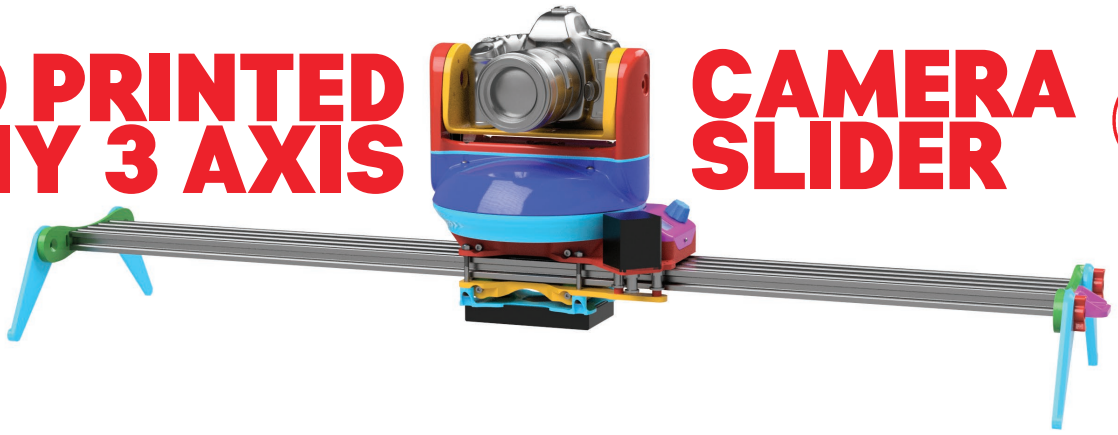
3D PRINTED DIY 3 AXIS CAMERA SLIDER



Well, hello and thank you for downloading files to create my DIY 3D printed 3 axis camera slider!
In these instructions I have done my best to explain the assembly process and electronics, however I would suggest that this is not a beginner project! I have made a suggestions for the electronics, however experience required to complete the electronics.

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Project created by Myles at NewTechCreative 2021
YouTube Chanel: https://www.youtube.com/channel/UCROCWhGcdRSwRNmuOSTrIjg
Email: newtechcreative@gmail.com

ENJOY THE BUILD :) AND PLEASE SHARE YOUR CREATIONS WITH ME AT newtechcreative@gmail.com

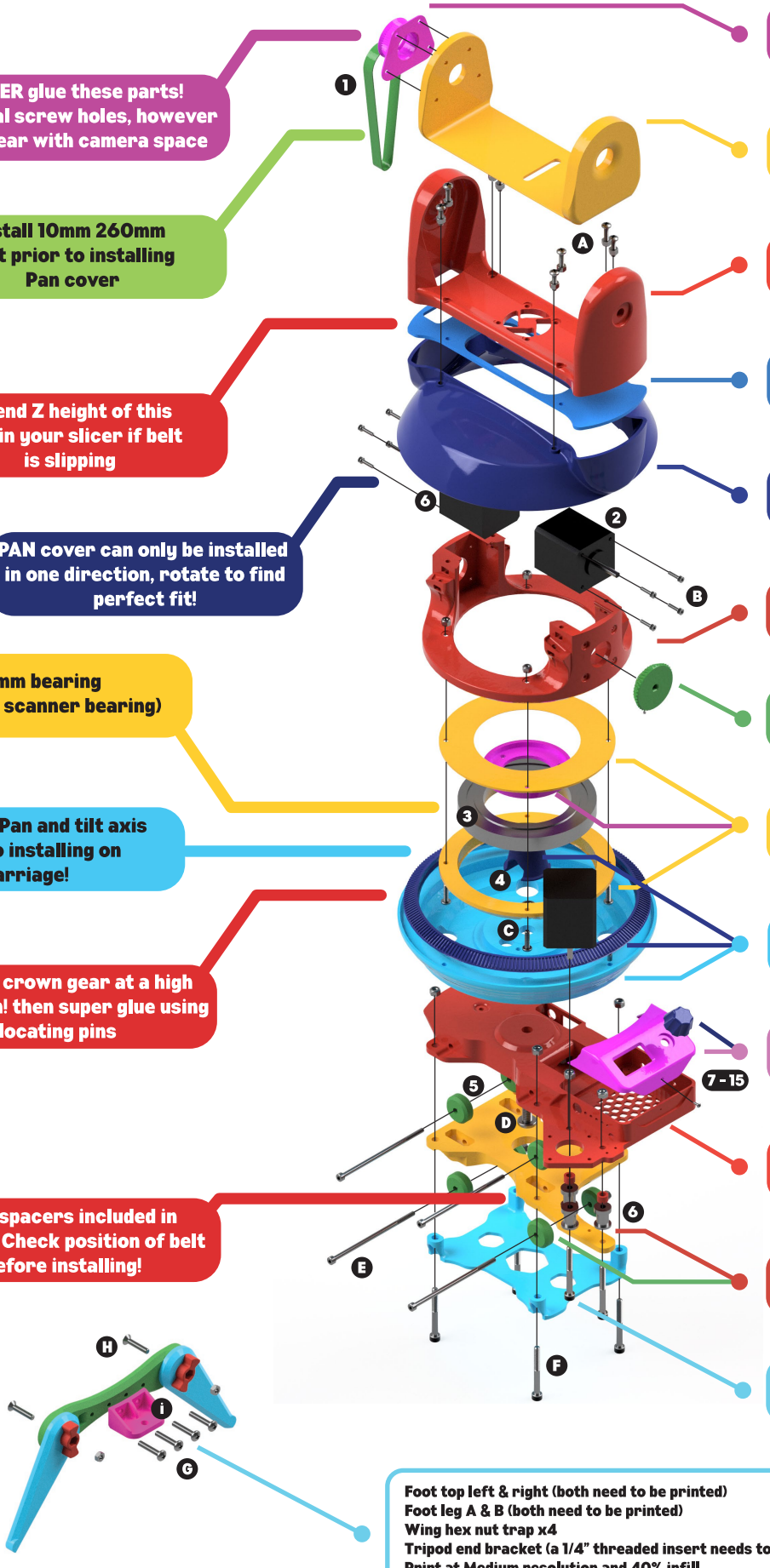
HARDWARE

	ITEM	QUANTITY
A	16mm M4 round head screws with M4 lock nut	8
B	M3 12mm Stepper motor socket screws	12
C	16mm M4 round head screws with M4 lock nut	4
D	25mm M8 Screw with Lock nut	1
E	90mm/100mm M5 socket screw with Lock nut	4
F	50mm M5 socket screw with lock nut	6
G	25mm M5 flat head screw	8
H	30mm M5 low profile Screw with hex nut	4
i	1/4" threaded heat set insert	2
+	M1.4 screw with nut for bevel gear	1
+	Tiny screw for elec box (6.5mm or less)	1
+	8020 v-slot aluminium extrusion to suit your build	1

ELECTRONICS

	ITEM	QUANTITY
1	Closed loop Belt 10mm 2GT 260mm	1
2	NEMA17 Stepper motor 1.7 amp	3
3	Deep groove ball bearing 70x110x13	1
4	12.5mm 12ch 2A Capsual slip ring	1
5	Polycarbonate V-slot mini wheel 625zz	8
6	16Teeth GT2 5mm bore Pulley	4
7	1.3 Inch OLED Module White 128x64 IIC I2C SPI	1
8	360 degree rotary encoder KY040	1
9	Arduino MEGA pro	1
10	TMC2209 Stepper driver	3
11	10uF 25V Capacitor	5
12	LM7805 voltage regulator	1
13	Limit switch	1
14	DC Jack socket female panel mount	1
15	12v rocker Switch KCD11	1
16	24 guage wire, proto board, soldier, connectors	-

ASSEMBLY



SUPER glue these parts! Optional screw holes, however interfear with camera space

Install 10mm 260mm belt prior to installing Pan cover

Extend Z height of this part in your slicer if belt is slipping

PAN cover can only be installed in one direction, rotate to find perfect fit!

110mm bearing (Ciclop 3D scanner bearing)

Assemble Pan and tilt axis prior to installing on carriage!

3D print crown gear at a high resolution! then super glue using locating pins

Pully spacers included in the files! Check position of belt before installing!

Top tilt gear
Print at high resolution and 60% infill

Camera swing (3 variations available)
Print at normal resolution and 70% infill

Top Shell (fan/no fan variation provided)
Print at normal resolution and 40% infill

Top Spacer tensioner 3mm
Print at normal resolution and 40% infill

Pan Cover (support material needed)
Print at normal resolution and 40% infill

Bearing structure axel (support material needed)
Print at normal resolution and 40% infill

Beval gear (Two variations supplied for TPU/PLA)
Print at high resolution and 40% infill

Base bearing outter top, base and inner
Print at normal resolution and 40% infill

Modular Crown base (all in one version also availble)
Print Teeth at High and remaining at normal resolution and 40% infill (support needed for base)

Elec box and rotary knob (Support material needed for elec box) Print at High resolution and 40% infill

Top Carriage (Insert V wheels- use soft mallet!)
Print at Medium resolution and 40% infill

Base Carriage (Insert V wheels- use soft mallet!)
Print at Medium resolution and 50% infill

Battery magnetic holder (Insert 5x3mm magnets)
Print at Medium resolution and 40% infill

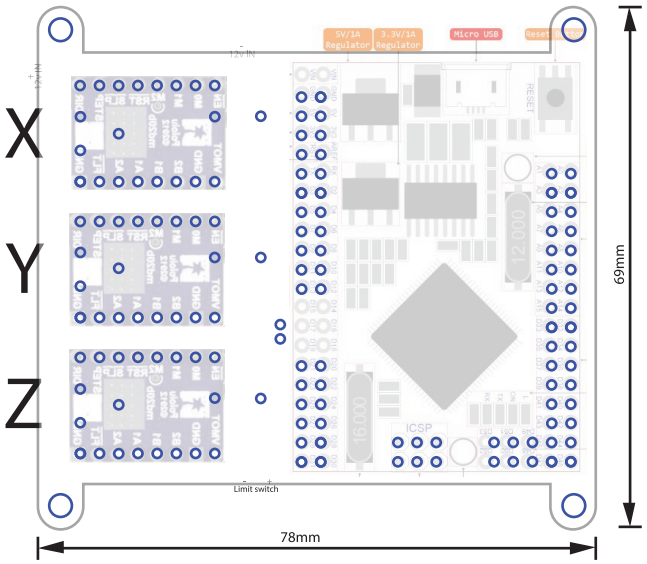
Foot top left & right (both need to be printed)
Foot leg A & B (both need to be printed)
Wing hex nut trap x4
Tripod end bracket (a 1/4" threaded insert needs to be installed using soldier iron)
Print at Medium resolution and 40% infill

NT ELECTRONICS

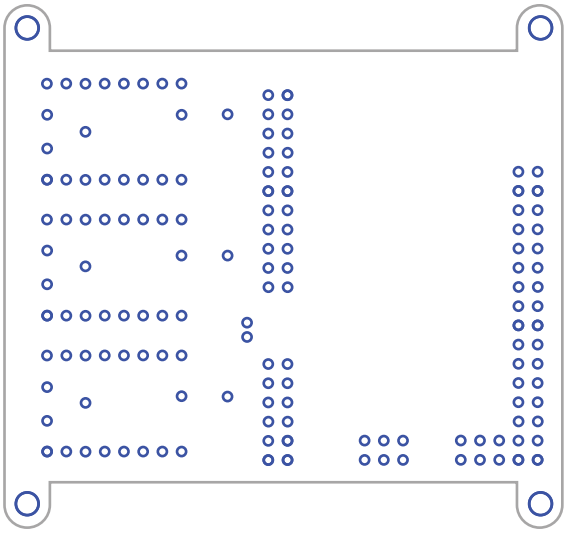
DISCLAIMER:
Please use as your own risk as I am not responsible for shorting components or any harm cause by following this project. Please check thoroughly before use.
This is a suggested layout and may require refining.

As for the 12v to 5v conversion to power Arduino MEGA Pro, research 'voltage regulator 12v to 5V circuit' for setup with the LM7805 voltage regulator.

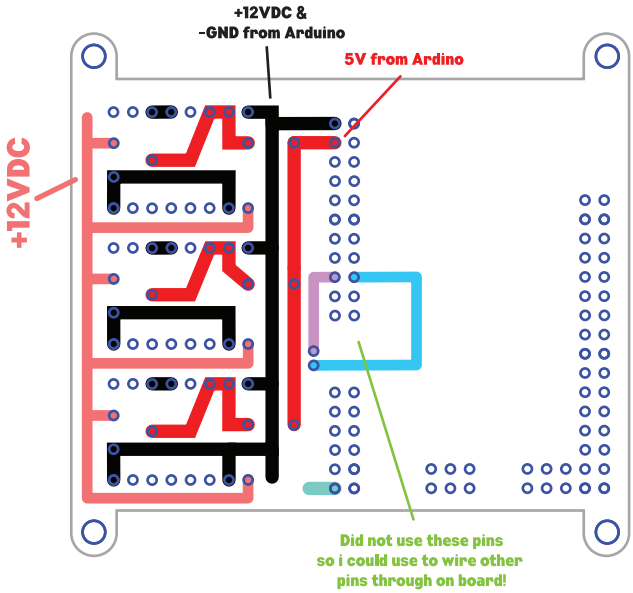
PIN/COMPONENT VIEW



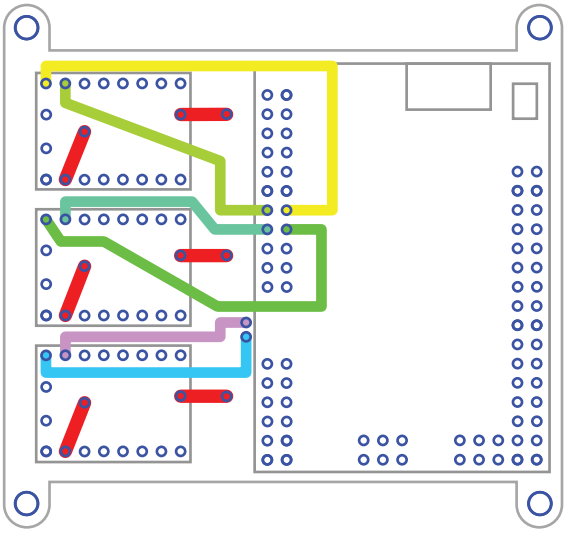
PIN VIEW



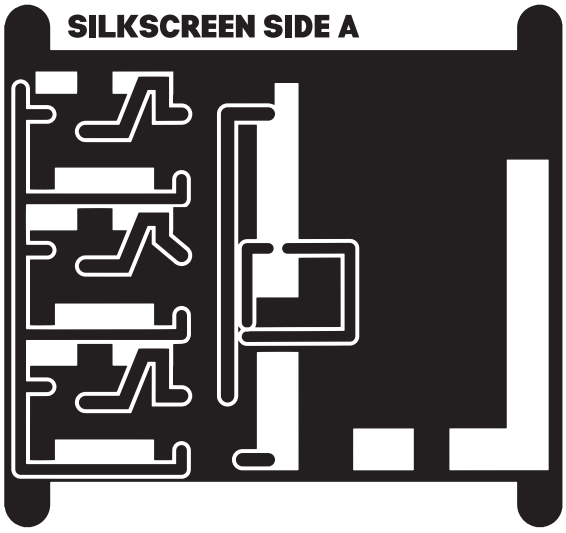
SIDE A VIEW (TOP)



SIDE B VIEW (From top view!)



SILKSCREEN SIDE A



SILKSCREEN SIDE B