



CAUTION:

Emergency Access

ELECTROCUTION!

WARNING!

This automatic garage door opener is designed and tested to offer safe service provided it is installed and operated in strict accordance with the following safety rules. Failure to comply with the following instructions may result in death, serious personal injury or property damage.

- The door may operate unexpectedly, therefore do not allow anything to stay in the path of the door.
 - When operating the manual release while the door is open, the door may fall rapidly due to weak or broken springs, or due to being improperly balanced.
 - The drive must not be used with a door incorporating a wicket door, unless the drive cannot be operated with the wicket door open.
 - The drive is intended to be installed at least 2.5m above the floor.
 - Do not disengage the opener to manual operation with children/persons or any objects including motor vehicles within the doorway.
 - If the door is closing and is unable to re-open when obstructed, discontinue use. Do not use a door with faulty obstruction sensing
 - When using auto close mode, a **Photo Electric beam** must be fitted correctly and tested for operation at regular intervals. **Extreme caution** is recommended when using auto close mode. **All safety rules** must be followed.
 - Place opener in protected area so that it does not get wet.
 - Do not spray with water .
 - Disconnect the power cord** from mains power before making any repairs or removing covers. Only **experienced** service personnel should remove covers from the opener.
 - If the power supply cord is damaged, it **must** be replaced by an Automatic Technology service agent or suitably qualified person.
 - Connect the opener to a properly **earthed** general purpose 240V mains power outlet installed by a qualified electrical contractor.
- If garage has no pedestrian entrance door, an emergency access device should be installed. This accessory allows manual operation of the garage door from outside in case of power failure.
 - Practice correct lifting techniques (carton weighs approx 9kg)
 - Practice correct lifting techniques when required to lift the door as per installation instructions.
 - Ensure ladder is the correct type for job.
 - Ensure ladder is on flat firm ground that will take the weight without the legs sinking.
 - Ensure user has 3 points of contact while on ladder.
 - Place a 2 metre exclusion zone around area under the door while it is unsecured.
 - Do not move under a door while it is on the door support (or ladder)
 - Follow the installation instructions
 - Fit door support (or ladder) snugly under door before removing bracket.
 - Ensure door support (or ladder) is on flat ground
 - Examine the door installation, in particular, springs and mountings for signs of wear, damage and imbalance.
 - The garage door must be **well balanced**. Sticking or binding doors must be repaired by a qualified garage door installer prior to installation of the opener.
 - Remove or disengage** all garage door locks and mechanisms prior to installation of the opener.
 - Never plug in and operate opener prior to installation.
 - Keep hands and loose clothing clear of door and guides at all times.
 - DO NOT** operate the opener unless the garage door is in full view and free from objects such as cars and children/people. Make sure that the door has finished moving before entering or leaving the garage
 - In order for the opener to **sense** an object obstructing the door way, some **force** must be exerted on the object. As a result the object, door and/or person may suffer minor **damage** or **injury**.
 - Ensure the garage door is in good working order by undertaking regular servicing.
 - Install the optional wall transmitter in a location where the garage door is visible, but out of the reach of children at a height of at least 1.5m.
 - Photo Electric beams must be installed if the closing force at the bottom edge of the door exceeds 400N (40kg)
- Muscular strain
 - Fall from ladder
 - Crush injury from unsecured door
 - Garage Door
 - Entanglement
 - Entrapment under operating door

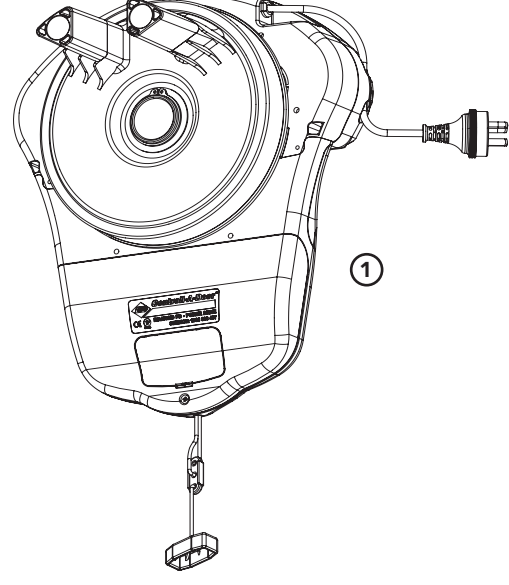
Troubleshooting Guide

Symptom	Possible cause	Remedy
The opener does not work from the transmitter	The opener does not have power	Plug a device of similar voltage (e.g. a hairdryer) into the power point and check that it is OK
The battery in the transmitter is flat	Transmitter does not contain Tri-Tran [®] Technology	Check that the transmitter has grey buttons and the model number on the back displays V2. Contact dealer for support if otherwise.
The opener has been put into "Vacation Mode"	The transmitter button is not programmed to operate the door.	Code in the transmitter (Section 8.3, step e of Home Owners Manual)
Door Code LED is flashing yet the opener is not working.	The transmitter battery	Replace transmitter
One transmitter works but the other/s do not	Flat battery	Replace battery
The motor is running but the door remains stationary	The opener is disengaged	Re-engage the opener
The transmitter range varies or is restricted	Varitions are normal depending on conditions e.g. temperature or external interference	Make sure you can see the door when you use the transmitter.
The battery life is exhausted	The battery is exhausted	Check the battery status by pressing a button (flashing or no light requires battery to be changed)
Position of the transmitter in the motor vehicle	LED has failed	Change LED.
The Courtesy light does not work	The door reverses for no apparent reason	Ensure the door runs smoothly before increasing the force pressure.
If Safety beams are installed they may be partially obstructed.	The door stops or moves very slowly.	Check the door's operation.
Garage door in poor condition e.g. springs may be broken.	The SERVICE LED has started to flash and is beeping numerous times	A fault has been detected. The fault will be active each time an attempt is made to operate the door.
(Optional Battery Back Up Accessory) The batteries may have little OR no charge	The Open (Green) LED and Close (Red) LED are flashing alternatively	Check the doors operation by disengaging the motor and ensuring the door runs smoothly. If necessary make door adjustments or contact your door professional.
Clear away any obstructions and test door opens correctly. (If door is damaged, contact your door professional).	The Open (Green) LED continues to flash	Clear away any obstructions and test door opens correctly. (If door is damaged, contact your door professional).
Clear away any obstructions and test door closes correctly. (If door is flashing, limits are not set. Reset Limits.	The Close (Red) LED continues to flash	Limits may be cleared

Safety Obstruction Forces

Controll-A-Door[®] Diamond PD and Firmamatic[™]

Rolling Door Opener RDO-1V3 Tri-Tran⁺ Installation Instructions



Kit Contents

- 1 x RDO-1V3 drive unit
- 2 x Locking Bar Covers
- 2 x TB-6 Transmitters (RDO-1V3) OR 2 x TB-5 Transmitters (Firmamatic)
- 1 x Collar Kit
- 1 x Weight Bar

Tools Required

- Ladder
- Adjustable Wrench
- Socket set
- Drill
- Screwdrivers
- Marker Pen
- Door Stand

Important Note:

Only Tri-Tran⁺ Technology Transmitters and Keypads are compatible with this RDO-1V3 product.

Power Supply

Properly earthed 3 pin single-phase power is required.

WARNING! A portable power generator is not recommended due to spikes, surges and fluctuations in the supply.

Position

The opener can be installed on either the right - or left hand side of the door (when viewed from the inside the garage). The opener is factory set for right hand side installation.

The opener must be installed in a dry position that is protected from the weather. Moisture or corrosion damage is not covered by the Warranty.

Unsuitable Door Types

The drive must not be used with a door incorporating a wicket door, unless the drive cannot be operated with the wicket door open. The fitting of an opener to doors with removable mullions is not recommended.

Sideroom

The minimum sideroom required from the edge of the door curtain is 41mm to the inside of the door bracket, and 85mm to the wall. If a Battery Backup is to be fitted, at least 135mm to the bracket is required.

Therefore the recommended sideroom from the edge of the door curtain is 95mm to the inside of the door bracket, and 135mm to the wall as per diagram.

Testing Close Cycle

- Press the programmed transmitter to open the door.
- Place a piece of timber approximately 40mm high on the floor directly under the door.
- Press the programmed transmitter to close door.
- The door should strike the object and re-open.

Testing Open Cycle

- Press the transmitter to close the door.
- When the door reaches approximately half way, firmly grab the door's bottom rail - the door should stop.
- If the door does not reverse when closing, or stop when opening, the force may be excessive and need adjusting.

Adjusting Safety Obstruction Force

The Safety Obstruction Force is calculated automatically during setup. Adjusting this is normally only necessitated by environmental conditions such as windy or dusty areas, and areas with extreme temperature changes.

WARNING! Take care when testing or adjusting the Safety Obstruction Force. Excessive force may cause SERIOUS PERSONAL INJURY and/or PROPERTY DAMAGE.

To Increase Force Pressure

- Hold down the FORCE MARGIN SET button.
- While holding the FORCE MARGIN SET button, press the PLUS (+) button. Each press will increase the force margin.
- The OPEN LIMIT LED will flash each time the PLUS (+) button is pressed to indicate an increase in force.
- If the OPEN LIMIT LED flashes continuously when the PLUS (+) button is being pressed, this indicates that the maximum force setting has been reached.
- Test the force again as per Testing Close Cycle and Testing Open Cycle.

To Decrease Force Pressure

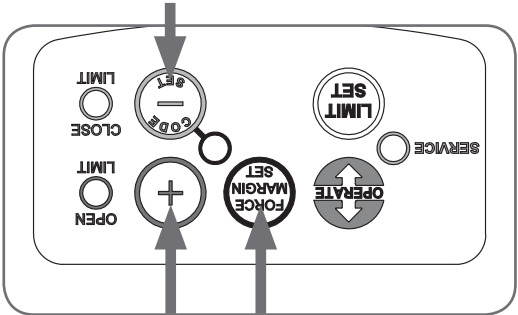
- Hold down the FORCE MARGIN SET button.
- While holding the FORCE MARGIN SET button, press the MINUS (-) button. Each press will decrease the force margin.
- The CLOSE LIMIT LED will flash each time the MINUS (-) button is pressed to indicate a decrease in force.
- If the CLOSE LIMIT LED flashes continuously when the MINUS (-) button is being pressed, this indicates that the minimum force setting has been reached.
- Test the force again as per Testing Close Cycle and Testing Open Cycle.

To Recall Factory Set Force

- Holding down the FORCE MARGIN SET button and the LIMIT SET button for two seconds.
- Release both buttons. The default setting should now be recalled.

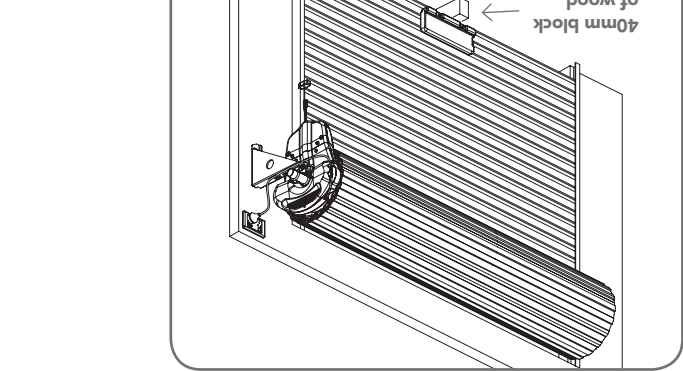
To Recalculate Force Margins

- Press and hold the FORCE MARGIN SET Button for six (6) seconds, the beeper will sound once.
- The door will start to move and re-calculate force margins. The door can move between the open and close limit positions up to four (4) times (depending on the position of the door and the power up condition).
- A single beep will be heard once the process is complete.
- Test the force again as per Testing Close Cycle and Testing Open Cycle.



WARNING! Please test the manual release mechanism to ensure that the manual release is easy to operate. No more than 15 kg of force should be required to disengage the door using the manual release cord. If excessive force is required reset the close limit position.

WARNING! If the door fails these tests, put the opener into manual mode, only operate the door by hand and call for service.



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Adjusting Safety Obstruction Force

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To Decrease Force Pressure

- Hold down the FORCE MARGIN SET button.
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- The CLOSE LIMIT LED will flash each time the MINUS (-) button is pressed to indicate a decrease in force.
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To Recalculate Force Margins

- Press and hold the FORCE MARGIN SET Button for six (6) seconds, the beeper will sound once.
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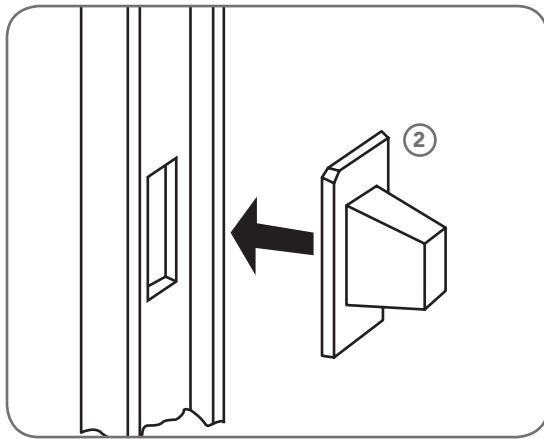
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Installation

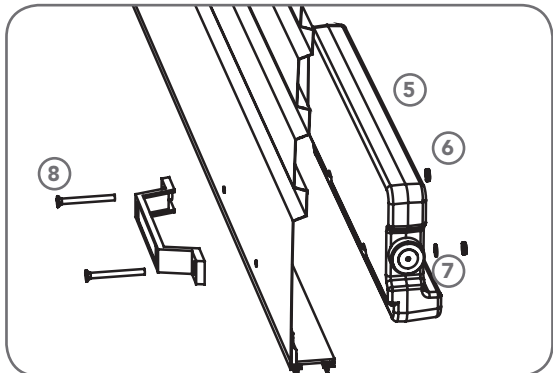


- Check the door's operation. The door must travel smoothly and be easy to operate by hand.
- Operating force on the bottom rail should be approximately 70N (7kgs) force
- Adjust any tight or twisted guides/tracks Clean the guides if there is any oil or wax present using a suitable white spirit. The only lubricant suitable for use on door guides is silicon spray. DO NOT use WD-40, RP-7, petroleum grease, or similar.
- Install the locking bar covers (2) if there are locking bar holes in the guides.
- Affix the warning labels supplied with this opener in a prominent place where they are clearly visible.
- Choose the side where the opener will be installed, ensuring there is sufficient sideroom.



WARNING! - Do not lock your door with the locking bars after installing the opener. Remove or disable the lock using wire or cable ties. Security is not affected as the opener has an inbuilt locking facility.

If the door has a handle

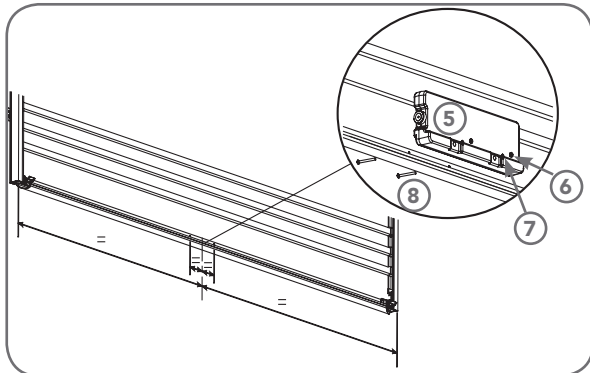


- Remove the door handle
- Fit the weight bar (5) and refit the handle using the new fasteners (6, 7, 8) provided.

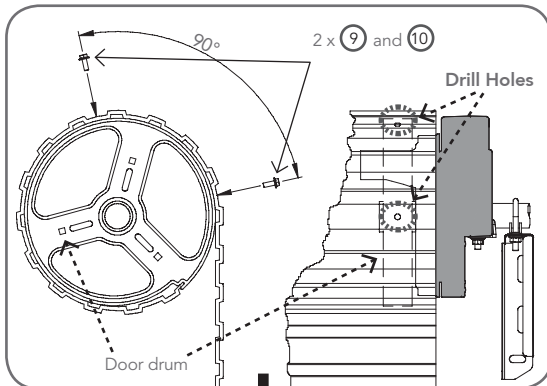


WARNING! The door and its springs are under significant tension. Adjustments should only be carried out by experienced persons, as this function can be dangerous if not performed under strict safety procedures.

If the door does not have a handle

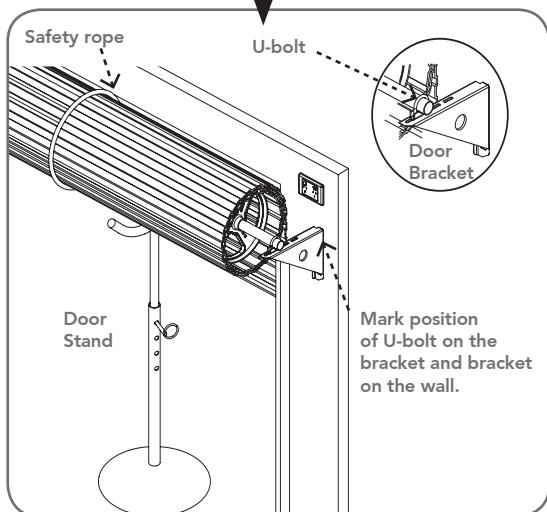


- Locate the centre of the door at the bottom rail.
- Place the weight bar (5) at this point (there is a centreline marked on the weight bar) and mark the two positions where the fasteners will go.
- Drill the two 4.5mm holes in the door and fit the weight bar using the new fasteners (6, 7, 8) provided.



- Fully close the door.
- Mark drill two (2) holes in the valley of the curtain at both ends of the door into the drum.
- Drill holes using 3.2mm (1/8") drill bit. Open the door slightly for easier access, if necessary.
- Fit two (2) M10 x 32mm screws (9) and washers (10). Each screw should be positioned as low as possible, within the valley, but make sure that it does not alter the curtain's normal approach to the guide (lead-in angle).

NOTE: Make sure that the screws do not project into the area where the internal gear will fit.



- At the end opposite to where the opener will be fitted, check that the U-bolt is tightened securely. Open the door completely and tie safety ropes around the door roll approximately 300mm from each end. Do not tie the ropes too tight as damage to the curtain may ensue.
- At the end where the opener is to be fitted, support the door with a door stand or suitable ladder.



WARNING! Make sure the support is snug under the door, stable and will not move.

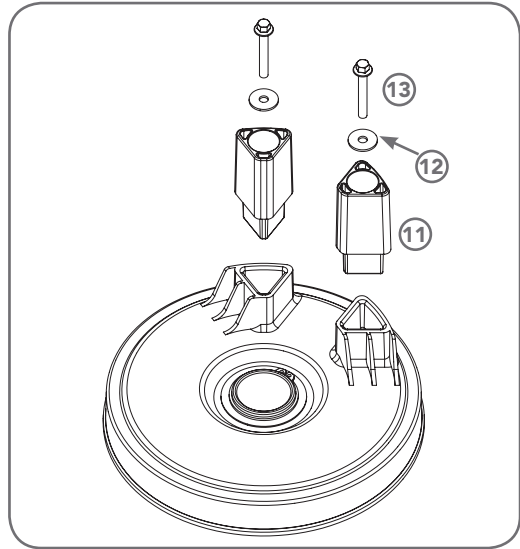
- Use masking tape or pen to mark the position of the U-bolt in the door bracket and the position of the door bracket on the wall to assist in reassembling.
- Remove the U-bolt (or bolts) and saddle from the door bracket.
- Remove the door bracket allowing the door to rest on the support.

NOTE: For minimum sideroom installations the door may have to be taken down.

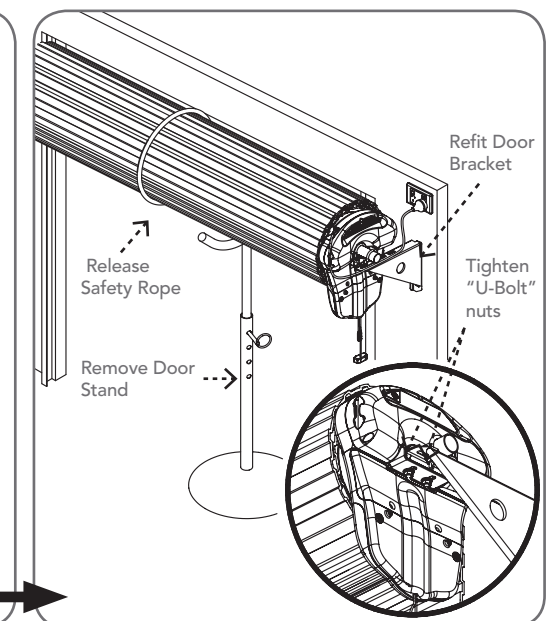
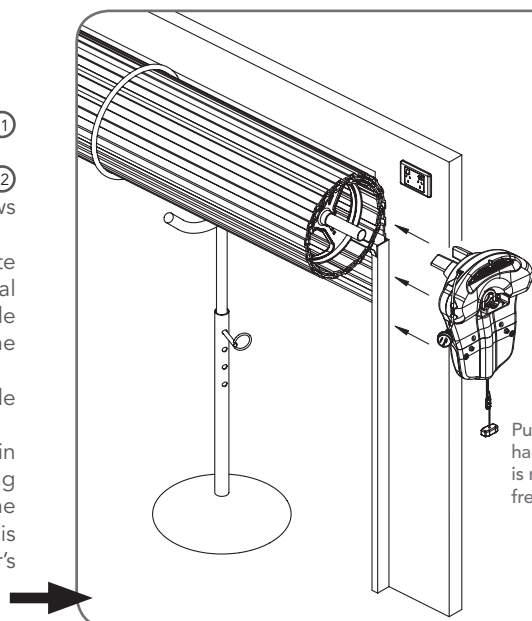


Proceed to Mounting the Opener

Mounting the Opener



- Insert the two (2) Extension forks (11) into the ring gear.
- Secure with two (2) Flat washers (12) and two (2) Hex serration head screws (13).
- If the internal gear does not rotate freely, switch the opener to manual by pulling the disengagement handle down (there will be a click), so that the ring gear can be rotated by hand.
- Slide the opener over the door axle and into the drum of the door.
- Ensure the internal gear is pushed in as far as possible (without interfering with the door curtain) and that one of the door drum's wheel spokes is completely between the opener's drive forks.



- Re-attach the door bracket using your reference marks as a guide and tighten the bolts. Ensure that the slots in the mounting bracket of the opener align with the slots in the door bracket, otherwise the door bracket may have to be relocated.

NOTE: If the bracket cannot be relocated, the opener may be fitted onto the axle using the opener's saddle and U-bolt as follows:

- Using your reference marks as a guide, sit the opener on the door mounting bracket and secure with the opener's U-bolt and saddle and tighten firmly.
- Adjust the door position (if necessary) on the brackets so that the door feeds smoothly into the guides. Make sure that the centre of the door doesn't hit the lintel and that the curtain is not pushed forward hard into the guide.

- Remove the Door stand and safety ropes



CAUTION - If the manual release handle is more than 1.8 metres from floor level when the opener is installed, extend the handle to a height less than 1.8 metres.

- Connect the power cord to a suitable power point, but **DO NOT SWITCH ON**. Secure the power cord away from any moving object (e.g. the door) with the cable clip supplied.
- With the opener still disengaged, pull the door up and down to make sure it runs freely. Leave the door approximately in the middle of travel and engage the opener.



Proceed to Programming the Opener

Programming the Opener



WARNING! Use caution when operating the manual release with the door open since it may fall rapidly due to weak or broken springs, or an improperly balanced door. Ensure that no persons or objects are in the door's path.

Setting the Close Limit

Move the door to half way open. If necessary, disengage the opener by pulling the red handle down.

- Re-engage the opener by pulling the red handle down.
- Turn on the power to the opener. The CLOSE LIMIT LED will be flashing.
- Press and hold the MINUS (-) button - the door should starting closing.
- If the door opens, release the MINUS (-) button and press the OPERATE button once to change the motor's direction. Press the MINUS (-) button again to close the door.
- Release the MINUS (-) button when the door is near the desired closed position. Single presses of the MINUS (-) button will "inch" the door closed.
- If the door overshoots press the PLUS (+) button to move the door in the open direction.
- When the door is at the desired close position, press the LIMIT SET button to record the Close limit position.

Setting the Open Limit

- The OPEN LIMIT LED will now flash.
- Press and hold the PLUS (+) button to open the door
- Release the PLUS (+) button when the door is near the desired open position. Single presses of the PLUS (+) button will "inch" the door open.
- If the door overshoots press the MINUS (-) button to move the door in the CLOSE direction.

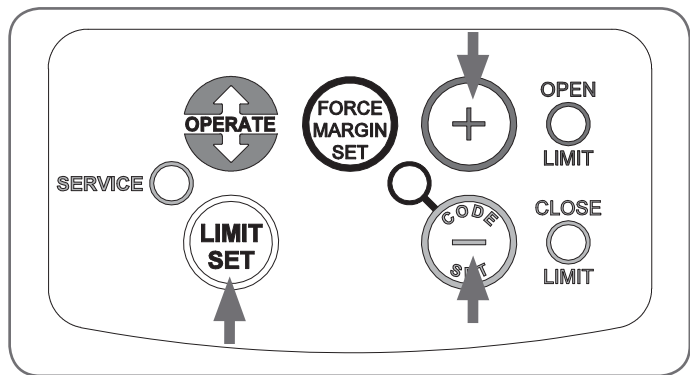


WARNING! The door will automatically close, open and close again once the next step is performed. Ensure that no persons or objects are in the door's path.

- Press the LIMIT SET button to store the open limit. Please read the above warning.

Resetting the Door Limit Positions

To reset the limits press and hold the Limit Set button for 6 seconds until the Close Limit LED flashes quickly. If no action is taken within 30 seconds, the opener will return to normal operating mode and restore the original limit settings.



WARNING! In setting the close limit position, do not force the door into the floor with excessive force, as this can interfere with the ease of operation of the manual release mechanism.

Setting the PET Mode position

When activated, PET mode drives the door to the preset position from the close position.

- Drive and stop the door at the desired PET mode open position by pressing the transmitter button coded for Open/Stop/Close operation.
- Press and hold the PLUS (+) button on the opener for six (6) seconds until the OPEN and CLOSE LED's are lit to record the new PET position.
- Release the PLUS (+) button.

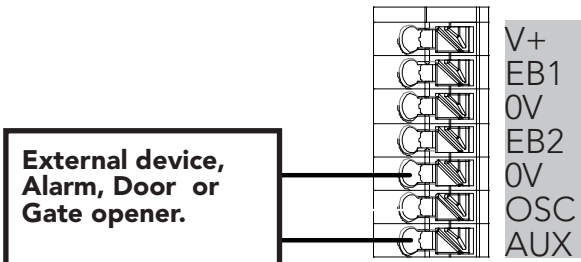


Proceed to Accessories

Accessories

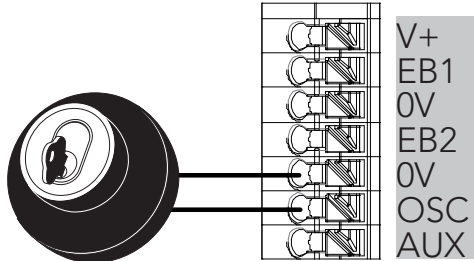
Auxiliary Output

The auxiliary output can be used to control alarm or another garage door opener. A valid transmission from the pre-coded transmitter will cause the auxiliary output to pulse for approximately 1 (one) second. The maximum DC voltage must not exceed 35 volts DC. Maximum current must not exceed 80 ma.



Keyswitch Connection

The RDO-1V3 has the input to connect bell switch or keyswitch to open or close the door.



Reset all Factory Defaults

- Turn power to the opener off.
- Press and hold the LIMIT SET Button.
- Turn power on while holding the LIMIT SET button. Continue to hold until all LED's are off.
- This will not erase transmitter codes stored in memory.

Remote Aerial

Some sites cause poor radio reception. Particularly problematic areas are those where there is a large amount of metal, like a steel garage, or an underground car park with large masses of steel reinforced concrete. These issues, and others, can create reception issues. Poor radio reception will be noticed by a reduction in the operating range of the transmitters.

You can evaluate whether fitting an external aerial will benefit as follows;

- Test the maximum operating range of the transmitter with the garage door closed; then
- Test the maximum operating range of the transmitter with the garage door open.

If the range improves when the door is open you can install a remote aerial kit to improve reception.

Mount the aerial to a suitable location on the outside of the garage. Similar to a television aerial, the better the mounting position the better the reception will be. Where possible, mount the aerial as high as possible, away from masses of metal and in line of sight position, to where you normally use your transmitter.



Proceed to Coding Transmitters

Coding Transmitters

Storing the Transmitter Code

The opener can only operated from remote control transmitters that have been programmed into its memory. Up to 64 codes (RDO-1V3) or 8 codes (Firmamatic) can be stored in the memory.

- Ensure that the battery is inserted in the transmitter.
- Press the CODE SET button and release. The CODE SET LED will illuminate to indicate the opener is in Code Learn mode. If a valid code is not stored within 15 seconds the opener will exit Code Learn.
- Press the transmitter button (one of four) that you want to control the door. The CODE SET LED will flash.
- Press the same transmitter button again. The CODE SET LED will illuminate for one second then go out.
- The Transmitter button is now coded - press to test.

Coding a Transmitter to the Courtesy Light

The transmitter can be programmed to operate the courtesy light on the opener independently of the door moving.

- Press the CODE SET button twice - the CODE SET LED and courtesy light will both illuminate.
- Press one of the four buttons on the transmitter for two (2) seconds, pause for two (2) seconds, then press the same button again for two (2) seconds. The CODE SET LED will illuminate for one second then go out.
- Press the transmitter button to test.

Coding a Transmitter Button to Enable Vacation Mode

The opener can be programmed into a "Vacation Mode" where the opener will not respond to any transmitter except the button of the transmitter that was programmed for vacation mode.

- Press the CODE SET button three (3) times - the CODE SET LED will illuminate and the courtesy light will flash slowly.
- Press one of the four (4) buttons on the transmitter for two (2) seconds, the CODE SET LED will begin to flash, pause for two (2) seconds, then press the same button again for two (2) seconds.
- The CODE SET LED will illuminate for one second and then go out, and the courtesy light will also switch off. This indicates the code has been stored.
- Press and hold the transmitter button for five (5) seconds to set Vacation Mode. The CODE SET LED will stay lit while Vacation Mode is active.
- To reset Vacation Mode, press the same button for two seconds, until the CODE SET LED turns off.

Coding a Transmitter to enable AUX Output

- Press the CODE SET button four (4) times - the CODE SET LED will illuminate and the courtesy light will flash quickly.
- Press one of the four (4) buttons on the transmitter for two (2) seconds, the CODE SET LED will begin to flash, pause for two (2) seconds, then press the same button again for two (2) seconds. The CODE SET LED will illuminate for one second then go out.
- Press the transmitter button to test.

Setting the Transmitter to Operate PET (Pedestrian) Mode

The PET mode position (see Programming the Opener) must set prior to coding a transmitter.

- Press the CODE SET button five (5) times - the CODE SET LED will illuminate and the courtesy light will flash quickly (twice per second).
- Press one of the four (4) buttons on the transmitter for two (2) seconds, the CODE SET LED will begin to flash, pause for two (2) seconds, then press the same button again for two (2) seconds.
- The CODE SET LED will illuminate for one second and then go out, and the courtesy light will also switch off. This indicates the code has been stored.
- Press the transmitter button to test.

Installation of the Wall Mounted Transmitter

- Mount the transmitter in a convenient location, yet out of reach of children and at least 1.5m off the ground.
- Make sure the door is visible from this location.
- To set the transmitter press the CODE SET button and release. The CODE SET LED will illuminate to indicate the opener is in Code Learn mode. If a valid code is not stored within 15 seconds the opener will exit Code Learn.
- Press the transmitter button (one of four) that you want to control the door. The CODE SET LED will flash.
- Press the same transmitter button again. The CODE SET LED will illuminate for one second then go out.
- The transmitter button is now coded - press to test

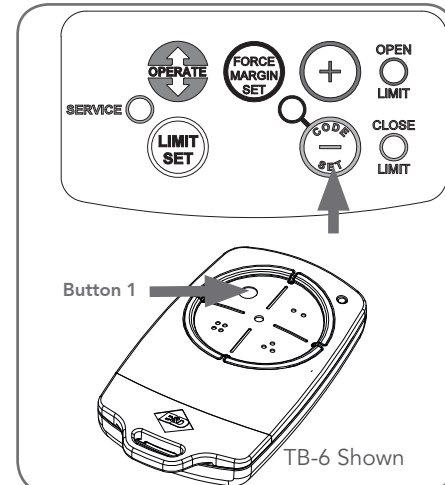
Remotely Coding Transmitters

Using this method transmitters can be coded without access to the opener's control panel as long as a pre-coded transmitter is available.

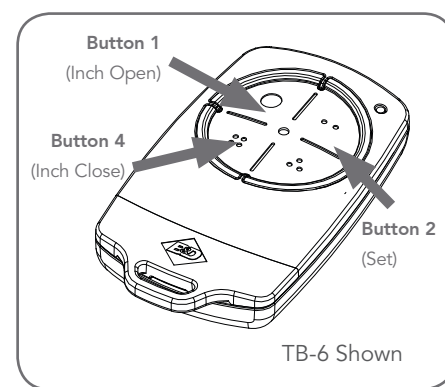
- Take any pre-coded transmitter. Press the button for the function to be duplicated and release.
- Using a small needle / pen, press and hold firmly for two seconds the middle button, through the Coding Hole.
- Within ten (10) seconds take the additional transmitter you wish to code. Hold the new transmitter's button for two seconds, pause for two seconds, hold again for two seconds and then release.
- Wait for ten (10) seconds and then press the new transmitter's button to test.



Proceed to Safety Obstruction Force



IMPORTANT NOTE: Only Tri-Tran' Technology Transmitters are compatible with this RDO-1V3 product.



Erasing Programmed Codes

If the CODE SET button is pressend and held for six (6) seconds the CODE SET LED will blink rapidly for one second to indicate that all programmed codes have been erased.

