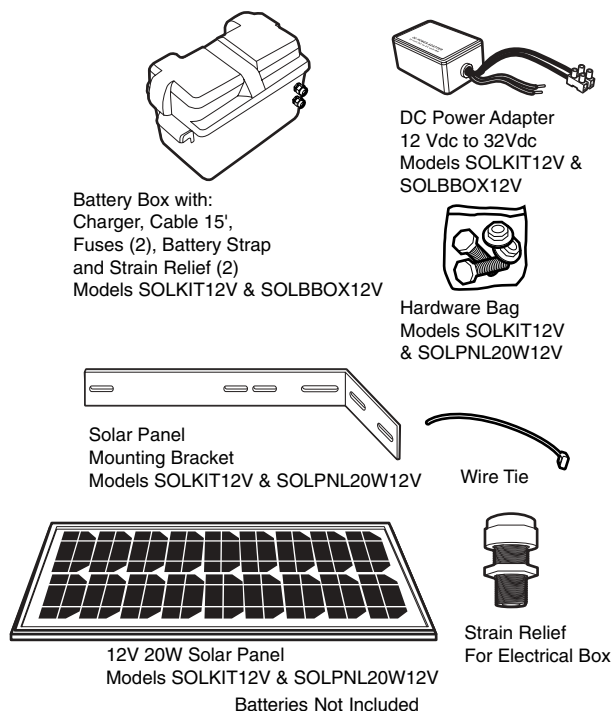


APPLICATION

The battery kit is designed to work with 24V solar powered linear actuated gate operators manufactured by Chamberlain.

CARTON INVENTORY



BATTERY KIT INSTALLATION

Models SOLKIT12V, SOLPNL20W12V and SOLBBOX12V

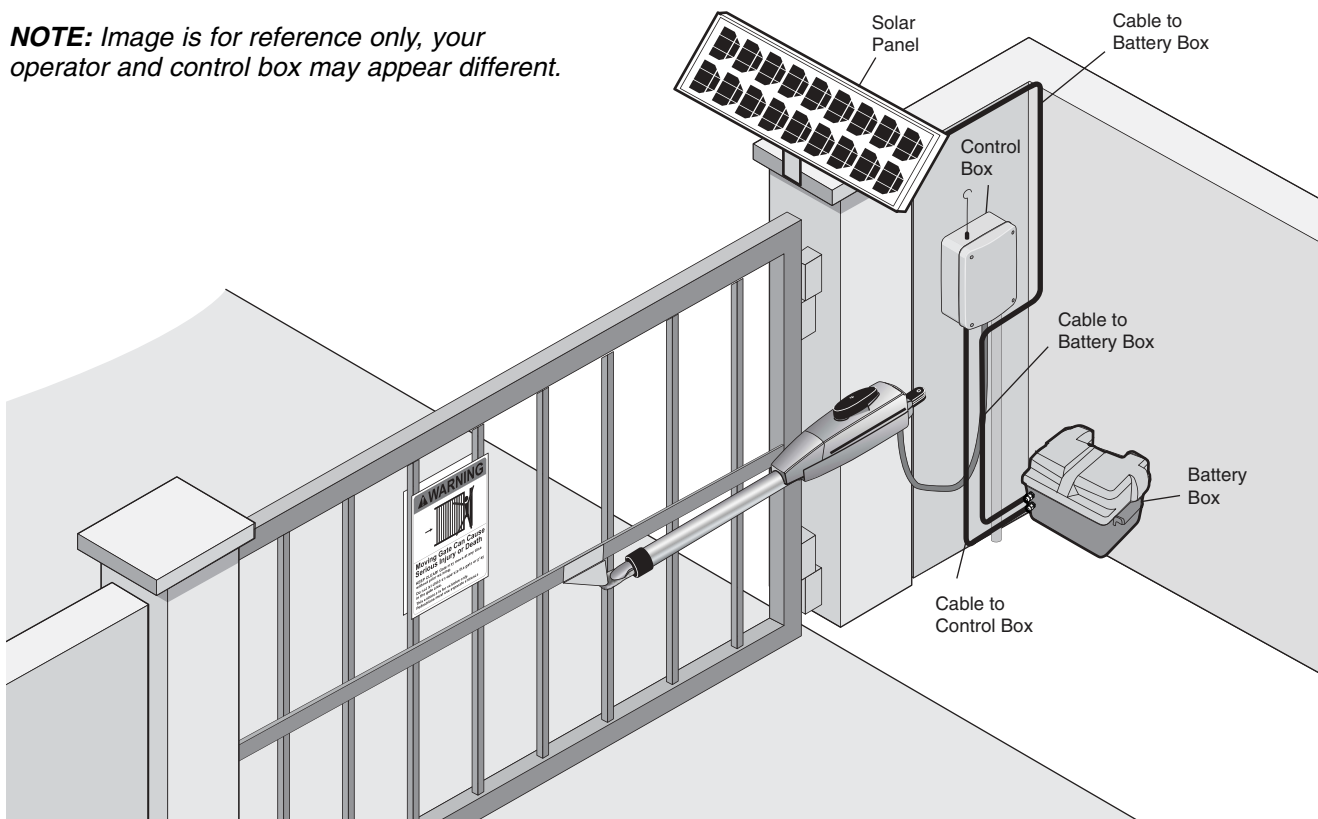
⚠️ WARNING

To reduce the risk of fire and the risk of SEVERE INJURY or DEATH to persons:

- Disconnect electrical power to operator BEFORE proceeding.
- Disconnect battery power internal to operator.
- Do NOT dispose of the battery in fire. The cells may explode. Check with local codes for disposal instructions.
- Do NOT open or mutilate the battery. Released electrolytes are corrosive and may cause damage to the eyes or skin. It may be toxic if swallowed.
- Exercise care in handling batteries in order not to short the battery with conducting materials such as rings, bracelets and keys.
- Change the battery provided with one identified for use with this product ONLY in accordance with the instructions and limitations specified in the manual.
- Observe proper polarity orientation between the battery and charging circuit.
- Do NOT mix batteries of different sizes or from different manufactures in this product.

COMPLETED OVERVIEW

NOTE: Image is for reference only, your operator and control box may appear different.



PREPARATION

This battery kit is not intended to replace or eliminate the need for the local batteries provided with the operator. Those batteries are designed to provide motor run currents that the additional battery kit cannot provide. Local batteries are required to reliably operate the gate. Do not remove the batteries from the control box.

- Verify battery kit contents.
- You will need to purchase a UL recognized, sealed lead-acid (SLA) battery (not included.) See Suggested Batteries.
- Remove and retain fuse in fuse holder.

SUGGESTED BATTERIES

MFG	PART NO.	SPECIFICATIONS
Jolt	XSA12800B	12V, 80AH
Werker	WKA12-80C/FR	12V, 80AH
Universal	UB12750	12V, 75AH
PowerSonic	PS-12750	12V, 75AH
Genesis	NP75-12	12V, 77.5AH

Potential sources:

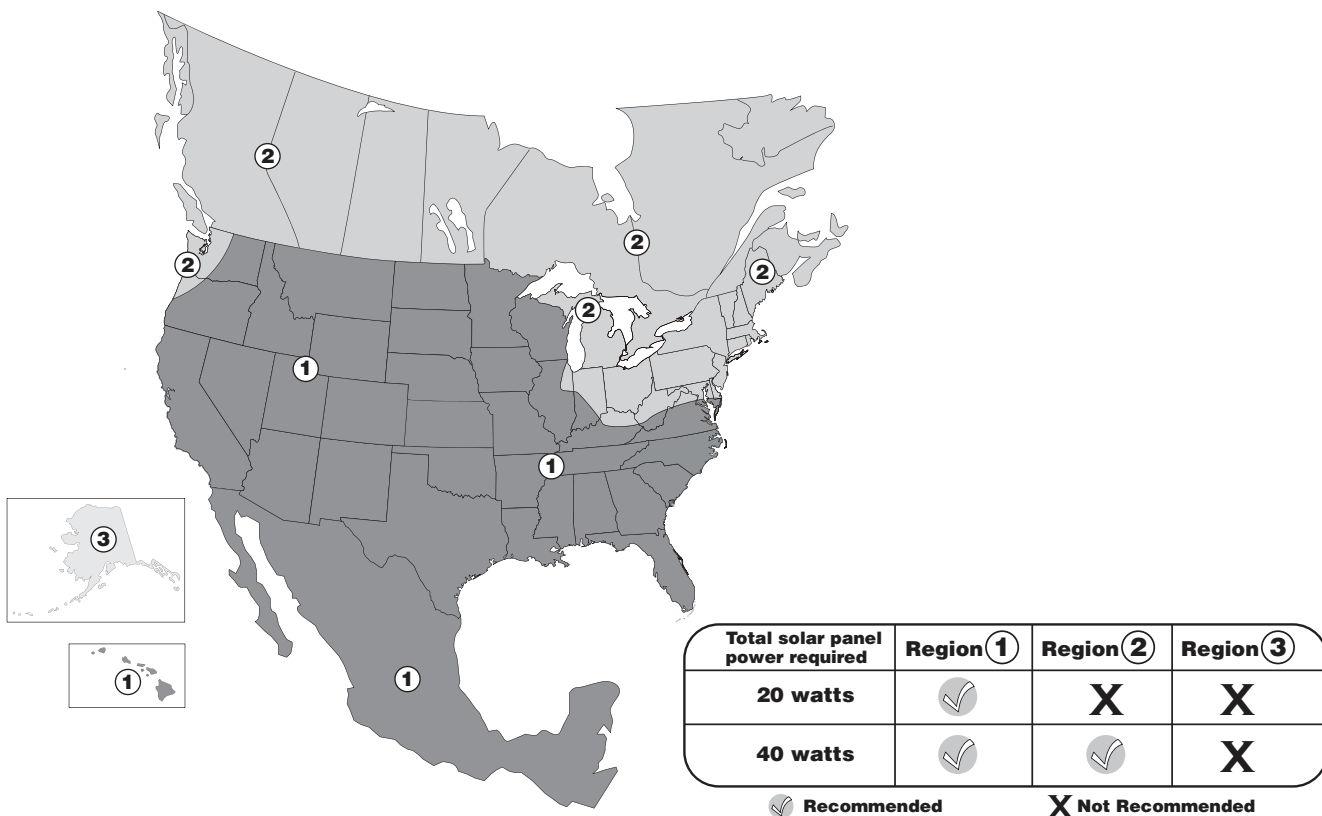
- www.batterygiant.com
- www.apexbattery.com
- www.batteriesplus.com

Select Site for Solar Panel

The solar panel must be located in an open area clear of obstructions and shading.

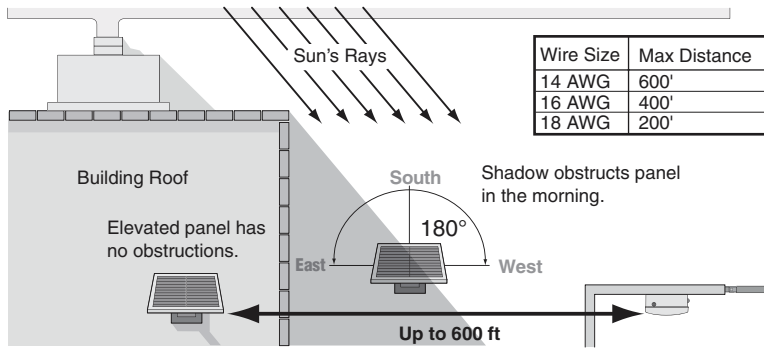
NOTE: The solar panel comes with a 10' cable, so if a suitable site cannot be located close to the gate control box and battery box, additional cable will be required.

Regional Installation Recommendations



NOTE: The Solar Panel requirement is based on average solar radiation in the given regions. Local geography and weather conditions may require additional solar panels for the installation or prevent the use of solar entirely. For example, valleys or areas near lakes may experience fog or lake effect rain and snow that other areas, only a few miles away, may not experience. For installations where 40W may not be adequate or locations in Region 3, please contact Chamberlain if solar power is a requirement.

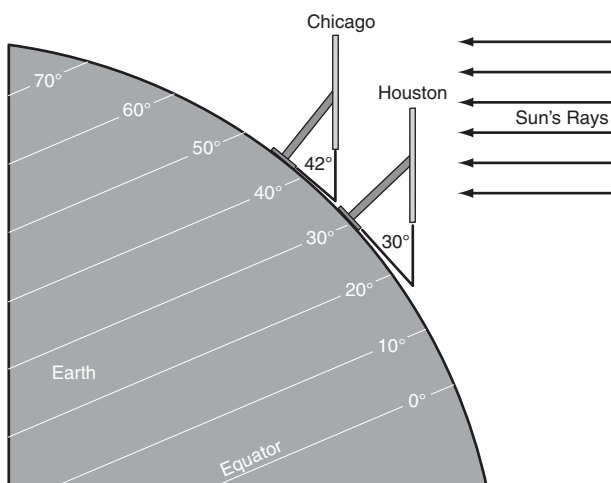
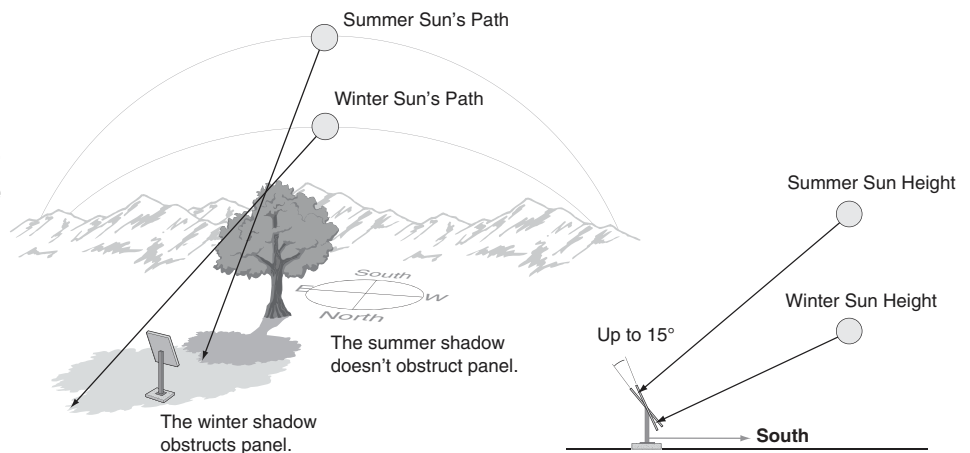
POSITION SOLAR PANEL



TIP: Wire runs should be kept as short as possible. The solar panel can be located up to 600' from the operator using #14 AWG wire (see table for recommendations) in any direction, including by elevating it. If a suitable site cannot be found for the panel, please contact Chamberlain to determine if solar is right for this installation.

The location of the panel is critical to the success of the installation. The panel must face **DUE SOUTH** and not be obstructed or shadowed throughout the day. The solar panel(s) should be mounted in an area clear of all obstructions and shading from buildings and trees. The area should be clear for a 180° arc from due east of the panel location to due west of the panel location. Keep in mind that tall trees or buildings that do not shade the solar panel in the summer could shade the solar panel during the winter months when the sun sits lower in the sky.

TIP: To optimize the system for winter operation the angle can be increased by up to an additional 15° (solar panel sits more vertical). The overall angle of the solar panel should never exceed 60°. This will decrease the charging and consequently performance (cycles per day, recovery time for batteries, etc.) during the summer months.

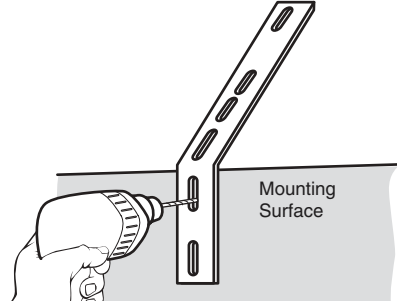
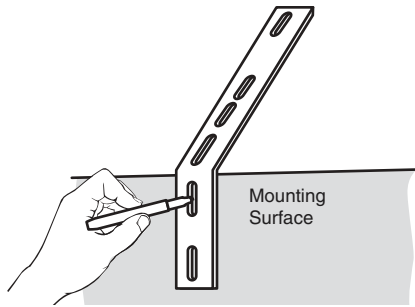


In general the panel should be mounted at between a 30° and 45° angle facing **DUE SOUTH**. This angle is based on the latitude of the installation. For example, the latitude for Chicago, IL, is approximately 42° so the optimal angle of the solar panel would be 42°. The latitude for an installation in Houston, TX, is approximately 30° so its optimal angle would be 30°.

MOUNT THE SOLAR PANEL

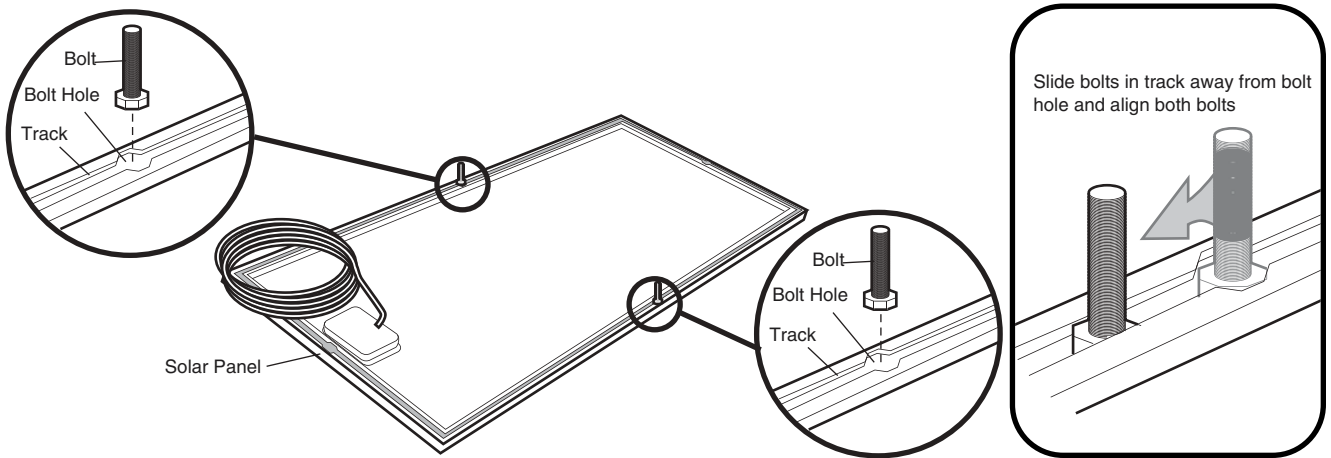
Position Solar Bracket

Position solar bracket on mounting surface, mark and drill holes.



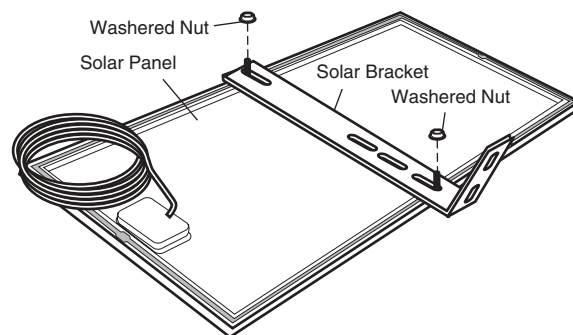
Insert Mounting Bolts

Insert bolts (2) provided into the track located on the back of the solar panel.



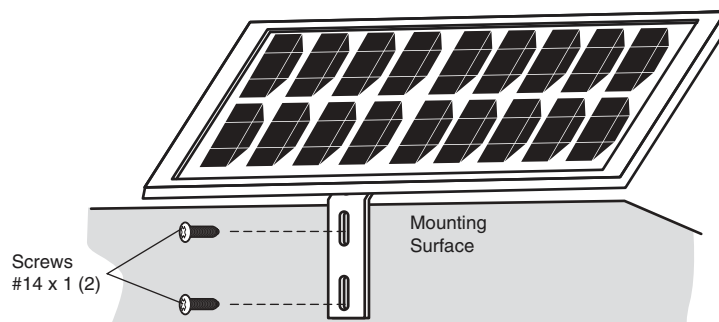
Secure Solar Panel to Solar Bracket

Secure solar panel to solar bracket using washered nuts (2) provided.



Mount Solar Panel Assembly

Secure solar panel assembly to mounting surface using appropriate hardware.

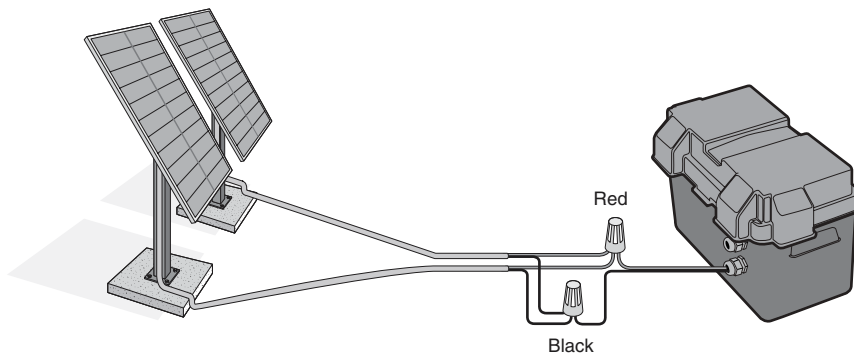


CHARGING

Keeping the batteries charged depends on how much charge (current used over time) is used by the system and how much sunlight is available to enable the solar panel to replace depleted charge. In a typical installation with no accessories, the operator requires 6 hours of charging in any given 48 hour period to maintain adequate battery charge indefinitely (assumes 8 cycles per day). Recovering depleted batteries requires full sun.

WIRING MULTIPLE PANELS

When multiple panels are required, they should be wired in parallel as shown below.



MAINTENANCE

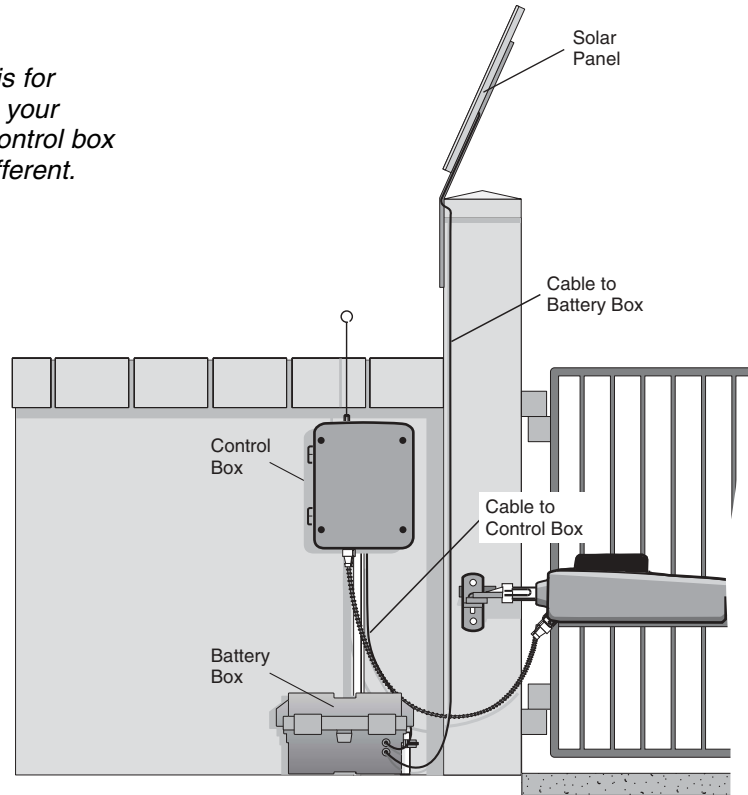
The solar panel glass should be cleaned regularly to keep the system operating at peak performance. Debris or dirt on the panel surface will diminish the panel's ability to charge the 12V battery.

INSTALL BATTERY BOX

Location

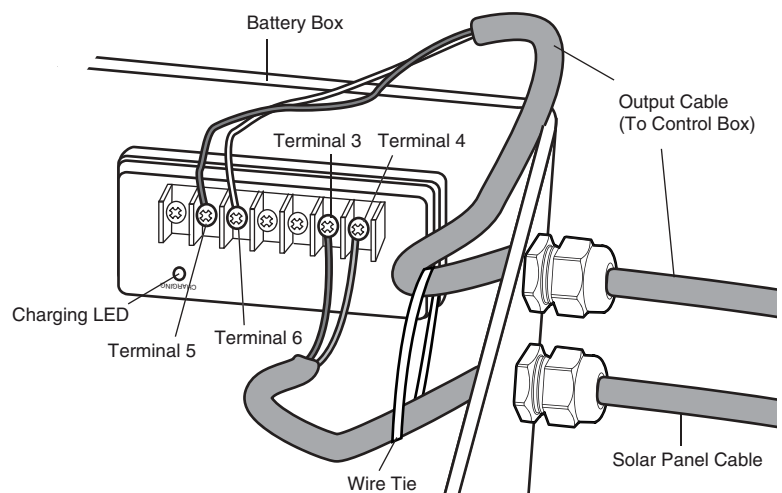
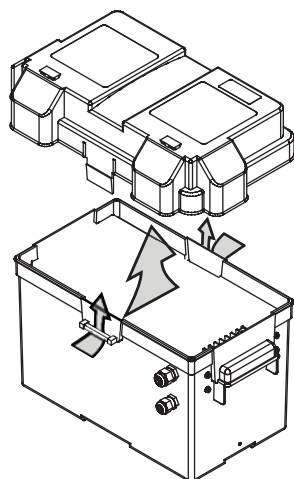
The battery box must be located within 10' of the operator control box. The box must be located in a place where it cannot be damaged due to flooding, excessive contact or by being knocked over. Place battery box either on the ground or a stable platform (not provided).

NOTE: Image is for reference only, your operator and control box may appear different.



Cables

Open battery box. Route output cable and solar cable as shown. Extend output cable through strain relief leaving slack in the battery box, and tighten top strain relief. Attach red wire from solar cable to terminal 4 on charging board and black wire to terminal 3. Tighten bottom strain relief. Attach and tighten the provided wire tie to both cables on the inside of the box.

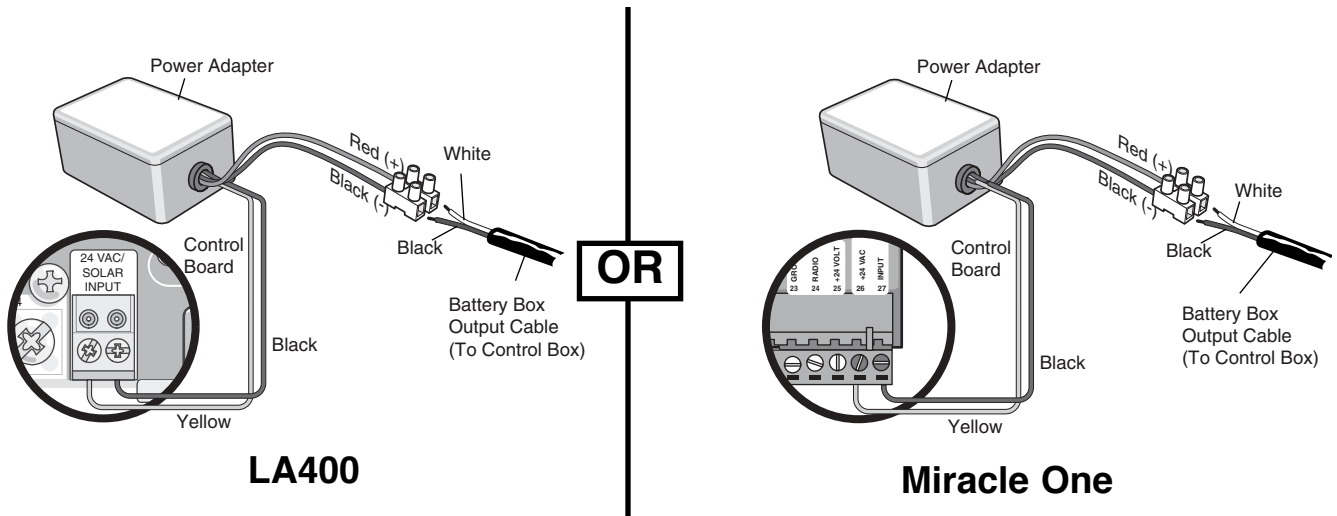


WIRE BATTERY BOX TO OPERATOR CONTROL BOX

Install Power Adapter

Open control box cover and disconnect ALL electrical power to the operator. Locate the 24Vac input on the control board. Attach the yellow and black wires to the 24Vac input terminal (polarity is not important). Insert the provided strain relief through one of the knockouts and thread the battery box output cable through strain relief in the control box. Attach black wire from the output cable to the black wire on the power adapter connector. Attach the white wire from the output cable to the red wire on the power adapter connector. Place power adapter inside of the control box.

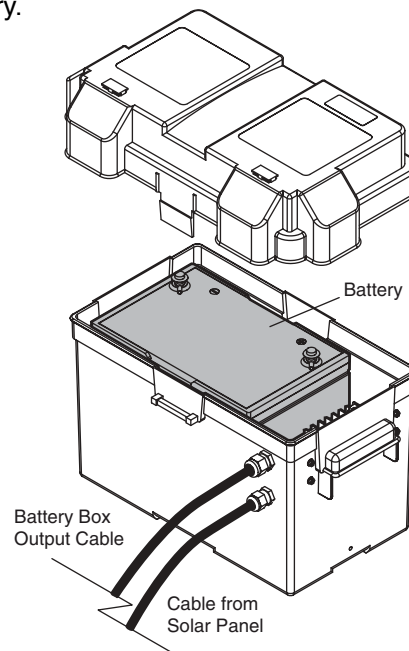
NOTE: Image is for reference only, your operator and control box may appear different.



INSTALL BATTERY

Wire Battery

Install the 12V 80AH sealed lead-acid battery (not provided) into the battery box. Connect the orange wire to the positive terminal on the battery. Insert the 5 amp fuse into the fuse holder. Connect the black wire to the negative terminal on the battery.



COMPLETE INSTALLATION

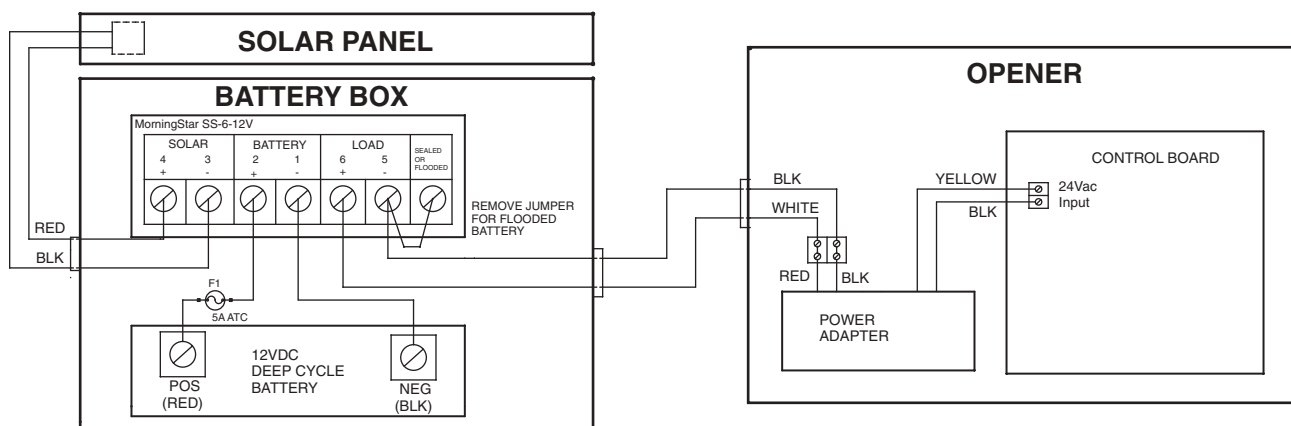
Reconnect internal batteries to the control board and ensure that all wires are secure and clear of moving parts. Close control box cover and battery box. Secure battery box with strap (provided) if desired.

TROUBLESHOOTING

NOTE: Take these steps if any of the components of the battery kit or the gate operator fail to operate properly.

PROBLEM	SOLUTION
Battery charger LED fails to light.	1. Solar panel may not be mounted properly or the day may be too cloudy to provide enough sunlight. Check mounting, orientation, and possible shading of the solar panel or wait for a brighter day to verify. 2. Wires may be swapped. Verify that the red and black wires go to the correct locations on the battery charger module (see wiring diagram).
Operator control board does not power up once power adapter is connected.	1. Wires may not be properly connected. Verify all connections for the installation (see wiring diagram). 2. Blown fuse. It is possible that a fuse, either in the battery cable harness or on the operator control board, may have been blown during the installation. If a blown fuse is found, first check all wiring to make sure it is correct, and then replace the fuse with the same size and type. 3. Battery is not charged. It is possible that the 12V 80 AH battery (not provided) was not fully charged when installed. Use a voltmeter to make sure this battery is good and has at least 12V across the open circuit terminals.
Operator powers up but does not run properly.	1. Control box batteries are not connected. This battery kit will only work with operators that have local batteries that are used to provide motor current. Make sure these batteries are good and properly connected to operator control board. NOTE: This battery kit does not replace the operator batteries nor will it prevent the replacement of those batteries during normal maintenance for the operator. 2. Debris or other obstructions are affecting gate travel. Make sure that the battery box, solar panel, and all connecting wires are clear of the gate. Clear the gate of all obstructions and verify all protection devices are operating properly.
Operator works fine for several weeks or months but then batteries die.	1. Obstructed solar panel. Verify the correct installation and orientation of the solar panel. Make sure that the solar panel is unobstructed from the sun throughout the entire day and the glass is clean. 2. Too many accessories. Too many accessories will eventually drain the battery despite its larger size and capacity. Contact technical support at 1-800-528-2806 if accessories are required for the installation. 3. Inadequate solar panel. Many locations are not suitable for solar installations because of local geography or locations that simply do not receive enough sunlight. Contact technical support to determine if an additional solar panel will help with your installation or if solar is entirely unsuitable.

WIRING DIAGRAM



HOW TO ORDER REPAIR PARTS

DEK CANADA INC

1928 ST-REGIS BLVD.

DORVAL, QC

H9P 1H6

TEL: 514-685-5800

TOLL-FREE: 1-800-361-3198

FAX: 514-685-5804

www.dekcanada.com

**WHEN ORDERING REPAIR PARTS
PLEASE SUPPLY THE FOLLOWING INFORMATION:**

PART NUMBER	DESCRIPTION	MODEL NUMBER
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