

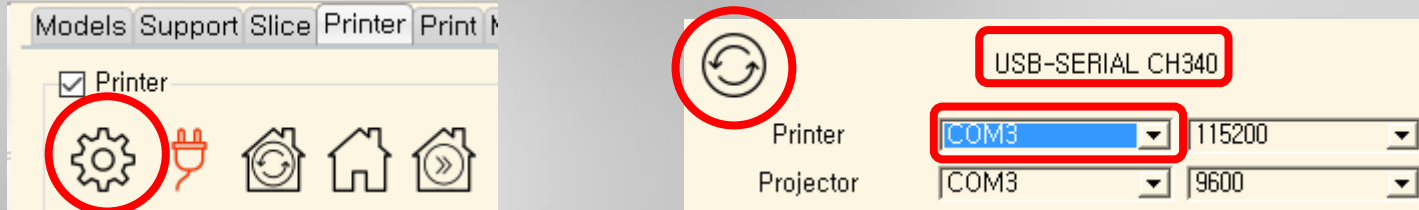
# Mono2 - Build Platform Calibration (Leveling)

Ver. 1.1

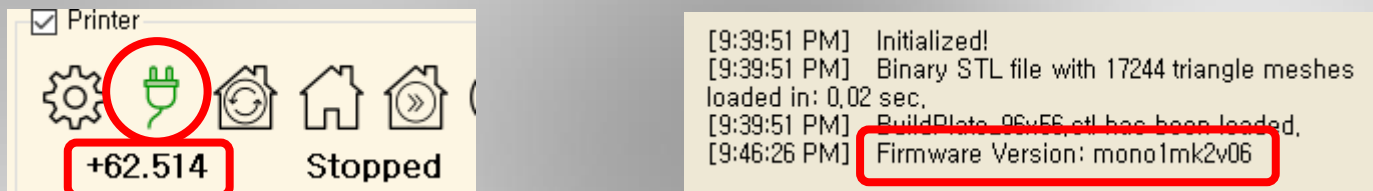
Dec. 26, 2017

# MonoWare connection

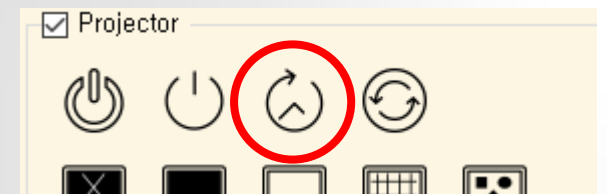
- Launch MonoWare
- Go to 'Printer Setting' and refresh COM ports



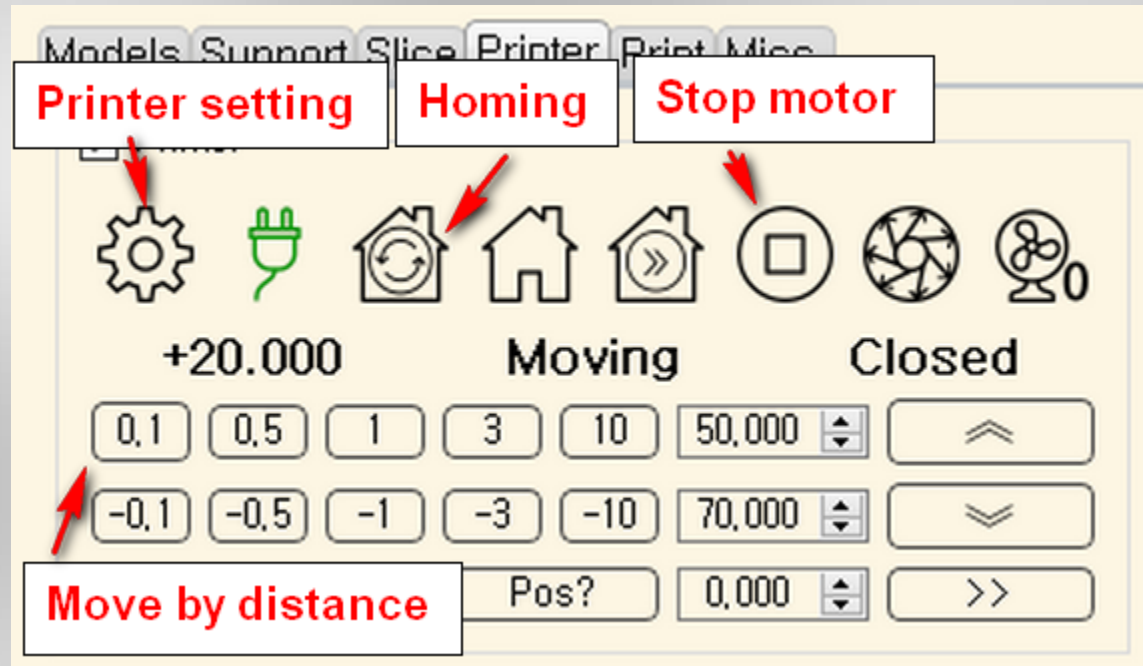
- Select a COM port that shows USB-SERIAL CH340.
- Baud rate is usually 115200. Don't need to change.
- Press OK button to save and finish the printer setting.
- Press Connect button. Then MonoWare will connect to Mono1.



- If the connection is successful, the firmware version will be displayed and the motor position will be updated. (Latest version: mono2mk1v01)
- Press 'Check projector bulb hours' button several times until the actual bulb hours are displayed on the message box. This invokes a successful connection between Mono1 and the projector.

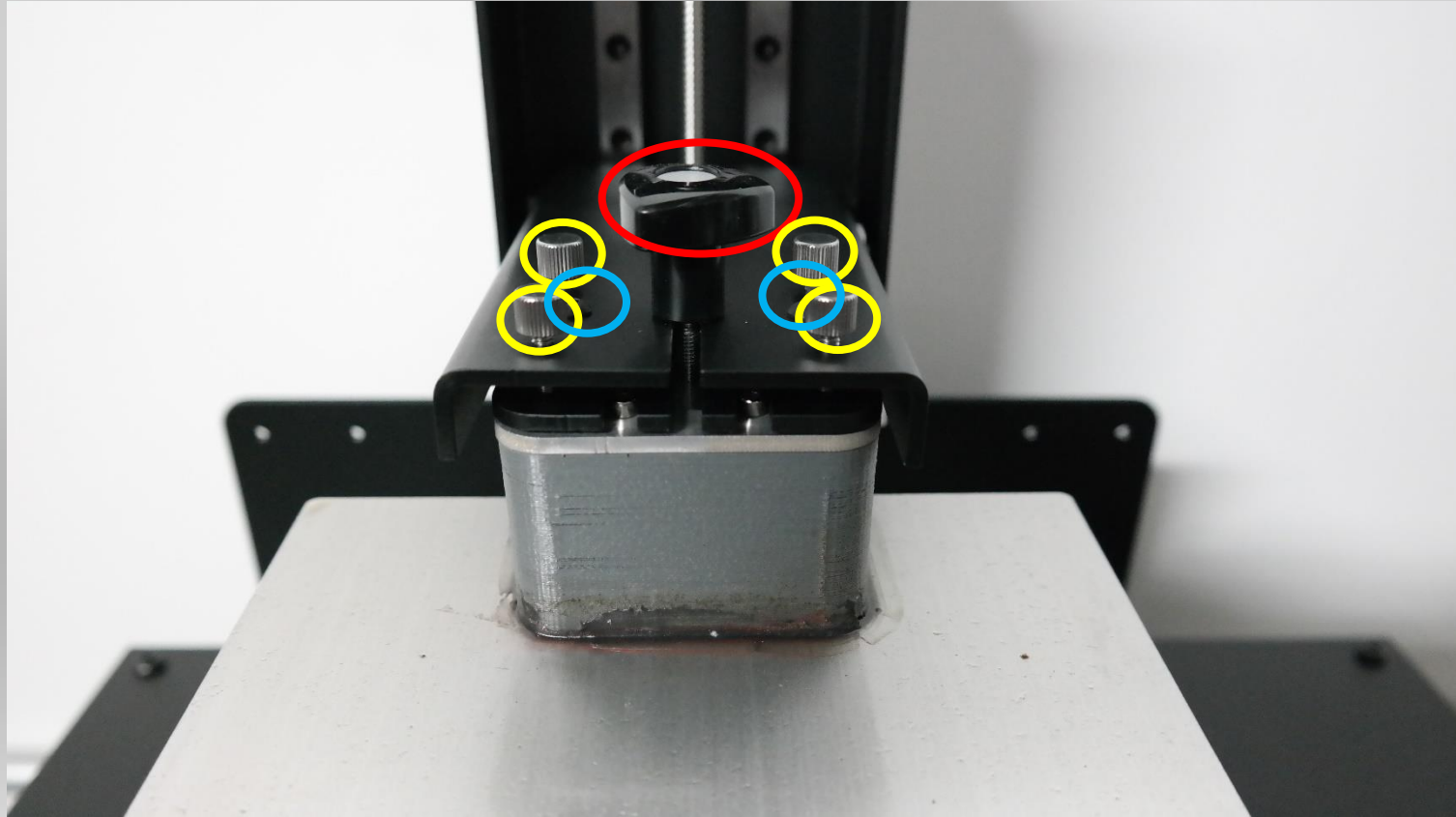


# Build platform calibration 1



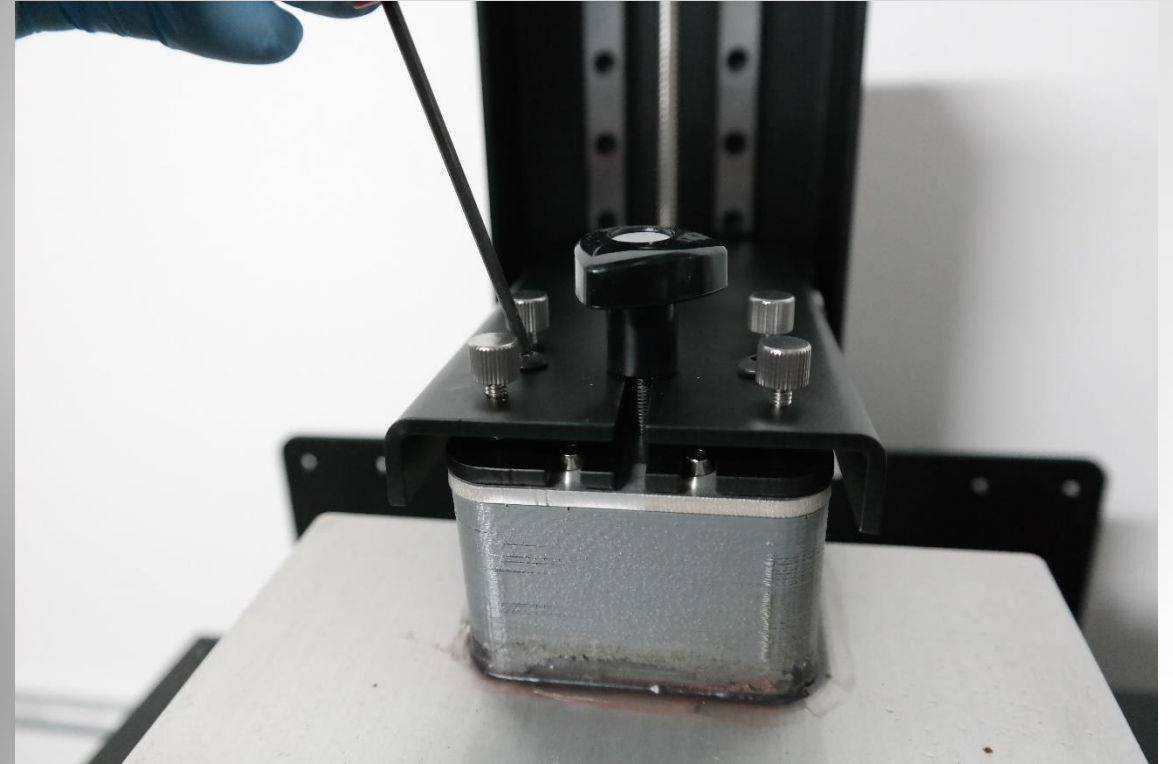
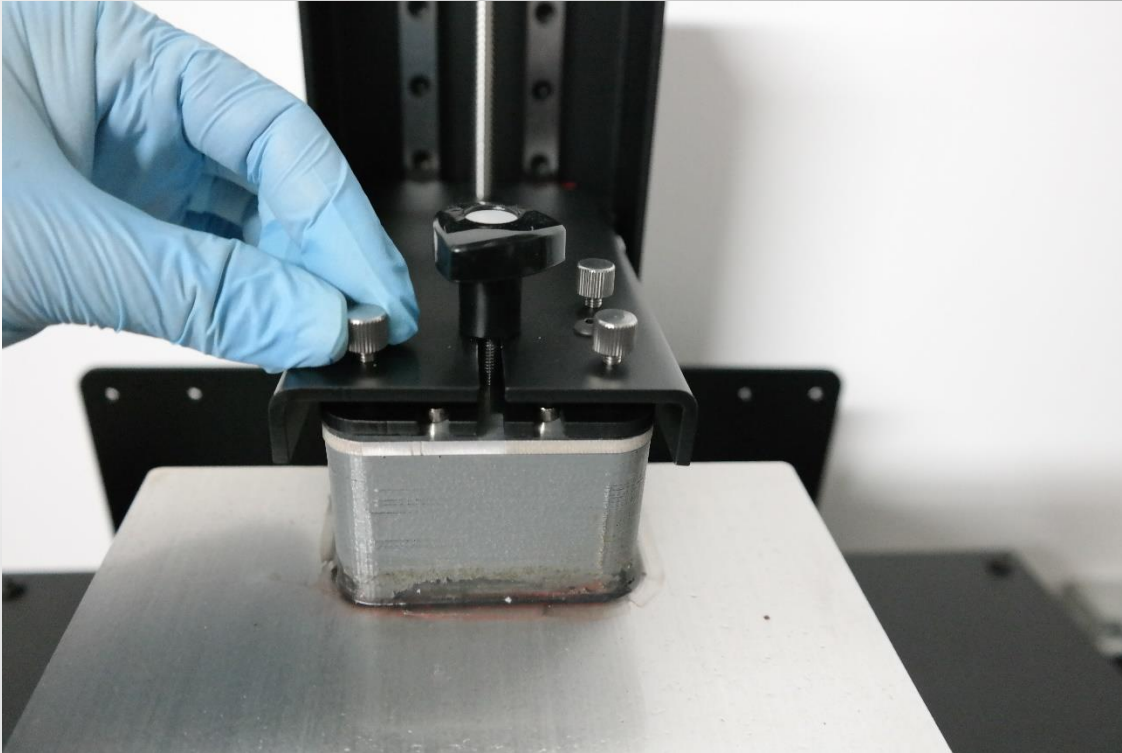
- Build platform calibration will use above MonoWare buttons
- After Mono2 is connected to PC, move the platform upward by 50 mm or higher.

# Build platform calibration 2



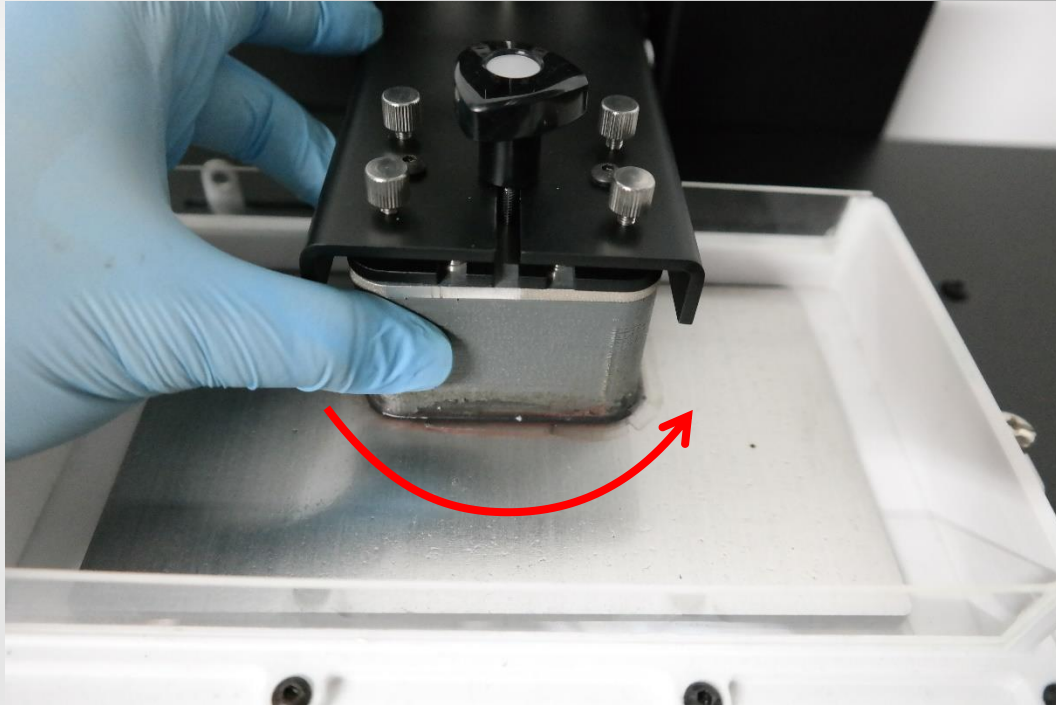
- There are 3 different kinds of screws on the build platform; 4 x m4 thumb screws (yellow circles above), 2 x m4 hex screws (blue circles), and m5 hand screw at the center (red).
- You need to operate these screws one by one : thumb screws(yellow) → hex screws (blue) → hand screw (red)

# Build platform calibration 3

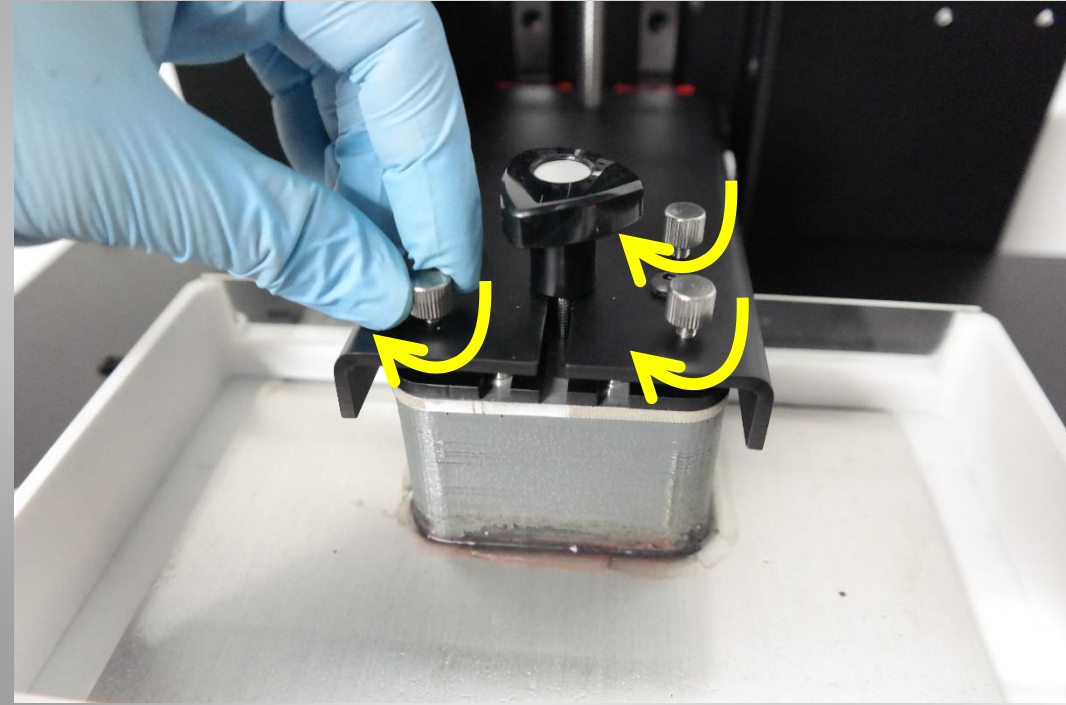


- Loosen thumb screws.
- Loosen hex screws.
- Slightly engage the hand screw.
- Caution: If you fully unscrew hex screws, the platform may fall down to the vat. Check if the platform is still engaged while loosening the hex screws

# Build platform calibration 4

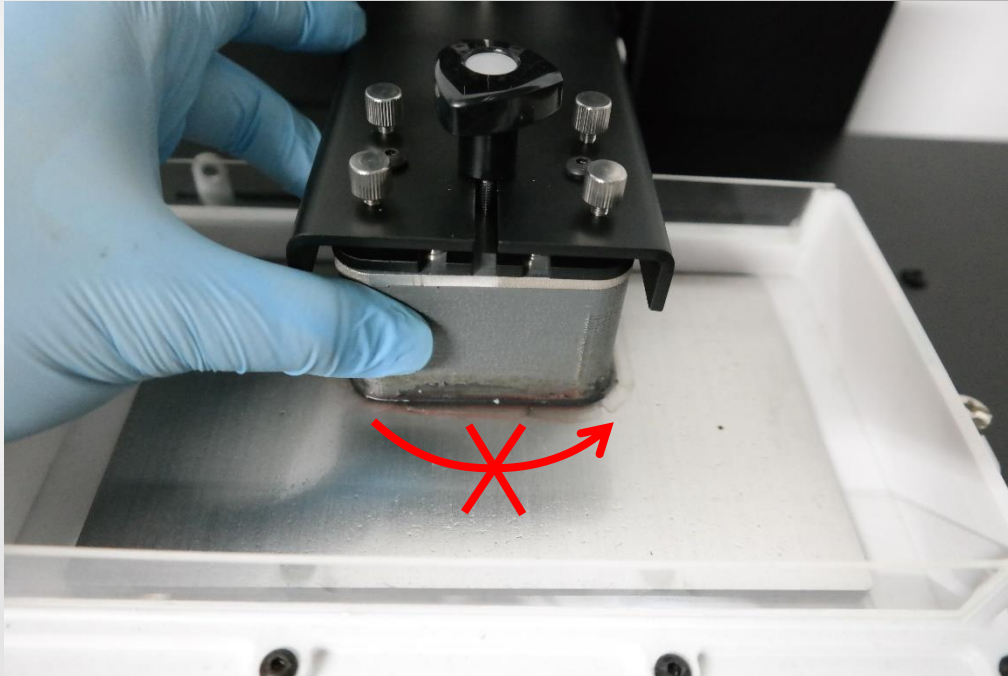


- Press 'Homing' button and wait for it is completed
- Check if the platform is touching down the FEP film and/or forcing it down further.
- After homing process, the build platform should be freely movable (there should be a small gap between).

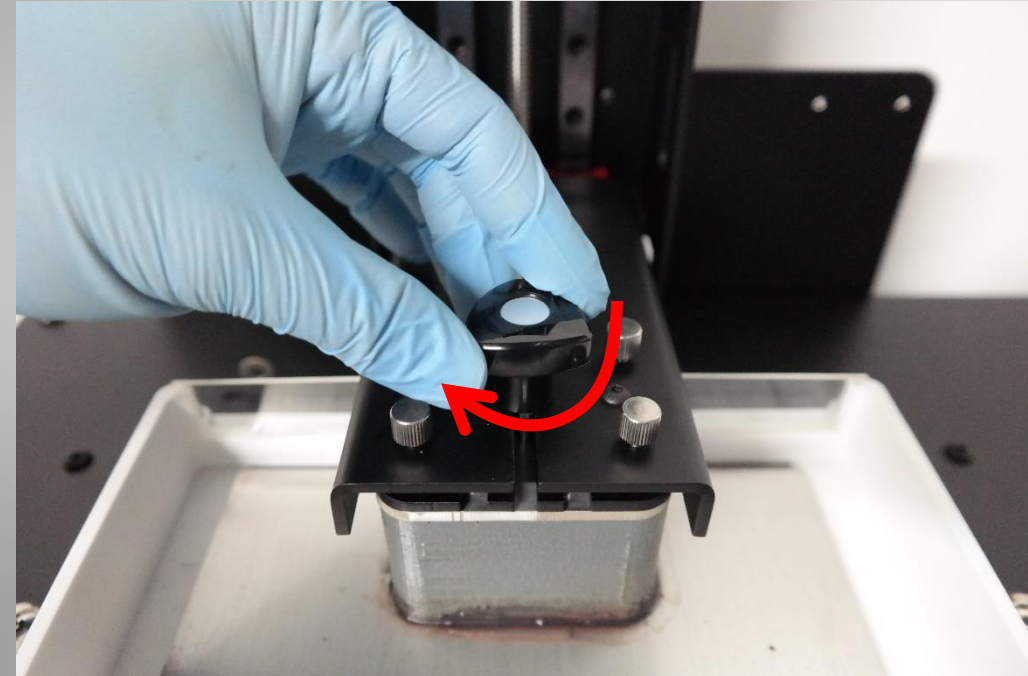


- Gently tighten the thumb screws (x4).
- Check if the hex screws are still loose during tightening the thumb screws.
- If the hex screws are locked, loosen the hex screws further and tighten the thumb screws again.

# Build platform calibration 5



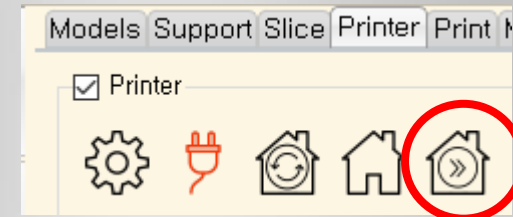
- Once the thumb screws are gently locked, the build platform is not freely movable. Do not force it to move, which makes scratches on the film
- Then gently tighten the hex screws. Do push hard. Mild force will be okay to fix the position.



- Finally tighten the central hand screw
- After all screws are tighten, the build platform is firmly fixed.
- Once you complete this calibration, use the hand screw only to remove the build platform from the build arm

# Build platform calibration 6

- Now Homing and Build platform calibration is completed.
- Move the build platform upward by 70 mm.
- Pour resin with 2-3 mm deep for Mono2 resin tank or 5-7 mm deep for Mono1 tank.
- With a well calibrated build platform, you can see the aluminum build plate through the bottom glass.
- Move down the build platform to the home position by pressing 'Go Home' button
- Now ready to print!





# Troubleshooting

Q: Why do I need the build platform calibration?

A: This is to ensure the platform surface is as parallel as possible with respect to the vat bottom, which is important to the first layer formation. If performed improperly, the first layer might not adhere to the platform, leading to failed prints.

Q: How often do I need to repeat this process?

A: When you use the same build platform and vat, you can keep the current calibration for a day or two, but re-calibration can be done quickly.

Q: Can I check how well the calibration is done visually?

A: You can remove the front cover and see the vat bottom. If the calibration is done properly, there is very little resin between the platform and the vat, so you can see the aluminum plate through the glass bottom.

# Thank you!

Send an email at [info@monoprinter.com](mailto:info@monoprinter.com) for any questions.