalls project folder (C:\PartyCAD\Projects\Sidewalls). This will be the design template for much of what we do from now on.



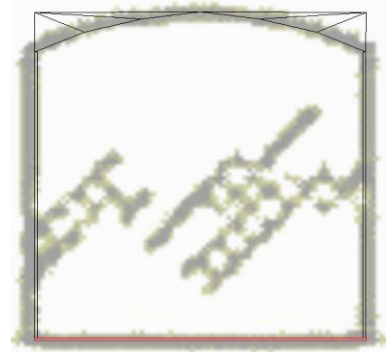
3. Use Layout Page to create the special pieces you will need to construct the window and door. To learn how to do this, run PartyCAD, click Help/Tutorials and then take the tutorial called *Generating Furniture in Layout Page*. This will teach you how to make any shape plane you may need, though the process is painstaking and error-prone and due for rewriting in an upcoming version of PartyCAD. The idea is to come up with planes of the appropriate shape to combine with stock PartyCAD pieces later on to create the perimeter of the door and of the window. For our window and door we need to make half the curved top of the window and an upper and a lower piece for the door, as shown in red in the illustration above. Save these pieces as Project Furniture.



4. Get into Furnish and make a new plan with a matched background picture. Use the picture from step 2 above and make sure to get the dimensions right. There is a video you can watch to learn how to use background pictures in the Furnish module. Look in the video index under *Background Pictures, in Furnish*.

5. With the background picture loaded in Furnish, load the first odd piece we created in Step 3, half the curved bit above the window. Scale and move this so it is correctly positioned over the window in the background picture, then duplicate it, switch to a Front View, rotate the duplicate 180 degrees, switch back to a Top View and position the now mirror-image duplicate to the right of the original curved window top. Next load a RUG

from the Furniture Album's Basic Pieces page, change its color to white and resize so that it is .5 inches wide and tall enough to run from the bottom of the window to where the curve of the top begins. The left edge of the RUG should lie along the left edge of the window. Duplicate this piece and position the duplicate as the right edge of the window. Finally, make a RUG for the bottom of the window in similar fashion. At this point your screen should look something like the illustration at the right.



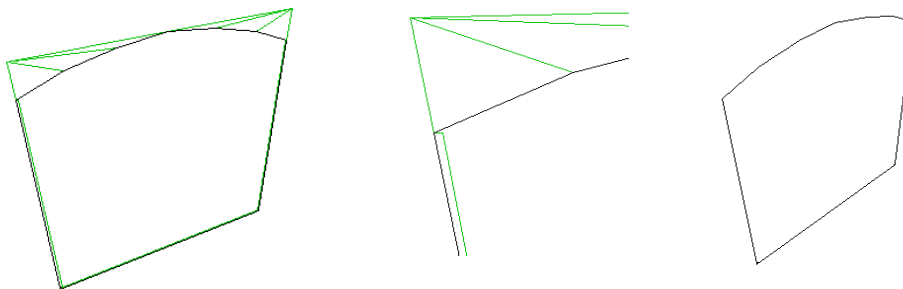
6. Save the arrangement just in case you need to modify your design at a later date. We might call this one, TWINARR. Now use Save As 1 at the lower right of the Furnish screen to save all the pieces in the arrangement as a single new piece. Save it as Project Furniture and call the piece TWIN.

7. Return to the Main Menu, then restart Furnish, make a new 30x30 lot and load the TWIN piece onto it from the Custom Pieces library. The piece is nearly complete, but we need to do just a little more work. Begin by switching to a Side View and rotating the piece 90 degrees so that it looks correct when seen in a Front View. Once you have done this, use Save As 1 to save the piece again, now in its correct orientation. Just save over top of the old TWIN piece to create a new one with the proper orientation.

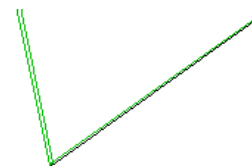
8. Use the piece editor to clean up the visible edges and icon line of the TWIN piece. The Piece Editor button is just to the right of Save As 1 in the Furnish module. When loaded, your window should look pretty much like the one at the right.



9. Fix the visibility of the edges so that only the perimeter will show in the View module. Note the detail below which shows that only the outside lines of the RUG pieces are made visible. The idea here is that the preview image of the window in the Piece Editor will look like a perfect window, as in the illustration at the right below.



10. Change the icon lines of the piece so that the only icon line is one belonging to the rug running along the bottom of the window.



11. Now all we need to do is save the finished window. I generally save a copy to the current project, and would once again keep TWIN as the name, overwriting the older, less perfect version.

In order for the new window to actually work with the Tent Wizard, it must also be saved to the: **C:\ProgramData\PartyCAD\Library\Tents\Sidewall Parts** folder. You can do this from within the Piece Editor by clicking **File/Save as...** to bring up the basic save menu, then click the **folder button** at the right above the file list to get into the Windows Save As menu and then click around to the proper folder. Again, save the piece as TWIN and it is ready to use.

Now that the window is complete, it is time to make the door. The steps are exactly the same, so I will omit the words and just show pictures keyed to the steps above:

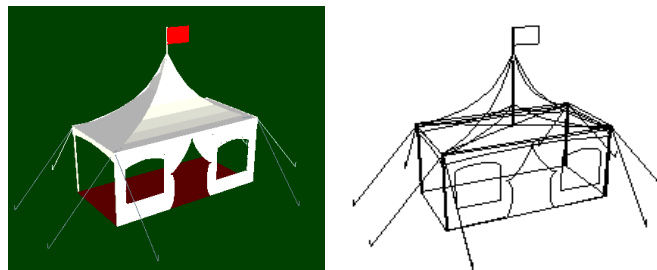


The door is saved to the Sidewall Parts folder as TDOOR.

Finally, within the Tent Wizard, we make a Sidewall element that looks like this:

```
WDW:Wall *;Twin 5',5',2'6;Wall 9;Tdoor 6',9';Wall 9;Twin 5',5',2';Wall *
```

When we apply the WDW sidewall to a tent we get the following results:



Making Tents with Poles for Use with the Tent Wizard

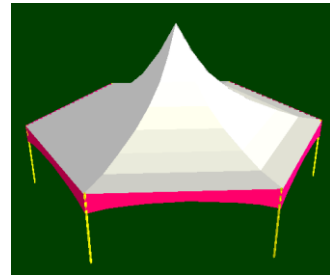
Nearly any tent can be incorporated into PartyCAD's Tent Wizard. Many can be generated by the wizard itself, but oddly-shaped tents cannot. Such tents can be divided into two types -- tents with poles and tent structures. This section deals with how to setup any tent that incorporates poles for use with the Tent Wizard. The next section deals with structures.



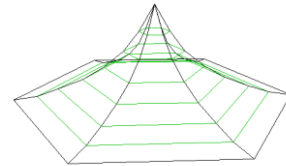
At the left is a hex tent manufactured by Tentnology. Let's take a look at how such a tent can be created in PartyCAD.

The first and hardest step is to get the geometry of the tent into PartyCAD's Piece Editor. That is, you somehow must generate or acquire a 3D model of at least the top of the tent and the drip edges. You may also get some other things such as legs as well, but the top and drip edges are all we really need. Some tents can be created as bodies of rotation by PartyCAD's Layout Page program, but mostly tents such as these will be created by a program external to PartyCAD and saved as DXF file. Such DXF file can be imported directly into the Piece Editor.

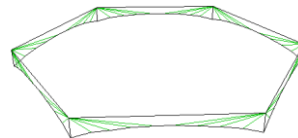
Once the geometry has been acquired, then next step is to color code the top, the drip edges, and any other part that are present in the tent. So, for a hex tent such as we are working on, the color-coded version might look like the illustration at the right. The tent top is white, all the drip edges are red and the poles have been colored yellow. These colors will tell the Piece Editor how to split the tent apart so that we can manipulate its component parts, but before we do that we must set the visibility of the lines for use in the View module, and also make sure that the icon for the top and drip edges is correct.



After some editing, the lines in the top of the tent will look like this. The green lines will be invisible, the black ones visible in the View module.



Similarly, the drip edges would look like this:

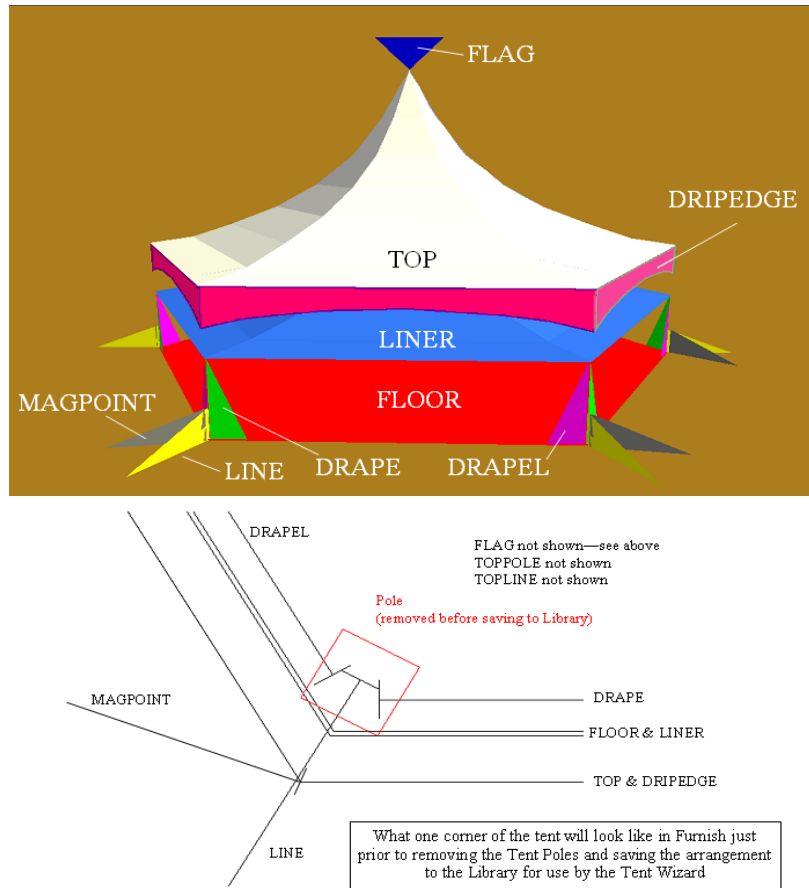


And the icon for both the top and the drip edges would look like this:



Once this preliminary work is done, you should click File/Save as Arrangement by Color in the Piece Editor and give the arrangement a name, say HEXTENT. Now we are ready to move on to the Furnish module where we will complete setting up the tent.

Exit the Piece Editor, start Furnish and load the HEXTENT arrangement you just saved. Our task here will be to add markers to the arrangement that will guide the Tent Wizard in its manipulation of the tent. Examine the pictures below carefully and then continue with your reading on the following page.



A special set of pieces called TENTMARKS is provided with PartyCAD for the express purpose of marking up tents for use with the Tent Wizard. Most users will never use them, so they are tucked away in the Tents folder. Before you attempt to use them, use Windows to copy the file:

C:\ProgramData\PartyCAD\Library\Tents\Manufacturers\TENTMARKS.FUR

to:

*<My Documents folder>***\My PartyCAD Files_Resources\Global Data\TENTMARKS.FUR**

Doing this will allow you to load the tent marks as a Custom Piece from your My Furniture Library. Load TENTMARKS and break the group so that you can work with the individual pieces. Now proceed as follows:

Select the top of your tent as the current part and change the name of this part to TOP

If you want a liner to be available for your tent, duplicate the TOP piece and rename the duplicate LINER. Now scale this LINER piece down so that it is a couple of inches smaller than the tent top but centered on it. Refer to the diagram. The wizard will manage the height of the liner, but you must get its size right and center it on the top of the tent. Select the drip edges part of your tent and rename this DRIPEDGE. You may have to switch to a Front View to insure that you are selecting the correct piece.

If yours is a hex tent, delete the rectangular FLOOR piece. If it is not, delete the hexagonal FLOOR PIECE. Now move the FLOOR piece that remains inside of the perimeter of the tent and resize it so that it is a couple of inches smaller than the tent top but centered on it. The FLOOR will be used to generate the floor of the tent and sidewalls will be placed on it perimeter, so it pays to spend some time and position it exactly. Again, refer to the diagram to see what the FLOOR should look like when you are done.

Now it is time to add markers that will guide the Tent Wizard in producing tent lines, drapes, and mag points for the tent.

LINE - find the Line piece. Never change its size or color. All that matters is that the "T" end of the piece be positioned over a tent pole and that the long side is oriented in the direction in which you wish to have the line run. You will need to add exactly one LINE piece for each pole in the tent. Or, you can skip this step and delete the LINE marker if you do not wish to allow for the possibility of poles, tent lines or sidewalls for your tent.

DRAPE & DRAPEL - find the drape pieces and add them at each pole, oriented in the same direction as the drape is to run. DRAPE is the right half of the drape and DRAPEL is the left half. (As with the other markers, DRAPE and DRAPEL are just triangles here, but they will be replaced by real drapes by the Tent Wizard.) You can skip this step and delete the DRAPE & DRAPEL markers if you do not wish to allow for the possibility of adding drapes to the top of your tent.

MAGPOINT - add a mag point at each corner of the tent top. These are used to align tents and so you should take some time to see that they are precisely positioned.

FLAG - add a flag marker at the top of each peak of the tent. You will have to switch to a Front View and perhaps a Side View to do this. You can skip this step and delete the FLAG marker if you do not wish to allow for the possibility of adding flags to the top of your tent.

If your tent does not include wires and a floating pole in the roof of the tent, delete the pieces called TOPPOLE and TOPLINE, otherwise use these markers to indicate the placement of these items.

Once you have placed all the markers and deleted any that you are not interested in, save the arrangement to the local project, so as to have a backup. Now delete the tent poles from the arrangement and save it again, but this time to one of the tent libraries. To do this, click the **Save Arrangement** button, then the **Use Windows Selection Menu**

button, then click over to the folders where PartyCAD keeps tent data. To create a new library for use with the Tent Wizard, all you need to do is create a folder with the appropriate name in the Manufacturers folder. So to create a Library named BrandX, just make a folder by that name at:

`C:\ProgramData\PartyCAD\Library\Tents\Manufacturers\BrandX`

The Tent Wizard will see this and add it to the list of available libraries. One thing though -- keep a backup of your library somewhere so that you will not lose the data across a system crash.

Now we are ready to save then HEXTEXT to the BrandX tent library. After removing the poles, all you need do is save it to the BrandX library so that the file is at:

`C:\ProgramData\PartyCAD\Library\Tents\Manufacturers\BrandX\HEXTENT.ARR`

That's it. If you have done everything correctly, you can now run the Tent Wizard, go to the BrandX Library and load your HEXTEXT into the wizard.

Making Multi-Part Pole Tents for use with the Wizard

The HEXTEXT we have just completed is a standalone tent, but it is easy to think of a manufacturer tent that contains ends and mids like those in the Frame, Pole and Clearspan libraries. How can we handle such a situation? All you need to do is save the parts with tags at the end to indicate which part they are, and the Tent Wizard will allow the parts to be combined as with its own tents. There is one little trick though, so read on:

If you have an end and a mid for a particular tent, say HANKSTENT, each part must be prepared and saved as described in the previous section. However, when it comes time to naming the tent parts you need to use the following conventions:

HANKSTENT-E is the name you should give to the left end of the tent, where "HANKSTENT" is replaced by the name of your tent. Once you have saved this, make a group of the entire arrangement and rotate it 180 degrees to make the right end of the tent. Save this arrangement as HANKSTENT-R. The Wizard will use this tent part whenever an E appears in the assemble list after the first E.

HANKSTENT-M is the name you should give to the mid of the tent. Additional mids would be named HANKSTENT-2, HANKSTENT-3, etc.

Once you have saved all the parts, loading HANKSTENT in the wizard and entering EME will cause the parts HANKSTENT-E, HANKSTENT-M and HANKSTENT-R to be combined to create the desired tent.

Setting Defaults and Changing the List Name of Your Tents.

If you get into the Tent Wizard and load your new tent, you will see that it comes up with all flags, tent lines, the floor, drapes and other possible extras turned on. This may be what you want, but if not, turn off what you like, set the pole heights to the desired default and in general, get the tent into the form that you wish to be the default when you load it. Now, switch to the Library Menu and click **Save to Library**. Save the tent to the library under the same name as the original -- HEXTENT, HANKSTENT -- whatever you called the arrangement that contains the tent. From then on, when the tent is loaded the changes will be applied to the standard configuration before the tent is displayed by the Tent Wizard.

Note: Tents saved to a library are actually all kept in the file:

<My Documents folder>\My PartyCAD Files_Resources\Global Data \TentData2.txt

If you open this file you can see them in there, though you will not understand just what the stored numbers mean. However, at the end of the file you will find the most recently saved tent. If you were to move this last part of the file to a file named:

C:\ProgramData\PartyCAD\Library\Tents\Manufacturers\BrandX\TentData.txt

the defaults would still be applied, because the tent wizard checks both locations before loading a tent from the BrandX library. You might want to do this if your BrandX library is to be distributed to others and you wish to distribute the default settings along with the tent data. Having the TentData.txt file in the BrandX folder means you need only distribute everything in the BrandX folder to transfer the library to a different machine.

(One last trick with TentData.txt files --- if you add lines at the beginning of such a file of this form: **HIDE:HANKSTENT** then the named tent (HANKSTENT in the example) will never be listed as one of the available tents by the Tent Wizard. You might want to do this if you wanted to use a name other than HANKSTENT as the list name of your tent.)

Making Tent Structures for Use with the Tent Wizard

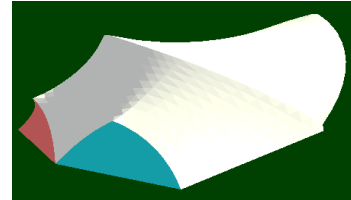
This section deals with how to setup structures for use with the wizard.



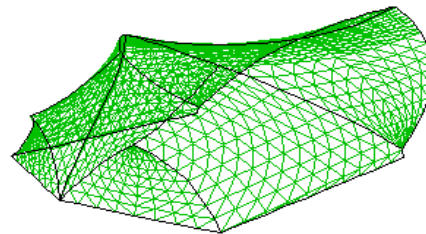
At the left is a structure tent manufactured by Tentnology. Let's examine how such a tent can be created in PartyCAD.

Again, the hardest step is to get the geometry of the tent into PartyCAD's Piece Editor. Usually this will have to come from the manufacturer in the form of a DXF file.

Once the geometry has been acquired, then next step is to color code the top, by the selectable parts of the tent. For the S2000 Concert tent show above, this might look like this the illustration here. The idea is that each piece of the tent that is a removable unit is coded with a different color. These colors will tell the Piece Editor how to split the tent apart when it is saved as an arrangement, but before we do that we must set the visibility of the lines for use in the View module, and also make sure that the icon for the top and drip edges is correct.



After some editing, the lines in the top of the tent will look like this. The green lines will be invisible, the black ones visible in the View module.



Each part of the tent needs to be looked at individually to make sure that a good drawing will result regardless of the configuration of the tent. Also the icons of the various parts need to be set up. The icon of the overall S2000 would look like the lower illustration.



Once this preliminary work is done, you should click **File/Save as Structure by Color** in the Piece Editor and give the arrangement a name, say BANDSHELL. Now we are ready to move on to the Furnish module where we will complete setting up the tent.

Exit the Piece Editor, start Furnish and load the BANDSHELL arrangement you just saved. All of the part of the tent will be named STRUC and our only task here is to color code the parts of the tent and add MagPoints.

1. Change the color of the parts so that each part of the tent that can have a different color in the finished tent has a different color in the arrangement. Usually this is not an issue and you will just change the color of every part to white, so that the entire tent can be colored/textured with a single operation -- usually white with no texture. If you would like to see an exception, get into the Tent Wizard and load the Tentnology Bumbershoot. Go to the Assembly tab and change one of the two available colors. See what happens?



2. Now set MagPoints as you did in the previous example. This will be especially important if the structure may be combined with others to create multi-part tents.

Once you have placed the MagPoints, save the arrangement to the local project, so as to have a backup. Now save it again, but this time to one of the tent libraries. To do this, click the **Save Arrangement** button, then the **Use Windows Selection Menu** button, then click over to the folders where PartyCAD keeps tent data. To save our BANDSHELL to the BrandX, we would place it at:

```
C:\ProgramData\PartyCAD\Library\Tents\Manufacturers\BrandX\BANDSHELL.ARR
```

The Tent Wizard will see it there, list it with the BrandX tents and allow users to load and manipulate it.