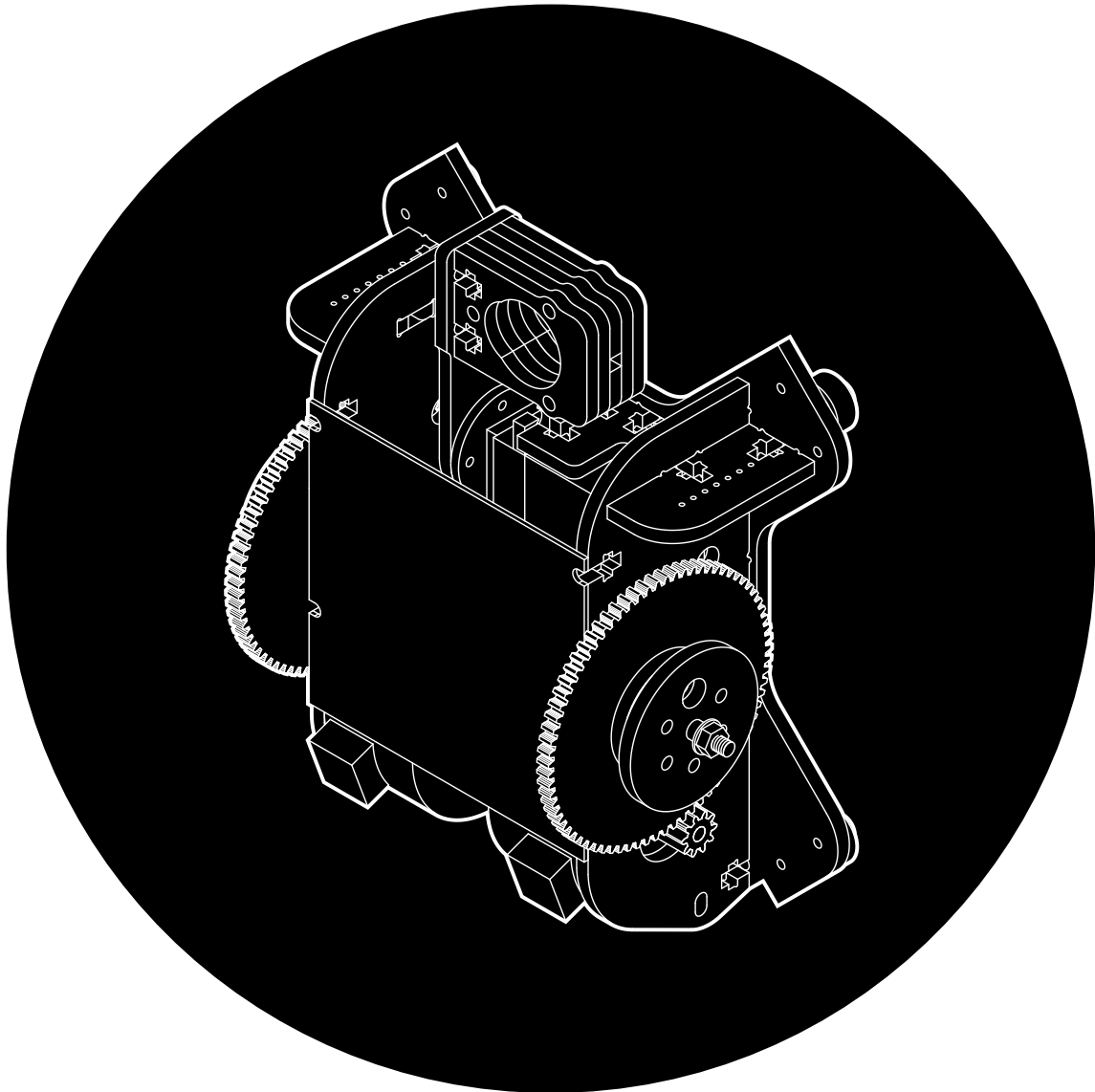


beta version

openWall



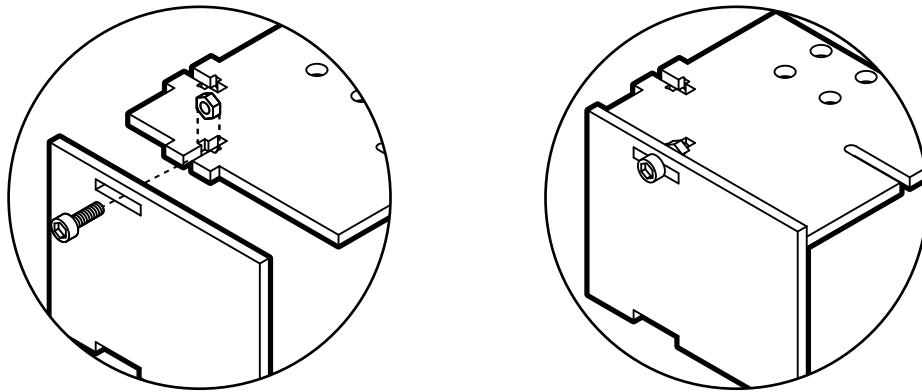
Vertical plotter system

Special thanks to: Officine Arduino, Fablab Torino, Franco Magni, Claudio Indellicati

Designed by Pietro Leoni, CARLORATTIASSOCIATI | Walter Nicolino & Carlo Ratti

CONNECTIONS AND COMPONENTS

beta version



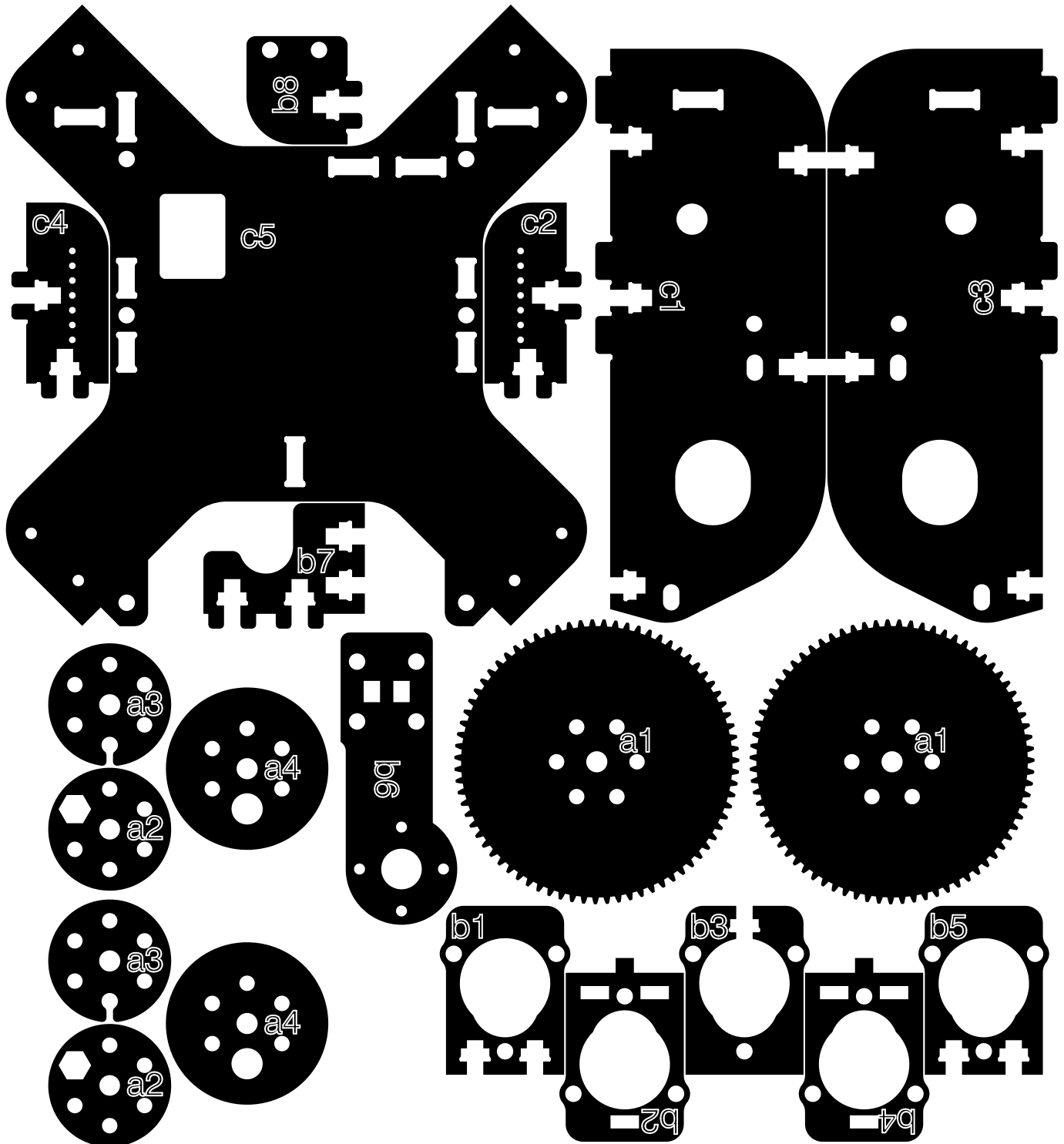
Many of the connections in this model are based on T joints, this allows to easily remove and replace individual parts.

#PARTS LIST

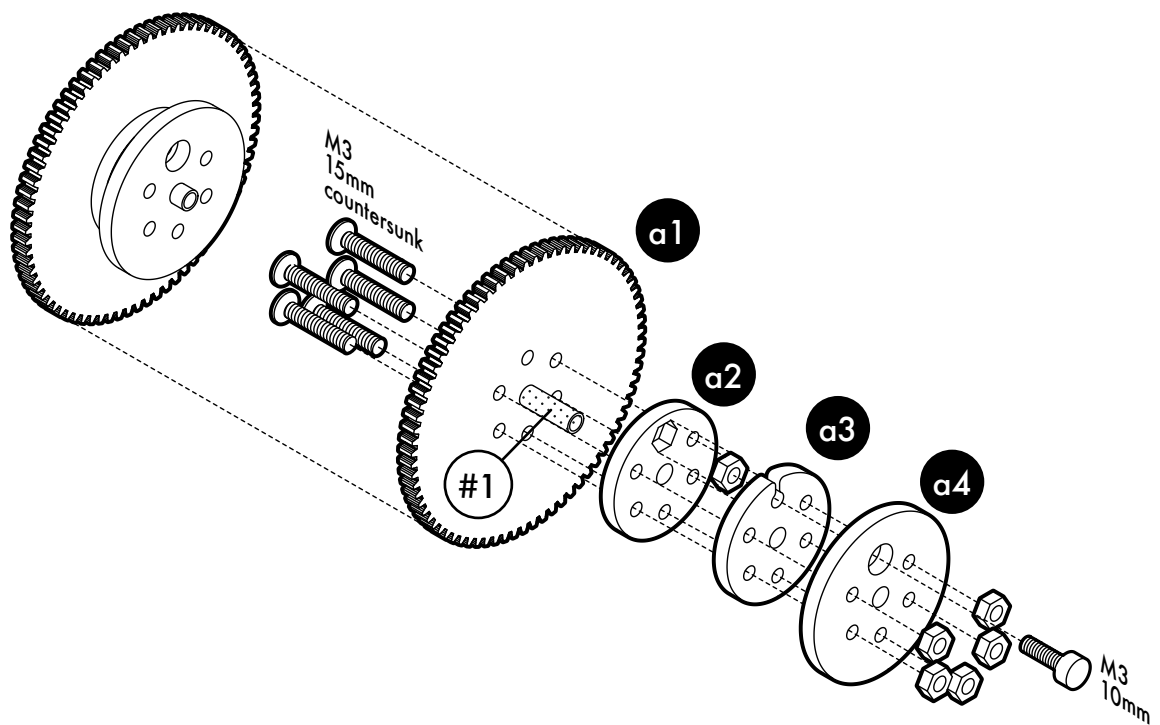
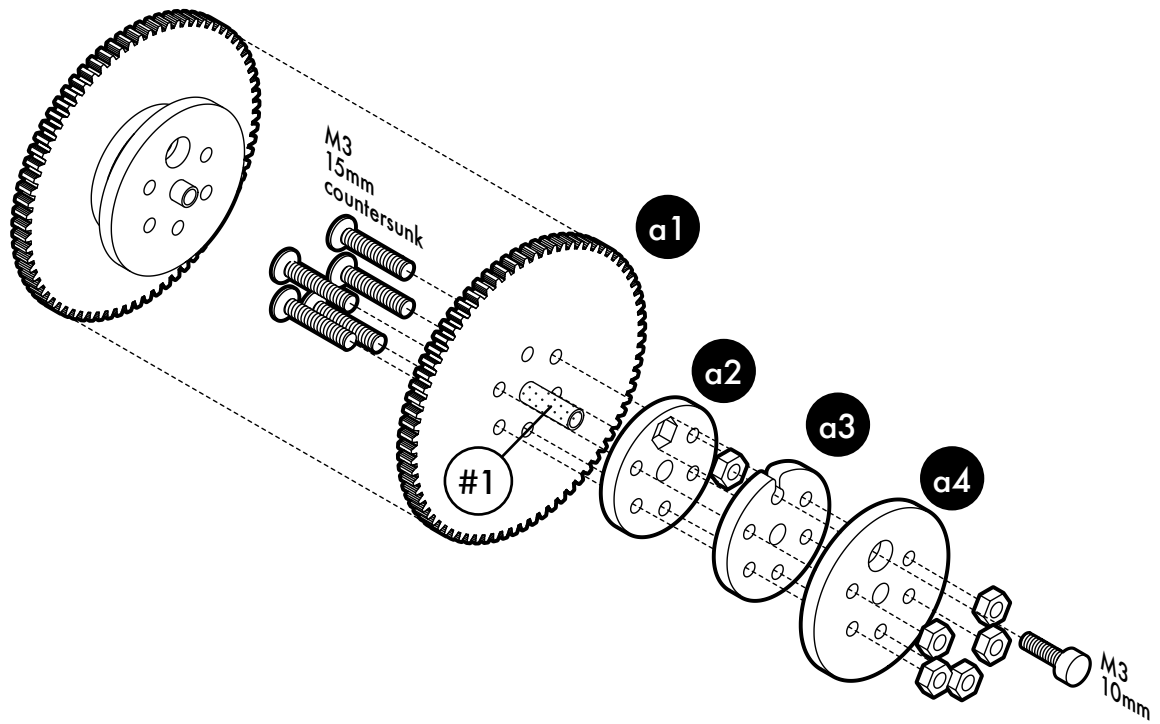
- #1 Cylindrical profile. 3,1mm internal diameter, 4mm outer diameter. Length 18mm.
 - #2 Hitec Spline Metal Servo Horn HMSH-02.
 - #3 Hitech standard servo, able to operate at 5V.
 - #4 Phidgets 3314_0 - 950g-cm Unipolar Stepper.
 - #5 Seed Studio general shaft joint -p3.
 - #6 Pololu ball caster with 3/8" metal ball.
 - #7 3mm steel bar.
 - #8 0,1mm fishing wire.
-

ASSEMBLY

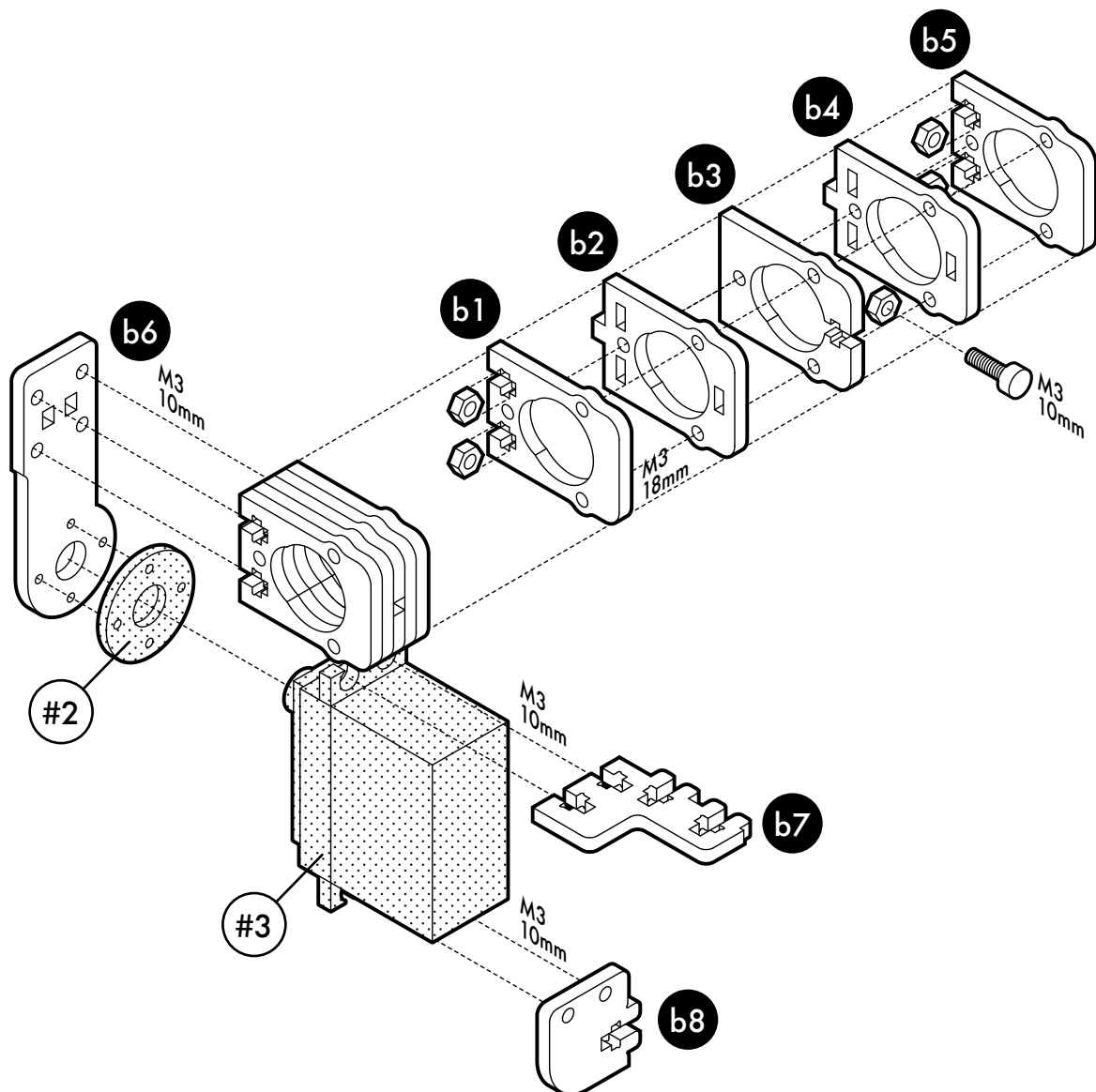
Material thickness for lasercut components: 3mm.



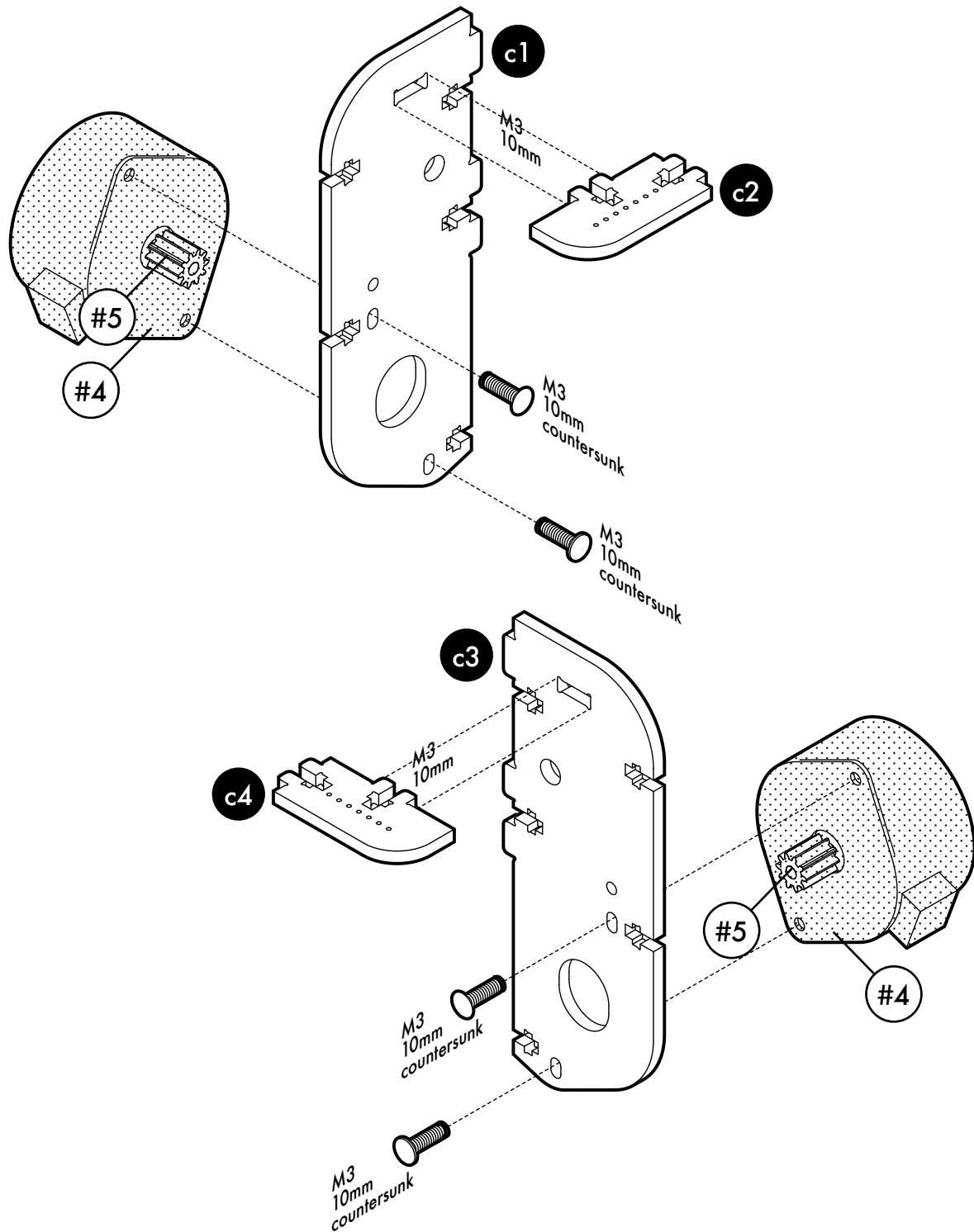
COILS



SERVO AND PEN HOLDER

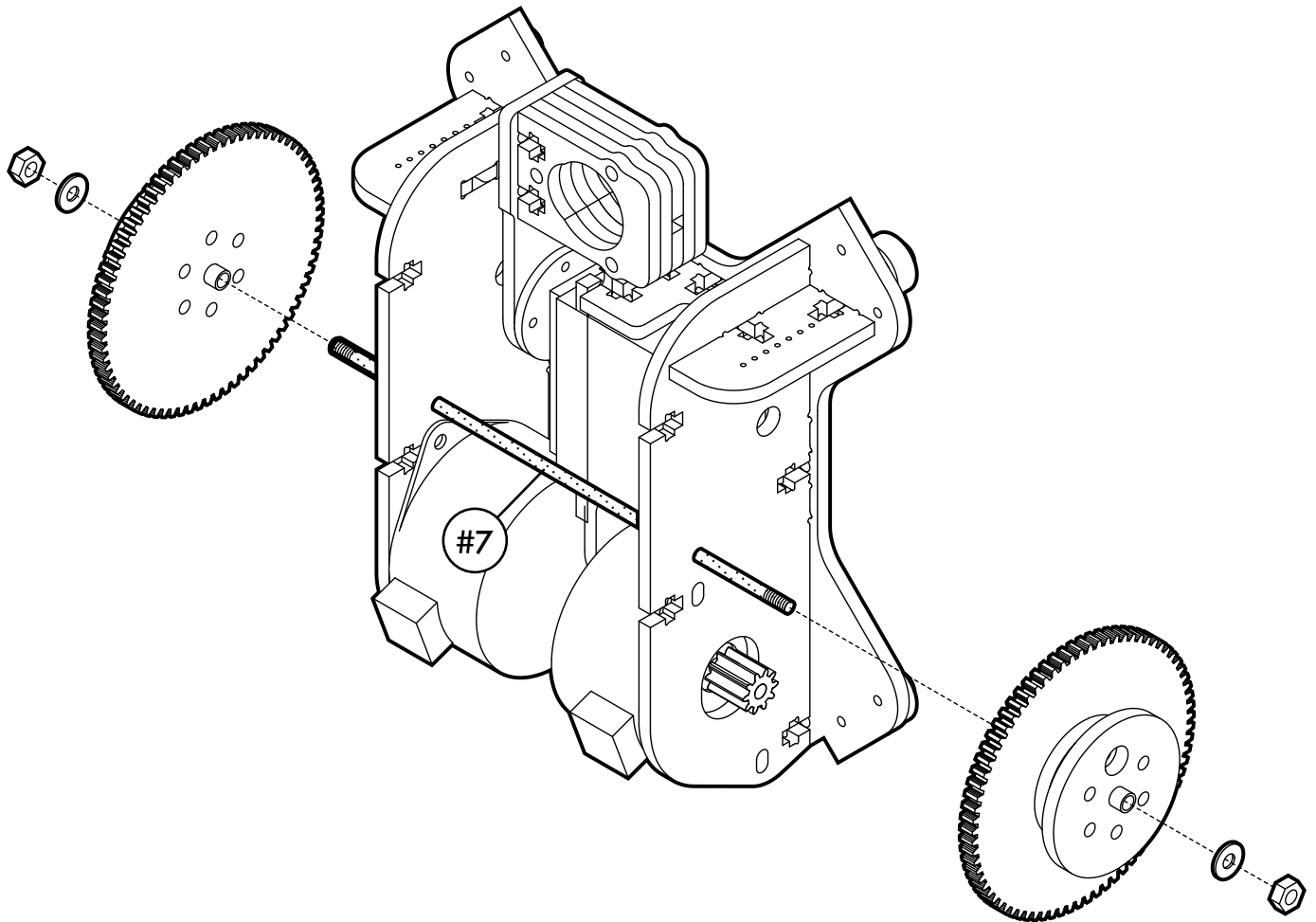


ENGINES SUPPORT

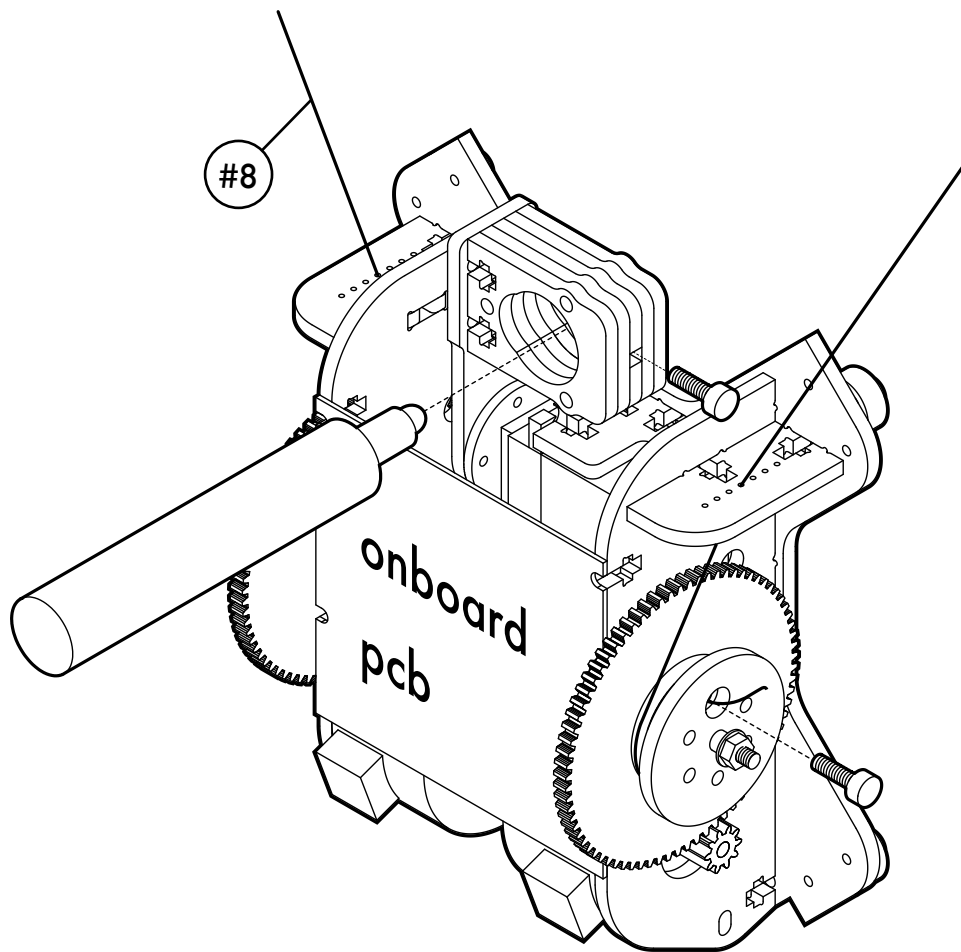




COILS AXIS

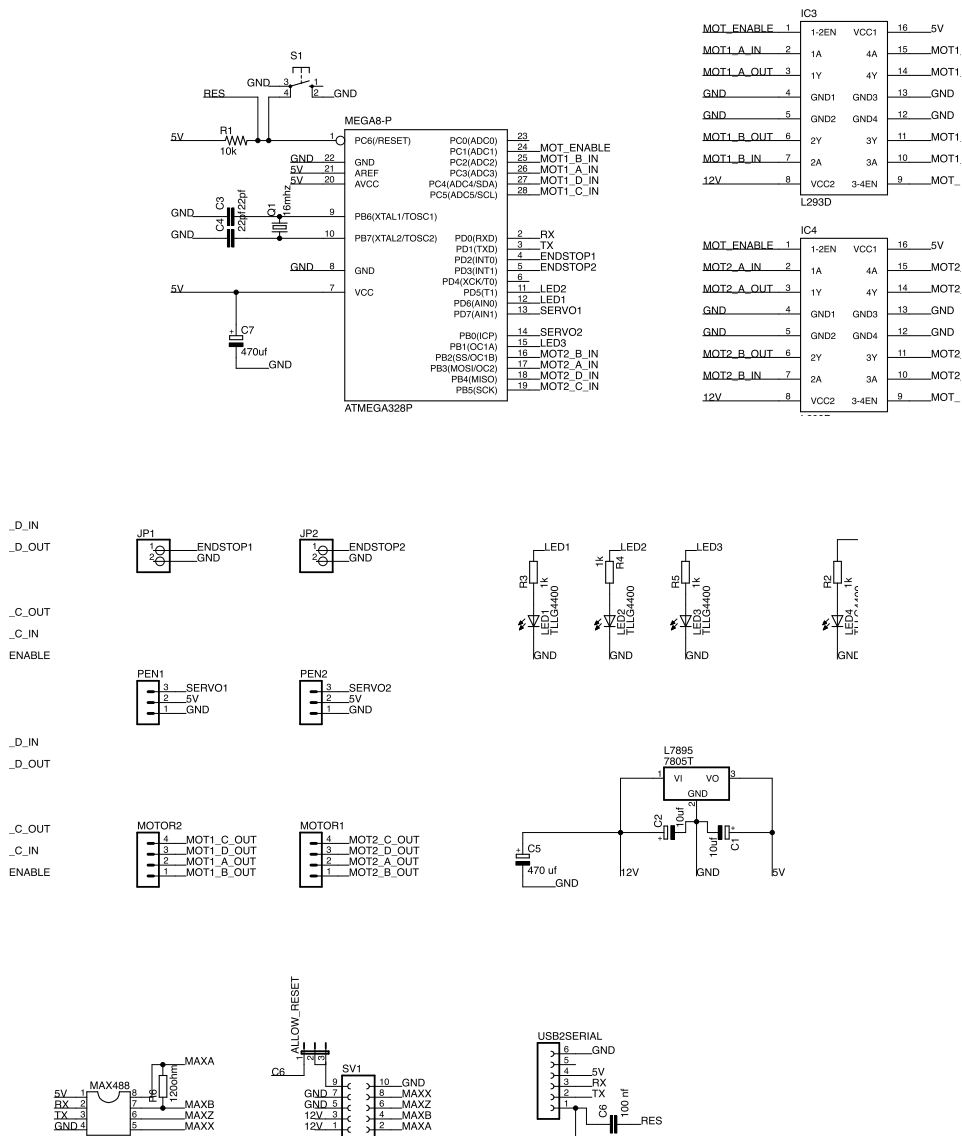


CABLES AND MARKER

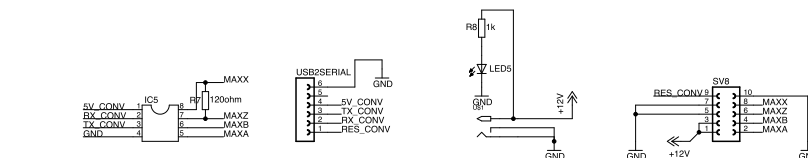


HARDWARE

Onboard pcb scheme.



Base pcb scheme.

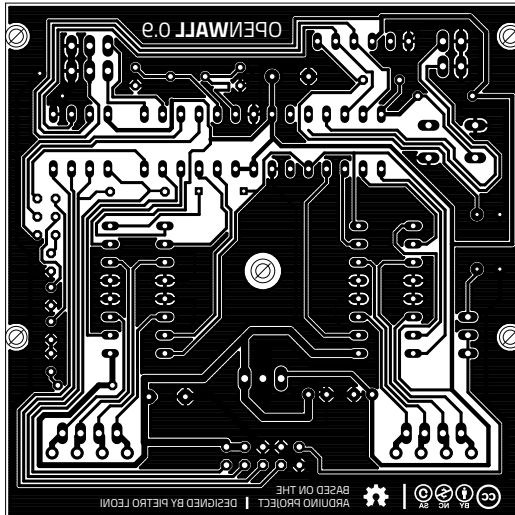


HARDWARE

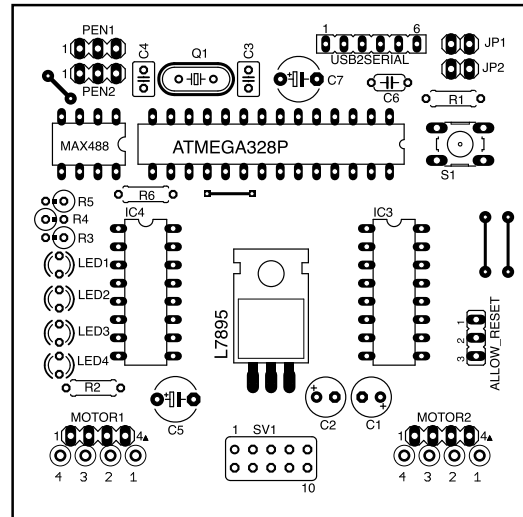
Onboard pcb.

WARNING:

Onboard pcb's usb2serial does not work if the max488 is mounted!



PRINTING STRAIGHT



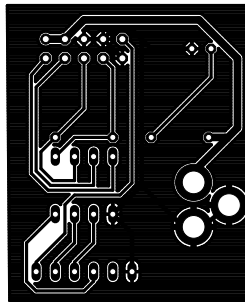
PRINTING MIRRORED

Parts value

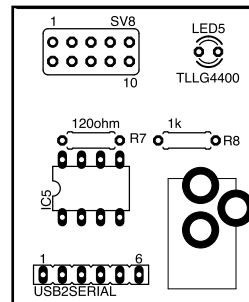
| | | | |
|-------------|------------------|------------|-------------------|
| ALLOW_RESET | jumper | R1 | 10k |
| ATMEGA328P | ATMEGA328P | R2 | 1k |
| C1 | 10uf | R3 | 1k |
| C2 | 10uf | R4 | 1k |
| C3 | 22pf | R5 | 1k |
| C4 | 22pf | R6 | 120ohm |
| C5 | 470 uf | S1 | button |
| C6 | 100 nf | SV1 | IDC 5x2 connector |
| C7 | 470uf | USB2SERIAL | 6pin male header |
| IC3 | L293D | X1 | 1751264 |
| IC4 | L293D | X2 | 1751264 |
| JP1 | 2pin male header | | |
| JP2 | 2pin male header | | |
| L7895 | 7805T | | |
| LED1 | TLLG4400 | | |
| LED2 | TLLG4400 | | |
| LED3 | TLLG4400 | | |
| LED4 | TLLG4400 | | |
| MAX488 | Maxim max 488 | | |
| MOTOR1 | 4pin header | | |
| MOTOR2 | 4pin header | | |
| PEN1 | 3pin male header | | |
| PEN2 | 3pin male header | | |
| Q1 | 16mhz | | |

HARDWARE

Base pcb.



PRINTING STRAIGHT



PRINTING MIRRORED

Parts value

| | |
|------------|-------------------|
| IC5 | Maxim max 488 |
| LED5 | TLLG4400 |
| R7 | 120ohm |
| R8 | 1k |
| SV8 | IDC 5x2 connector |
| U\$1 | 2.1MMJACKTHM |
| USB2SERIAL | 6pin male header |

beta version