

Service Bulletin 1016 Proper Wiring and Configuration for Bench Lathe Bluetooth DRO

Date

Issued August 27, 2020

Product

7550 HiTorque Deluxe Bench Lathe

Issue

Magnetic scales are connected to wrong terminal. DRO software needs additional configuration.

By convention, the axis parallel to the spindle (that is, the axis on which the carriage moves) is the Z axis, and the cross slide moves along the X axis. But this fix does more than change the names: it enables features in the software (such as diameter/radius measurements and tool offsets) that are associated with a particular axis.

Symptoms

Moving the carriage hand wheel changes the X value on the display (it should change the Z-axis value). Moving the cross slide feed handle changes the Y value on the display (it should change the X-axis value).

Electrical Safety

- Do not work on electrical equipment if you are not knowledgeable or comfortable.
- Always unplug the power before opening the devices.

Solution

To properly configure the DRO, you need to make some easy wiring changes inside the lathe and you need to make some settings in the DRO app on the tablet.

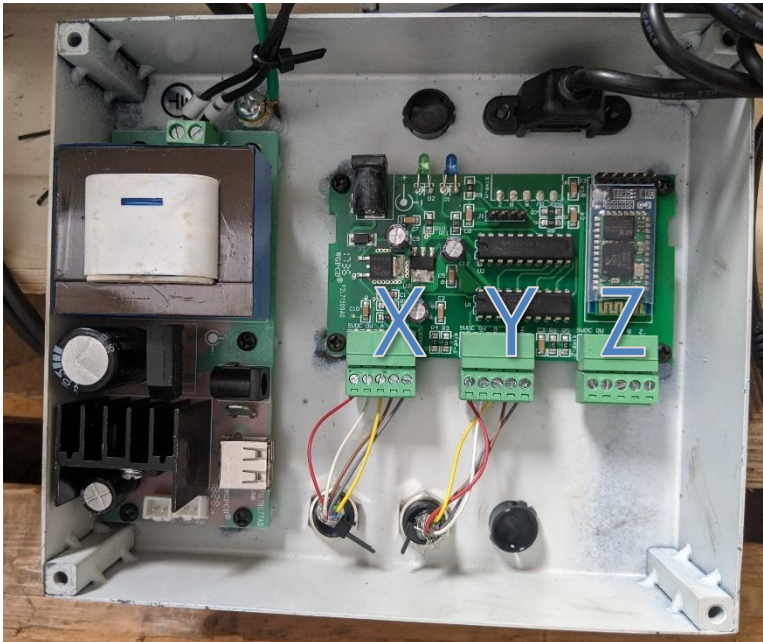
Making the Wiring Changes in the Lathe

Summary:

- Plug the carriage scale into the Z-axis connector on the transceiver. (It's currently plugged into the X-axis connector.)
- Plug the cross slide scale into the X-axis connector on the transceiver. (It's currently plugged into the Y-axis connector.)

Detailed steps:

1. **Unplug the lathe from the wall power outlet.** The box you'll be working in is "hot" even when the lathe power is turned off.
2. Remove the four screws on the back of the lathe that hold the Bluetooth transceiver cover in place. (This is the cover on the back of the headstock with a USB connector.)
3. Remove the cover.
4. Disconnect both ends of the power cable that connects the power supply to the transceiver circuit board and set the cable aside.
5. Disconnect the USB cable from the power supply.



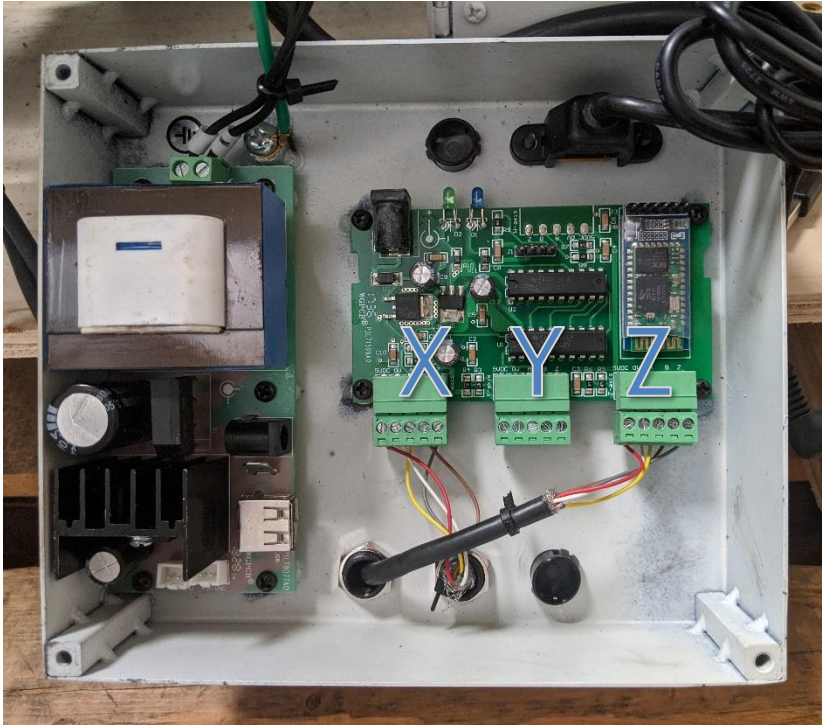
With power and USB cables out of the way, this is what you'll see.

6. Remove the connector block from the Z-axis connector and set it aside.
7. Unplug the connector block from the X-axis connector (this has the cable from the carriage scale) and plug it into the Z-axis connector on the transceiver circuit board.

Note: To get enough cable to reach the Z-axis connector, you might need to loosen the cable strain reliever (unscrew from the outside of the cover) and pull more cable through the hole. You might also need to

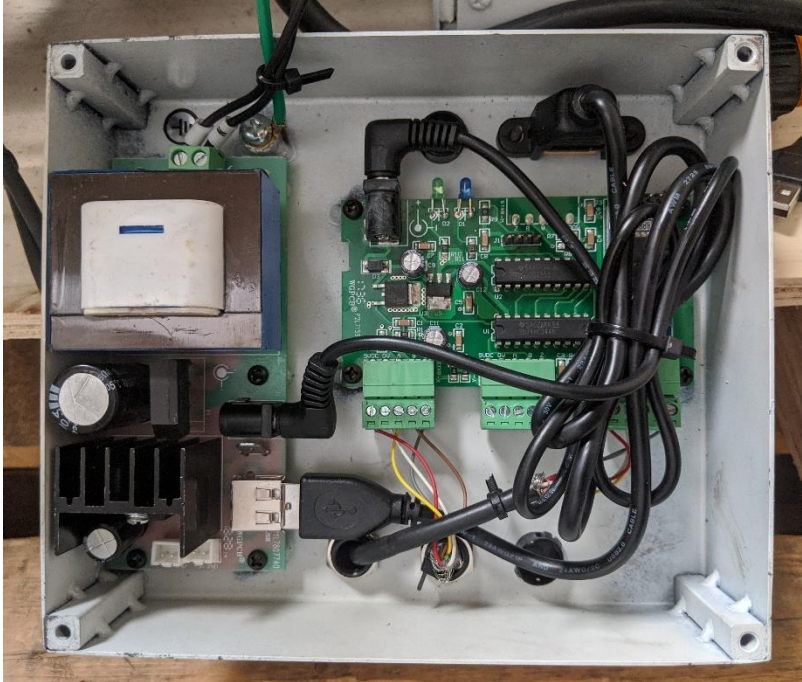
cut a cable tie. When you have enough cable to reach the connector, retighten the strain reliever.

8. Unplug the connector block from the Y-axis connector and plug it into the X-axis connector on the transceiver circuit board.



Connect the carriage scale to Z and the cross slide scale to X.

9. Plug the unused connector block from step 6 into the Y-axis connector.



Power and USB cables replaced, ready to reattach.

10. Reassemble everything by reversing steps 5 through 1.

Configuring the DRO App

On the tablet you use as a DRO display, open the SIEG DRO app. Tap More (the three dots in the upper right corner of the screen) and then tap Settings. On the Settings page, make the following changes:

- Machine type: Lathe
- Under X Axis
 - Axis CPI: 5080
 - Invert Readout: check
- Under Y Axis
 - Enable Y Axis: remove check
- Under Z Axis
 - Axis CPI: 5080

