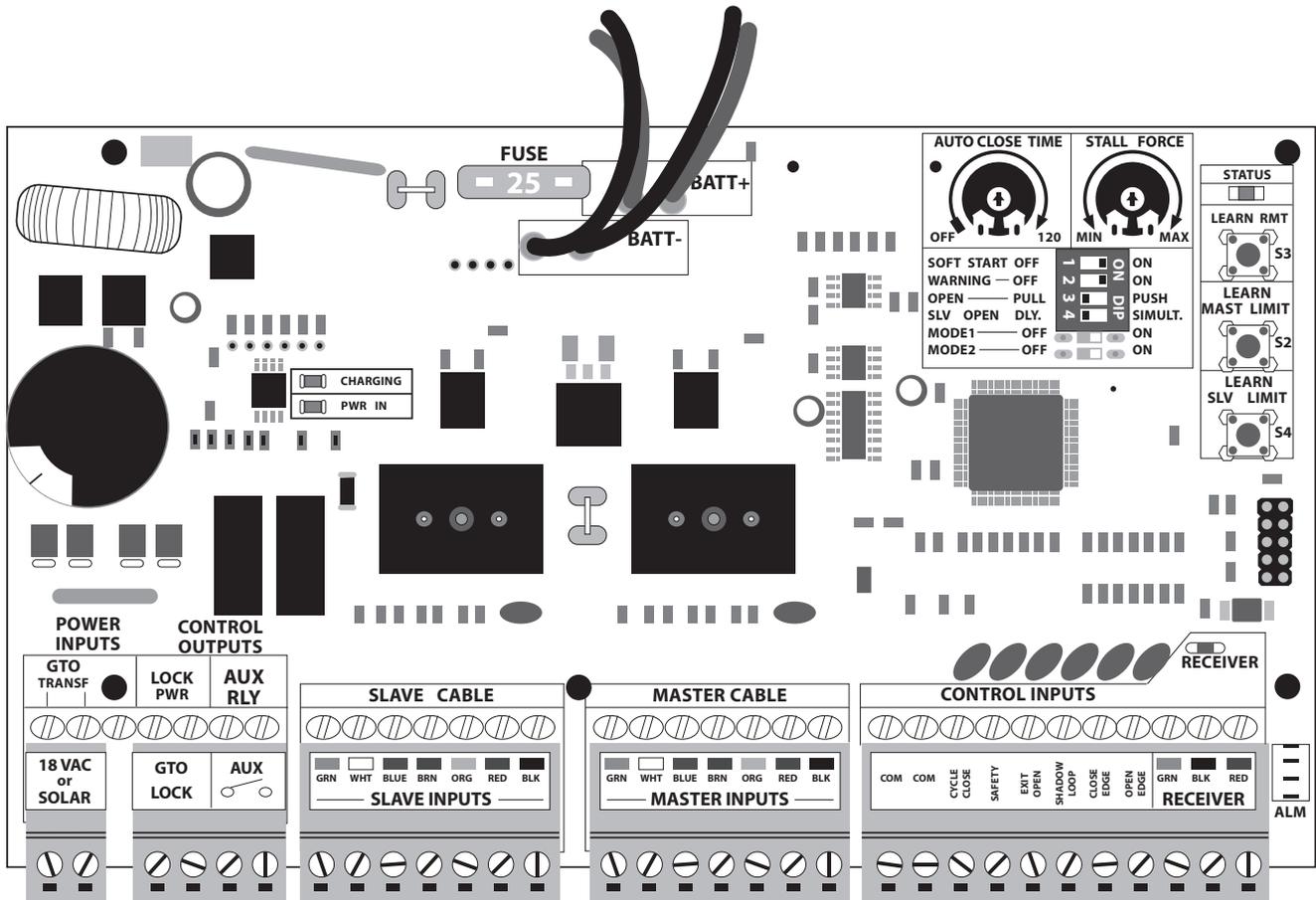


Generation-3 Control Board Wiring and Programming Instructions

PRO3040-G3

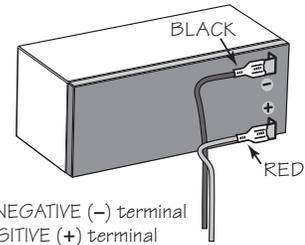
for the
GTO/PRO 3000XL/4000XL



Connecting Opener Power Cable

Step 1

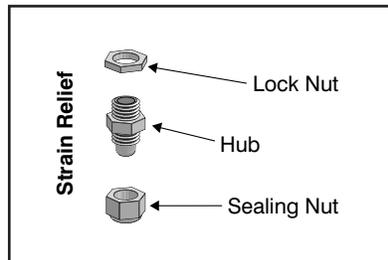
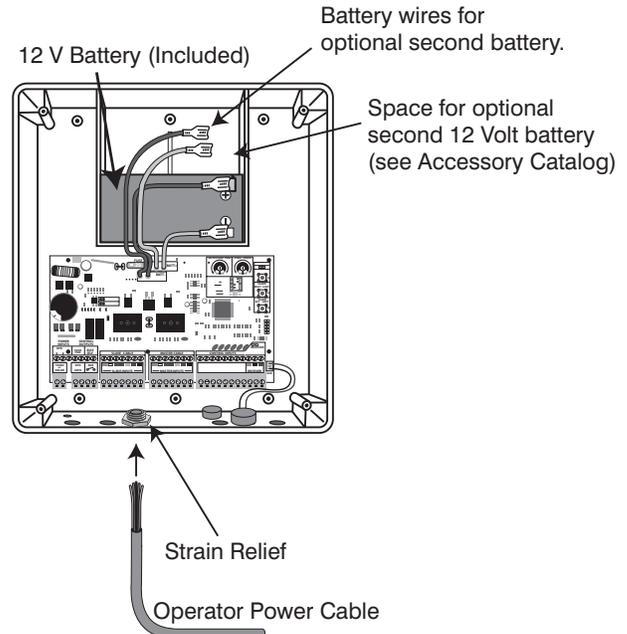
Make sure the control box power switch is in the **OFF** position. The ON/OFF Switch is located on the bottom of the control box. Remove the control box cover and slide the battery into position with its terminals to the **RIGHT** (see illustration). Connect the **BLACK** battery wire to the **NEGATIVE (-)** battery terminal. Connect the **RED** battery wire to the **POSITIVE (+)** terminal. *Pay close attention to the color of the wires. If the wires are connected incorrectly, the control board will be damaged. NEVER insert the battery with the terminals to the left.*



BLACK wire to NEGATIVE (-) terminal
RED wire to POSITIVE (+) terminal

Step 2

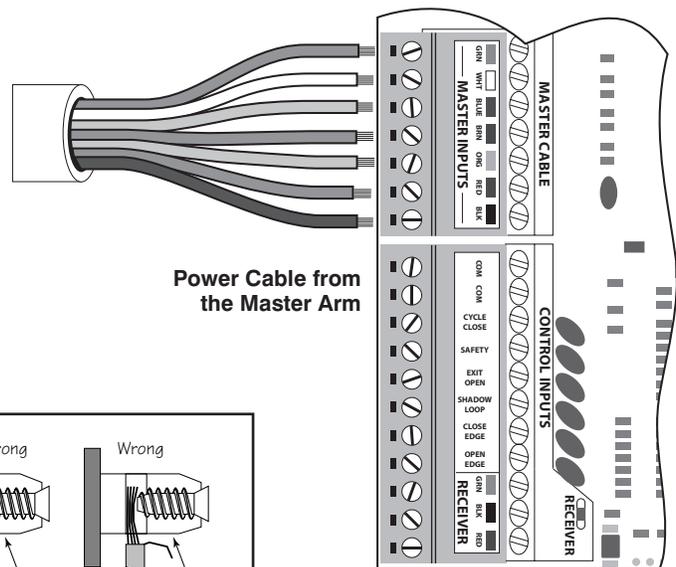
Strip approximately $\frac{3}{16}$ " of insulation from each wire of the opener power cable. Twist each exposed wire tightly (there are seven [7] wires inside the power cable sheath). Loosen sealing nut on strain relief hub at bottom of control box. Insert power cable into control box through strain relief. Thread approximately 6" of the power cable into the control box and retighten sealing nut until the power cable locks into place.



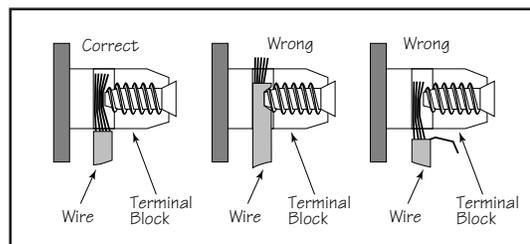
Step 3

Insert the stripped power cable wires into the appropriate terminals on the **MASTER INPUTS** terminal block. The green wire should be inserted into the **GRN** terminal, the white wire into **WHT**, the blue wire into **BLUE**, brown wire into **BRN**, and the orange wire into the **ORG** terminal, red wire into **RED**, and black wire into **BLK**.

Tighten the set screws against the end of the wires. A dab of petroleum jelly on each terminal will help prevent corrosion.



Power Cable from the Master Arm



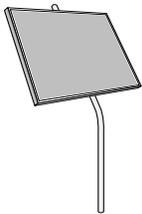
Powering the System

Installation of the Transformer

IMPORTANT:

- The transformer is designed and intended for indoor use. If the transformer can be plugged only into an outside electrical outlet, a weatherproof cover or housing (available at local electrical supply stores) **must** be used.
- All low voltage wire used with the GTO PRO® Gate Opener must be 16 gauge dual conductor, multi-stranded, direct burial wire (see page 20 and the *Accessory Catalog*). **Do not run more than 1000 feet of wire.**
- If your gate is more than 1000 ft. from an ac power source, you will need to use at least one 5 watt Solar Panel to charge the battery (see *Accessory Catalog*). Refer to the **Solar Panels and Gate Activity** chart below.

Optional Solar Panels and Gate Activity

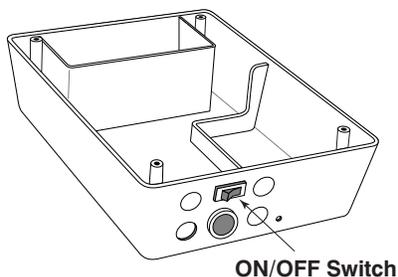
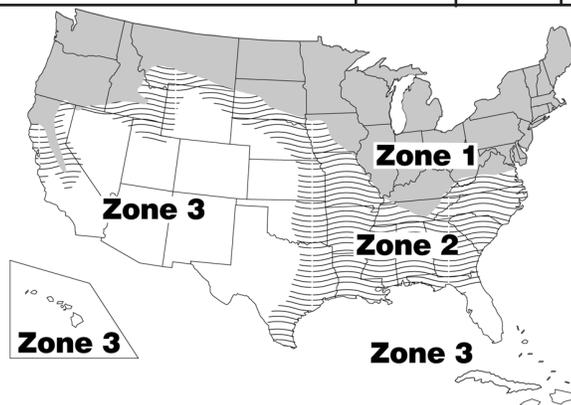


The table and map illustrate the maximum number of gate cycles to expect per day in a particular area when using from 5 to 30 watts of solar charging power. (see *Accessory Catalog*).

The figures shown are for winter (minimum sunlight) and do not account for the use of any accessory items. *Accessories connected to your system will draw additional power from the battery.*

NOTE: A maximum of 30 watts of solar charging power can be connected to the GTO PRO® Gate Opener. Consult *Solar Panel Installation Instructions* for further information.

Winter Ratings	Zone 1	Zone 2	Zone 3
12 v single gate (5 watts) solar charger	4	8	13
12 v single gate (10 watts) solar charger	8	16	26
12 v single gate (15 watts) solar charger	11	20	30
12 v single gate (20 watts) solar charger	14	28	38
12 v single gate (25 watts) solar charger	17	36	46
12 v single gate (30 watts) solar charger	20	44	54



Step 1

Make sure the power switch is **OFF** before proceeding to the next step.

Step 2

Select the electrical outlet into which you will plug the transformer. Measure the distance from this outlet to the control box following the path where the wire will be laid. After you have measured how much wire is needed, cut the wire to the appropriate length.

IMPORTANT INFORMATION ABOUT LOW VOLTAGE WIRE

The only wire acceptable for use with GTO products is 16 gauge multi-stranded, low voltage, PVC sheathed wire. This particular gauge enables the transformer to provide an adequate charge through the control board to the battery at distances up to 1000 ft.

DO NOT use telephone wire or solid core wire. Unlike multi-stranded wire, these types of wire are inadequate for use with your gate opener system. Telephone wire and solid core wire do not deliver enough voltage for your gate opener to function and will cause the system to go into a condition known as "low voltage lockout."

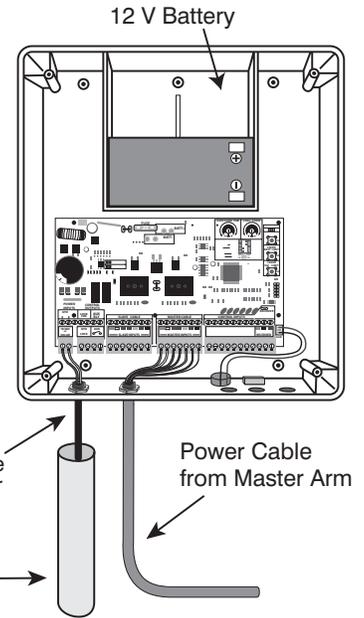
NEVER splice wires together. Splicing permits corrosion and seriously degrades the wire's ability to carry an adequate current.

Step 3

Lay the measured length of low voltage wire in a trench following a path from the selected electrical outlet to the control box. Wires coming up from the ground should be run through PVC conduit to protect them from lawn mower blades, weed eaters, and grazing animals. Be sure to bury the wire laid in the trench.

Step 4

Feed the low voltage wires upward through the strain relief opening on the lower left of the control box. Pull 6" to 8" of wire into the control box and tighten the strain relief screw to secure the wires.



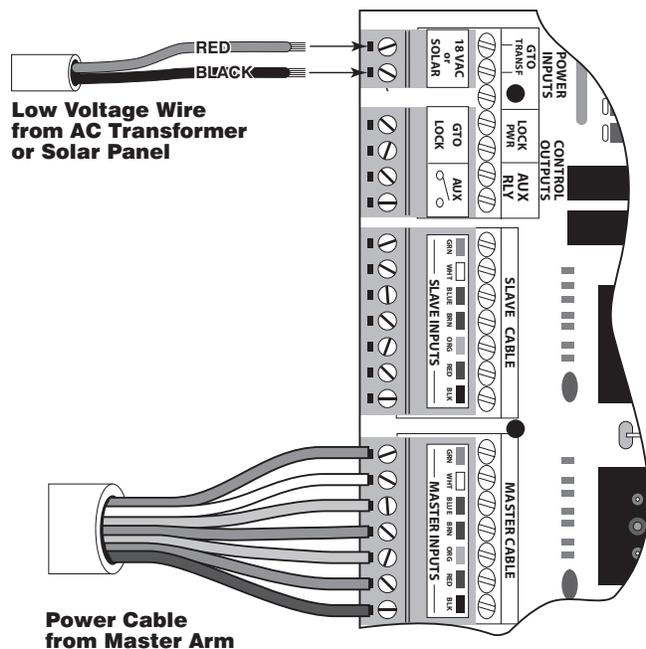
⚠ WARNING! DO NOT PLUG THE TRANSFORMER INTO AN OUTLET DURING THIS STEP! THE TRANSFORMER MUST ONLY BE PLUGGED INTO AN OUTLET DURING STEP 7!

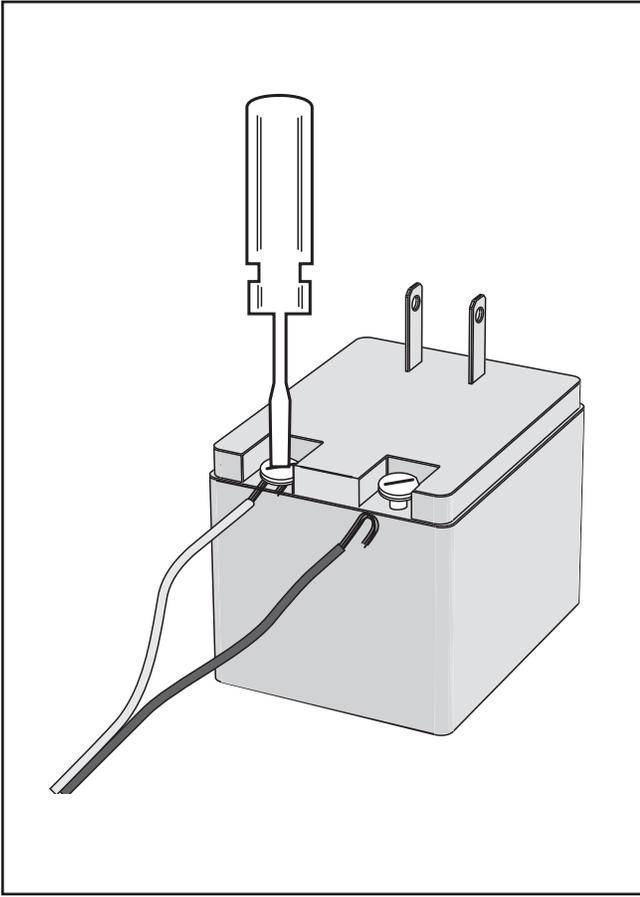
Step 5

Strip $\frac{3}{16}$ " off the ends of the low voltage wire and twist tightly. Attach these ends to the **GTO TRANSF** (GTO Transformer) terminals located on the **POWER INPUTS** (GTO Transformer) terminal block (*see illustration at right*). **Be certain not to let the exposed wires touch each other!**

Insert one transformer wire into an **GTO TRANSF** terminal. Insert the other transformer wire into the remaining **GTO TRANSF** terminal. The transformer wires can be connected to the **GTO TRANSF** terminals regardless of color or polarity.

Tighten set screws against exposed end of wires. A dab of household petroleum jelly on each terminal will help prevent corrosion.





Step 6

Strip 1/2" of insulation from the ends of the low voltage wire. Attach these stripped ends to the transformer terminals.

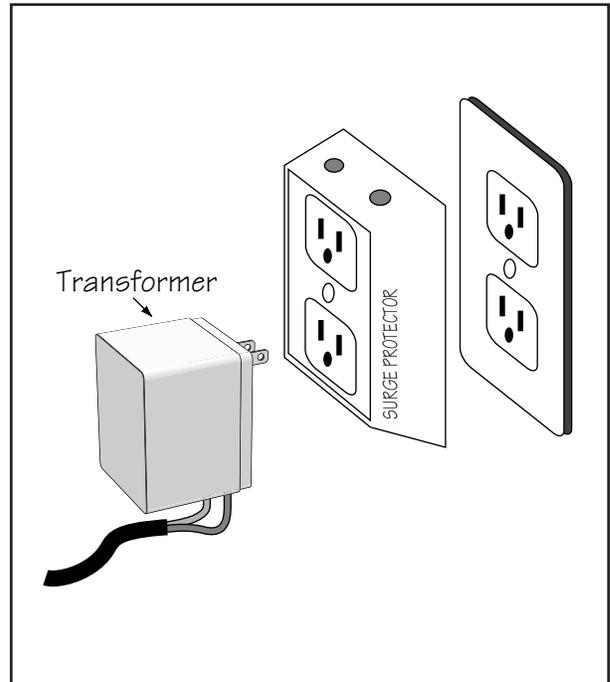
A dab of household petroleum jelly on each terminal will help prevent corrosion.

Make sure the exposed wires do not touch each other!

Step 7

Plug the transformer into the electrical outlet.
(Use of a surge protector with the transformer is strongly recommended.)

HINT: Keep a few mothballs in the control box to discourage insects from entering it and damaging the control board.



CONTROL BOARD SETTINGS

DIP Switches

Main DIP Switch Settings (MODES)

DIP Switch #1 - Soft Start/Stop

ON - Soft start enabled (factory preset).
OFF - Soft start disabled.
 The Soft Start/Stop feature slowly starts the gate as it begins to open and slows the gate as it comes to the closed position. This saves wear and tear on the gate and gate opener system.

DIP Switch #2 - Warning Buzzer

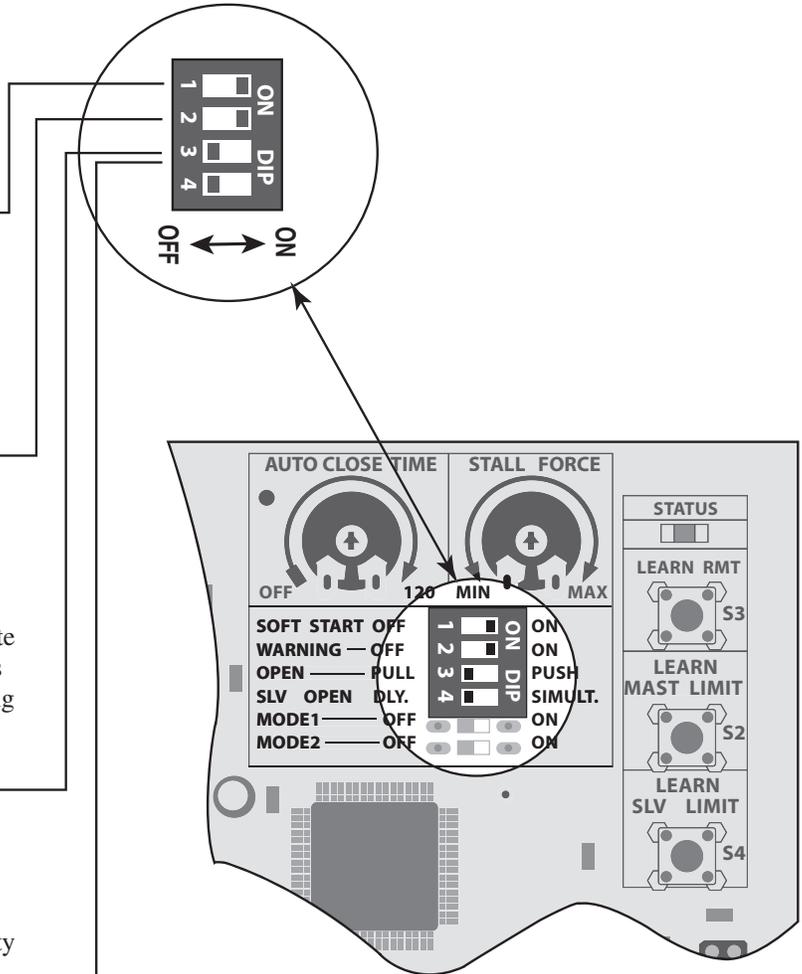
ON - Buzzer warning enabled (factory preset).
OFF - Buzzer warning disabled.
 The Warning Buzzer alerts you when the gate opener is beginning to either open or close the gate. It sounds for the first 2 seconds in each direction. It also sounds a warning when the gate obstructs two times in one cycle. Switching this to OFF only disables the open and close warning not the obstruction warning.

DIP Switch #3 - Push/Pull-to-Open

ON - Push to open.
OFF - Push to open (factory preset).
 If your gate opens into the property the DIP Switch is set to the OFF position (factory setting). If your gate opens out from the property the DIP Switch must be set to the ON position.
 NOTE: if you have a Push-to-Open gate application you will need a Push-to-Open bracket (see Push-to-Open Instructions on page 30).

DIP Switch #4 - Dual Operation

ON - Slave opens simultaneously with master.
OFF - Slave opens after master.
 Note: Not applicable for single gate operator.

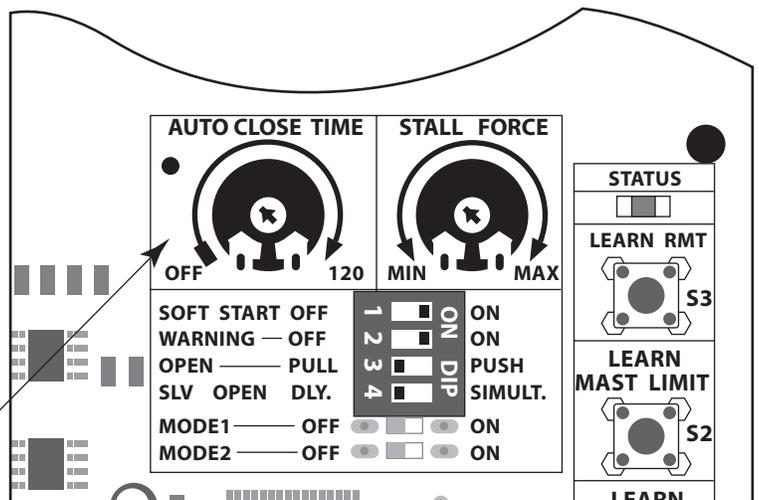


Auto Close

The 'AUTO CLOSE TIME' pot controls auto close feature.

Turning the pot all the way counter-clockwise will turn auto close feature off. The minimum auto close time is 3 seconds. The maximum (turn the pot all the way clockwise) auto close time is 120 seconds.

Auto Close Time Potentiometer



Setting the Closed Position Limit for Pull to Open Applications

TURN CONTROL BOX ON

Your GTO PRO® has two Limit Settings

1) **OPEN Limit setting:** (Gate in the OPEN POSITION / the limit is FACTORY SET and NOT ADJUSTABLE) The open limit setting is the fully open position.

2) **CLOSED Limit setting:** (Gate in the CLOSED POSITION) To achieve optimum closed position, you are required to complete the following FOUR STEPS:

Step 1

Confirm that the power switch is in the ON position and the gate is in the OPEN POSITION.

Step 2

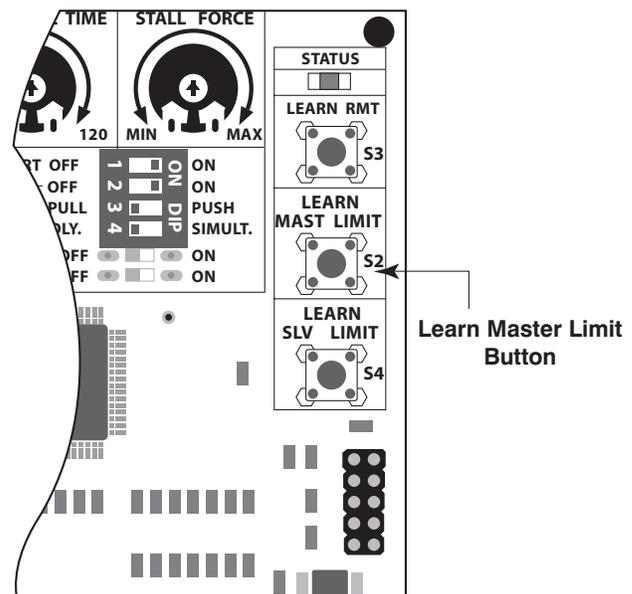
Activate your opener by pressing the entry transmitter button. Your gate should now be moving from the fully open position toward the closed position. Prepare to STOP the gate by pressing the entry transmitter button again when the gate reaches the desired closed position. This step may be repeated until desired close position is achieved. Once the desired CLOSED position has been achieved, proceed to step 3.

Step 3

With the gate in the desired closed position PRESS & HOLD the "LEARN MAST LIMIT" button on the control board for 5 seconds.

Step 4

Press the transmitter button and allow the gate to return to the fully open position. YOUR GATE'S CLOSED POSITION LIMIT IS NOW PROGRAMMED.



TESTING YOUR CLOSED LIMIT SETTING:

Press your entry transmitter and allow your gate to close. If the CLOSED position is not correct or needs to be changed, you will need to CLEAR your CLOSED LIMIT settings and follow Steps 1-4 again.

CLEARING THE PROGRAMMED CLOSED LIMIT SETTING:

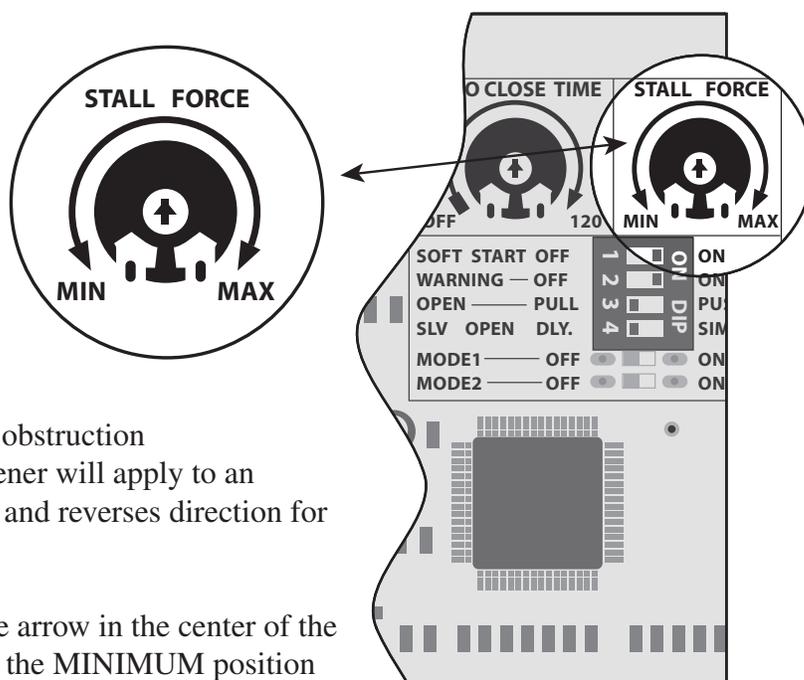
If you make a mistake and set the limit at the wrong position – press your transmitter to return the gate to the fully opened position, then press and hold the "LEARN MAST LIMIT" button for 5 seconds. This will clear the memory for the closed limit position. Follow Steps 1-4 again.

Obstruction Sensitivity Potentiometer

IMPORTANT: For safety reasons the obstruction setting or **Stall Force** on the GTO PRO® control board comes from the factory set at **MIN** (minimum). In many gate installations this setting will need to be adjusted to overcome the weight and size of the gates.

The **Stall Force** potentiometer on the control board operates like a volume control on a radio. It controls the obstruction sensitivity (or the amount of force the opener will apply to an obstruction) before it automatically stops and reverses direction for approximately two (2) seconds.

Use a small slotted screwdriver to turn the arrow in the center of the potentiometer. Adjust the stall force from the **MINIMUM** position where the gate operates without obstructing from its own weight or the wind conditions in your area.



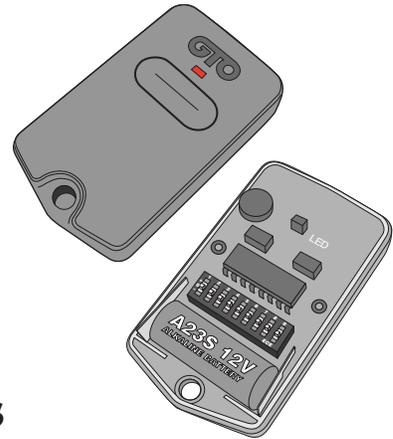
ALWAYS KEEP SAFETY AT THE TOP OF YOUR LIST WHEN ADJUSTING OR SERVICING YOUR AUTOMATIC GATE OPENER!

Setting Your Personal Transmitter Code

All GTO transmitters are set to a standard code at the factory and are ready to operate your GTO PRO® Gate Opener®. For your safety and security, however, we **strongly recommend** that you replace the factory setting with your own personal code. Follow the directions below:

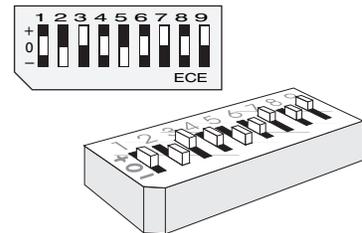
1. Remove the Transmitter Cover

On the back of the transmitter use a small phillips head screw driver to remove the two screws on the sides of the visor clip and separate the front cover from the transmitter. With the front cover removed, the battery and the DIP switches will be exposed. To set a new code, use a small screwdriver to move the switches.



2. Set the transmitter DIP Switches

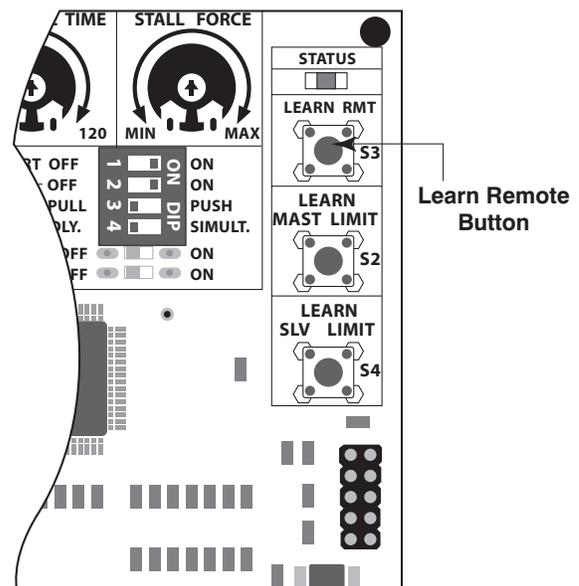
There are nine (9) transmitter DIP switches; each can be placed in three different positions (+, 0, -). **DO NOT** set all the switches in the same position, such as all +, all 0, or all -. Once the DIP switches have been set to a personal code, replace front cover.



WARNING: No other adjustments should be made inside the transmitter.

3. "Teach" the New Code to Control Board Memory

- Press and hold transmitter button.
- Press and hold the **LEARN RMT (Learn Remote)** button on the control board until the buzzer sounds.
- Release transmitter button. The new code is stored in control board memory.
- Release the **LEARN RMT (Learn Remote)** button.

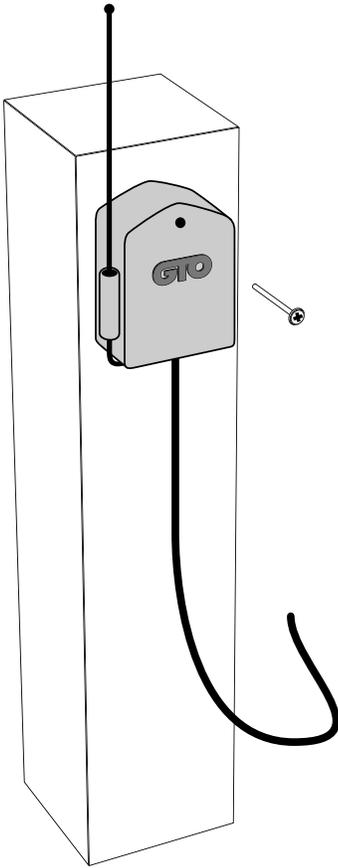


Installing the Receiver

Use the transmitter to check the range of the receiver *before permanently mounting it*.

Consider the following when mounting the receiver:

- Standard receiver cable length is 10 feet (receivers with a longer cable are available as special order items; *call the GTO Sales Department*). NEVER splice receiver cable!
- **Run the cable through PVC conduit to protect it from damage.**
- DO NOT run cable through metal conduit because the receiver signal range will be decreased.
- DO NOT run cable in conduit containing ac wiring.
- The receiver range can vary from 50 to 100 feet depending upon weather, topography, and external interference.
- DO NOT mount upside down.
- DO NOT mount on metal fence or post; doing so will decrease signal range.
- MOUNT so that you have line of sight between remote to antenna.
- MOUNT 3 feet away from AC voltage.
- MOUNT as high as possible for optimum range.



FCC Regulation

This device complies with FCC rules Part 15. Operation is subject to the following conditions:

1. This device may not cause harmful interference.
2. This device must accept an interference that may cause undesired operation.

Transmitter distance may vary due to circumstances beyond our control. **NOTE: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.**

Connecting Additional Safety Devices

Although GTO strongly recommends the use of additional safety devices, we do not endorse any specific brand names. Only use products that are certified and listed to be in compliance with any applicable UL standards (Underwriters Laboratories) and national and regional safety codes.

Call GTO Sales at 1-800-543-4283 for information on compatible products for your specific application.

The GTO PRO® 3000 will ONLY accept accessory devices with normally open dry contact output.

Contact Sensors (safety edges)

If not installing a contact sensor skip to next section.

PLEASE NOTE: Contact sensors are not *included with* the GTO PRO® 3000.

The GTO PRO® 3000 is equipped with built-in obstruction sensitivity. The opener is designed to stop and reverse the gate within 2 seconds when it comes in contact with an obstruction. However, obstruction sensitivity, although functioning properly, *may not be sensitive enough to prevent bodily injury in some circumstances*. To augment your protection against entrapment, **GTO recommends using some form of additional safety device**. When installed, contact sensors must be mounted in compliance with UL 325, Underwriters Laboratories safety standard for gate openers. Review page 5 for information about mounting requirements for safety edges ("contact sensors").

Refer to the sensor manufacturer's instructions for information about installing these devices on a vehicular gate.

⚠ Make sure the power switch to the opener is turned off before connecting safety device wiring to the terminal blocks. Unplugging the transformer does not turn power to the opener OFF.

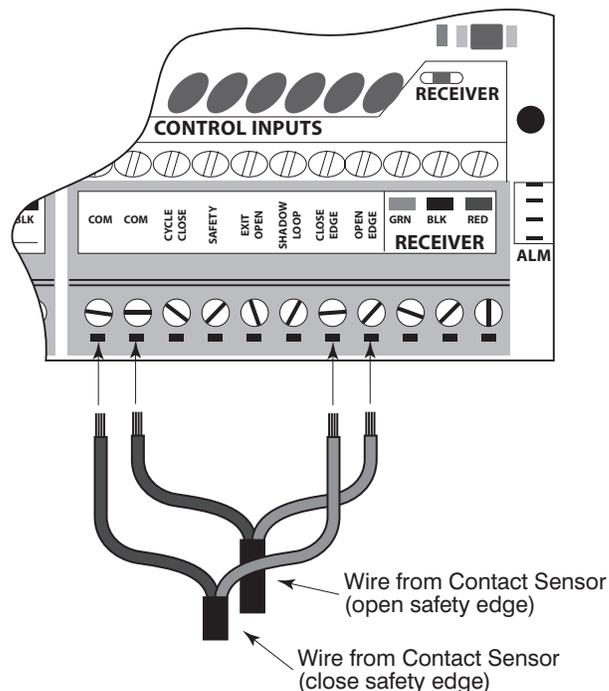
Contact Sensor Input Connection:

Connect one of the OPEN EDGE contact sensor wires to the COMMON (COM) terminal and the other to the OPEN EDGE terminal on the GTO PRO® 3000 control board.

Connect one of the CLOSE EDGE contact sensor wires to the COMMON (COM) terminal and the other to the CLOSE EDGE terminal on the GTO PRO® 3000 control board.

Activation of a contact sensor while the gate is in motion will cause the gate to stop and reverse within two (2) seconds.

NOTE: If the close edge is contacted when the gate is opening, nothing happens. If the close edge is contacted when the gate is closing, then it reverses. If the open edge is contacted when the gate is closing, nothing happens. If the open edge is contacted when the gate is opening, then it reverses.



Non-Contact Sensors (photo beams)

If not installing a non-contact sensor skip to next section.

PLEASE NOTE: Non-contact sensors are not *included with* the GTO PRO® 3000.

The GTO PRO® 3000 can also accept "Safety" input from normally open "dry-contact" output devices such as photo beams connected to the SAFETY input terminal.

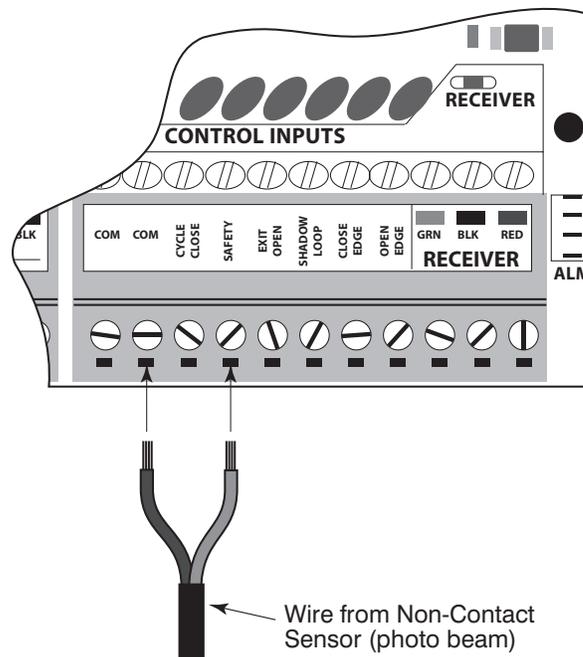
Refer to the sensor manufacturer's instructions for information about installing these devices on a vehicular gate.

⚠ Make sure the power switch to the opener is turned off before connecting safety device wiring to the terminal blocks. Unplugging the transformer does not turn power to the opener OFF.

Non-Contact Sensor Connection:

Connect one of the non-contact sensor dry contact output wires to the **COMMON (COM)** terminal and the other to the **SAFETY** terminal on the GTO PRO® 3000 control board.

This input is ONLY monitored when the gate is closing. Activating the non-contact sensor (obstructing the safety beam path) will cause the gate to reverse to the fully open position.



Shadow Loop

If not installing a shadow loop skip to next section.

PLEASE NOTE: Non-contact sensors are not *included with* the GTO PRO® 3000.

The GTO PRO® 3000 can accept "Shadow Loop" input from Loop Detector that provides normally open "dry-contact" connected to "Shadow Loop" input terminal.

Refer to the sensor manufacturer's instructions for information about installing these devices on a vehicular gate.

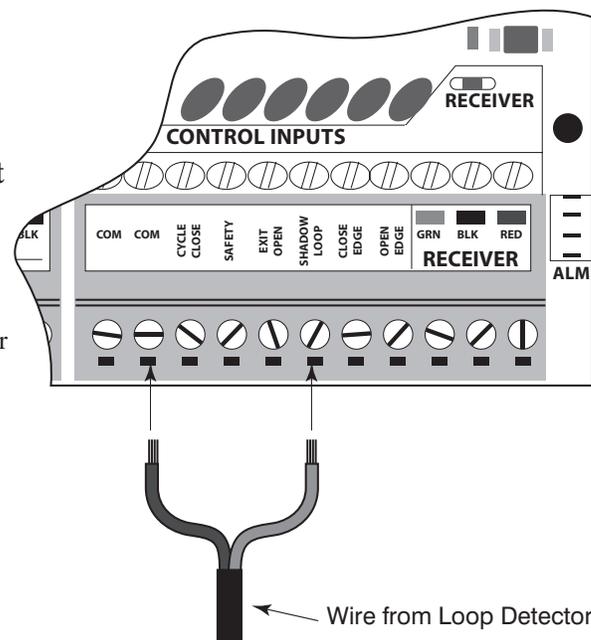
⚠ Make sure the power switch to the opener is turned off before connecting safety device wiring to the terminal blocks. Unplugging the transformer does not turn power to the opener OFF.

Shadow Loop Connection:

Connect the COM wire from the Loop Detector to the **COMMON (COM)** terminal and the normally open wire from the Loop Detector to the **SHADOW LOOP** terminal on the GTO PRO® 3000 control board.

The **SHADOW LOOP** is a detector located within the moving path of the gate to prevent the gate from closing when a vehicle is in the path.

This input is ONLY monitored when the gate is at the fully open position. Activating this will prevent the gate from closing.



Connecting Accessories

If not connecting accessories skip to next section.

Cycle Input

The GTO PRO® 3000 can accept NORMALLY OPEN "DRY-CONTACT" accessories, such as; Push Button Entry Devices and Key Pads.

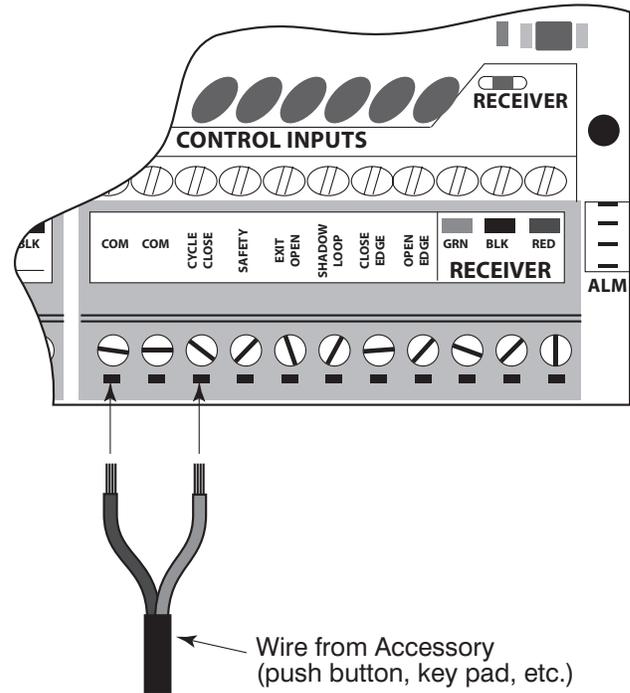
Refer to the sensor manufacturer's instructions for information about installing these devices on a vehicular gate.

- ⚠** Make sure the power to the opener is turned off before connecting cycle input device wiring to the terminal blocks. Unplugging the transformer does not turn power to the opener OFF.

Cycle Input Connection:

Connect one of the accessory wires to the COMMON (COM) terminal and the other to the CYCLE terminal

Each activation of the accessory will cause the gate to cycle as follows:



Free Exit Input

The GTO PRO® 3000 can accept NORMALLY OPEN "DRY-CONTACT" free exit/entry devices such as GTO Wand and Loop Detector

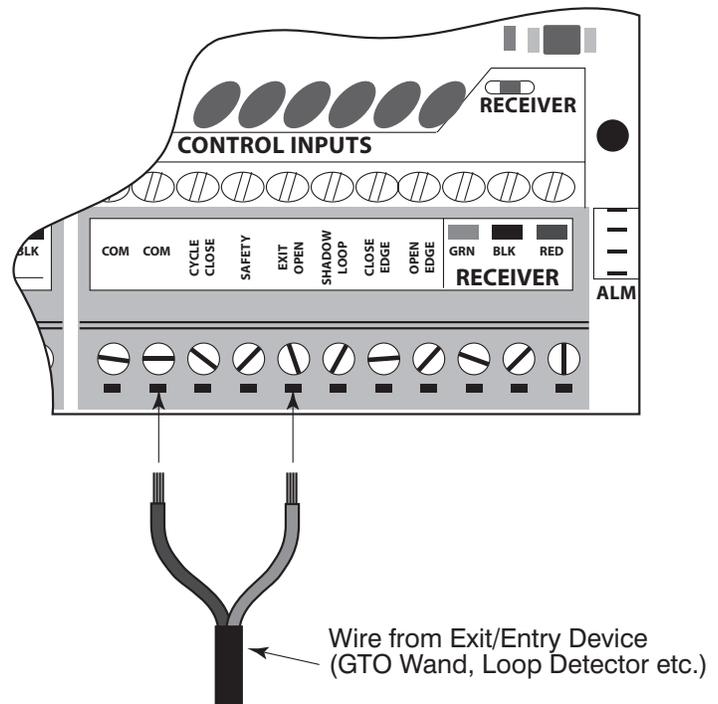
Refer to the sensor manufacturer's instructions for information about installing these devices on a vehicular gate.

- ⚠** Make sure the power to the opener is turned off before connecting free exit/entry device wiring to the terminal blocks. Unplugging the transformer does not turn power to the opener OFF.

Free Exit Connection:

Connect Exit Wand BLK wire to the COMMON (COM) terminal and Exit Wand BLU wire to the EXIT OPEN terminal on the GTO PRO® 3000 control board.

Activation of this input will cause the gate to open to the fully opened position. As long as contact is held, the gate will remain open.



Connecting GTO Automatic Gate Lock

If not connecting gate lock skip to next section.

GTO Lock:

For use exclusively with GTO Lock (FM143 or FM144).

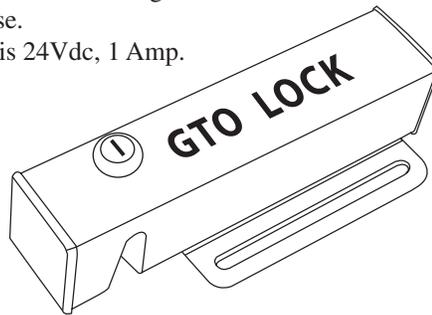
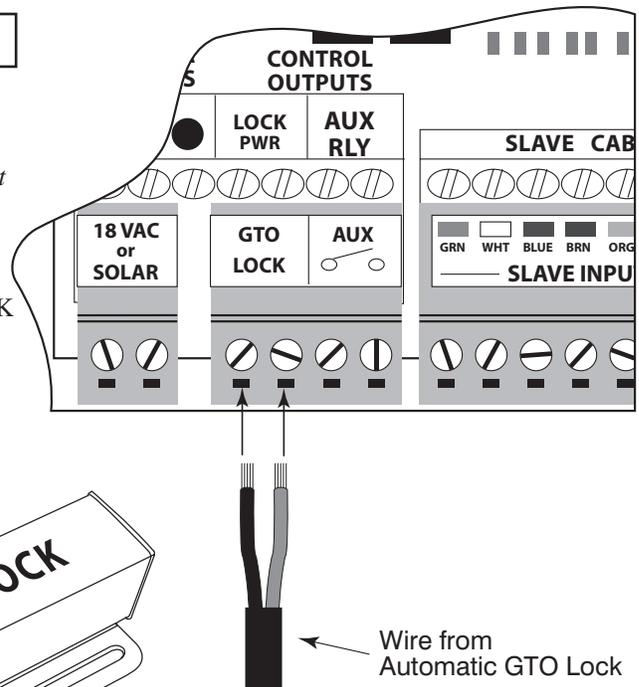
Connecting other devices to these terminals may cause incorrect operation and void your warranty.

GTO Lock Connection:

Connect the red and black leads from the lock to the GTO LOCK terminal on the GTO PRO® 3000 control board.

Aux:

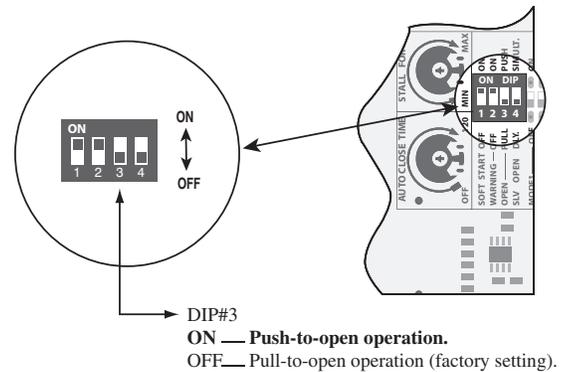
- These 2 terminals are normally open 'dry-contact' (no voltage) relay output.
- These 2 terminals are ON (shorted) whenever the gate is moving and OFF (opened) otherwise.
- These 2 terminals maximum rating is 24Vdc, 1 Amp.



Push to Open Installation

Step 4

Make sure the control box power switch is **OFF**. Use a small screwdriver to move the **Number 3** DIP switch from the factory setting (OFF / Pull-To-Open) to **ON for Push-To-Open**. Turn power switch **ON**. The control board is now configured to *push* the gate open.



Setting the Open Position Limit

Step 1

Confirm that the power switch is in the ON position, and the gate is in the CLOSED POSITION.

Step 2

Activate your opener by pressing the entry transmitter button. Your gate should now be moving from the closed position toward the open position. Prepare to STOP gate by pressing the entry transmitter button again when the gate reaches the desired open position. This step may be repeated until desired open position is achieved. Once the desired OPEN position has been achieved, proceed to Step 3.

Step 3

With the gate in the desired open position PRESS & HOLD the “LEARN MAST LIMIT” button on the control board for 5 seconds.

Step 4

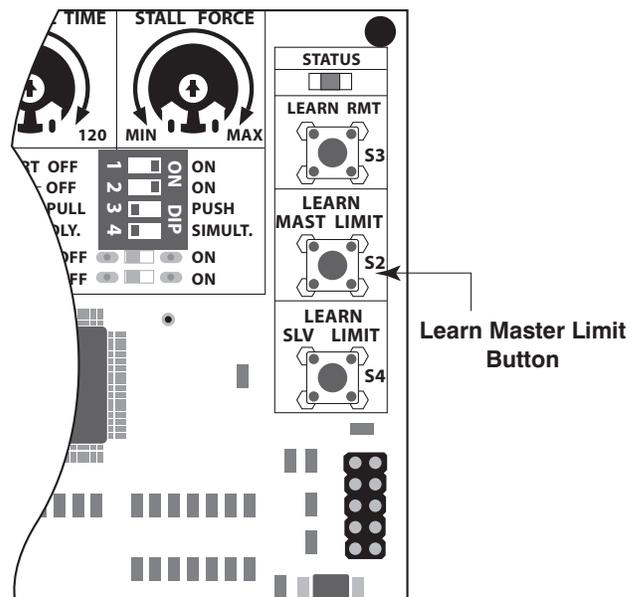
Press the transmitter button and allow the gate to return to the closed position. YOUR GATE’S OPEN POSITION LIMIT IS NOW PROGRAMMED.

TESTING YOUR OPEN LIMIT SETTING:

Press your entry transmitter and allow your gate to open. If the OPEN position is not correct or needs to be changed, you will need to CLEAR your OPEN LIMIT settings and follow steps one (1) to four (4) again.

CLEARING PROGRAMMED OPEN LIMIT SETTING:

If you make a mistake and set the limit at the wrong position – press your transmitter to return the gate to the fully closed position, then press and hold the "LEARN MAST LIMIT" button for 5 seconds. This will clear the memory for the open limit position. Follow steps one (1) to four (4) again.



Maintenance & Troubleshooting Guide

If your gate opener does not function properly after it is installed, use this guide before calling the GTO Service Department.

'PR03040-G3' DIAGNOSTIC INDICATORS GUIDE

This guide provides detailed explanations of various alarm sound and led indicators for the new PRO3040-G3 board).

A. LED INDICATORS ON WORKING OPENER:

In the following modes, the control boards will indicate various conditions of the operator. The operator is fully operational in these modes.

1. Input Changed indicators:

Alarm: None.

'STATUS' Led: 1 blink.

- Whenever there is a change in state in any of the following inputs: retracted limit switch, DIP-Switches, Cycle, Safety, Exit, Shadow, Close Edge or Open Edge.

2. 'CYCLE' Input Activated indicators:

Alarm: None.

'STATUS' Led: 1 blink with 2 seconds pause (Idle state only)

- 'CYCLE' input is continuously shorted to common/ground.

3. 'SAFETY' Input Activated indicators:

Alarm: None.

'STATUS' Led: 2 blinks with 2 seconds pause (Idle state only)

- 'SAFETY' input is continuously shorted to common/ground.

4. 'EXIT' Input Activated indicators:

Alarm: None.

'STATUS' Led: 3 blinks with 2 seconds pause (Idle state only)

- 'EXIT' input is continuously shorted to common/ground.

5. 'SHADOW' Input Activated indicators:

Alarm: None.

'STATUS' Led: 4 blinks with 2 seconds pause (Idle state only)

- 'SHADOW' loop input is continuously shorted to common/ground.

6. 'CLOSE EDGE' Input Activated indicators:

Alarm: None.

'STATUS' Led: 5 blinks with 2 seconds pause (Idle state only)

- 'CLS EDGE' input is continuously shorted to common/ground.

7. 'OPEN EDGE' Input Activated indicators:

Alarm: None.

'STATUS' Led: 6 blinks with 2 seconds pause (Idle state only)

- 'OPN EDGE' input is continuously shorted to common/ground.

8. 'POWER IN' Input indicator:

Alarm: None.

'POWER IN' Led (Green): ON/OFF (see description below)

- ON: Transformer is detected.
- OFF: Transformer installation: No AC input power is present. The battery is not being charged...

9. Battery charging indicator:

Alarm: None.

‘CHARGING’ Led (Red): vary (see description below)

- Constantly ON: The charging circuit is in fast charge mode. The battery is being charge with a constant current (~ 1Amp)
- 2 blinks per second: Soak charge mode. The charger has completed fast charge mode and the battery has reached the desired voltage (~14.1 Volts). The charger circuit will remain at this stage for a maximum of 2 hours then switch to float charge mode.
- 1 blink per 2 seconds: Float charge mode. The battery has reached full capacity; a constant volt age is applied to keep the battery at fully charged capacity. (~13.8 Volts)
- OFF: Battery is not being charge. This led will be OFF if there is no transformer or solar panel power.

10. Low Battery indicators:

Alarm: 1 beep every 10 seconds (Idle state only)

‘STATUS’ Led: 1 blink every 10 seconds (Idle state only)

‘CHARGING’ Led: Rapid pulses every second.

- Operator will continue to operator as normal. However, the battery will need to be charged. Low battery indicator will only be activated while gate is idle.
- While in idle state and the battery voltage drop below 11.4 volts (this voltage is temperature compensated) the unit will enter low battery indicator mode as described above. The operator will ‘exit’ low battery indicator mode when the voltage is above 12Volts.

11. Receiver/RF indicators:

Alarm: None

‘RECEIVER’ Led: blinking or OFF.

- When the ‘RECEIVER’ led is blinking, the controller is receiving ‘GTO scheme’ 318 MHz signal from the receiver. This indicates that the transmitter and receiver are working properly. However, if the transmitter is not being pressed and the ‘RECEIVER’ led is blinking, this indicates that there is significant interference (i.e. A stuck transmitter sending out unwanted signal).
- The ‘RECEIVER’ led is normally off if the transmitter is not pressed/transmitting.

B. LED INDICATORS ON NON-WORKING OPENER:

In the following modes, the operator is not functional. Power-on reset is required to return the operator to normal operation after the problem has been corrected.

1. Master arm limit switch error indicators: Error Code ‘1’

Alarm: 1 beep with 2 seconds pause.

‘STATUS’ Led: 1 blink with 2 seconds pause.

- The limit switch from the master arm is not detected. This typically indicates that the master arm is not connected or both the normally open (brown wire) and the normally close (orange wire) are shorted to common/ground.

2. Slave arm limit switch error indicators: Error Code ‘2’

Alarm: 2 beeps with 2 seconds pause.

‘STATUS’ Led: 2 blinks with 2 seconds pause.

- The limit switch from the slave arm is not detected. This typically indicates that both the normally open (brown wire) and the normally close (orange wire) are shorted to common/ground. Note: If no slave arm is connected, the control board will automatically switch to single mode operation.
- After 2 seconds of extending and the retracted limit switch still being activated (Stuck limit switch).

3. Master arm running error indicators: Error Code '3'

Alarm: 3 beeps with 2 seconds pause.

'STATUS' Led: 3 blinks with 2 seconds pause.

- No pulses are detected from the master arm rev counter input during the first 1-2 seconds of running the gate.
- After 2 seconds of extending and the retracted limit switch still being activated (Stuck limit switch).

4. Slave arm running error indicators: Error Code '4'

Alarm: 4 beeps with 2 seconds pause.

'STATUS' Led: 4 blinks with 2 seconds pause.

- No pulses are detected from the slave arm rev counter input during the first 1-2 seconds of running the gate.
- After 2 seconds of extending and the retracted limit switch still being activated (Stuck limit switch).

5. Current Sensing (Obstruction) error indicators: Error Code '5'

Alarm: 5 beeps with 2 seconds pause.

'STATUS' Led: 5 blinks with 2 seconds pause.

- Current sensing circuit for detecting obstruction is not working properly. The current sensing circuit is tested prior to running the motor.

6. Board have NOT been tested (and passed QA): Error Code '25'

Alarm: 2 beeps then 5 beeps with 2 seconds pause.

'STATUS' Led: 2 blinks then 5 blinks with 2 seconds pause.

- The board has not been tested and/or have not passed QA test.

7. Master Motor Terminals Shorted: Error Code '12'

Alarm: 1 beep then 2 beeps with 2 seconds pause.

'STATUS' Led: 1 blink then 2 blinks with 2 seconds pause.

- The master motor terminals and/or leads are shorted.

8. Slave Motor Terminals Shorted: Error Code '13'

Alarm: 1 beep then 3 beeps with 2 seconds pause.

'STATUS' Led: 1 blink then 3 blinks with 2 seconds pause.

- The master motor terminals and/or leads are shorted.

The **GTO, Inc. Technical Service Department** is open
Monday – Friday 8:00 A.M. – 5:00 P.M. (Eastern Time)

Telephone (800) 543-1236

Telephone (850) 575-4144

Fax (850) 575-8950 • Web site: www.gtoinc.com

E-Mail: techsupport@gtoinc.com