



Basic Operating Instructions for the DG1 – 4.6 metre SPEEDYGATE

This document contains the instructions for Dofygate DG1 Unit intended for controlling traffic or people. Accessories are available that provide automatic options.

INFORMATION YOU MUST TAKE HEED OF

- THE MAIN ON/OFF SWITCH IS IN THE CABINET
- YOU WILL NEED TO CONNECT THE BATTERY RED WIRE ON RED TERMINAL
- YOU MAY NEED TO TWIST THE SOLAR PANEL TO FACE EAST, WEST OR SOUTH
- IF THE SOLAR PANEL IS FACING AWAY FROM THE CABINET DO NOT ANGLE THE SOLAR PANEL BEYOND 10DEG OR IT WILL SNAG THE GATE AS IT CLOSES
- DO NOT LEAVE THE GATE ON AND UP FOR EXCESSIVELY LONG PERIODS IF THE SOLAR PANEL IS SHADED OR THE BATTERY WILL RUN DOWN
- KEEP THE SOLAR PANEL CLEAN
- IF THE GATE SLOWS DOWN CHARGE THE BATTERIES USING THE CHARGER PROVIDED
- YOU WILL NEED TO TUNE IN THE FOBS

WHAT YOUR DELIVERY CONTAINS AND WHERE TO LOOK FOR WHAT

Each gate unit is delivered in a single box containing one gate unit with fittings, fob, cabinet key, battery and instructions. The gates are normally sold in pairs forming the 4.6m span and one of the boxes will contain the battery charger.

ASSISTANCE – In the event that you need assistance during installation or after please refer to the manufacture website under 'other info' www.dofygate.co.uk or use the contact numbers on the website if you require further help.

SAFETY INFORMATION

General Warnings and Precautions



Do not remove the plastic covers from the gate arm unless the gate is turned off



Do not remove the gate from the gate holder unless the gate has been turned off.



Do not remove or change the battery unless the gate has been turned off.



Do not connect the battery to a mains charger while the battery is connected to the gate



If **horses** are to pass through the gate such that the gate is opened in front of the horse then the horse should be kept back from but in view of the gate the first time it comes across the gate.

Environmental conditions that may affect use

Temperature – The gate has been tested for prolonged periods down to -10 degrees C for 7 days continuously and down to -20 degrees C for 24 hours and continues to operate at these temperatures. Battery output is affected if the battery itself is cooled to below -5 degrees C. This means that in extreme conditions the energy reserve of the battery will be up to 30 % less than expected. Where the gate becomes frozen in wet conditions it will normally break the frost grip but in some circumstances may need to be ‘knocked’ upwards.

Rainfall – Wet weather will have no effect on the operation of Dofygate. Should the weather be so severe that flooding occurs around Dofygate then we recommend that the battery is removed if the water level is likely to reach cabinet level.

Wind – Wind speeds in excess of 50mph may affect the operation of Dofygate depending how the wind strikes the gate when it is moving from an open position to a closed position.

Sunshine – All exterior components are UV stabilised or unaffected by sunshine. This is a sunshine powered device so prolonged periods when the gate is left turned on with no available sunshine to recharge itself will result in failure to operate. The solar panel should be turned to point South, West or East but not North.

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These are the Original Instructions for Dofygate DG1 Unit intended for use in retaining stock within a stock yard or within field. Or controlling traffic entering a property.

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1.0 Assistance Information

Sales	01522 500600
Technical help	01603 493102
Out of hours help	07785 352730
E Mail	admin@dofygate.co.uk

For operational information including tuning in fobs or pairing gates then please try our web page www.dofygate.co.uk and go to 'useful information' tab.

Dofygate Ltd is located at Manor Farm,
Calthorpe,
Norwich.
NR11 7QR

2.0 Accessories

- Extra fob – Can be tuned in to any gate
- Extra post fixing – allows the gate to be relocated easily
- Energiser for stock control
- 4 bar height extension – necessary to contain animals
- Battery – 7.0 amp hour lead acid AGM Gel battery
- Charger – 700ma
- Automatic closing – uses 2 infra red sensors to safely close the gate automatically following an open command from a fob or other device
- Call 2 Open – Must be used with auto close
- Keypad – Must be used with auto close
- Auto open – gate responds to vehicle stopped near device.
- Timed closure.

3.0 Setting up instructions – Fixing heights

Fixing height as measured from ground level to top of post plate.



Traffic	600mm
Stock with no height extensions	500mm
Cows and calves double extensions	500mm
Sheep double extensions	350mm
Dog Gate Small or mix of small and other dogs	300mm
Dog Gate Large or Tall dogs on their own	375mm

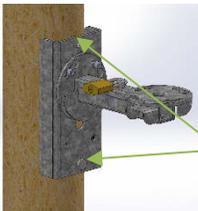
INSERT BATTERY

Remove front cover using the cover key and place battery into the battery holder small end down with the terminals facing the actuator (electric gate lifting motor).

NOTE: the battery does not sit flat – the terminals face out to the side.

Make sure the switch half way up the cabinet on the opposite side to the actuator is up (off). Attach the colour coded power wires by attaching the earth wire to the black coded terminal and the red wire to the red coded terminal. You will find it more convenient to lift the battery slightly out of its holder to fix these terminals.

Fixing post plates



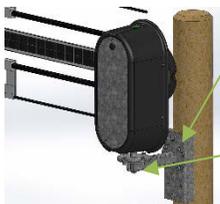
Using the above guidelines fix the first post plate using coach screws (10mm * 130mm), threaded rod (10mm) or suitable masonry fixing with a 8-10mm bolt. The fixing screw / bolt passes through the central hole located top and bottom of the post plate.

Getting post plates level

If you have a laser leveller great but if not

Tie a string or use a long straight bar between the posts at the level of the top of the first post plate and using a spirit level move the string up or down the other post to get the other plate level with the one just fixed. While the gates can be set to follow the ground contour this can upset the balance spring which may need adjusting if the gates are not approximately level.

Fixing Adjustable Bracket



Using the cap head bolts provided fix the adjustable bracket to the post plate ensuring the horizontal circular plate is about level. Tighten one convenient cap head properly leaving the others loose. Place gate into the adjustable bracket and fix with the cap head bolts.

Lining up gates

- Remove front cover from both gates and turn them on.
- Press the button on the top of the cabinet if fitted or use the supplied fob to lower the gates.
- First ensure the gates line up and are square across the gateway. Tighten the cap head bolts holding the gate to the adjustable bracket.
- While holding the gate so it cannot drop loosen the one tight cap head holding the adjustable bracket to the post plate. Move the gate to horizontal. Repeat with the other gate and line the ends up so both gates follow the same line. Tighten all cap head bolts holding the adjustable bracket to the post plate.

NOTE – when adjusting the gate angle support the cabinet so the gate does not suddenly drop.

Solar

Loosen the brackets holding the solar panel and twist the solar panel so that it faces East South or West. Choose the most unobstructed position. It may be necessary to cut back foliage overhanging the gate if that foliage is interfering with the solar panel.

NOTE be careful how much angle is placed on the solar panel as it can snag the gate as the gate opens of angled beyond 10 degrees.

Solar and Battery care

NOTE – IF THE GATE IS TO BE LEFT UP DURING THE DAY THEN THE SOLAR PANELS SHOULD BE ALIAGNED IN THE UP POSITION FOR THE SUN RATHER THAN THE DOWN POSTION.

The battery will tell you when it is suffering. If the gate is moving slower than normal for more than 2 days remove the battery and charge it using the charger supplied. Battery life will vary enormously and we recommend changing the batteries for new around December providing a pair of backup batteries. These can be supplied by us or from the internet and should be NP7-12 AGM gel lead acid batteries. Alternatives are NP7.2-12 or NP7.5-12 or NP9-12. So long as the backup batteries are charged as soon as they are removed then they will remain in good condition.

NOTE – IF A BATTERY IS LEFT IN A RUN DOWN CONDITION FOR ANY LENGTH OF TIME ITS ABILITY TO REACH FULL CHARGE AGAIN WILL BE COMPROMISED. IF THE BATTERY DOES NOT HOLD ITS CHARGE FOR VERY LONG THEN REPLACE WITH A NEW BATTERY.

Turning the gate on – Single Gate



1. Open the cabinet door using the supplied key.
2. Turn the gate on by moving the toggle switch situated on the steel plate holding the control boards downwards.

3. Close and lock the cabinet door.
4. Press the green button on top of the cabinet once. If the gate does not operate press the green button again. The gate will close.
5. The gate will now operate using the fob.

Turning the gate on – Double gate

1. Open the cabinet door of either gate using the key. 
2. Check the battery connections are in place.
3. Turn the gate on by moving the toggle switch situated inside the cabinet downwards.
4. Repeat steps 1 to 3 on the opposite gate
5. Press either green button. Both gates should close. If only one gate operates press the same green button on the gate that did not operate until both gates operate in unison.

Tuning your fobs for the first time – This will also pair the gates

1. Have one of your fobs to hand before starting
2. Turn the gate(s) off and wait 10 seconds.
3. While holding down the cabinet mounted 'operate' button, switch the gate on with the internal toggle switch. 
4. Keep the cabinet mounted 'operate' button pressed for 5 seconds.
5. Release the cabinet mounted 'operate' button.
6. On your fob press orange button number 1 
7. The LED in the cabinet flashes quickly
8. Press the same (orange no 1) fob button again.
9. Press the cabinet mounted 'operate' button to complete and lock in the fobs.
10. Press the cabinet mounted 'operate' button a second time to complete
11. Check the fob is tuned in by operating the gate with fob.
12. Turn this unit off
13. Repeat this procedure with the other gate unit.
14. **YOU MUST TUNE ONE FOB INTO BOTH GATES BEFORE TUNING ANY OTHER FOBS IN.**
15. Turn both units on and check they are working as a pair

16. Tune in other fobs by carrying out steps 3 – 8. So multiple fobs can be tuned in one after the other then locked in using with steps 9 – 11
17. IF THIS IS YOU SECOND GATE THEN THIS PROCEDURE SHOULD BE CARRIED OUT USING THE GREEN BUTTON NUMBER 2 INSTEAD OF ORANGE BUTTON NUMBER 1
18. WE DO HAVE GREEN REFLECTIVE LOGO LABELS AVAILABLE FOR THE GATE CENTRE TO ASSIST USE.

Using the fob

- If you have one gate or one pair of gates then use the orange buttons.
- If you have more than one gate or pairs of gates then the orange buttons will operate one set and the green buttons will operate the other.
- If you have more than 2 pairs of gates then the orange buttons will safely operate another gate independently if the gates are separated by **more than 125 meters**. The same applies to the green buttons.
- If you wish to use the gate units independently then follow the instructions below to detune the existing and then re-tune one gate to orange and one gate to green.



Pairing the gates – (also deleting existing fob and tuning in new)

If it is necessary to pair 2 gate units that have been separated then brought back together then the following procedure should be carried out – All fobs pre-tuned will be erased.

1. Turn the gate off and wait 10 seconds.
2. While holding down the 'operate' button, switch the gate on with the switch.
3. DO NOT Release the 'operate' button until the LED moves from constant on to flashing slowly
4. Release operate button and wait 15 seconds while **all previous fob information is erased. LED will stop flashing**
5. Follow instructions for tuning in your fobs for the first time – This will also pair the gates.

If you wish to remove the pairing to allow the gates to be used as independent units such as two quad buke gates then follow steps 1 – 4 for pairing gates to remove the fob memory. Then tune in either orange 1 or green 2 to the appropriate gate unit. This will allow you to control the gate units independently.

4.0 Operating Instructions

Manual Operation

Press Green Operating Button on top of cabinet to operate gate. If the gate is closed it will open and stay there. If it is open then it will close and stay there.

When the gate is closing and the Green Operating button is pressed it will stop.
When the gate is opening and the green button is pressed then it will close. (This is to allow speedy pedestrian access)

Obstruction

If the gate meets an obstruction while in motion in either direction it will reverse back to its previous stop point or stop.
Detection Response Unit (DRU) (See Figure 5)

Emergency gate opening procedure

Push the gate open at the mid (elbow) point so that it swings on the gate axis. The catastrophic clutch will give way and allow the gate to move through 90 degrees and lock in that position. Where an energizer is fitted use gloves or back into the gate using your clothing as insulation. You will not feel any shock.

Catastrophic clutch

Located in the base of the cabinet is a mechanism that will allow the gate to swivel away from a force that is sufficiently large that damage to the gate may occur. If the gate has moved on its vertical axis then push the gate back into place. The gate will locate in the appropriate place.

NOTE:- THE SPRING PRESSURE ON THE CATASTROPHIC CLUTCH CAN BE ADJUSTED TO PROVIDE MORE OR LESS RESISTANCE TO BEING PUSHED OPEN.

The gate may be pushed through 90 degrees should such an action be required. The gate will lock itself in the 90 degree position until it is pushed back into place.

(Where the shock unit is fitted be aware that when carrying out this action the gate is down and the shock is on so some means of insulation between the person and the gate is required).

6.0 Maintenance

All bearings and rotating parts are designed to be maintenance free.

Clean the solar panel regularly. A small amount of dirt can have a significant effect on power production from the panel.

Check alignment of the solar panel.

Check any shading to the panel from vegetation.

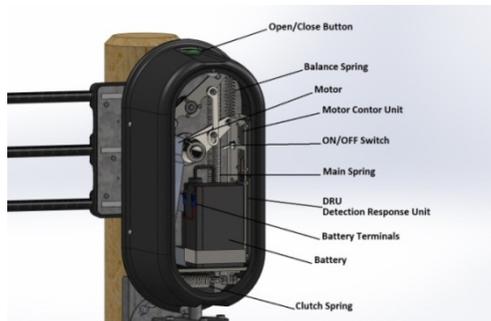
It may be necessary to apply a small dab of grease to the stops on the inside of the D Plate from time to time.

Battery

If the battery voltage drops below 11.5 volts the gate will operate more slowly. If this is the case replace the battery or remove and place on charge for 12 hours. The battery may recharge of its own accord if sufficient sunlight is made available to the solar panel.

The battery should be charged with the charger available from Dofygate .

We recommend the battery is changed every year. **Battery Disposal – This is a Lead Acid Gel battery and should be disposed of in the same way as any other lead acid car type battery.**

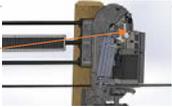


7.0 Storage

If the gate will not be used for a period exceeding 1 month then the battery should be disconnected.

The gate may be left in the Open or closed position but it is recommended that it is left in the closed (down) position if left attached to a gate post. If the gate is left in the open position for prolonged periods it is recommended that the gate is turned off using the switch inside the cabinet. This is because in the open position the solar panel is more likely to be in some form of shade.

9.0 Troubleshooting

PROBLEM	CAUSE	SOLUTION
Gate moves slowly	Low voltage Battery	Change Battery
Gate does not open / close	Low Voltage Battery	Change Battery
	Dirty Auto close sensor	Clean sensor (cobweb)
	Condensation inside sensor	Call dofygate if a misting can be seen on the inside of the front window of the sensor
	Solar Panel misaligned	Check the solar panel is not catching as the gate closes
	The partner gate is not working	Isolate the gates to determine which one of the pair isn't working. Then troubleshoot that gate individually.
	*If one of the pair of gates is not working correctly then the other pair of the gate will also not work.	
	Cable derailed	Turn off gate, remove cover, loosen adjusters, reset cables, tighten adjusters.
	Check main spring is not broken. Request maintenance description with part from Dofygate	

Gate does not work with Fob - LED on motor board does not light when fob is pressed	Low Fob battery	Re-place Fob Battery.
Gate does not work with Fob - LED on motor board lights up when fob is pressed	Gate is not tuned to Fob	Tune gate
	Actuator has become disconnected	Check wiring
Gate works with Fob but not on the manual button	Wire has become disconnected from switch	Check and re-attach wire
	Manual switch has become faulty	Replace switch
	Gates not tuned together	Remove all fobs from the memory of both gates and retune one fob to each gate. Tune in all other fobs.
Gate closes but immediately rises or Gate opens but immediately closes	Gate has slipped on main shaft	Request maintenance description from dofygate
	Check stops are not loose - located between main plate of gate cabinet and the D shaped hub	
	Check Infra Rd for dirt, cobwebs or weed growth.	

Outer half of gate has dropped	Impact damage	While holding inner half reposition outer half
		Remove centre cover fixed to the outer rails and tighten the hex head bolts clamping the shaft using a 5mm allen key
	cable derailed - check D plate for bending.	remove D cover and centre cover. It is usually possible to relay cable in groves.
		While holding gate firmly pull gate arm to straighten D plate - it may be necessary to place a clamp around the clutch located at the bottom of the cabinet to enable this to take place
Cannot tune fob	Low fob battery	
	Button on top of cabinet is disconnected or faulty	
Battery does not hold charge	Battery has deteriorated - does not reach 13.5v when fully charged. Can be caused by being left to long in a low voltage state or using an incorrect	Replace with NP7 12 volt battery
	Solar panel not charging	connect multi meter in line on positive side. Take milliamp reading with solar panel covered and not covered. Repeat on other side. They should be similar. DO NOT OPERATE GATE WITH MULTIMETER CONNECTED - YOU WILL BLOW THE FUSE IN THE METER.
Gate bounces open	Contact with object	slippage on main shaft - contact office. Easy fix procedure available.
Gate Bounces shut	Contact with object	slippage on main shaft - contact office. Easy fix procedure available.
Gate will not close	Sticky top stop	apply small dab of grease to top stop located between the back of the cabinet and the D shaped cover.
	Obstruction in front of IR sensor if fitted	clean IR sensor and ensure it is pointing across gateway.
Fob does not work and cannot retune gate	faulty button on top of cabinet	replace button - gate will need to be retuned to all fobs.