**Outer Frame Assembly and Alignment**

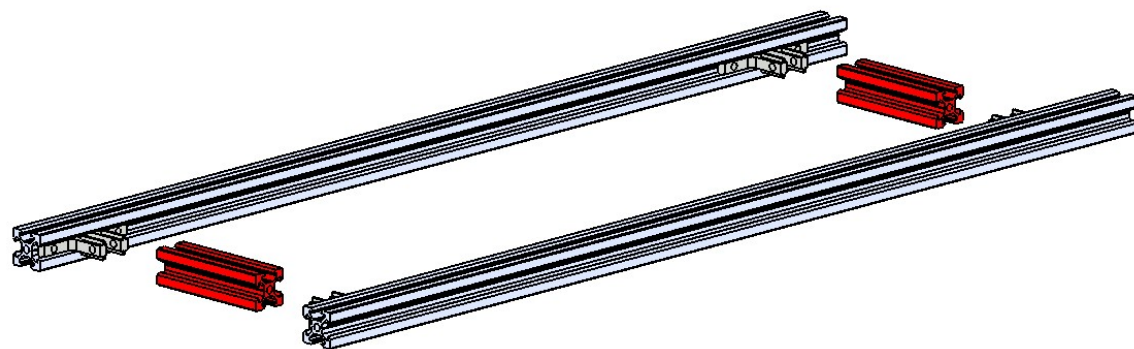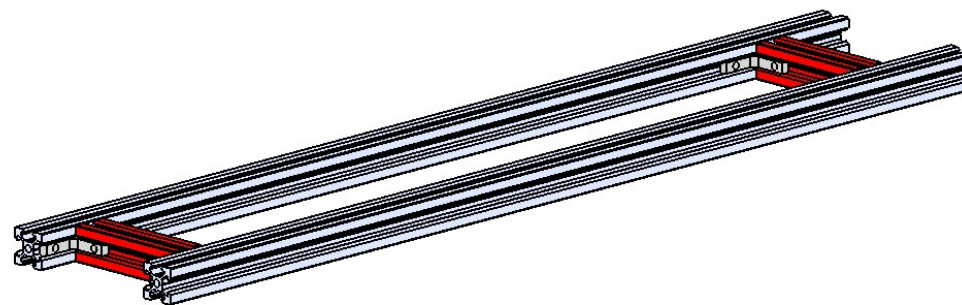| Created by: | last edited: |
|---|---|
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| SCALE: 1:5 | SHEET 1 OF 11 |

Exploded View

Assembled View

Assemble the 12 items together as shown without tightening down any screws. Lay the loose assembly down on a flat surface.

Exact locations of the brackets do not matter yet.

The short red extrusions are for squaring the frame and will be removed later.

| ITEM NO. | DESCRIPTION | QTY. |
|----------|-------------|------|
| 1 | 604mm long TSlot Extrusion | 2 |
| 2 | Interior Inside Corner Bracket | 8 |
| 3 | 74mm Temporary TSlot Extrusion for Squaring | 2 |

Upper Frame Squaring Setup

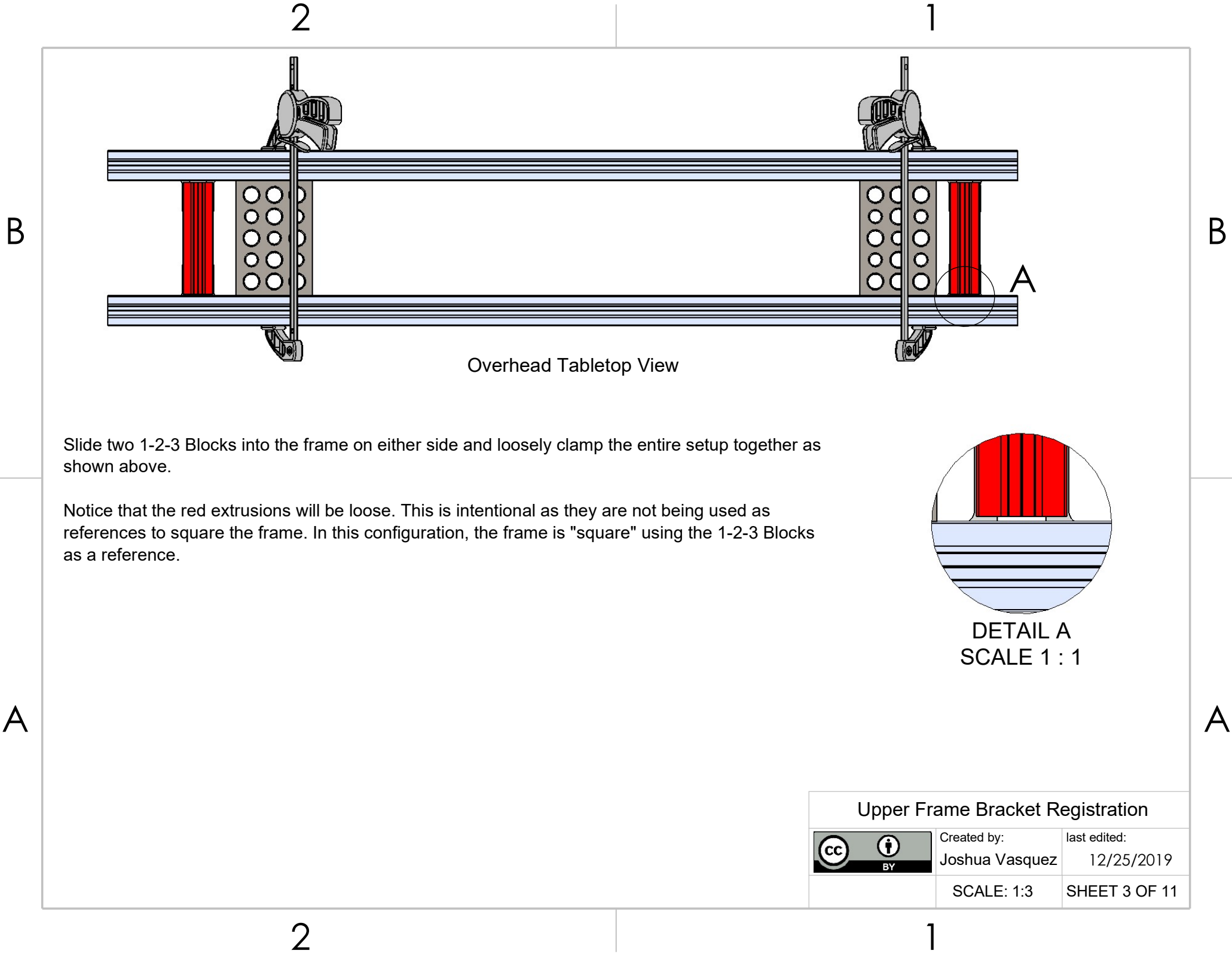| Created by: | last edited: |
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| SCALE: 1:4 | SHEET 2 OF 11 |

B

B

Overhead Tabletop View

A

Slide two 1-2-3 Blocks into the frame on either side and loosely clamp the entire setup together as shown above.

Notice that the red extrusions will be loose. This is intentional as they are not being used as references to square the frame. In this configuration, the frame is "square" using the 1-2-3 Blocks as a reference.

DETAIL A
SCALE 1 : 1

A

A

| Upper Frame Bracket Registration | | |
|---|---|---|
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| | SCALE: 1:3 | SHEET 3 OF 11 |

$50.00 \pm 0.5$

$25.00 \pm 0.5$

B

B
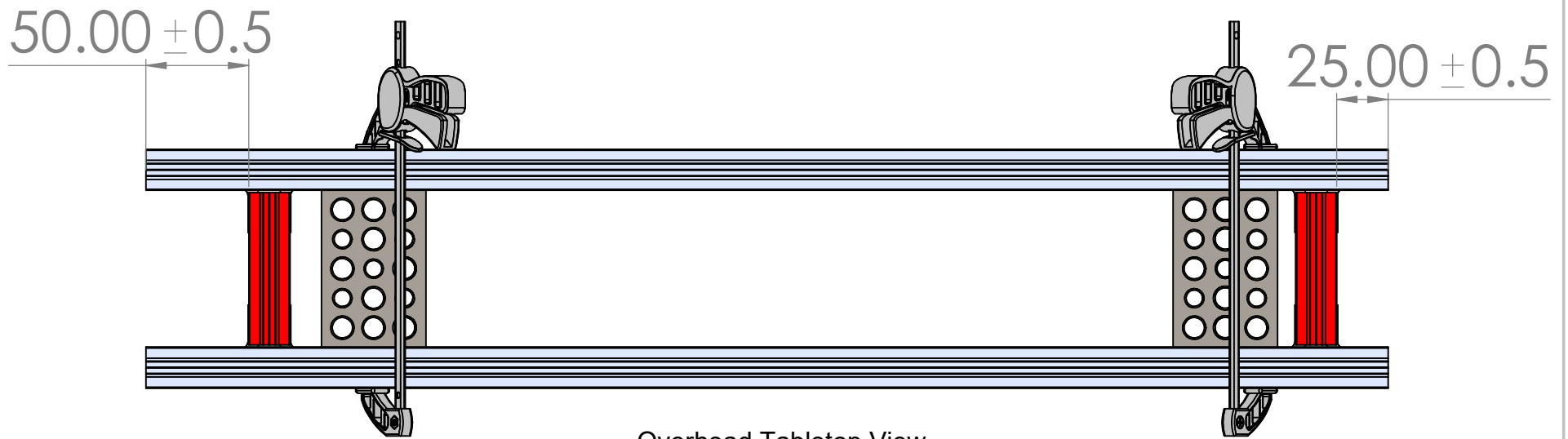
Overhead Tabletop View

Using Calipers as a reference, adjust the red extrusions such that they match the dimensions shown above. Note that bracing the entire assembly against a loose extrusion may make this dimension easier to measure as shown below. When they are in the proper location, fasten down all 16 screws in the inside corner brackets. This procedure will "set" the brackets in the correct location.
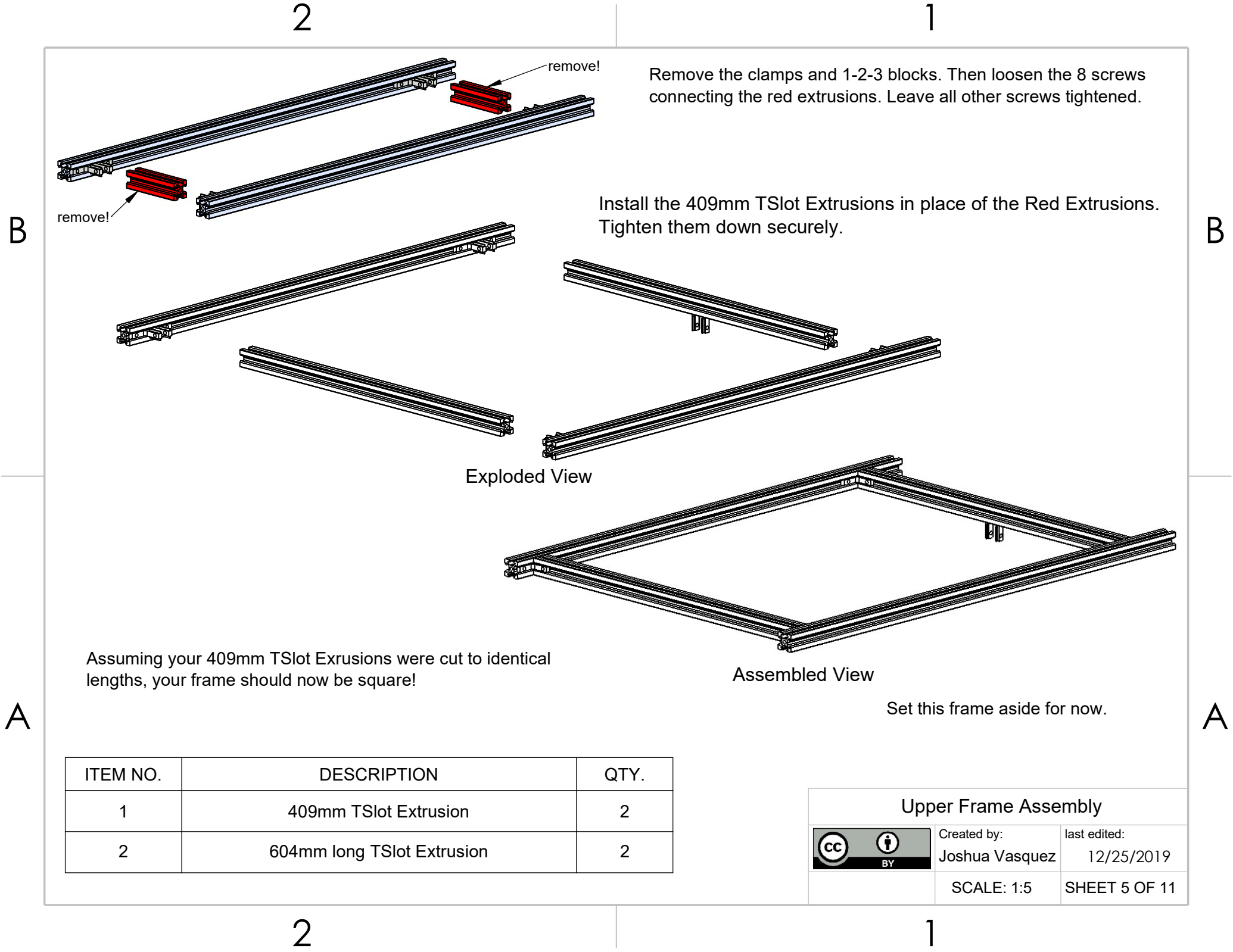
A

A

| Upper Frame Bracket Fixturing | | |
|---|---|---|
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| | SCALE: 1:3 | SHEET 4 OF 11 |

B

remove!

remove!

Remove the clamps and 1-2-3 blocks. Then loosen the 8 screws connecting the red extrusions. Leave all other screws tightened.

Install the 409mm TSlot Extrusions in place of the Red Extrusions. Tighten them down securely.

B

Exploded View

Assembled View

Assuming your 409mm TSlot Exrusions were cut to identical lengths, your frame should now be square!

Set this frame aside for now.

A

A



| ITEM NO. | DESCRIPTION | QTY. |
|---|---|---|
| 1 | 409mm TSlot Extrusion | 2 |
| 2 | 604mm long TSlot Extrusion | 2 |

Upper Frame Assembly

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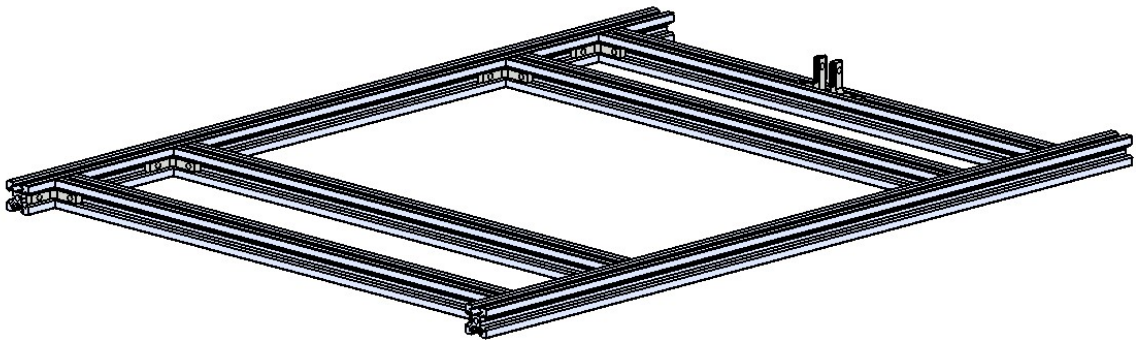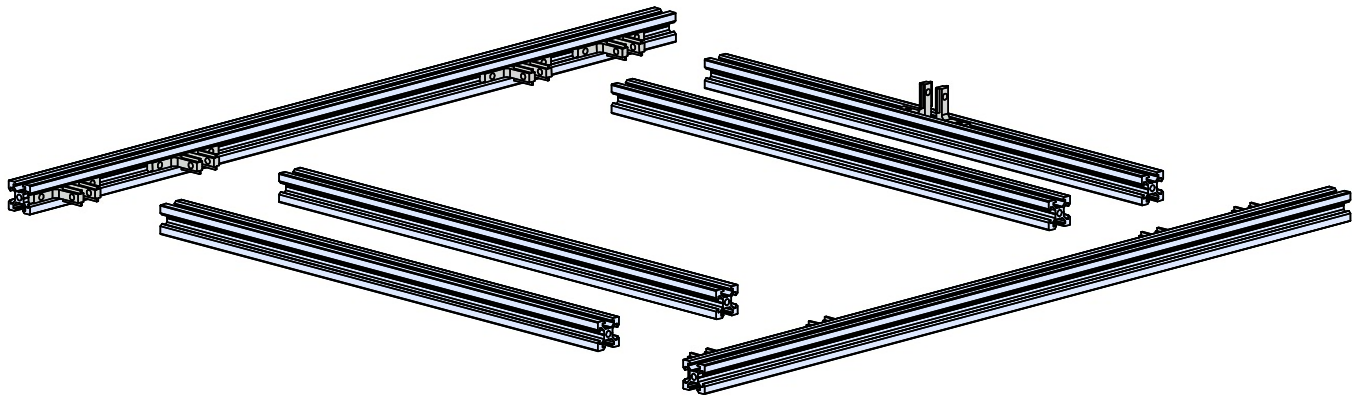last edited:
12/25/2019

SCALE: 1:5

Like before, assemble the entire lower frame without fastening down any set screws.

| ITEM NO. | DESCRIPTION | QTY. |
| --- | --- | --- |
| 1 | 409mm TSlot Extrusion | 4 |
| 2 | 604mm long TSlot Extrusion | 2 |
| 3 | Interior Inside Corner Bracket | 18 |

**Lower Frame Loose Assembly**

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SCALE: 1:5     SHEET 6 OF 11

B

Make 8 of the following assemblies.

Keep these T-Nuts Loose; only two full turns.
They will be tightened into the frame later.

A
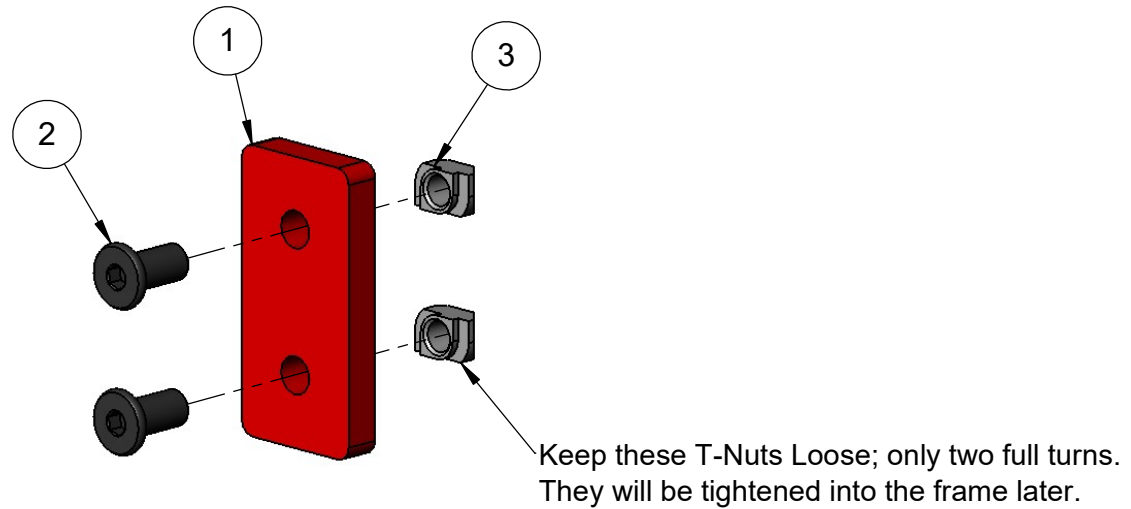
| ITEM NO. | DESCRIPTION | QTY. |
|----------|-------------|------|
| 1 | Outer Frame Squaring Plate | 8 |
| 2 | M5 Buttonhead Screw, 10mm long | 16 |
| 3 | M5 Drop-In T-Nut for 20x20 Extrusion | 16 |

**Squaring Bracket Assembly**

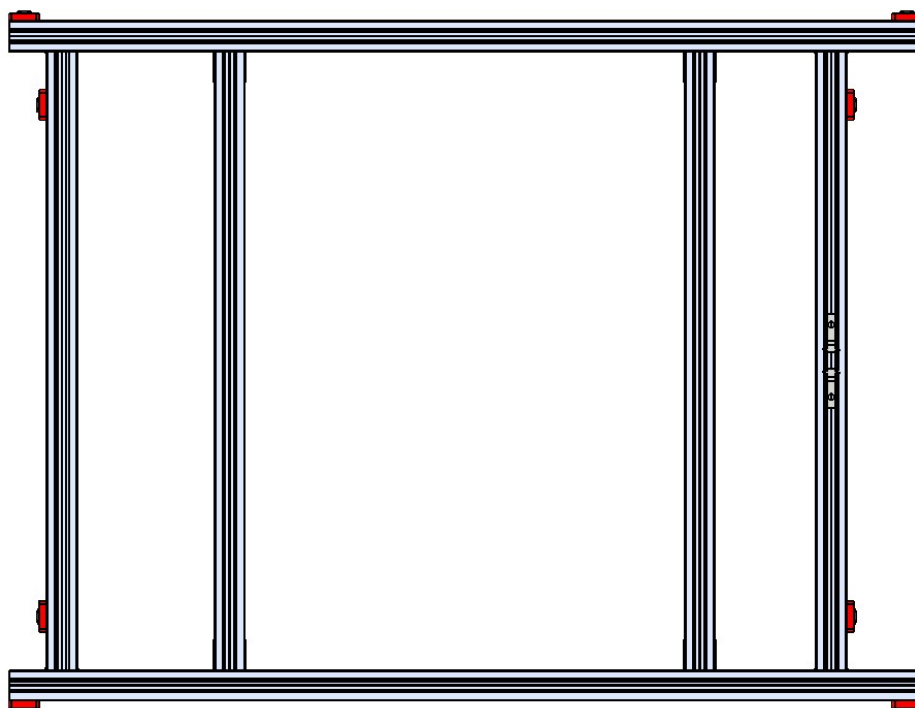| Created by: | last edited: |
|-------------|--------------|
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SCALE: 1:1    SHEET 7 OF 11

B

Join the prior frame with the loose frame "back-to-back" such that the dangling corner brackets do not interfere with each other. Then install the 8 plate assemblies into the corner and tighten them down such that the frame is "pulled" into the shape by the frame from the prior step.

Note: This process is made easier by dangling the frame over a table such that the corner brackets do not prevent the frame from resting flat on the table surface.
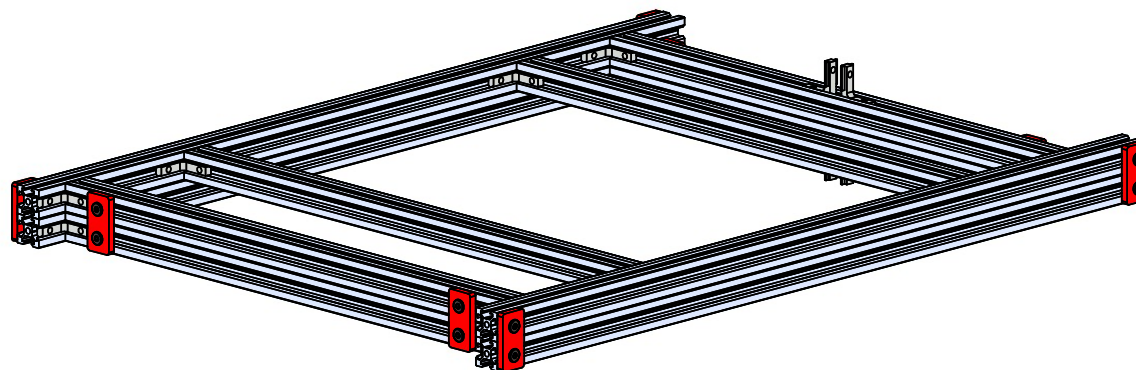
Clamp down the outer frame with the temporary red plates as shown below. This step will pull the lower frame into a configuration that matches the upper frame. Then clamp down the setscrews in the outer frame extrusions. (The inner extrusions will be clamped down later.)

A

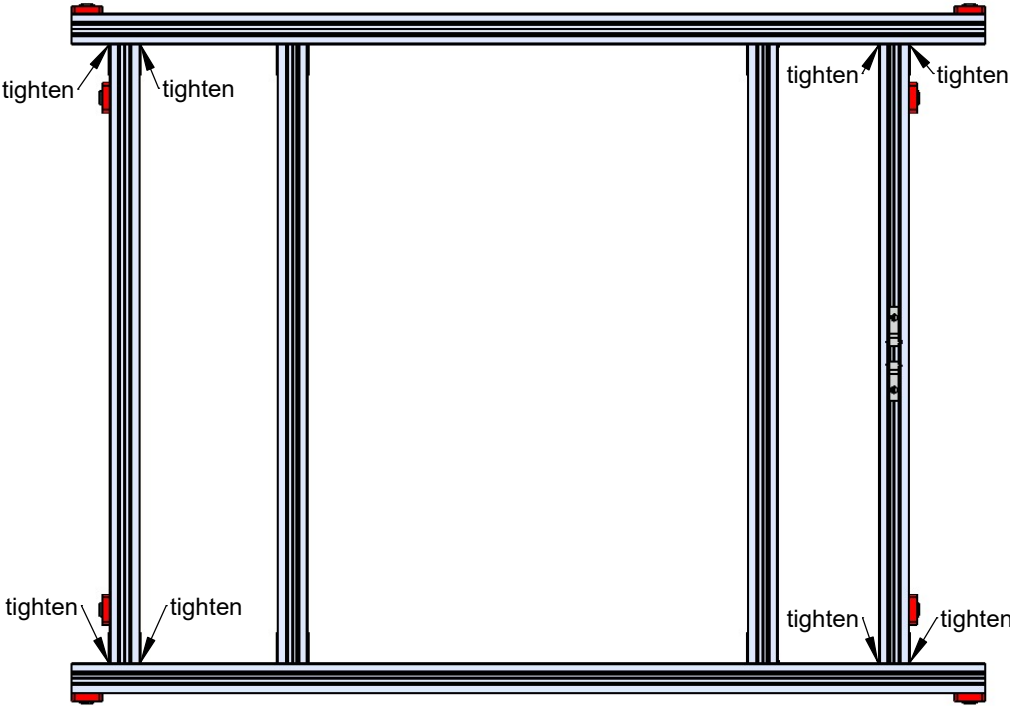| Upper/Lower Frame Registration | | |
|---|---|---|
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| | SCALE: 1:5 | SHEET 8 OF 11 |

Now tighten down the setscrews in the outer frame extrusions on the frame that is still loose. (The inner extrusions will be clamped down later.)

B

B

tighten  tighten

tighten  tighten

tighten  tighten

tighten  tighten

A

A



Lower Frame Bracket Fixturing

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SCALE: 1:5

SHEET 9 OF 11
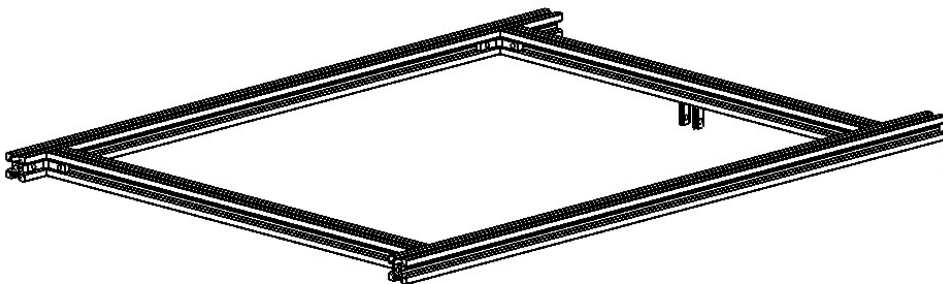
B

B

With the outer screws tightened on the lower frame, remove the temporary plates and separate the frames.
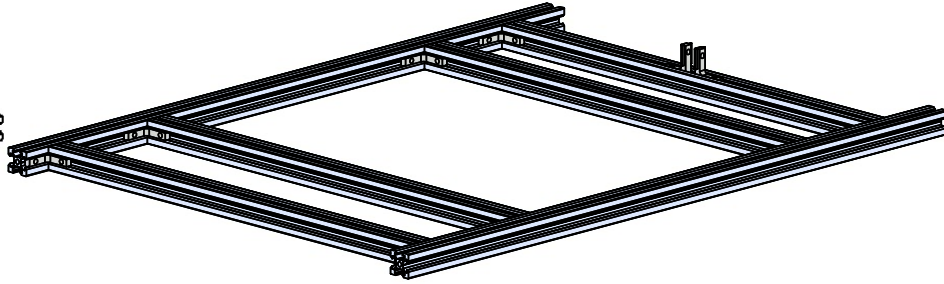
Set this one aside.

Upper Frame

Lower Frame

A

A

Separated Upper/Lower Frames

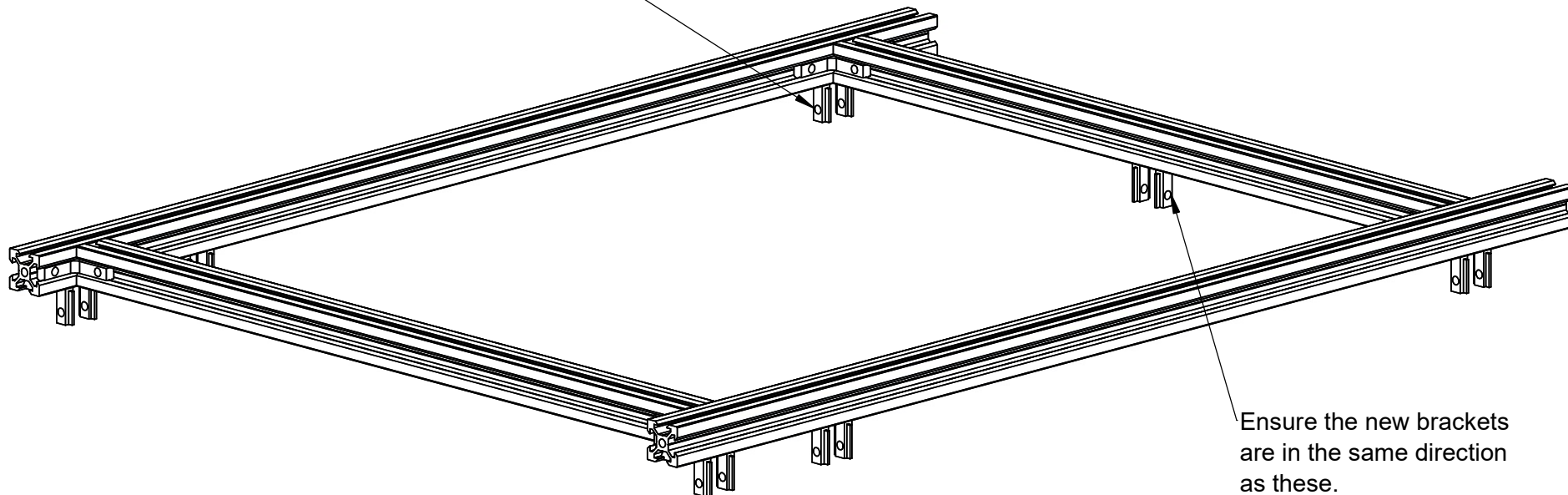| | Created by: | last edited: |
|---|---|---|
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| | SCALE: 1:6 | SHEET 10 OF 11 |

B

B

Slide 3 pairs of Inside-Corner Brackets (12 total) onto the bottoms side of each long extrusion. Loosely fasten them in the approximate locations shown just  they do not fall out.

Ensure the new brackets are in the same direction as these.



A

A

| ITEM NO. | DESCRIPTION | QTY. |
|---|---|---|
| 3 | Interior Inside Corner Bracket | 12 |
| 4 | Upper Frame Assembly | 1 |

Upper Frame Bracket Loose Assembly

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|---|---|
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| SCALE: 1:3 | SHEET 11 OF 11 |