

SMART ROLLER *duo*

ROLL UP DOOR OPENER



WARNING: IT IS VITAL FOR THE SAFETY OF ALL PERSONS INSTALLING AND USING THIS OPENER TO FOLLOW THE INSTALLATION INSTRUCTIONS AND SAFETY WARNINGS. FAILURE TO COMPLY MAY RESULT IN SERIOUS PERSONAL INJURY AND/OR PROPERTY DAMAGE AND FAILURE OF THE OPENER SYSTEM.

INSTALLATION MANUAL

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To the extent that they may be lawfully excluded, Smart Openers Pty Ltd hereby expressly excludes all conditions and warranties, statutory or otherwise, which may be implied by law as conditions or warranties of purchase of a Smart Openers Pty Ltd Garage Door Opener. Smart Openers Pty Ltd hereby further disclaims and rejects to the maximum extent permitted by law any liability or responsibility whatsoever for any direct, indirect, consequential, incidental or other injury, damage, cost, expense or loss whatsoever incurred or suffered by any person, company, firm or organization as a result of any failure to install the Garage Door Opener in accordance with these installation instructions.

Contents

Part		
No	Description	Qty
1	Motor	1 Set
2	Transmitter	2 Pcs
3	U-Bolt	1 Pc
4	LED Array	1 Pc
5	Holder	8 Pcs
6	Bolt M6 x 25	2 Pcs

Important Safety Warnings

The Smart Roller Duo garage door opener described in this manual is designed for the automation of residential roll up doors. Any other use is considered improper and will void the warranty.

WARNING:

You are carrying out operations on machine systems classified in the automatic gates and doors category and as such failure to comply with the relevant safety rules may result in serious personal injury and/or property damage. Reference to the safety rules can be found on pages 2-4 of the owners manual and should be read and understood prior to installation.

Only qualified personnel should install and service the equipment. It is the responsibility of the installer to adhere to all relevant safety standards.

The Smart Roller Duo opener is designed and manufactured to meet all current Australian standards and it is essential that the installer also installs the equipment in accordance with all local and Australian regulations.

Unqualified personnel or those who do not know the occupational health and safety standards applicable to automatic gates and doors category must under no circumstances carry out installations or implement systems.

Persons who install or service the equipment without observing all the applicable safety standards will be held responsible for any damage, injury, cost, expense or claim whatsoever suffered by any person as a result whether directly or indirectly from failure to install the system correctly and in accordance with the relevant safety standards and installation manual.

For a more detailed list of the Safety Warnings and Safety Issues associated with the installation and use of a Smart Roller Duo roll up door opener refer to the safety warnings in the OWNERS MANUAL.

Description

The Smart Roller Duo garage door opener requires a 240VAC 50Hz power input and has a 24V DC motor and can provide 'Hold to Run' control and automatic modes for operation. When the door is in operation, movement can be interrupted by activation of the safety inputs (manual pull cord, transmitter, wall button (if fitted) and photo beams (if fitted)).

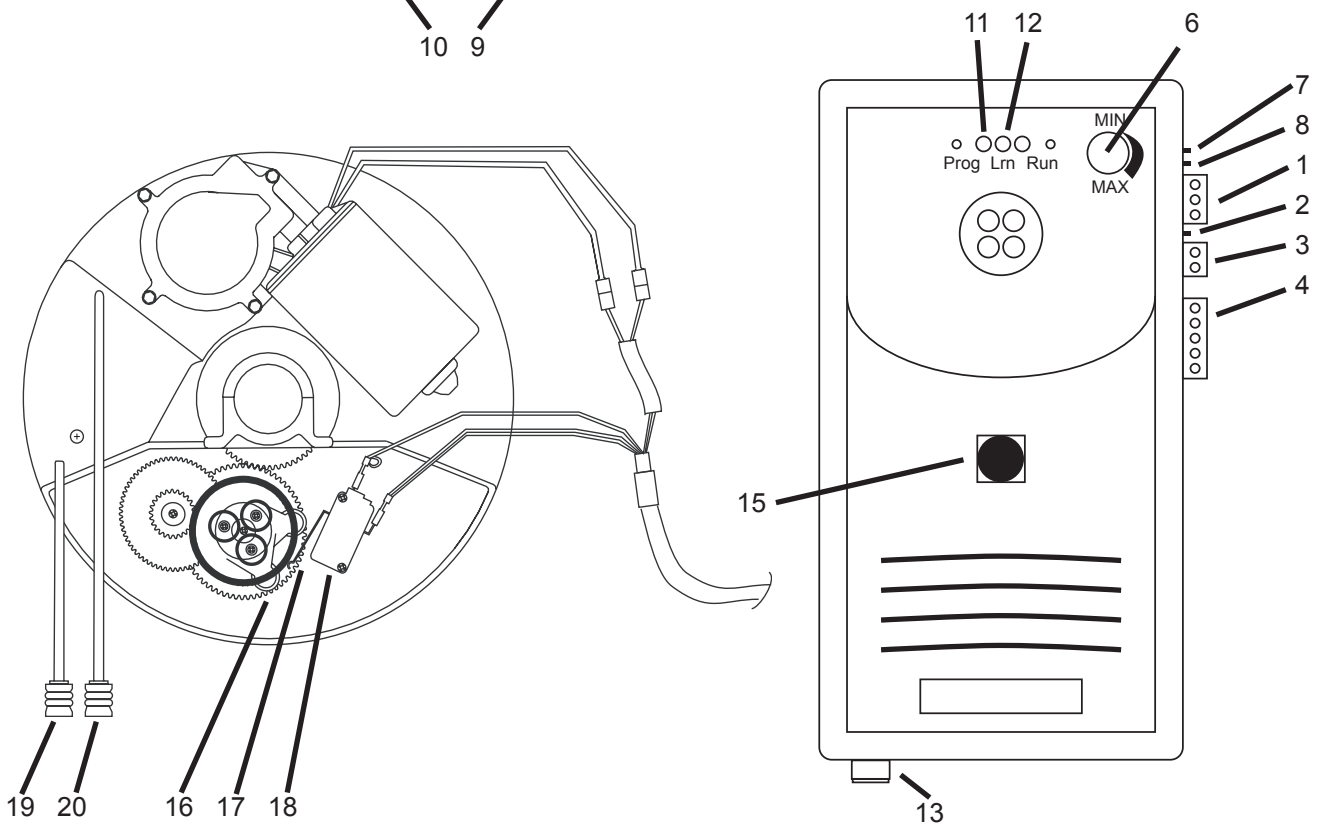
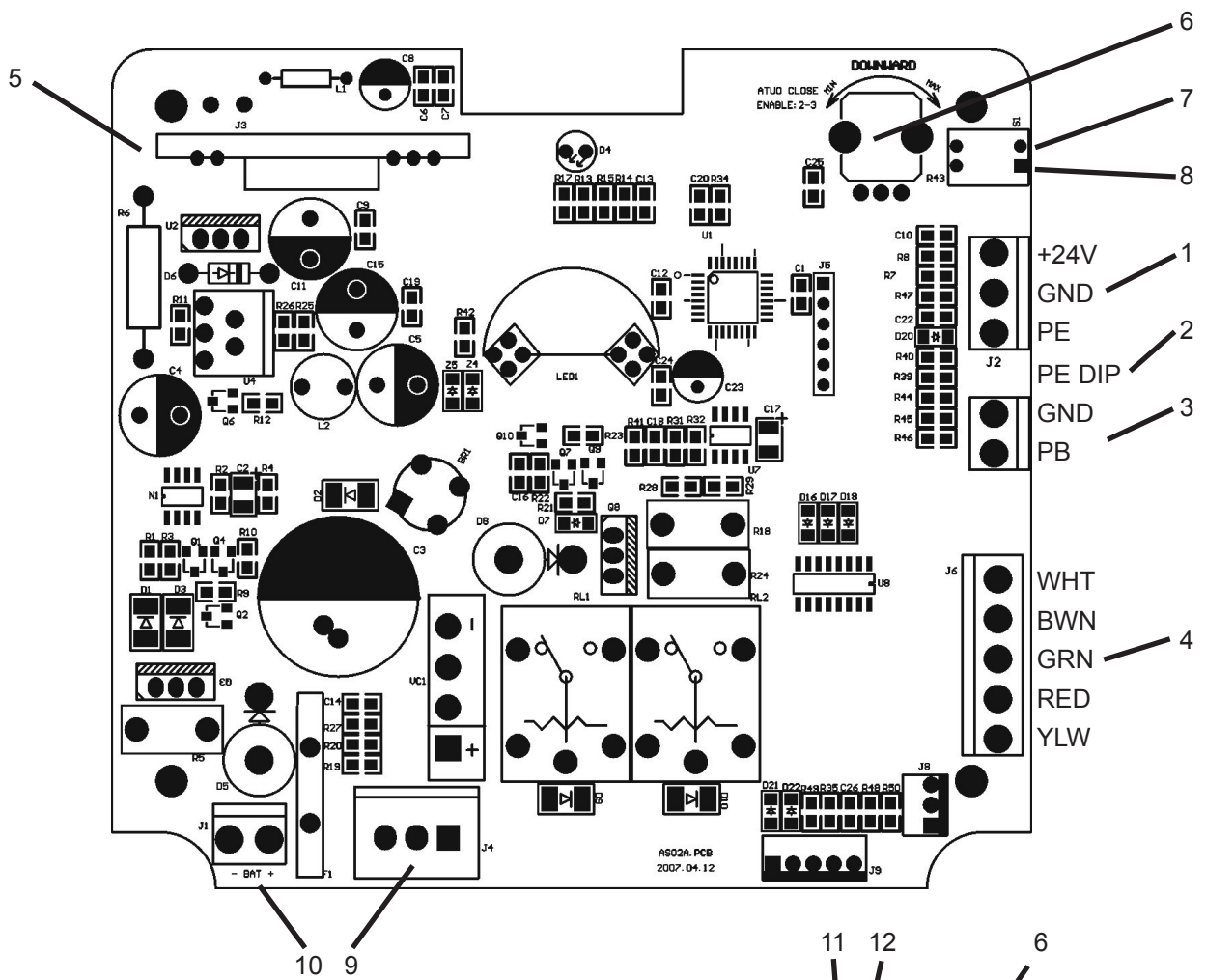
Limits set open and close positions and braking during the end of the travel cycle reducing speed and noise.

A 433.22MHz radio receiver is built into the circuit board and the rolling code is memorised with the self-learning technique. As an alternative to the built-in receiver the unit will accept any of the range of stand alone radio receivers. The unit has been designed to provide maximum reliability, safety and flexibility of use.

IMPORTANT:

Before starting to install the unit read all of the instructions carefully and make sure you are familiar with the safety warnings included in this manual and in the OWNERS MANUAL.

Operating Controls



Operating Controls

- 1 +24V, PB, GND** - used for connecting 2 or 3 wire Photo Electric beam.
- 2 PE Dipswitch setting** - set dipswitch down when connecting Photo Electric Beams.
- 3 GND, PB** - used for external push button input.
- 4 Motor and limit inputs.**
- 5 RF Receiver Board** - 433.22MHz AM FSK Receiver.
- 6 Down Force Adjustment** - used to adjust closing obstruction force margin.
- 7 Auto-Close (AC) Dipswitch Setting** - set dipswitch up to activate auto close function. (1 min. set close time).
- 8 Right Hand/Left Hand Dipswitch** - used during installation. Dipswitch is factory preset for RH, for LH installation set dipswitch up.
- 9 24 Volt AC Input.**
- 10 24 Volt Battery Input**
- 11 Learn Button** - used to store transmitter into memory.
- 12 Learn LED** - indicates learn/operate mode of transmitter.
- 13 Fuse** - main fuse (240V 3A)
- 14 LED Light.**
- 15 Operate Button** - Open/Stop/Close function.
- 16 Open Limit Cam**
- 17 Close Limit Cam**
- 18 Open/Close Limit Switches**
- 19 Green Engage Cord** - used to engage the door for automatic operation.
- 20 Red Disengage Cord** - used to disengage the door for manual operation.

Before Installation

- 1) Read the instructions carefully.
- 2) Make sure the door structure is solid and suitable to be motor driven.
- 3) Make sure that when the door is moving there are no friction points.
- 4) The door must be properly balanced and must be easily lowered and raised by hand.
- 5) A 240V, adequately protected 3-pin socket must be near where the Smart Roller Duo opener is going to be installed.

Remember there are specific standards that have to be strictly followed regarding the safety of electrical installations and automatic gates and doors.

As well as the legal requirements and standards that must be adhered to, please take note of the following points to ensure maximum safety and reliability of your installation.

- 6) Prior to installing check the surrounding environment. Carefully evaluate any hazards there could be from physical damage (transiting vehicles, parts of trees falling etc.), possible contact with foreign bodies (insects, leaves, etc.), flooding hazards or any others exceptional events.
- 7) Check that the main voltage is the same as that given on the rating plate and in this manual.
- 8) Check there is suitable electrical protection against short circuits/power spikes and proper earthing on the main supply.

Remember the unit has mains voltage running through it (electrocution hazard, fire hazard).

- 9) Take care with the control unit; parts may be subject to damage if abused.
- 10) Make sure you have all the necessary materials and that they are suitable for this kind of use.
- 11) Read all the instructions thoroughly and make sure they are understood before attempting to install the Smart Roller Duo.
- 12) Before starting the installation, carefully analyse all the risks relating to automating the door. Verify that the door to be automated is in a sound condition and that the mechanisms are in good working order; observe the safety margins and minimum distances.
- 13) Evaluate with particular care the safety devices to be installed and where to install them; always install an emergency stop device for interruption of power to the opener if required.
- 14) Once the risks have been analysed, install the Smart Roller Duo opener and relative safety devices, emergency stop and/or photoelectric cells.

Important: For additional safety Smart Openers Pty Ltd strongly recommends the fitting of Photo Electric safety beams on all installations.

- 15) When installing the Smart Roller Duo opener, strictly follow all the instructions given in the instruction manual. If some points or procedures in this manual are not very clear do not install the unit until all doubts have been cleared up with our technical department.

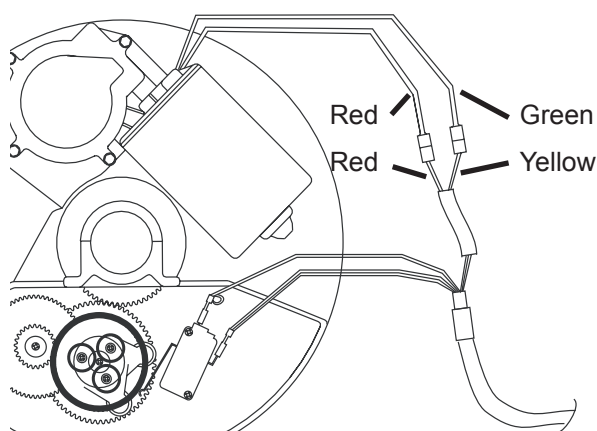
Important: Make sure that the motor wires have been connected to the wiring harness correctly.

They should be:

Red – Red

Green – Yellow

If this is not the case please swap the connection to the above polarity before proceeding.



Before Installation

Side Room

The minimum sideroom required is just 30mm between the edge of the door curtain and wall bracket with a total of 80mm from the wall to the edge of the door curtain (Fig 1). If the situation permits, it is recommended that 80mm is allowed between door curtain and bracket and a total of 130mm between the door curtain and the wall (see Fig 2).

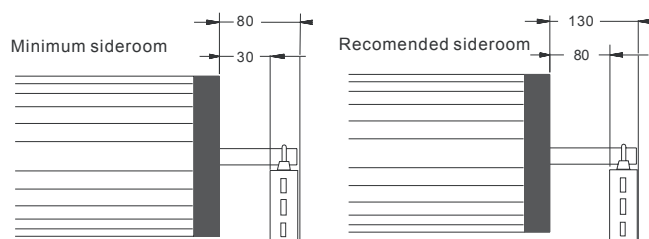


Fig. 1

Fig. 2

Weight Bar

Position the weight bar so that it is centrally spaced along the bottom rail of the door. Secure with fasteners provided and test operation. If the door feels heavy extra tension may need to be added to the door springs. Refer to the door manufacturer's instructions for proper adjustment procedure.

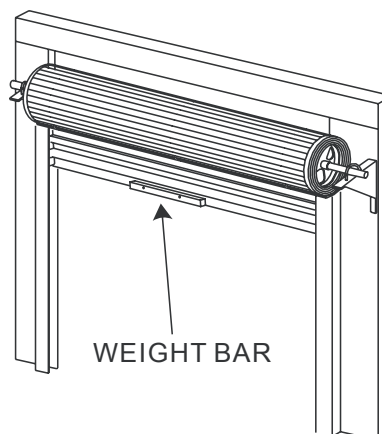


Fig. 3

Left or Right Hand Installation

The Smart Roller Duo is shipped from the factory ready for installation on the **RIGHT SIDE** of the door (when viewed from inside the garage).

If you are installing this opener on the **RIGHT SIDE** then proceed to the next step.

If installing on the **LEFT SIDE** then the dip-switch No. 1 must be shifted up as per Fig 4.

Fixing The Door Curtain To Drum Wheel

The door curtain has to be secured to the drum wheel with suitable fasteners.

- With the door in the fully closed position mark the curtain on both ends of the door.
- Open the door slightly to access the marked positions. Secure the curtain to drum wheel using self drilling screws (two on each end). The screws should be at least 90 degrees apart as per Fig 5.

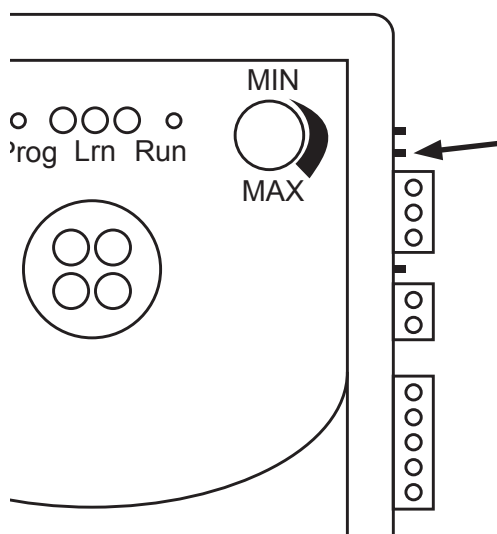


Fig. 4

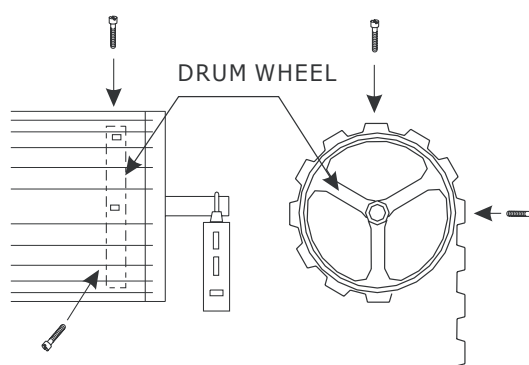


Fig. 5

Installation

Fitting Drive Unit to Door

Note: The following instructions are for **RIGHT HAND SIDE** installation (from the inside looking out).

- 1 Check that the U-Bolt on the opposite end of the door shaft is securely tightened.
- 2 Roll the entire door curtain onto the drum and tie securely with rope (or similar).
- 3 Using a suitable prop support the right side of the door. Make sure that the prop is padded to avoid marking the curtain.

WARNING: DO NOT ALLOW CHILDREN/PERSONS AROUND THE DOOR WHEN PROPPED. SERIOUS PERSONAL INJURY AND/OR PROPERTY DAMAGE CAN RESULT FROM FAILURE TO FOLLOW THIS WARNING.

- 4 Carefully loosen and remove the right hand U-Bolt.
- 5 Make sure that the door is safely supported by the prop. Remove the right hand door bracket from the wall.
- 6 Hold the drive unit assembly and try to rotate the drive gear by pushing the fork. If it does not turn, switch the opener into manual mode by pulling the red cord downwards.
- 7 Slide the drive unit over the door shaft and make sure that the fork engages one of the spokes of the door drum wheel.
- 8 Refit the door bracket to the wall. In some cases it may need to be repositioned to accommodate the opener.
- 9 Refit the axle U-Bolt and tighten securely.
- 10 Straighten the drive unit and secure the motor drive unit U-Bolt.
- 11 Remove prop and test manual operation of the door. It should travel smoothly and not catch on the drive unit.

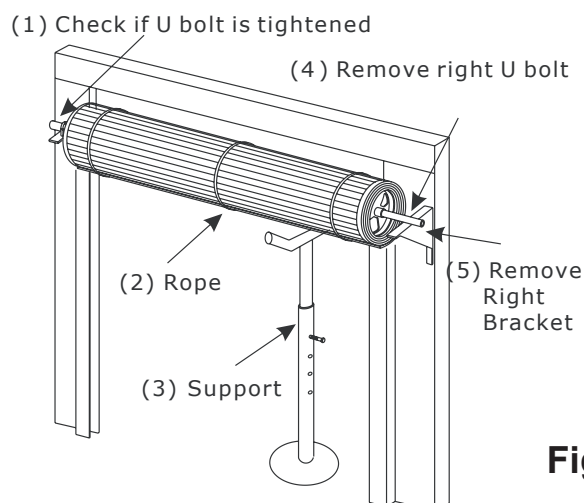


Fig. 6

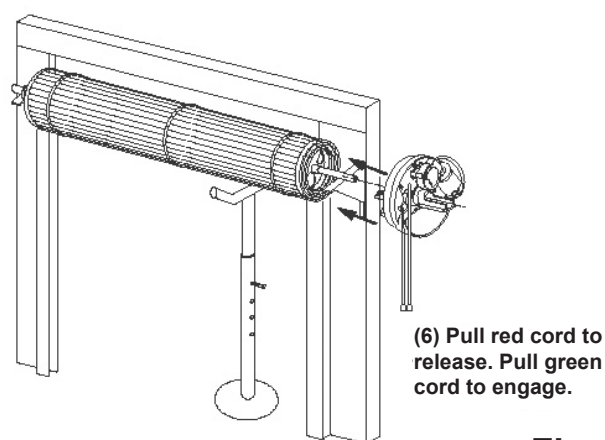


Fig. 7

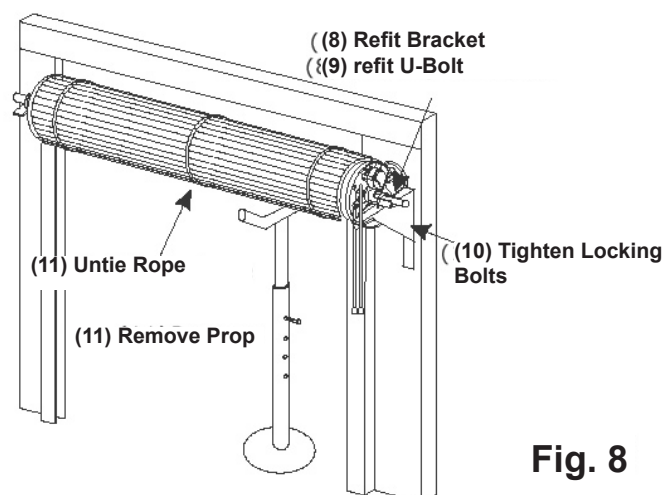


Fig. 8

Limits Set Up

REMINDER: If you have not already done so, inspect the wiring harness to confirm that the motor wires are connected correctly: red–red and green–yellow.

Also check that the L/H-R/H dipswitch has been set correctly.

Setting Limits - RIGHT HAND INSTALLATION

- 1 With the Drive Unit in manual mode move the door up by hand to the desired open position.
- 2 Remove the Switch Cover (see Fig 9). Rotate the UP LIMIT CAM by hand in a clockwise direction until the cam clicks the open limit switch.
- 3 Move the door down by hand to the desired closed position.
- 4 Rotate the DOWN LIMIT CAM by hand in an anticlockwise direction (see Fig 10) until the cam clicks the close limit switch.
- 5 Connect power lead from the Drive Unit into a general purpose power outlet installed by a licensed qualified electrical contractor. Turn the power on.
- 6 Re-engage the drive unit by pulling the red cord. (see Fig 14).

Open Limit Adjustment

- 1 Press the Operate Button on the Control Box. The door should start moving.
- 2 If the door stops at the desired open limit position then the limit adjustment is complete.
- 3 If the door has not reached, or has gone past the desired position, adjust the UP LIMIT CAM clockwise to open the door more or to open the door less adjust the cam anticlockwise.

Close Limit Adjustment

- 1 Press the Operate Button on the Control Box. The door should start closing.
- 2 If the door stops at the desired closed position then the close limit adjustment is complete.
- 3 If the door has not reached the desired position, adjust the DOWN LIMIT CAM anticlockwise to close the door more or to close the door less adjust the cam clockwise.

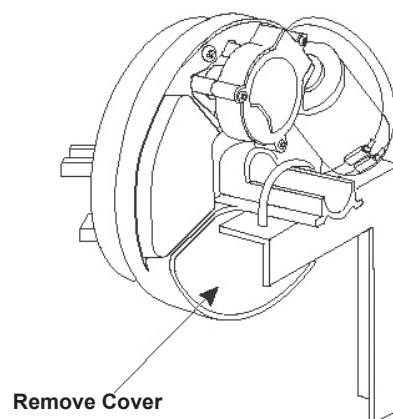


Fig. 9

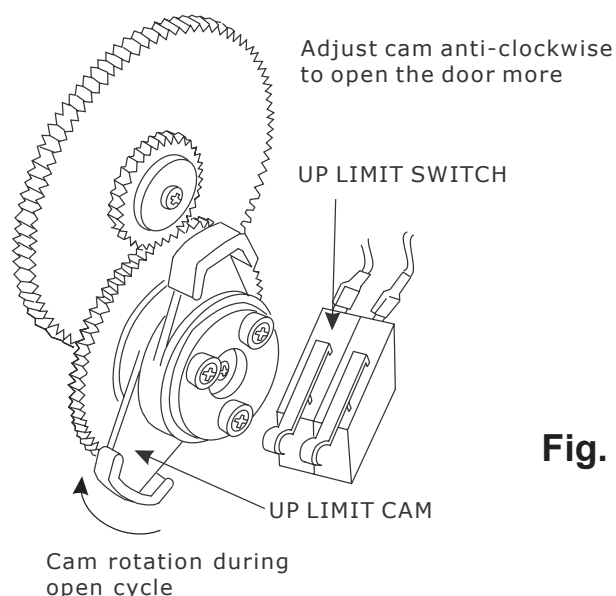


Fig. 10

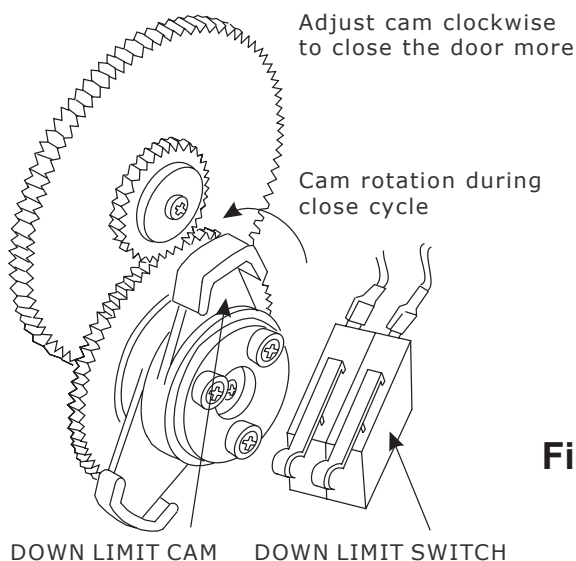


Fig. 11

Limits Set Up

Setting Limits - LEFT HAND INSTALLATION

Note: The RH/LH dip switch must be set to LH side.

REMINDER: If you have not already done so, inspect the wiring harness to confirm that the motor wires are connected correctly: red–red and green–yellow.

- 1 With the Drive Unit in manual mode move the door up by hand to the desired open position.
- 2 Remove the Switch Cover (see Fig 9). Rotate the UP LIMIT CAM by hand in an anticlockwise direction until the cam clicks the open limit switch.
- 3 Move the door down by hand to the desired closed position.
- 4 Rotate the DOWN LIMIT CAM by hand in a clockwise direction (see Fig 13) until the cam clicks the close limit switch.
- 5 Connect power lead from the Drive Unit into a general purpose power outlet installed by a licensed qualified electrical contractor. Turn the power on.
- 6 Re-engage the drive unit by pulling the red cord. (see Fig 14).

Open Limit Adjustment

- 1 Press the Operate Button on the Control Box. The door should start moving.
- 2 If the door stops at the desired open position then the limit adjustment is complete.
- 3 If the door has not reached the desired position, adjust the UP LIMIT CAM anticlockwise to open the door more or to open the door less adjust the cam clockwise.

Close Limit Adjustment

- 1 Press the Operate Button on the Control Box. The door should start closing.
- 2 If the door stops at the desired closed position then the close limit adjustment is complete.
- 3 If the door has not reached the desired position, adjust the DOWN LIMIT CAM clockwise to close the door more or to close the door less adjust the cam anticlockwise.

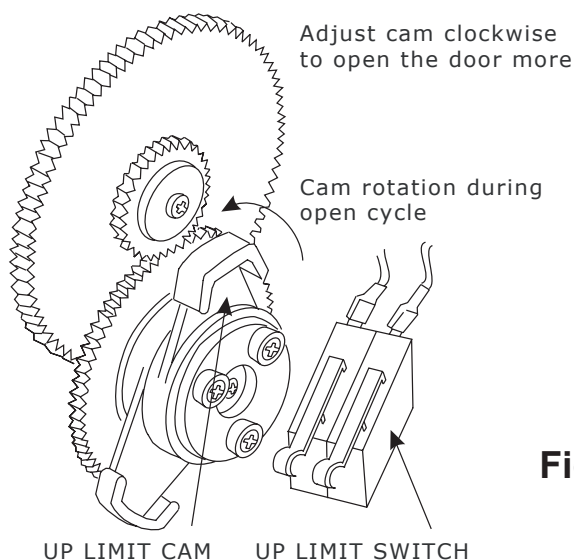


Fig. 12

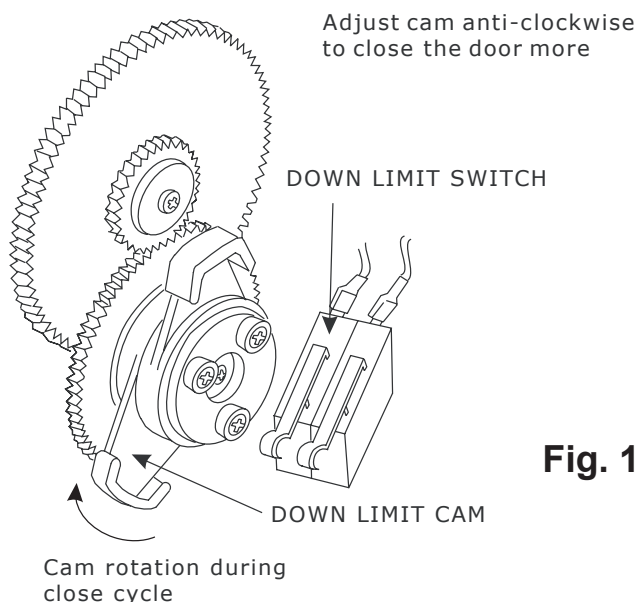


Fig. 13

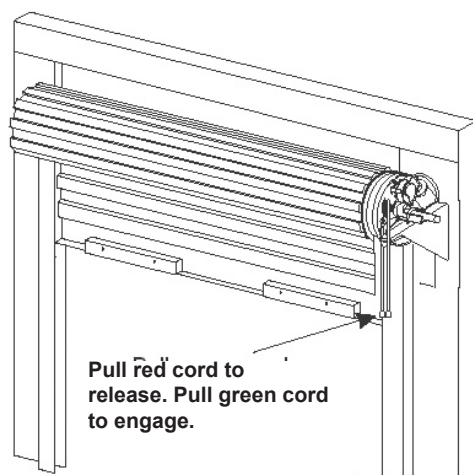


Fig. 14

Obstruction Force Margins

Setting Safety Obstruction Force Margins

IMPORTANT: The setting for the close obstruction force margin is the most important adjustment in the installation procedure. Make sure that the force (load) is adjusted correctly as per the installation instructions. Failure to adjust these settings correctly could result in serious personal and/or property damage. The end user must be informed that they must test these settings at regular intervals (monthly is recommended), and the necessary adjustments made as required. Refer to the Owner's Manual section 11.

Note: The Close Obstruction Force Margin adjustments procedure are the same for Left or Right Hand installation.

CLOSE SAFETY OBSTRUCTION FORCE ADJUSTMENT

- 1 Open the door fully by pressing the Operate Button. The door will stop automatically when the open limit position is reached.
- 2 Press the Operate Button again, the door should start closing. As the door is closing, turn the DOWN FORCE shaft slowly anticlockwise until the door stops momentarily then reverses to the open position.
- 4 Turn the DOWN FORCE shaft 10 degrees clockwise.
- 5 Press the Operate Button again to close the door. If the door reverses by itself, re-adjust the DOWN FORCE shaft a further 5 degrees clockwise. Keep adjusting in this manner until the door can complete the full close cycle.

Note: The open safety obstruction margin is preset.

CLOSE SAFETY OBSTRUCTION TEST

The door now has to be tested for response to an obstruction while it is opening and closing.

Press the Operate Button with the door in the open position, the door should start closing. When the door reaches half the closing distances holding the bottom of the door with your hands. If the door does not reverse open readily the force may be excessive and need adjusting.

IMPORTANT: If the door is unable to reverse when obstructed discontinue use. Do not use a door with faulty obstruction setting. Repair fault and retest before using.

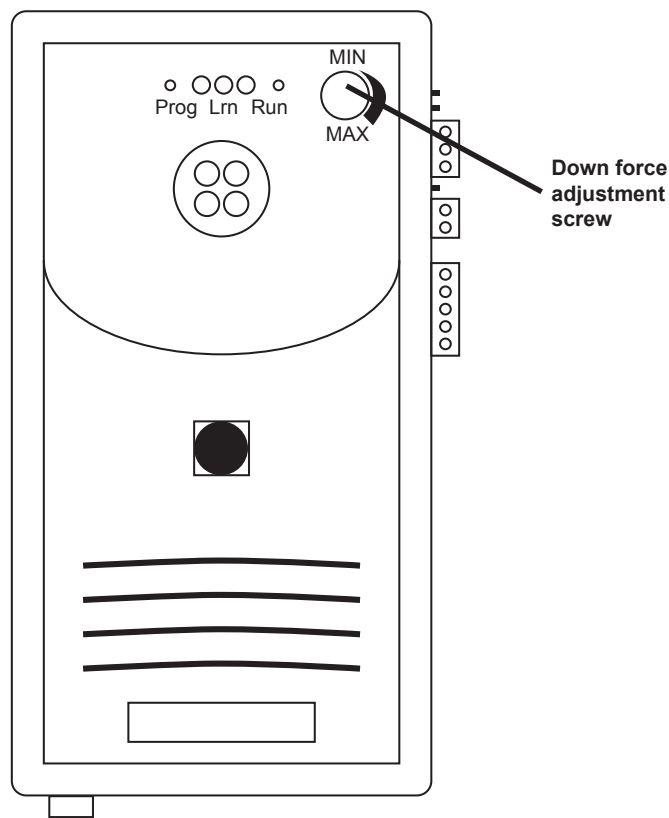


Fig. 15

Setting Transmitter Code

Note: A transmitter must be coded into the opener's memory before use.

- 1 Press the LEARN BUTTON for 2 seconds the LEARN LED will turn on.
- 2 Press the same button on the transmitter twice, the LEARN LED will flash 8 times and then turns off. The transmitter has now been coded and the security code stored in the memory on board.
- 3 Press the transmitter to see if it operates the door.

Repeat the above steps to code additional transmitters.

Note: Up to 20 transmitters can be stored into memory. If more than 20 transmitters are stored the system will disregard the additional attempts to code new transmitters.

DELETING ALL TRANSMITTERS

- 1 Press and hold the LEARN BUTTON, the LEARN LED will turn on.
- 2 Hold the LEARN BUTTON 8 seconds approximately, the LEARN LED will turn off.
- 3 Release the LEARN BUTTON, all the stored transmitter codes will be deleted.
- 4 Confirm this by pressing one of the deleted transmitters.

It is recommended to delete all transmitters and re-coding when one of the stored transmitters is lost.

Maintenance

No particular maintenance is required for the logic circuit board.

At least twice a year check that the door is properly balanced and that all working parts are in good working condition.

IMPORTANT: A poorly operating door can effect the life of the automatic opener due to incorrect loads and will void the warranty.

Check the reversing sensitivity at least twice a year and adjust if necessary.

Make sure that the safety devices are working effectively (photo beams, etc.)

Technical Specifications

Power Input:	240 VAC \pm 10% 50Hz
Motor:	24V DC 100W
Courtesy light time:	3 minutes approx.
Working temperature:	-20° ~ 70°C
Relative Humidity:	<90%
Open and close force:	250N
Reception frequency:	433.22MHz
Storage Capacity:	20 Transmitters
Decoding:	Rolling code
Transmitter power:	27A 12V Battery
Courtesy Light:	LED Array

NOTE: Smart Openers Pty Ltd reserves the right to modify its product and product specifications at any time without prior notice.

Manual Disengagement

To switch the door to manual operation pull on the red cord to disengage the motor. To re-engage the motor pull on the green cord. (See Fig. 16).

For situations where a pedestrian door is not present it is recommended that an external disengagement device is fitted.

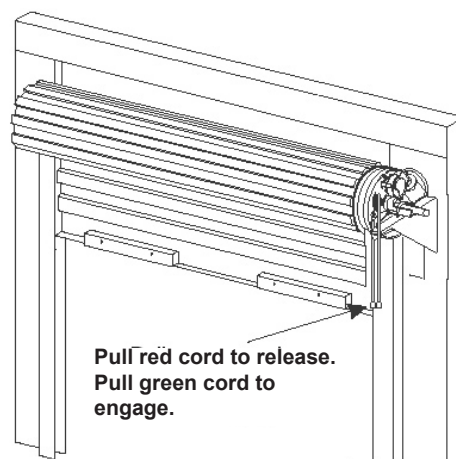


Fig. 16

Important Information for the User

Once the Smart Roller Duo opener has been installed, the user must be informed about how it works and all the risks that can arise if it is used improperly. The user must avoid placing himself/herself in dangerous situations such as standing within the door's operating range when it is moving.

Do not let children play near the door and keep the remote controls out of their reach.

All servicing, repairs or checks must be carried out by professionally qualified personnel and noted on a maintenance register kept by the user.

Information for the user is found in the USERS/OWNERS MANUAL included with this opener.

IMPORTANT: Please make sure the USERS/OWNERS MANUAL is passed on to the owner prior to leaving the installation.

IMPORTANT: In the case of a malfunction the user must call an authorized Smart Opener Pty Ltd installer and should not attempt to repair the opener.

Final Notes

This manual is only for use by technical personnel qualified to carry out the installation.

No information given in this manual can be considered of any interest to the end user.

No setting or adjustments contained in this manual can be carried out by the end user.

It is important for the installer to show their clients correct operational use of the Smart Roller Duo including the use of the manual disengagement cord.

Inform the owner about the need for regular and accurate maintenance, especially regarding a regular check of the safety and reversing devices.

Warranty and Exclusion of Liability

1. This warranty is an addition to any conditions or warranties that are implied by relevant statute, including the Trade Practices Act 1974 (Cth), which cannot be excluded or negated.
2. Subject to all of the matters set out below, **Smart Openers Pty Ltd** ("**Smart Openers**") warrants:
 - (a) swing and sliding gate opener drive units for twelve (12) months
 - (b) roll-up and overhead door opener drive units for twenty four (24) months
 - (c) all components and accessories for twelve (12) months, from the date of purchase (specified in the sales docket receipt) as free of any defects in material and workmanship.
3. This warranty applies only where the purchaser:
 - (a) immediately notifies **Smart Openers** or the retailer of the alleged defect;
 - (b) returns the product to **Smart Openers** or the retailer; and
 - (c) presents the relevant sales docket and this warranty document to the retailer and, if so requires, to **Smart Openers** to confirm the date of purchase.
4. Defects or damage partly or wholly due to any of the following causes are not covered by this warranty:
 - (a) accidental damage to any of the Product or to the Product's components;
 - (b) normal wear and tear to the Product or to the Product's components;
 - (c) flood, rain, water, fire, lightning, storms, any acts of God, contamination or pollution;
 - (d) incorrect, improper, inappropriate or unreasonable maintenance and/or use;
 - (e) installation, adjustment or use which is not in accordance with the instructions set out in installation instructions incorporated in the document;
 - (f) attempted or complete modification or repairs to the Product or tampering with the Product carried out by a person who is not authorised by **Smart Openers** to carry out such modification or repairs;
 - (g) faulty or unsuitable wiring of structure to which the Product is fixed or connected;
 - (h) radio (including citizen band transmission) or any electronic interference;
 - (i) blown fuses or damage caused by electrical surges, power surges or power spikes;
 - (j) damage caused by insects or any infestation;
 - (k) negligence or deliberate damage.
5. Except for this warranty, **Smart Openers** gives no warranties of any kind whatsoever (whether express or implied), in relation to the product, and all warranties of whatsoever kind relating to the product are, to the extent permissible by statute, hereby excluded and negated.
6. To the extent permissible by statute, **Smart Openers** disclaims any liability of whatsoever nature in respect of any claim or demand for loss or damage which arises out of:
 - (a) accidental or deliberate damage to, or normal wear and tear to, the product or to the product's components;
 - (b) any cost relating to damage resulting from wear and tear;
 - (c) blown fuses, loss or damage caused by electrical surges, power surges or power spikes;
 - (d) loss or damage due to theft, fire, flood, rain, water, lightning, storms, any acts of God, contamination or pollution;
 - (e) door or gate not in safe and correct working order and condition;
 - (f) evidence of unauthorised repairs;
 - (g) any cost relating to damage caused deliberately or by misuse, negligence or failure to maintain the equipment in a proper working order, including (without limitation) due to anything described in paragraphs (d) and (e);
 - (h) installation, adjustment or use which is not in accordance with the instructions set out in installation instruction manual and owners manual;
 - (i) attempted or complete modification or repairs to the Product or tampering with the Product carried out by a person who is not authorised or has not been trained by **Smart Openers** to carry out such modification or repairs;
 - (j) faulty or unsuitable wiring of structure to which the Product is fixed or connected;
 - (k) radio (including citizen band transmission) or any electrical interference;
 - (l) damage caused by insects or any infestation;
 - (m) loss or damage to any property whatsoever or any loss, damage or expense whatsoever resulting or arising therefrom;
 - (n) any consequential, indirect, special or incidental loss or damage;
 - (o) any cost or expense arising due to manufacturer recall of any product;
 - (p) any cost or expense due to negligence of the approved service provider;
 - (q) installation of a residential garage door or gate opener in a commercial or industrial situation or a non-single residential dwelling.
7. **Smart Openers** liability under this warranty is limited, at **Smart Openers** absolute option, to replacing or repairing the product which **Smart Openers**, in its unfettered and absolute opinion, considers to be defective either in material and/or workmanship or to credit the dealer with the price at which the product was purchased by the dealer.
8. This warranty does not extend to cover labour for installation.
9. This warranty is limited to Return-to-Base (RTB) repair and does not cover labour for on-site attendance.
10. This warranty is void if the Product is not returned to the manufacturer in original or suitably secure packaging.
11. This warranty is only applicable for repairs to the Product carried out within Australia and for Product in Australia.
12. This warranty does not cover consumable items including globes, batteries and fuses.
13. This warranty is not transferable.
14. Where the Product is retailed by any person other than **Smart Openers**, except for the warranty set out above, such person has no authority from **Smart Openers** to given any warranty or guarantee on **Smart Openers** behalf in addition to the warranty set out above.

Notes:

1. This warranty is to be read in conjunction with the installation manual and owner's manual.



Notes

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