

## Installation - 4503 Mini Mill Control Box Assembly

This Mini Mill Control Box Assembly kit is a complete replacement for the motor controller box and mill control box, with all components, for the SIEG X2 family of mini mills including the X2, X2D, X2L, X2LF, and X2P. LittleMachineShop.com has parts diagrams and replacement parts for the following common models in this family.

- Bolton XJ-9510 Mill/Drill
- Clarke CMD300 Milling Drilling Machine
- Grizzly G8689 Mini Milling Machine
- Hare & Forbes HM-10 Mill/Drill
- Princess Auto 8507667 Powerfist Mini Mill
- Micro-Mark 82573 MicroLux Milling Machine
- BusyBee CX605 Craftex Mini Mill
- Cummins (Tools Now) 7877 Mini Mill
- Eastwood 32498 Mini Mill
- Harbor Freight 44991 Central Machinery Mill/Drill
- Homier 03947 Speedway Mini Mill
- Northern Tool 49657 KLUTCH Mini Mill
- Penn Tool Co XJ-9510-1 Precise Mini Mill
- Travers Tools OT2213 OTMT Mini Mill
- LittleMachineShop.com 4962 SIEG Mini Mill
- WEN 33013 WEN Mini Mill

Using the Harbor Freight 44991 Central Machinery Mill/Drill for reference, this kit contains parts listed on the machine drawing as numbers 69 (Controller Box) and 111 (Control Box) and all their components.

To see this drawing or any of the other models listed above, visit our parts page.  
<https://littlemachineshop.com/products/search.php?tabName=Parts>

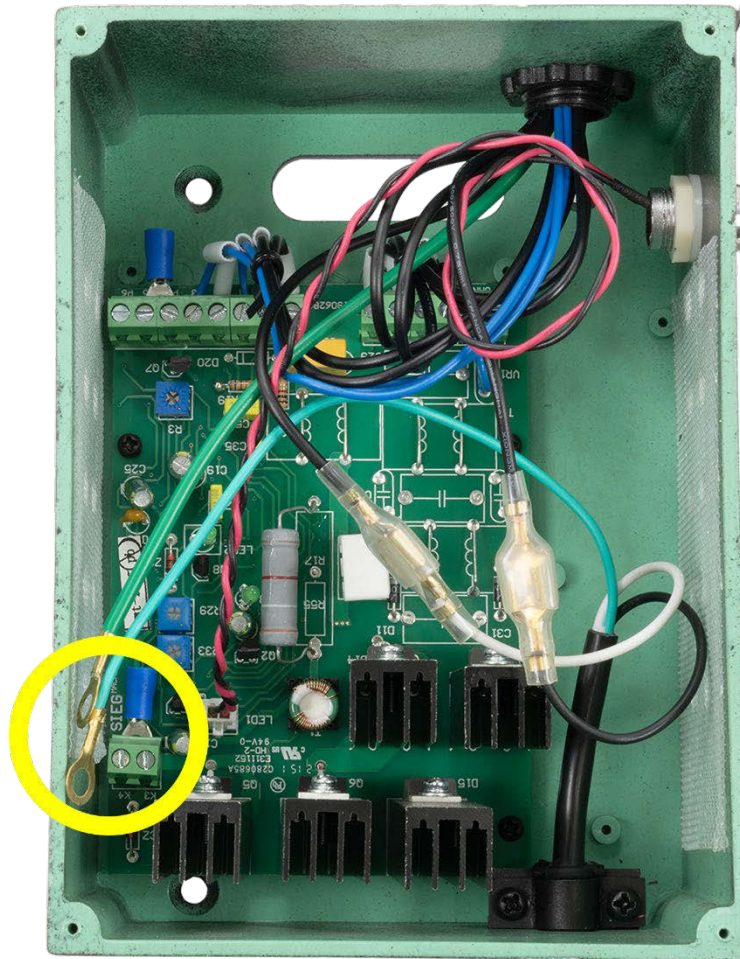
## Installation

The kit comes fully assembled. One only needs to mount the controller box to the back of the column, the control box to the headstock and connect the wiring from the motor to the control box.

### Controller Box

The controller box contains the motor controller board. It is mounted to the column with four M5x8 countersunk flathead Phillips machine screws (not included in kit, use the screws that came with your mill).

1. Remove the front plate and mount the box to the column.
2. Connect the two green ground wires to the two screws on the column by way of the long oval opening cut into the box.



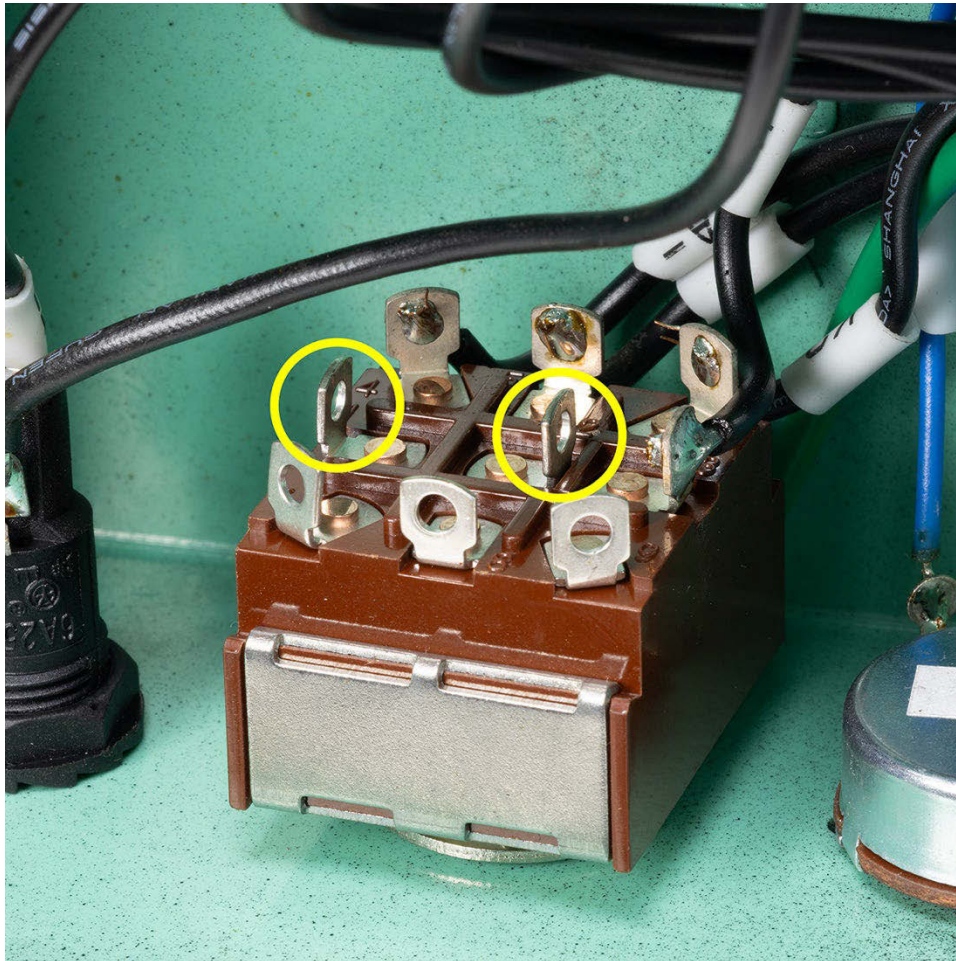
Control box showing two green ground wires that need to be attached to the mill column.

3. Reattach the front plate.

## Mill Controls Box

Mount the control box to the headstock using three M5x8 button head Phillips machine screws (not included in kit, use the screws that came with your mill).

1. Remove the front plate being careful to open the box without putting stress on any soldered wires.
2. Attach the power from the mill motor to the On/Off (1/O) switch in the control box using the two open terminals in the center row.



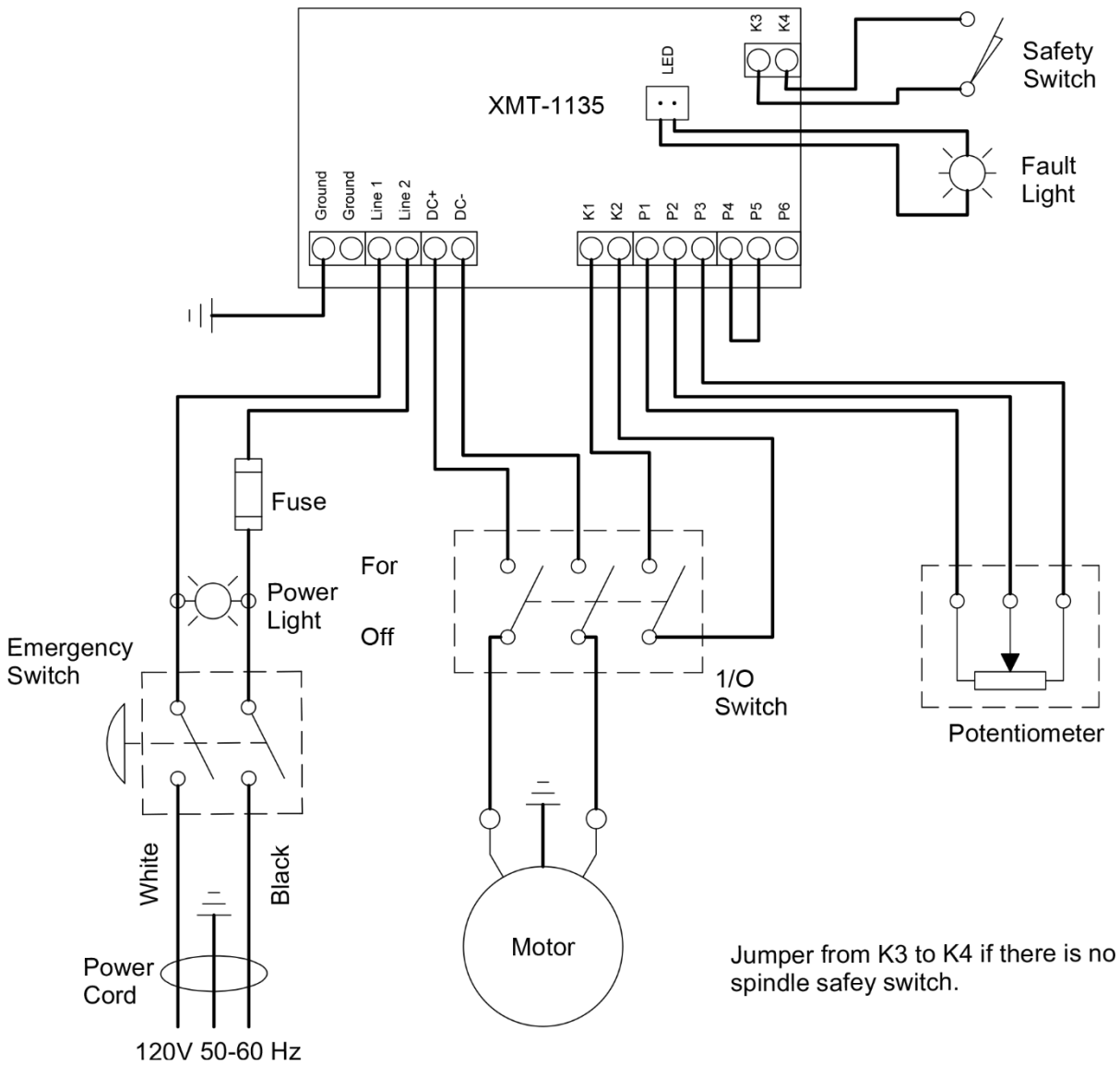
The two terminals are shown in the middle row above and are open.

3. Reattach front plate.

## Reference

For reference and troubleshooting, the wiring and connections information is provided below.

### XMT 1135 Wiring



## XMT Connections

Connector	Function	Notes
L1	120V 50-60Hz Power in hot (black)	AC power input connections.
L2	120V 50-60Hz Power in neutral (white)	
A-	DC output negative	DC motor output connections.
A+	DC output positive	
K1	Current overload interlock	Connection must be broken and then reconnected to restart after torque overload.
K2	Current overload interlock	
P1	Potentiometer 12V source	Speed control potentiometer connections.
P2	Potentiometer splitter voltage	
P3	Potentiometer 12V sink	
P4		
P5		
P6		
K3	Safety interlock	Terminals must be connected for the motor to run. Use for safety guard switches, limit switches, and E-stop switches.
K4	Safety interlock	
LED1	Fault light	LED is on when current overload fault has occurred.
LED1	Fault light	