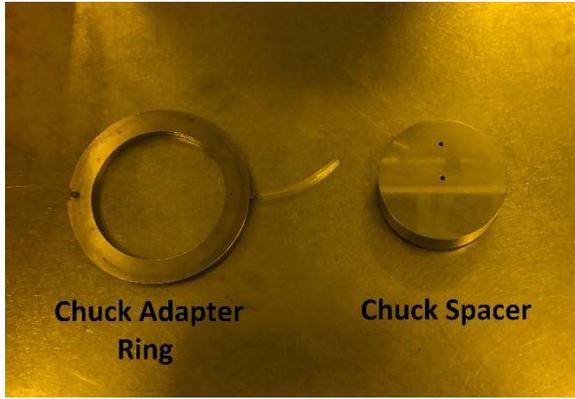


# MJB 3 IR Mask Aligner Topside/Backside Alignment Mode Conversion

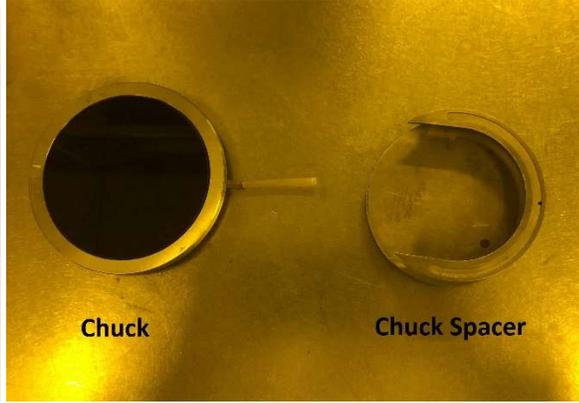
## Overview

This document describes how to switch the MJB 3 IR mask aligner between topside (visible) and backside (IR) alignment modes.

### Topside Alignment Tooling

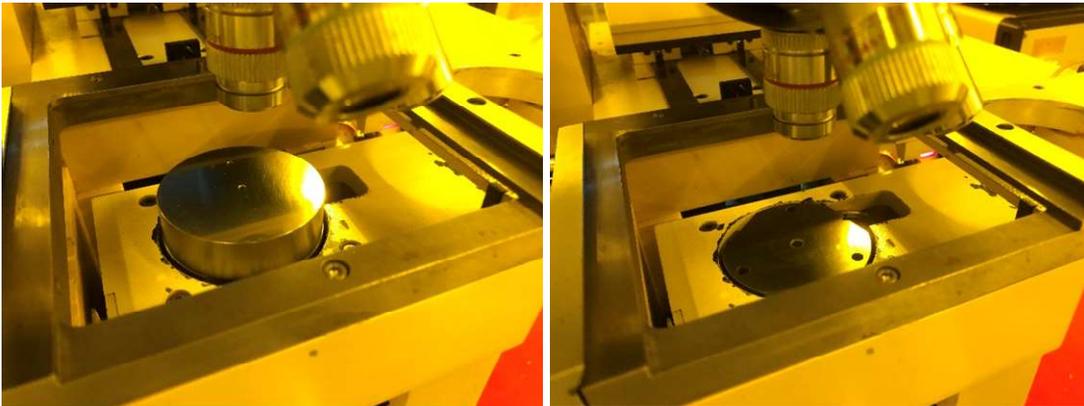


### Backside (IR) Alignment Tooling



## Switching from Topside to Backside Alignment Mode

1. With the chuck transport slide out (to the right) remove the topside alignment chuck spacer from the stage. It is held in place magnetically and you just need to pull it off.



**Take care not to hit any of the objectives while doing this!**

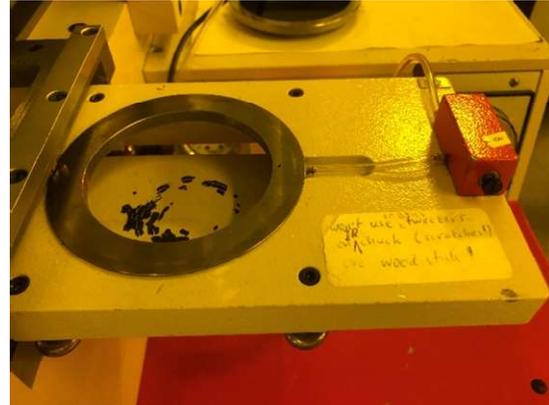
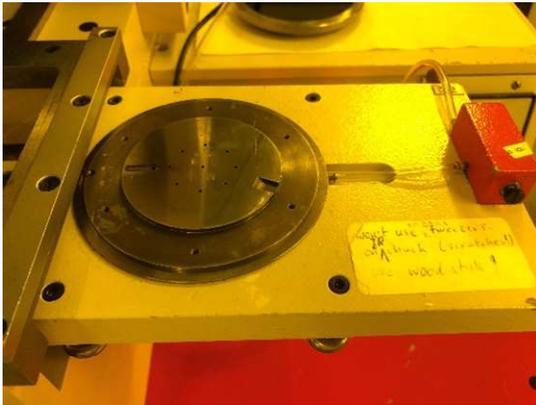
2. Place the backside alignment chuck spacer on the stage with the opening to the left and the air hose connection to the right. The bottom of the chuck spacer has a 2 positioning pins. Once you have it on the stage rotate it until it locks into place.



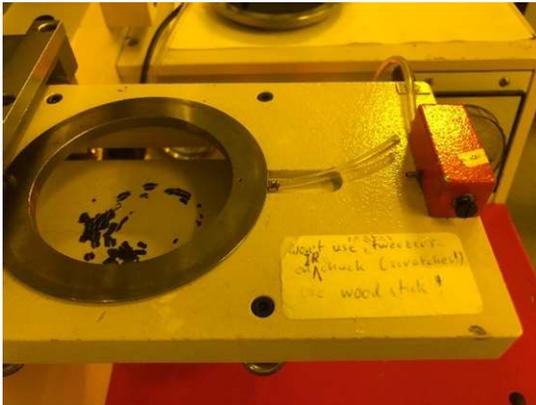
**NOTE:** The air hose connection on this chuck spacer is not used.

## MJB 3 IR Mask Aligner Topside/Backside Alignment Mode Conversion

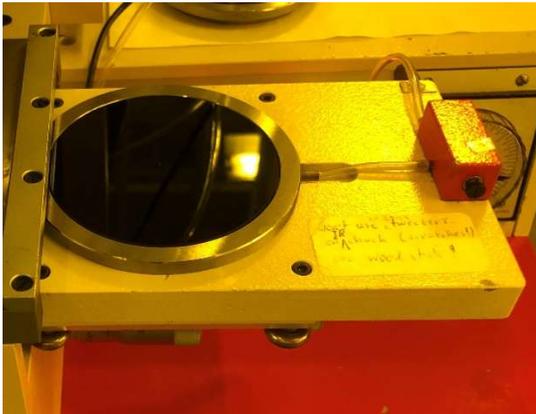
3. If a topside alignment chuck is present in the transport slide, remove it by lifting it out of the chuck adapter ring.



4. Disconnect the chuck adapter ring vacuum line from the transport slide by pulling it off of the barbed connection on the transport slide (red block). Do not remove the vacuum line from the chuck adapter ring!



5. Now remove the chuck adapter ring by lifting it out of the transport slide.
6. Insert a backside alignment chuck into the transport slide and connect its vacuum line to the transport slide.



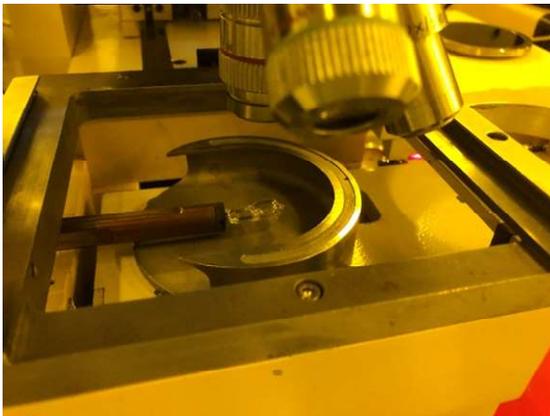
## MJB 3 IR Mask Aligner Topside/Backside Alignment Mode Conversion

7. Locate the needle valve on the right side of the stage, behind the X-axis stage micrometer. Turn the needle valve knob counterclockwise until it stops.

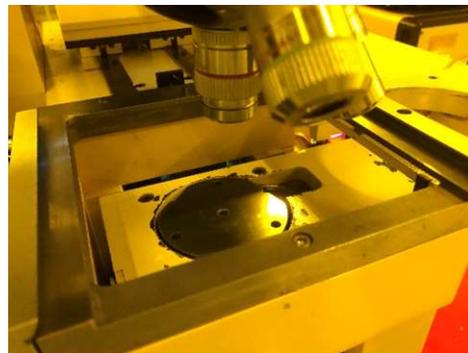


### Switching from Backside to Topside Alignment Mode

1. Ensure that the previous user did not leave the backside illuminator in the extended position. If it is (see image below), move the IR ILLUMINATOR switch on the illumination control box down to the OFF position. The illuminator should retract out of the chuck spacer, contact staff if it does not.



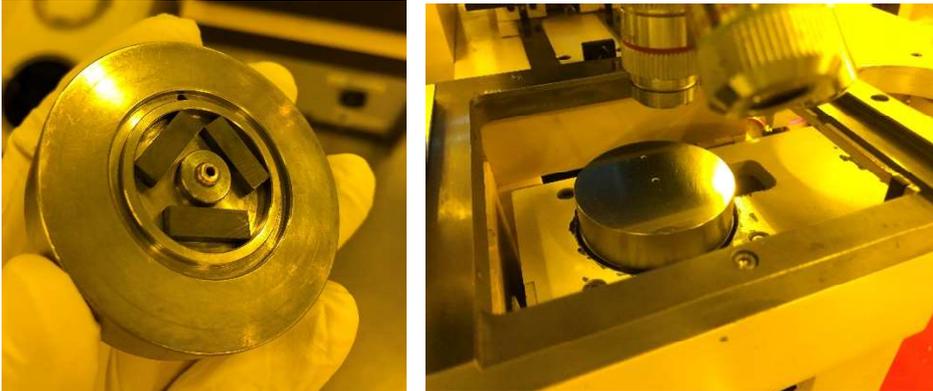
2. With the chuck transport slide out (to the right) remove the backside alignment chuck spacer from the stage by lifting it off.



**Take care not to hit any of the objectives while doing this!**

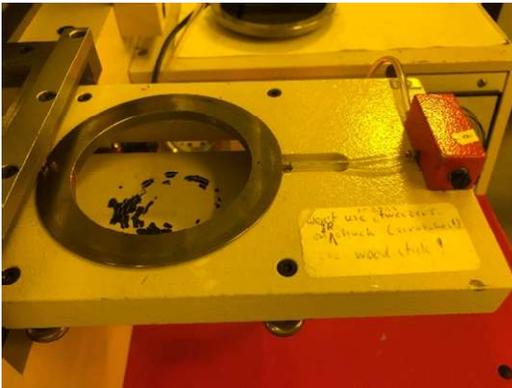
## MJB 3 IR Mask Aligner Topside/Backside Alignment Mode Conversion

3. Place the topside alignment chuck spacer on the stage. The bottom of the chuck spacer has a single positioning pin in the center and is held in place magnetically.



**NOTE:** There are 2 holes on the top of this chuck spacer, one in the center and one offset from center. The orientation of the offset hole DOES NOT MATTER.

4. Disconnect the backside alignment chuck's vacuum line from the transport slide by pulling it off of the barbed connection on the transport slide (red block). Do not remove the vacuum line from the chuck!
5. Insert the chuck adapter ring into the transport slide and connect its vacuum line to the transport slide.



6. Select the desired topside alignment chuck and insert it in the chuck adapter ring, making sure to orient the chuck so that it sits in the pin on the left side of the adapter ring.



7. Locate the needle valve on the right side of the stage, behind the X-axis stage micrometer. Turn the needle valve knob clockwise until it stops.