Girard GG750 Patio Awning with Apollo Solar Awning Fabric

OWNER'S MANUAL

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Introduction

The GG750 Patio Awning with Apollo Solar Awning Fabric provides protection from the sun at the touch of a button coupled with the convenience of solar charging. The Awning is built with the highest quality materials available. The unit features:

- Apollo Solar Awning Fabric.
- A 12V DC motor that operates with solar power.
- Motion sensor that will retract the awning to prevent damage from the wind.
- A wired wall mount control.

Additional information about this product can be obtained from lci1.com/support or by downloading the free LippertNOW app. The app is available on Apple App Store® for iPhone® and iPad® and also on Google Play™ for Android™ users.
Apple App Store®, iPhone®, and iPad® are registered trademarks of Apple Inc.
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For information on the assembly or individual components of this product, please visit: https://support.lci1.com/gp-llc-awnings-manuals.

NOTE: Images used in this document are for reference only when assembling, installing and/or operating this product. Actual appearance of provided and/or purchased parts and assemblies may differ.

Safety

Read and understand all instructions before installing or operating this product. Adhere to all safety labels.

Local building codes may impose additional requirements that may supersede the installation instructions in this manual. Be sure to check with the local municipality for code adherence. Determining the acceptability of alternate installation methods is solely the responsibility of the installer.

This manual provides general instructions. Many variables can change the circumstances of the instructions, i.e., the degree of difficulty, operation and ability of the individual performing the instructions. This manual cannot begin to plot out instructions for every possibility, but provides the general instructions, as necessary, for effectively interfacing with the device, product or system. Failure to correctly follow the provided instructions may result in death, serious personal injury, severe product and/or property damage, including voiding of the Lippert limited warranty.

⚠WARNING

The "WARNING" symbol above is a sign that a procedure has a safety risk involved and may cause death or serious personal injury if not performed safely and within the parameters set forth in this manual.

⚠WARNING

Failure to follow instructions provided in this manual may result in death, serious personal injury and/or severe product and property damage, including voiding of the component warranty.

⚠WARNING

Be sure to turn off power before beginning any electrical work. All electrical work must be carried out by qualified personnel and conform to applicable electrical codes and standards. Please consult the wiring diagram to locate any wiring prior to any drilling or any installation procedures.

⚠WARNING

Always ensure the solar fabric is fully closed when installing or performing any work on the awning. If the solar system is already connected to an electrical circuit, make sure to disconnect it.

⚠WARNING

Never work on the solar fabric and/or awning while it is open and exposed to sunlight. If a repair is needed, it must be done in an enclosed structure, or if possible, please contact Lippert Customer Service for assistance.

⚠WARNING

Risk of Electric Shock

Take care to prevent any damage to the solar fabric surface. Any penetration or impact that compromises the integrity of the solar panel disqualifies it from safe use. Such damage may lead to serious hazards, including the risk of electric shock and water penetration.

⚠WARNING

Risk of Electric Shock

Exposed electrical conductors are extremely hazardous and must be reported immediately. If any exposed wire or conductors are encountered, first close the awning, avoid contact and immediately report the issue to a qualified technician.

⚠ CAUTION

The "CAUTION" symbol above is a sign that a safety risk is involved and may cause personal injury and/or product or property damage if not safely adhered to and within the parameters set forth in this manual.

⚠ CAUTION

Always wear eye protection when performing service, maintenance or installation procedures. Other safety equipment to consider would be hearing protection, gloves and possibly a full face shield, depending on the nature of the task.

⚠ CAUTION

To prevent the motor from overheating do not exceed 4 minutes of operation per hour. Overheating will destroy the motor.

⚠ CAUTION

Ensure that placement of controls, cables, and wires are not in any way obstructed. This can damage the components and obstruct electrical current.

⚠ CAUTION

Use only certified components.

⚠ CAUTION

Temperature During Operation

Solar fabric may become warm or hot during operation. This is a normal occurrence as the fabric absorbs and converts sunlight into energy. Do not touch the solar fabric while or after it is in use to avoid burns or discomfort.

⚠ CAUTION

No Fire or Flames

It is strictly prohibited to have fire and/or flames in the vicinity of the solar fabric or underneath it, including, but not limited to, campfires, grills, and any other sources of open flame.

⚠ CAUTION

Handling

Under no circumstances should the solar fabric be disassembled or reassembled from the awning device. Improper handling may lead to damage of the fabric and compromised functionality. Always seek professional assistance for an issues related to installation.

⚠ CAUTION

Before using the solar awning, make sure that all electrical circuits are operating properly. The output cables must be connected to a proper charging system and the solar fabric specifications must fit to this system.

⚠ CAUTION

Girard Systems solar awnings may be operated in light wind and rain conditions. When periods of heavy rain and or high wind are expected the solar awning must be closed. Never leave the solar awning open and unattended.

Damage caused by wind and rain is not covered by warranty.
If applicable, all solar awnings must be closed prior to moving the vehicle for any reason. As an extra safety precaution a visual check that every solar awning is fully closed is required.

Damage caused by failure to comply with these instructions is not covered by warranty.
Before using the solar awning, ensure that the area into which the solar awning will be deployed is free of obstructions (Trees, walls, pillars, posts, other vehicles, etc.).

Damage caused by collisions with any of the above or similar is not covered by warranty.

Basic System Overview

Mechanical System Components

1. The enclosure (or cassette) protects the solar awning while closed.
2. The roller tube which is mounted within the cassette.
3. The top cover or fabric rolled onto the roller tube and connected to the lead rail that extends from the enclosure when the solar awning is opened.
4. The folding arms that supports the lead rail and the fabric.
5. Tubular motor which is mounted inside of the roller tube that controls the extension and retraction of the solar awning (optional).
6. Manual crank handle and drive system that controls the extension and retraction of the solar awning (optional).

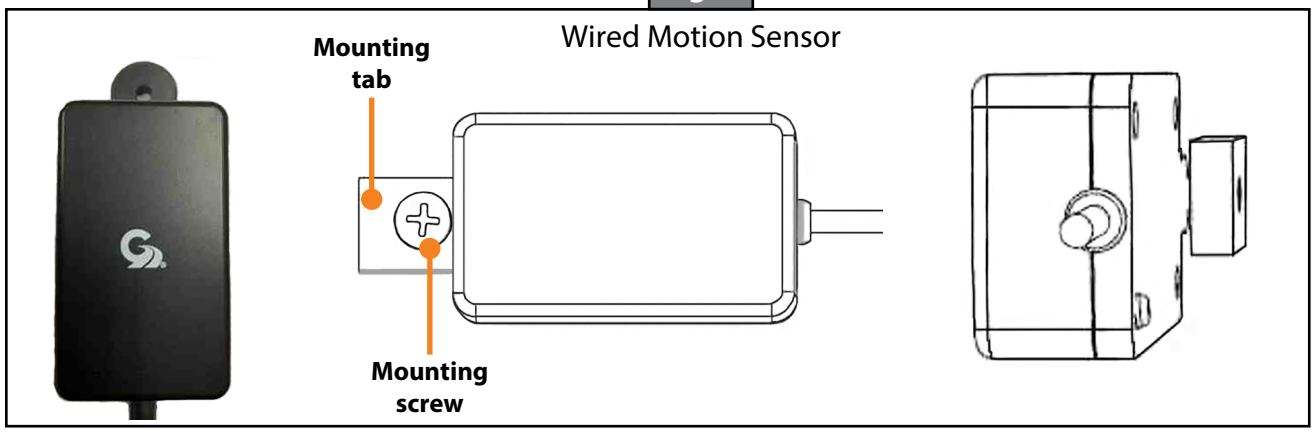
Electronic Controls (Optional)

To power and operate the motor.

1. Wired motion sensor (98GC780B) (Fig. 1) – works in conjunction with 98GC781B and 98GC783B wired wall switch controllers. The wired motion sensor communicates directly to the DC motor controller (98GC781B) by RS485 protocol.

Fig. 1

Wired Motion Sensor



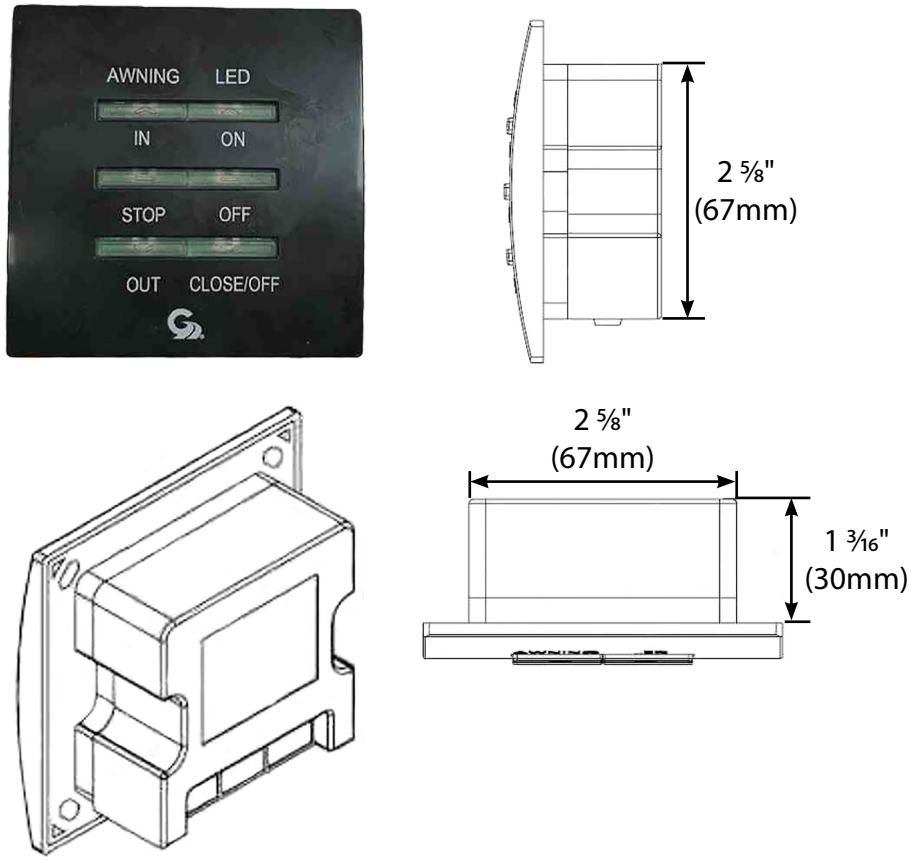
User Controls (Optional)

Hand held remote controllers and wall mounted remote switches will differ according to the individual customer's needs. Single or multi-channel handsets, with or without LED switching facility, and wall switches will differ depending upon how many awnings they are required to control.

1. Wired wall switch controller (98GC781B) (Fig. 2) – Wired wall switch controller.
2. Combination Switch Controller with Wired Motion Sensor Kit (98GCK-49) used for a single DC solar awning with LED. Includes an Ignition Retract-Lock function to retract the solar awning if the engine is ON. (See wiring diagram for details).

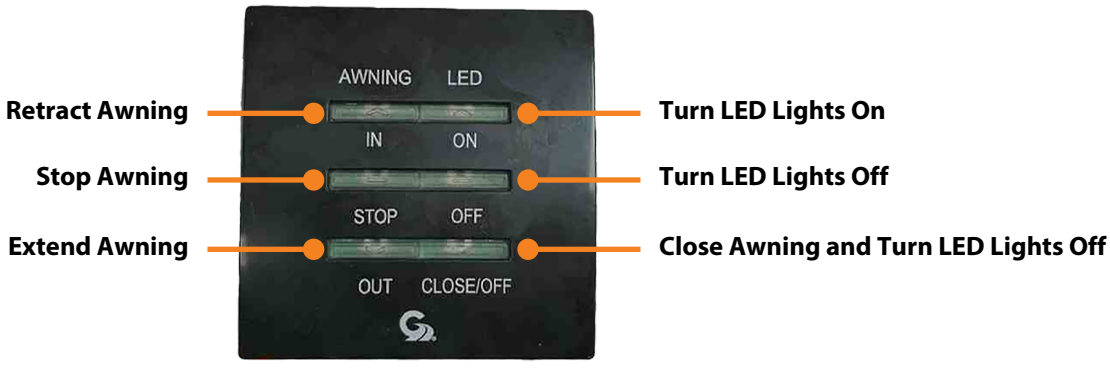
Fig. 2

Wired Wall Switch Controller



Operation

Wall Control Overview



Choosing a Location

The solar awning must be fully exposed to sunlight for optimal performance. Choose a location where all parts of the solar awning receive adequate sunlight and is not partially shaded.

Open the Solar Awning

⚠ CAUTION

Always open the solar awning all the way. A permanent and/or prolonged partial extension may affect the functionality of the solar awning or damage it.

⚠ CAUTION

Do not attempt to open the solar awning if it is obstructed by accessories or other objects. It is mandatory to ensure that the path of the awning is clear to avoid damaging the solar fabric.

1. Before opening the solar awning, ensure the path of the solar awning is clear.
2. Press the Out button to extend the solar awning into the open position.

Close the Solar Awning

⚠ CAUTION

Closing the solar awning with objects on it will cause damage to the fabric or other components and compromise the solar awning's reliability and performance.

1. Before closing the solar awning, inspect the fabric's surface to ensure that no foreign objects are present on top of or beneath the solar awning.
2. Press the In or Close/Off button to retract the solar awning.

Sensitivity Adjustment

The solar awning has 10 levels of sensitivity that can be adjusted directly on the wall control switch.

1. Locate the switch 98GC781B and pull off the cover.
2. Press and hold the set button until you hear a beep from the switch.
3. The controller will automatically reset to level 10. Press down to increase the sensitivity level. The lower the sensitivity level, the more sensitive the sensor will be.
4. The Setting LED will blink a certain number of times with every press to indicate which level it is currently on. (E.g., 3 blinks means it is on level 3). Recommended factory setting is three.
5. Once the level is selected, press and hold the set button again until a beep sounds and then release the set button. If the programming is successful, you will here three more beeps from the switch to confirm.

Testing And Adjustments

Overview

A. Adjusting Motor Limit Switches
B. Manual Override
C. Adjusting Pitch and Elbow height
D. Motion Sensor Testing

Adjusting Motor Limit Switches

Tools Required

- Black plastic key provided with solar awning, or
- 4mm (5/32") hex wrench.

NOTE: The motor limit switches have been adjusted to the correct positions at the factory prior to shipment. When fully retracted the solar awning motor is set to stop the exact moment the solar awning box closes. When fully extended the fabric should be taut and the arms should be slightly bent, exposing a gap of about ¼" at the elbows.

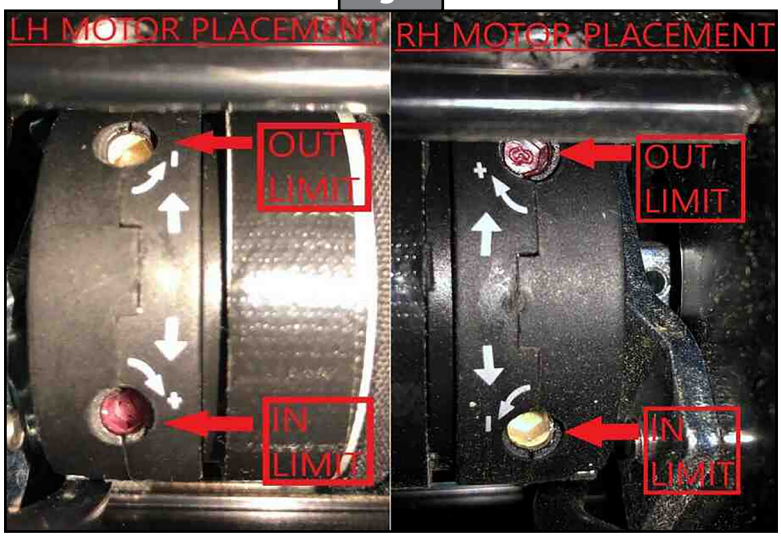
NOTE: Always check the motor limits after installation to ensure that the solar awning opens and closes correctly. Solar awning fabric can stretch over time, this will require an adjustment of the IN and/or OUT limit switch.

⚠ CAUTION

Extreme care should be taken to ensure that the motor limit turns off at the exact moment the solar awning box closes. Failure to do so will cause the motor to run when the solar awning is closed. This will destroy the motor.

1. The motor has limit settings for both OUT (extension) and IN (retraction).
2. The limit switches can be adjusted by use of a 4mm (5/32") hex wrench.
3. Extend the solar awning a few feet to gain access to the motor. Locate the motor. The limit adjustment screws are located on the head of the motor (Fig. 3). Using the symbols printed next to the adjustment screws, turn the black key or 4mm hex wrench to make the necessary adjustments. The motors are labeled with a + or a – to indicate the adjustment direction.

Fig. 3



4. Approximately one quarter turn of the adjustment screw represents about 1" of solar awning movement. NEVER set outward limits so that the fabric is slack with full arm extension. For proper adjustment, set limit switch to stop the motor just before the arms lock. This will expose about a 1/4" gap at the elbow.

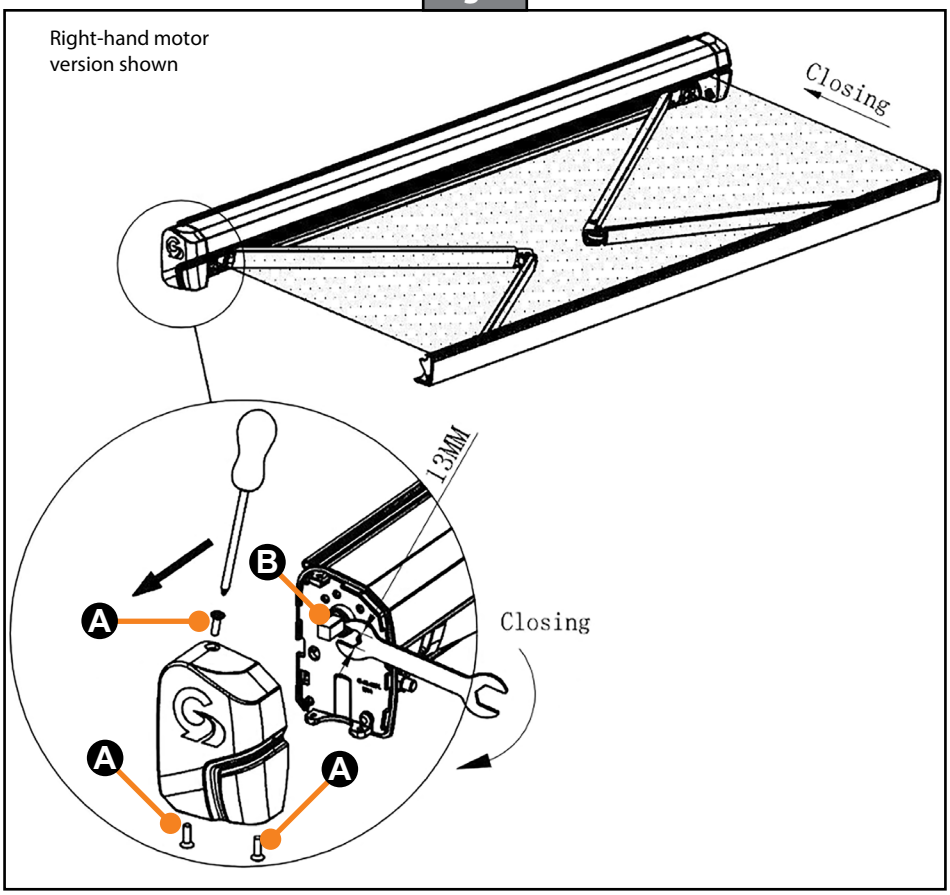
Manual Override

In case of motor issues, the GG750 has a manual override to close the solar awning.

1. Remove the 3 Philips head screws on the end cap opposite the motor (Fig. 4A).
2. Using a 13mm wrench, turn the manual override shaft in order to close the solar awning (Fig. 4B).

NOTE: The manual override is one-way, it can only close the solar awning.

Fig. 4



Adjusting Pitch And Elbow Height

NOTE: Adjustment of the Elbow height and pitch, will affect the height of the solar awning lead rail when it is fully deployed. This adjustment is usually required after an arm replacement or if the elbow of the arm hits the bottom of the casing as the lead rail closes.

Tools Required

- 17mm open-end wrench
- 19mm (3/4") open-end wrench
- 4mm hex wrench

1. Elbow Height

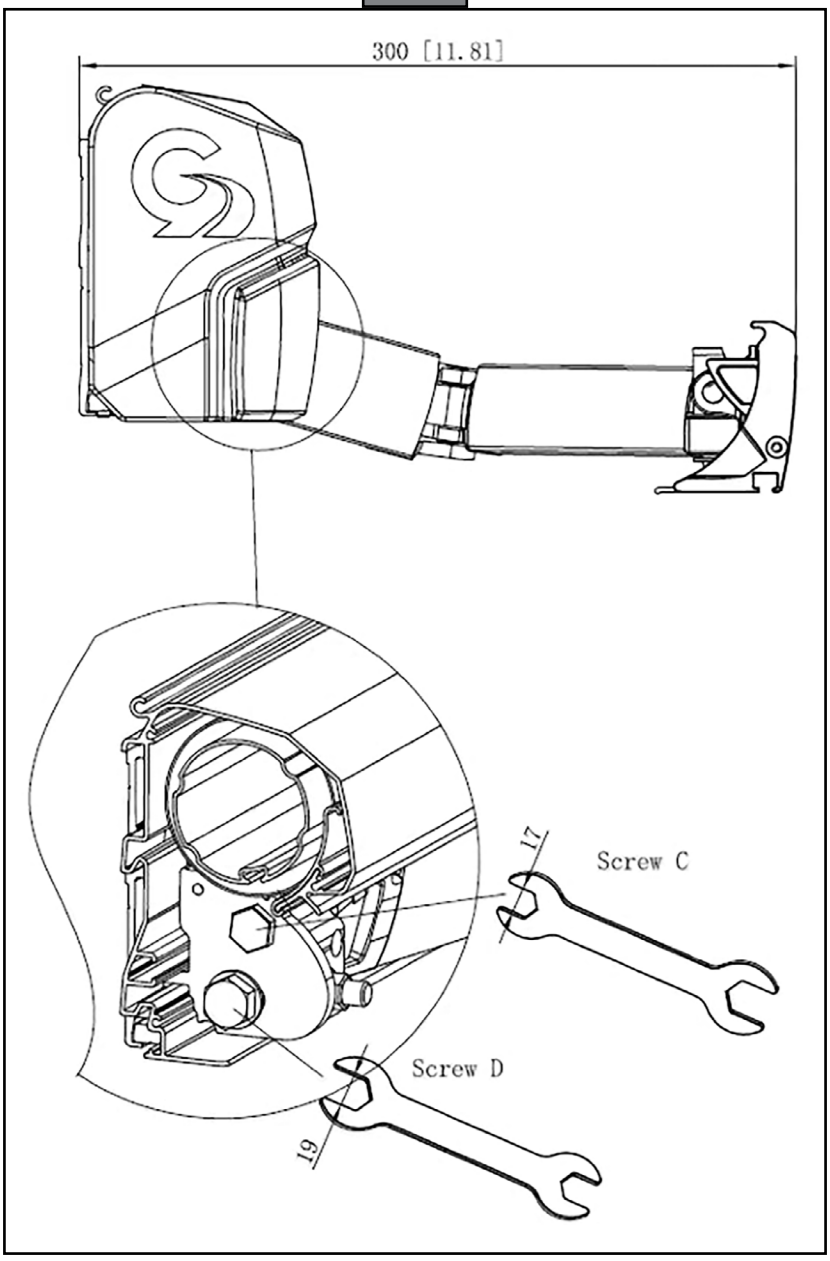
A. Extend the solar awning approximately 12".

B. To lower the elbow: Locate screw C located on the side of the shoulder, the top bolt (Fig. 5). Using a 17mm open-end wrench, rotate the bolt counterclockwise to lower the arm position. Then, use a 19mm wrench to tighten Screw D, the bottom bolt.

C. To raise the elbow: Locate screw C located on the side of the shoulder, the top bolt (Fig. 5). Using a 17mm open-end wrench, rotate the bolt clockwise to raise the arm position. Then, use a 19mm wrench to loosen Screw D, the bottom bolt.

D. Close the solar awning completely to ensure smooth operation, that the lead rail lies flush and square along the length of the cassette, and that the arms fold inside the cassette without interference.

Fig. 5



⚠ CAUTION

Do not overtighten as this will result in damage to the solar awning. Lifting up on the arm slightly to relieve pressure may be necessary.

2. Adjusting Pitch

A. Extend the solar awning to its fully extended length.

B. Locate screw A, adjustment nut located on front side of the shoulder assembly, (Fig. 6 and Fig. 7). Using a 17mm wrench rotate the nut either counterclockwise to lower the pitch or clockwise to raise the pitch.

C. Close the solar awning completely to ensure smooth operation and that the lead rail lies flush and square along the length of the cassette.

Fig. 6

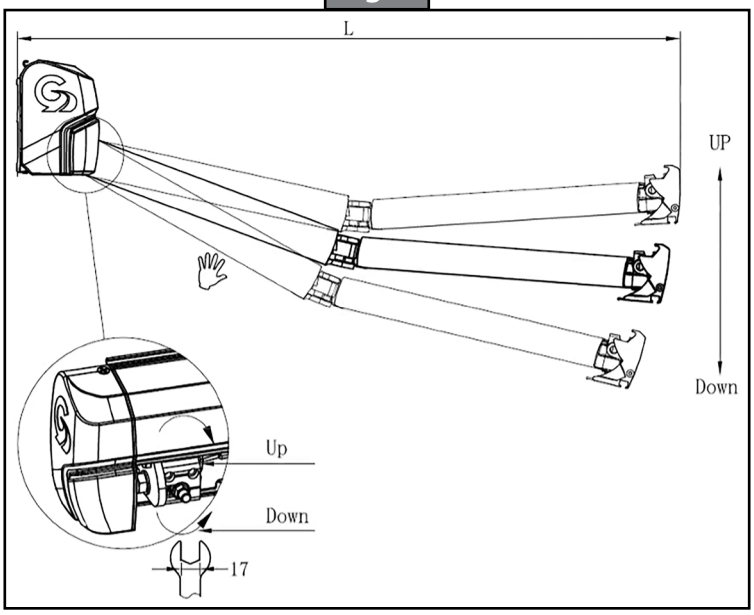
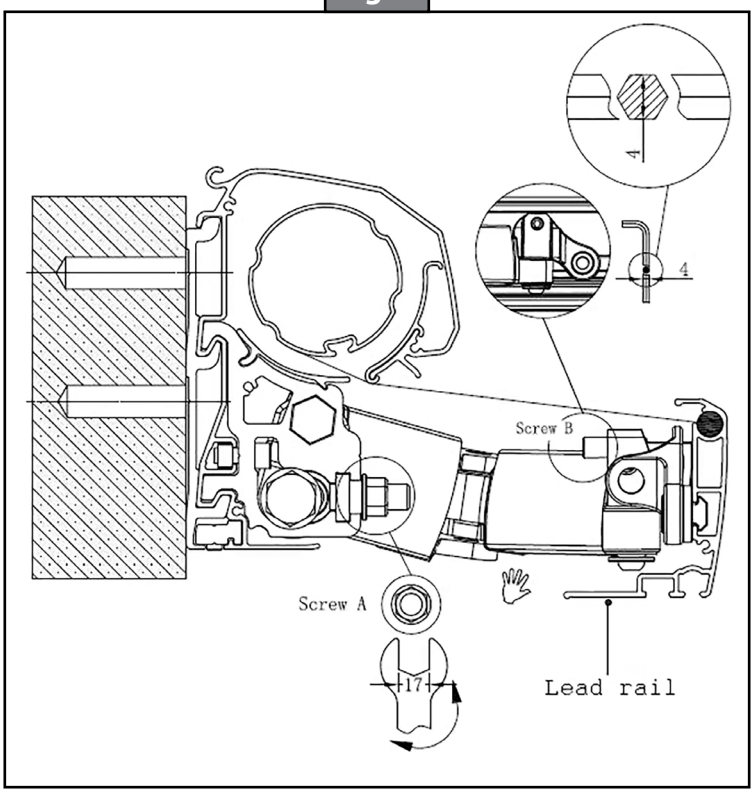


Fig. 7



Testing The Motion Sensor (Wind Sensor)

1. Partially extend the solar awning (at least 3 feet).
2. Physically activate the motion sensor by shaking the solar awning lead rail.
3. At this point the solar awning should retract; if not, check that there is a 12V DC supply to the motion sensor and that the motion sensor is correctly programmed.

NOTE: The motion sensor will send a retract signal to the motor controller of the solar awning. If there are multiple solar awnings extended that begin to retract simultaneously under windy conditions, the power system of the vehicle must be able to withstand the resulting surge of current. The surge will be the greatest when the solar awnings are fully extended. When testing the system, verify all of the solar awnings will close when fully extended.

Adjusting The Lead Rail

The lead rail on the solar awning has been preset at +/- 3 degrees. This allows the lead rail to rest firmly in the cassette and also creates a weather resistant seal for travel. To increase or decrease the pitch angle, insert a 4mm hex wrench into the Pitch Adjustment screw (Fig. 8). Turn clockwise to increase the pitch and turn counterclockwise to decrease the pitch. Ensure that the pitch adjustment screw is set evenly on all of the arms.

Fig. 8

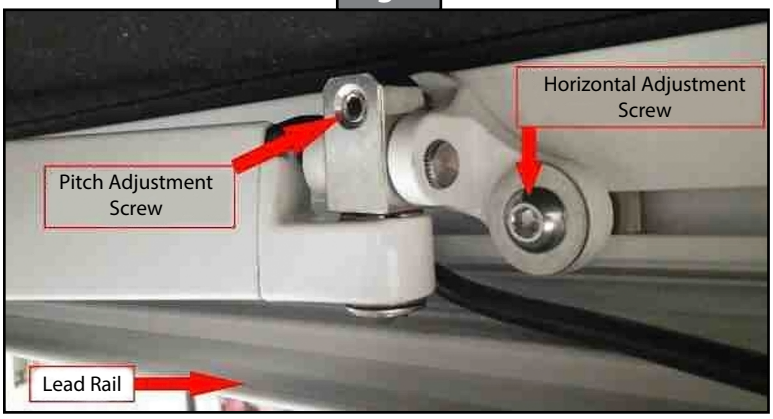


Fig. 9

Troubleshooting

Before contacting Customer Service:

1. Verify the awning is exposed to full sunlight and is not in the shade.
2. Check that all electrical connections are tight and free of corrosion.
3. Measure the voltage at the solar fabric output using a multimeter.
4. Ensure all system fuses are intact and not blown.
5. If the problem persists, refer to the table below.

What is Happening	Why?	What Should Be Done?
The lead rail is binding on the side of the solar awning casing.	The rail is offset from the housing.	1. Open the solar awning about 3 feet. 2. Loosen the lead rail horizontal adjustment screws on all arms, (Fig. 8). 3. Locate and remove the two fabric set screws that are on each end of the lead rail (Fig. 8). The lead rail is now ready to be shifted. 4. Retract the solar awning until the lead rail is about 4 inches from the fully closed position. 5. Using a rubber mallet, tap the end of the lead rail to move it into the correct position. 6. When proper alignment has been achieved tighten the lead rail horizontal adjustment screws (Fig. 8), and then replace the fabric screws (Fig. 9).
The motor side of the solar awning closes when the solar awning is retracted but the opposite end does not.	Lead rail needs to be adjusted.	Refer to “Adjusting the Lead Rail” section. If this does not solve the issue, contact Lippert Customer Service.
Motor will not operate.	Problem with power source.	1. Check that the panel fuse on the 12V DC circuit is good. 2. If vehicle has an awning power main switch, locate the switch and make sure it is in the ON position. 3. If this does not solve the issue, contact Lippert Customer Service.
The motor will operate for 10-12" and then stop.	The motor may not be receiving enough power to operate correctly.	1. Check to ensure a minimum of 12V DC at the motor connection. If not, switch on a generator or connect to shore power. 2. If this does not solve the issue, contact Lippert Customer Service.
The fabric is loose when the solar awning is fully extended.	The roller keeps turning after the solar awning arms have locked open.	The motor’s OUT limits must be reset to factory standards. Please refer to the "Adjusting Motor Limit Switches" section.

What is Happening	Why?	What Should Be Done?
The motor stops before the lead rail has closed completely into the awning cassette on either or both sides. There is no apparent binding of the awning components.	Motor limit switch needs adjusting.	The GG750 patio awning is equipped with a manual override motor which has manual limit settings. The IN limit may need to be adjusted to allow the box to be closed tighter. Refer to the “Adjusting Motor Limit Switches” section.
The charge controller does not show energy production.	The battery is fully charged.	Check the battery status in the app. If "Float" is displayed, the battery is full.
	The awning is in the shade.	Move the vehicle/awning to a location with direct sunlight.
	There is a wiring disconnect between the solar fabric and the controller.	Check all wiring connections between the solar fabric and the controller.
	Fault in the controller.	Contact Lippert Customer Service.
No voltage is measured on the solar fabric cables at the controller input.	Loose or disconnected wiring.	• Measure the voltage at the solar fabric output using a multimeter. • Check the integrity of all wiring between the solar fabric and the controller. • Contact Lippert Customer Service.
	The awning is closed.	Make sure the awning is fully open and in direct sunlight.
Power production is lower than expected.	Dirt and/or dust on the solar fabric surface.	Gently clean the solar fabric surface. Refer to "Solar Fabric Maintenance" section.
	Partial shading.	Ensure no objects or structural parts are shading the awning.
	Loose wiring connection.	Verify all cables are tightly connected.

Solar Fabric Maintenance

Following these guidelines will ensure the solar panel awning fabric remains efficient and in good working condition.

⚠ CAUTION

It is mandatory to ensure the solar panel is cool to touch before beginning any cleaning. Avoid cleaning while the solar panel fabric is exposed to direct sunlight.

⚠ CAUTION

Do not use scrub brushes, scouring pads, or other abrasive materials as these can damage the solar fabric's surface.

⚠ CAUTION

Do not use high pressure water. High pressure water will damage the product and its components. Clean using a soft, non-abrasive cloth only.

Routine Cleaning

Tools Required

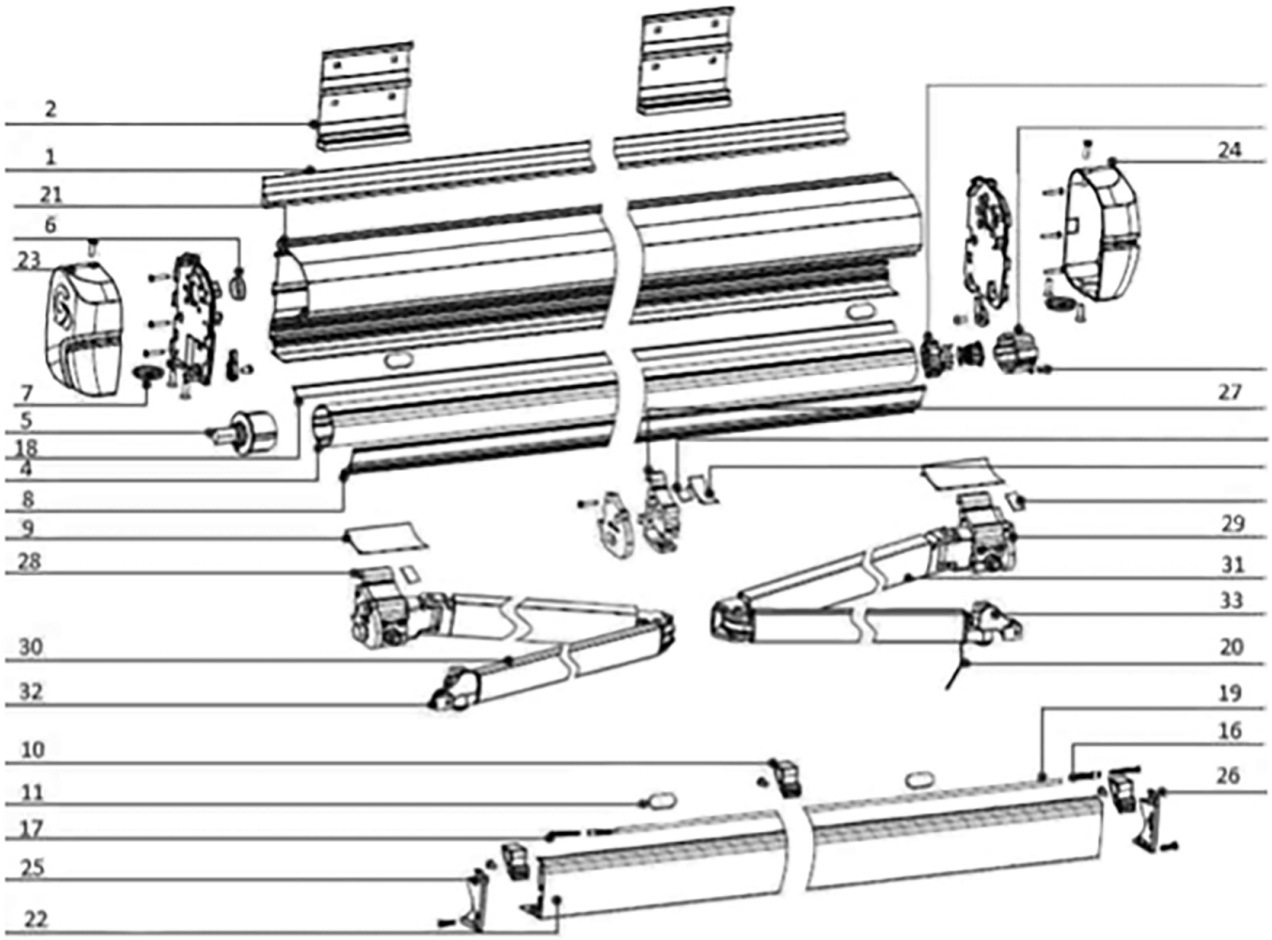
- Soft, non-abrasive cloth (microfiber or similar)
- Bucket of water (no other materials allowed)

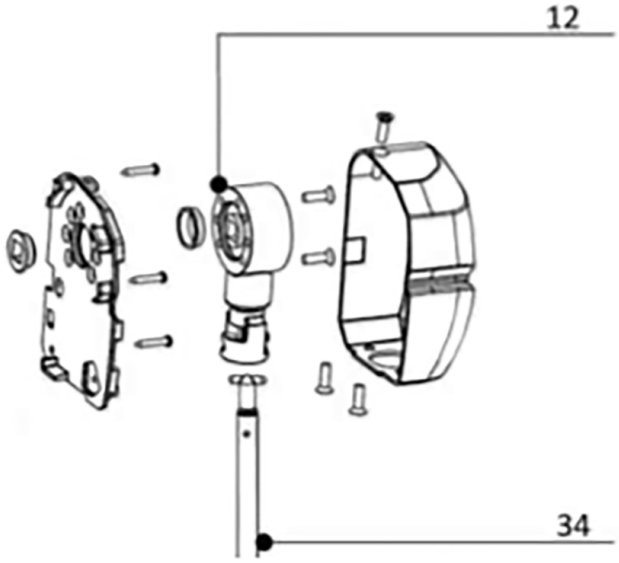
1. Soak the soft cloth in water and wring out any extra water. The cloth should be damp, not sopping wet.
2. Gently wipe the surface of the solar fabric with the damp cloth. Use a light, circular motion to avoid scratching the panel or putting pressure on it.
3. After cleaning, inspect the fabric for any remaining debris or damage. Remove any visible dirt or leaves carefully.

Routing Inspection

Regularly conduct routine inspections to ensure the panels are free from obstructions.

GG750 Exploded View

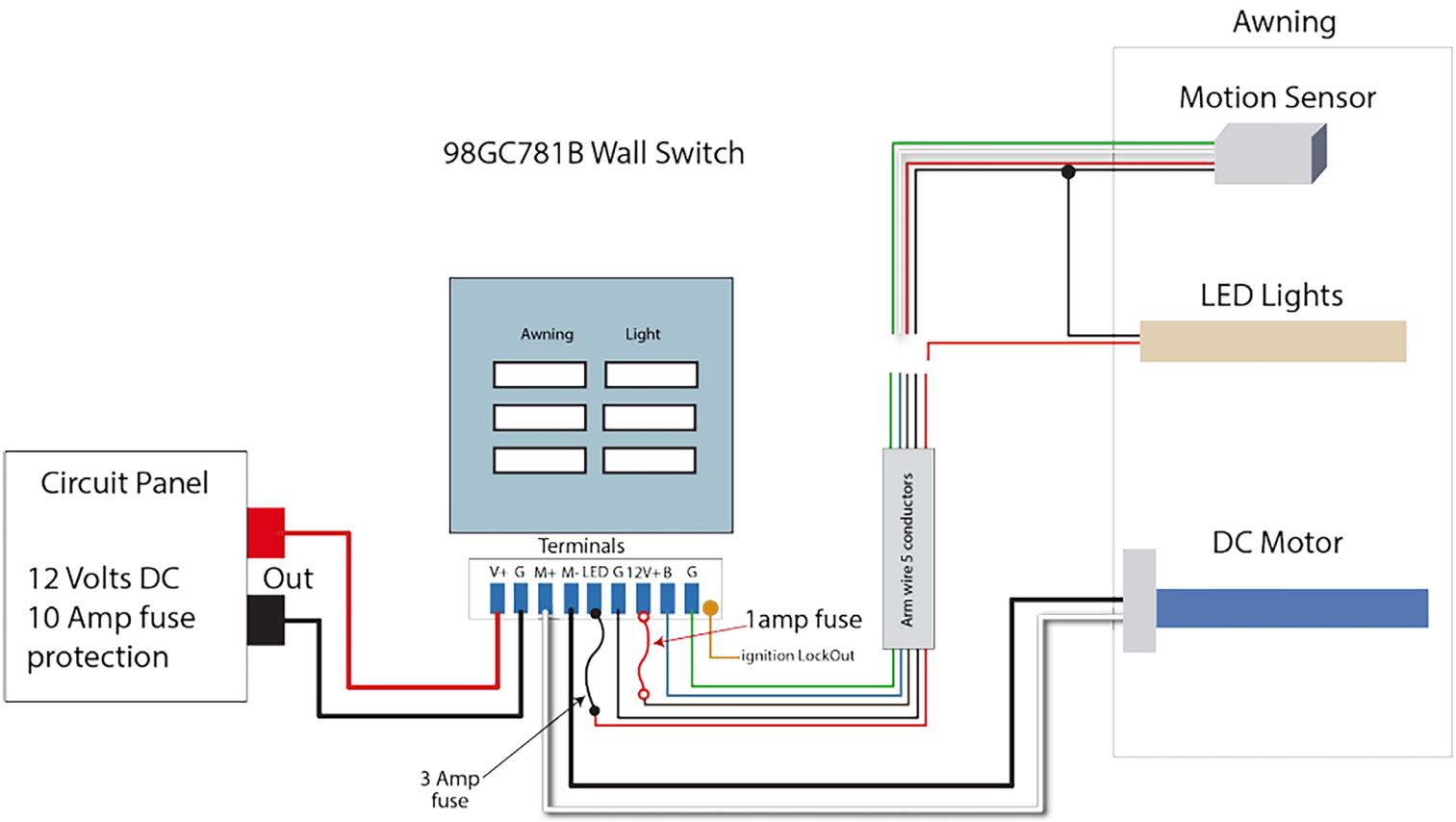




GG750 Component Identification

ITEM	DESCRIPTION	PART NUMBER (BLACK)	
1	L Track Mount	2022303859	
2	Mounting Bracket	2022303861	
3	Sprinter Van Bracket Set	2022303864	
4	Roller Tube	2022303871	
5	Gudgeon	2022303873	
6	Bushing Insert	2022303874	
7	End Cap Hole Plug	2022303875	
8	Fabric Guide	2022303877	
9	Fabric Guide B	2022303878	
10	Shoulder Angle Guide	2022303879	
11	Foam Washer	2022303881	
12	Manual Crank Gearbox	N/A	(Manual Version Only)
13	Washer Plastic Side Plate	2022303884	
14	Bushing Insert Cover	2022303885	
15	Screw for Gear Box	2022303886	
16	Fabric Screw Anchor	2022303887	
17	Fabric Screw	N/A	
18	Poly Rope Roller Tube	2022303889	
19	Fabric Poly Rope	2022303890	
20	Wire Electrical for Arm	N/A	
21	Main Housing	2022303894	
22	Lead Rail	2022303897	
23	End Cap Left	2022303900	
24	End Cap Right	2022303904	
25	Lead Rail End Cap Left	2022303907	
26	Lead Rail End Cap Right	2022303909	
27	Roller Tube Support Bracket	2022303911	
28	Shoulder Assembly Left	2022303914	
29	Shoulder Assembly Right	2022303916	
30	Arm Left 3’3”	N/A	
31	Arm Right 3’3”	N/A	
30	Arm Left 6’7”	2022303922	
31	Arm Right 6’7”	2022303924	
30	Arm Left 8’	2022303926	
31	Arm Right 8’	2022303928	
32	Lead Rail Connector Left	2022303930	
33	Lead Rail Connector Right	2022303932	
34	Manual Crank Handle	N/A	(Manual Version Only)

Wiring Diagram



Specifications

Specifications	
Operating Voltage	11V DC - 14V DC
Current	Up to 10A
Lights	LED
Motion Sensor Communication Standard	RS485
Maximum Run Time	4 minutes
Operating Temperatures	32°F - 120°F (0°C - 48°C)

Please recycle all obsolete materials.

For all concerns or questions, please contact
Lippert
Ph: 432-LIPPERT (432-547-7378) | Web: lippert.com | Email: customerservice@lci1.com