

Not Another Catan Board
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INTRODUCTION

Thank you for downloading my design, I hope it will work for you well. As this is a rather large and complex project, please read the rest of this file carefully so that you have all possible information in advance. You can also refer to the Blender model and a few pictures I prepared as a part of the package.

These files are provided free of charge (see licence below) but if you find them useful or interesting you can send me few bucks for a coffee via <https://www.paypal.com/paypalme/TalsiSunstorm>

Although I physically made all the pieces, I have been working on this in my spare time for several months and I made a lot of errors and revisions during the development. There might be some inconsistencies and errors in the files. If you find something, please let me know.

Any tips, notes, comments and lessons are welcomed. Also, sorry for my English.

Thank you

LICENCE

All content in this package, including SVG files, images, models and documents, are distributed under

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IMPORTANT NOTES

The files do not include cutting tolerance, please add offset according to your machine's specifications! This is extremely important as you need precise cuts so that the board pieces align correctly.

You will need paper cards and two dice for the game. All my designs are based on Catan: Big Box (KOSMOS, 2016, 1st edition, Art. Nr. 693725) of the game with 6 players in mind. Please see “EDITION DETAILS” for more information.

The elements of my design do not include beginner friendly pointers (dots under numbers, building cost cards, description for +2 VP tokens, etc.) and it is generally presumed that you know the rules of the game. If you play with someone who does not know the rules by memory, please take your time and explain everything in detail

Always be aware of the magnet's orientation.

Having several, different sized, woodworking clamps is highly recommended.

In the photos and the video, I used a 3:1 harbor piece instead of a second sheep harbor piece. I have made a few extra pieces during the process and when I was going to meet the photographer I accidentally took the wrong piece. Since I already had a reservation for the common room and the photographer had limited time I decided to proceed with the shooting with the wrong piece. The sheep harbor (there are 2 of these in 6 player expansion) is shown in the pictures and the video therefore all materials/designs are representative in spite of this mistake. Also, there are two villages placed against the rules - totally missed this. Sorry.

SOFTWARE COMPATIBILITY

The files are prepared in Inkscape v1.4.2 (<https://inkscape.org>) and tested with Lightburn 1.7.08

(<https://lightburnsoftware.com/>). The model files are made with Blender v4.2

(<https://www.blender.org>).

BEFORE YOU START

For this project, you will need a 3 mm thick material, a 1 mm thick material (plywood strongly recommended) and 178 neodymium magnets (150 for the game with boxes for pieces and 28 for the large box to store everything) with dimensions of 3x3x3 mm. They are quite cheap and you can get them almost anywhere.

The 1mm layer is there mainly to cover the magnets. If you do not mind magnets showing, you can make this without 1 mm material as well but you have to be a bit creative with the source files.

For coloring of final version of the resource tiles (seen in pictures) I went with very watered down acrylic paint because I have experience with this type of paint and I wanted to preserve plywood texture as much as possible. I suspect that watercolor or food dyes would work in similar fashion.

For best contrast, I strongly recommend using borax to make engraved lines as dark as possible. But beware that this will make plywood more absorbent so paint will smudge a lot more.

The container for cards is designed to hold cards WITHOUT protective sleeves!

EDITION DETAILS

As I mentioned above, my design is based on Catan: Big Box (KOSMOS, 2016, 1st edition, Art. Nr. 693725). Although this edition comes with extra expansions/scenarios, I am using pieces required for the base game with 6 players only.

There are some variations in card sizes between different editions of the game. For example cards in my edition are 44x68mm, but in the base game and expansion cards are (supposedly, don't have access to verify) 54x80mm. Other editions might have different sizes as well, not to mention the potential issue with different card thickness. Though this is not an issue for the game itself, the box is another matter.

In the files, I have included alternative versions (see "EXTRA PIECES") of some designs that should accommodate cards with the dimension of 54x80mm assuming that the thickness of the cards is the same. I did not test cut these, but according to the digital model, they should work. Make sure everything fits before making any commitment to the build.

If you have cards larger than this, you will have to modify the files yourself or design your own container and insert, possibly even the box itself.

CUTTING GAME PIECES

The pieces are divided into two sections:

- 1) 3mm pieces
- 2) 1mm pieces

Please always be careful what piece you are cutting and from which material.

Since I was designing on the fly, I have separated cutting and engraving of board pieces into different tasks. Although you could engrave and cut the board pieces at the same time, I would not recommend it. See "EXTRA PIECES" for more information. Other materials are for engraving and cutting at the same time as they are fast to remake if something goes wrong.

The ship model is cosmetic only. If you want to save yourself some work/materials you do not necessarily have to make these. They look cool thou. :-)

I set it up so that the engraving for number tokens is on 3mm material. The files are however swappable so you can engrave on 1mm material if you want to. If your 1 material has a different color/texture, it can make number tokens visually stand out from the rest of the board.

Number of times you need to cut certain piece is indicated in the file name (number with "x"), but here is recap:

Game:

- 3mm pieces:

Board Piece Base - 28 times

Board Piece Base_Desert - 2 times

Side Long - 6 times

Side Short - 4 times

Player_City - 24 times (4 per player)

Player_Village - 30 times (5 per player)

Player_Road - 90 times (15 per player)

Numbers - 1 time (red cut, black engrave)

Harbor - 11 times

Numbers - 1 time (red cut, black engrave)

Robber Base - 1 time

Robber - 1 time (red cut, black engrave on both sides)

Knight trophy - 1 time (red cut, black engrave)

Roads trophy - 1 time (red cut, black engrave)

- 1mm pieces:

Board Piece Base_1mm - 30 times

Side Long_1mm - 6 times

Side Short_1mm - 4 times

Wood_1mm - 1 time (red cut, black engrave)
Brick_1mm - 1 time (red cut, black engrave)
Sheep_1mm - 2 times (red cut, black engrave)
Grain_1mm - 1 time (red cut, black engrave)
Ore_1mm - 1 time (red cut, black engrave)
3to1_1mm - 5 times (red cut, black engrave)
City, Village, Numbers_1mm - 82 times
Road_1mm - 90 times
Ship_1mm - 11 times (optional)
Robber Base_1mm - 1 time

Containers (all parts 3mm):

Player Pieces - 6 times

Cards - 2 times

Ships - 1 time (optional, but highly recommended, it keeps long side pieces from moving too much)

Tokens - 1 time

Storage Box - 1 time (optional, only for small cards)

Box (all parts 3mm):

Side_Short_Holder - 2 times

Insert - 1 time

Box - 1 time (red cut, black engrave)

ENGRAVING AND ASSEMBLY

As I mentioned above, I recommend using borax to get nice black lines but it will depend on the material you will use. But, again, keep in mind that using borax will make plywood more absorbent so paint will smudge a lot more.

Engravings for resource tiles have a small overlap to ensure edge to edge engraving (red line is tile's border). What I did is: tightly secured leftover 1mm material to my honeycomb bed, cut out the shape of the tile, locked the position of this cutout in Lightburn and then I used this as a fixed "slot" for easy and quick engraving. There are other ways to do it, but this worked great for me. You will need to do:

Wood - 6 times
Brick - 5 times
Sheep - 6 times
Grain - 6 times
Ore - 5 times
Desert - 2 times

For the side pieces: all holes for magnets are 3,2x3,2mm. This will cause magnets to be very loose in the holes. This is on purpose so as not to bend thin pieces out of shape. All magnet

holes are designed to be hidden so glue 3mm and 1mm parts together first and then glue in the magnets.

The assembly itself is very straightforward, just be precise so that all pieces fit together nicely. Also be aware that for some pieces the 1mm material is on top and for some it is on bottom. I have enclosed a simple diagram of how pieces fit together.

For number tokens, the 1mm bottom layer is optional, but it helps a lot with clarity of the board and taking tokens out of sockets.

The “Side_Short_Holder” is just to better fasten the short sides inside the insert. It connects two short sides together in a fixed distance so that the entire thing is in the same position as resource tiles. It is meant to go on top of two stacks of resource tiles; or any other position except for bottom.

The insert is made with 1mm (0,5mm on each side of the axis) of free space on all axes, both on the inside and outside. Meaning there will be a slight wiggle room when putting the insert inside the box and also when putting containers inside the insert. This will make manipulation of the parts easier but it will also rattle more. If you want to make it tighter or looser, edit the files accordingly. Also, it is not “mathematically” correct. I made adjustments in a few places to better reflect real world parts I made, again your dimensions might vary. You might need to make slight adjustments yourself depending on material you will use.

The main box is simple to make. Just be careful what parts you glue together. Some are meant to, some are not. I have enclosed a model and a few pictures of the parts so that you know which pieces to glue together. When done, you should have a box, a lid and two “locks”. Make basic structure first and glue in the magnets. At this point, if you glue the magnets in the wrong way, you can remove them (carefully) with pliers. Once everything fits, glue in decorative pieces.

In the lid and in the side parts of the box, there are holes for the magnets. The more magnets you use, the more secured the lid will be but it will also be more difficult to remove. The lid is held in place with locks on the sides but I would still suggest putting magnets at least in the middle.

The Storage Box is optional and will fit only if you have small cards (see EDITION DETAILS section). When I was done with the placement of parts of the game, I was left with empty space so I made a small box for spare parts. I have occasional issues with magnets falling out, so I have small super glue and a few spare magnets stored in here in case I need to make on-the-go repairs and a few extra pieces for the game.

EXTRA PIECES

Here are a few pieces that are optional or alternative to make:

- 54x80mm cards (folder)

Use these files if you have cards with the dimension of 54x80mm (see EDITION DETAILS section). You will need to make "Cards" 2 times (two containers for cards) and "Insert" 1 time (3 pieces, see diagram/model). These are replacement of corresponding pieces in main files.

- Board piece base_cut and engrave

When cutting "Board Piece Base" you do not have to cut all lines. By cutting red lines and only engraving blue lines and black image, you can cut down on total work time (laser and gluing). However I would still recommend not to use this because:

a) By separating cutting and engraving you lower the risk of making the entire piece again if anything goes wrong, especially when using plywood - sometimes not cutting all the way through or burning some areas more than others, etc.

b) You will have a much easier time painting the pieces.

- Player pieces variants

In this file you can find all variants of player pieces I have created in the case you want to mix it up a bit. Not all pieces are used in the final design, and for clarity I would suggest keeping it simple and/or consistent. Please keep in mind that I did not test cut these pieces at all.

- Ship variants

The initial ship model I wanted to make did not work (it had too many details and not enough space) so I had to make a new, simpler one. As I was indecisive about new visuals for the ship, I have made a few variants to see which is better. If you find the one I chose in the end not to your liking, you can make one of these alternatives. The one I chose is the biggest one so any other models should fit in the container as well but no promises.

- Harbor_No magnet hole

This piece does not have the magnet hole for ship alignment. If you are not making the ships, use this piece instead.

- Precise base

I had some trouble inserting tiny city and village pieces into precisely cut holes, so the holes in "Player_City" and "Player_Village" are actually 3,1x3,1mm to make inserting and gluing easier. If you prefer, you can use this part, which has 3x3mm holes, instead.

- Harbors with arrows+thin sea

Alternative harbor pieces with small arrows next to slots for towns/villages to better illustrate relevant slots. These pieces also have thinner engraving lines for the sea if you prefer.

- Sides_2 magnets (3mm + 1mm)

For extra connection strength, these pieces use two magnets. From my testing one magnet seemed fine. Remember to get extra 20 magnets if you use these. I designed these just in case but I did not actually laser cut them.

- Board Piece Base_1mm_Offset

This piece has a 0,2mm offset inwards. I misglued a few pieces by a few fractions of a millimetre resulting in misalignment. Nothing a quick sanding down won't fix but, as this part is hidden, it really does not matter much if it is smaller. Use this for easier glueing.

- Flat Robber

Small and flat token for robber if you prefer. Don't forget the 1mm bottom base.

FINAL NOTES, THOUGHTS AND FUN FACTS (in not particular order)

AI disclaimer: as I can't draw I used AI to generate images for engravings. These images served only as very rough templates and I modified them heavily. Fixing errors, entirely redrawing some parts and modifying for laser engraving was done all by me. These images are neither integral nor essential part of the design and the source files are made in a way that you can easily replace them with your own creation.

If you do not have the game itself, you can buy a card replacement pack (either official one, or custom on Etsy for example) to save money. Dice you can find anywhere and rulebooks can be found here: <https://www.catan.com/understand-catan/game-rules>

If you have a 3D printed, you can download models of player pieces for 3d printing at my Thingiverse profile page: <https://www.thingiverse.com/talsisunstorm/designs>

Setting up a board is a bit finicky, sorry about that. I originally had a slightly different design in mind, but it did not work out so I had to make some changes. Make the border first then put tiles inside. Be very precise and everything should clip together nicely.

If engraving the resource tiles (wood, brick, ore, grain, sheel, desert) does not go well, you can use the back side of the same piece for another try. The back side of the piece will be hidden either way.

One of the city's piece in pieces variants is modeled upon the existing castle. Can you figure which one?

If you can paint, you can skip the engraving part and paint your own tiles. Or keep it simple and paint tiles with flat colors only. Or don't use colors at all. It is entirely up to you!

If you want to have some additional variants, don't glue the main resource tile (the hexagon with engraved image on it) to the rest of the pieces and paint one side of the tile one way

and the other side in a different way. Now you can simply flip the pieces to have different themes on your board. Maybe something futuristic, fantasy setting, more of an eastern style, halloween or christmas theme.... be creative!

I made a tiny mistake which I found extremely late in the process of making this. The mistake is corrected in final files but my board has a miniscule misalignment (like 0,4mm) of certain parts as I really did not want to remake all relevant pieces at that point.

In the insert, there is a free space if you need to print out and store the rules as shown in the pictures and the video.

CONTACT

Project website: <https://www.thingiverse.com/thing:7204267>

Also available at: <https://talsisunstorm.itch.io/not-another-catan-board>

Preferred line of communication (in descending order):

1. Comment project website
2. Reddit: <https://www.reddit.com/user/TalsiSunstorm>
3. Discord: TalsiSunstorm#2999
4. Only as a last resort: talsisunstorm@gmail.com