



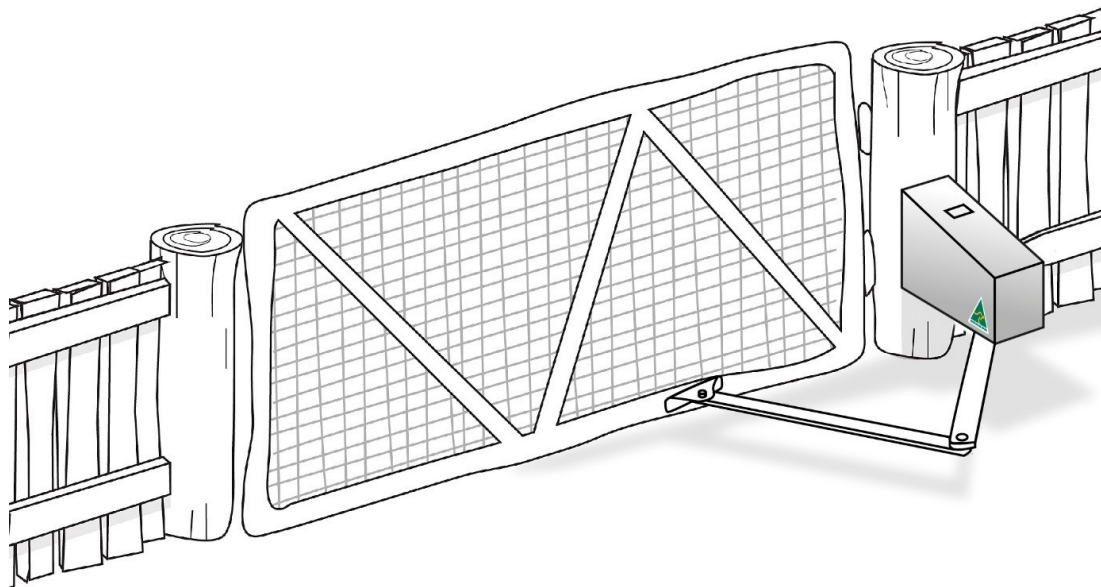
# Model FG 5 DC2

Single Swing Gate Motor Kit

Solar Powered and 12V Low Voltage

March 2018

## Installation and Set Up Instructions



Unit 27 / 49 Corporate Boulevard Bayswater Vic 3153 Phone 1800 111 930  
Email [info@gforceautogates.com.au](mailto:info@gforceautogates.com.au) Web [www.gforceautogates.com.au](http://www.gforceautogates.com.au)



## FG / DC2 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 correct 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

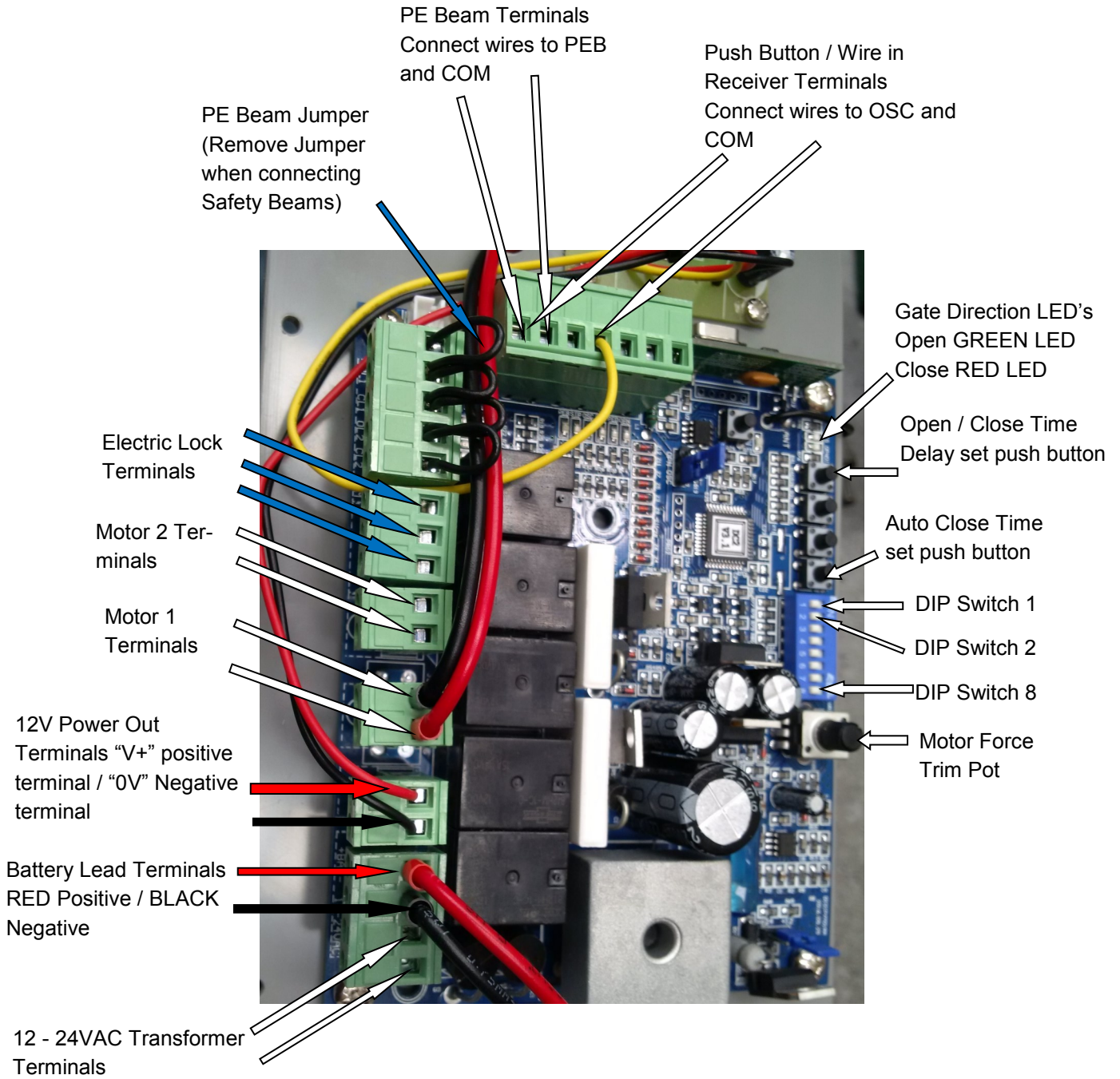


# DC2 Circuit Board

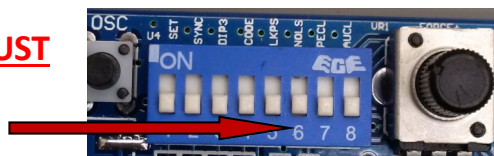
## Data Sheet



**DIY Automatic Gate Kits**  
*Solar & Low Voltage Specialists*  
 PH 1800 111 930  
 info@gforceautogates.com.au  
 www.gforceautogates.com.au



**CAUTION—DIP SWITCH 6 MUST BE IN THE 'OFF' POSITION**





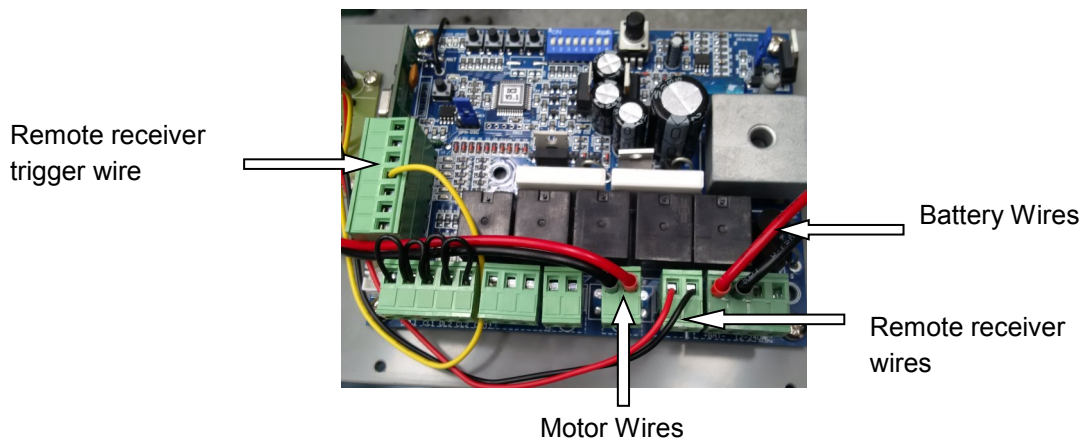
## Pre Installation Set Up and Testing FG 5 / DC2 Double Swing Gate



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 “DC 2 *Circuit Board*” data sheet included with this manual and familiarise yourself with the layout and location of the items and wiring terminals.

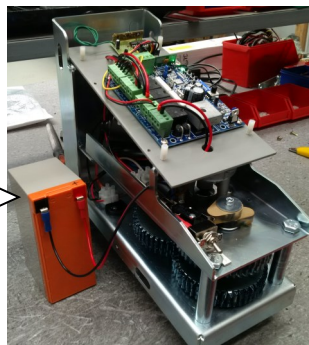
**Care should be taken as there are moving components inside the gate motor that may cause damage or personal injury.**



### Battery connection for bench testing and set up

Place the battery on the bench next to the motor

Battery Connection  
Double piggy back spade connectors for solar power or single spade connectors for transformer power



Refer to the “DC 2 *Circuit Board*” data sheet included with this manual and locate the battery wires on the circuit board. Ensure the battery wires are correctly connected to the correct terminals on the circuit board. Connect the other end of 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 stop the motor and press the handset again to reverse the motor direction. To stop the motor, disconnect a battery lead or press the remote handset.



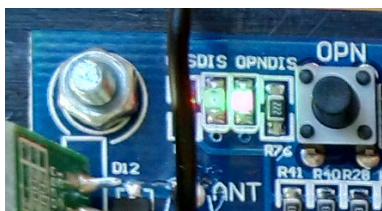
## Pre Installation Set Up and Testing

### FG 5 / DC2 Double Swing Gate



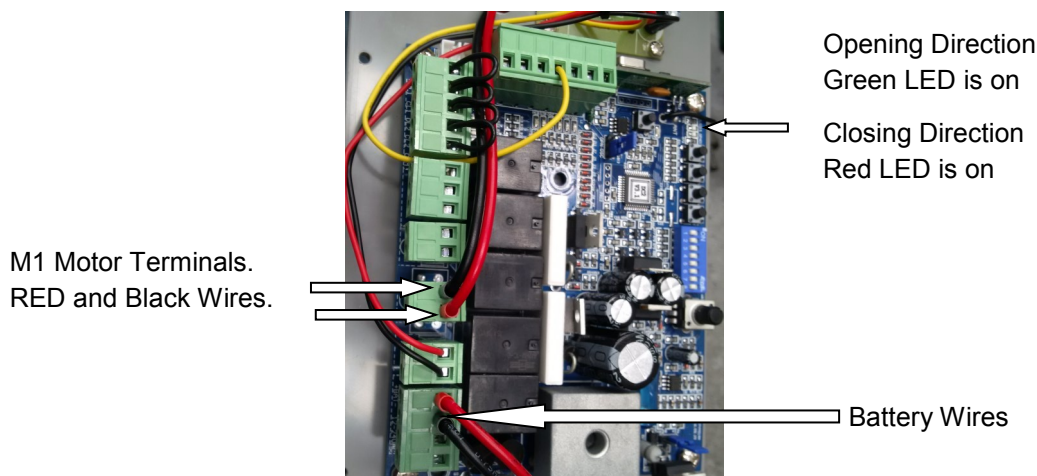
#### Setting Motor Direction

Refer to the “DC2 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 light is on.

If the motor is going in the wrong direction, disconnect all power. Refer to the “DC2 Circuit Board” data sheet included with this manual and locate the ‘M1 Motor’ terminals on the circuit board. Swap the red and black motor wires connected to ‘M1 Motor 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 drive gear 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 light is on.

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

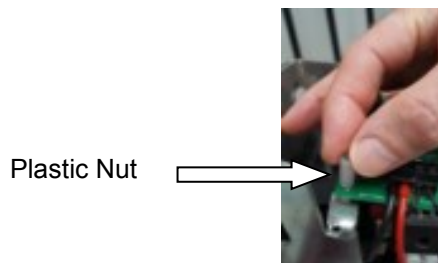


## FG / DC2 GATE MOTOR INSTALLATION AND SET UP INSTRUCTIONS



### 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.

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.



## FG / DC2 GATE MOTOR INSTALLATION AND SET UP INSTRUCTIONS



### Attaching the Arms and Brackets to the Gate:

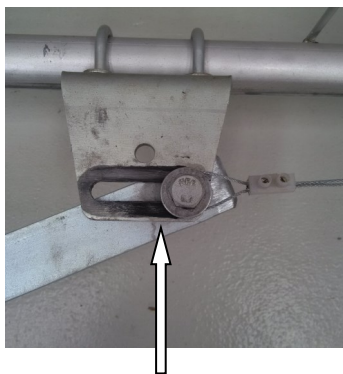
Move the gate into the closed position manually.

Fit the swing arm assembly to the motor shaft and loosely screw on the shaft bolt so the swing arm is free to rotate by hand. At other end of the swing arm assembly, loosely attach the gate mounting bracket to the swing arm.

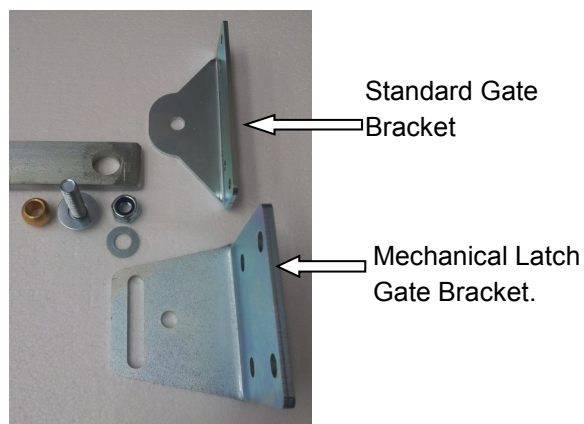
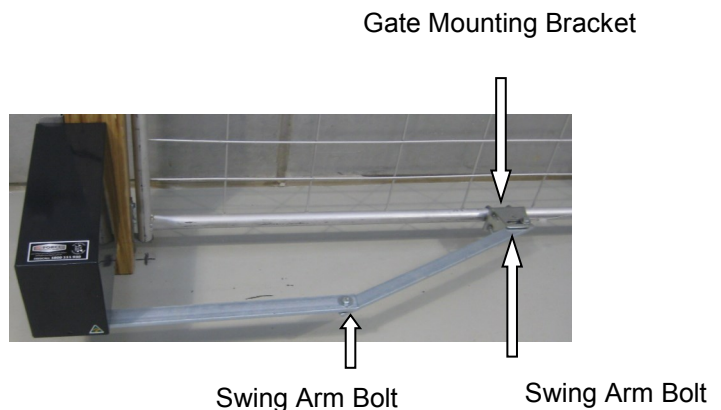
Extend the swing arm straight out and mark a position where the gate mounting bracket touches the gate. If fitting the mechanical latch gate bracket, ensure the swing arm is at the end of the slot furthest from the gate motor.

Attach the gate mounting bracket on the gate approximately 20mm towards the gate 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 times to test.



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





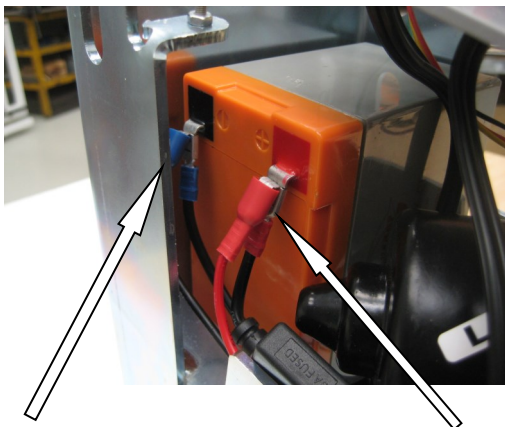
## FG / DC2 GATE MOTOR INSTALLATION AND SET UP INSTRUCTIONS



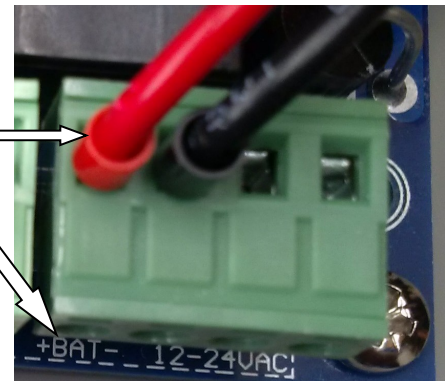
### Fitting the Battery and Connecting the Circuit Board

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

Fit the battery on its end into the space at the rear of the motor chassis as shown below and replace the circuit board support tray and fit the 4 plastic nuts finger tight. Refer to the “DC 2 Circuit Board” data sheet included with this manual or to any reference notes or photos and fit the wires into the correct terminal locations.



Battery Wires



**Black / Blue** wires to **black** Negative battery Terminal / Double piggy back spade connectors for solar power or single spade connectors for transformer power

**Red** wires to **Red** Positive Battery Terminal / Double piggy back spade connectors for solar power or single spade connectors for transformer power

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 “DC 2 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.

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





## FG / DC2 GATE MOTOR INSTALLATION AND SET UP INSTRUCTIONS



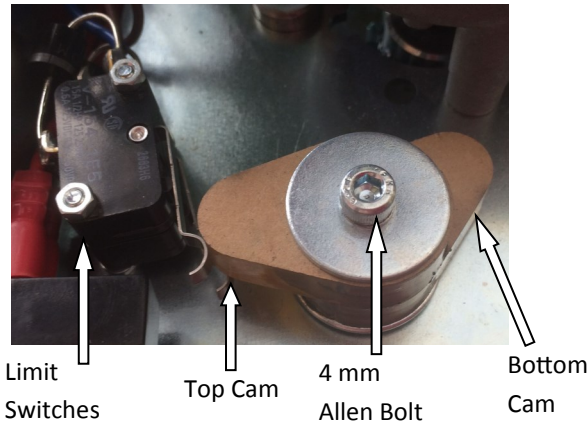
### Setting Open / Close Limit Switch Cams

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

**LEFT HAND inward  
swing gate**

**Bottom CAM =  
CLOSE Position**

**Top CAM = OPEN  
Position**



**RIGHT HAND inward  
swing gate**

**Top CAM = CLOSE  
Position**

**Bottom CAM = OPEN  
Position**

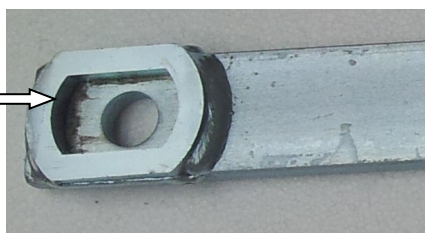
Manually move the gate into the closed position.

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 as per the pre-installation set up.

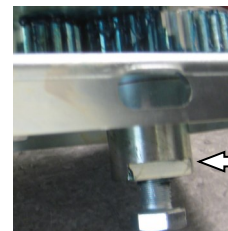
As soon as the flat sides on the shaft are in the correct position to fit the swing arm , press the handset remote to stop the gate.

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

Primary arm  
square drive to  
match motor  
shaft



Flat sides of  
Motor shaft



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

Press the handset remote and activate the gate motor. As soon as the gate reaches the desired open position, press the handset remote to stop the gate. Using a 4mm allen key loosen the cams and rotate the correct cam until it clicks the corresponding limit switch. Re-tighten the cams and test the gate motor several times to ensure it is stopping in the correct positions.



## FG / DC2 GATE MOTOR INSTALLATION AND SET UP INSTRUCTIONS



### FG / SW / DSW DC2 Circuit Board Adjustments

#### Motor Torque / Obstruction Sensing / Auto Reverse Adjustment

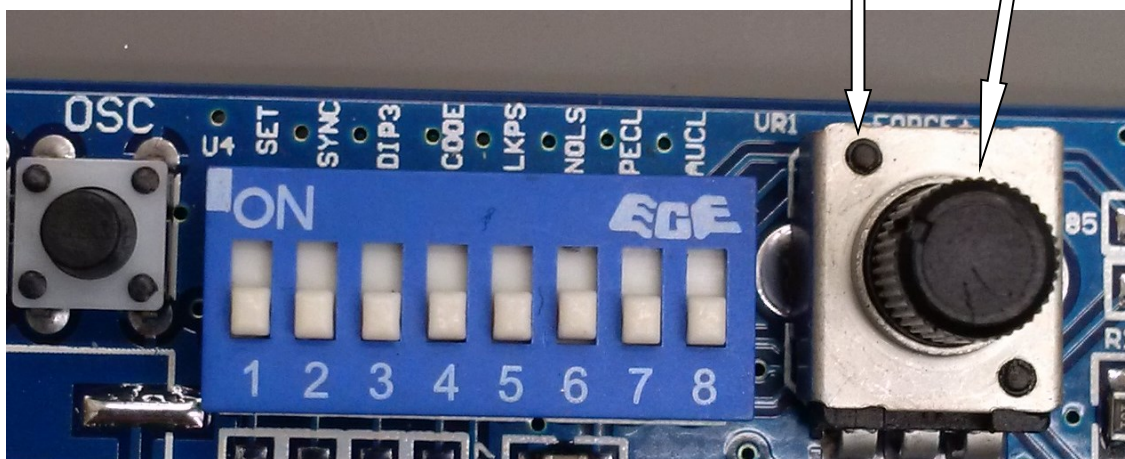
Refer to the “DC2 Circuit Board” data sheet included with this manual and locate the ‘Motor Force’ trim pot on the circuit board.

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 the gate may hit an obstruction more forcefully.

Turn the Motor Force trim pot anti-clockwise to increase sensitivity to an obstruction or turn the Motor Force trim pot clockwise to increase the motor torque (force) of the motor.

Motor Force Trim Pot

*Turn dial to the first black dot  
for maximum recommended  
force setting.*





## FG / DC2 GATE MOTOR INSTALLATION AND SET UP INSTRUCTIONS



### FG / SW / DSW DC2 Setting Automatic Close Operation

Refer to the “DC2 Circuit Board” data sheet included with this manual and locate the ‘AUTO CLOSE ’ settings on the circuit board.

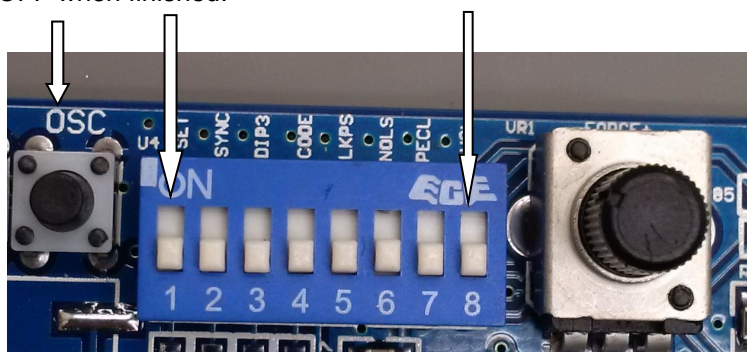
***The gate motor is supplied with the Auto Close OFF as standard.***

The gate motor can be set to ‘Auto Close’ by simply flicking DIP switch 1 to ON, press and hold down “OSC” button for the required time you want the gate to remain open before it auto closes, and release the button. For example if you want the gate to remain open for 30 seconds before it auto closes then press and hold down the “OSC” button for 30 seconds and release the button. Once time is set flick DIP switch 1 back to OFF.

To start the Auto Close function flick DIP switch 8 to ON and leave it on. To disable the Auto Close flick DIP switch 8 back to OFF.

Flick DIP switch 1 to ON and press  
“OSC” to set the Auto Close time.  
Flick back to OFF when finished.

Flick DIP switch 8 to ON to start Auto Close  
or back to OFF to disable Auto Close



## **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.**



# FG / SW / DSW DC2 Transformer Wiring Instructions



DIY Automatic Gate Kits  
Solar & Low Voltage Specialists  
PH 1800 111 930  
info@gforceautogates.com.au  
[www.gforceautogates.com.au](http://www.gforceautogates.com.au)

## **ENSURE THE TRANSFORMER IS SWITCHED OFF AND THE BATTERY DISCONNECTED**

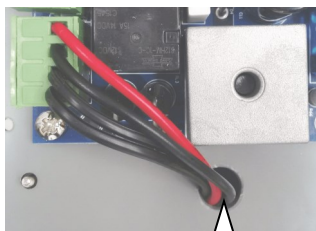
Refer to the “DC2 Circuit Board” data sheet included with this manual and locate the ‘12-24VAC’ terminals on the circuit board.

Connect the 12 v transformer wires to the ‘12-24VAC’ terminals on the circuit board. There is no positive or negative transformer wire and they can connect to either of the two “12-24VAC” terminals. Connect the battery wires to the battery. **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. Turn on the transformer, replace the metal motor cover and test.

Transformer

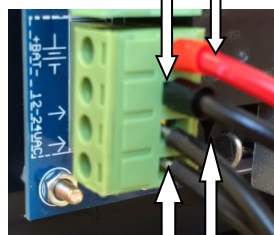


12 v Transformer Wires



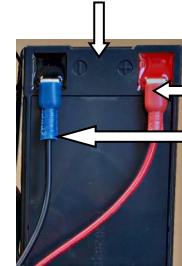
Feed transformer wires through the hole in the support tray with the battery wires

Battery Wires



Connect 12 v Transformer Wires to 12-24VAC Terminals

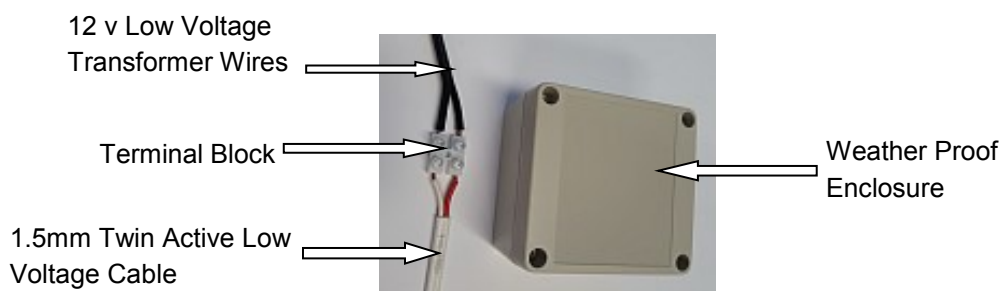
Battery Connection



**Red** wire to **Red** battery terminal

**Black / Blue** wire to **Black** battery terminal

If the 12 v low voltage transformer 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.





# Solar Panel / Regulator Wiring Instructions

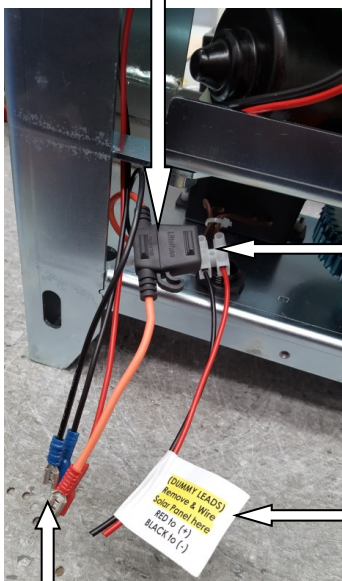


DIY Automatic Gate Kits  
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## ENSURE THE SOLAR PANEL IS COVERED AND THE BATTERY DISCONNECTED

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

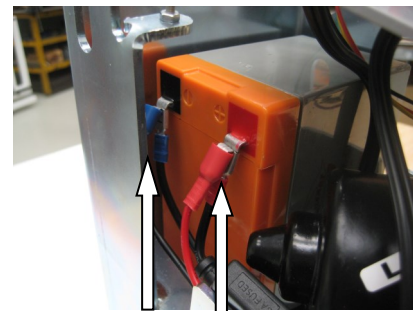
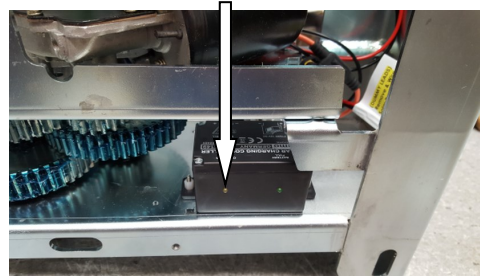


Terminal Block from solar regulator  
Connect solar Panel Wires **POSITIVE** wire to grey / **red** wire **NEGATIVE** wire to grey / **black** wire

Dummy Wires — To be removed

Battery Terminal Piggy Back Spade Connectors

Solar Regulator Yellow LED



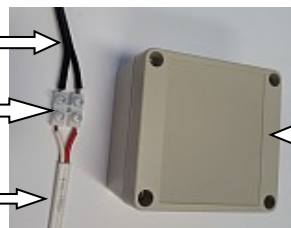
**Red** wires to **Red** Positive Battery Terminal / Piggy Back Spade Connectors. **Black / Blue** wires to **black** Negative battery Terminal / Piggy Back Spade Connectors

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



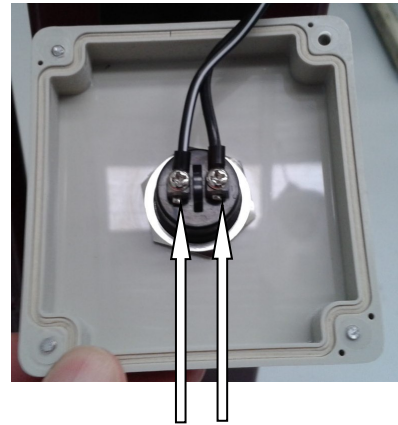
DIY Automatic Gate Kits  
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PH 1800 111 930

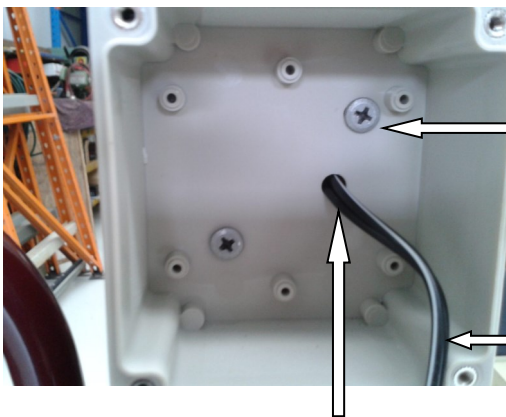
info@gforceautogates.com.au



Undo the 4 screws and take off the cover



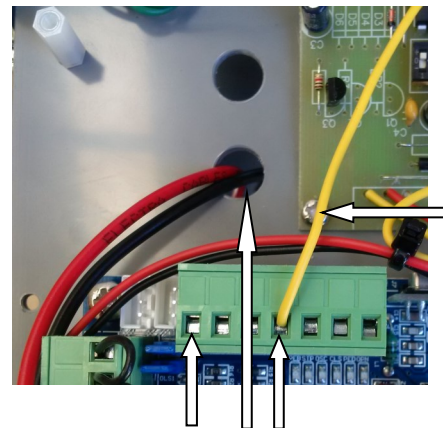
Attach the wire to the terminals on the push button. We suggest to use 0.75mm figure 8 wire for the push button wire



Mounting  
Screws

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.



Receiver  
Wire

Feed the push button wire through the hole in the support tray and connect to terminals "OSC" and "COM"



# 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.

<b>1</b> year	 <b>DIY</b> Gate Kits	<i>Applicable Kits:</i> FG 5, SW 5, DSW 5, SL2000,
<b>1</b> year	Visitor Access & Hardware	<i>Such as:</i> Intercoms, Keypads, PE Beams, Loop Detectors, etc.
<b>3</b> 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](mailto:info@gforceautogates.com.au)

Web [www.gforceautogates.com.au](http://www.gforceautogates.com.au)