



The Opt Lasers PLH3D 6-watt laser

# MASSO Touch Controller: Changing the Settings from a Mill to a Laser and Back

**i INFORMATION:** Laser engraving/cutting is only available in MASSO G3 and MASSO Touch software versions with the Multi-Head feature. Available in version 4.02.77b onwards.

### Changing the Settings from a Mill to a Laser

1. Go to the F1 screen.
2. Change Outputs 11, 12, and 13 (see Figure 1).
  - A. Double-click on Output 11 and change it to Laser-Engraving (PWM).
  - B. Double-click on Output 12 and change it to Laser-Up/Down.
  - C. Double-click on Output 13 and change it to Laser-Air Assist.

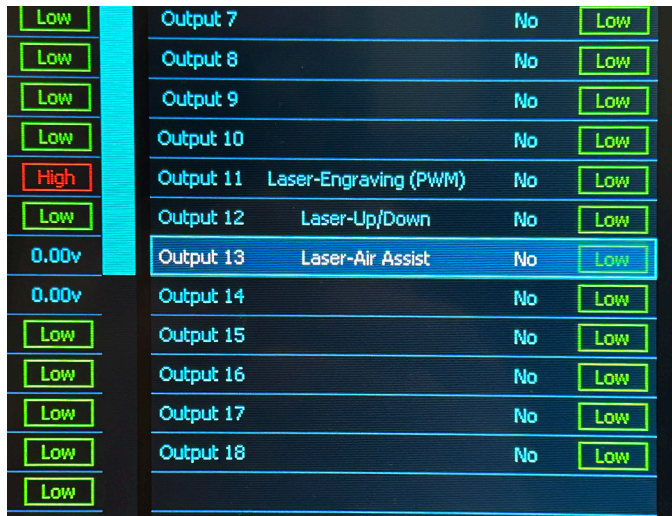


FIGURE 1

3. Change Multi-Head Settings under Machine Settings.
  - A. Double-click on Multi-Head and the setting window will open.

- B. Double-click on Laser Engraving/Cutting (see Figure 2).
  - i. Check the Enable Laser Engraving/Cutting box (see Figure 2).
  - ii. Input machine positions for X, Y, and Z if you want to or leave them as 0.0000.
  - iii. Enter a value between 1000 and 10000 in the PWM Freq (Hz) box. We enter 5000, which is the midrange of the OPT Laser. **NOTE:** The higher the PWM value, the more powerful the laser beam, and the shorter the laser life will be.
  - iv. Click on Save.

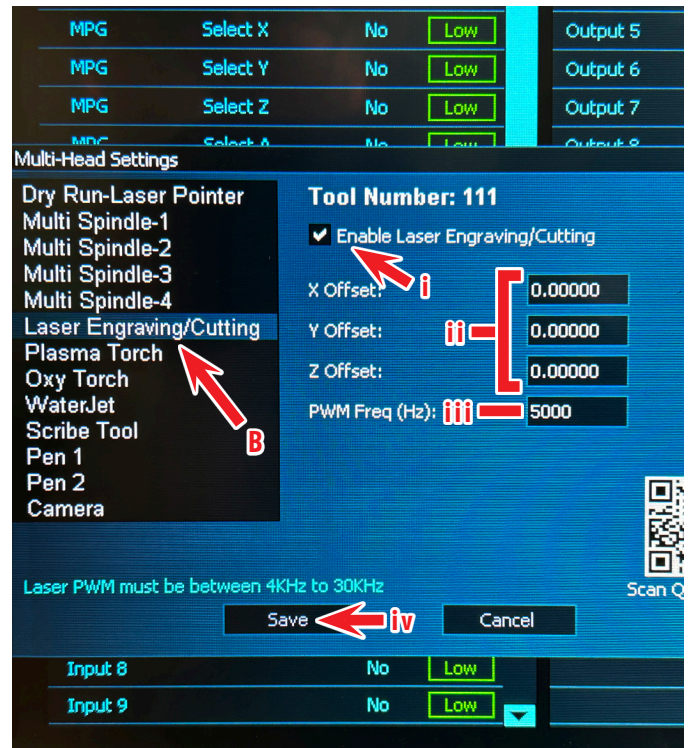


FIGURE 2

- Go to the MDI page and click on MDI CTRL+M. Then enter “T111 M06” to call up the laser. The laser is tool 111 on the tool page (see Figure 3).

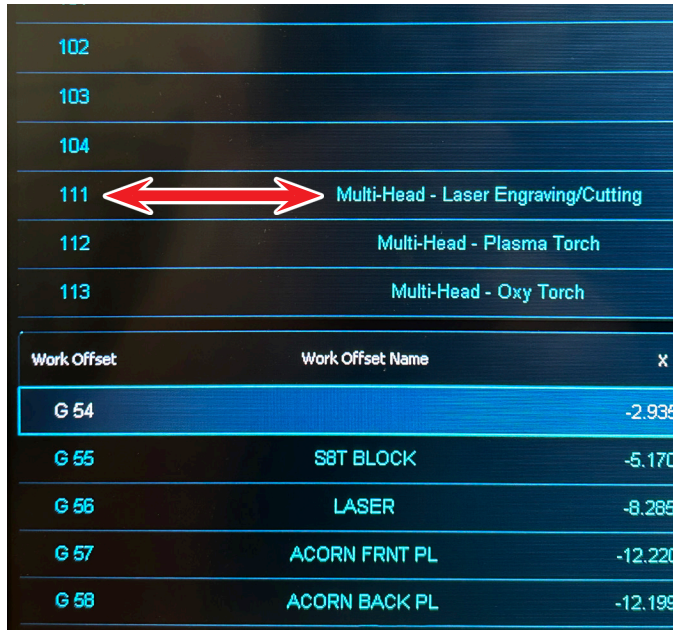


FIGURE 3

- When you call up T111, the Spindle control page will change to a Laser control page.



FIGURE 4

- Now you are set to use your laser.
  - Connect the laser.
  - Move your laser to the correct position.
  - Set the Z-axis laser height.
  - You can enter your X, Y, Z, and possible A machine locations into one of the G54 – G59 Work Offsets and use that to position your laser in your program.
  - Load the program and run it.

### Changing from a Laser back to a Mill

- Go to the F1 screen and Double-click on outputs 11, 12, and 13. Change them all to Not Used.
- Double-click on Multi-head setting and change it to Multi Spindle-1 and then click on Save (see Figure 5).



FIGURE 5

- Go to the MDI page and open the MDI command window. Call up any tool except tool 111 (For example, enter T1 M06). When the tool changes from T111 to T1, the MDI screen will change from the laser control page (see Figure 6) to the spindle control page (see Figure 7).

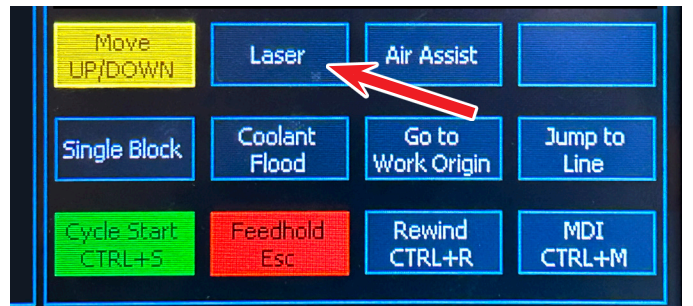


FIGURE 6—Laser control page.

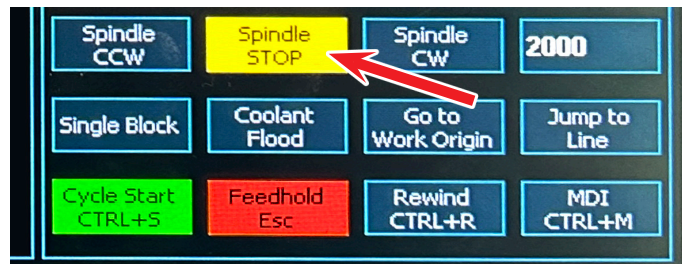


FIGURE 7—Spindle control page.

**⚠ WARNING:** Any time that you connect or disconnect the grounding cable, all power to the machine and the Controller/Drive boxes must be off. Failure to do so may result in a ground fault that will severely damage the Optical Encoder..

1. Turn the power off.
2. Remove the laser head from the column saddle.
3. Mount the headstock, motor, and speed control.
4. Connect the green encoder connector to the encoder. Make sure that all of the connector prongs are in the correct connector receptacles (see Figure 8).

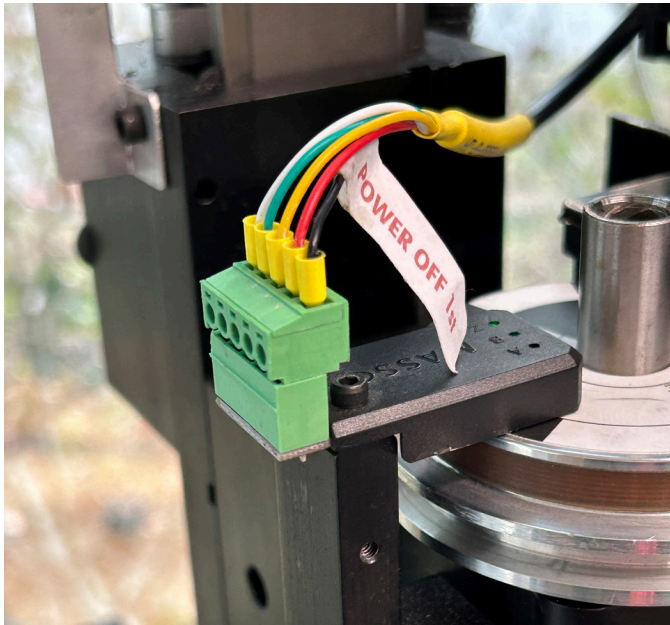


FIGURE 8—Closeup of the optical encoder connector.

5. Connect the Motor Connection and the Encoder connections. The connections shown below are factory installed. On an existing machine, you will need to install your own connectors.

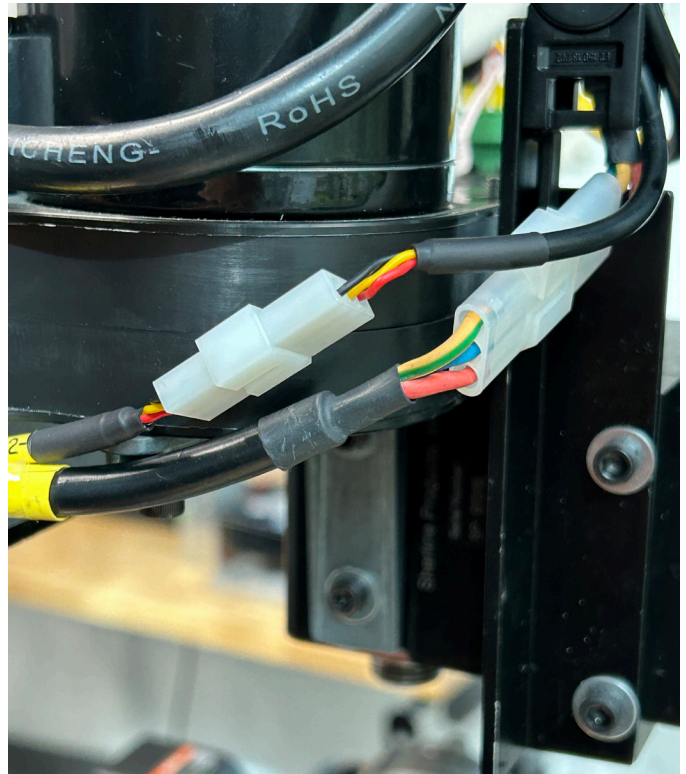


FIGURE 9—Closeup of the motor and encoder connectors.

6. Enter an RPM value, click on Spindle CW, and check the tach readout for RPM accuracy. The RPM will drift +/- 20 to 30 RPM from the entered RPM value.