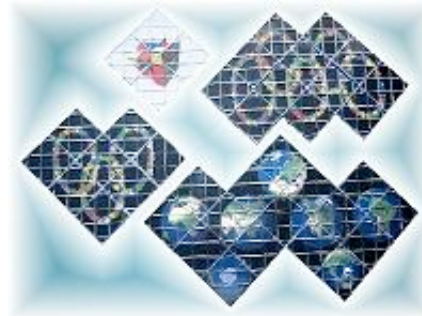


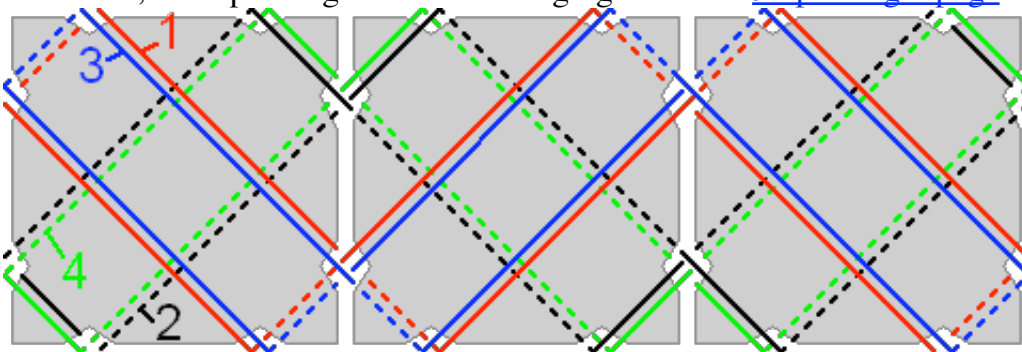


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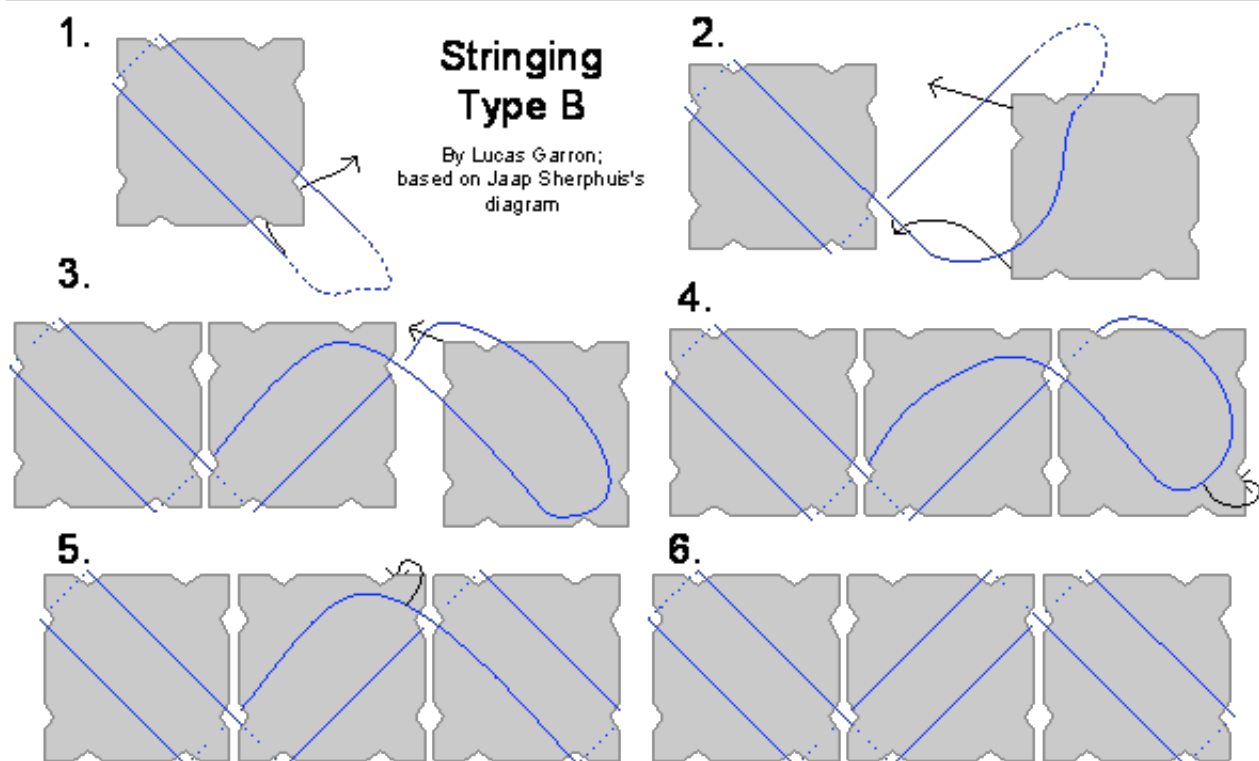
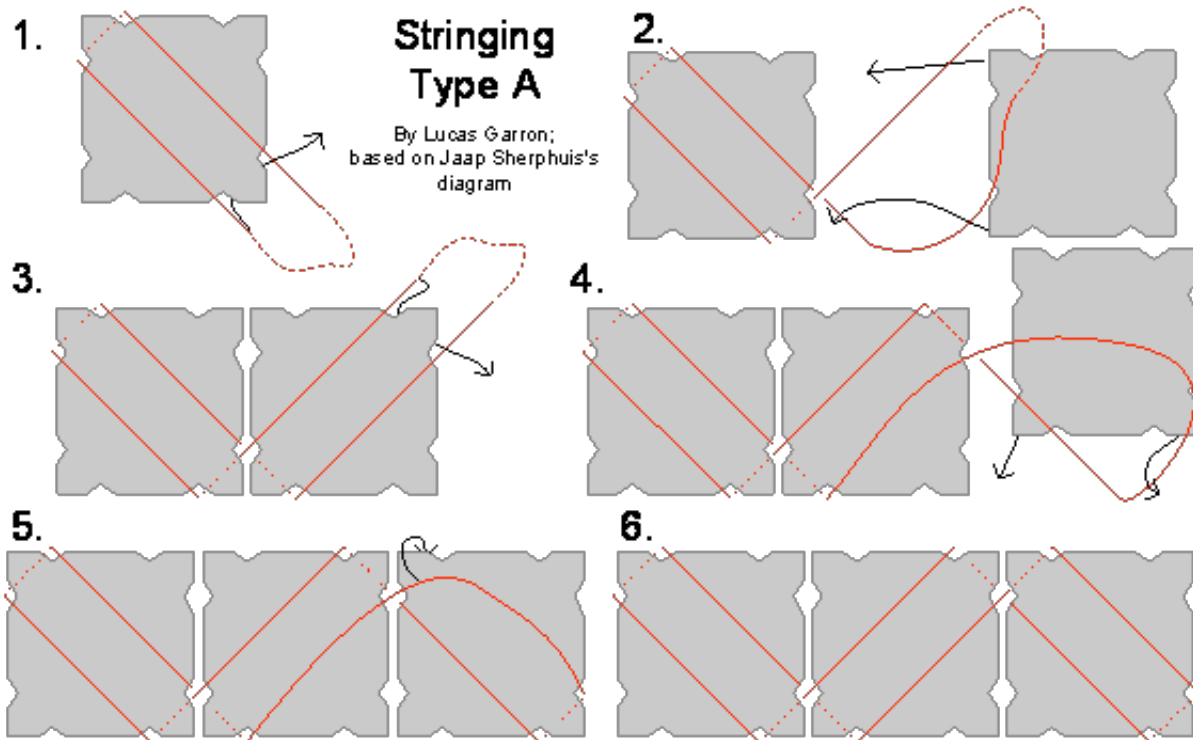
# Lucas's (Rubik's) Magic Page



For now, a simple diagram of the stringing based on [Jaap's magic page](#):



Now, how about something more explicit:



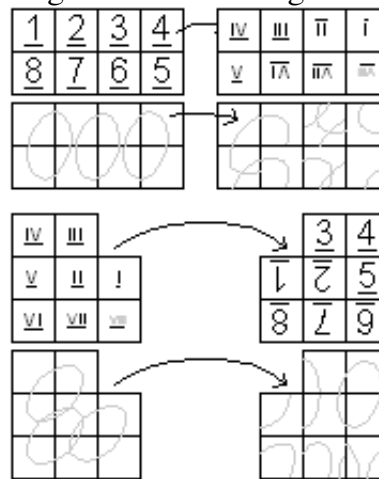
[Infinitely accurate Extended Metafile](#)

Lay out the tiles in order, rotating the bottom half of the magic around to the right of the top. Depending on the magic type and orientation, you might have to swap an end tile to the other end. You should begin with any odd tile of this cyclic ordering (1st, 3rd, 5th... but not 2nd); if you don't, the Magic may not fold into the correct pattern. The regular Magic should begin in the upper left-hand tile, the Master Magic requires shifting for the common orientation.

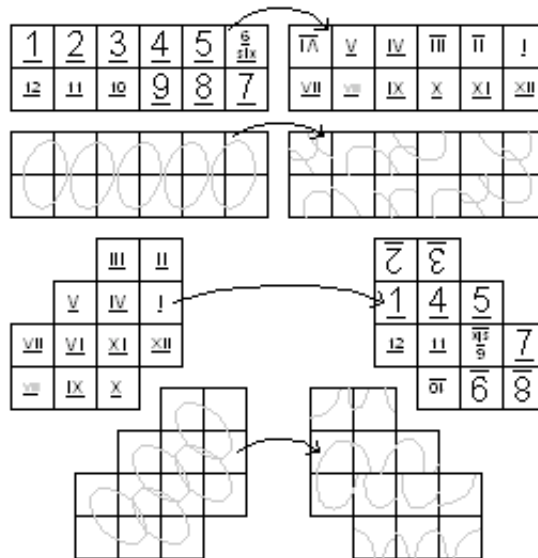
Note that to string between tiles already in place, you can simply pull the string through the small gap to the string crossing junction; all added strings go onto the outside of anything in place.

1. Take the first three tiles, and perform stringing A, You can twist the last tile to put the string into place without stretching.
2. Flip the Magic vertically, and do stringing B on the back. With a small lever (a thin, long bar slightly bent in the center would work best, but a paperclip works if you're careful), this should require little force. The tiles should already be attached firmly enough; in fact, they are theoretically enough to hold the magic together. If you are running a bit low on strings, do the first two stringings for each, and one of the next two (I use #3).
3. Flip the magic back; do stringing B.
4. Finally, flip again and perform stringing A. There should be one of each stringing begun on both sides, in different orders.
  
5. Now, flip back to the original orientation, and add two tiles to the right. Repeat 1-4, using the three right-most tiles, until you only have one tile left to place.
6. Fold the magic into a ring, and carefully join the ends, with the last tile between them, with operations 1-4. You might have to do something creative to provide a workable area for the last few leverings. Ideally, you should try to string the thread under the first three tiles'. However, in practice, it's not that harmful, and since magics break, it's better not to have a loop. If you have to replace strings, you will probably have to undo at least the rest of the magic, until the the end of you stringing. If you place the last set correctly, you can avoid strings breaking there from the double-overlap, and "catch" the undo chain from the most likely breaking place (most often the lower right).
7. Fold the ring back into a rectangle, and begin having fun :-)

Assemble a Magic with a custom pattern as follows (the numbering follows the chain of tiles); I showed how the configuration of the regular ring pattern changes.



I finally made an image for the Master Magic. Here, you will have to begin stringing with tiles 2, 3, and 4.



### Magic Renders

I used [POV-Ray](#) to render rings of Rubik's cubes (512 pixels across each 5.3 cm tile); I'll post the source code once I clean it up:



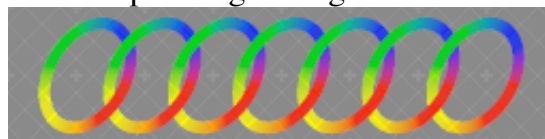
[Rubik's Magic \(rectangle\)](#)  
[Rubik's Magic \(linked\)](#)

I will eventually add diagrams for putting custom Master Magic and Super Magic patterns in correctly, but for now here are my renders (for cubers: ~~I~~ have I had examples at the Nationals):

### Master Magic Renders

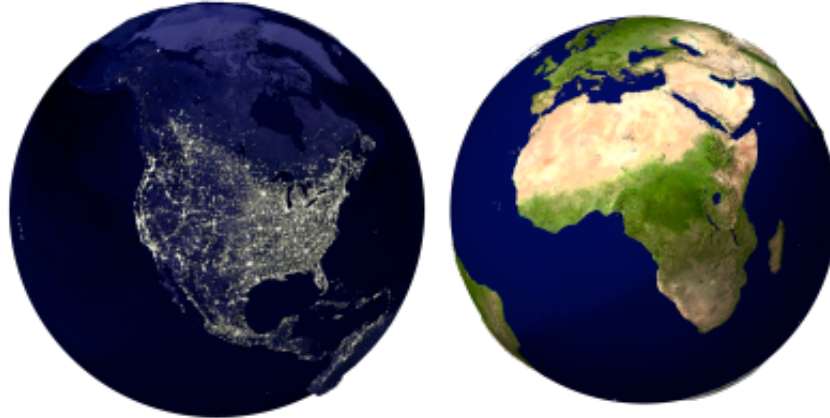
[Rubik's Master Magic \(rectangle\)](#)  
[Rubik's Master Magic \(linked\)](#)  
[Super Magic](#)

### Super Magic Ring Renders



In response to [this post](#):  
[Super Magic Rings \(Front\)](#)  
[Super Magic Rings \(Back\)](#)  
[Super Magic Rings, Lined \(front left\)](#)  
[Super Magic Rings, Lined \(front right\)](#)  
[Super Magic Rings, Lined \(back left\)](#)

[Super Magic Rings, Lined \(back right\)](#)



I created a [Magic Balls](#) Super Magic pattern; except I replaced the balls with worlds. There is one ball for each continent, plus the north and south (Antarctica) poles when solved; unfortunately, I had to leave out Australia...

The row view is composed of night images, and "solved" shows the daytime.

I used GIMP to put the pictures together, but I might post the sources I used to render the views; using POV-Ray, with the correct images, they're easy (but annoying) to create.

Oh, I should mention: I split up the images, so they should be easy to print onto standard sized paper if you give each tile a width of 5.3 cm. So, the images:

[Front \(left\)](#) - 4x2 tiles

[Front \(right\)](#) - 4x2 tiles

[Back \(upper left\)](#) - 2x3 tiles

[Back \(right\)](#) - 3x4 tiles

P.S.: Just to go neutral, I arranged the continents alphabetically from left to right.

