



Model FG 5-7 / SW 5-7 / DSW 5-7

Swing Gate Motor Kit

Solar powered and 12V Low Voltage

Installation and Set Up Instructions





SWING GATE MOTOR INSTALLATION AND SET UP INSTRUCTIONS



Important Safety Warnings

Please read these important safety warnings before attempting to install or use this product

Do not operate the gate motor unless the gates are in full view and free from objects such as cars, children or people.

Children must be supervised near the gates at all times, especially when the gate motor is in use.

Ensure that the obstruction sensing function of the gate motor is operational and adjusted where necessary.

Keep hands and any loose clothing well clear of the gate(s) and gate motor at all times.

Before attempting to service the gate motor or removing the cover, turn off and / or disconnect the power to the gate motor. If you are unable to do this, then we strongly recommend you call an electrician. **Care should be taken as there are moving components inside the gate motor that may cause damage or personal injury.**

Keep any gate controllers out of reach of children. Any wired or wireless controllers must be installed away from any moving parts, and it must be at a minimum height of 1.5m from the ground.

Regularly check that all safety features and safety accessories are fully functioning.

Warning:

Failure to comply with these safety warnings or installation instructions may result in serious personal injury and/or property damage.

Installation Checklist

Read all instructions and data sheets before installing the gate motor kit. Failure to follow the instructions could void warranty.

The gate opens and closes freely for its full length of travel and that it does not stick or bind on pathway, driveway or garden beds.

The gate is in good condition and well balanced. The gate is correctly and securely mounted with the correctly sized hinges.

Generally, the gate motor requires about 350mm side clearance from the gate hinge to allow the arms to rotate around during the opening of the gate.

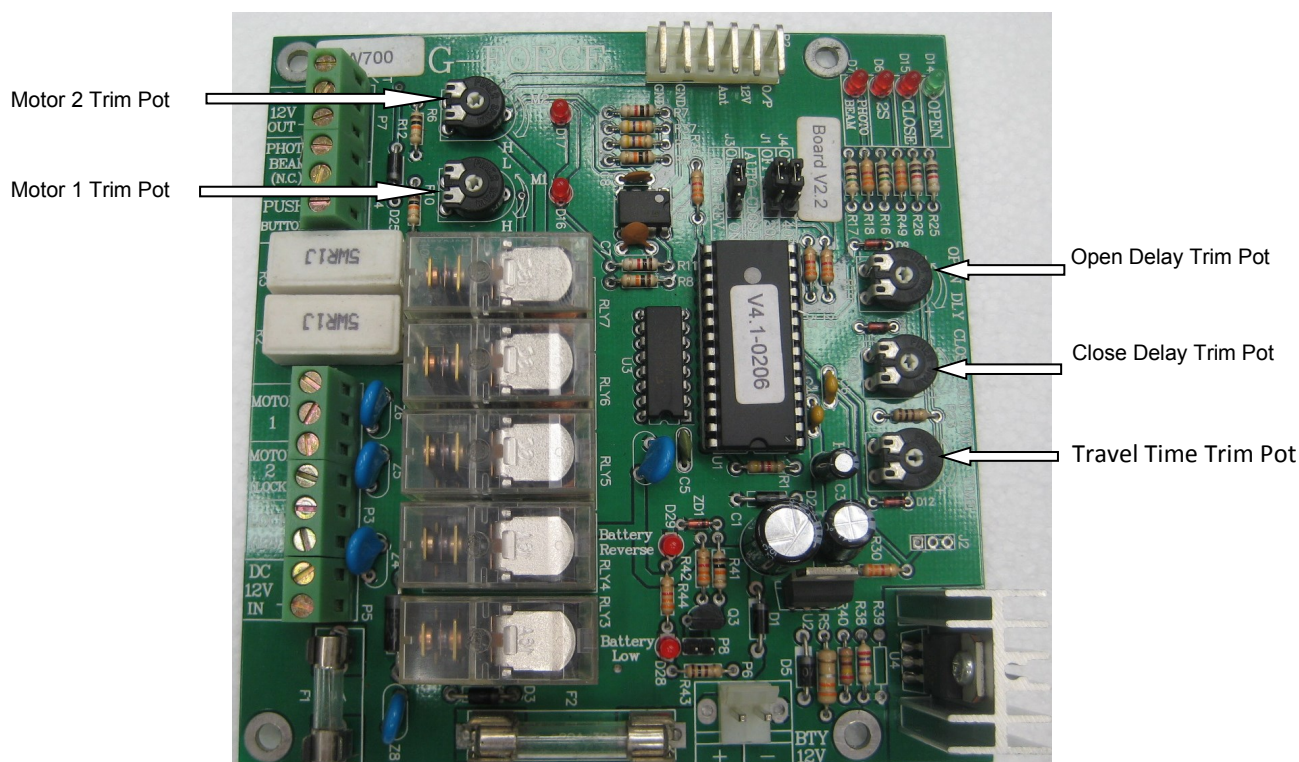
We recommend 1.5mm twin active lighting cable for power supply wiring and 1mm figure 8 wire for wiring push buttons and other auxiliary items



FG / SW / DSW 700 Trim Pot Locations and Adjustments



CAUTION



Adjusting the Trim Pots.

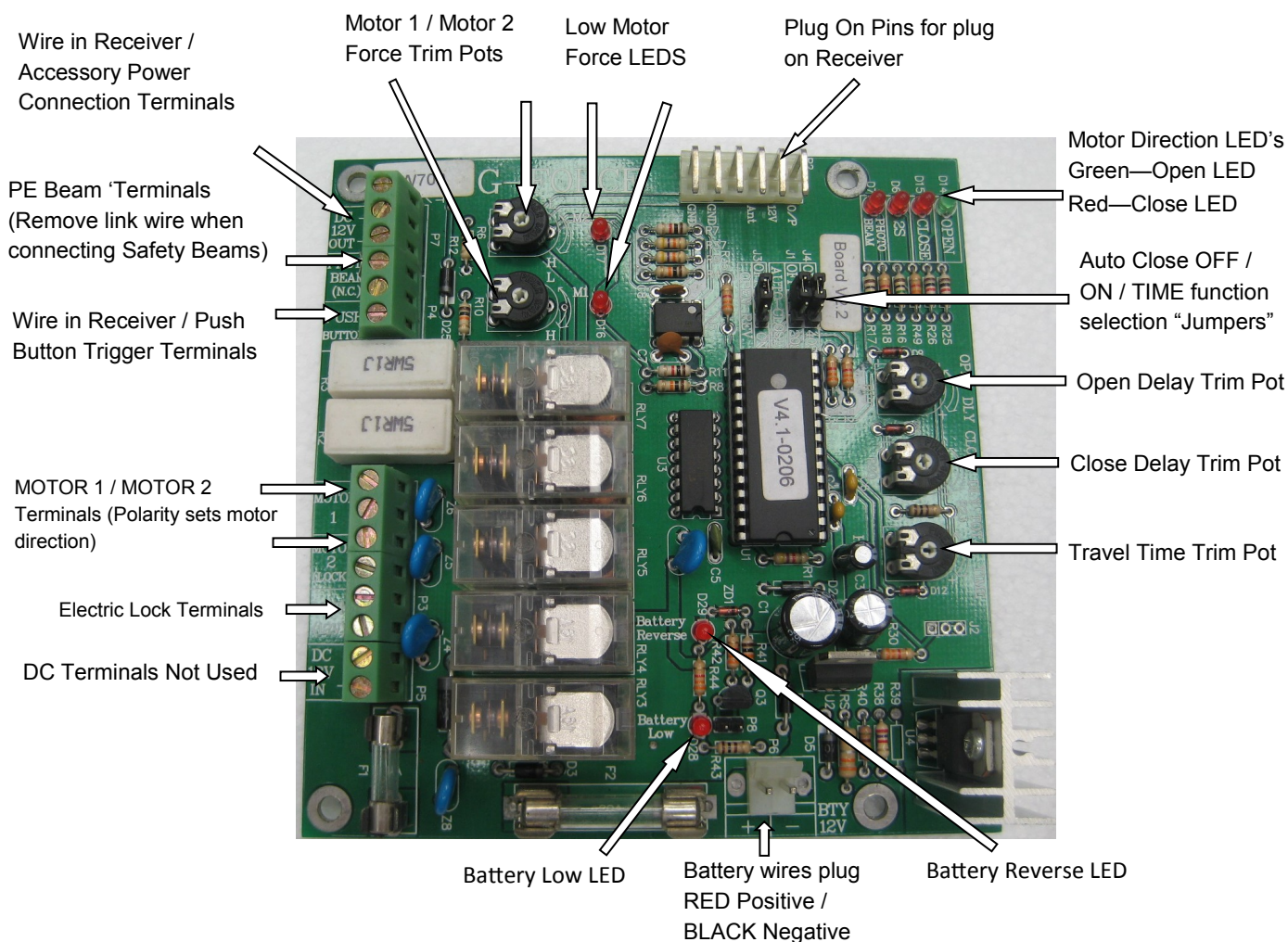
The trim pots are thoroughly tested and checked after manufacture and during assembly and final testing of the gate motor.

Extreme care should be taken when adjusting the trim pots. They DO NOT rotate 360 degrees (in a full circle). Ensure the correct sized screwdriver is used and all adjustments are done slowly and carefully. Excessive force will damage the trim pot and render the board inoperable. Trim pots damaged by excessive force are not covered by



SW 700 Circuit Board

Data Sheet

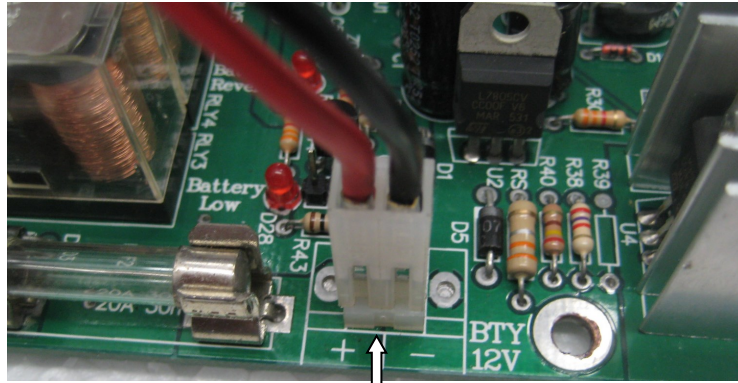


Trim Pot	Function	Typical Setting
Motor 1 – Force Adjustment Trim Pot	Decrease Motor force to increase sensitivity	Adjust as required.
Motor 2 - Force Adjustment Trim Pot	Decrease Motor force to increase sensitivity	Adjust as required.
Open Delay Trim Pot for Double Swing Gate Kit	Delay Time before 'Motor 1' Gate OPENS	Single Gates – Set fully to zero Double Gates – Set as required Clockwise Maximum Delay
Close Delay Trim Pot for Double Swing Gate Kit	Delay Time before 'Motor 2' Gate CLOSSES	Single Gates – Set fully to zero Double Gates – Set as required Clockwise Maximum Delay
Auto Close OFF / ON / TIME function selection "Jumpers"	Auto Close setting will cause Gates to automatically close after pre-set time	Leave on 'OFF' for no Auto Close. For Auto Close, set Jumpers to the time required.
Travel Time Adjustment Trim Pot	Adjust time before circuit board times out and cuts power – a safety feature.	Set nominally mid-way. If the motors stop before completing their open / close cycle, increase Travel Time

Pre Installation set up and testing

We recommend the gate motor settings and direction of rotation be set up and tested prior to installation.

Un pack the master motor and remove the metal motor cover. Place the gate motor on a suitable work bench. Visually inspect the motor to ensure nothing has moved during transit. Refer to the “*SW 700 Circuit Board*” data sheet included with this manual and familiarise yourself with the layout and location of the items and wiring terminals.

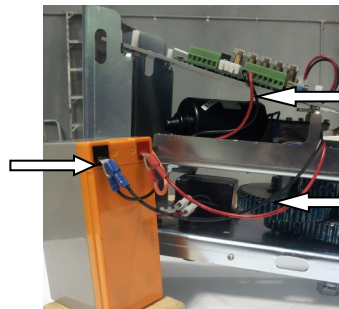


Battery Wires

Place the battery on the bench next to the motor.

Battery connection for
bench testing and set up

Piggy back spade connectors



Motor wires

Battery Wires

Refer to the “*SW 700 Circuit Board*” data sheet included with this manual and locate the battery wire plug on connectors on the circuit board. Ensure the battery wires are correctly connected to the correct terminals on the circuit board. Connect the battery wires to the battery terminals on the battery. Note the polarity (**Red** wire to **Red** battery terminal, **Black / Blue** wire to **Black** battery terminal). The board should now be powered and great care should be taken to avoid shorting out or otherwise damaging the circuit board.

Activate the gate motor using one of the handset remote. The remotes are coded to the gate motor during assembly. Alternatively, refer to the “*Handset Remote Programming*” data sheet to code in the handset. Press the handset again to reverse the motor direction. To stop the motor disconnect a battery lead or flick the cut off switch. Refer to the “*Set Up Open / Close Limit Switch Cams*” section for details of the cut off switch.

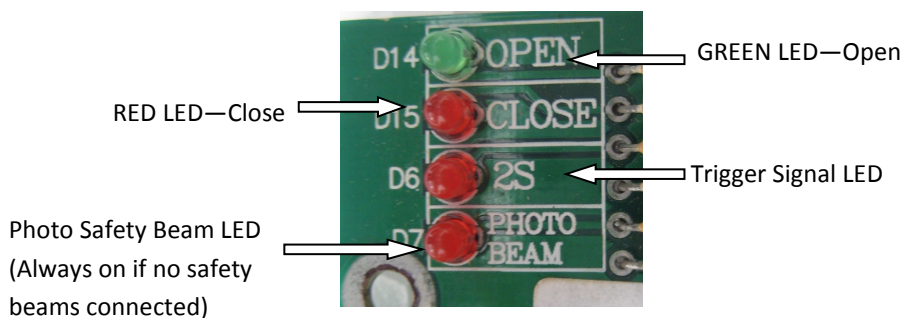
Care should be taken as there are moving components inside the gate motor that may cause damage or personal injury.

Pre Installation set up and testing (continued)

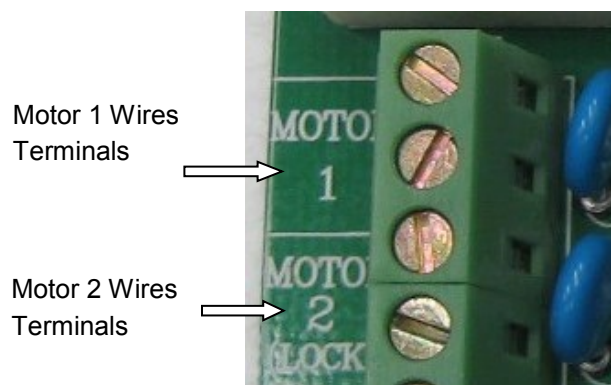
Setting Motor Direction

Refer to the “SW 700 Circuit Board” data sheet included with this manual and locate the direction LED’s on the circuit board. The GREEN LED indicates opening direction and the RED LED indicates closing direction.

Activate the gate motor using the handset remote and check the rotation of the motor shaft is turning in the correct direction for opening the gate and the GREEN LED light is on OR the correct direction for closing the gate and the RED LED is on.



If the motor is going in the wrong direction, disconnect all power. Refer to the “SW 700 Circuit Board” data sheet included with this manual and locate the ‘Motor 1’ terminals. on the circuit board. Swap the red and black motor wires connected to ‘Motor 1’ terminals on the circuit board. The red wire should be connected to the terminal that had the black wire connected to it and the black wire should be connected to the terminal that had the red wire connected to it. This will reverse the direction of the motor.

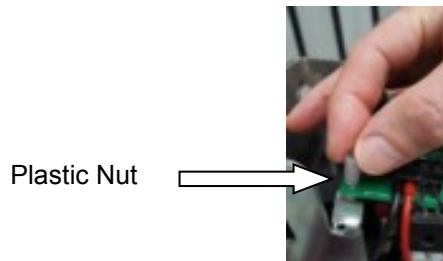


Activate the gate motor again using the handset remote and check the rotation of the motor shaft is turning in the correct direction for opening the gate and the GREEN LED light is on OR closing the gate and the RED LED is on.

Care should be taken as there are moving components inside the gate motor that may cause damage or personal injury.

Mounting the Gate Motor:

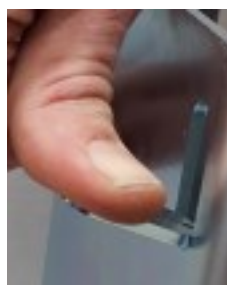
Remove the black steel motor cover. Take note or a photo of the circuit board wires for possible future reference. Remove the necessary wires from the terminals on the circuit board. Undo by hand the 4 plastic nuts in each corner of the circuit board support tray and remove the circuit board support tray. Take care not to damage the circuit board or allow it to get wet.



The gate motor should be mounted about 50mm — 100mm from the gate hinges on a solid post or pillar. *Refer to Figure 2*

The motor drive shaft should be approximately at the same level as the bottom rail of the gate.

At the rear of the motor chassis there are 4 cut-outs for the mounting slots. Gently push the cut-out tabs with your finger so they fold back and sit flat against the outside of the chassis, in this position they act as a spacer allowing clearance for the black steel motor cover. NOTE: Do not remove these tabs.



Bolt the gate motor to the post ensuring it is vertical, securely mounted and the motor does not move in any direction.

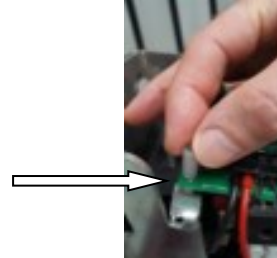
Battery and Circuit Board

Fit the battery on its end into the space at the rear of the motor chassis and replace the circuit board support tray and fit the 4 plastic nuts finger tight. Refer to the “*SW 700 Circuit Board*” data sheet included with this manual and fit the wires into the correct terminal locations.



Place battery into cavity

Plastic Nut



Attaching the Arms and Brackets to the Gate:

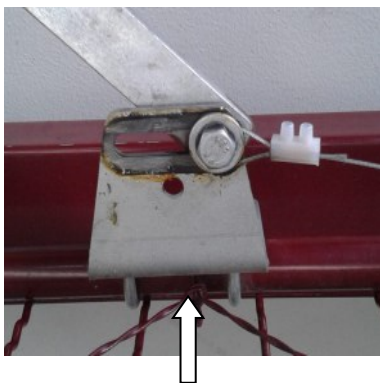
Move the gate into the closed position manually.

Fix the swing arm assembly to the motor shaft and loosely screw on the shaft nut so the swing arms are free to rotate by hand. At other end of the swing arm assembly, loosely attach the gate mounting bracket to the arm.

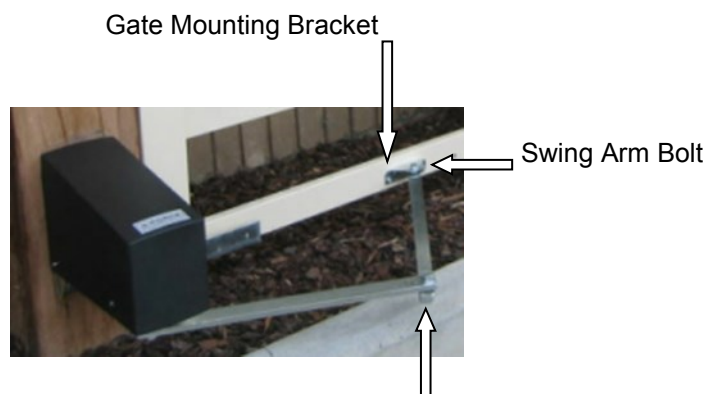
Extend the swing arms straight out and mark a position where the gate mounting bracket touches the gate. If fitting the mechanical latch gate bracket, ensure the swing arm is at the end of the slot furthest from the gate motor.

Attach the gate mounting bracket on the gate approximately 20mm toward the motor from the marked position.

Tighten the two swing arm bolts with care not to over tighten. Open and close the gate manually by hand several time to test.

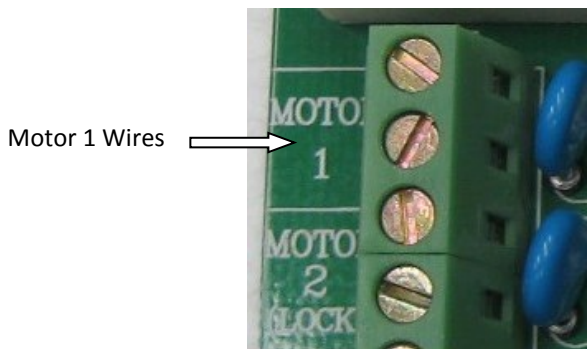


Mechanical Latch Gate Bracket. Ensure the swing arm is at the end of the slot furthest from the gate motor



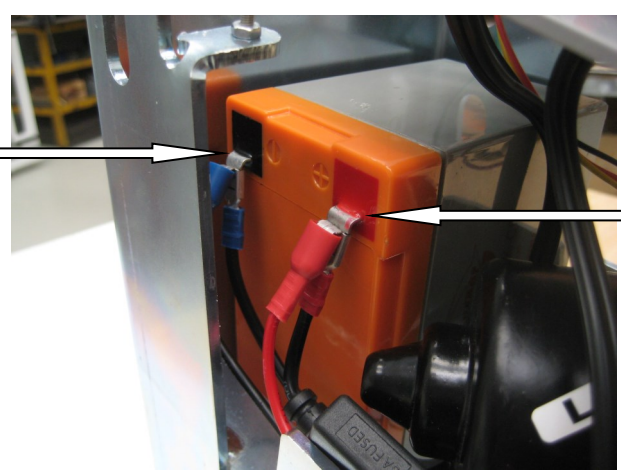
Remove the swing arm assembly from the motor shaft and manoeuvre the swing arm away from the gate motor.

Refer to the “*SW 700 Circuit Board*” data sheet included with this manual and locate the ‘Motor 1’ terminals on the circuit board. Ensure wires from the motor are connected correctly into control board terminals ‘Motor 1’.



It is recommended that the battery be connected first during this stage of the installation. The primary power source can be connected after all the necessary set-up procedures and adjustments are made. Refer to the “*SW 700 Circuit Board*” data sheet included with this manual and locate the battery connection terminals on the circuit board. Ensure the battery wires are correctly connected to the correct terminals on the circuit board. Connect the battery wires to the battery terminals on the battery. Note the polarity (**Red** positive wires to **Red** battery terminal, **Black / Blue** Negative wires to **Black** battery terminal). The board should now be powered and great care should be taken to avoid shorting out or otherwise damaging the circuit board.

Black / Blue wires to **black** Negative battery Terminal / Piggy Back Spade Connectors



Red wires to **Red** Positive Battery Terminal / Piggy Back Spade Connectors

Care should be taken as there are moving components inside the gate motor that may cause damage or personal injury.

Setting Open / Close Limit Switch Cams



Cut-off Switch



Limit Switch & Cams

<p>Standard inward swing gate on the LHS - Bottom CAM = CLOSE Position Top CAM = OPEN Position</p>	<p>Standard inward swing gate on the RHS - Top CAM = CLOSE Position Bottom CAM = OPEN Position</p>
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Manually move the gate into the half open / half closed position.

Activate the gate motor using the key ring handset remote and check the rotation of the motor shaft. As soon as the shaft is in the half open / half closed position flick the cut-off switch to OFF.



Cut-off Switch

Attach the swing arm assembly to the motor shaft and tighten on the shaft nut so the swing arms are firmly attached. Check to ensure the swing arm is correctly fitted to the flat sides of the motor shaft.

PLEASE NOTE

The control board may time out and therefore not respond to the cut off switch during this set up process. If this does happen, push your key ring handset remote control to re-activate the control board and then continue with the instructions.

Flick the cut off switch to ON and activate the gate motor. as soon as the gate reaches the desired open or closed position, flick the cut-off switch to Off.

Using a 4mm allen key loosen the cams and rotate the correct cam until it clicks the corresponding limit switch. Re-tighten the cams.



Limit Switch & Cams

Flick the cut-off switch to ON and activate the gate so it travels in the opposite direction. As soon as the gate reaches the desired position, flick the cut off switch to OFF.

Using the allen key loosen the cams and rotate the correct cam until it clicks the limit switch. Re-tighten the cams and flick the cut-off switch to ON.

Test the gate opening and closing several times to make sure the cams are contacting the limit switches and turning off the gate motor and the gate has stopped in the desired open and closed positions.

Care should be taken as there are moving components inside the gate motor that may cause damage or personal injury.

Circuit Board Gate Adjustments

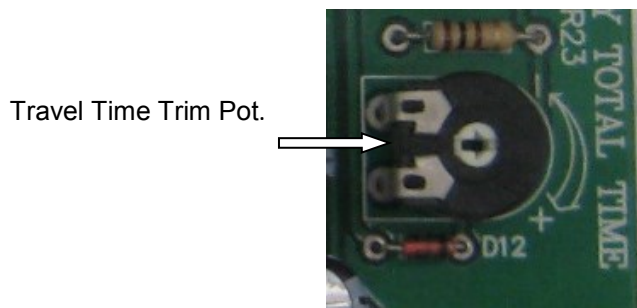
Refer to the “SW 700 Circuit Board” data sheet included with this manual for details and locations of these circuit board adjustments.

Please read the ‘Trim Pot Caution’ attachment included with this manual

Setting Travel Time Adjustment

This adjustment sets the time the circuit board is active. The travel time should be set long enough to allow the board to remain active for 5 – 10 seconds after the gate has fully opened OR closed. Using a suitable small screw driver gently turn the trim pot clockwise to reduce the time or anticlockwise to increase the time.

When Travel Time elapses, the board essentially goes into a ‘stand-by’ mode. Pressing the remote or push button will activate the circuit board again.

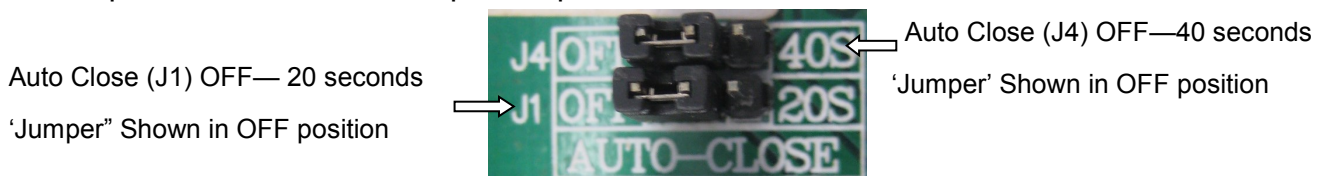


Setting Automatic Close Operation

Refer to the “SW 700 Circuit Board” data sheet included with this manual and locate the ‘AUTO CLOSE’ settings (J1 + J4) on the circuit board.

The gate motor is supplied with the Auto Close OFF as standard.

The gate motor can be set to ‘Auto Close’ by simply changing a ‘jumper’ setting on the control board to give a 20, 40 or 60 second close delay. With the gate motor set to ‘Auto Close’, the gate will always close after the pre-set time has elapsed. The ‘jumpers’ can be easily pulled off the 2 pins and pushed back onto the 2 pins required.



WARNING

If the ‘Auto Close’ feature is enabled, then precautions should be taken to ensure the gate can close without hitting any obstructions or suitable safety accessories are also installed.

Regularly check that all safety features and safety accessories are fully functioning.

Circuit Board Gate Adjustments

Motor Torque / Obstruction Sensing / Auto Reverse Adjustment

Please read the 'Trim Pot Caution' attachment included with this manual

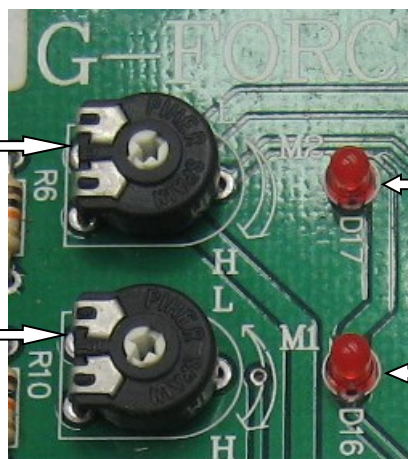
This adjustment controls the motor torque and obstruction sensing of the gate motor. The motor needs to have enough torque (force) to fully open and close the gate however the more torque the motor has the less obstruction sensitivity there is and therefore may hit an obstruction more forcefully.

Turn the Motor 1 (and Motor 2 trim pots for double gate motor installations) clockwise to increase sensitivity to an obstruction. Turn the Motor 1 (and Motor 2 trim pots for double gate motor installations) anti-clockwise to increase the motor torque (force) of the motor.

An obstruction will cause the gate motors to STOP during OPENING or STOP and AUTO REVERSE if the gate is CLOSING.

Motor 2 / Motor Torque / Obstruction Sensing / Auto Reverse trim pot used for double gate motor installations (R6).

Motor 1 / Motor Torque / Obstruction Sensing / Auto Reverse trim pot (R10).



Motor 2 Low Force LED (D17).

Motor 1 Low Force LED (D16).

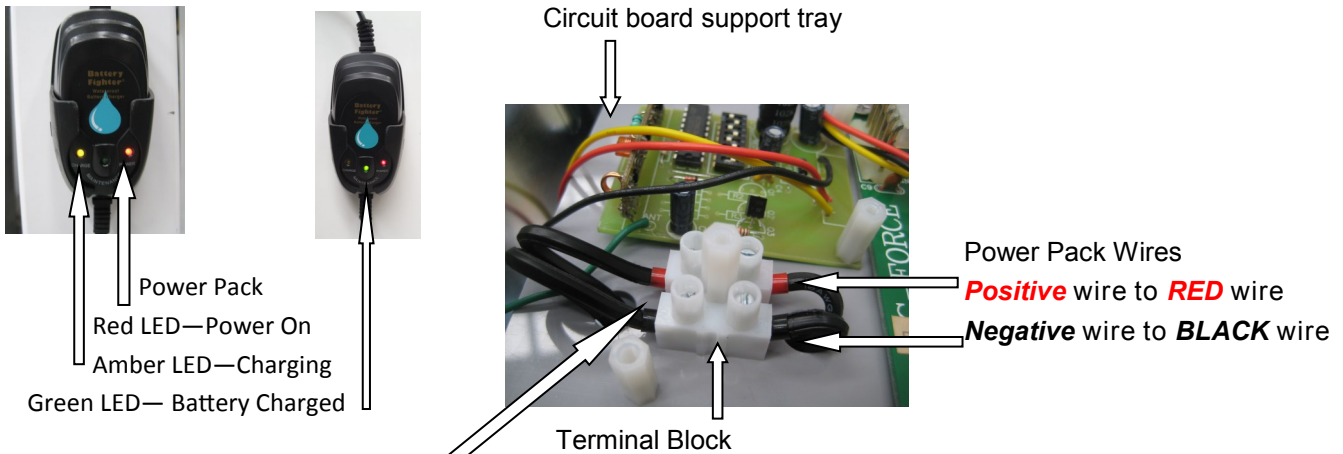


Power Pack Wiring Instructions



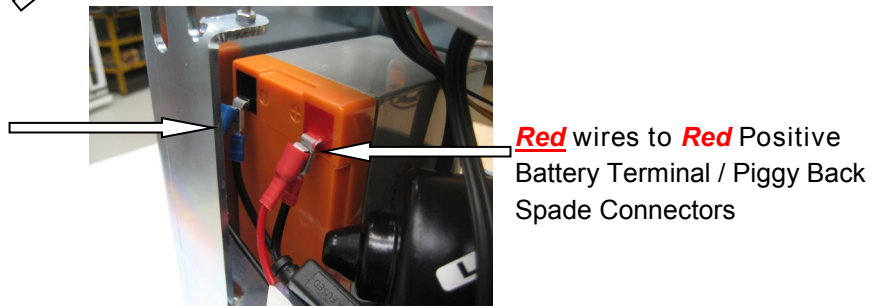
ENSURE THE POWER PACK IS SWITCHED OFF AND THE BATTERY DISCONNECTED

Locate the terminal block fastened to the top of the circuit board support tray. Connect the power pack **positive** wire to the mating wire with the **red end** and connect the power pack **negative** wire to the mating **black** wire. Plug the piggy back spade connections to the battery terminals on the battery. Note the polarity (**Red** positive wires to **Red** battery terminal, **Black / Blue** Negative wires to **Black** battery terminal). The board should now be powered and great care should be taken to avoid shorting out or otherwise damaging the circuit board. Turn on the power pack, replace the metal motor cover and test.

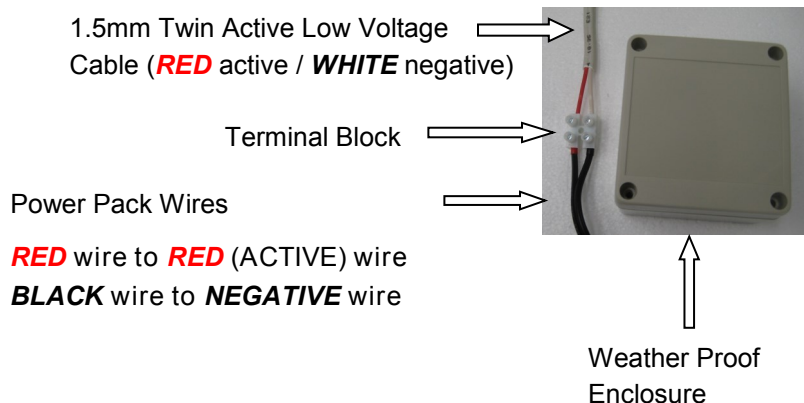


Battery Wires **RED** is **Positive**
BLACK is **Negative**

Black / Blue wires to **black**
Negative battery Terminal /
Piggy Back Spade Connectors



If the power pack wires need to be extended then we recommend you use a terminal block / joiner. Place the terminal block / joiners into a small enclosure for protection and outdoor installation. As a minimum, 1.5mm Twin Active cable should be used to extend the wires.





Solar Panel / Regulator Wiring Instructions



DIY Automatic Gate Kits
Solar & Low Voltage Specialists

PH 1800 111 930

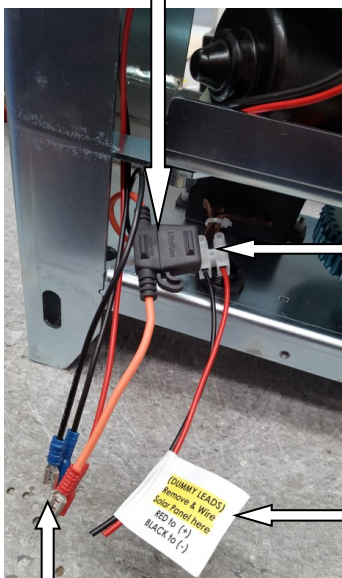
info@gforceautogates.com.au

ENSURE THE SOLAR PANEL IS COVERED AND THE BATTERY DISCONNECTED

The solar panel is to be connected directly to the terminal block from the regulator next to the cable entry gland on the lower chassis tray and NOT to the circuit board.

Remove the “Dummy” wires and connect the positive and negative solar panel wires to the terminal block from the regulator (grey / red positive wire - grey / black negative wire). Plug the piggy back spade connections to the battery terminals on the battery. Note the polarity (**Red**, Positive wire to **Red** battery terminal, **Black / Blue** Negative wire to **Black** battery terminal). The board should now be powered and great care should be taken to avoid shorting out or otherwise damaging the circuit board. Uncover the solar panel and check the solar regulator yellow LED is glowing. Replace the metal motor cover and test.

Safety Fuse

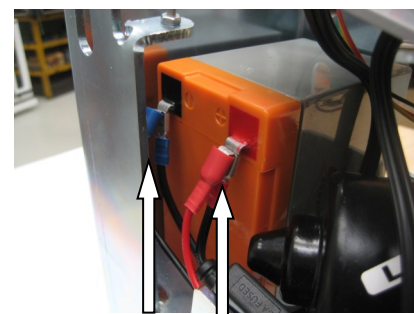
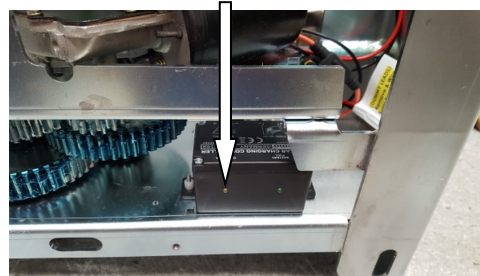


Terminal Block from solar regulator
Connect solar Panel Wires **POSITIVE** wire to grey / **red** wire **NEGATIVE** wire to grey / **black** wire

Dummy Wires — To be removed

Battery Terminal Piggy Back Spade Connectors

Solar Regulator Yellow LED



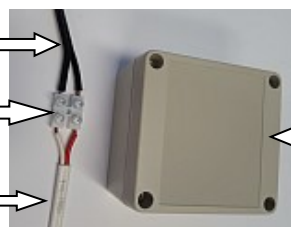
Red wires to **Red** Positive Battery Terminal / Piggy Back Spade Connectors. **Black / Blue** wires to **black** Negative battery Terminal / Piggy Back Spade Connectors

If the solar panel wires need to be extended then we recommend you use a terminal block / joiner. Place the terminal block / joiners into a small enclosure for protection and outdoor installation. As a minimum, 1.5mm Twin Active cable should be used to extend the wires.

Solar Panel Wires **RED** tipped wire **POSITIVE** / **BLACK** tipped wire **NEGATIVE**

Terminal Block

1.5mm Twin Active Low Voltage Cable



Weather Proof Enclosure



Standard Push Button Wiring Instructions



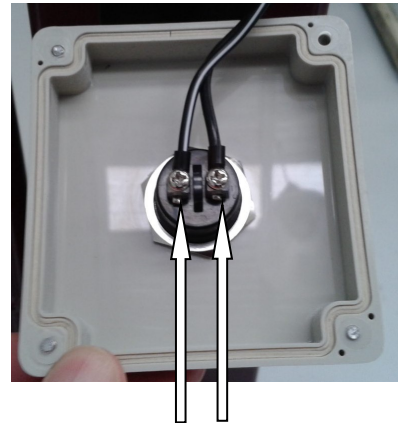
DIY Automatic Gate Kits
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PH 1800 111 930

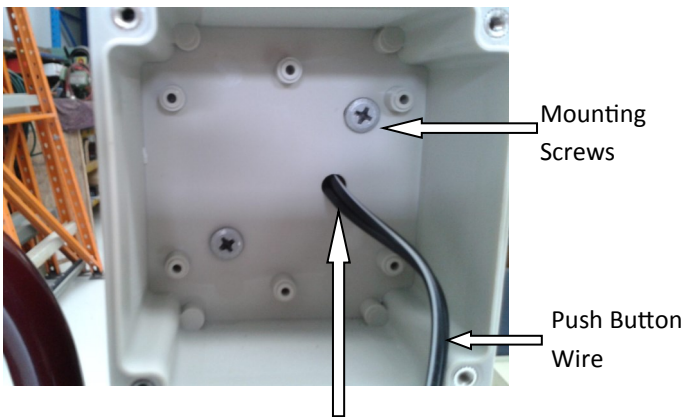
info@gforceautogates.com.au



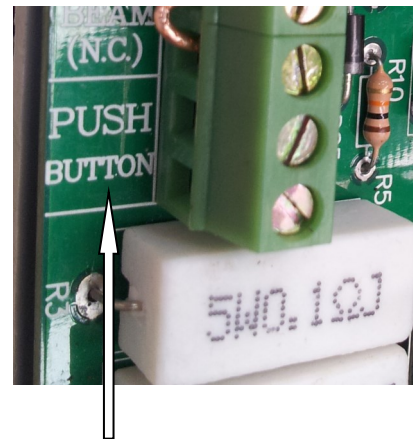
Undo the 4 screws and take off the cover



Attach the wire to the terminals on the push button. We suggest to use 0.75mm figure 8 wire for the push button wire



Drill a small hole either at the rear of the enclosure or the bottom of the enclosure to run the wire through. Mount the enclosure to the post. As an option, the holes can be sealed with silicon. Screw the cover back on.



Connect the other end of the wire to the push button terminals on the circuit board.



Warranty & Returns POLICY




GENERAL

G-Force Automatic Gate products are covered by the manufacturer's warranty which covers defects in materials and workmanship for the Warranty Periods stated below. This warranty is additional to any applicable statutory requirements, subject to the exclusions and limitations stated below.

Product is deemed to be warranted from the date of initial purchase from G-Force Automatic Gates. Proof of purchase is required when applying for warranty claims.

Warranty is offered on a Back-to-Base Warranty basis. Where issues can't be resolved by your Installer or local Reseller in person, or by G-Force Staff over the phone, product will need to be returned at Customer Cost to G-Force's Repair Centre in Bayswater, VIC for assessment, repair or replacement.

1 year	 DIY Gate Kits	<i>Applicable Kits:</i> FG 5, SW 5, DSW 5, SL2000,
1 year	Visitor Access & Hardware	<i>Such as:</i> Intercoms, Keypads, PE Beams, Loop Detectors, etc.
3 month	Spare Parts (exclusive of warranty replacements)	<i>Such as:</i> <i>Control Boards, Receivers, Remote Controls, Gears, Limit Switches, Brushes, etc.</i>

Warranty Periods

Exclusions & Limitations

The warranties stated herein do not cover damage, malfunction or service failures caused by:

Failure to follow G-Force or Product Installation, Operation or Maintenance Instructions

Repair or modifications to your G-Force product by someone other than a G-Force Service Technician, Authorised Installer or Reseller

Abuse, misuse or negligent acts

Batteries or Fuses supplied with your G-Force product (inc Handset batteries)

Power failure surges, lightning, fire, water damage, pest damage, accidental breakage, actions of third parties and other events or accidents outside of G-Force Automatic Gate's reasonable control and not arising from normal operating conditions

G-Force Automatic Gates is not responsible for any special, incidental, consequential or punitive damages arising from the use

- 1** Request
To lodge a claim, contact G-Force Automatic Gates on 1800 111 930 for assignment of an **RMA No.** (Returns Material Authorisation No.). This number should be recorded on each box of returned goods to
- 2** Return Goods to G-Force
Goods are to be returned to G-Force Automatic Gates at the Customer's cost. G-Force will assess returned product within 7 days to determine the extent of warranty cover and likely repair costs
- 3** Repair or Replacement of Goods
In-Warranty Repairs will proceed as soon as practicable. The manufacturer's offering the warranty reserves the right to repair or replace product at its discretion. It may, at its discretion, use new, remanufactured, or refurbished parts or products when repairing or replacing product. Replaced parts become the property of G-Force Automatic Gates. Repair costs and return freight of in-warranty repairs will be covered free of charge
Non-Warranty Repairs will not proceed until you are notified of estimated Repair Costs, we receive authorisation and payment details from you to proceed. Where product is deemed to be unrepairable, and you require goods to be returned to you, freight costs will need to be pre-paid to G-Force prior to return.



Maintenance



1. A regular cleaning to remove dust & dirt. A small soft brush will suffice.
2. Approximately every 6 months remove the motor cover, clean with a soft brush and spray inside the motor cover. Spray with a surface spray suitable for crawling insects, slugs and snails. **DO NOT SPRAY ANY ELECTRONIC COMPONENTS.**
3. Check Battery terminals for corrosion. If present, bushing with a wire brush or dipping the actual terminals – ‘hot water’ will remove it. A light spray with WD40 will help keep them clean.
4. Using a small screwdriver, tighten all terminal block screws and ensure any cables are not frayed at the ends.
5. Ensure Receiver is firmly mounted.
6. Tighten all mounting and attachment bolts.
7. Check screws on Push Button covers are intact and tight.
8. If Photocells (Sensors) are fitted, remove covers and gently brush any cobwebs, etc. away. Check operation and replace.

Finally, there is usually no substitute for good housekeeping. Ensuring the Motors and the area around the Motors and Gates are free of rubbish, leaves, infestation of insects and trimming of plants will help to give a long and trouble free life.

Should you be unsure of any points above, PLEASE contact us.



Unit 27 / 49 Corporate Boulevard Bayswater Vic 3153

Phone 1800 111 930

Email info@gforceautogates.com.au

Web www.gforceautogates.com.au