



Fancy Magnetic Quarto game with board

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Summary

Fully 3D Printable Quarto game set with magnets.

[Toys & Games](#) > [Board Games](#)

Tags: [magnetic](#) [openscad](#) [quarto](#) [quartopieces](#)

So,

i found the Quarto game and really liked the idea.

But i really dislike the look of that original game, it looks like children's wooden building bricks, not the aesthetics i'm looking for.

So i designed pieces with the look of classic chess pieces in mind.

I kept 3 of the original 4 Variables the same:

- Small / Tall
- With a hole on top
- Round / quadratic

And replaced the dark / light colors with another form variant: half of the pieces have ridges on the side.

Gameplay is unchanged.

since printed pieces are quite light, even if printed with 100% infill i used magnets and ball bearings to help the pieces to stay in place once put down.

What you need

Apart from some nice filament, up to 3 colors are recommended, you'll need 16 long round magnets and 16 **steel** ball bearings.

I used d=5mm ball bearings and d=5, h=10mm cylindrical magnets.

You can use slightly different sizes and just change variables but you need to render the stl's with openscad by your self.

How to slice

Pieces

Sliced in 0.2mm layerheight, 10% infill, pause at 10.4mm /52 layer to inset magnets.

It's advised to insert the magnets in the same orientation.

While it doesn't matter in which direction they are while placed on board, having them in the same direction makes them repel each other when standing on the table

Board

I sliced top to bottom, to have the nice first layer on top, 0.2mm layer height 10% infill.

color change at 1.2mm, play around with it, depending on the used colors a bit less or more looks better, i think colorchange should leave a colored groove on top.

pause at 6.4 mm to inset the balls.

What about all these files?!

there are 3 folders:

source:

That's the source file i'm working with.

exported_source:


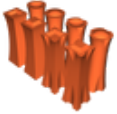
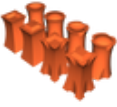
These are openscad files that are exported using <https://github.com/schorsch3000/openscad-multi-exporter>, one for every stl

stl:

That's what you properly looking for.

- board: that's the board and test pieces. board4 is what you need, board1 ist just to test ball inserting, board2 is to test grove printing.
- all_pieces: there is one single stl with all pieces on a build plate
- pieces_by_size: basically the same as all_pieces, exept one file for large and one for small files. That's usefull when using color-changing filament to keep the change-rate constant
- single_pieces: there are 16 stl's, one for every piece, if you like to print piece by piece or replacements.

Model files

source		1 file
	quarto_game.scad	
stl		22 files
	quarto_game-export-alltallpieces.stl	
	quarto_game-export-allsmallpieces.stl	



quarto_game-export-allpieces.stl



quarto_game-export-board4.stl



quarto_game-export-board1.stl



quarto_game-export-board2.stl



quarto_game-export-singleprint7.stl



quarto_game-export-singleprint4.stl



quarto_game-export-singleprint1.stl



quarto_game-export-singleprintf.stl



quarto_game-export-singleprint0.stl



quarto_game-export-singleprintc.stl



quarto_game-export-singleprintb.stl



quarto_game-export-singleprint2.stl



quarto_game-export-singleprint5.stl



quarto_game-export-singleprint8.stl



quarto_game-export-singleprinte.stl



quarto_game-export-singleprintd.stl



quarto_game-export-singleprint3.stl



quarto_game-export-singleprint6.stl



quarto_game-export-singleprint9.stl

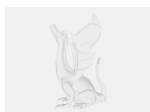


quarto_game-export-singleprinta.stl

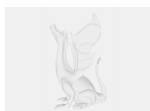


exported_source

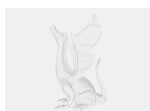
22 files



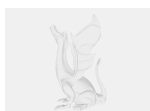
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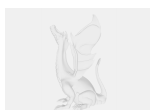
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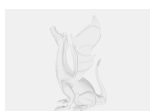
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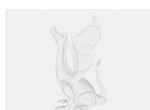
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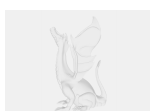
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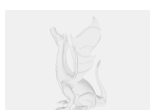
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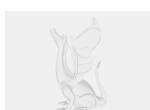
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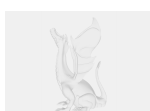
quarto_game-export-singleprint9.scad



quarto_game-export-singleprint7.scad



quarto_game-export-singleprint4.scad



quarto_game-export-singleprint6.scad



quarto_game-export-singleprint2.scad



quarto_game-export-board1.scad



quarto_game-export-singleprint0.scad



quarto_game-export-singleprintb.scad



quarto_game-export-board2.scad



quarto_game-export-singleprintf.scad



quarto_game-export-singleprinta.scad



quarto_game-export-allpieces.scad



quarto_game-export-singleprint1.scad



quarto_game-export-singleprinte.scad



quarto_game-export-singleprintc.scad

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