

ConvivialCNC Assembly Guide

This is an step-by-step assembly guide for your ConvivialCNC project. ConvivialCNC is a piece of Open Source Hardware published under CC BY-SA, which means you are allowed to remix, adapt, and build upon this work even for commercial purposes, as long as you share your work under the same conditions and give credit to the author.

This guide should be used together with the instructions from Maker Made, which give a deeper insight into the CNC assembly itself. Furthermore, this guide only explains the crucial steps of building your ConvivialCNC.

You should always carry out your own full health and safety risk assessment, as a minimum operators should wear full Personal Protective Equipment (PPE), including eye protection, ear protection, dust masks and gloves. Also keep in mind local road traffic law, if you operate your ConvivialCNC on a trailer or similar.



note: the production files have been updated after making this guide. However, the fundamental steps remain the same - so please don't be confused if something looks a little different.

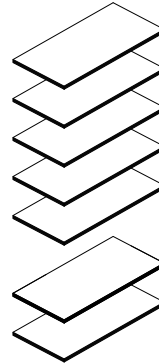
STEP 1: Material

5x

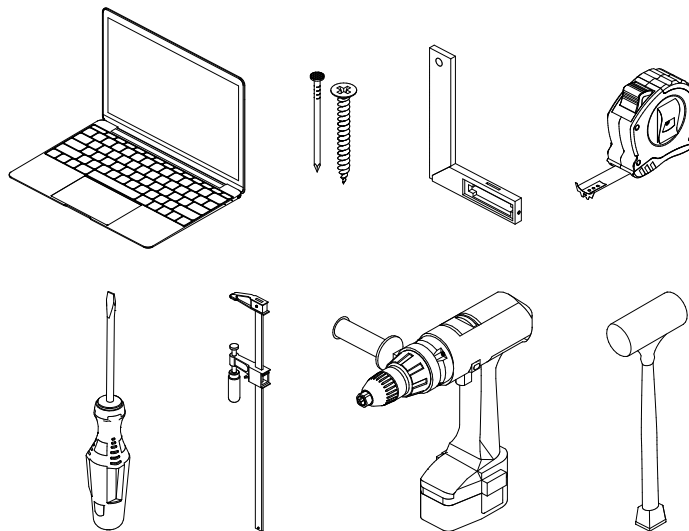
Plywood, 2440 x 1220 x 18 mm

2x

Wasteboard: 2440 x 1220 x 10 mm



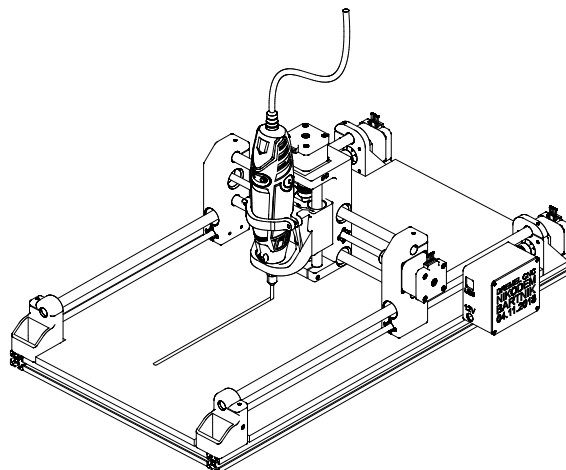
STEP 2: Tools needed



STEP 3: Mill parts with CNC

optional: sanding, sealing, painting

5x



Needed:
CNC-machine + Computer
or: local FabLab
basic wood tools
5x plywood 2440x1220x18mm

STEP 4: A-Frame assembly

2x frame end
2x frame middle

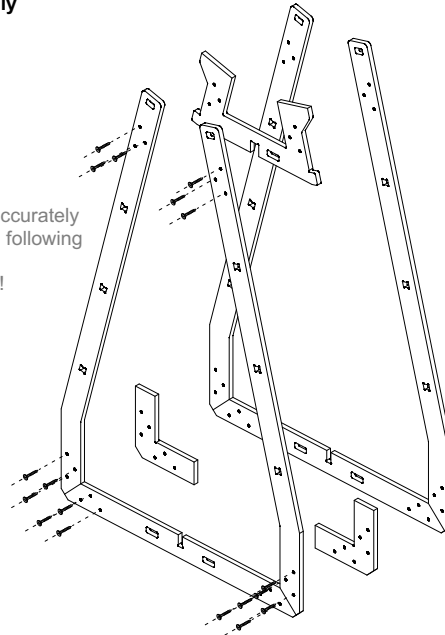
1-2



4x

note: assemble 1st frame accurately
to use it as template for the following

all frames have to be equal!

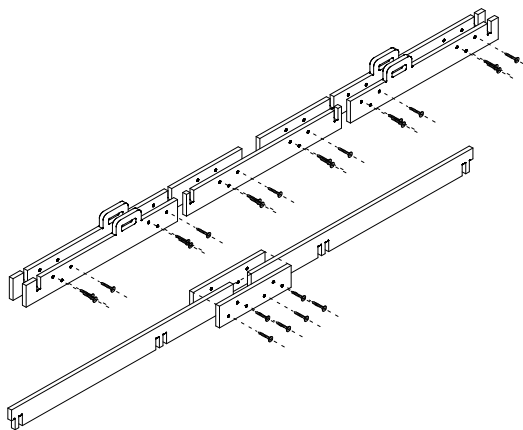


Needed:
screwdriver
woodscrews
clamps
template recommended

STEP 5: Connector assembly

1x top connector parts
1x bottom connector parts

1-2



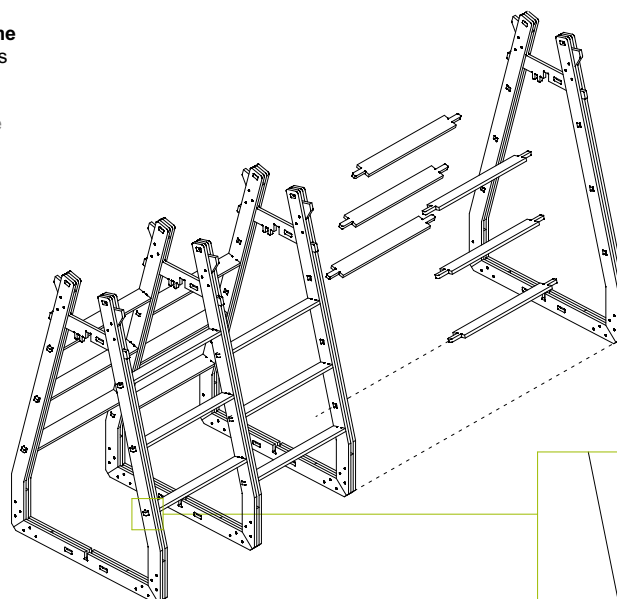
Needed:
screwdriver
woodscrews
clamps
template recommended

STEP 6: Basic frame

18x short connectors
4x A-Frame

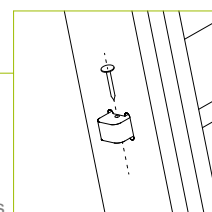
optional: build frame
directly on a trailer

2



Needed:
(wooden) hammer
nails

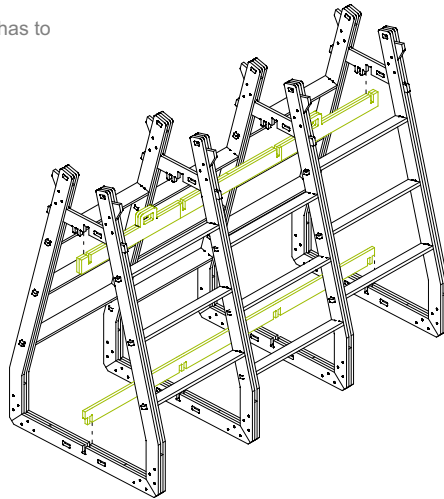
optional: secure
short connectors



STEP 7: Connectors to frame

1x top connector
1x bottom connector

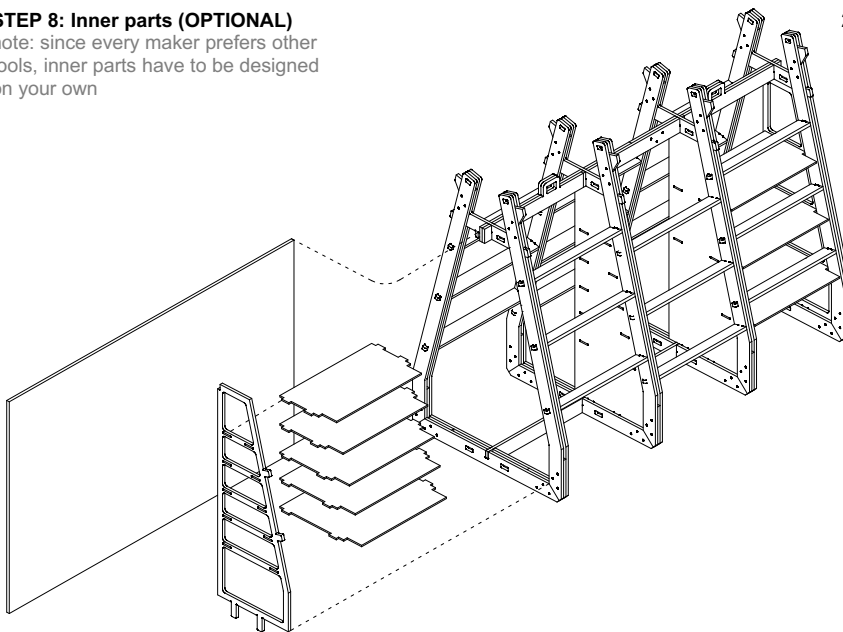
note: top connector has to be screwed in



Needed:
screwdriver
woodscrews

STEP 8: Inner parts (OPTIONAL)

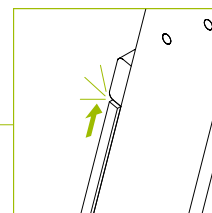
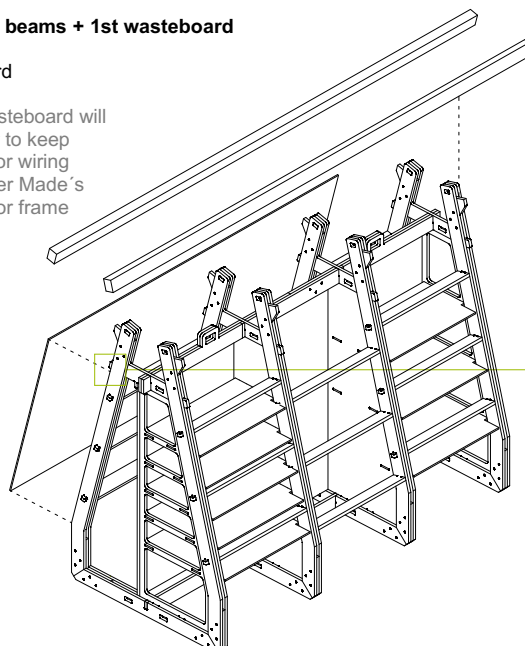
note: since every maker prefers other tools, inner parts have to be designed on your own



STEP 9: Top beams + 1st wasteboard

2x top beam
1x wasteboard

note: 2nd wasteboard will be done later to keep reachability for wiring + watch Maker Made's instructions for frame assembly

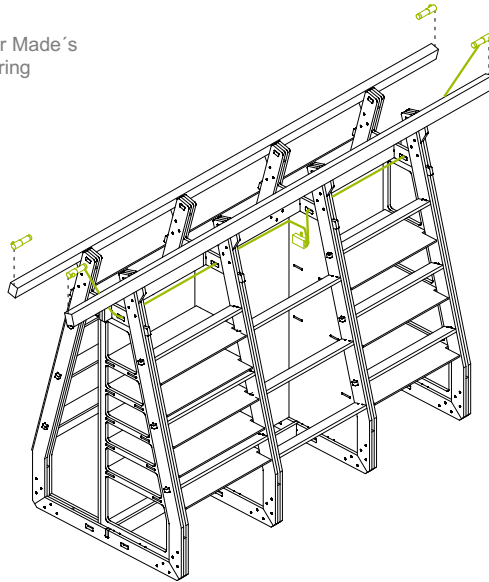


Needed:
screwdriver
wood screws
square

STEP 10: Arduino + motor wiring
1x Maker Made electric kit

1-2 

note: watch Maker Made's instructions for wiring

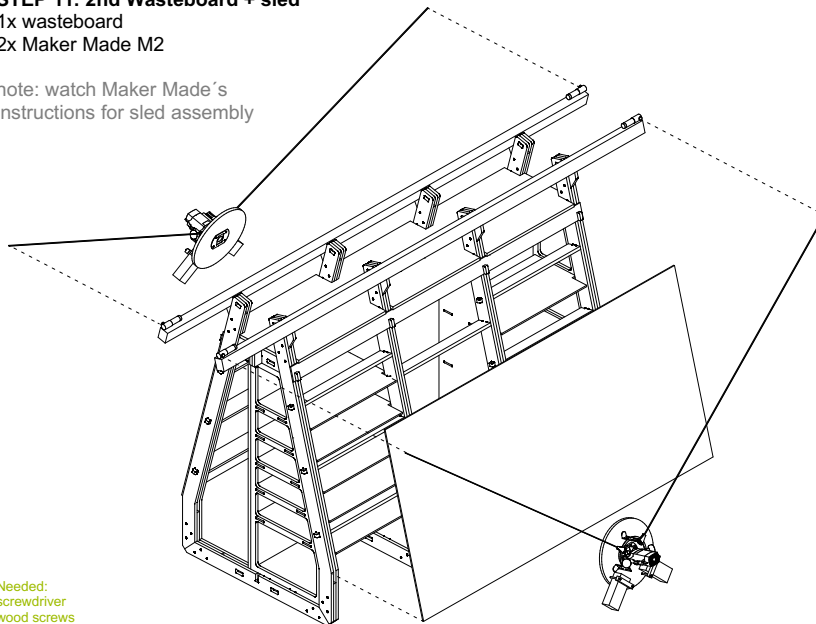


Needed:
screwdriver

STEP 11: 2nd Wasteboard + sled
1x wasteboard
2x Maker Made M2

2 

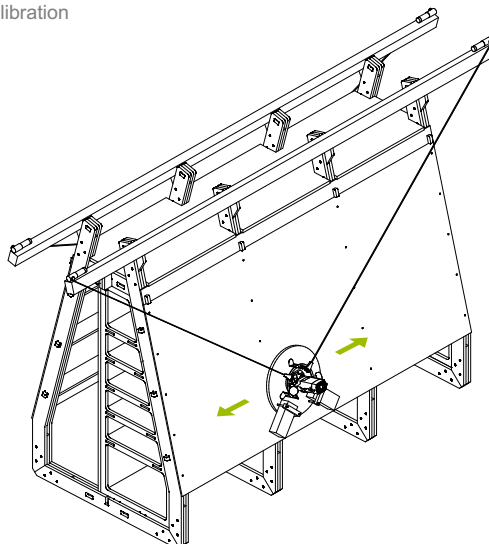
note: watch Maker Made's instructions for sled assembly



Needed:
screwdriver
wood screws

STEP 12: Finished! + Calibration
1x Makerverse

note: watch Maker Made's instructions for calibration



Needed:
Laptop