

Boldstar Technical, LLC

Installation and Troubleshooting Manual
for Home Depot Security Keypads



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1 Panel Saw/Tile Cutter/Pipe Threading Machine problem solving (New Install)

1.1 Normal Operation

The red light on the keypad will be lit whenever power is connected. Enter the security code into the keypad followed by the '*' key (Example: 1234*). The Start/Stop button will illuminate and the system has now begun timing 5 minutes. To start the equipment PULL the Start/Stop button. When finished PUSH the Start/Stop button to cancel time and stop the equipment.

1.2 If the keypad red light is OFF

Step 1) Check that the DC Power Supply (Figure 1) has both the red and green lights illuminated. If the green light is ON but not the red then service will be required, contact BoldStar Technical.

Step 2) Reset both circuit breakers inside the panel, see Figure 2.

Step 3) Measure the supply voltages at the input terminals (across N to L1, and N to L2) both should be 120VAC. For the Panel Saw L1 to L2 should measure 208VAC.

Step 4) On the DC Power Supply (Figure 1) make sure there is a small jumper placed across JP2 ("On for 24V").

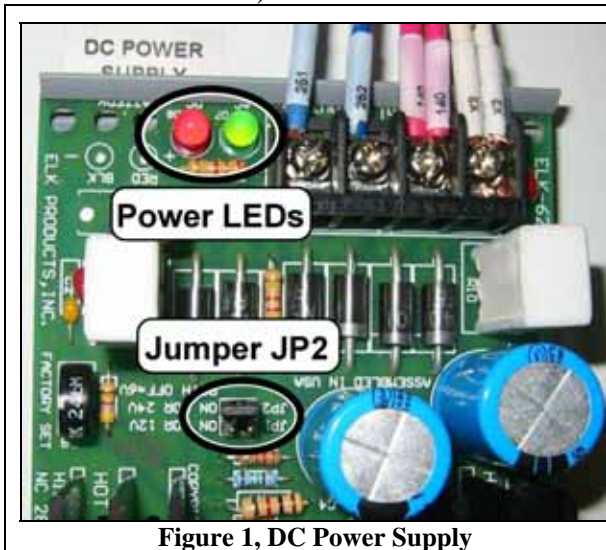


Figure 1, DC Power Supply

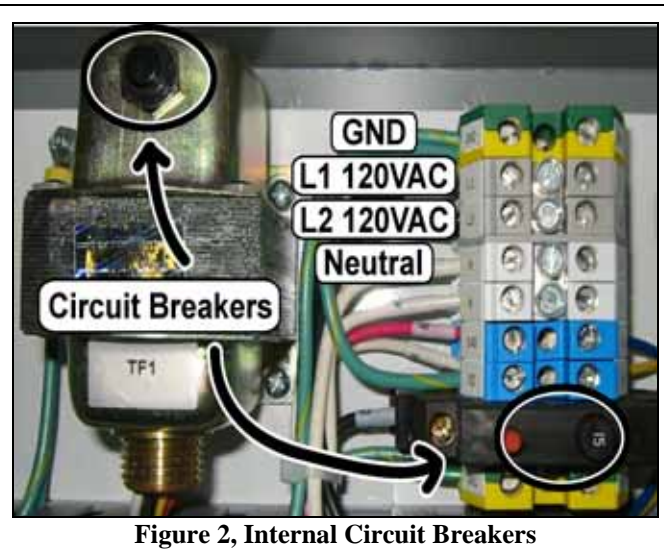


Figure 2, Internal Circuit Breakers

1.3 If the keypad red light is ON

Step 1) If the yellow light on the keypad does not flash when buttons are pressed please check for any keys that may be stuck down.

Step 2) Power cycle the entire system and try again.

Step 3) When the security code is entered the green light should flash once then return to the red light only, if it does not then verify your security code (other possible defaults are 1234* or 4321*)

Step 4) Figure 3 shows the back of the keypad, carefully press on this circuit board to ensure that it's fully seated, also check that the plugs along the edge of the board are correct.

Step 5) On the DC Power Supply (Figure 1) make sure there is a small jumper placed across JP2 (On for 24V).

Step 6) Figure 4 shows how to short two contacts together with pliers. This will bypass the keypad and force the system to become active (the Start/Stop button will illuminate just as if a valid security code was entered.) This tests that the remainder of the system is operating properly and that the problem may be in the keypad.

Step 7) Depress the small button (Figure 3) on the back of the keypad circuit board with a non-metallic object (like a writing pen.) The yellow light should now flash for 20-30 seconds, at the end of this time the system will become active. This tests that the keypad is operating, but may not be accepting your security code.

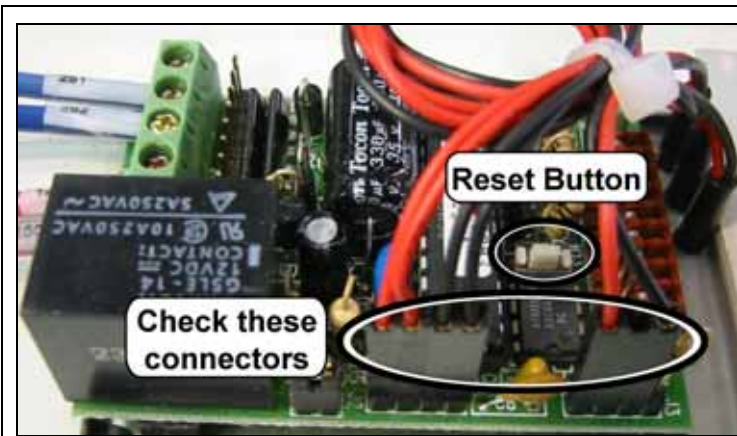


Figure 3, Back of Keypad

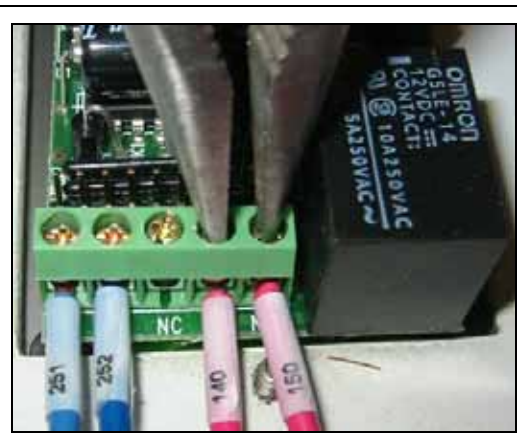


Figure 4, Using pliers to force system ON

1.4 Keypad appears to operate, but equipment does not run

- Step 1) There is a GFCI breaker located on the right-side of the keypad panel, also Figure 2 shows two internal breakers which must be reset.
- Step 2) The equipment might have a separate power switch. The Panel Saws vacuum system (located inside the cabinet) has a power switch which must always remain ON. The saw motor has an operator switch mounted on it.
- Step 3) The Pipe Threading Machine has a neutral gear and a “Jaw Open/Close” lever which must be in the correct position.
- Step 4) Measure the supply voltages at the terminals, across N to L1, and N to L2, both should be 120VAC. For the Panel Saw L1 to L2 should measure 208VAC.
- Step 5) Both TR1 & TR2 should have numbers on their displays (and may be counting down.)
- Step 6) The timers TR1 and TR2 must be configured to these settings only. Any other values will prevent the equipment from running. If different from Figure 5 use a small screwdriver to adjust the values.

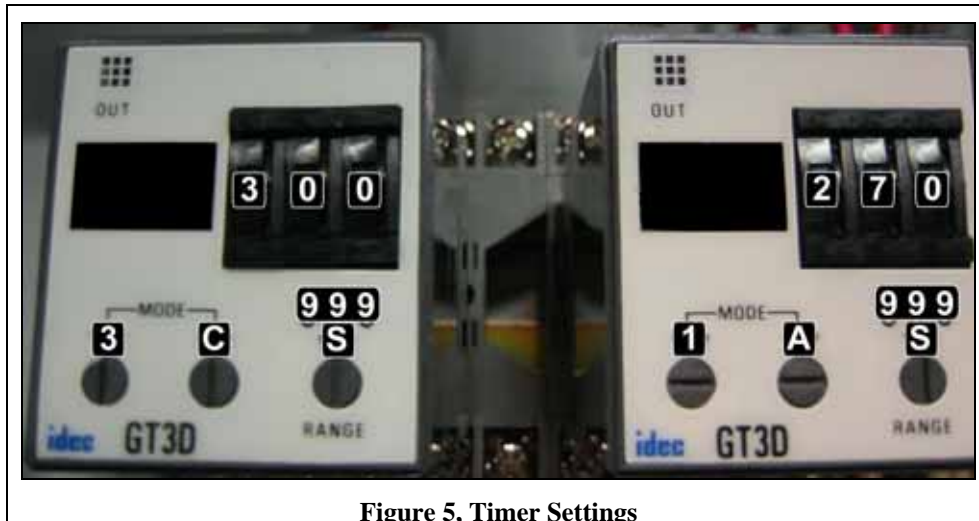


Figure 5, Timer Settings

2 Panel Saw/Tile Cutter/Pipe Threading Machine problem solving (In Service)

2.1 Normal Operation

The red light on the keypad will be lit whenever power is connected. Enter the security code into the keypad followed by the '*' key (Example: 1234*). The Start/Stop button will illuminate and the system has now begun timing 5 minutes. To start the equipment PULL the Start/Stop button. When finished PUSH the Start/Stop button to cancel time and stop the equipment.

2.2 If the keypad red light is OFF

Step 1) Check the circuit breakers in the main electrical room.

Step 2) Check the fuses in the Fused Disconnect.

Step 3) Reset both circuit breakers inside the panel, see Figure 7.

Step 4) Measure the supply voltages at the input terminals (across N to L1, and N to L2) both should be 120VAC. For the Panel Saw L1 to L2 should measure 208VAC.

Step 5) Measure the input voltage at the DC Power Supply (across the Red & White wires), it should measure 24 Volts AC.

Step 6) Measure the output voltage at the DC Power Supply (across the Blue wires), it should measure 24 Volts DC.

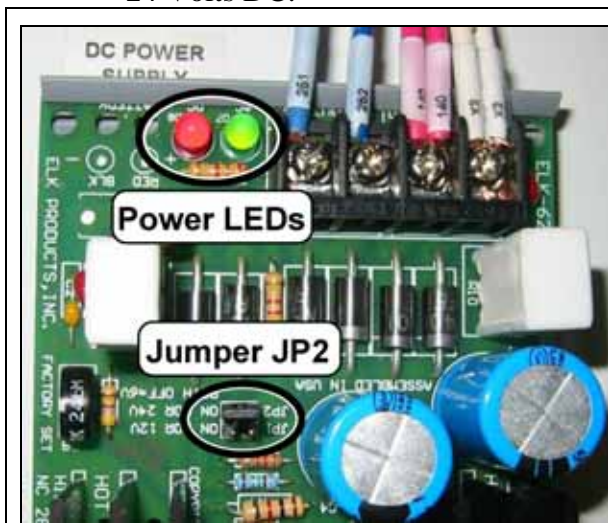


Figure 6, DC Power Supply

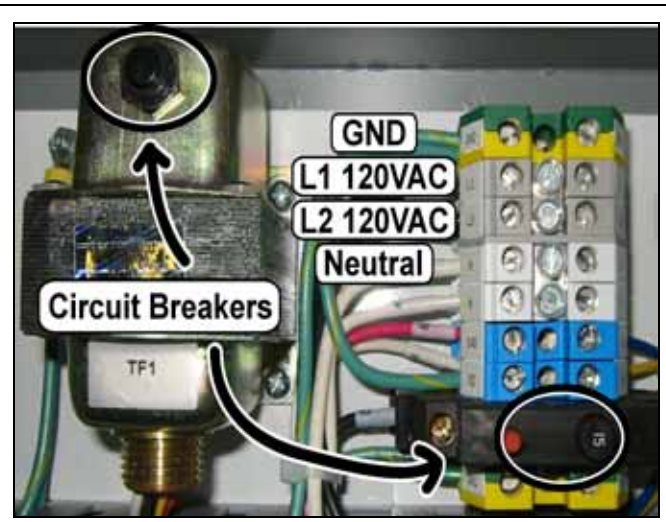


Figure 7, Internal Circuit Breakers

2.3 If the keypad red light is ON

Step 1) If the yellow light on the keypad does not flash when buttons are pressed please check for any keys that may be stuck down.

Step 2) Both Timers (see Figure 10) should have red digits showing on their displays, if not then the Start/Stop Button is bad and needs to be replaced.

Step 3) When the security code is entered the green light should flash once then return to the red light only, if it does not then verify your security code (other possible defaults are 1234* or 4321*)

Step 4) If the vacuum works but not the saw check the GFCI breaker on the right side of the keypad panel, turn ON-OFF-ON-OFF several times and then try the saw again.

Step 5) If the vacuum works but not the saw, check the circuit breakers in the main electrical room.

Step 6) Check the fuses in the Fused Disconnect.

Step 7) Measure the supply voltages at the input terminals (across N to L1, and N to L2) both should be 120VAC. For the Panel Saw L1 to L2 should measure 208VAC.

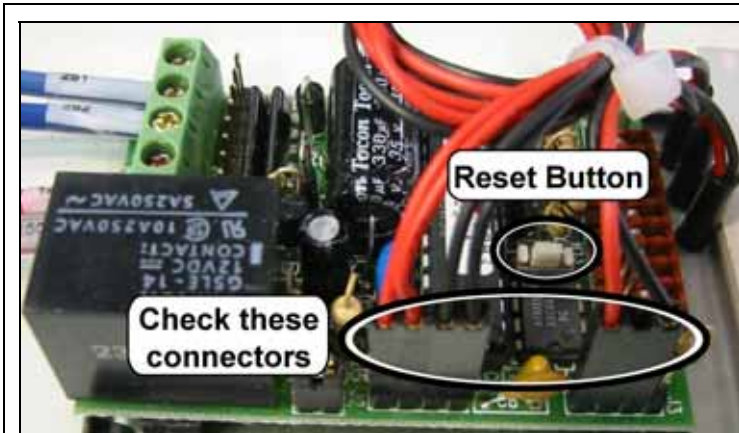


Figure 8, Back of Keypad

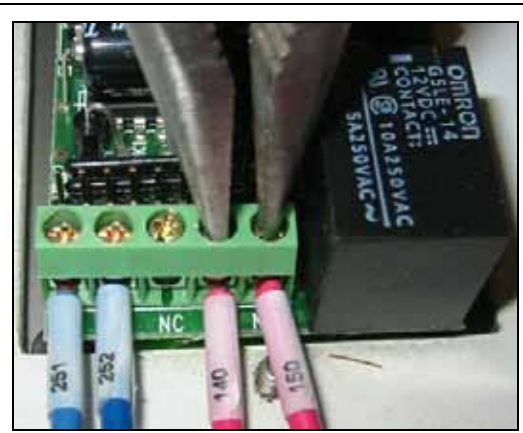


Figure 9, Using pliers to force system ON

2.4 Keypad appears to operate, but equipment does not run

- Step 1) There is a GFCI breaker located on the right-side of the keypad panel, also Figure 7 shows two internal breakers which must be reset.
- Step 2) The equipment might have a separate power switch. The Panel Saws vacuum system (located inside the cabinet) has a power switch which must always remain ON. The saw motor has an operator switch mounted on it.
- Step 3) Measure the supply voltages at the terminals, across N to L1, and N to L2, both should be 120VAC. For the Panel Saw L1 to L2 should measure 208VAC.
- Step 4) Both TR1 & TR2 should have numbers on their displays (and may be counting down.)
- Step 5) The timers TR1 and TR2 must be configured to these settings only. Any other values will prevent the equipment from running. If different from Figure 10 use a small screwdriver to adjust the values.

Pipe Threading Machines Only

- Step 6) The machine must not be in the neutral gear and a “Jaw Open/Close” lever which must be in the correct position.
- Step 7) If the Start/Stop Button Light turns off when the foot switch is activated then the supply voltage is too low. Check that the machine is connected to a dedicated 20 Amp outlet. An optional upgraded keypad may be required to solve this problem, contact Boldstar Technical for further information.

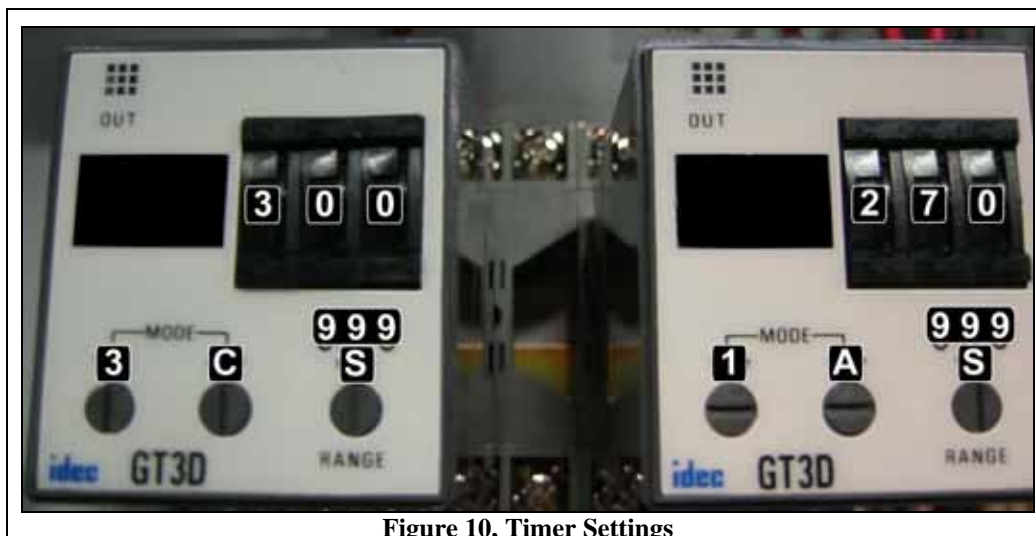
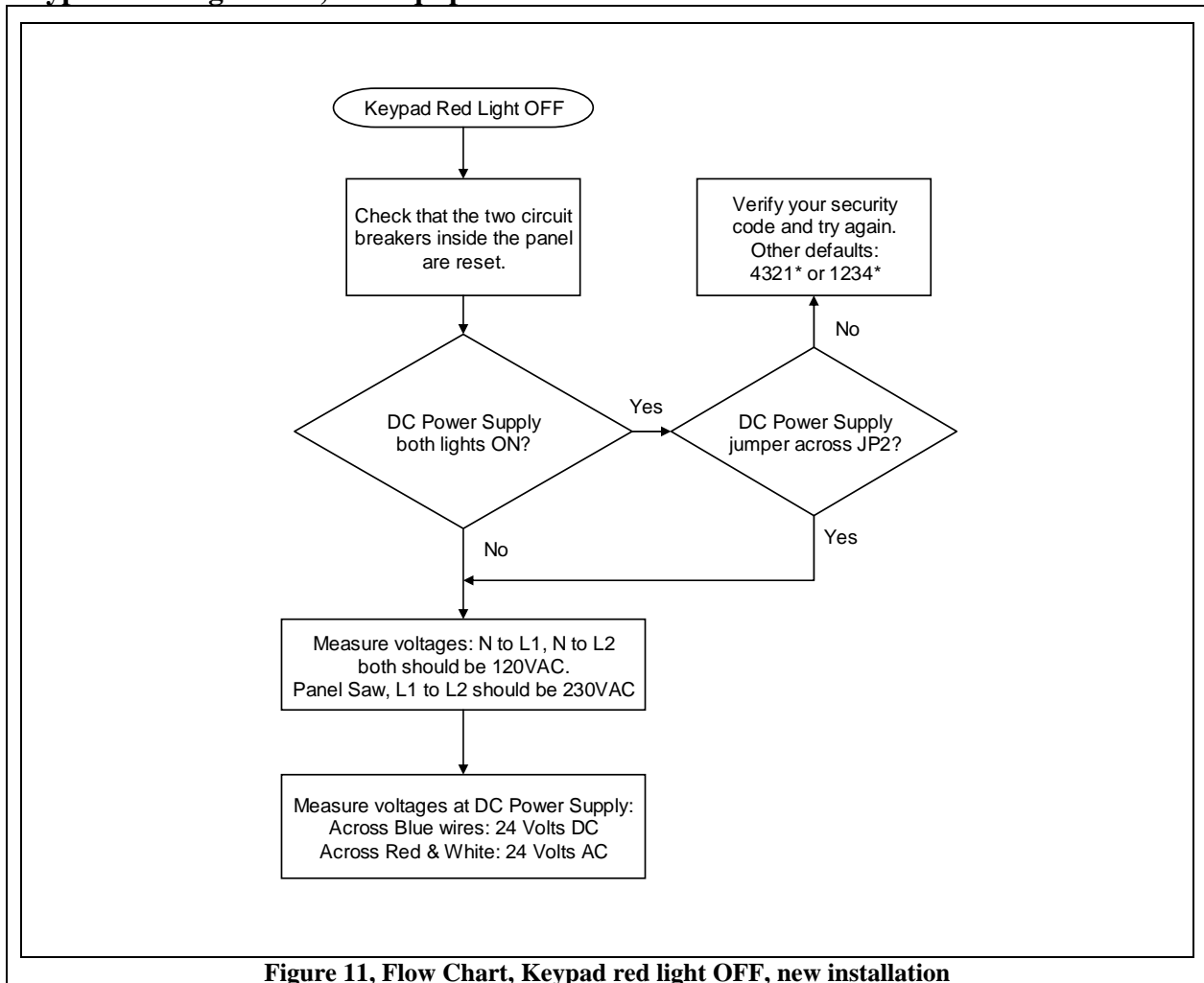


Figure 10, Timer Settings

3 Panel Saw/Tile Cutter/Pipe Threading Machine Diagnostics Flow Diagrams

3.1 Keypad Red Light OFF, and equipment is a new installation



3.2 Keypad Red Light ON, and equipment is a new installation

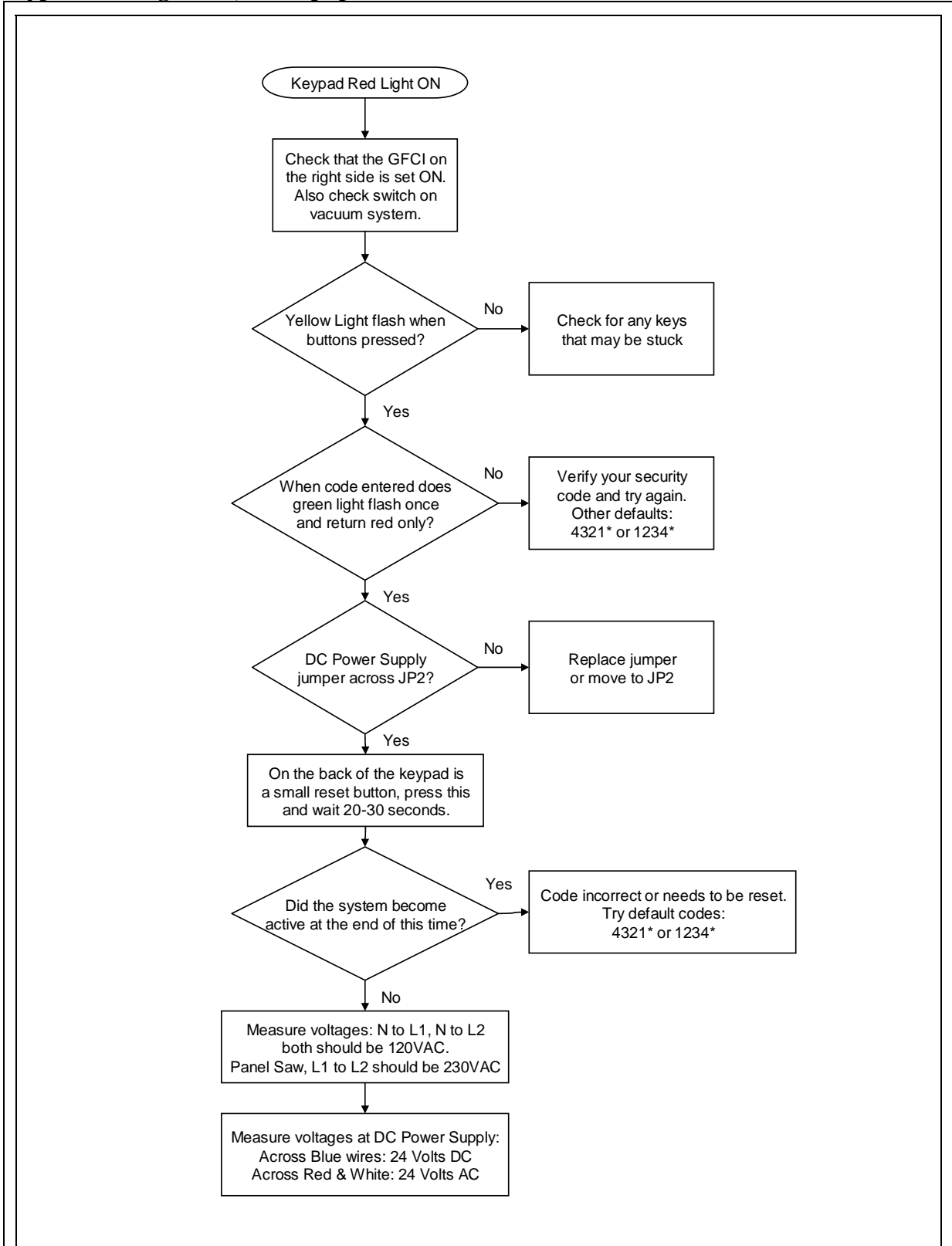


Figure 12, Flow Chart, Keypad red light ON, new installation

3.3 Keypad Red Light OFF, and the equipment was previously in service

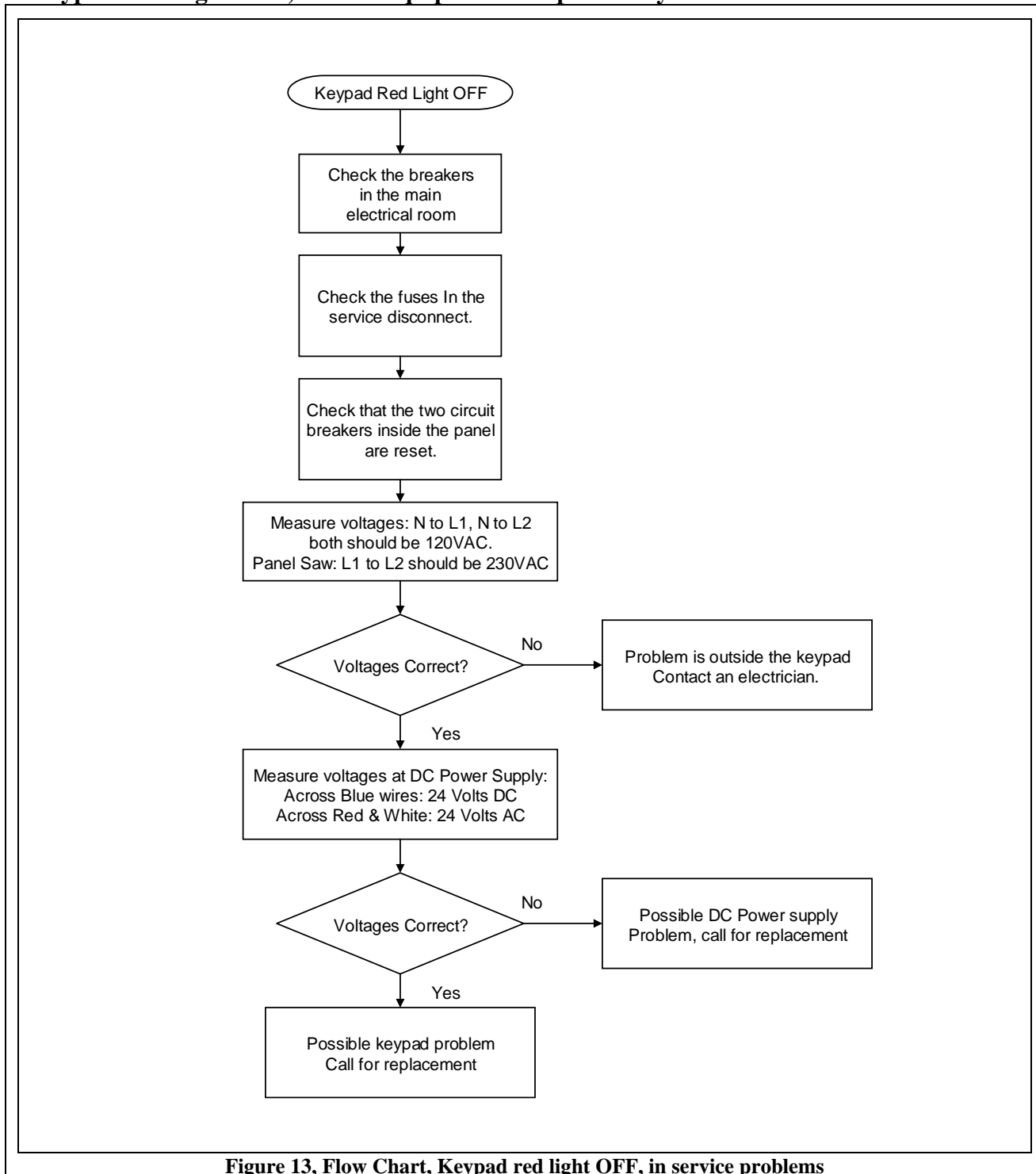


Figure 13, Flow Chart, Keypad red light OFF, in service problems

3.4 Keypad Red Light ON, and the equipment was previously in service

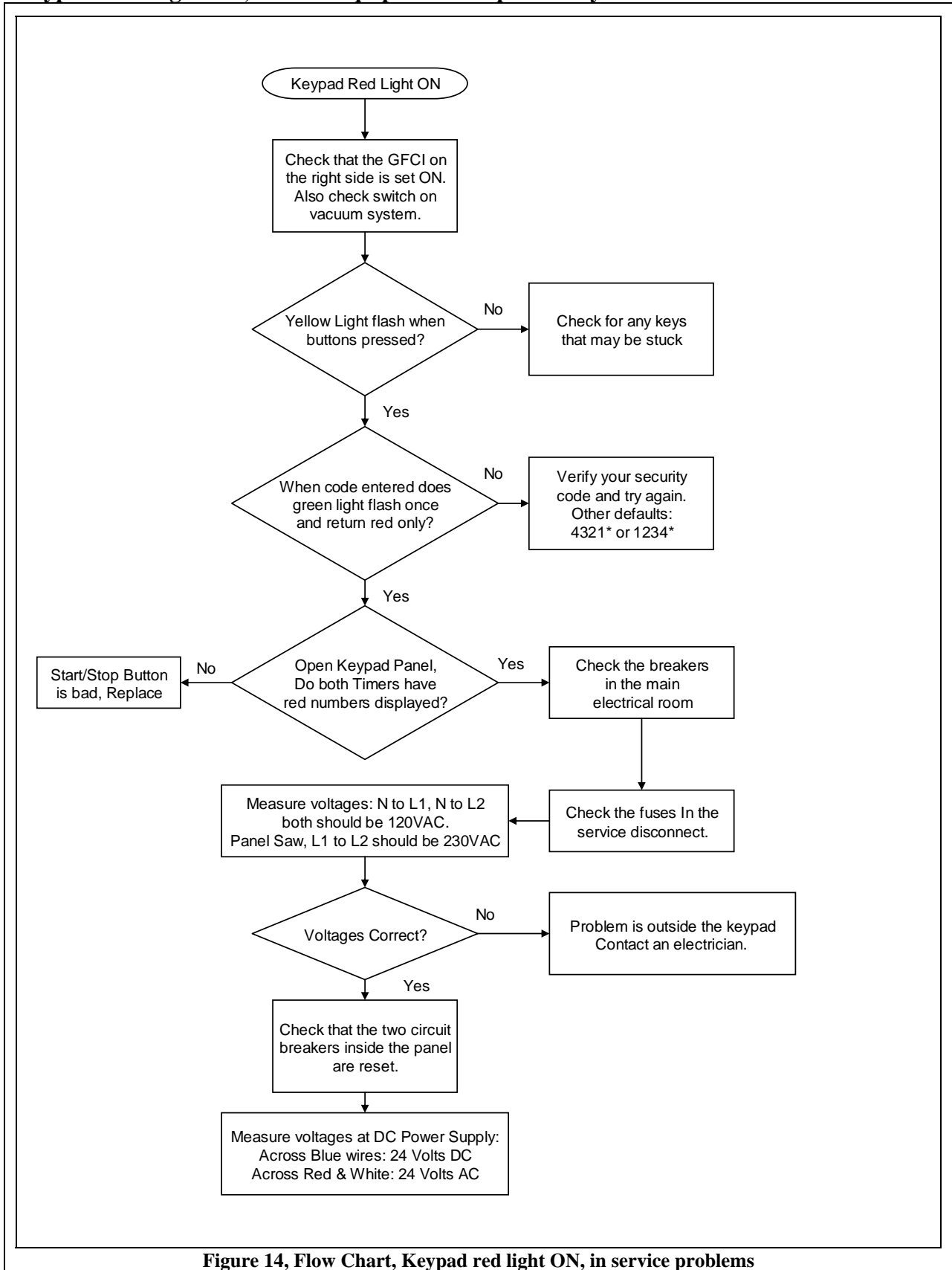


Figure 14, Flow Chart, Keypad red light ON, in service problems

4 DC Powered, Pipe Threading Machine problem solving

4.1 Normal Operation

The red light on the keypad will be lit whenever power is connected. Enter the security code into the keypad followed by the '*' key (Example: 1234*). The Start/Stop button will illuminate and the system has now begun timing 5 minutes. To start the equipment PULL the Start/Stop button. When finished PUSH the Start/Stop button to cancel time and stop the equipment.

4.2 If the keypad red light is OFF

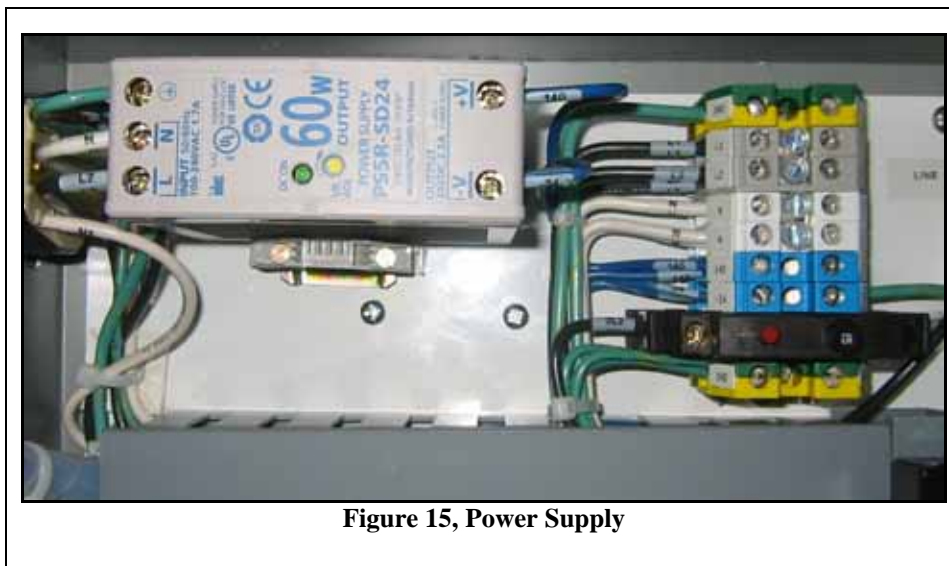
Step 1) Check the circuit breakers in the main electrical room.

Step 2) Check the fuses in the Fused Disconnect.

Step 3) Measure the supply voltages at the input terminals (across N to L1, and N to L2) both should be 120VAC.

Step 4) Measure the input voltage at the Power Supply (across N to L2), it should measure 120VAC.

Step 5) Measure the output voltage at the Power Supply (across “-V” to “+V”, or -24 to 140), it should measure 24 Volts DC.



Step 5) Measure the input voltage at the DC Power Supply (across -24 to 140), it should measure 24 Volts DC.

Step 6) Measure the output voltage at the DC Power Supply (across 251 to 252), it should measure 24 Volts DC.

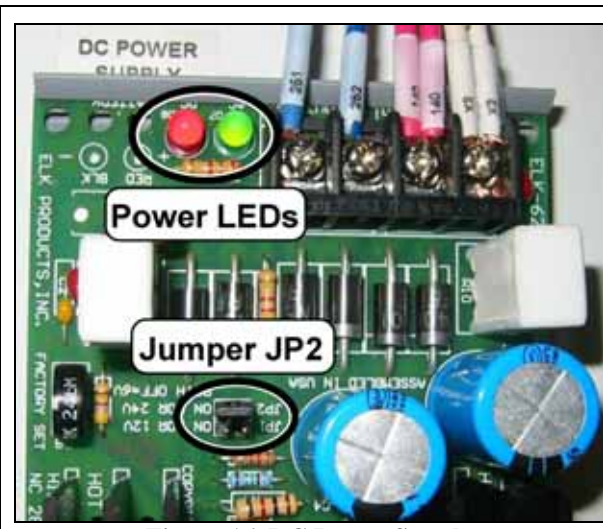


Figure 16, DC Power Supply

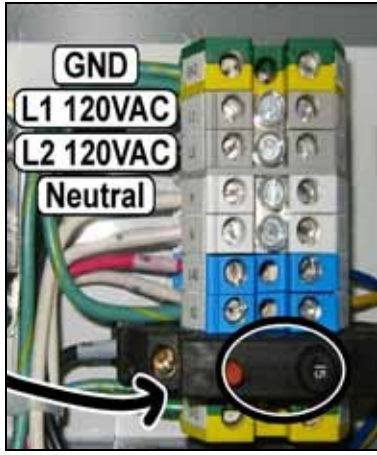


Figure 17, Internal Circuit Breaker

4.3 If the keypad red light is ON

- Step 1) If the yellow light on the keypad does not flash when buttons are pressed please check for any keys that may be stuck down.
- Step 2) Both Timers (see Figure 20) should have red digits showing on their displays, if not then the Start/Stop Button is bad and needs to be replaced.
- Step 3) When the security code is entered the green light should flash once then return to the red light only, if it does not then verify your security code (other possible defaults are 1234* or 4321*)
- Step 4) Check the GFCI breaker on the right side of the keypad panel, turn ON-OFF-ON-OFF several times and then try the equipment again.
- Step 5) Measure the supply voltages at the input terminals (across N to L1, and N to L2) both should be 120VAC.

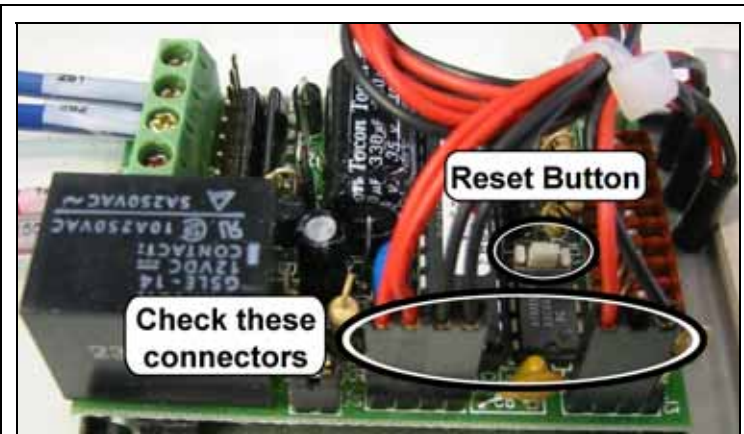


Figure 18, Back of Keypad

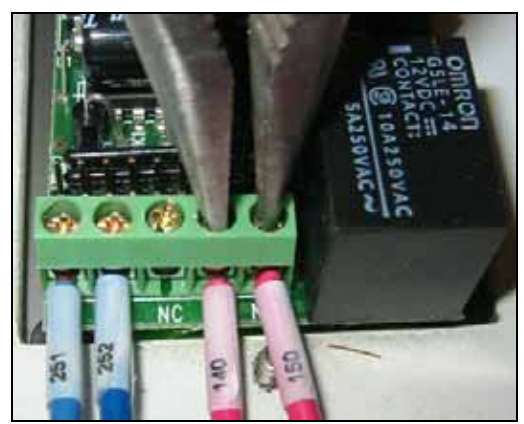


Figure 19, Using pliers to force system ON

4.4 Keypad appears to operate, but equipment does not run

- Step 1) There is a GFCI breaker located on the right-side of the keypad panel.
- Step 2) Measure the supply voltages at the terminals, across N to L1, and N to L2, both should be 120VAC.
- Step 3) Both TR1 & TR2 should have numbers on their displays (and may be counting down.)
- Step 4) The timers TR1 and TR2 must be configured to these settings only. Any other values will prevent the equipment from running. If different from Figure 20 use a small screwdriver to adjust the values.
- Step 5) The machine must not be in the neutral gear and a “Jaw Open/Close” lever which must be in the correct position.
- Step 6) If the Start/Stop Button Light turns off when the foot switch is activated then the supply voltage is too low. Check that the machine is connected to a dedicated 20 Amp outlet.

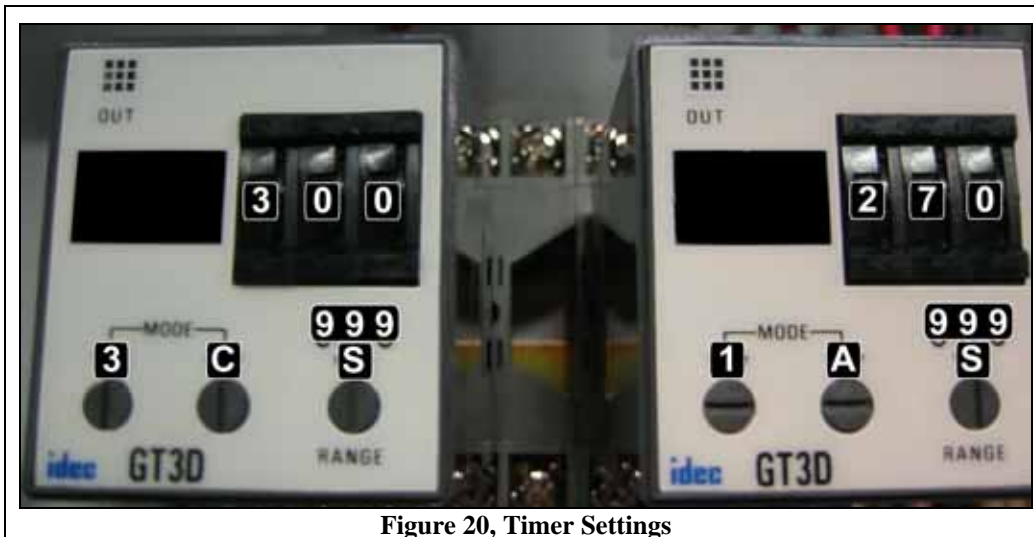


Figure 20, Timer Settings

5 DC Powered, Pipe Threading Machine Diagnostics Flow Diagrams

5.1 Keypad Red Light OFF, and equipment is a new installation

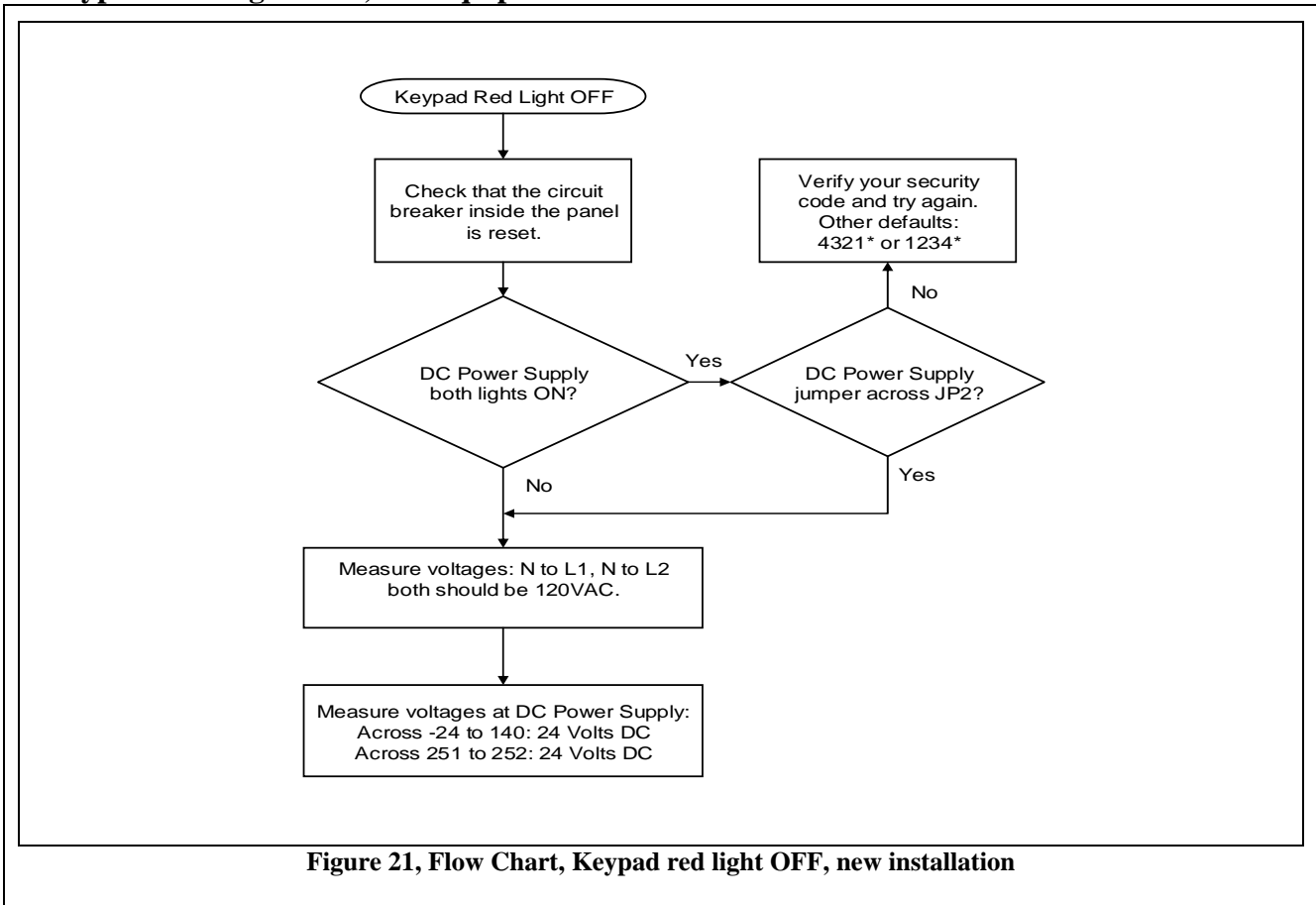


Figure 21, Flow Chart, Keypad red light OFF, new installation

5.2 Keypad Red Light ON, and equipment is a new installation

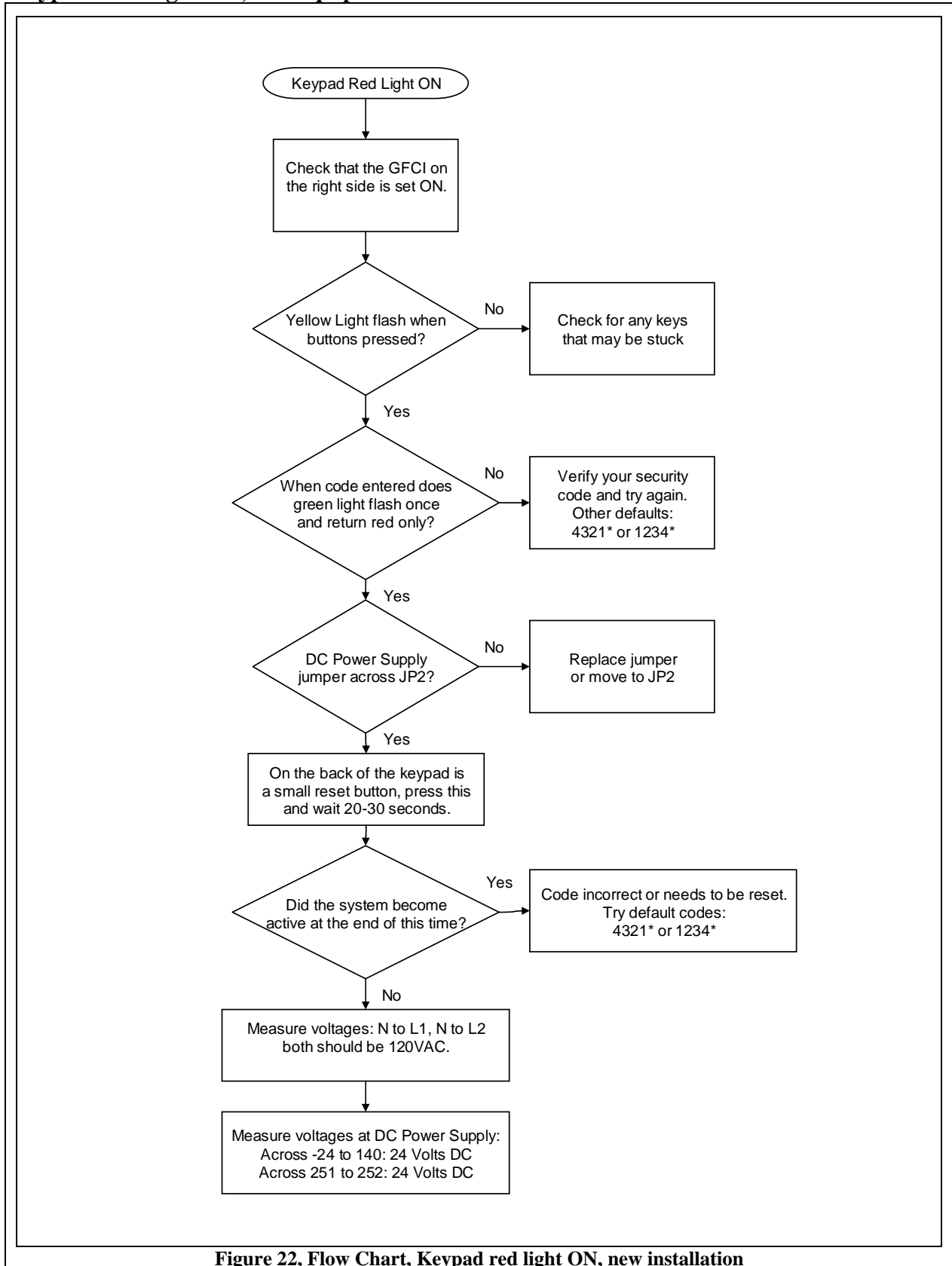


Figure 22, Flow Chart, Keypad red light ON, new installation

5.3 Keypad Red Light OFF, and the equipment was previously in service

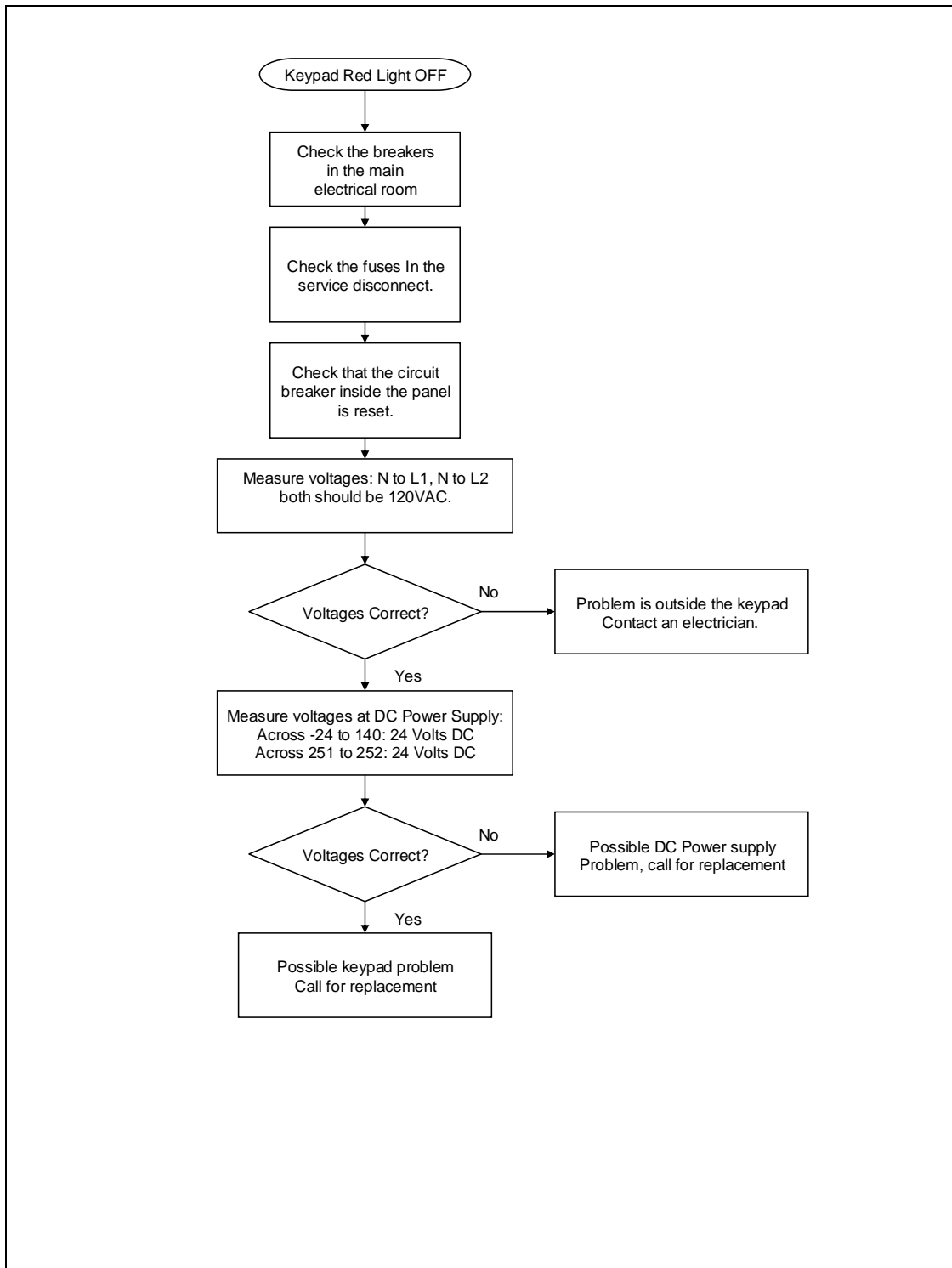


Figure 23, Flow Chart, Keypad red light OFF, in service problems

5.4 Keypad Red Light ON, and the equipment was previously in service

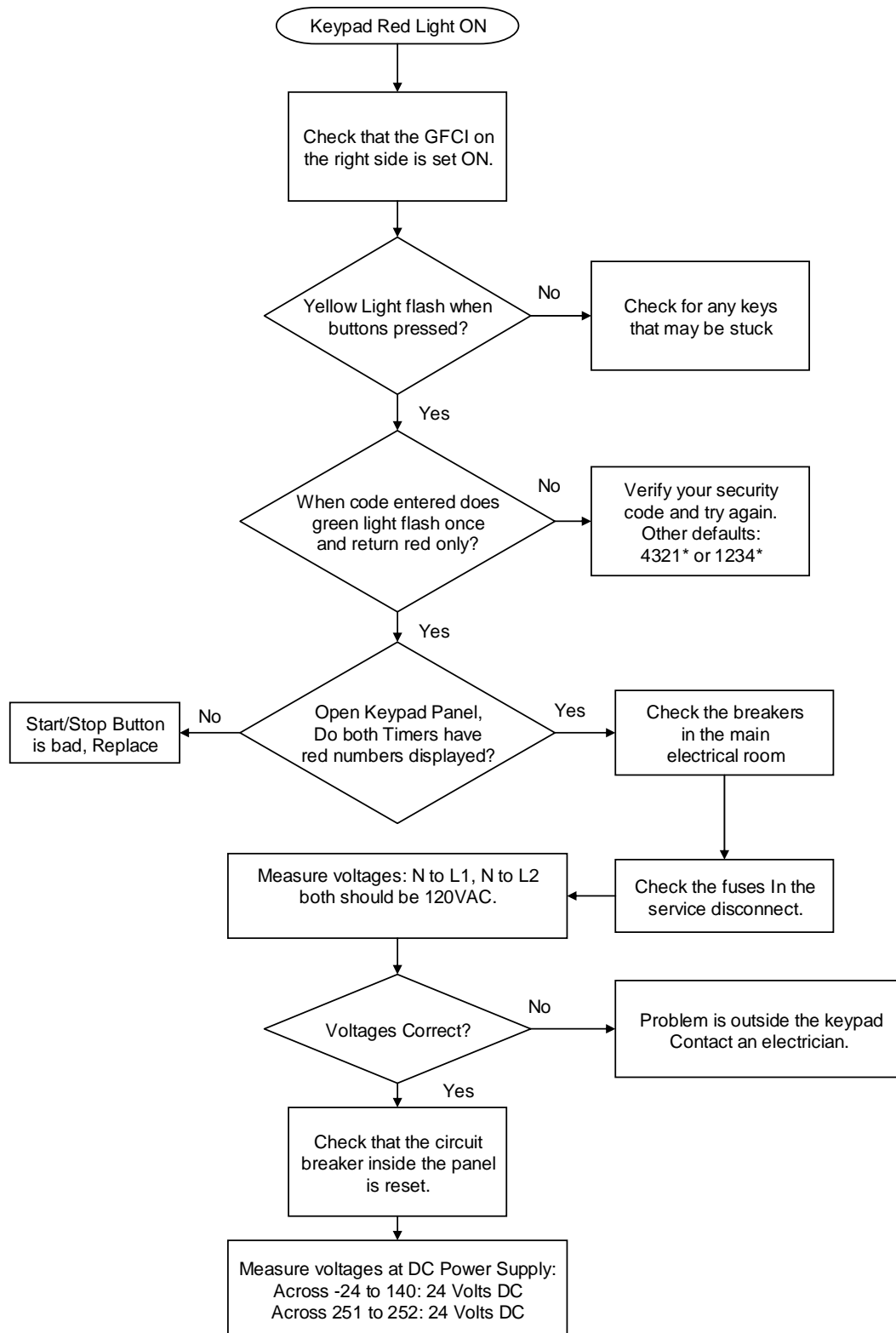
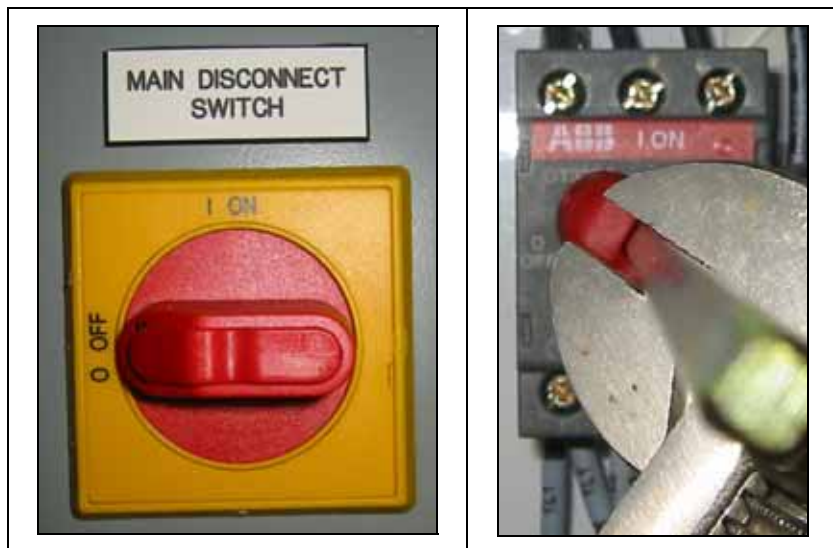


Figure 24, Flow Chart, Keypad red light ON, in service problems

6 Radial Arm Saw problem solving (New Install)

6.1 Warnings

“Main Disconnect Switch” must be in the OFF position before opening or closing the front panel. The system can be turned ON with the front panel open by using a wrench or pliers, but the switch and knob must be returned OFF before trying to close the panel.



6.2 Normal Operation

The red light on the front of the keypad will be lit whenever power is connected. Enter the security code into the keypad followed by the '*' key (Example: 1234*). The Start/Stop button will illuminate and the system has now begun timing 5 minutes. To start the equipment PULL the Start/Stop button. When finished PUSH the Start/Stop button to cancel time and stop the equipment.

6.3 If the keypad red light is OFF

- Step 1) Check that the DC Power Supply (Figure 25) has both red and green lights illuminated. If the green light is ON but not the red light then service will be required, contact BoldStar Technical.
- Step 2) Figure 27 shows the back of the keypad, carefully press on this circuit board to ensure that it's seated fully, also check that the plugs along the edge of the board are correct.
- Step 3) Measure the line supply voltages at the terminals, across L1 to L2, L2 to L3, and L3 to L1. All should be between 440VAC and 480VAC for new installations. Retrofit installations may be 230 or 208VAC, see further instructions for, “Setting and changes for different operating voltages.”
- Step 4) On the DC Power Supply (Figure 25) make sure there is a small jumper placed across JP2 (On for 24V).
- Step 5) With the service disconnect OFF, pull and test the three fuses indicated in Figure 26.

6.4 If the keypad red light is ON

- Step 1) If the yellow light on the keypad does not flash when buttons are pressed please check for any keys that may be stuck down.
- Step 2) Power cycle the entire system and try again.
- Step 3) When the security code is entered the green light should flash once then return to the red light only, if it does not then verify your security code (other possible defaults are 1234* or 4321*)
- Step 4) Figure 27 shows the back of the keypad, carefully press on this circuit board to ensure that it's seated fully, also check that the plugs along the edge of the board are correct.
- Step 5) On the DC Power Supply (Figure 25) make sure there is a small jumper placed across JP2 (On for 24V).
- Step 6) Figure 28 shows how to short two contacts together with pliers. This will bypass the keypad and force the system to become active (the Start/Stop button will illuminate just as if a valid

security code was entered.) This tests that the remainder of the system is operating properly and that the problem may be in the keypad.

Step 7) Press and release the small button (Figure 27) on the back of the keypad circuit board with a non-metallic object (like a writing pen.) The yellow light should now flash for 20-30 seconds, at the end of this time the system will become active. This tests that the keypad is operating, but may not be accepting your security code.

6.5 Keypad appears to operate, but equipment does not start

- Step 1) Check that the overloads attached to the contactors are reset with no red indicator (pull gently, then push back down.) (Figure 29)
- Step 2) Measure the line supply voltages at the terminals, across L1 to L2, L2 to L3, and L3 to L1. All should be between 440VAC and 480VAC for new installations. Retrofit installations may be 230 or 208VAC, see further instructions for, "Setting and changes for different operating voltages."
- Step 3) The "Run Light" on the MotorSaver must be solid green, if it is not then refer to instructions "Final Wiring and Startup for Radial Arm Saws".
- Step 4) Both TR1 & TR2 must have red numbers on their displays (and may be counting down.)
- Step 5) With power disconnected, manually push in the center of the M1 contactor (Figure 29), the small switch between the two contactors should follow the movements of M1.
- Step 6) The timers TR1 and TR2 must be configured to these settings only. Any other values will prevent the equipment from running. If different from Figure 30 use a small screwdriver to adjust the values.

7 Radial Arm Saw problem solving (In Service)

7.1 **Normal Operation:**

The red light on the front of the keypad will be lit whenever power is connected. Enter the security code into the keypad followed by the '*' key (Example: 1234*). The Start/Stop button will illuminate and the system has now begun timing 5 minutes. To start the equipment PULL the Start/Stop button. When finished PUSH the Start/Stop button to cancel time and stop the equipment.

7.2 **If the keypad red light is OFF**

Step 1) Check circuit breakers in main electrical room.

Step 2) Turn OFF fused disconnect, open it, measure the voltages at the input terminals (L1 to L2, L2 to L3, and L3 to L1.) All should be between 440VAC and 480VAC for new installations, some installations may be 230 or 208VAC.

Step 3) Turn OFF the “Main Disconnect Switch” on the front panel of the keypad before trying to open.

Step 4) Open the front panel of the keypad.

Step 5) Using a wench or pliers, turn the “Main Disconnect Switch” ON by twisting the square shaft in the top-left area of the panel. Return the “Main Disconnect Switch” to the OFF position before closing the panel.

Step 6) Turn the fused disconnect back ON.

Step 7) Measure the voltages at the input terminals in the bottom-right area of the panel (L1 to L2, L2 to L3, and L3 to L1.) All should be between 440VAC and 480VAC for new installations, some installations may be 230 or 208VAC.

Step 8) With the fused disconnect OFF, pull and test the three fuses indicated in Figure 26.

Step 9) Check that the DC Power Supply (Figure 25) has both red and green lights illuminated. If the green light is ON but not the red light then service will be required, contact BoldStar Technical.

7.3 **If the keypad red light is ON**

Step 1) If the yellow light on the keypad does not flash when buttons are pressed please check for any keys that may be stuck down.

Step 2) Both Timers (labeled TR1/TR2) must have red numbers on their displays. If TR1 does not have anything displayed the problem is one of two things; the Motor Saver isn't solid green indicating an input power problem, or a bad Start/Stop Button.

Step 3) When the security code is entered the green light should flash once then return to the red light only, if it does not then verify your security code (other possible defaults are 1234* or 4321*)

Step 4) If the warning strobe light works when the system is active but the saw does not then the Contactor Overloads are tripped.

Step 5) (After the above conditions are checked) When the security code is entered both timers should begin counting down (TR1 at 300, TR2 at 270) and the Start/Stop Button should illuminate, if the system doesn't start when the Start/Stop Button is pulled then this indicates a bad Start/Stop Button.

7.4 **Keypad appears to operate, but equipment does not start**

Step 1) Turn OFF the “Main Disconnect Switch” on the front panel of the keypad.

Step 2) Open the front panel of the keypad.

Step 3) Using a wench or pliers, turn the “Main Disconnect Switch” ON by twisting the square shaft in the top-left area of the panel. Return the “Main Disconnect Switch” to the OFF position before closing the panel.

Step 4) Check that the overloads attached to the contactors are reset with no red indicator (pull gently, then push back down.) (Figure 29)

Step 5) Both TR1 & TR2 must have numbers on their displays (and may be counting down.)

Step 6) The "Run Light" on the MotorSaver must be solid green, if it is not then refer to instructions "Final Wiring and Startup for Radial Arm Saws".

Step 7) Measure the line supply voltages at the terminals, across L1 to L2, L2 to L3, and L3 to L1. All should be between 440VAC and 480VAC for new installations. Retrofit installations may be 230 or 208VAC, see further instructions for, “Reconfiguring for other voltages.”

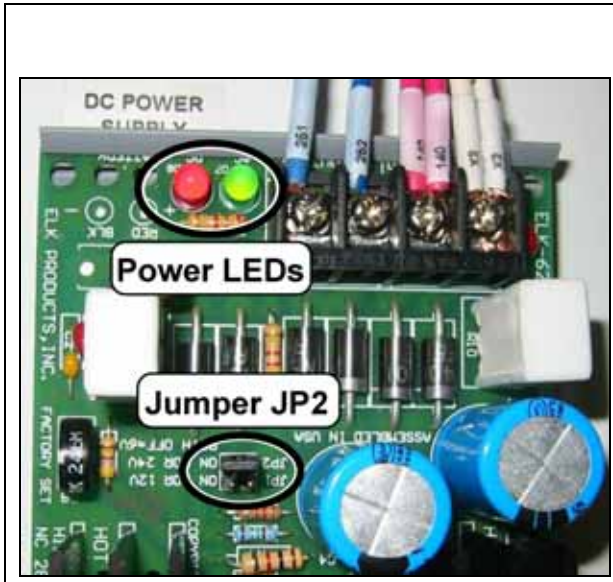


Figure 25, DC Power Supply

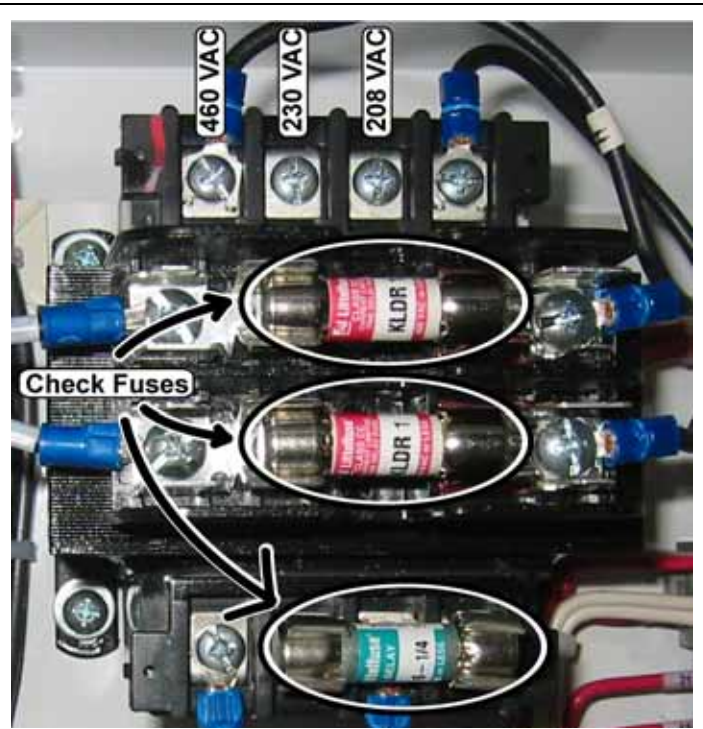


Figure 26, Internal Circuit Breakers

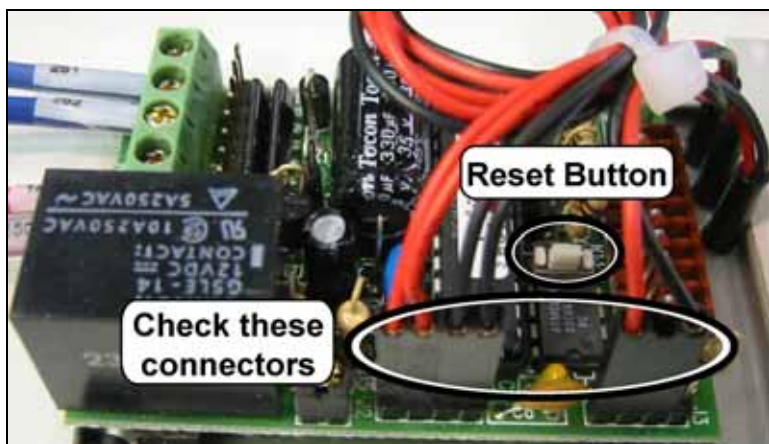


Figure 27, Back of Keypad

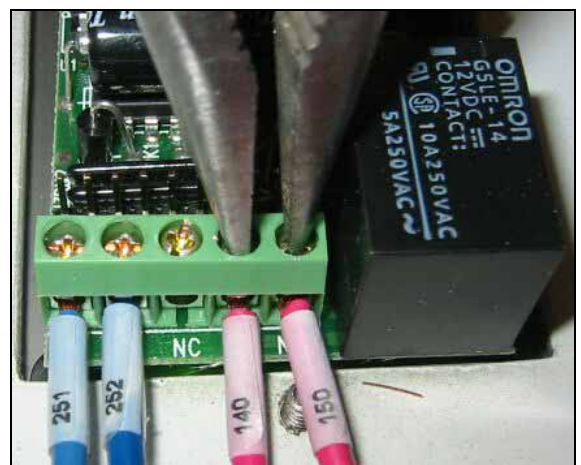


Figure 28, Using pliers to force system ON

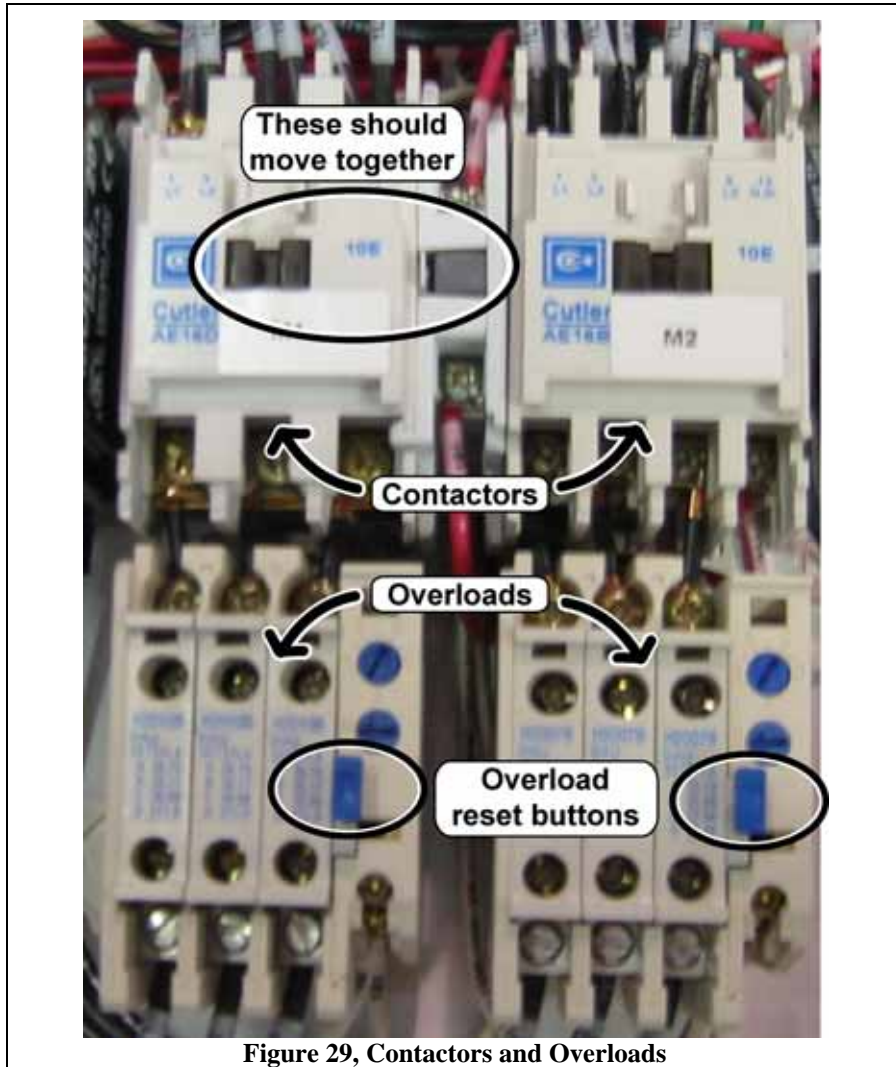


Figure 29, Contactors and Overloads

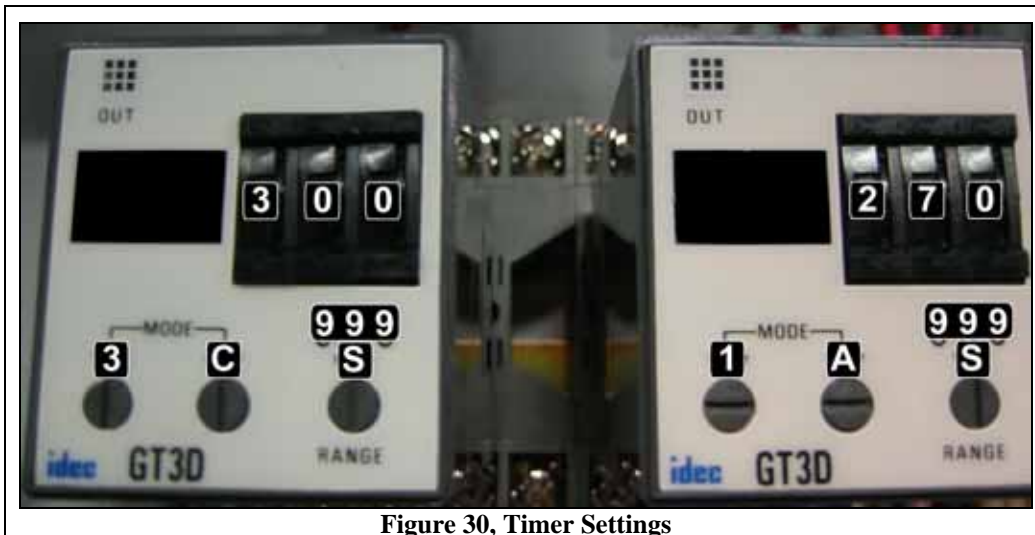


Figure 30, Timer Settings

8 Radial Arm Saw Flow Diagrams

8.1 Keypad Red Light OFF, and equipment is a new installation

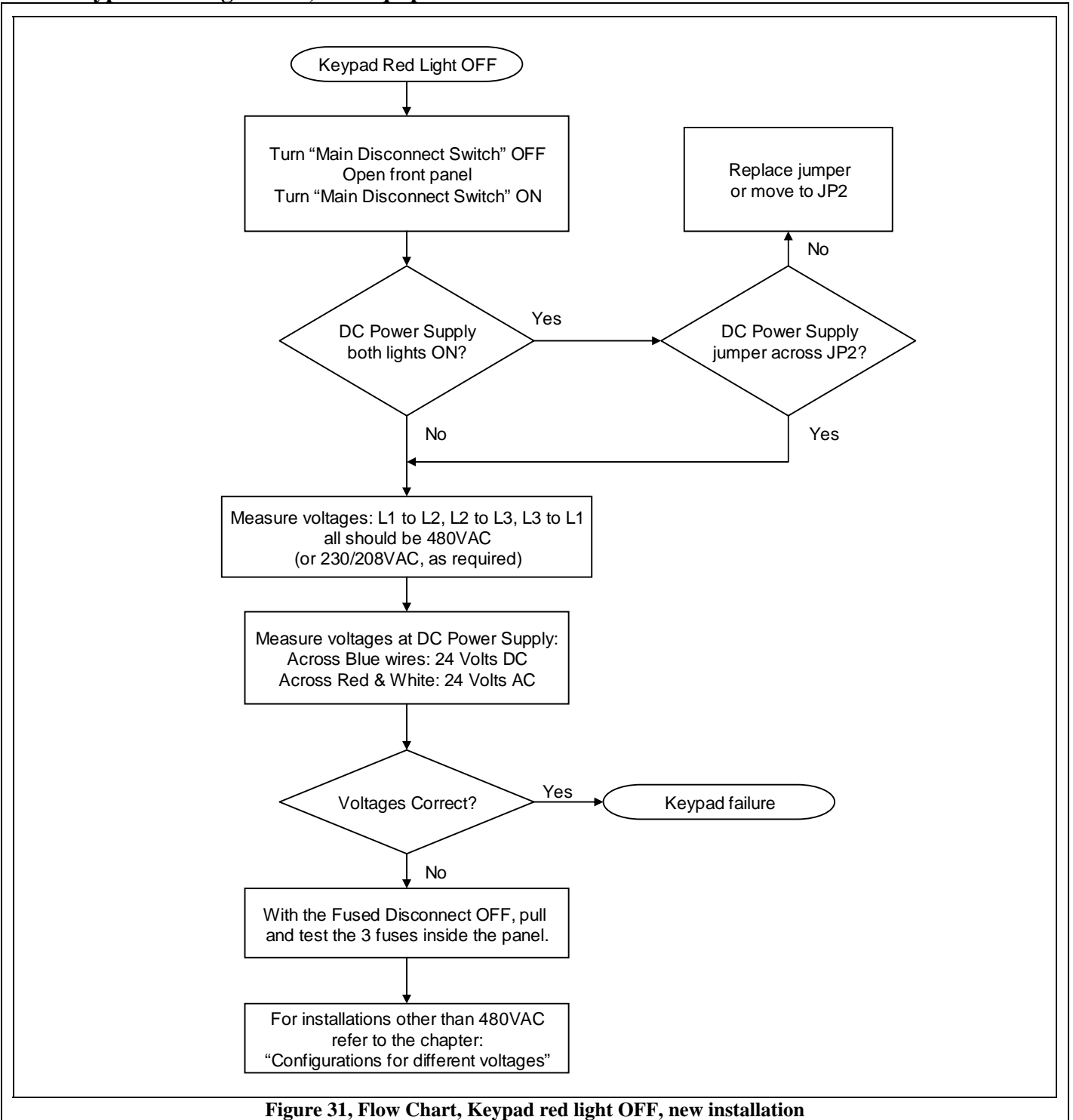


Figure 31, Flow Chart, Keypad red light OFF, new installation

8.2 Keypad Red Light ON, and equipment is a new installation

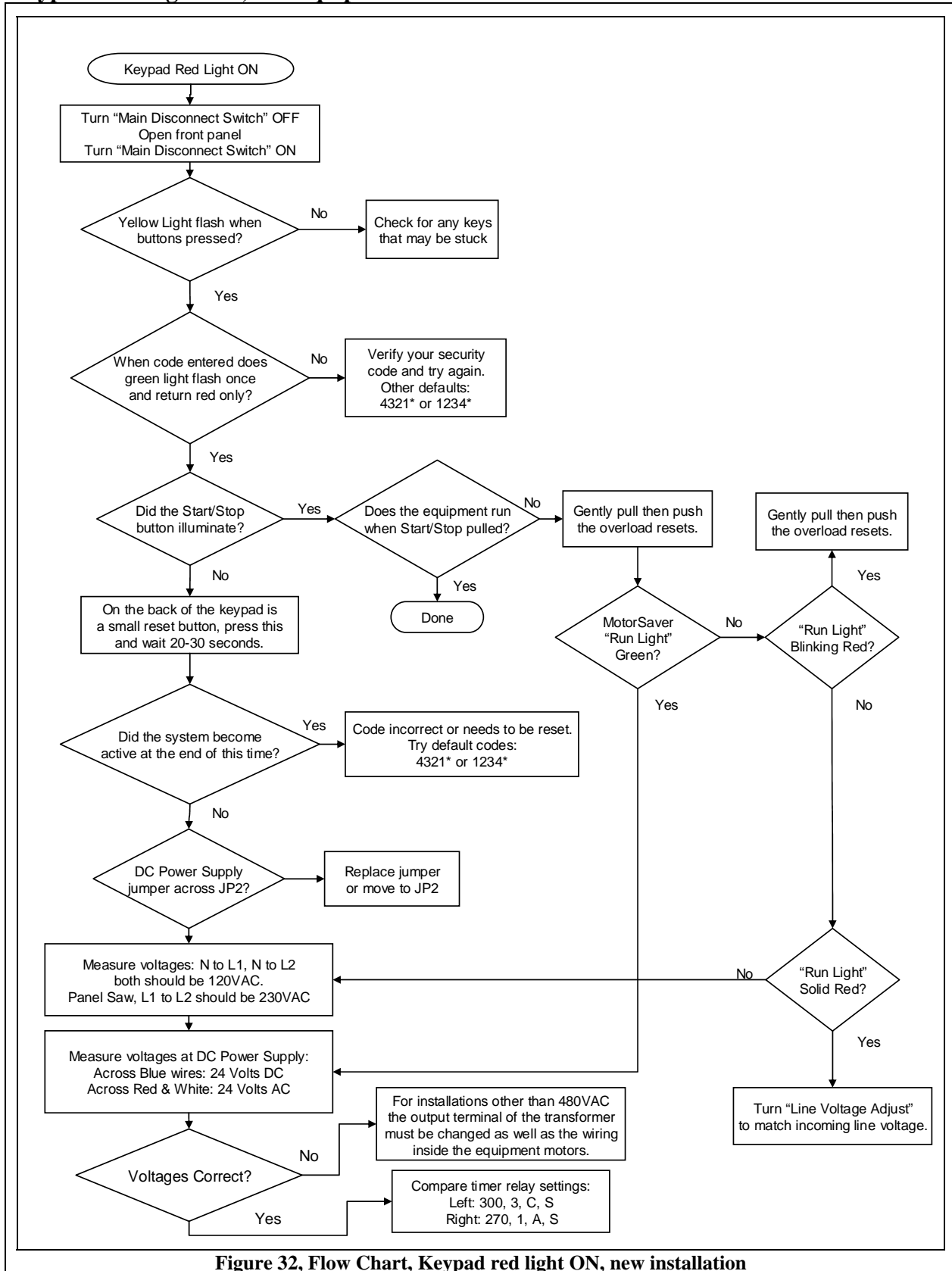


Figure 32, Flow Chart, Keypad red light ON, new installation

8.3 Keypad Red Light OFF, and the equipment was previously in service

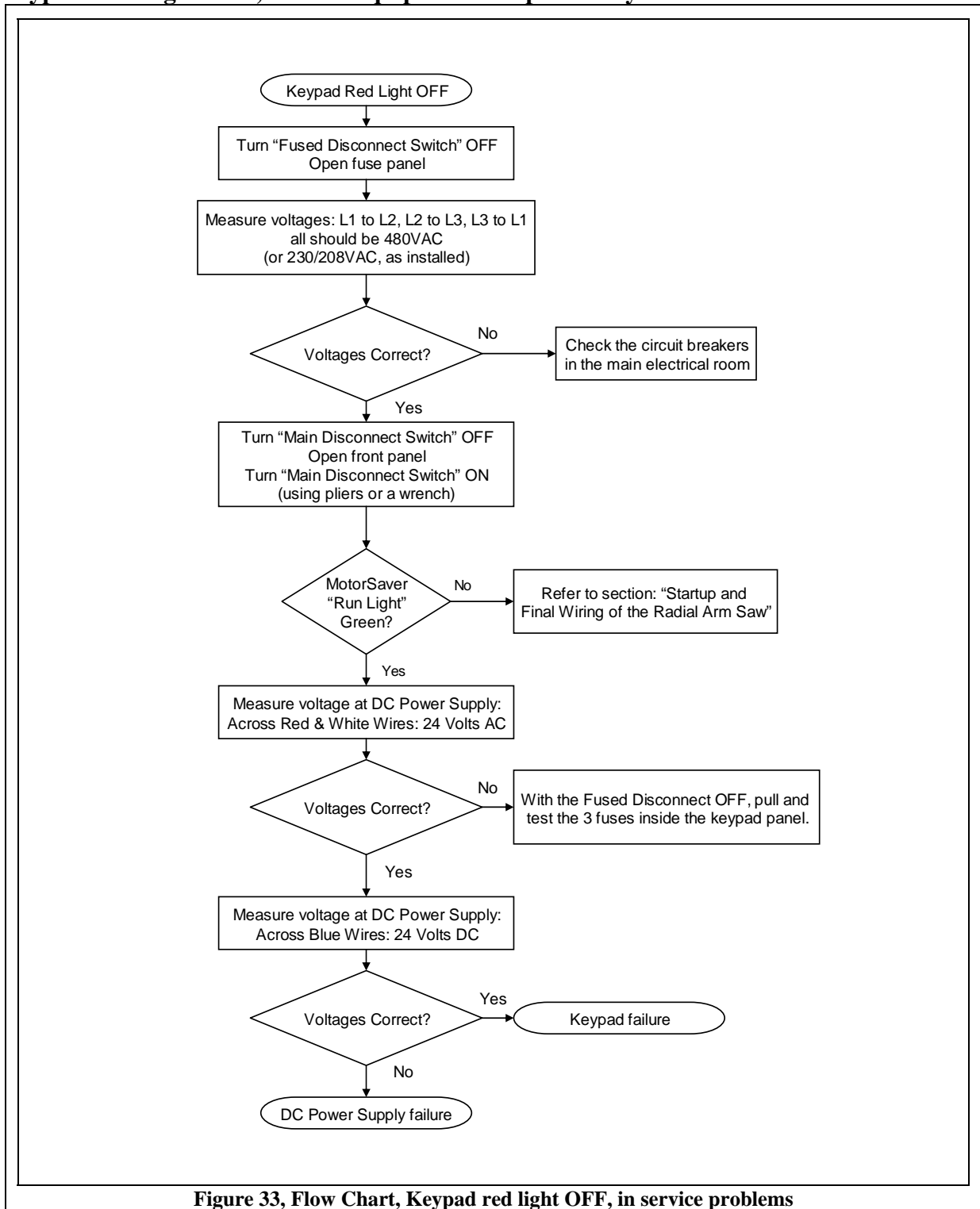


Figure 33, Flow Chart, Keypad red light OFF, in service problems

8.4 Keypad Red Light ON, and the equipment was previously in service

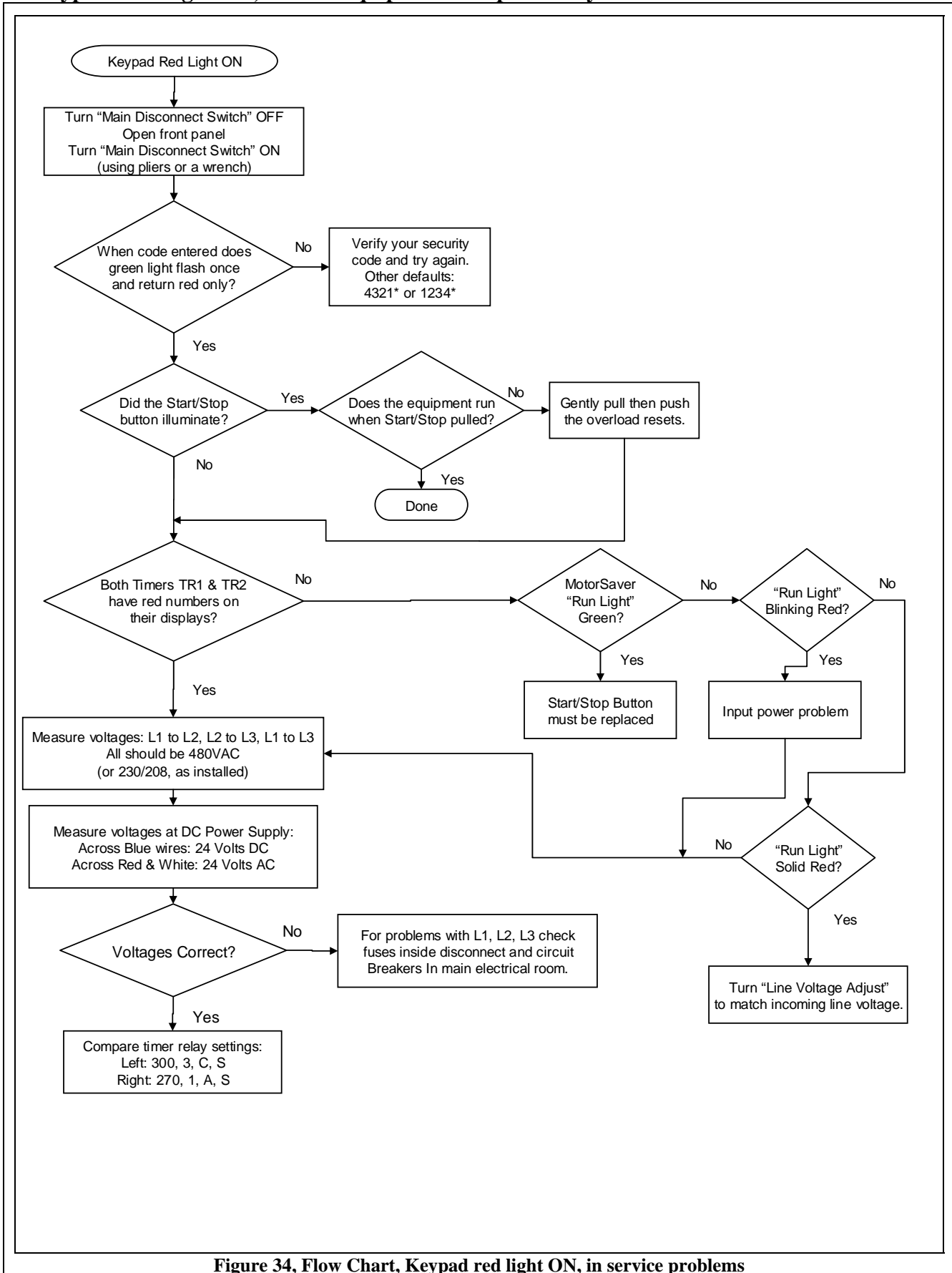


Figure 34, Flow Chart, Keypad red light ON, in service problems

9 Final Wiring and Startup for Radial Arm Saw

After the BoldStar Technical staff completes installation of the saws into the building, it is the responsibility of the electricians to make the final electrical connections and bring the saw into service. A fused disconnect (with 20 amp fuses) mounted to the back wall is the only extra equipment required. The supply lines are wired to terminals L1, L2, and L3 inside the keypad panel. Additionally, the saw motor is wired to RS_T1, RS_T2, and RS_T3. The Dust Collector vacuum motor is wired to DC_T1, DC_T2, and DC_T3. All of these connections are 3-phase and at the same voltage. The system can be configured to run on 460(factory default), 230, or 208VAC. If the installation requires 230 or 208VAC refer to section, "Settings and Changes for different operating voltages". **Warning!** Before making any wiring changes turn off power at the fused disconnect mounted on the back wall. Although it may be useful to have the front panel open with the "Main Disconnect Switch" ON, the panel can only be open or closed with both the knob and switch in the OFF position.



Figure 35, MotorSaver

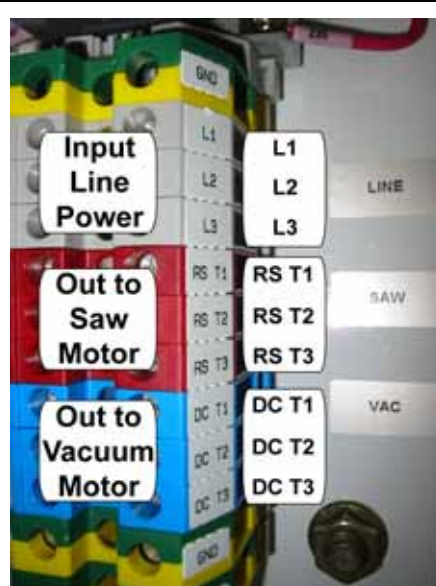


Figure 36, Input/Output Terminals

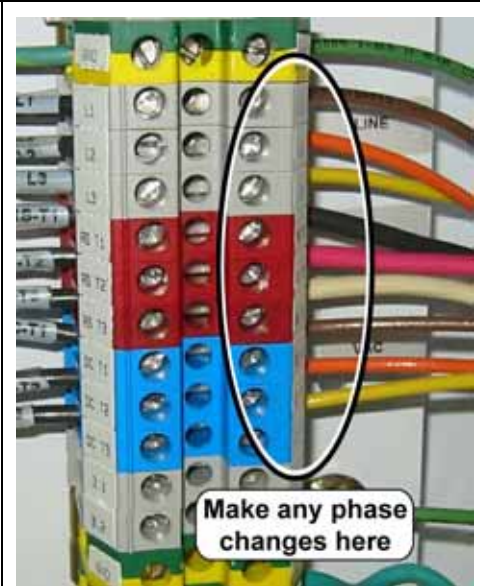


Figure 37, Phase Change Location

9.1 Motor Saver Run Light is solid green

Input power connections are correct, but the motor rotation directions still need to be verified.

Continue reading at the section below, "First startup and checking for proper motor direction."

9.2 Motor Saver Run Light is solid red

- The "Line Voltage Adjust" is set improperly for the voltage supplied.
- Measure the input line voltages individually with a voltmeter.
- The meter should be set to Volts AC (VAC, or "~") and have inputs rated for at least 600VAC.
- Measure between terminals; L1 and L2, L2 and L3, L3 and L1 ... all three values should be similar.
- Now turn the "Line Voltage Adjust" dial to match the value measured, if above 480VAC then set dial to the maximum range.
- The Run Light should now turn green.

9.3 Motor Saver Run Light is blinking red

- There is an error in the input line phase order.
- Turn power off to the saw at the fused disconnect and swap the motor wires feeding the L1 and L2 terminals.
- Turn power back on and take note of the Motor Saver LED again.
- Continue your work based on the current LED status (either solid red or solid green.)

9.4 First startup and checking for proper motor direction

!!!Warning!!! Clear the table top and saw area before continuing.

Step 1) Enter the security code (written on blue tape inside the cover, the store number, or the defaults 1234 or 4321) followed by the '*' key.

Step 2) The Start/Stop button will light.

Step 3) Pull the Start/Stop button, the vacuum and saw motors will start at the same time.

Note: The vacuum may appear to function even if the rotation is wrong, visual inspection of the rotor is required to verify proper operation.

Step 4) Temporarily remove the vacuum hose.

Step 5) Start the system and then Stop it again.

Step 6) As the vacuum slows observe the motor direction.

Step 7) If required, change the direction of the vacuum motor by first turn power off at the fused disconnect and then swap the wires going to the terminals DC_T1 and DC_T2.

Step 8) Check the rotation of the saw motor by following the same steps as above except swap the wires going to terminals RS_T1 and RS_T2 if required.

10 Rope Burner, Key Machine, Blind Cutter, and Shelf Cutter

10.1 Normal Operation

The red light on the keypad will be lit whenever power is connected. Enter the security code into the keypad followed by the '*' key (Example: 1234*). The system has now begun timing 3 minutes. When finished PUSH the STOP button to cancel time and stop the equipment.

10.2 If the keypad red light is OFF

Step 1) Measure the line voltage at the input terminals (across terminals 1 & 2), it should be 120VAC.

Step 2) Check that the DC Power Supply (Figure 40) has both the red and green lights illuminated. If the green light is ON but not the red then service will be required, contact BoldStar Technical.

Step 3) Figure 39 shows the back of the keypad, carefully press on this circuit board to ensure that it's fully seated, also check that the plugs along the edge of the board are correct.

10.3 If the keypad red light is ON

Step 1) If the yellow light on the keypad does not flash when buttons are pressed please check for any keys that may be stuck down.

Step 2) Power cycle the entire system and try again.

Step 3) When the security code is entered the green light should flash once then return to the red light only, if it does not then verify your security code (other possible defaults are 1234* or 4321*)

Step 4) Figure 39 shows the back of the keypad, carefully press on this circuit board to ensure that it's fully seated, also check that the plugs along the edge of the board are correct.

Step 5) Depress the small reset button (Figure 39) on the back of the keypad circuit board with a nonmetallic object (like a writing pen.) The yellow light should now flash for 20-30 seconds, at the end of this time the system will become active. This tests that the keypad is operating, but may not be accepting your security code.



Figure 38

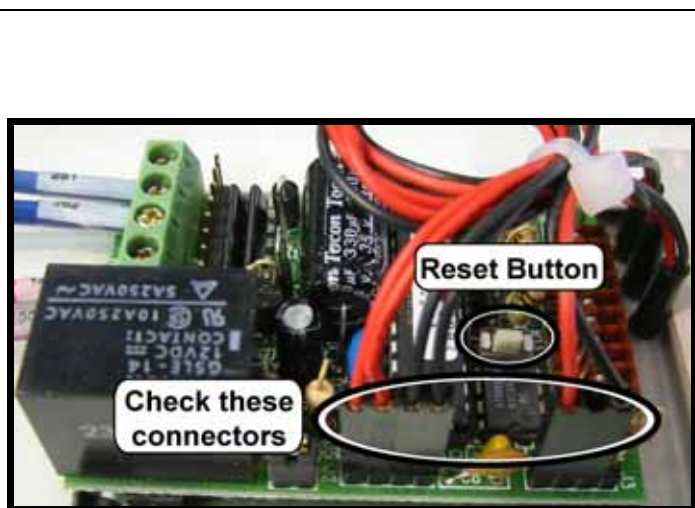


Figure 39



Figure 40

11 Settings and Changes for different operating voltages

When installing the keypad control panel it's important to realize the operating voltage. Although new installs will be configured for 460VAC, many older existing saws may use 230 or 208VAC. In these cases it will be required for the installer to make the necessary changes to the keypad control panel.

11.1 Selecting the heater packs required

Figure 41 shows the various heater packs which must be installed depending on the operating voltage and the equipment motors. Find your specific combination and make the required changes to the heater packs and the adjustable setting. If your application is not listed then contract BoldStar Technical for further information. **The Saw Motor and the Vacuum Motor MUST run at the same voltage!**

	Saw Motor Dust Motor		Saw Motor Dust Motor	
	Omga	Omga	Omga	Omga
Voltage	480		230	
HP				
FLA	4.4	1.71	8.9	3.42
Heater Pack	H2008B-3	H2005B-3	H2010B-3	H2008B-3
FLA Dial	D	D	B	B

	Saw Motor Dust Motor		Saw Motor Dust Motor	
	Omga	Oneida	Omga	Oneida
Voltage	480		230	
HP				
FLA	4.4	2.8	8.9	5.8
Heater Pack	H2008B-3	H2007B-3	H2010B-3	H2009B-3
FLA Dial	D	C	B	C

	Saw Motor Dust Motor		Saw Motor Dust Motor	
	Original	Original	Original	Original
Voltage	480		230	
HP	5	2		
FLA	7.6	2.8	8.9	3.42
Heater Pack	H2010B-3	H2007B-3	H2012B-3	H2009B-3
FLA Dial	C	C	C	C

Figure 41, Overload heater pack selection

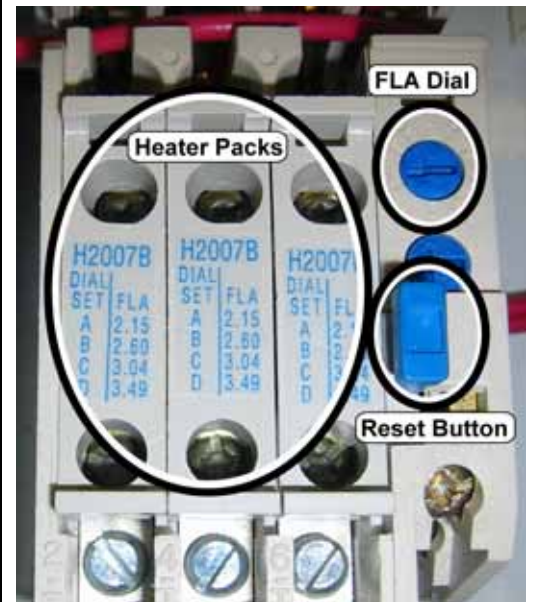


Figure 42, Picture of Overload

11.2 Selecting the control transformer voltage

The control transformer has 3 different terminals which must be selected according to the supply voltage. Figure 43 shows these terminals in the default 460VAC setting. The other possible configurations are shown in Figure 44.

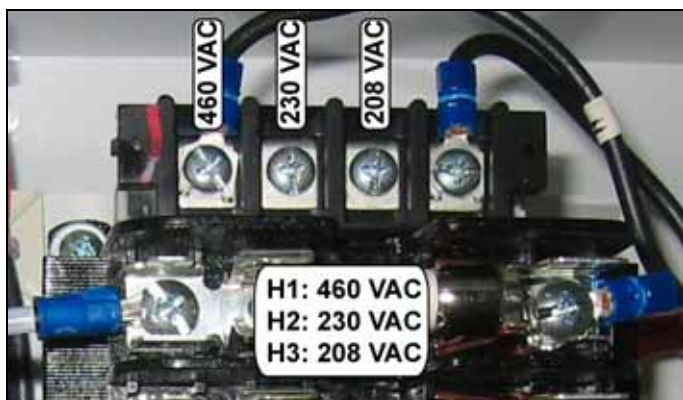


Figure 43, Control Transformer Taps

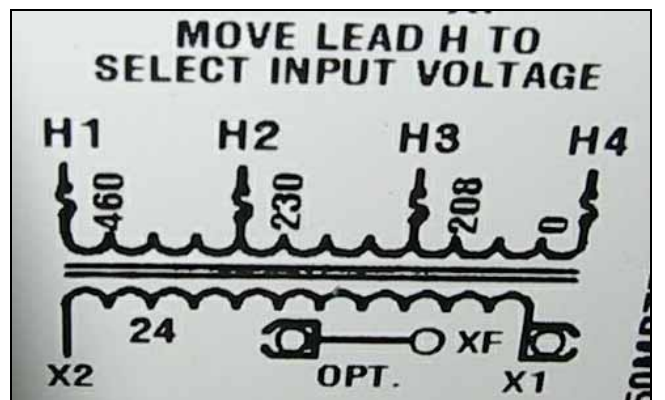


Figure 44, Control Transformer Tap Diagram

11.3 Selecting different heater packs and FLA Adjustment

This bimetallic ambient compensated overload relay has an adjustable FLA range between 0.254 and 32.0 amperes, depending upon which heater packs are installed. Select the appropriate heater pack part number which corresponds to the motor FLA rating for your application. Adjust the FLA Dial to closely match the motor FLA. Insert each heater into the overload relay and tighten heater mounting screws to 9 pound-inches of torque. Note: All three heater packs must be the same part number. Replacement heaters ordered through Boldstar Technical will come as a set of three.

When setting the FLA Dial a more precise control of the value can be achieved by estimating a point between the positions. So that when the pointer is halfway between “B” and “C”, the current setting will be halfway between the “B” and “C” values shown.

	FLA Dial						
	A	A-B	B	B-C	C	C-D	D
H2003B	0.56	0.62	0.68	0.73	0.79	0.85	0.91
H2004B	0.81	0.90	0.98	1.07	1.15	1.24	1.32
H2005B	1.20	1.33	1.45	1.58	1.71	1.84	1.96
H2006B	1.79	1.98	2.16	2.35	2.53	2.72	2.90
H2007B	2.15	2.38	2.60	2.82	3.04	3.27	3.49
H2008B	3.23	3.57	3.90	4.23	4.56	4.90	5.23
H2009B	4.55	5.03	5.50	5.98	6.45	6.93	7.40
H2010B	6.75	7.46	8.17	8.88	9.58	10.29	11.00
H2011B	9.14	9.97	10.80	11.60	12.40	13.20	14.00
H2012B	14.00	15.45	16.90	18.40	19.90	21.35	22.80
H2013B	18.70	20.70	22.70	24.70	26.70	28.70	30.70
H2014B	23.50	26.00	28.50	31.00	33.50	*	*

11.4 Replacing Heater Packs

- Step 1) Turn OFF “Main Disconnect Switch” on front of panel.
- Step 2) Turn OFF fused disconnect mounted on back wall.
- Step 3) Loosen the hold-down screws for the front cover.
- Step 4) Open the front panel.
- Step 5) Fully loosen the two screws that hold each heater (six screws total per motor starter.)
- Step 6) Remove all the heaters and set them aside.
- Step 7) Select the new heaters (or use the ones provided to you.)
- Step 8) Install the new heaters (the larger value part number will always be installed into the left starter “M1” for the saw motor)
- Step 9) Tighten all six screws.
- Step 10) Adjust the FLA Dial as needed (or as instructed.)
- Step 11) Make sure the overload is reset (push the reset button.)
- Step 12) Repeat actions if heaters need to be changed for the vacuum system (make these same changes in the right-side starter “M2” for the vacuum motor)
- Step 13) Close the front panel, tighten the cover screws.
- Step 14) Turn ON fused disconnect mounted on back wall.
- Step 15) Turn ON “Main Disconnect Switch” and re-test the system.



12 Reprogramming the Keypad Security Code

Keypads that have been shipped directly to a new store during construction will be preprogrammed to use the store code as the security code. Replacement keypads should have been preprogrammed to use the store code. Keypads other than BoldStar Technical might have any combination including the defaults: 1234* or 4321*. These instructions might be also be applicable to other equipment which uses this same keypad.

12.1 **If you know the current security code and wish to change it**

Step 1) Press: 99#(Current Code)*

Step 2) Press: 1#(New Code)*(New Code)**

12.2 **If you don't know the current security code and wish to change it**

Step 1) Turn OFF “Main Disconnect Switch” on front of panel.

Step 2) Loosen the hold-down screws for the front cover.

Step 3) Open the front panel.

Step 4) Using a wrench or pliers, turn the “Main Disconnect Switch” ON by twisting the square shaft in the top-left area of the panel.

Step 5) The red light on the keypad should now be ON.

Step 6) Locate the small white button on the back of the keypad and press it.

Step 7) The yellow light on the keypad should now be blinking.

Step 8) Press 1#(New Code)*(New Code)**

Step 9) Test the new code.

Step 10) Using a wrench or pliers, return the “Main Disconnect Switch” to OFF by twisting the square shaft in the top-left area of the panel.

Step 11) Close the front panel, tighten the cover screws, power ON, and re-test the new code.

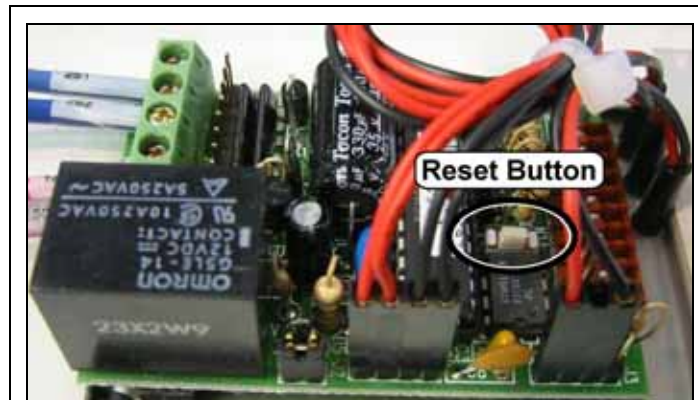


Figure 45, Reset Button (Old Style Keypad)

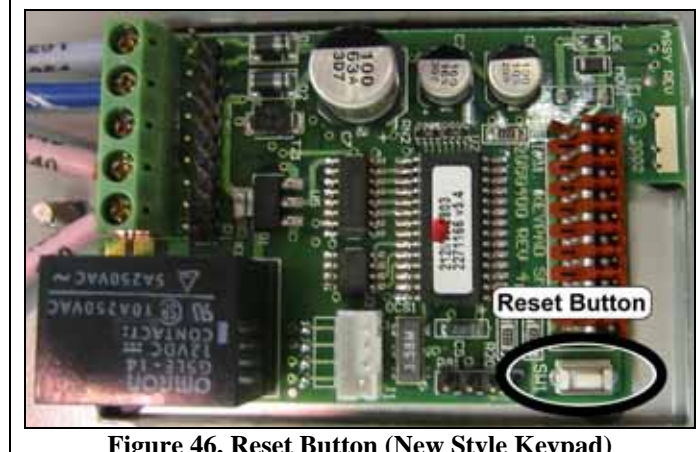
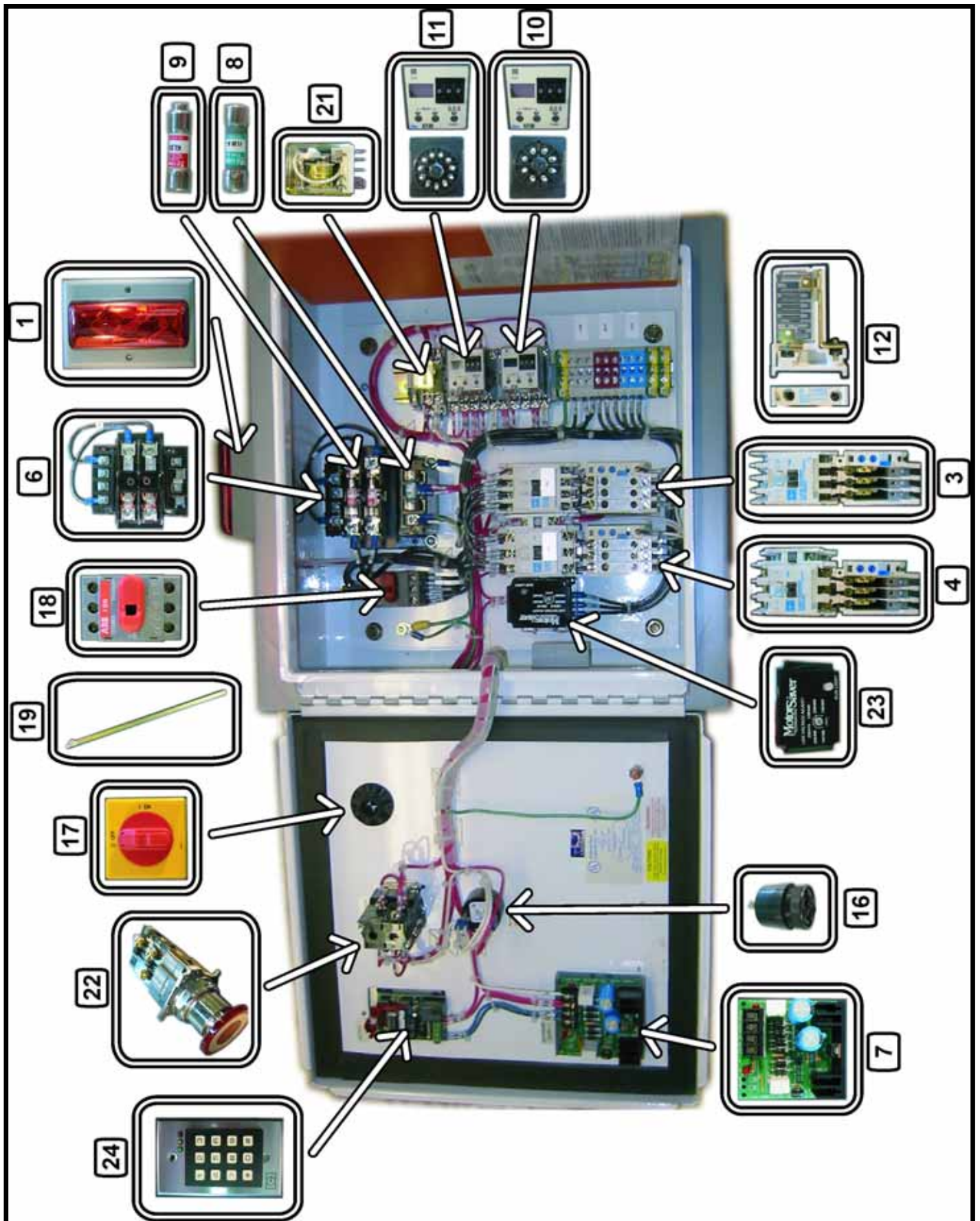


Figure 46, Reset Button (New Style Keypad)

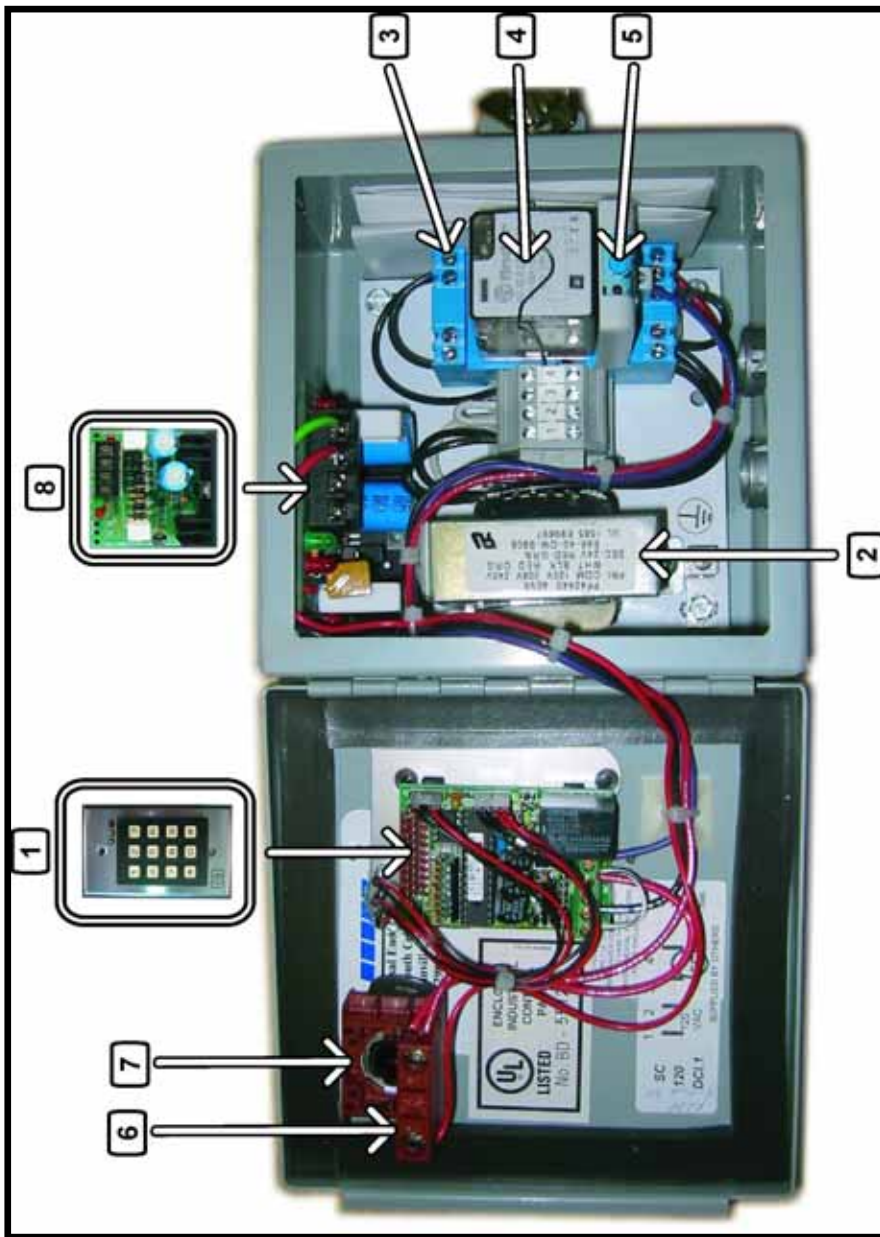
13.2 Part Diagram for Radial Arm Saw



13.3 Parts List for; Radial Arm Saw, Panel Saw, Pipe, Threader, Tile Cutter

Reference Number	Description	Labeled	Part Number
1	Strobe Light	Warning Light	BSTHD1023
2	Contactora w 24VAC Coil	PR	BSTHD1001
3	Motor Starter for Dust Collector	M2	BSTHD1043
4	Motor Starter for Arm Saw	M1	BSTHD1044
5	Transformer 120V/24V	TF1	BSTHD1008
6	Transformer 480V/24V	TF1	BSTHD1002
7	DC Power Supply	DC Power Supply	BSTHD1020
8	Fuse 6 1/4 AMP		BSTHD1047
9	Fuse 1 AMP		BSTHD1050
10	Time Delay Relay	TR2	BSTHD1024
11	Time Delay Relay	TR1	BSTHD1025
12	Heater Pack H2005B-3 (Pack of 3)		BSTHD1048
	Heater Pack H2009B-3 (Pack of 3)		BSTHD1049
	Heater Pack H2007B-3 (Pack of 3)		BSTHD1065
13	Hubbell Twist Lock Female Outlet125 V	Panel Saw/Pipe Threader Outlet	BSTHD1013
14	Hubble Twist Lock Male		BSTHD1014
15	Hubbell 110V Single Outlet	120 VAC Outlet	BSTHD1015
16	Audio Horn (All Others)	Alarm Horn	BSTHD1005
	Alarm Horn (Rad Arm Saw)	Alarm Horn	BSTHD1051
17	Main Disconnect Operator Handle		BSTHD1052
18	32A Disconnect Switch	DS1	BSTHD1053
19	Disconnect Switch Shaft		BSTHD1054
20	GFCI 20 AMP Breaker		BSTHD1007
21	Two Pole Relay 24VAC	R1	BSTHD1026
22	Start Stop Switch Complete	Start/Stop	BSTHD1022
23	Motor Saver	Motor Saver	BSTHD1041
24	CESI Weatherproof Key Pad	Keypad	BSTHD1019
25	A-B Jumpers		BSTHD1009
26	Circuit Breaker 15A		BSTHD1011
	GFCI Breaker Clips		BSTHD1006
	A-B Barriers		BSTHD1010
	Terminal Block White		BSTHD1012
	Hubbell Cover Plate 110V		BSTHD1016
	Hubbell Cover Plate Twist Lock		BSTHD1017
	2 Pole Relay Socket		BSTHD1027
	8 Pin Relay Socket		BSTHD1028
	11 Pin Relay Socket		BSTHD1029
	Terminal Block End Anchor		BSTHD1030
	Terminal Block Gray		BSTHD1031
	Terminal Block Blue		BSTHD1032
	Terminal Block Ground		BSTHD1033
	Bridge Rectifier (OMGA Only)		BSTHD1034
	Brake Transformer (OMGA Only)		BSTHD1036
	20" Hinge		BSTHD1037
	Mounting Bracket Panel Saw		BSTHD1038
	Mounting Bracket Pipe Threader		BSTHD1039
	Motor Saver Relay Socket		BSTHD1042
	12" Long Hinge		BSTHD1055
	12" Aluminum Angle		BSTHD1056
	Terminal Block Red		BSTHD1059

13.4 Part Diagram for Blind Cutter, Key Machine, Rope Burner, Shelf Cutter



13.5 Part List for Blind Cutter, Key Machine, Rope Burner, Shelf Cutter

Reference Number	Description	Part Number
1	Indoor Key Pad	BSTHD1057
2	120 X 24V 40VA Transformer	BSTHD1058
3	11 Pin relay Base	BSTHD1059
4	2PDT Relay	BSTHD1060
5	Timer Module. 1S-10 HR	BSTHD1061
6	1NC Contact Block 22MM	BSTHD1062
7	RED 22mm Push Button	BSTHD1063

14 Pictures of Typical Installations



15 Still having problems?

After exhausting all the possibilities mentioned here please have a voltage meter, this document, and the following information in hand before calling **Boldstar Technical** at **1-866-808-6700**. Start your call by describing if this is a new installation, or service/repair.

Store Number _____

Store Location _____

Store Contact _____

Store Phone Number _____

Equipment Type: Panel Saw / Radial Arm Saw / Pipe Threading Machine / Tile Cutter

Problem occurred: During Wiring / Startup Issue / In Service

16 Warranty Policy

All keypads supplied by Boldstar Technical are made with the highest quality materials available. Our parts and workmanship are warranted to be free of defects for one year from the date of purchase. Potential warranty repairs will be addressed by troubleshooting with our technical support team to determine the failed component(s) or returning the keypad system back to the manufacturer freight prepaid. All shipping charges and part orders must be accompanied by a purchase order and all defective parts submitted for credit must be returned within 30 days accompanied by an RMA number.

Technical Support 1-866-808-6700