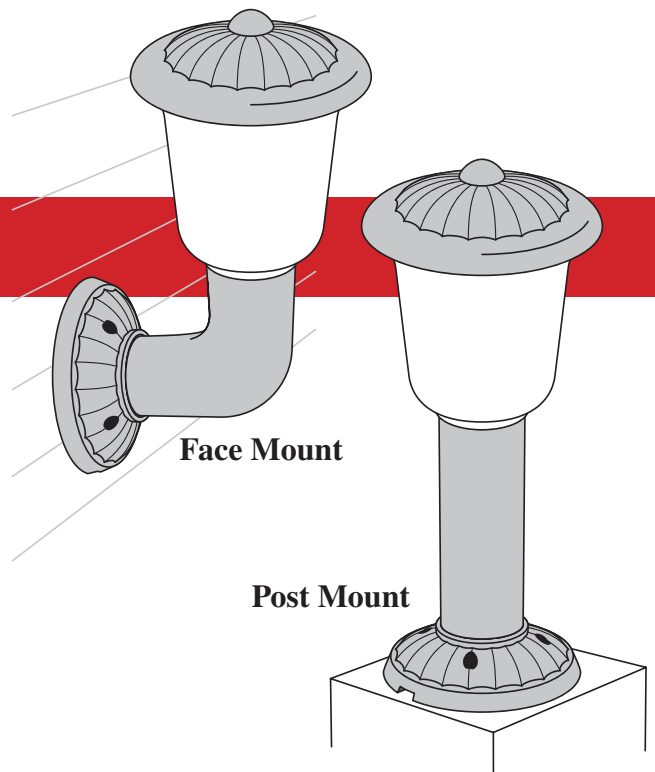


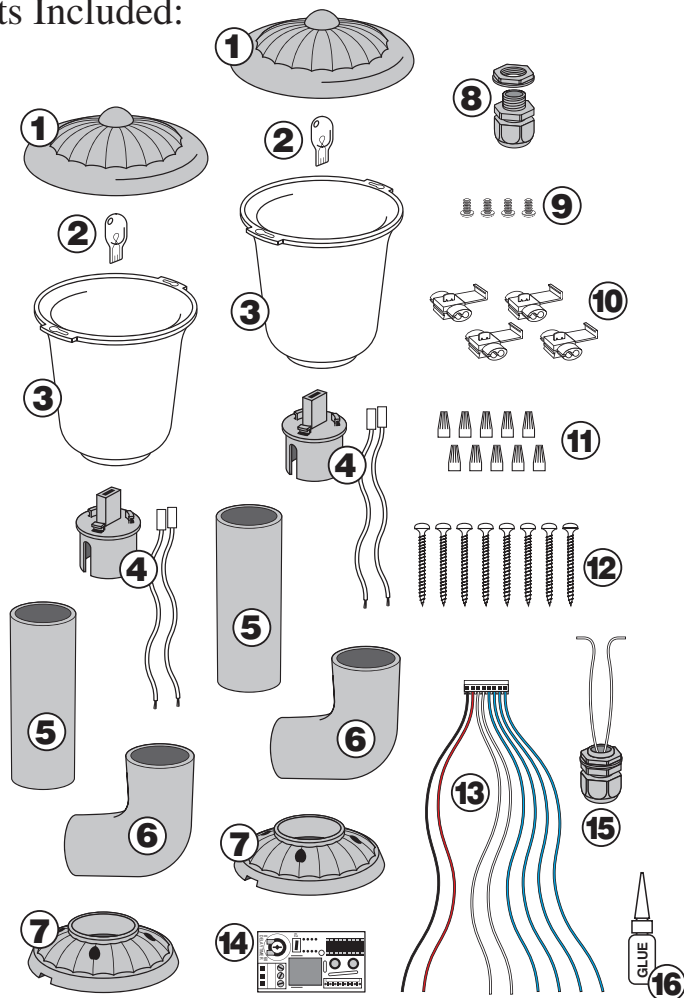
IMPORTANT: 16 gauge, multi-stranded, direct burial, low voltage wire (RB509) is required to connect the lights to the digital control board (see diagram on page 1). Small sections of the same wire will also be required for connecting light kit control board to gate operator control board and power source. Please read manual to determine how much wire you will need.

Gate Opener Light Kit

with Digital Controller



Parts Included:



- | | |
|--------------------------------|-----------------------------|
| 1. Lens Hood (2) | 9. Lens Hood Screws (4) |
| 2. 4 Watt Light Bulb (2) | 10. Wire Splicing Locks (4) |
| 3. Light Lens (2) | 11. Wire Nuts (10) |
| 4. Light Socket & wires (2) | 12. Mounting Screws (8) |
| 5. Top Mount Lens Support (2) | 13. Wiring Plug (1) |
| 6. Face Mount Lens Support (2) | 14. Control Board (1) |
| 7. Mounting Plate (2) | 15. Photocell (1) |
| 8. Strain Relief Nut (1) | 16. Glue (1) |

- **Digital Controller:** Controls lights to conserve battery life. Built-in adjustable time-on control, allows you to adjust the light timer from 0-120 seconds.
- **Easy Installation:** Connects to existing gate opener power system with no additional wiring or power source required.
- **Photocell:** Only allows activation from dusk-to-dawn for energy conservation preventing lights from coming on when not necessary.
- **Illuminates gate:** Allows you to clearly see the drive when gate is activated.
- **Commercial lens:** Professional landscape grade housing and lens are UV resistant to prevent discoloration of the lenses.
- **Decorative:** Enhances the appearance of your entrance and drive.
- **Hardware:** Post and column mount application hardware included.

Thank you...

for purchasing the Digital Controlled Gate Opener Light Kit. GTO, Inc., has been designing and manufacturing reliable, high quality products since 1987. Our corporate headquarters and state of the art manufacturing facility is located in Tallahassee, Florida. One of our highest priorities is to provide outstanding technical service to our customers. Therefore, if you have any questions or require any technical assistance, please call our toll free line 800-543-1236 or 850-575-4144 and ask to speak to one of our technicians.

The Digital Controlled Gate Opener Light Kit you have purchased is designed with some of the most advanced technology available. The Light Kit's digital control board integrates with the gate opener's controller and controls the activation and duration of the low voltage lights at the gate. The Photo Sensor only allows the light to be activated during low light or dark periods of the day for energy conservation. The lights come on when the gate operator is activated and will remain on from 0 to 120 seconds from the time the gate closed.

Prior to installing your Light Kit, please read this manual thoroughly. There are important safety recommendations of which you should be aware. This product, and any accessory you purchase, should only be installed on a gate opener that meets the current safety standard (UL325). If you have a gate opener that is not listed with the current standards, please contact the GTO sales department at 800-543-4283 or 850-575-0176 for consultation on a gate opener that can meet your specific needs.

Joe Kelley, President of GTO, Inc.

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BEFORE YOU START...

HOW THE DIGITAL LIGHT KIT WORKS:

The Digital Light Kit is designed to work in conjunction with GTO automatic gate openers to illuminate the entry way while the gate is being opened and closed during night time hours. The low voltage lights are controlled by a digital control board that is connected to the gate opener's controller. The lights are activated when the gate begins to open and can be adjusted to remain on for up to 120 seconds. The photo cell allows the lights to only come on at night which conserves energy and battery power, making the Digital Light Kit ideal for low voltage DC powered automatic gate openers.

INSTALLATION OVERVIEW:

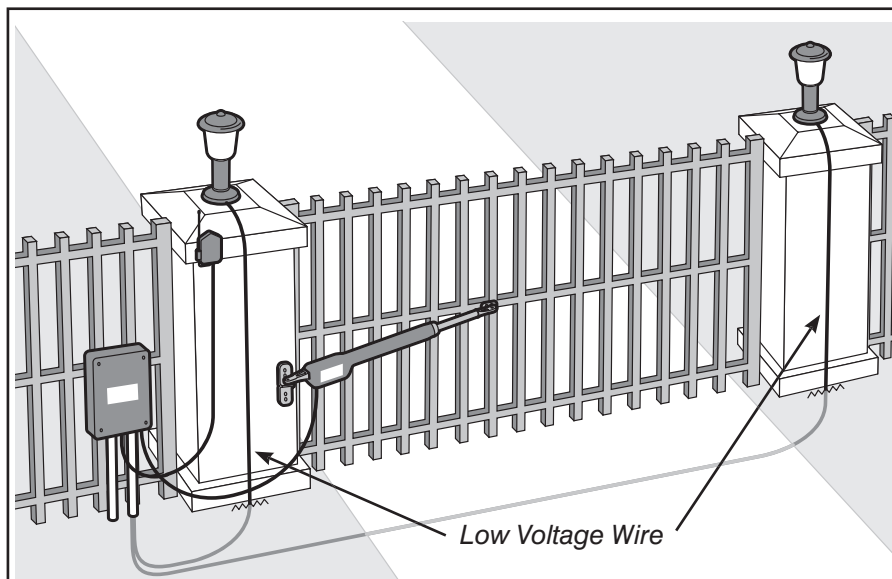
The lights can be assembled to mount on the face of your gate posts or on top of the posts. Once you determine where you want to mount the lights, you will assemble the lights and attach them to the gate post. Low voltage wire (RB509) will be needed to connect the lights mounted on the gate post to the light kit control board. GTO recommends that all wires be run in PVC conduit.

The light kit control board is normally mounted inside the gate opener's control box close to the gate opener's control board. If it will not fit in the gate opener's control box or your gate opener doesn't have a control box, a weatherproof junction box must be used to house the light kit control board and low voltage wire (RB509) must be used to connect the light kit control board to the gate opener control board.

The photocell will be mounted in the bottom of either the gate opener's control box or the weatherproof junction box, depending on where you installed the light kit control board.

After everything is installed, you will program the light kit control board for the length of time you wish the lights to remain on after the gate is opened.

IMPORTANT: 16 gauge, multi-stranded, direct burial, low voltage wire (RB509) is required to connect the lights to the digital control board (see diagram below) and in some cases small sections will be needed to connect light kit control board to gate operator control board.



INSTALLING THE LIGHTS

Installing lights on the face of the gate post:

1. Insert small screws into holes on the underside of lens hood as shown in *Figure 1*. Only screw them part way so they can twist lock into place on top of lens.
2. Install wires into the light bulb socket by simply pressing a brass connector into each side of the socket until it snaps into place. See *Figure 2*.
3. Line up the slots on the socket with the notches in the lens. Insert the socket into the lens. Firmly grasp the socket, push and twist until it snaps into place as shown in *Figure 3*.
4. Assemble the rest of the light using the angled lens support as shown in *Figure 4*. Do not glue any of the parts at this time.

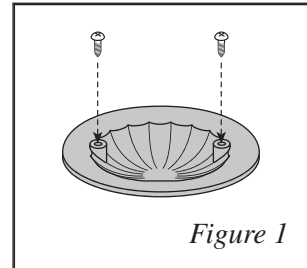


Figure 1

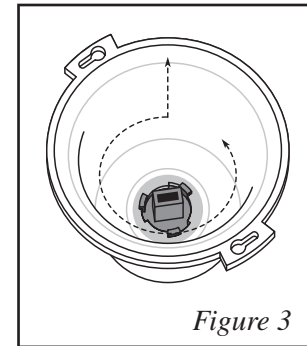


Figure 3

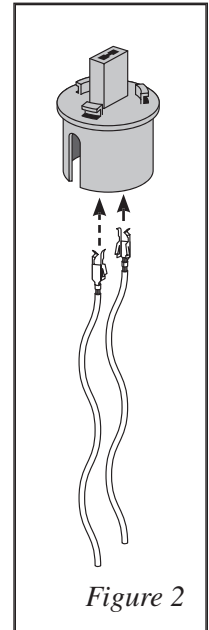
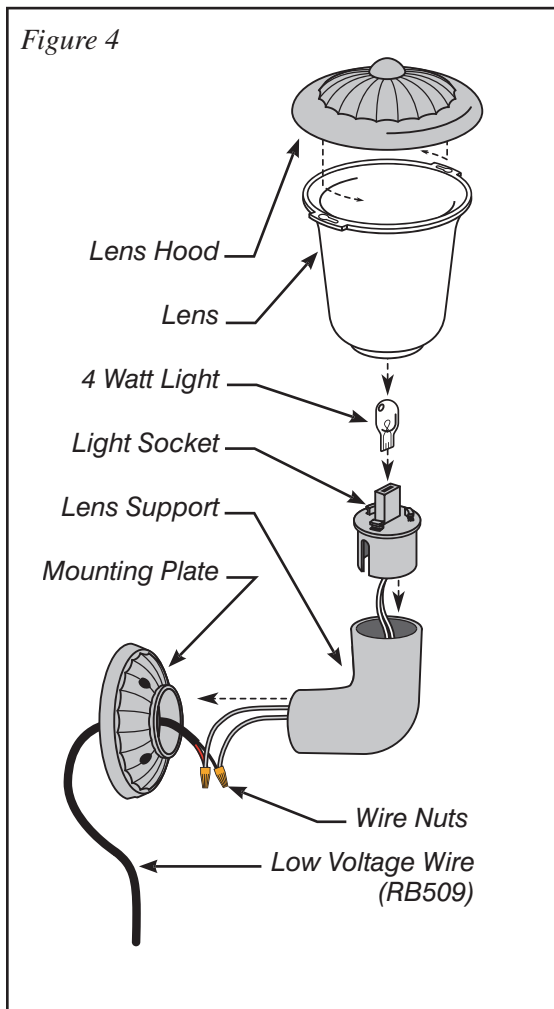


Figure 2



5. Determine where the low voltage wire will be run. Connect to the lights using the wire nuts provided before mounting the fixtures. The notches in the mounting plates are openings for running the low voltage wire. Be sure it is facing the direction the wire will enter.
6. Use the self tapping screws provided to attach the assembled fixtures to the gate posts. Additional hardware may be required depending on the type of gate posts you have. See *Figure 5*.
7. When you are satisfied with the placement of the fixtures, glue the lens support pieces using a small amount of glue (provided). Be careful to keep the glue off the outside of the support pieces. See *Figure 6*.

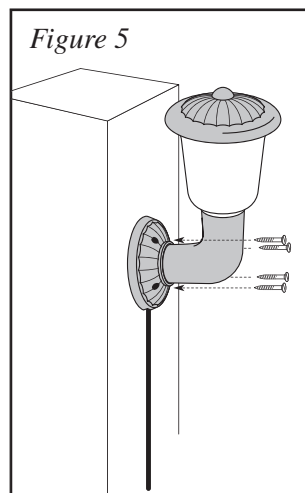


Figure 5

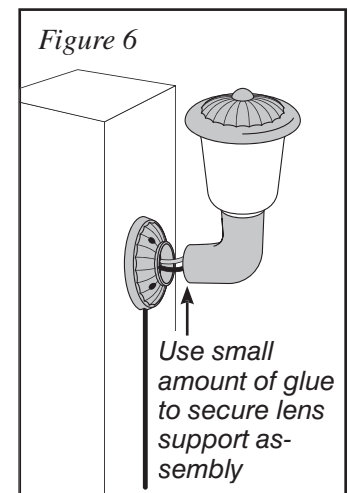


Figure 6

Installing lights on top of the gate post:

1. Insert small screws into holes on the underside of lens hood as shown in *Figure 7*. Only screw them part way so they can twist lock into place on top of lens.
2. Install wires into the light bulb socket by simply pressing a brass connector into each side of the socket until it snaps into place. See *Figure 8*.
3. Line up the slots on the socket with the notches in the lens. Insert the socket into the lens. Firmly grasp the socket, push and twist until it snaps into place as shown in *Figure 9*.
4. Assemble the rest of the light using the angled lens support as shown in *Figure 10*. Do not glue any of the parts at this time.

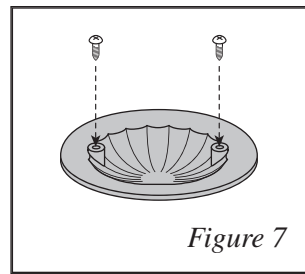


Figure 7

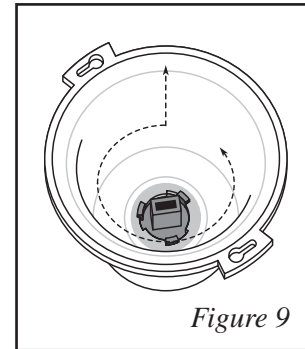


Figure 9

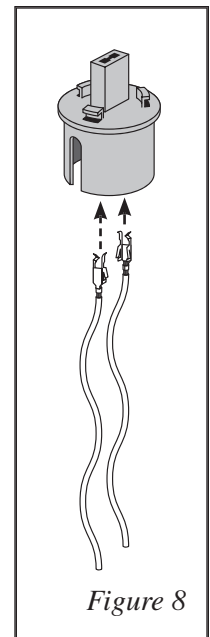
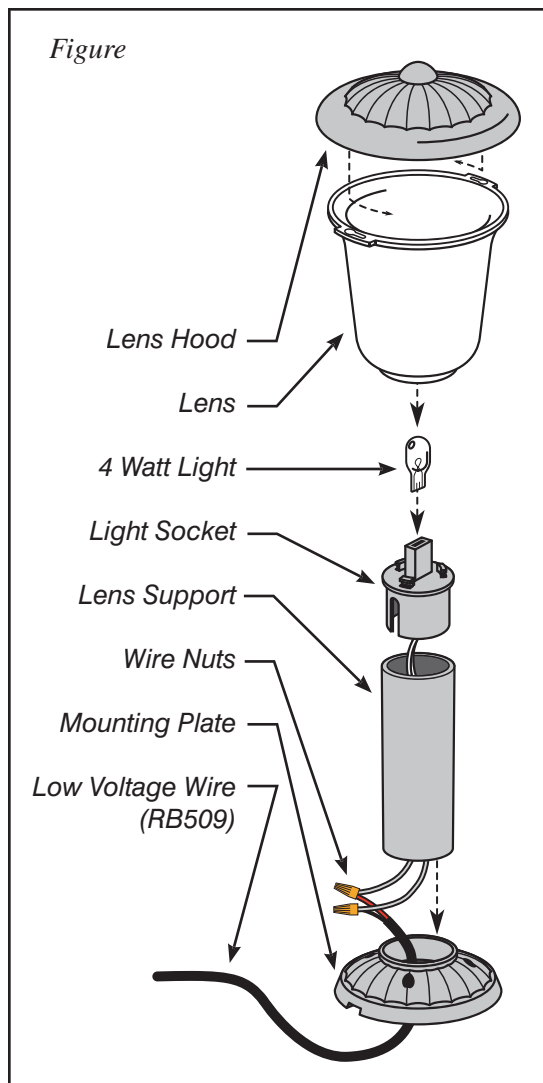


Figure 8



Figure

5. Determine where the low voltage wire will be run. Connect to the lights using the wire nuts provided before mounting the fixtures. The notches in the mounting plates are openings for running the low voltage wire. Be sure it is facing the direction the wire will enter.
6. Use the self tapping screws provided to attach the assembled fixtures to the gate posts. Additional hardware may be required depending on the type of gate posts you have. See *Figure 11*.
7. When you are satisfied with the placement of the fixtures, glue the lens support pieces using a small amount of glue (provided). Be careful to keep the glue off the outside of the support pieces. See *Figure 12*.

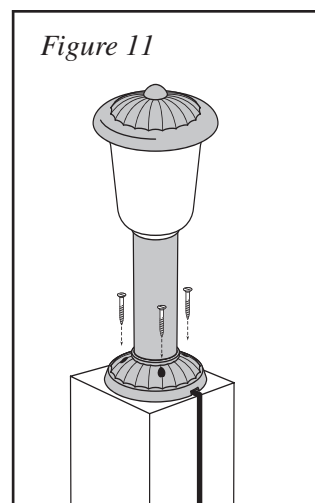


Figure 11

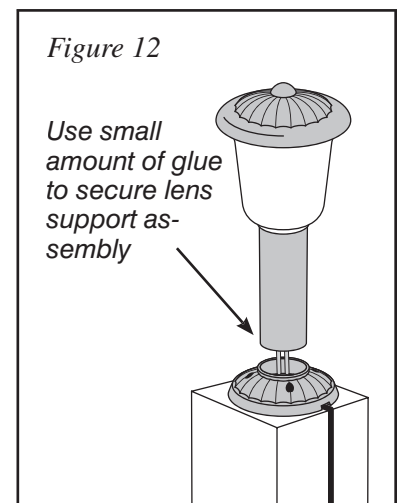
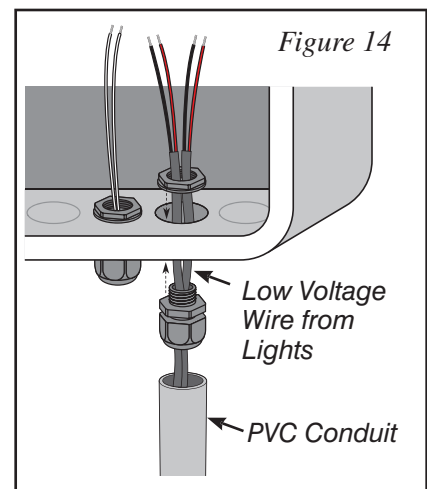
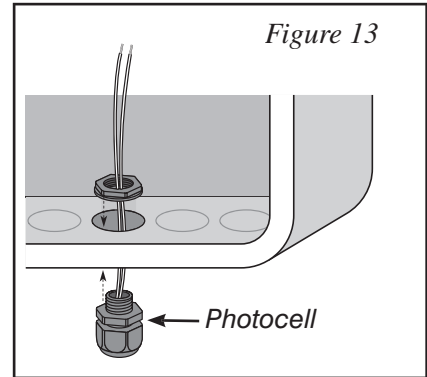


Figure 12

Installing the Photocell and Control Board

Installing the photocell and low voltage wire strain relief:

1. Use a screwdriver to remove a “knockout” in the bottom of the gate operator control box or a weatherproof junction box. If knockouts are not available, carefully drill a 5/8” hole, then install the photocell as shown in *Figure 13*.
2. In another knockout or 5/8” hole, install the strain relief provided. Run the low voltage wire from the lights through the strain relief into the box. Secure by tightening the strain relief nut until the wire is snug. Always run wire from the ground to the box in PVC conduit to protect it from grazing animals and weed eaters. See *Figure 14*.



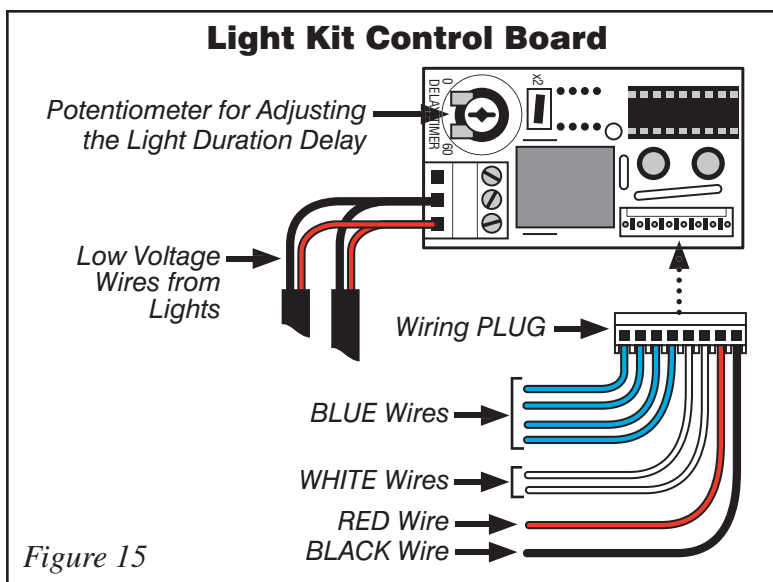
Wiring the Light Kit

Installing the Photocell:

Place the Light Kit control board in the gate operator control box or a weatherproof junction box. Connect the Light Kit control board using *Figure 15* and the Wiring Diagrams on the following pages.

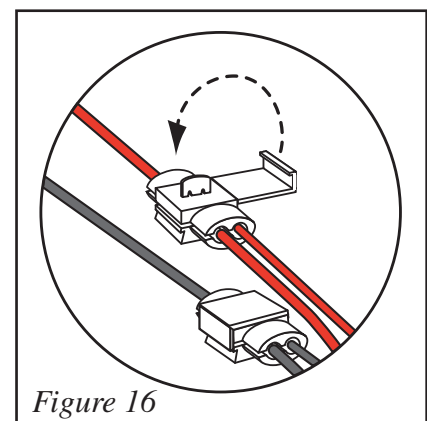
1. Plug the Light Kit’s Wiring Plug to the Light Kit control board. See *Figure 15*.
2. Connect the two RED wires from the lights to one of the Light Kit control board terminals. Connect the two BLACK wires from the lights to another Light Kit control board terminal.

IMPORTANT: Only use the two terminals shown in *Figure 15* to connect the wires from the lights.



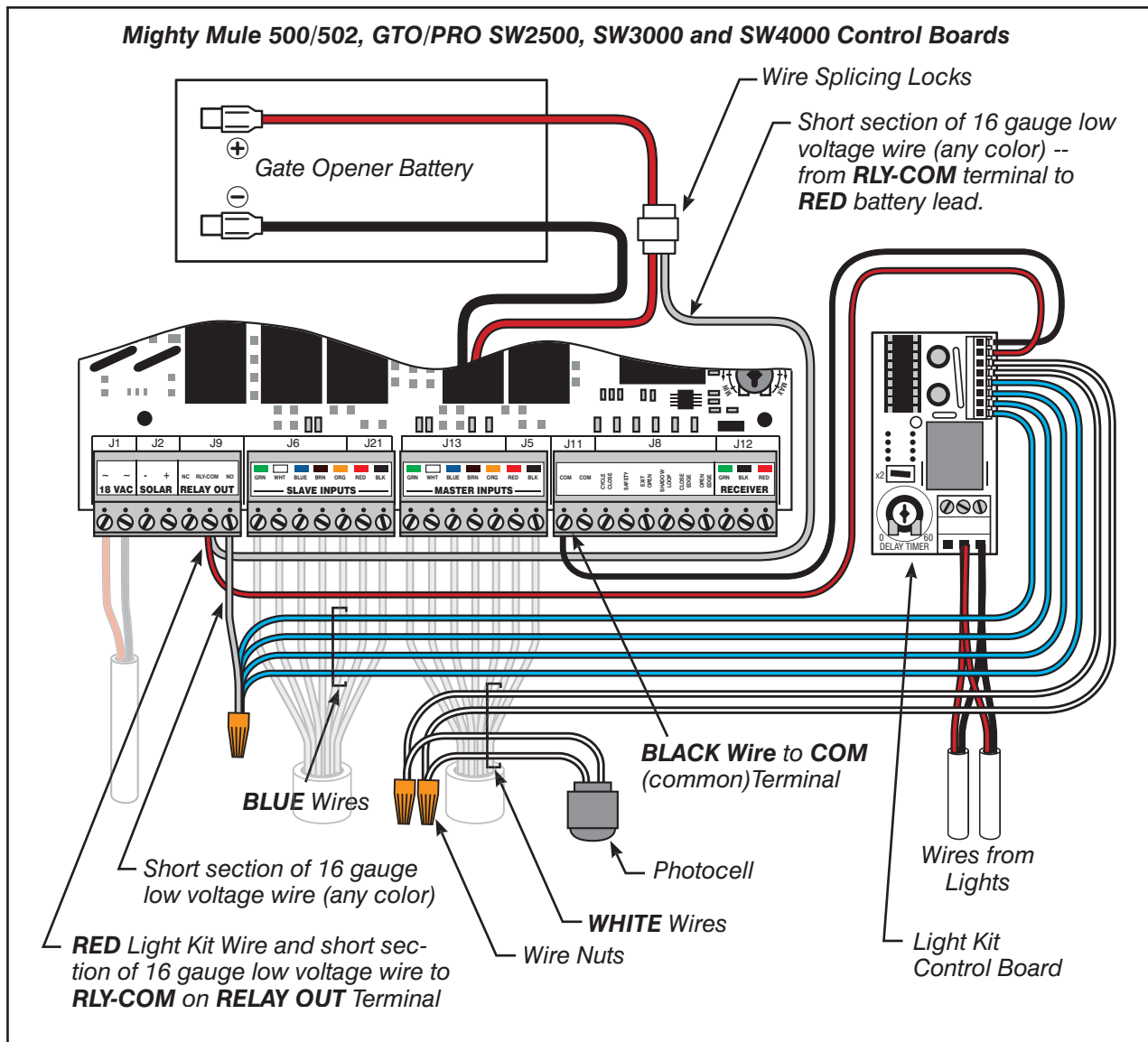
NOTE: Included in the light kit are four wire splicing locks. They are used to connect the end of one wire to the middle of another.

With wires in place, fold locking tab over and press until it locks in place. Make sure the locks are clamped securely to the wires. Use pliers if necessary. See *Figure 16*.



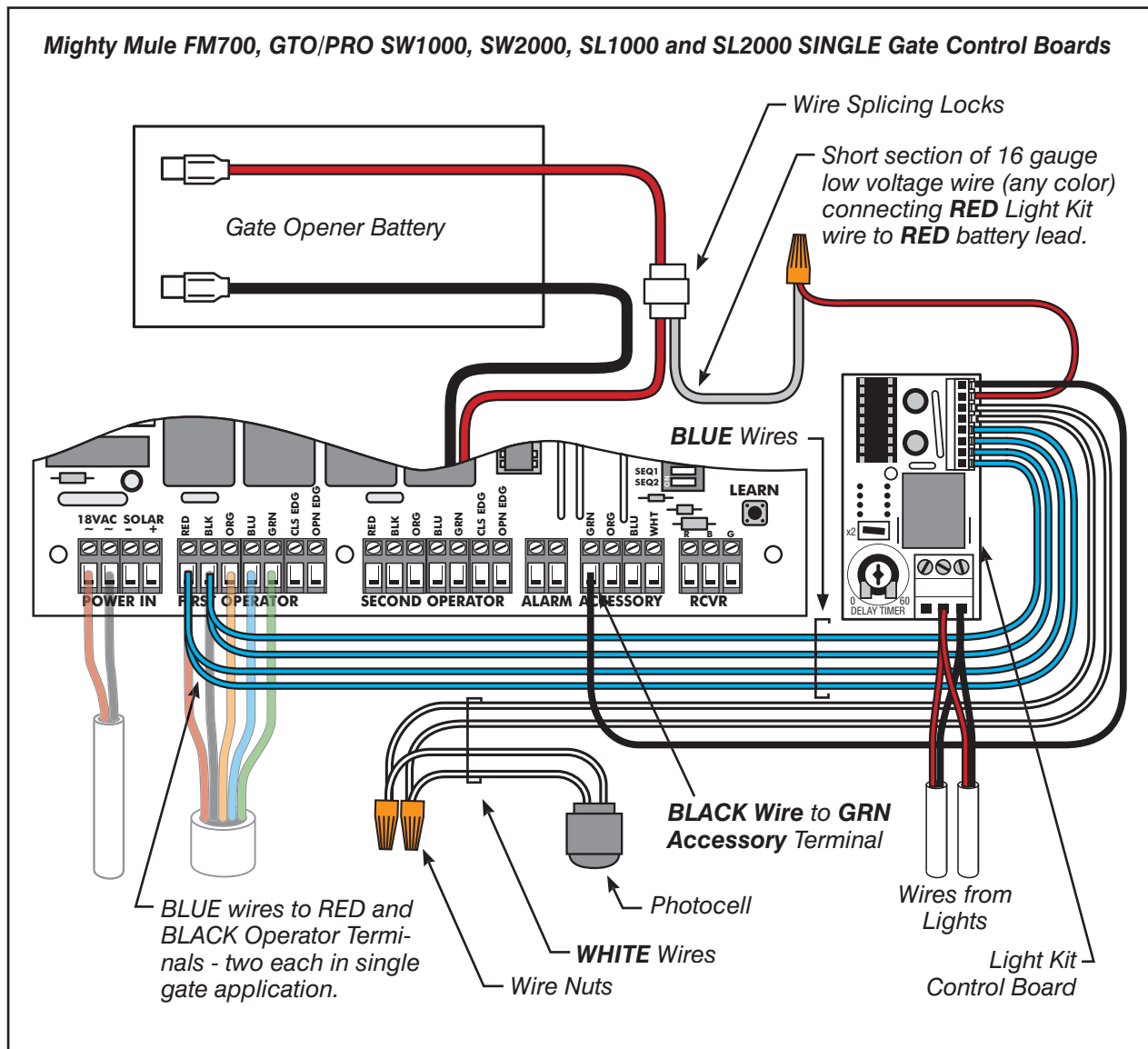
Connecting Light Kit to Mighty Mule FM500/502, GTO/PRO SW2500, SW3000, and SW4000 Gate Openers:

1. Connect the RED wire from the Light Kit control board **and** a short section of 16 gauge low voltage wire (not provided) to the RLY-COM (Relay Common) terminal on the gate opener control board. Connect the other end of the short section of wire to the RED gate opener battery lead using the wire splicing locks provided. *See diagram below and Figure 16.*
2. Connect the BLACK wire from the Light Kit control board to the COM (COMMON) terminal on the gate operator control board. *See diagram below.*
3. Connect all the BLUE wires from the Light Kit control board together with a short section of 16 gauge low voltage wire (no provided) using a wire nut (provided). Connect the other end of the short section of wire to the NO (Normally Open) terminal RELAY OUT terminal on the gate opener control board. *See diagram below.*
4. Connect the WHITE wires from the photocell to the WHITE wires from the Light Kit control board using the wire nuts provided. *See diagram below.*



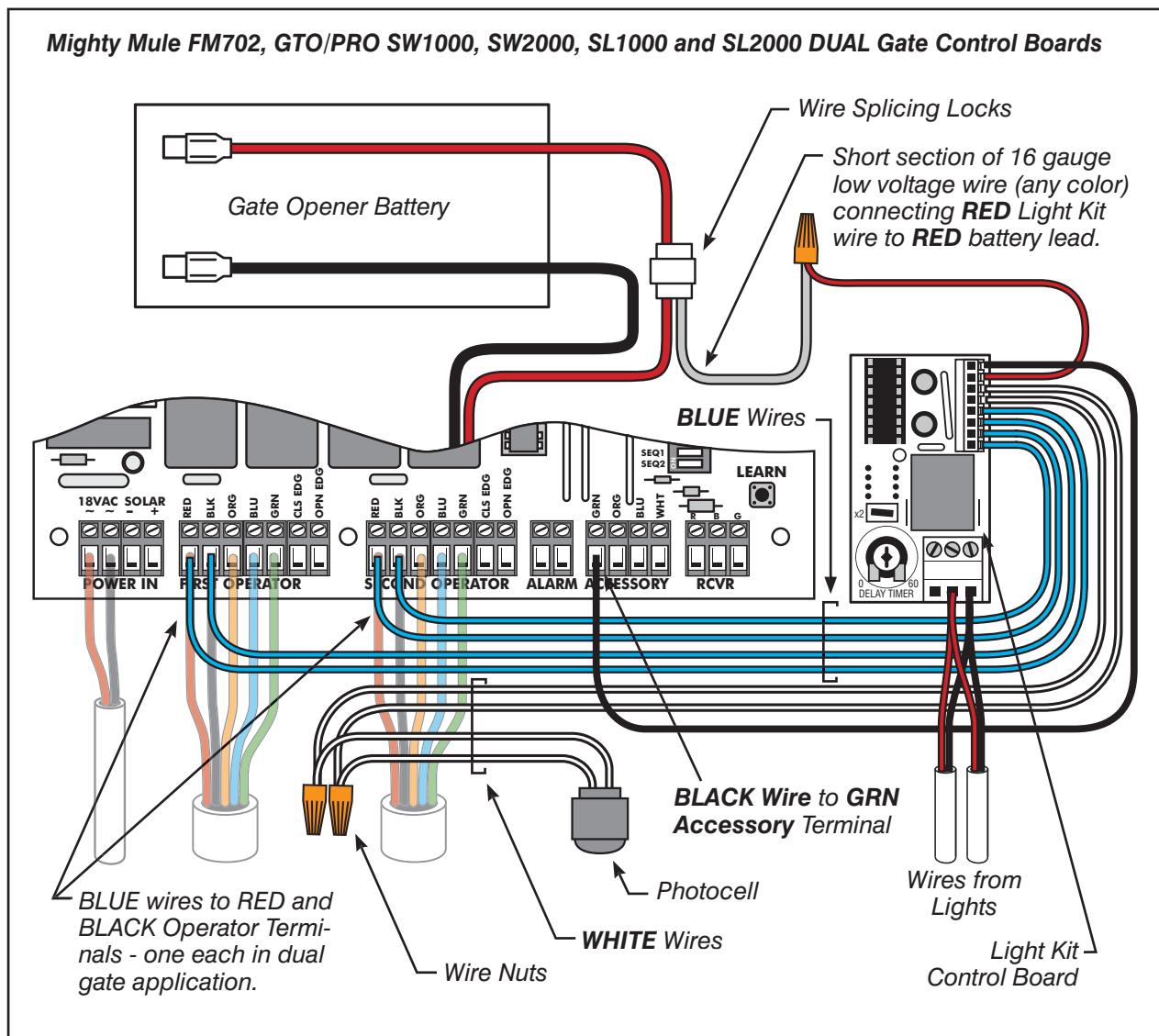
Connecting Light Kit to Mighty Mule FM700, GTO/PRO SW1000, SW2000, SL1000 and SL2000 SINGLE Gate Openers:

1. Connect the RED wire from the Light Kit control board to a short section of 16 gauge low voltage wire (not provided) using a wire nut provided. Connect the other end of the JUMPER wire to the RED gate opener battery lead using the wire splicing locks provided. *See diagram below and Figure 16.*
2. Connect the BLACK wire from the Light Kit control board to the GRN ACCESSORY terminal on the gate operator control board. *See diagram below.*
3. Connect two BLUE wires from the Light Kit control board to the RED OPERATOR terminal and and two BLUE wires to the BLK OPERATOR terminal on the gate opener control board. *See diagram below.*
4. Connect the WHITE wires from the photocell to the WHITE wires from the Light Kit control board using the wire nuts provided. *See diagram below.*



Connecting Light Kit to Mighty Mule FM702, GTO/PRO SW1000/1200, SW2000/2200, SL1000/1200 and SL2000/2200 DUAL Gate Openers:

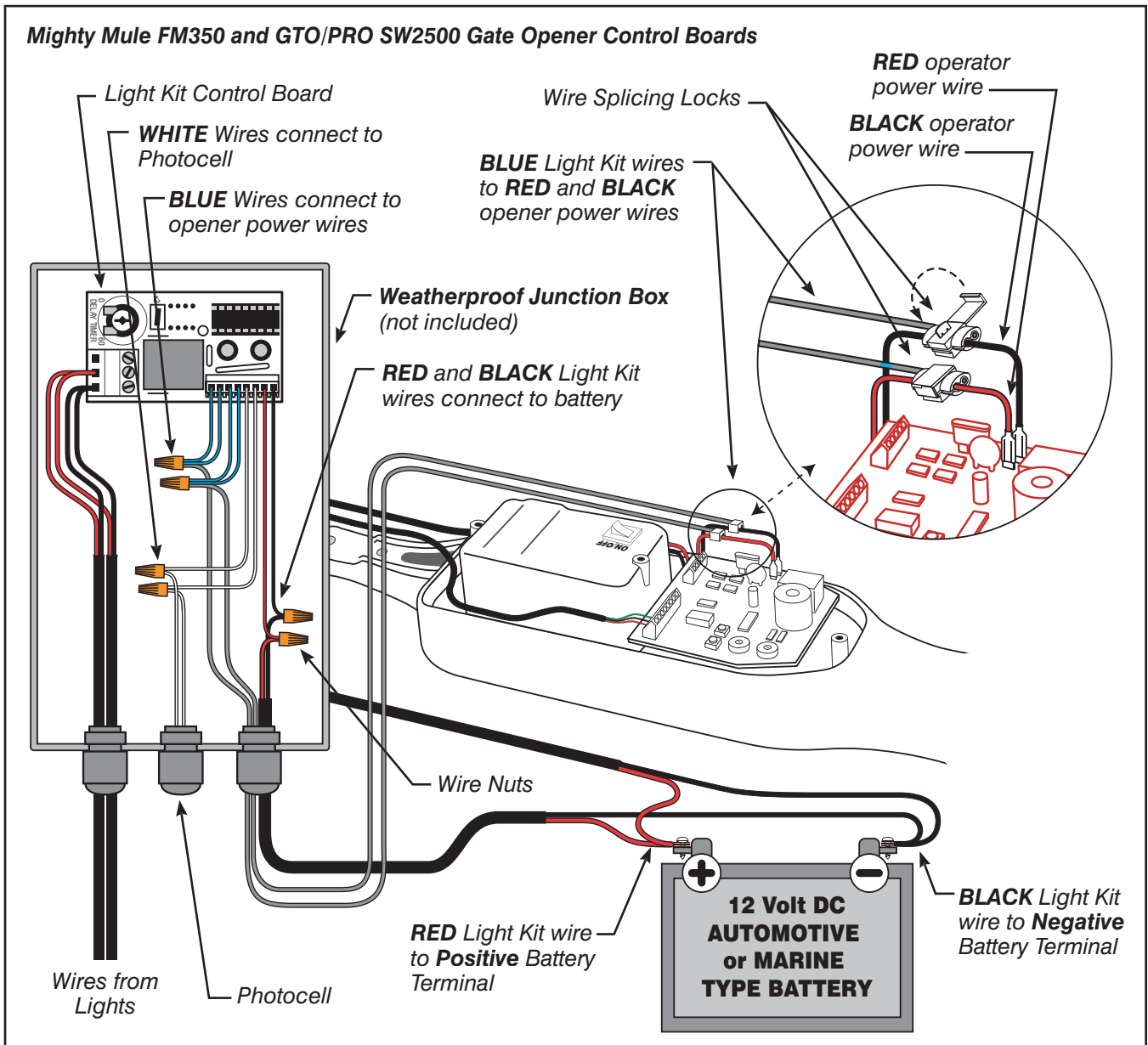
1. Connect the RED wire from the Light Kit control board to a short section of 16 gauge low voltage wire (not provided) using a wire nut provided. Connect the other end of the short section of wire to the RED gate opener battery lead using the wire splicing locks provided. *See diagram below and Figure 16.*
2. Connect the BLACK wire from the Light Kit control board to the GRN ACCESSORY terminal on the gate operator control board. *See diagram below.*
3. Connect one BLUE wire from the Light Kit control board to the FIRST OPERATOR RED terminal and one BLUE wire to the BLK terminal on the gate opener control board. Connect one BLUE wire from the Light Kit control board to the SECOND OPERATOR RED terminal and one BLUE wire to the BLK terminal on the gate opener control board. *See diagram below.*
4. Connect the WHITE wires from the photocell to the WHITE wires from the Control Board Plug using the wire nuts provided. *See diagram below.*



Connecting Light Kit to Mighty Mule 350 and GTO/PRO-SW1500 Openers

NOTE: When the Light Kit is used with the Mighty Mule 350 or the GTO/PRO-SW1500, a weatherproof junction box (not included) must be used to house the Light Kit control board and Photocell. Weatherproof junction boxes can be found at your local hardware or electrical supply stores.

1. Connect the RED and BLACK wires from the Light Kit control board to a section of 16 gauge low voltage wire long enough to run from the junction box to the gate opener battery. Connect the RED wire to the POSITIVE battery terminal and the BLACK wire to the NEGATIVE battery terminal. *See diagram below.*
2. Connect the BLUE Light Kit wires to two sections of 16 gauge low voltage wire (two BLUE wires to each section) using wire nuts (provided). Connect the other ends of the 16 gauge wires to the opener power wires on the gate opener control board (one to the RED wire and one to the BLACK wire), using the wire splicing locks (provided). *See diagram below and Figure 16.*
4. Connect the WHITE wires from the photocell to the WHITE wires from the Control Board Plug using the wire nuts provided. *See diagram below.*



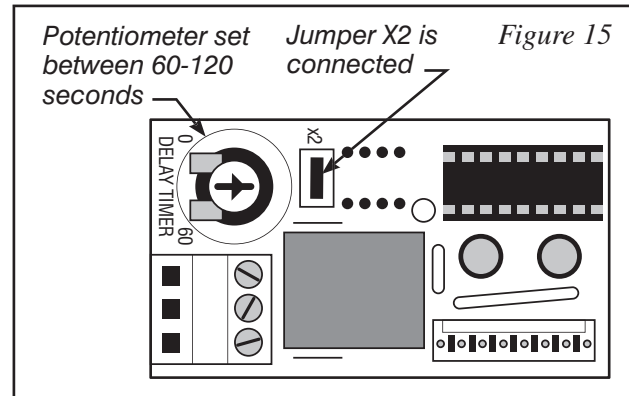
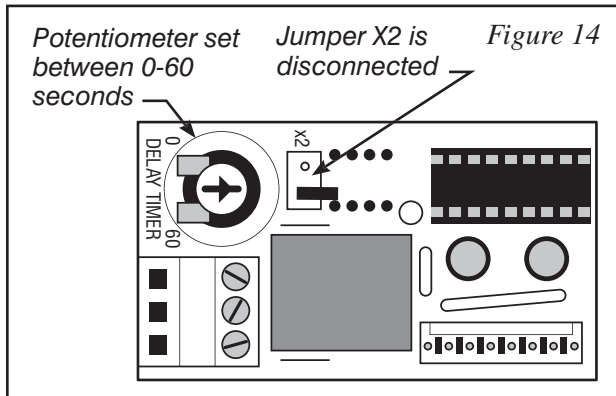
Programming the Light Kit

Adjusting the Time-On Delay:

The Light's Time-On can be set to leave the lights on from 0-120 second from the time the gate stops.

1. To set the Time-On from 0-60 seconds disconnect the jumper (X2) on the control board. Using a small screwdriver, turn the potentiometer to the time you desire between 0-60 seconds. See *Figure 14*.

2. To set the Time-On from 0-120 seconds connect the jumper (X2) on the control board. Using a small screwdriver, turn the potentiometer to the time you desire between 0-120 seconds. See *Figure 15*.



Testing the Light Kit:

In order to test the light kit in the day light, place a piece of black electrician's tape over the photocell lens then wait for 2 minutes. Activate the gate operator by pressing the gate operator's transmitter button or another activation device.

The lights should come on when the gate is activated and go off at the time delay you have set.

If any of these actions did not occur, please call GTO Technical Service at 1-800-543-4283 for additional information.

When everything is working correctly, replace all connection covers, remove the electrician's tape and your done.

Features and Technical Specifications:

- 12 Vdc systems only.
- Maximum load: 20 Watts / 2-10 Watt bulbs.
- Built-in overload protection with re-set able poly fuse. This feature prevents the load (bulbs) from drawing more than 3 Amps from the battery.
- Built-in battery reversal protection with re-setable poly fuse.
- Low battery condition monitor: If the motor voltage is below 9V the lights will not activate, conserving battery power for the operator.
- Potentiometer adjustable time delay from 0 - 120 seconds.
- Day light photocell (sensor) disables light during day light.

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

For technical service Call toll free: 1-800-543-1236

For sales call toll free: 1-800-543-GATE (4283)

Conversion Chart

Converting Metric Units to English Equivalents

When You Know	Multiply By	To Find	Symbol
centimeters	0.3937	inches	in. (or “)
meters	3.2808	feet	ft. (or ‘)
kilograms	2.2046	pounds	lb. (or #)

Converting English Units to Metric Equivalents

When You Know	Multiply By	To Find	Symbol
inches	2.5400	centimeters	cm
feet	0.3048	meters	m
pounds	0.4535	kilograms	kg

Converting Temperature

deg. Celsius	$(^{\circ}\text{C} \times 1.8) + 32$	deg. Fahrenheit	$^{\circ}\text{F}$
deg. Fahrenheit	$(^{\circ}\text{F} - 32) \div 1.8$	deg. Celsius	$^{\circ}\text{C}$

This product and any accessory you purchase should only be installed on a gate opener that meets the current safety standard, UL325, 4th Edition. If you have a gate opener that is not listed with the current standard please contact the GTO sales department for consultation on a gate opener that can meet your specific needs.

Limited One Year Warranty

GTO, Inc. gate opener accessories are warranted by the manufacturer against defects in workmanship for a period of one (1) year from the date of purchase, provided recommended installation procedures have been followed.

In the case of product failure due to defective material or manufacturer workmanship within the one (1) year warranty period, the accessory will be repaired or replaced (at the manufacturer's option) at no charge to the customer, if returned freight prepaid to GTO, Inc., 3121 Hartsfield Rd., Tallahassee, FL 32303. IMPORTANT: Call 850/575-4144 or fax 850/575-8950 for a Return Goods Authorization (RGA) number before returning goods to factory. Products received at the factory without an RGA will not be accepted. Replacement or repaired parts are covered by this warranty for the remainder of the one (1) year warranty period. GTO, Inc. will pay the shipping charges for return to the owner of items repaired.

The manufacturer will not be responsible for any charges or damages incurred in the removal of the defective parts for repair, or for the reinstallation of those parts after repair. This warranty shall be considered void if damage to the product(s) was due to improper installation or use, connection to an improper power source, tampering, or if damage was caused by lightning, wind, fire, flood, insects, or other natural agent.

After the one (1) year warranty period, GTO Inc. or one of its authorized service centers will make any necessary repairs for a nominal fee. Call GTO at 850/575-4144 for more information. This warranty gives you specific legal rights, and you may also have other rights which may vary from state to state. This warranty is in lieu of all other warranties, expressed or implied. NOTE: Verification of the warranty period requires copies of receipts or other proof of purchase. Please retain those records.

GTO, Inc. • 3121 Hartsfield Road • Tallahassee, Florida 32303
 1-800-543-GATE (4283) • Technical Support 1-800-543-1236
www.gtoinc.com

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