

Hi!

These are the instructions for manually adjusting an image so displays undistorted on a tapered cube in Second Life. Please read the Actions Instructions first. The information you need to know before you begin the adjustment process is there, and will not be repeated here.

So, we'll assume that you have an image, all ready to manipulate, but you don't want to use the Actions I've provided; either because you aren't using Photoshop, you don't want to reduce the resolution to 512 pixels, or you need a Top Size that I haven't provided an Action for.

We'll cover the first two cases first, and assume that you want to use an even 10% increment.

The image should be flattened, or put on a single layer, before you begin; so please do that if it's not. (I recommend saving the flattened file with a different name, in case of mistakes.)

1. The image must be on a square. So, open the image you want to use, and go to Image > Image Size. Uncheck Constrain Proportions, and type the same Width and Height into the top two text fields. (For example, 512 pixels for both.) Click OK, and you'll have a square image.
2. Double click on the image, so the Background becomes a Layer. Duplicate that layer, so there are two identical images in the Layer Stack. We'll be working on the top image first, so make sure it's the Active layer.
3. Go to Edit > Free Transform. When the Transform handles appear, move the Reference Point, that the transformation occurs around, to the Lower Left Handle. Look at the Cube Distortion Table below, and type the Right H Skew degrees into the Horizontal Skew degrees field. (This may be in the Options Bar at the top of the window, or the Tool Options window, depending on the version of Photoshop you have.) For Example, if your taper is 0.20, you'd use

-21.8°. Accept the Transformation.

4. With the Polygonal Lasso, click in the Lower Left corner, the Upper Right corner, and the Lower Left Corner, to make a selection that divides the image in half diagonally from lower left to upper right. Precision is vitally important here. (Or just use the one I provide.) Click the Make Mask button, at the bottom of the Layer Palette, to hide the top left portion.

5. Make the Bottom Layer active, Free Transform, and move the Reference Point to the Center Top Handle. Type the Width Scale percentage and the Left Horizontal Skew degrees into the appropriate fields, much as you did before. (In the example, that would be 495%, and 63.2°.) You should see everything matching up, with no visible seam lines. Accept the Transformation.

6. That's it! Make the .tga or .jpg file, and upload it to Second Life. You are ready to go.

Cube Distortion Table

	Right H Skew °	Width %	Left H Skew °
Top Size 0.90	-2.9	110.9	3.2
Top Size 0.80	-5.8	125	7.1
Top Size 0.70	-8.7	143	12.2
Top Size 0.60	-11.4	165.6	18.4
Top Size 0.50	-14.1	199.2	26.6
Top Size 0.40	-16.8	250	37
Top Size 0.30	-19.3	333	49.6
Top Size 0.20	-21.8	495	63.2
Top Size 0.10	-24.2	1007	77.6
Top Size 0.00	-26.6	N/A	N/A

If you want to use a Top Size not on the table above, you will have to extrapolate the degrees and percentages you need. Since it's a geometric progression, you can't just add a certain amount to move to the next step. So I

have provided graphs that should help.

Just draw a line from the Top Size Value you need to the red line on the graph, and then another line to the left to get an idea of the degrees or percent to use.

This is a jumping off point, and may not be the exact numbers! If the stuff in your image doesn't line up, then you need to adjust what you have.

I recommend beginning by just taking whatever the graph shows for the First Skew Degrees. Since the curve is pretty flat, you should be fairly safe with that.

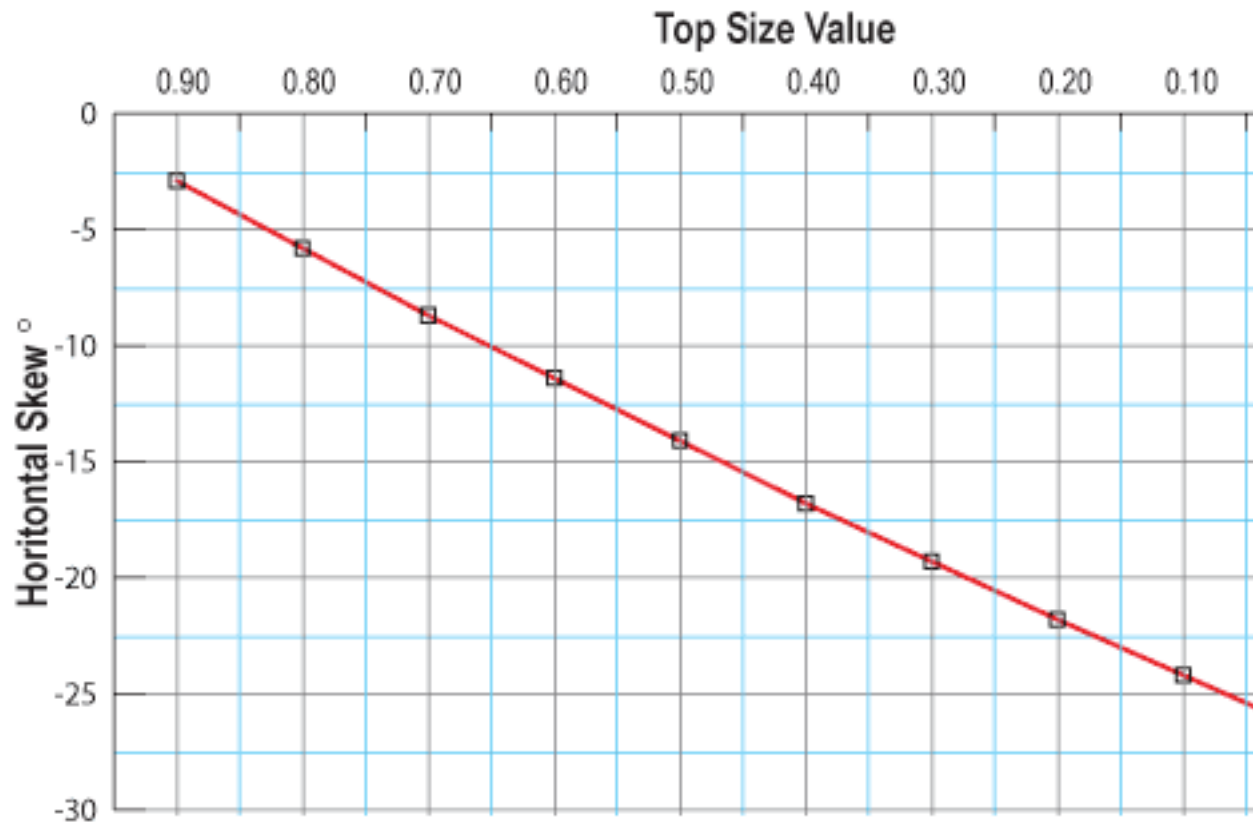
So the place you need to tweak is during the second Transformation operation. You can either use the interactive tools (difficult when dealing with small Top sizes,) or type new numbers into the text fields (can be tedious.)

In either case, I recommend changing the Width first, and if you can't get everything to line up that way, change the Skew. (This is because the Width is far more likely to be "wrong.") Before you click to accept it, **note the numbers**.

That way, if it's perfect, you'll have them to use if you want that Top Size again. And, if not, you'll at least know what you did the last time.

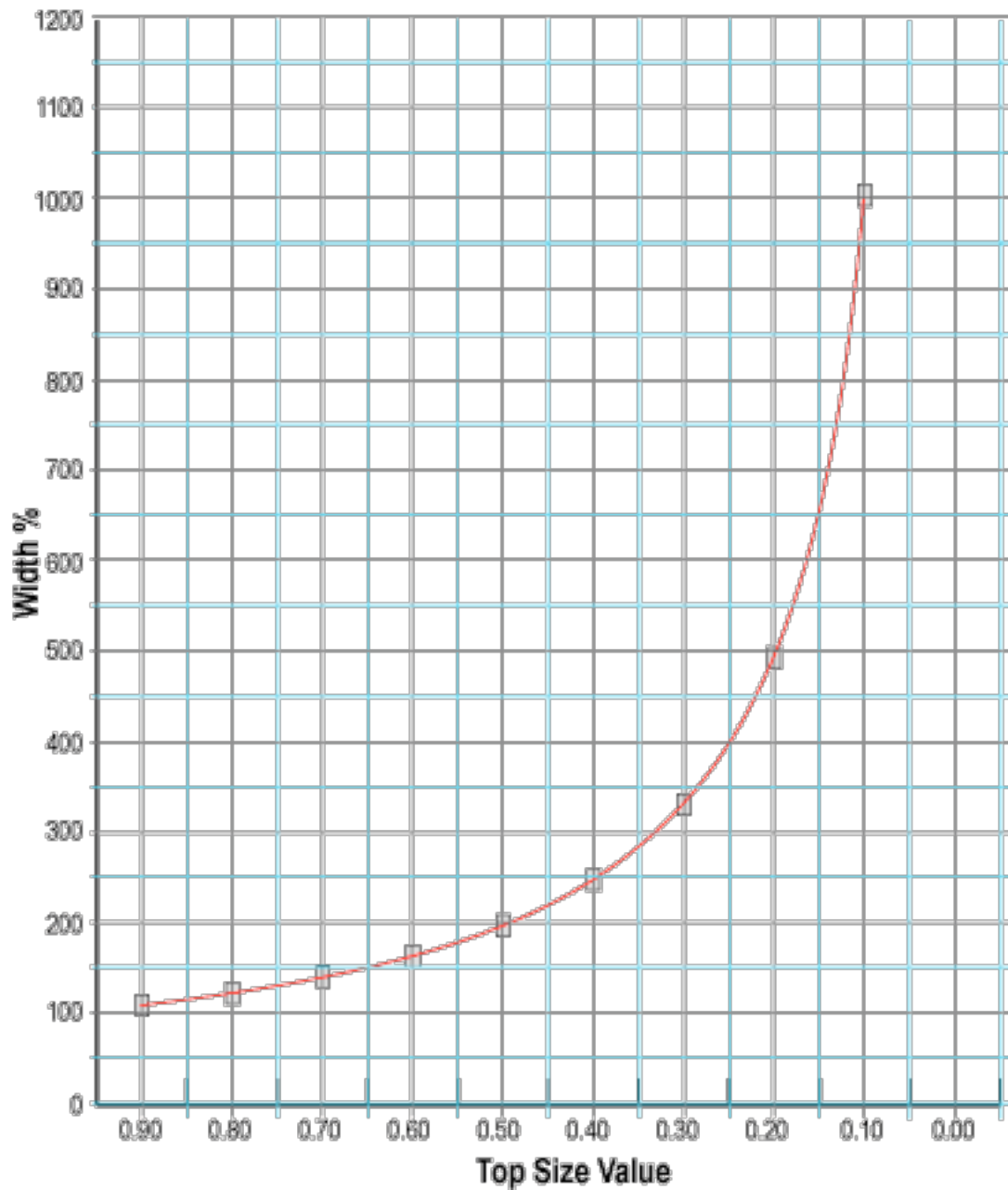
Have fun, and good luck!

Right Side Horizontal Skew in Degrees



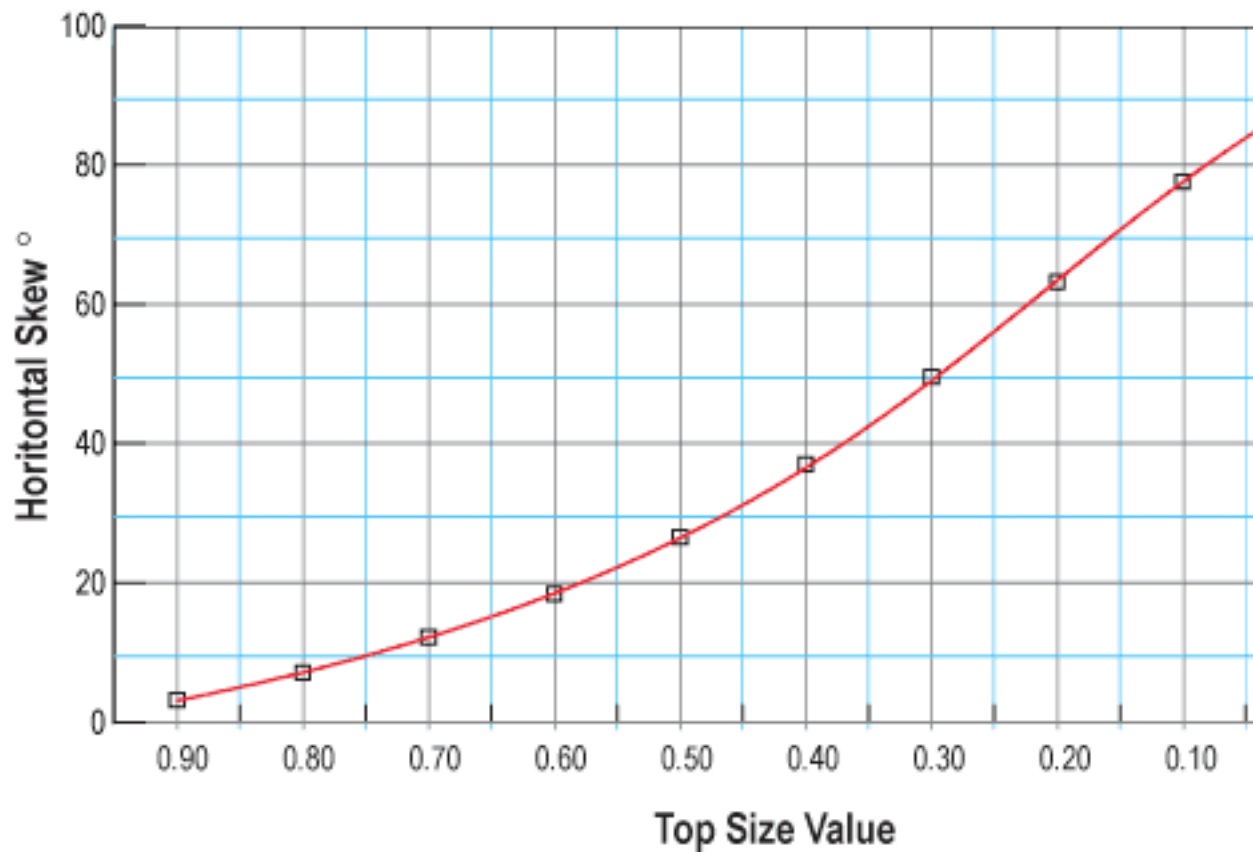
The first graph to use. Draw straight down, to the red line, and then straight to the left. For example, for a Top Size of 65, you would find a Horizontal Skew of about -10° . (Note that all Top Size values increase from right to left.)

Width Percentage Increase



The second graph, for the Width. Draw from the desired Top Size straight up to the red line, and from that point straight left to see the size needed. For example, for a Top Size of 65, you would find a Width of around 150%. (Note that all Top Size values increase from right to left.)

Left Side Horizontal Skew in Degrees



The final graph, to get the final Horizontal skew, for the left side of the image. Draw a line from the Top Size Value on the bottom, straight up to the red line, and then straight to the left to find the Skew degrees. For example, for a Top Size of 65%, you would find a Skew of around 12.5°. (Note that all Top Size values increase from right to left.)

And that's it!

I hope this is helpful. If it is, remember to help others when you have a chance.
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