CAUTION—ELECTRICAL HAZARD!
Do not make adjustments to the circuit board when the electrical cord is plugged in. Unplug from wall before opening the protective housing.

SHERLINE PRODUCTS
INCORPORATED 1974

DC Motor Wiring

P/N 45450 (Leeson), 45470 (Hill House), 33050, 33060, 33070

Wire colors for Sherline DC motors

Sherline DC motors are connected to the speed control circuit board as shown in Figures 1 and 2. Older motors had an orange wire for the thermal overload sensor. On the newer motors that wire is now a light tan color. Also, for many years the ground wire was green. The newest motors may have a ground wire that is green with a yellow stripe. With the exception of these slight color changes, they are all wired in the same manner as the older DC motors.

The wiring colors noted below supercede the colors shown in the Sherline Assembly and Instruction Guide (7th Ed.)

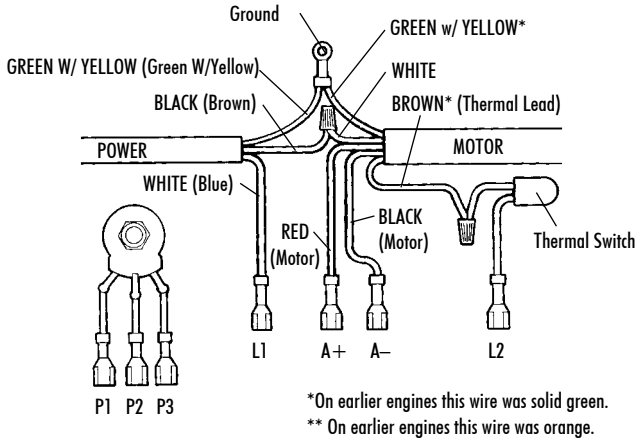

FIGURE 1—Wire colors for Sherline motor connections starting in late 2010. USA colors listed first, European colors in parenthesis if different.

Identifying the motor manufacturer

Sherline purchases motors from two different suppliers. When ordering a replacement motor, it is best to order the same brand you had before. This will not require any readjustment of the potentiometers on the speed control circuit board. The manufacturer's lable will either say "Leeson" or "Hill House." Some of the older Hill House motors may be labeled "Protech" but the settings will be the same. If you are changing from one manufacturer's motor to another, adjust the IR and CL potentiometers as shown in the next column.

Sherline Motor Part Numbers:
45450—Leeson
45470—Hill House

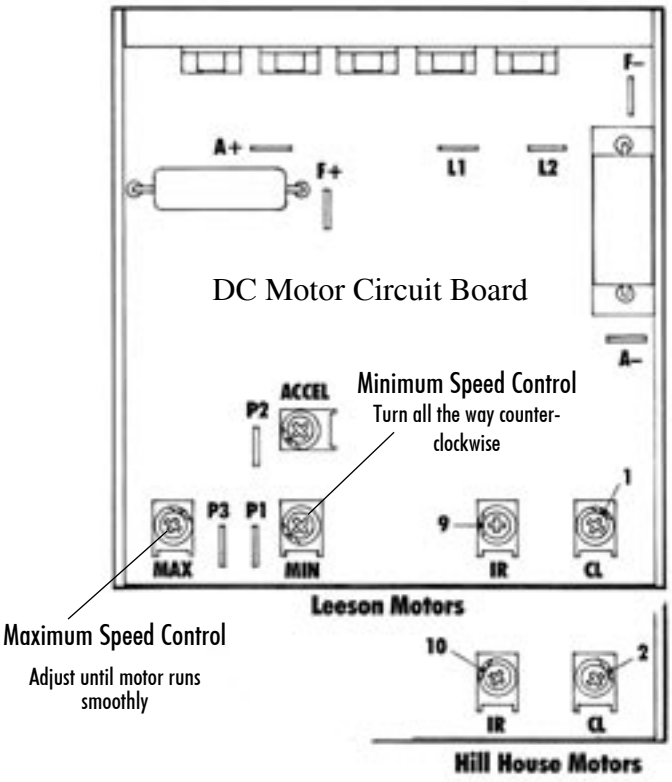

FIGURE 2—Location of terminal connectors and ajdustable potentiometers on the speed control circuit board.

Speed adjustment

Slightly different adjustments of the "IR" and "CL" potentiometers are suggested for Leeson and Hill House brand DC motors as shown above. The position numbers shown around the pots refer to positions of hands on the clock; i.e., 9 o'clock and 1 o'clock or 10 o'clock and 2 o'clock. If you are purchasing an assembled motor and speed control unit, these adjustments have been made for you at the factory; however, if you are purchasing only a replacement motor and connecting it for the first time to a Sherline speed control, you may have to adjust potentiometers as shown above to conform with the brand of motor you have received.

Joe Martin, President and Owner
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