



# Adjusting the RPM on the Sherline Speed Control and the Isolator Board for the Acorn Controller

## About the Speed Control-Isolator Board Adjustments

In order for the Sherline speed control to send enough voltage to the DC motor to enable it to reach the max RPM of 2,800, the isolator board must be sending the maximum voltage of 10 VDC to the speed control when the Acorn control is sending the command (M03 S2800).

### ⚠ WARNING

**These adjustments will be done with the power on. Be careful and be sure that the electrical components are not making contact with you or any of the other electrical components.**

### Adjusting the "MAX" Voltage Output of the Isolator Board

1. Remove the Acorn Controller cover to gain access to the isolator board.
2. You will need a multimeter to check the output voltage.
3. Connect your multimeter cables to the wire connectors, #9 and #10, on the isolator board (see Figure 1).

**NOTE:** Be careful because the control will have power during the adjustment procedure.

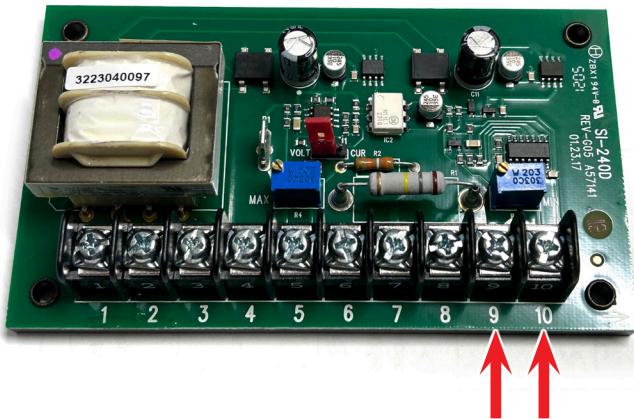


FIGURE 1

4. With the Acorn control on, go to the MDI screen and input (M03 S2800). Then click on Cycle Start.
5. Read the voltage across #9 and #10.

6. On the isolator board, there is an adjustment screw for MAX voltage on the blue W203 component shown below in Figure 2. Turn the screw clockwise to increase the output voltage.

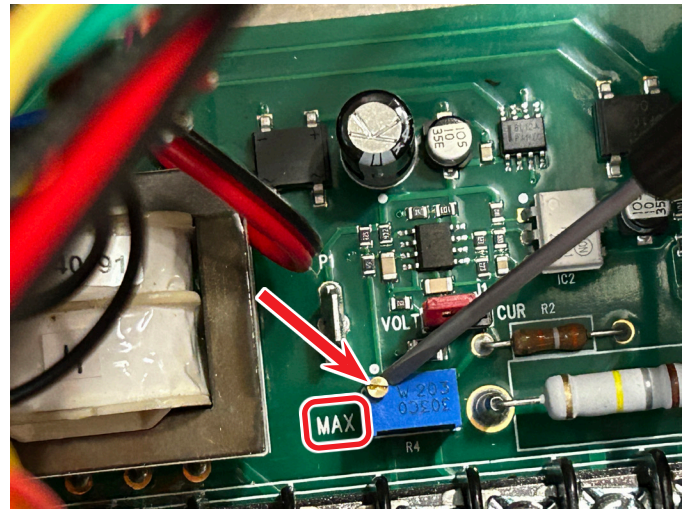


FIGURE 2—MAX adjustment screw on the isolator board.

7. Once the output voltage is set to 10 VDC on the MDI page, enter (M05) to turn the spindle off. Now you can turn the power off and close the control housing.

### Adjusting the Speed Control as Needed

1. Read the [wiring isolator board inst.pdf](#) for instructions on wiring the *Centroid Acorn Isolator Board to the Speed Control*.
2. With the speed control open.  
**CAUTION:** Be careful, because the speed control will have power during the adjustment procedure.
3. With the Acorn control on, go to the MDI screen and input (M03 S2800). Then click on Cycle Start.
4. On the control screen, you will see the actual RPM.
- 5a. Use a Phillips head screwdriver and turn the white adjustment screw on the "ACCEL" pod to change the maximum RPM (see Figure 3). This pod is very

sensitive. A slight adjustment will cause an increase or decrease of 100 RPM.

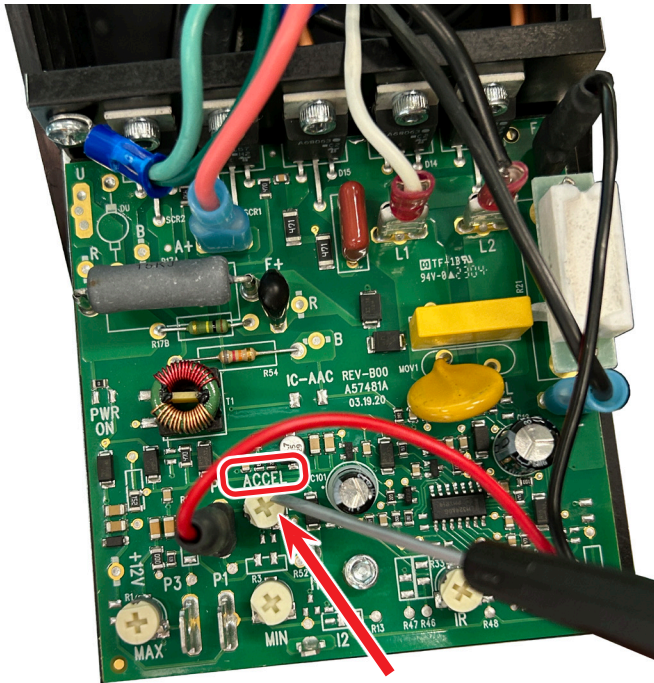


FIGURE 3—ACCEL pod adjustment on the Sherline speed-control unit.

5b. On some of our older speed control units, the maximum RPM is adjusted using the “MAX” pod. If adjusting the ACCEL pod does not change the RPM, then try turning the MAX pod. Turning the screw clockwise will increase the RPM (see Figure 4).

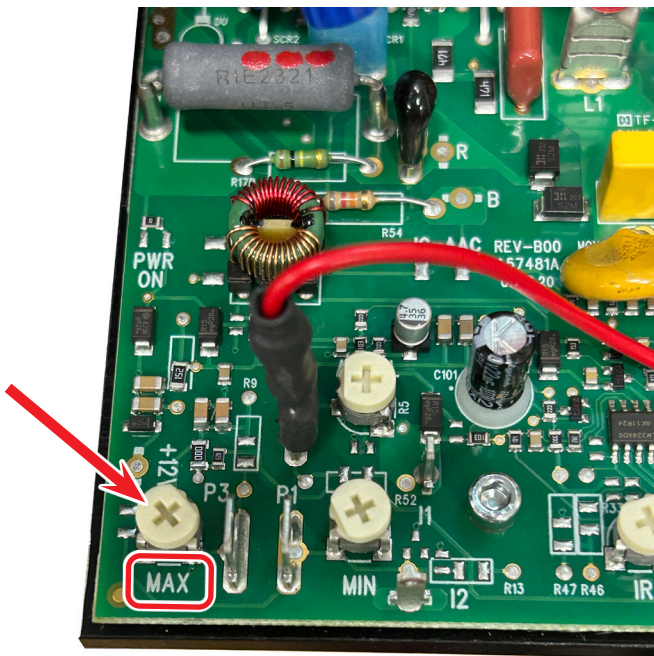


FIGURE 4—Location of the MAX pod adjustment in the event the ACCEL pod doesn't change the RPM.

6. Once the RPM are set at approximately 2,800, on the MDI page enter (M05) to turn the spindle off. Now you can turn the power switch off, Unplug the power cord, and close the control housing.
7. Once the speed control is reassembled and mounted, plug in the power cord, and turn on the speed control power switch. Then use MDI and input (M03 S2800) and check the max RPM again. Readjust if necessary.

Thank you,  
Sherline Products Inc.