



BORGHUIS INSTRUMENTS Saw Laser - Instructions for use

1. *Connect the laser assembly to the power supply.* The laser assembly is designed for wiring to a 12V battery through the attached 12V->5V step-down voltage converter. To power the laser, connect the exposed ends of the red and black wires to the positive and negative posts of your mill's battery, respectively. Protect the voltage converter from the elements by enclosing it inside the battery compartment (see image) with the jack plug connector on the outside for easy access to power the laser on and off (connect and disconnect the jack plug).

2. *Attach the laser to the mill.* Next, attach the magnetic bracket to the mill. Depending on model and make of your mill, you may use the drive side wheel door, or a laser head post. After attaching the assembly, carefully move the saw head through its entire working range (up-down) to ensure sufficient clearance around the laser assembly. Ensure that the power cord has sufficient length to allow opening/removing the wheel cover and use cable ties to fix the power cord to the mill where necessary.

3. *Calibrating the laser.* Use the following method to easily calibrate the laser.

1. Load a log, make a cut, and remove the cut section from the log. Raise the saw head, bring it back to the front of the log, and lower it to return to the height of the cut just made.
2. Adjust laser height by sliding the magnetic bracket up or down until the laser line skims the top of the freshly cut edge around halfway down the log.
3. Adjust laser level by adjusting the pivot-mount screws on the bracket using a Phillips-head screwdriver so that the laser skims the freshly cut edge along the entire length of the log. To prevent damage to the mount, avoid overtightening of the screws; keep them in a range where there is fair but not excessive compression of the red rubber pivot.
4. Adjust laser rotation by rotating the magnetic bracket until the laser skims the freshly cut edge uniformly across the front of the log. The laser has been installed in the mount ~level, and only minor deviations from true vertical mounting of the bracket should be required. If additional rotational adjustment is necessary, use pliers to carefully rotate the laser module in its housing.

It is recommended to check accurate calibration daily upon startup of the mill and also intermittently throughout the day, simply by returning the saw head to the just-cut height and verifying that the laser skims the log across the cut surface. When you have established a good working position for the magnetic bracket, consider fixing the bracket to the wheel cover or post with a metal bolt, to avoid accidental displacement.

WARNING: This laser can cause permanent eye damage. Do not stare into the beam, and keep children away. Use at your own risk.