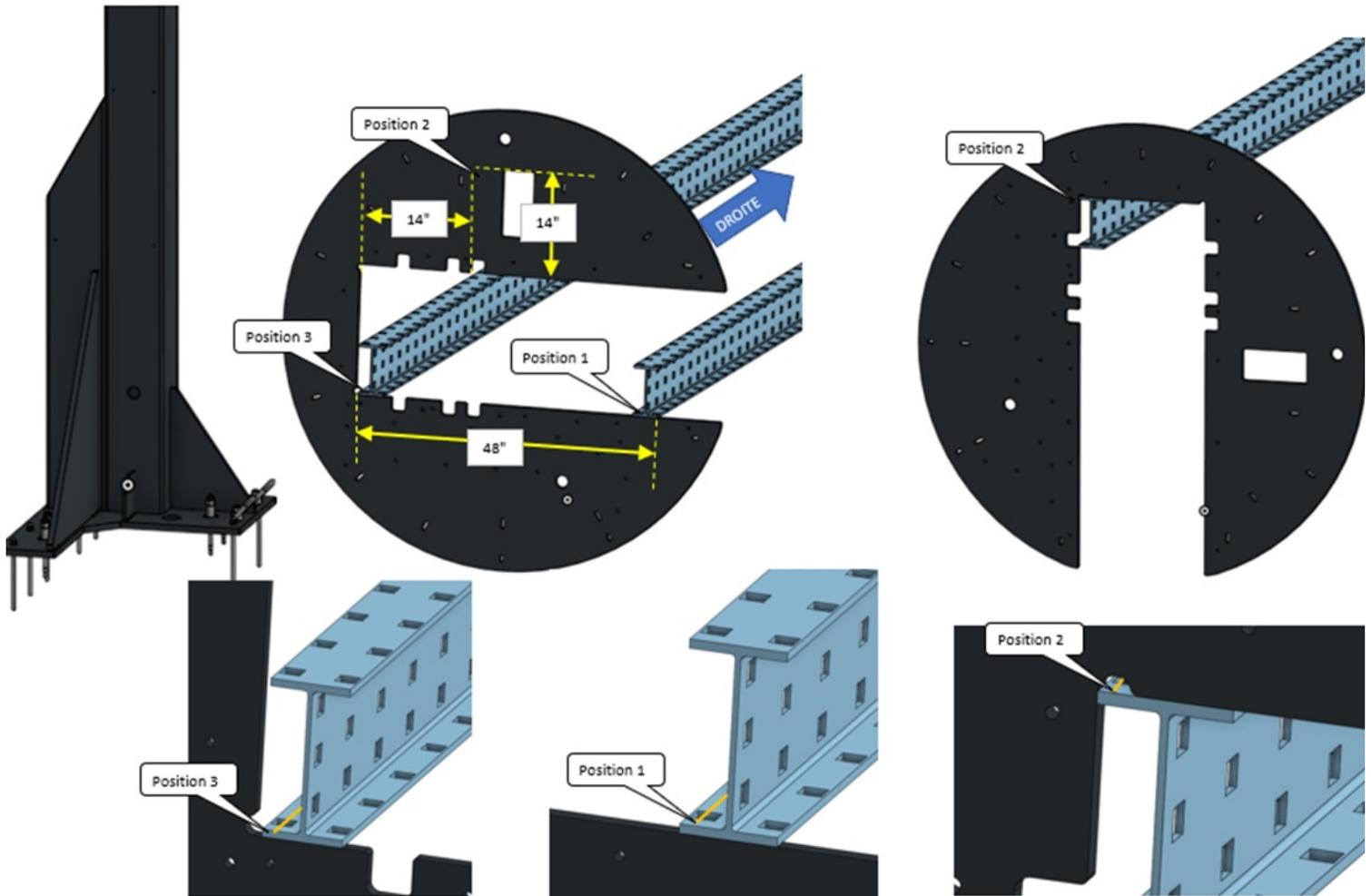


LayoutMaster: Positions calibration

Prerequisites: Laser Calibration

Mechanical preparation

- Use the same 2 beams used when calibrating lasers.
- Position the rotators not to obstruct the lasers.
- Position the 2 beams in positions 1 and 3.



Preparing the software

- Enable Calibration mode
 - Calibration On = ON
 - Using Master = OFF
 - Beam Offset calibration Y=0 and Z=0
 - Distance Between Projector info = 200 (Minimum distance between each calibration position).
 - If there is an already calibrated position near the current position, it will be replaced, otherwise a new calibration position will be created.
- Select position in H
- Make a copy of ...\\CurrentConfigs\\LayoutMaster\\Options\\CalibrationModel.xml by CalibrationModel_aammjj.xml

LAYOUT		
Beam Origin		
X	883.5	
Y	0	
Z	0	
Master Offset		
X	805	
Y	5	
Z	-400	
	Master Width	711.2
Cal. Beams Offset		
X	-785	
Y	0	
Z	0	
CALIBRATION		
Distance		
Distance Between Projector Info	200	
Distance Projector Will Update	5	
Calibration Mode		
Calibration On	<input checked="" type="checkbox"/>	
Using Master	<input type="checkbox"/>	

Position calibration

The following steps must be done with the projector centered vis-à-vis each laser except for the minimum and maximum positions.

- Bring the Canopy to its calibration position in front a laser.
- Adjust the beam offset calibration in X to have the beam in the field of view.
- There is no need to press Origin.
- Ensure that the projection plan of the 3 lasers on the 2 beams is level at +/- 1mm
 - Correct the projection heights using magnetic sheet or any other 1mm plate
- Adjust the Pan, Zoom and Roll to have the perfect 1,2 and 3 lasers on beam 1 and 2.
- If it is not possible to adjust to +/- 1mm check the theoretical values of the lasers and correct if necessary.
- Press calibrate to record this calibration position.
- Repeat for all positions to be calibrated.

Manually correct theoretical laser positions

- Identify the incorrect input by revalidating the measurements between the lasers and apply the corrections to the file:
 - P:\Projects\LAY - Layout Master\LAY-xxx ...\.TSW - Software Programming\Calibration\AGT-234 - 20210618-R02 - CALIBRATION LAY-xxx - ymmdd.xlsm
- Regenerate the CalibrationCreator file.csv and update it in C:\Program Files \AGT\LayoutMaster\Build\CurrentConfigs\LayoutMaster\Options
- Make a copy and rename CalibrationModel_aaaa-mm-dd-hhmm.
- Open the original O = CalibrationModel.xml and C = backup copy made at the beginning of this procedure.
- In C, locate one of the 3 copies of the incorrect laser and copy the following highlighted lines

```

<CompensationTableEntryModel Name="CompensationTableEntryModel" Id="f6c8b9a9-c620-4d0c-a125-cd9a61658a63" Unit="Millimeters" Versio:
<Guid>f6c8b9a9-c620-4d0c-a125-cd9a61658a63</Guid>
<LaserReferenceModel>
<LaserReferenceModel Name="13" Id="54b374de-6c98-4521-9c09-291a60766769" Unit="Millimeters" Version="1.0" VerticalAngleOfField0:
<Guid>54b374de-6c98-4521-9c09-291a60766769</Guid>
<ColorHtml>Red</ColorHtml>
<UpVector>
<Location>
<X>9480</X>
<Y>-260</Y>
<Z>362</Z>
</Location>
<Target>
<Direction>
<LeftIntersectionPoint>
<X>9480</X>
<Y>-260</Y>
<Z>362</Z>
</LeftIntersectionPoint>
<TopRightIntersectionPoint>
<X>9474</X>
<Y>510</Y>
<Z>1229</Z>
</TopRightIntersectionPoint>
<BottomRightIntersectionPoint>
<X>9473</X>
<Y>855</Y>
<Z>362</Z>
</BottomRightIntersectionPoint>
<Index>13</Index>
</LaserReferenceModel>
<LaserReferenceModel Name="14" Id="d961decd-d4be-496f-895e-6b5a8c52630c" Unit="Millimeters" Version="1.0" VerticalAngleOfField0:
<Guid>d961decd-d4be-496f-895e-6b5a8c52630c</Guid>
<ColorHtml>Red</ColorHtml>
<UpVector>
<X>9480</X>

```

- In O, locate the first of the 3 faulty lasers, replace by the lines copied from C.
- Correct the X-value(s) to be corrected.
 - CAUTION: "Location" must remain equal to "LeftIntersectionPoint." if corrected.
 - The points are in the order of positions 1,2,3.
- Copy its corrected values and apply them to the other 2 copies of the same laser.
- To save.
- Restart LayoutMaster.
- Redo the calibrations of the positions that includes the incorrect laser.

Backing up calibration files

- Once done, copy the following files:
 - C:\Program Files\AGT\LayoutMaster\Build\CurrentConfigs\LayoutMaster\Options\
 - CalibrationCreator.csv
 - CalibrationCreatorParameter.csv
 - CalibrationModel.xml
- And paste them into the AGT directory:
 - P:\Projects\LAY - Layout Master\LAY-00X - *\TSW - Software Programming\Calibration\Final Calibration y-mm-dd