

### Lower Frame Assembly



Created by:  
Joshua Vasquez

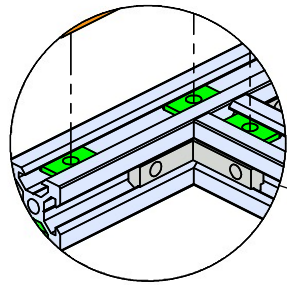
last edited:  
1/31/2021

SCALE: 1:3

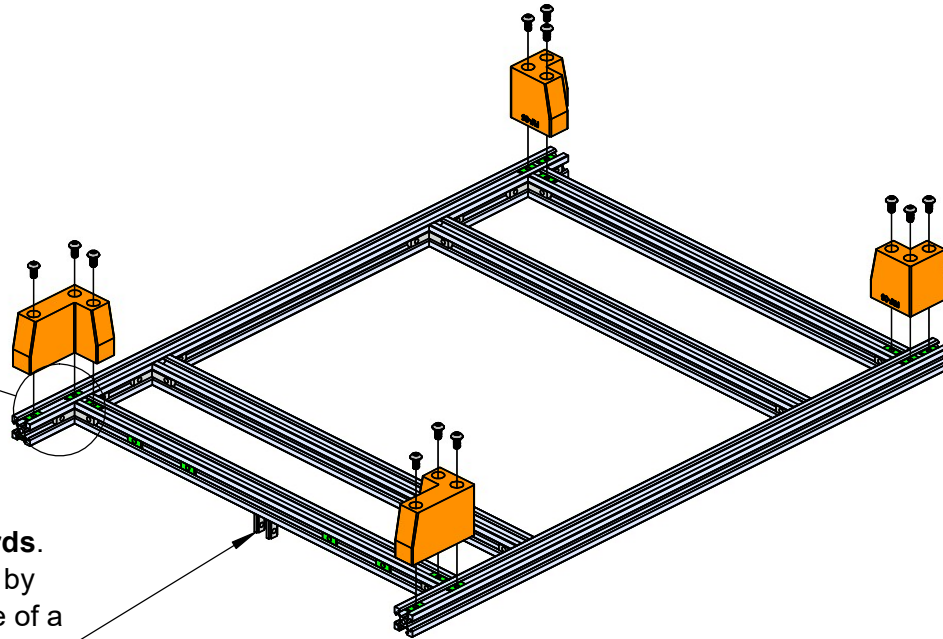
SHEET 1 OF 10

Flip the Lower Frame Assembly Upside Down. Slide each foot's T Nuts under each foot and then tighten all screws.

B

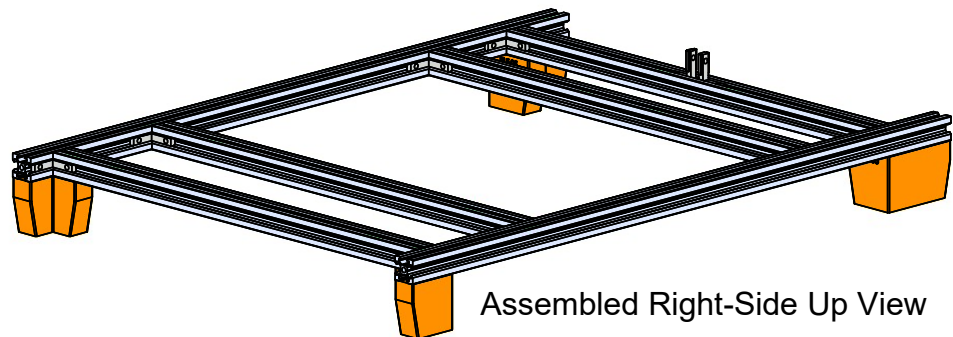


Note that these inside-corner brackets should face **downwards**. It may be easier to do this step by dangling this end over the edge of a table.



Exploded Upside Down View

Flip the frame right-side up when finished.



Assembled Right-Side Up View

A

ITEM NO.	DESCRIPTION	QTY.
5	Back Right Foot	1
6	M5 Buttonhead Screw, 10mm long	12
7	Back Left Foot	1
8	Front Right Foot	1
9	Front Left Foot	1
10	Lower Frame	1

B

A

#### Corner Foot Installation



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SCALE: 1:6

SHEET 2 OF 10

B

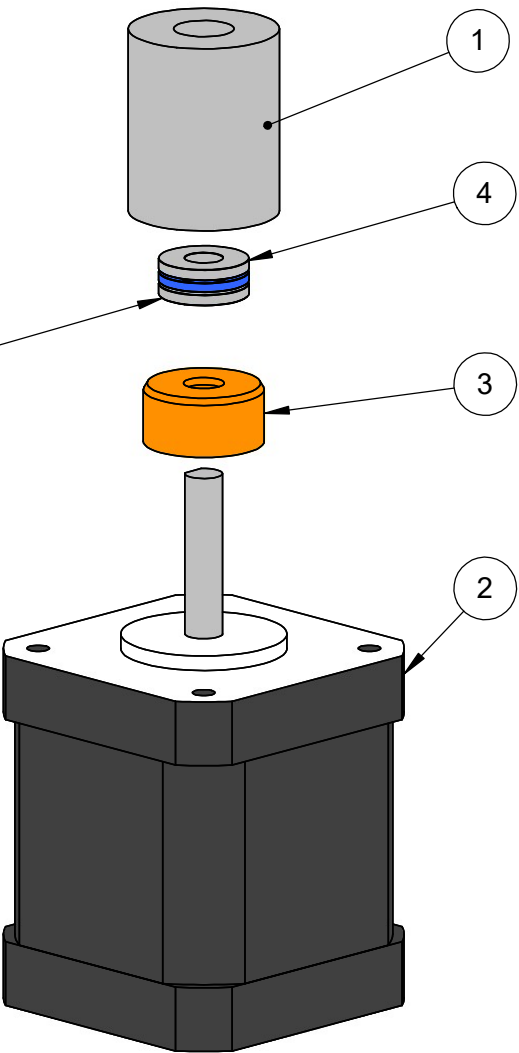
B

A

A

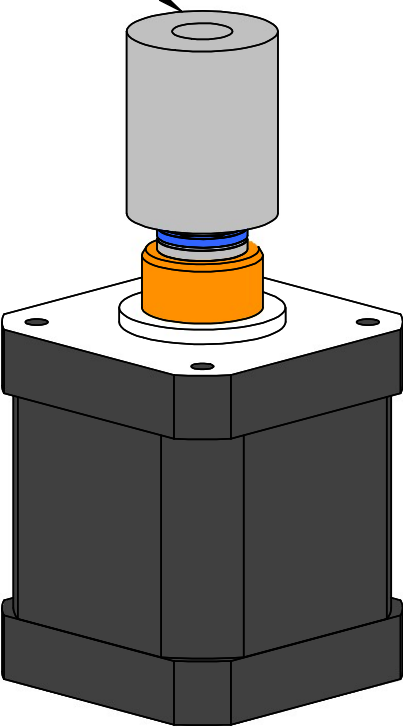
Make 3 Assemblies.

These are a 3 piece set.  
Orientation of each piece  
does not matter.



Exploded View

With one hand, compress the coupler  
onto the motor shaft to remove any  
space on the motor shaft. Securely  
screw down the coupler in this  
configuration.



Assembled View

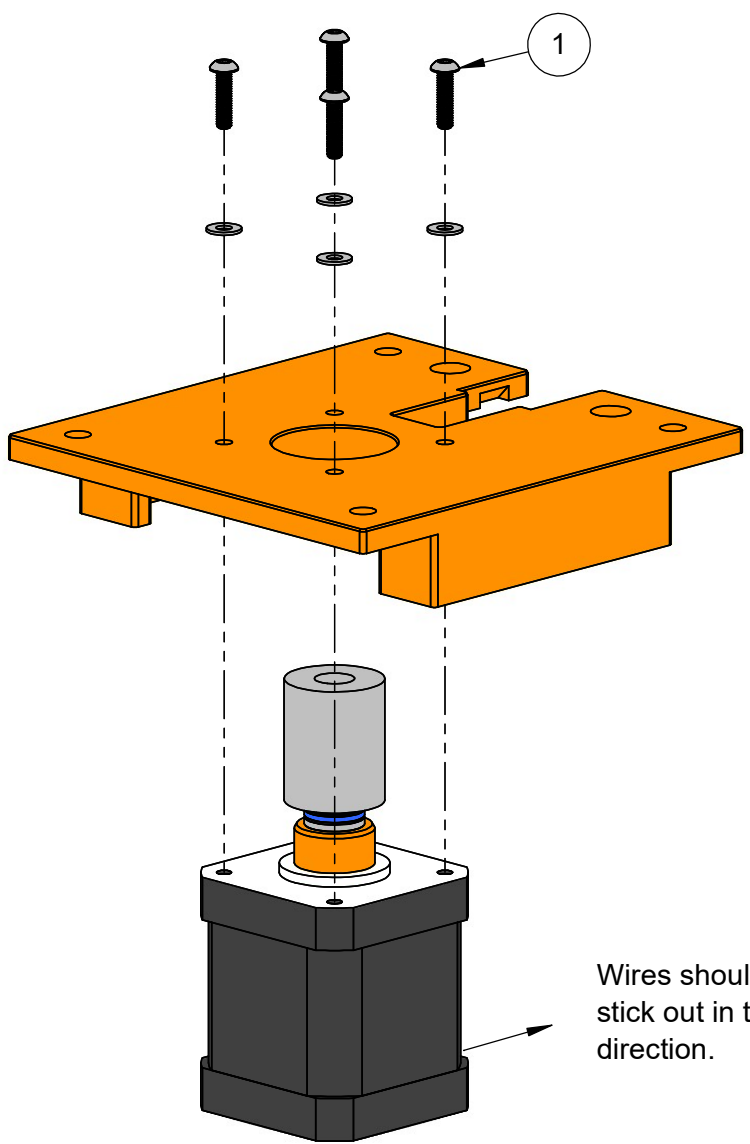
ITEM NO.	DESCRIPTION	QTY.
1	5mm to 8mm flexible plumb coupler	1
2	Nema 17 Stepper Motor	1
3	Z Thrust Bearing Spacer	1
4	5mm Oversize Thrust Bearing	1

Z Motor Thrust Coupling Assembly		
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	SCALE: 1:1	SHEET 3 OF 10

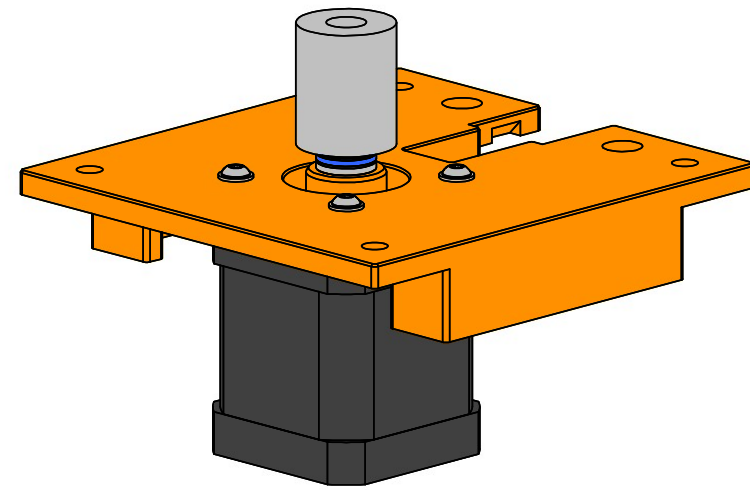
B

A

Apply a dab of threadlock to the tip of the four M3 screws before tightening them down securely.



Exploded View



Assembled View

ITEM NO.	DESCRIPTION	QTY.
1	M3 Buttonhead Screw, 12mm long	4
2	Back Plate Plate Assembly	1
3	Z Motor Thrust Coupling Assembly	1
4	M3 Washer	4

Back Z Motor Plate Assembly		
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	SCALE: 1:1.5	SHEET 4 OF 10

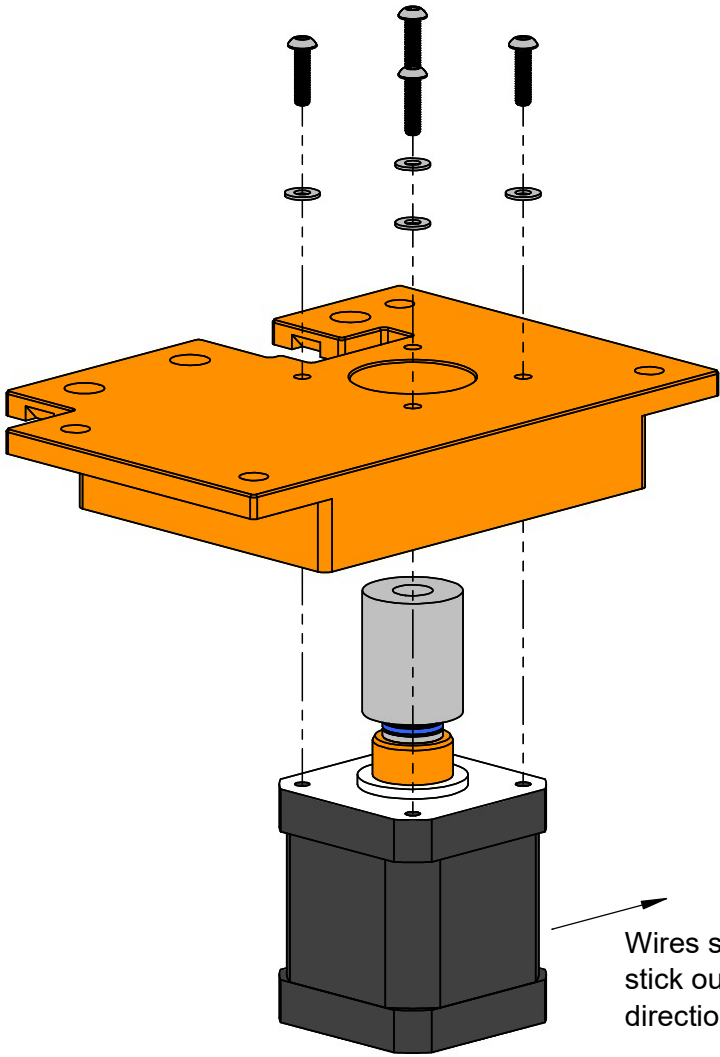
B

A

Apply a dab of threadlock to the tip of the four M3 screws before tightening them down securely.

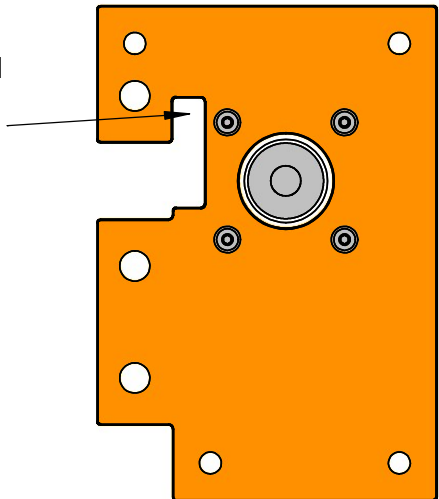
B

B



Exploded View

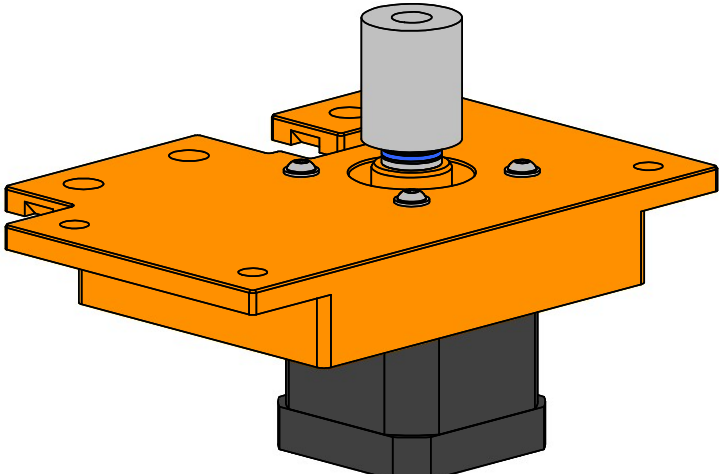
Optional: motor wires could poke up and out from this cavity.



Assembled Top View  
Scale 1:2

A

A



Assembled View

ITEM NO.	DESCRIPTION	QTY.
1	M3 Buttonhead Screw, 12mm long	4
3	Z Motor Thrust Coupling Assembly	1
4	M3 Washer	4

Front Left Z Plate Assembly



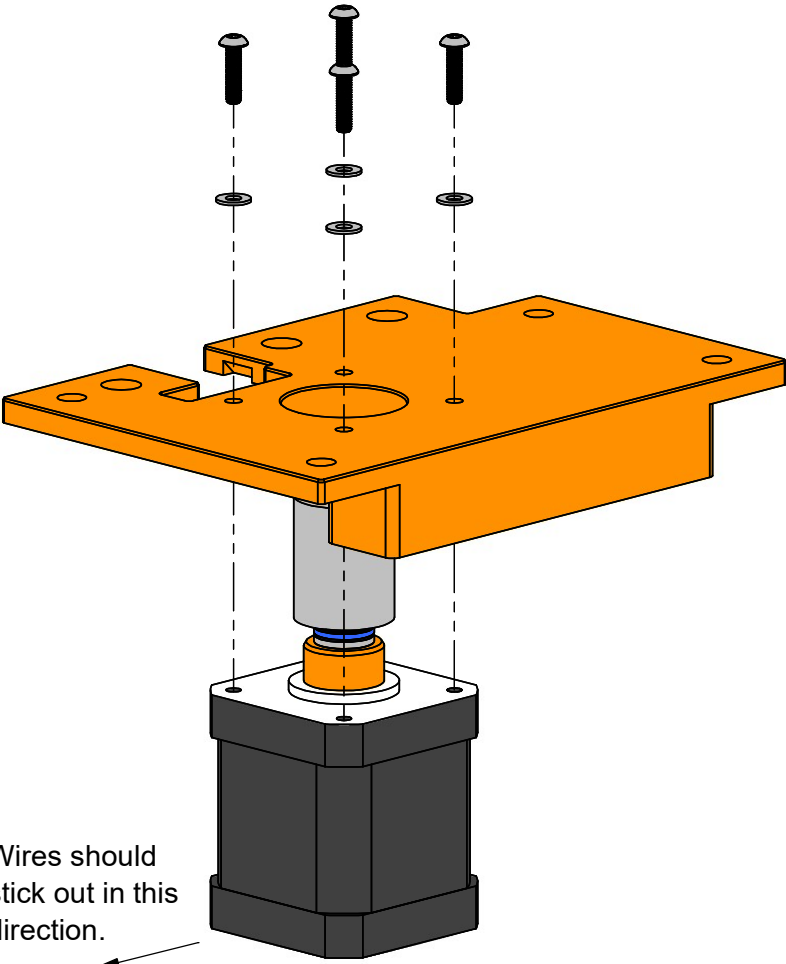
Created by:  
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SCALE: 1:1.5

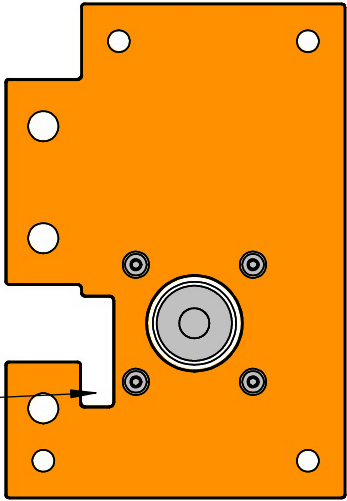
SHEET 5 OF 10

Apply a dab of threadlock to the four M3 screws before tightening them down securely.

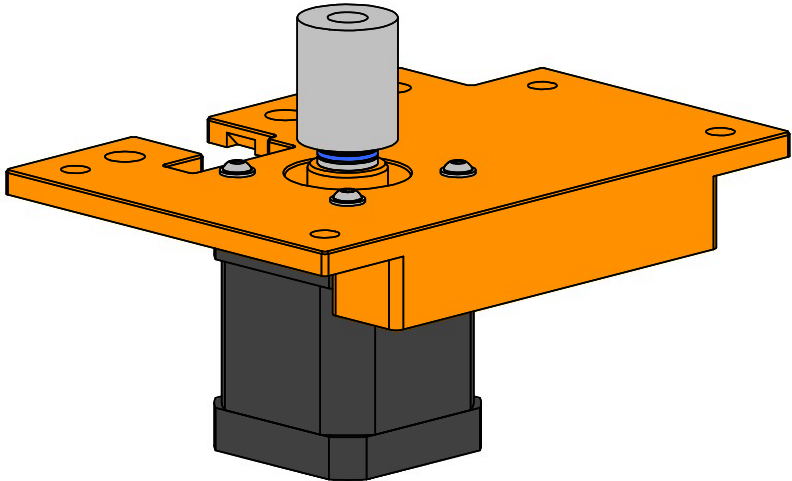


Exploded View

Optional: motor wires could poke up and out from this cavity.



Assembled Top View  
Scale 1:2



Assembled View

ITEM NO.	DESCRIPTION	QTY.
1	M3 Buttonhead Screw, 12mm long	4
3	Z Motor Thrust Coupling Assembly	1
4	M3 Washer	4

Front Right Z Plate Assembly



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SCALE: 1:1.5

SHEET 6 OF 10

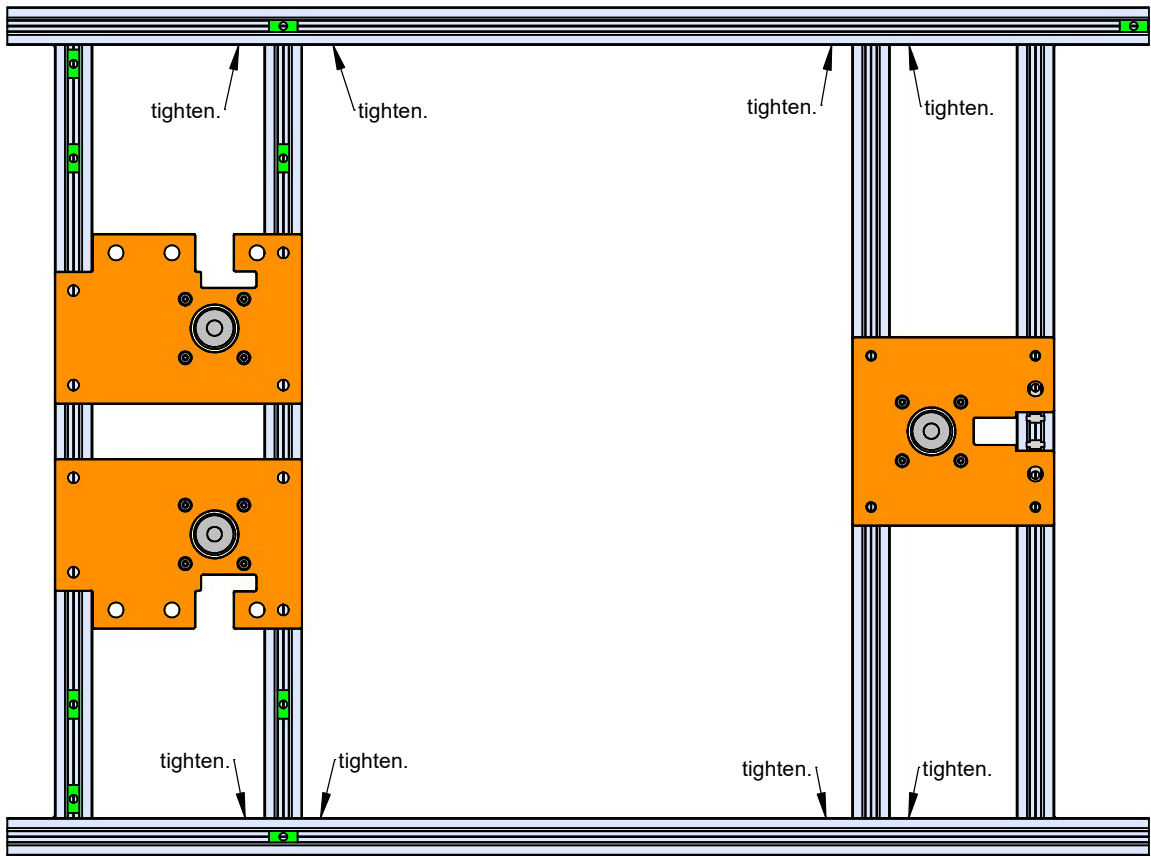
2

1

Load the Z Motor Plates into the frame to set the spacing of the internal loose extrusions. Push these internal extrusions into the plates and fully tighten the 8 inside corner brackets shown below.

B

B



Top View

A

A

ITEM NO.	DESCRIPTION	
1	Base Frame Assembly with Feet	1
2	Back Z Plate Assembly	1
3	Front Left Z Plate Assembly	1
4	Front Right Z Plate Assembly	1

Internal Extrusion Alignment



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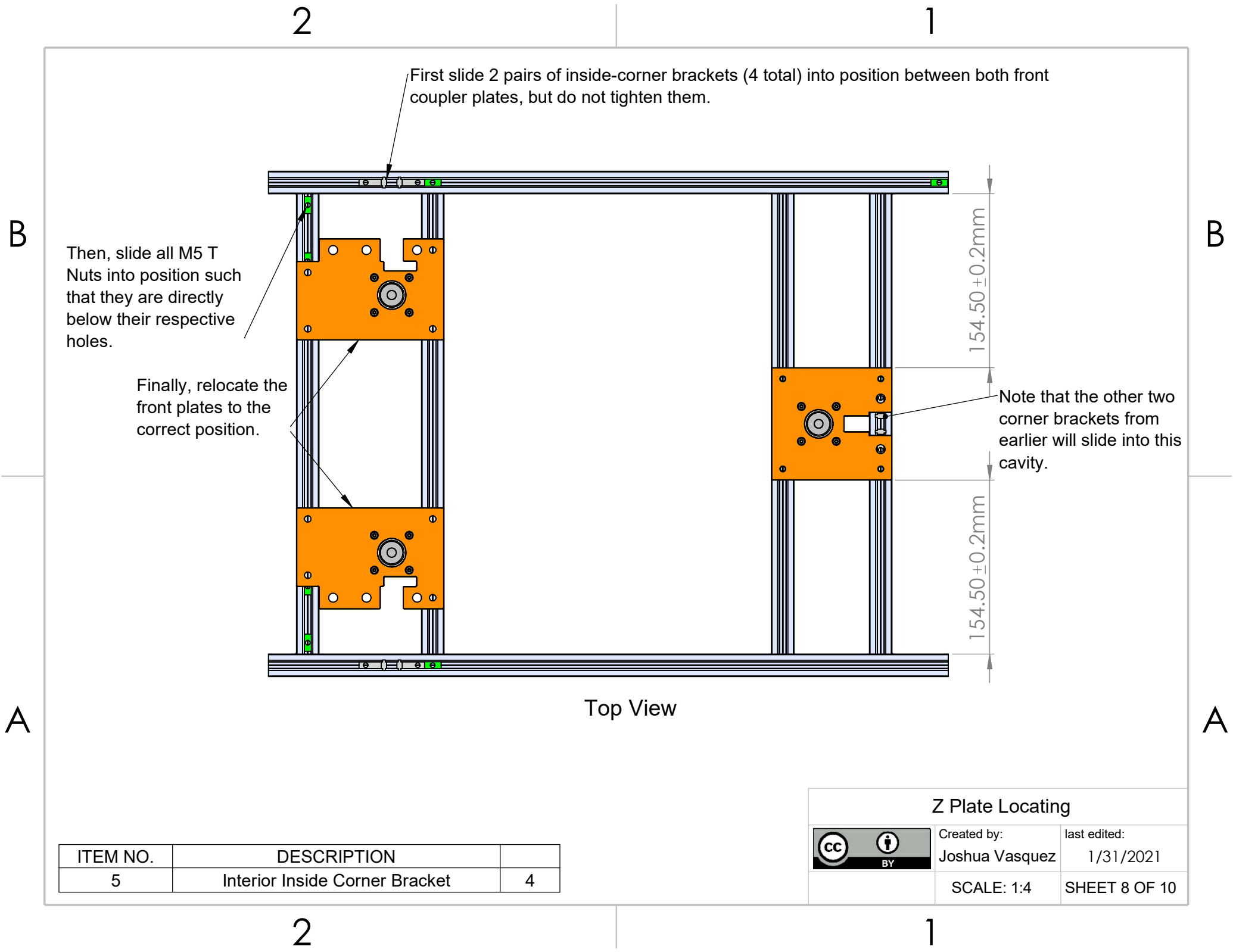
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SCALE: 1:4

SHEET 7 OF 10

2

1



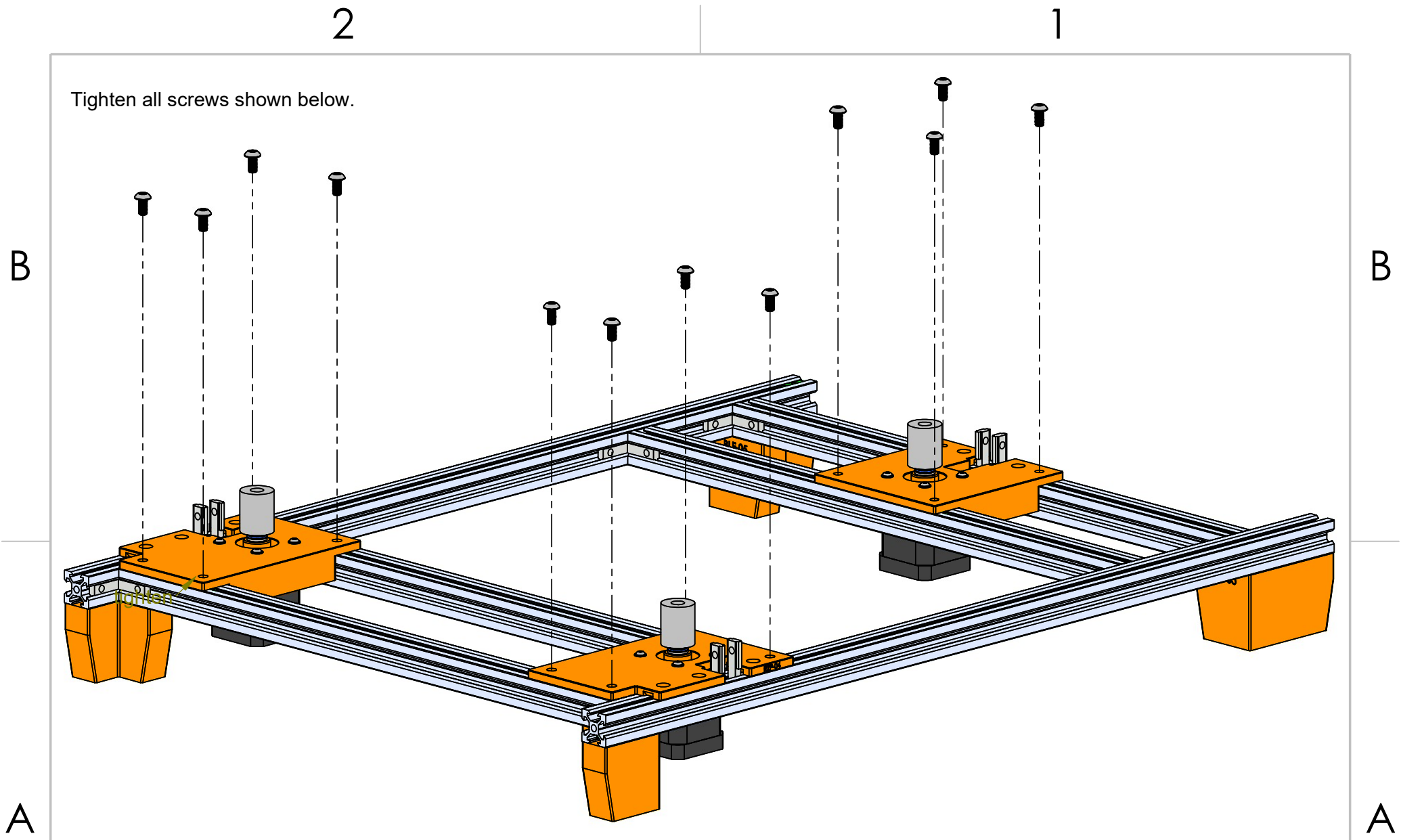
ITEM NO.	DESCRIPTION	
5	Interior Inside Corner Bracket	4

Z Plate Locating		
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	SCALE: 1:4	SHEET 8 OF 10

2


1

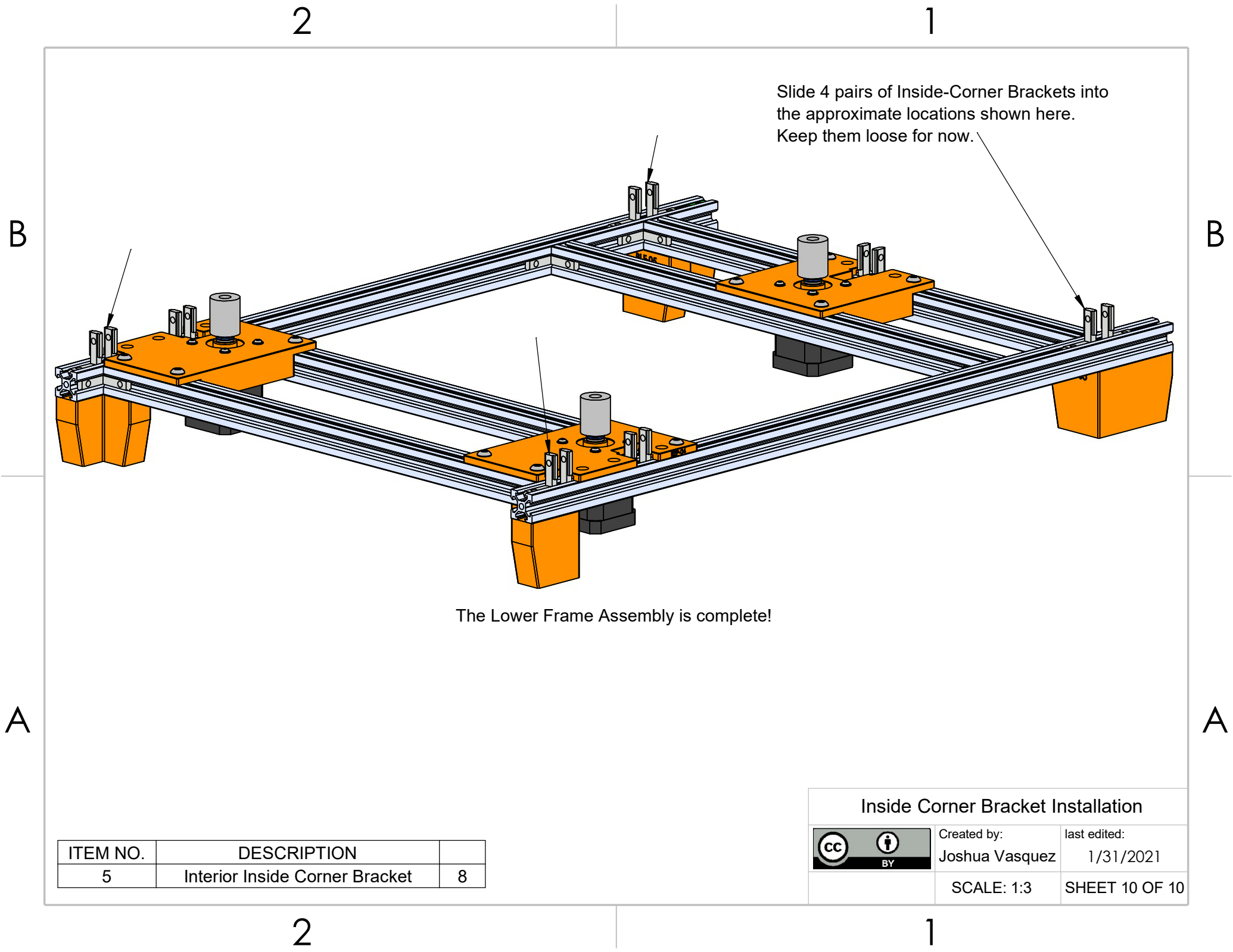




Top View


ITEM NO.	DESCRIPTION	QTY.
10	M5 Buttonhead Screw, 10mm long	12

Z Plate Tightening		
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	SCALE: 1:3	SHEET 9 OF 10



The Lower Frame Assembly is complete!

ITEM NO.	DESCRIPTION	
5	Interior Inside Corner Bracket	8

Inside Corner Bracket Installation		
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	SCALE: 1:3	SHEET 10 OF 10