

GEMINI



INSTALLATION/OWNERS MANUAL

24V DC SYSTEM

Motorised Opener for
Roll-up Type Garage Doors

MOTORISED OPENER FOR ROLL-UP TYPE GARAGE DOORS

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MOTORISED OPENER FOR ROLL-UP TYPE GARAGE DOORS

Section 1: Suitable Applications

This **GEMINI** Motorised Door Opening System is designed for and only compatible with the following type Domestic Garage Door:

SINGLE OR DOUBLE ROLL-UP DOORS AS DEPICTED BELOW:

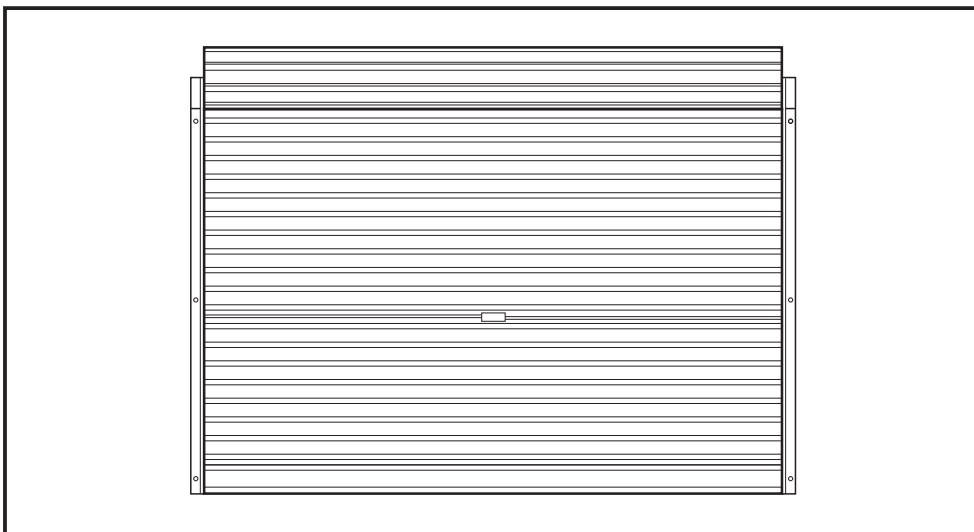


Figure 1

Please Note!

- This **GEMINI** Opener is only to be used with Roll-up Type Garage Doors which Slide and Roll Upwards of the Garage Entrance.
- Carefully read through this entire manual before installing or using this motorised door opener.
- It is important that the door should be in perfect working order. It should be easily opened by hand without presenting undue resistance or friction.
- **Do not try to rectify an unstable or jamming door by fitting a motorized opener. It may result in injury or a broken door.**
- Pay close attention to Section 5: Important Safety Information, as well as all Warnings and Cautions.
- **It is recommended that this Gemini opener be used in conjunction with a Gemini Roll-up Stabilizer kit**



MOTORISED OPENER FOR ROLL-UP GARAGE DOORS

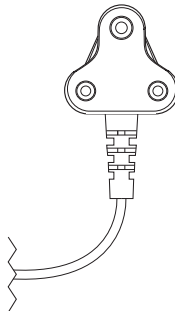
Section 2: Introduction

Thank you for choosing GEMINI for your automation requirements. Be assured that your system was driven by safety as the design criteria.

By following the basic principles of installation as explained in this manual, your GEMINI automation system will provide you with many years of trouble free service.

WARNING!

Do not cut the electrical plug off as this will terminate the warranty.



WARNING!

This Door Opening system is only suitable for use with Roll-up type doors.



MOTORISED OPENER FOR ROLL-UP GARAGE DOORS

Section 3: Technical Specifications

Motor.....	24V DC
Door speed.....	11 meter / min
Proximity sensors.....	Independent in both directions
Obstruction sensing.....	Electronically force-adjustable in both directions
Activation.....	Remote control or mounted push button
Weight.....	±11 kg
Electric current	±0.5 A
Duty cycle.....	50%
Other features	<ul style="list-style-type: none">• Battery Back-up in case of power failure• Courtesy light• Manual Override in case of malfunction

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MOTORISED OPENER FOR ROLL-UP GARAGE DOORS

Section 4: Dimensions



Figure 2

A = 2400mm

B = 330mm

C = 140mm

D = 200mm



MOTORISED OPENER FOR ROLL-UP GARAGE DOORS

Section 5: Important Safety Information

BE SURE TO READ AND HEED THESE INSTRUCTIONS!

When installing or using the GEMINI Opener for Roll-up type garage doors, normal basic safety precautions, including those detailed underneath, should always be followed to reduce the risk of electric shock or injury to persons or animals.

- Do not disassemble the carrier box assembly, or attempt any installation or operating procedures not prescribed in this manual. Refer all servicing to qualified service personnel.
- This equipment must only be connected to a 220V 50/60Hz grounded outlet. Connecting to any other outlet will damage the equipment and invalidate the warranty.
- The power should always be disconnected when working on the system.
- Never allow persons, particularly children, or animals to stand close to the door whilst it is operational. Keep remotes away from children. Never let children play with the door controls.
- Regularly test all operating systems, ***particularly the safety features!***
- If the manual override function was used, re-engage the traveler assembly after closing the garage door. ***The engaged traveler acts as a locking mechanism.***
- Always monitor the door while it is in motion and keep people and animals away until the door is completely open or closed.
- Always use caution when disengaging the traveler. The door may fall back rapidly due to weak or broken springs, or due to imbalance.
- Frequently examine the installation, in particular the springs and mountings for wear, damage or imbalance. Do not use if repair or adjustments are needed since a fault in the installation, or an incorrectly balanced door may cause injury.
- ***NB: Keep clear of all door parts during closing as well as opening!***



MOTORISED OPENER FOR ROLL-UP GARAGE DOORS

Section 6: Standard Installation Kit

YOUR GEMINI DOOR OPENING KIT IS COMPRISED OF THE FOLLOWING:

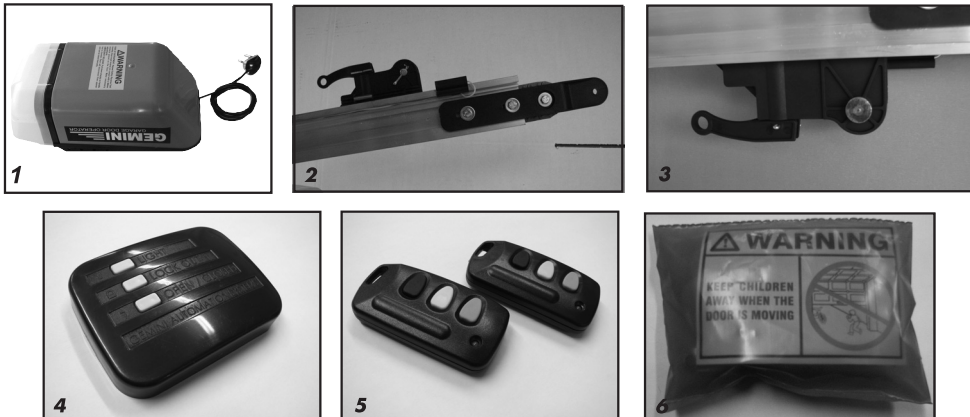


Figure 3

1. Motor carrier box including 40W courtesy light and attached 15A 3 pin plug.
2. Aluminium Extrusion assembly with magnetic open and close sensors.
3. Traveler assembly with emergency release.
4. Wireless wall console.
5. Code hopping 3 button Transmitters.
6. Red accessories bag with installation accessories.



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Section 7: Preparation of unit for installation

ASSEMBLY OF MOTOR AND EXTRUSION

This is an option to be incorporated in the near future. At present the unit comes fully assembled.



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Section 8: Installation Instructions

The door opener is to be mounted with the carrier box between the two doors and for single doors, between the door and the side wall. The dimensions of the carrier box allows it to fit easily between most double door installations.

8.1 STANDARD DIMENSIONS AND ORIENTATION

- The optimum distance between the ceiling and floor is 3100mm. The length of the aluminium extrusion and operator combination is such that virtually all standard garage door heights can be accommodated.
- The shaft(s) of the rolled-up door(s) must be checked for perfect horizontal orientation. As the operator has to be aligned perfectly vertically, the shafts must be exactly perpendicular to the operator extrusion.

8.2 INSTALLING THE OPERATOR

- Install as per Gemini Roll-up Stabiliser Kit manual

8.2.1 INSTALLING THE PUSH BUTTON CONSOLE

(Only applicable if remote control and remote wall console are not used)

1. Identify a practical and easily accessible location for the push-button.
2. Connect two wires to the connections marked (1) TRIGGER and (2) GND. (figure 4, page 9). Note and record colour and connecting positions of each of the wires.
3. Mount the push - button against the wall, route a practical path with no interference with any moving assemblies to the carrier box connector block. Make sure to secure the cables at short intervals with suitable means.
4. Connect the wires to the corresponding connector block terminals as indicated in Figure 4. Ensure that the wire positions correspond with those on the push - button.



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Section 8: Installation Instructions

8.3 CONNECTING THE 220V ELECTRICAL SUPPLY

Plug into the wall socket, 1 metre from Carrier Box

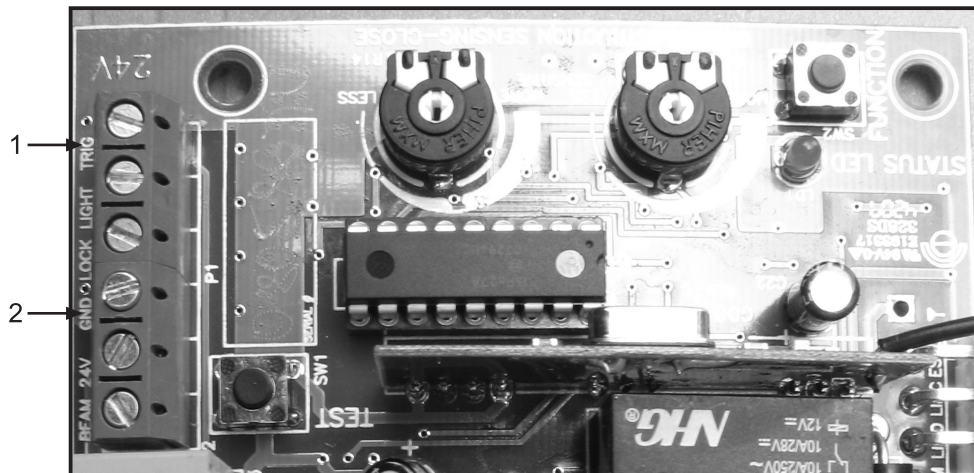
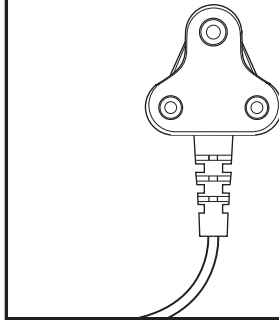


Figure 4

CAUTION

Under no circumstances must the Main electrical supply be wired from a primary power source. An ON/OFF switch MUST be incorporated into the circuit. Comply with all legal requirements for your area.



MOTORISED OPENER FOR ROLL-UP GARAGE DOORS

Section 8: Installation Instructions

8.4 INSTALLING AND PROGRAMMING THE REMOTE WALL CONSOLE & REMOTE CONTROLS

The receiver, transmitters and remote wall console are pre-programmed at the factory. A total of 15 transmitters/wall consoles can be programmed onto the onboard receiver. To program additional transmitters and or wall consoles, follow these steps:

- * Press and release the “Function” button on the PC board inside the Garage Door Operator.
- * LED will flash once.
- * Push and hold remote control/wall console button until LED flashes again.
- * Repeat the first three steps for every remote control/wall console.
- * To re-format system, hold function button down until LED (LD1) lights up, then release the button. When the LED turns off after approximately 4 seconds, all learned transmitters and remote wall consoles will be erased.

8.5 LOCK-OUT FUNCTION

When the lock button is depressed, the courtesy light will flash once to indicate that the lock-out function has been activated. It is not possible to operate the unit by remote control until the lock-out function has been de-activated on the remote wall console. To de-activate the lock-out function, press the ‘lock’ button on the remote wall console. The courtesy light will flash twice to indicate that the lock-out function has been de-activated. The garage door operator will now function normally from the remotes and remote wall console.

When the lock is active and the opener is triggered, the courtesy light will flash 3 times in rapid succession to indicate that the opener is locked.



MOTORISED OPENER FOR ROLL-UP GARAGE DOORS

Section 8: Installation Instructions (Continued)

8.6 CONNECTING THE REMOTE CONTROL RECEIVER (* IF UTILISED)

Insert the telephone – type male connector of the remote control receiver into the female receptacle on the carrier box as shown below, and mount the receiver in a suitable position. Straighten the aerial wire, securing it out of the way of any moving parts.

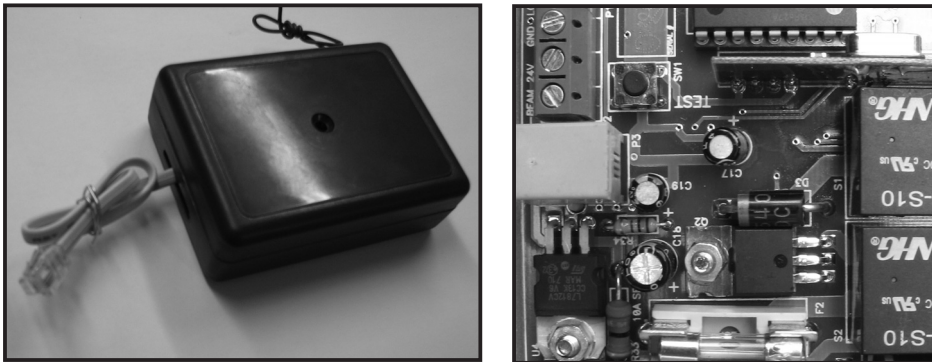


Figure 5

8.7 HOW TO PROGRAM CODE HOPPING RECEIVERS (* IF UTILISED)

1. Select “pulse” on receiver before connecting to female connector on the PCB.
2. Plug receiver into the female connector on the PCB.
3. Press and release program button.
4. Holding remote at least an arm length away, press and release the desired button on the remote.
5. Repeat steps 3 & 4 for every remote.
6. A maximum of 32 remotes can be programmed per receiver.
7. Once all remotes have been learned, unplug the receiver and plug in again.

***To erase all codes, press and hold down program button until LED flashes.
Unplug receiver and plug in again.***



MOTORISED OPENER FOR ROLL-UP GARAGE DOORS

Section 8: Installation Instructions (Continued)

8.8 ADJUSTING THE 'OPEN' AND 'CLOSE' SENSORS

1. Manually move the door to the fully open position.
2. Referring to Fig. 6A, move the "OPEN" sensor (sensor closest to the carrier box) until it aligns with the traveler assembly.
3. Manually move the door to the fully closed position.
4. Move the "CLOSED" sensor (sensor furthest away from the carrier box) until it aligns with the traveler assembly. (See Figure 6B)



Figure 6A

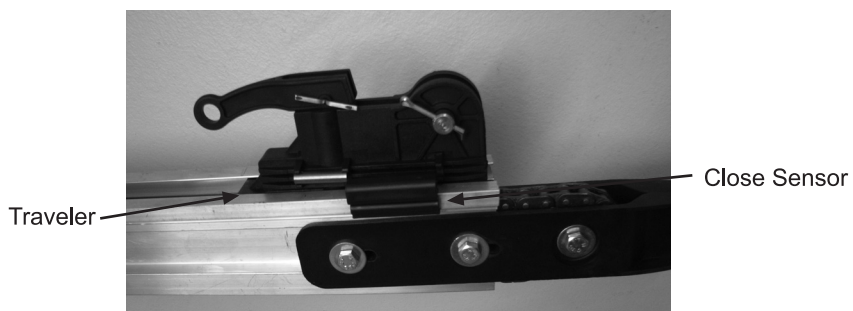


Figure 6B



MOTORISED OPENER FOR ROLL-UP GARAGE DOORS

Section 8: Installation Instructions (Continued)

8.9 TESTING THE SENSORS

1. Disengage the traveler assembly and ensure that the door is in the fully closed position.
2. Activate the door opener as if to open. (Without the door)
3. Now manually open the door until the open sensor switches off the opener operation. Ensure the door is fully open.
4. Re – adjust the “open” sensor if necessary.
5. Activate the door opener as if to close. (Without the door)
6. Now manually close the door until the sensor switches off the opener operation. Ensure the door is fully closed. Re-adjust the “closed” sensor if necessary.

MOTORISED OPENER FOR ROLL-UP GARAGE DOORS

Section 8: Installation Instructions (Continued)

8.10 CHECKING THE DOOR OBSTRUCTION FORCE

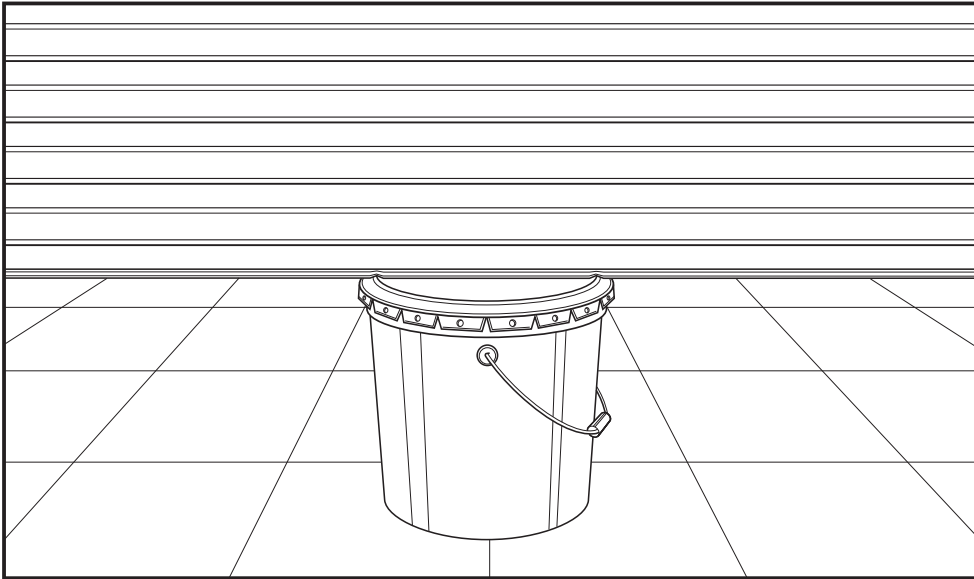


Figure 7

1. Open the door fully. Place a 400mm high solid object under the door, where the edge of the door will touch it squarely.
2. Stand clear of the door and activate the door in closing mode.
3. The electric motor should stop its operation and return the door position once a resisting force of $\pm 5-10\text{kg}$ is reached after touching the obstruction.



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Section 8: Installation Instructions (Continued)

8.11 ADJUSTING THE 'OPEN' AND 'CLOSE' SENSITIVITY ON THE PCB

- Obstruction sensing should be set so that the door will stop and reverse on impact while closing. The obstruction sensitivity is set at the factory, but adjustment will be required to suit the mass of the door.
- Impact sensitivity is set by adjusting the sensitivity potentiometer on the PC control card.

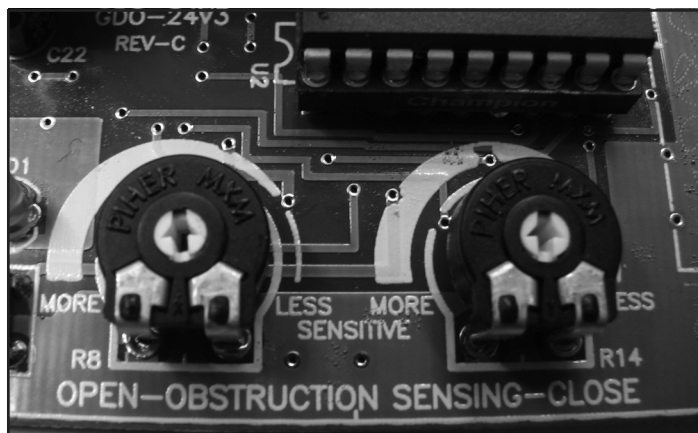


Figure 8

If adjustment is required, insert a small flat tip instrument type screwdriver into the potentiometer adjusting slot. Turning the adjuster clockwise will decrease the sensitivity and turning it counter-clockwise will increase the sensitivity. Adjust as necessary.



MOTORISED OPENER FOR ROLL-UP GARAGE DOORS

Section 9

A) INITIAL TESTING PROCEDURES AFTER INSTALLATION

1. Disengage the traveler assembly and move the door to its halfway position. Re – engage the traveler assembly. Press remote control button. The door must open to its full extent and stop. If necessary adjust the 'Door Open' limit sensor. (Closest to motor)
2. Press the remote control button. The door must move to the fully closed position and stop. If necessary adjust the "Door Closed' sensor.(Furthest away from the carrier box)
3. Perform an obstruction sensing test. If necessary, refer to '**ADJUSTING THE OPEN & CLOSE SENSITIVITY**' and re – adjust the obstruction sensitivity. Test the operation of the door and courtesy light from the inside of the garage by using the remote wall console or the remote control. The courtesy light must come on for 2 minutes.
4. Once everything has been tested, replace the light and back cover.

B) DAILY OPERATION

The remote or remote wall console can now be utilized for the door. Pressing either one in the event of operation will lead to the following:

- *If door was closing – Door will stop and open.*
- *If door was opening – Door will stop and await next command.*



MOTORISED OPENER FOR ROLL-UP GARAGE DOORS

Section 9

9.1 EMERGENCY MANUAL OVER-RIDE

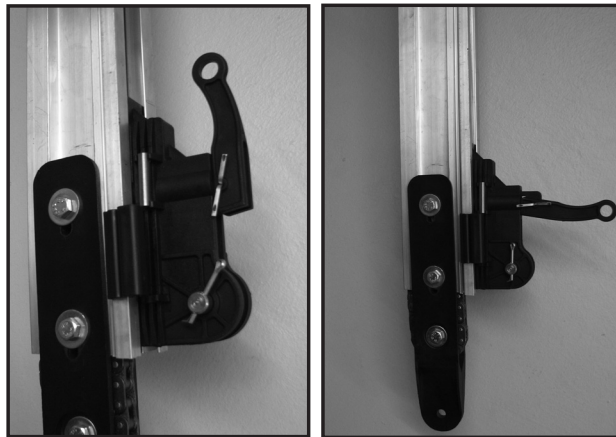


Figure 9

In the unlikely event of a failure or breakdown, the Opener will be inoperative but the garage door can be opened manually from inside the garage by disengaging the traveler mechanism.

An easy to reach emergency release is attached to the traveler. Under normal operating conditions, the traveler lever will be in the vertical (engaged) position, pointing towards the light cover on the motor. To disengage the traveler, switch OFF the electrical power, and pull the emergency release downwards. The traveler will disengage as the release clip moves into a horizontal position.

The door can now be opened and closed in the conventional way.

9.2 HOW TO RE – ENGAGE THE TRAVELER

Ensure that the opener is in the midway position. Push the emergency release upwards.

The traveler lever will be re – engaged as it moves into the vertical position.

9.3 DOOR LOCKING MECHANISM

The engaged traveler acts as the door locking mechanism for normal operation. Alternative security and/or locking measures should be implemented if the situation requires so.



MOTORISED OPENER FOR ROLL-UP GARAGE DOORS

Section 10: Maintenance

10.1 GENERAL

- The **GEMINI** Roll-up door opening system is a maintenance free unit and needs very little attention other than checking the door tracks for obstructions (excessive dirt, sand, etc).
- On a 6-monthly basis, it is advisable to remove the protection lid and blow off all accumulated dust and dirt from the carrier box interior with low-pressure compressed air.



MOTORISED OPENER FOR ROLL-UP GARAGE DOORS

Section 11: Trouble Shooting Guide

<p>Electrical Motor does not activate</p>	<ul style="list-style-type: none"> • Is the main power switched on? 	<ul style="list-style-type: none"> • Switch the power ON
<p>Electrical Motor turns but the door does not move</p>	<ul style="list-style-type: none"> • Is the traveler engaged? 	<ul style="list-style-type: none"> • Engage the traveler
<p>Power is ON (LED indicating) but the motor does not react.</p>	<ul style="list-style-type: none"> • Wiring to PC Board not properly connected 	<ul style="list-style-type: none"> • Check and rectify as necessary
<p>Motor operates when pressing the Remote wall console but not with the remote control.</p>	<ul style="list-style-type: none"> • Remote Control not properly coded • Remote Control battery flat • Remote Control defective 	<ul style="list-style-type: none"> • Refer to section 8.4 • Replace battery • Replace Remote Control
<p>Motor opens door for a short travel only</p>	<ul style="list-style-type: none"> • Door mass too heavy for unit • Obstruction in track • Obstruction sensitivity too high 	<ul style="list-style-type: none"> • Discuss problem with your local GEMINI agent • Check and rectify as necessary • Adjust obstruction sensitivity to suit



MOTORISED OPENER FOR ROLL-UP GARAGE DOORS

Section 11: Trouble Shooting Guide (Continued)

<p>Motor makes a clicking sound but does not switch on</p>	<ul style="list-style-type: none"> • Proximity sensors incorrectly set. • Control Board has to be reset. 	<ul style="list-style-type: none"> • Adjust proximity sensors • Turn OFF mains power and turn ON again
<p>Door opens and closes by itself</p>	<ul style="list-style-type: none"> • Faulty Push-button wiring (If utilised) • Faulty Remote Control Receiver 	<ul style="list-style-type: none"> • Check all wiring • Replace the Remote Control receiver
<p>Receiver reception insufficient</p>	<ul style="list-style-type: none"> • Transmitter Battery flat • Receiver reception is obstructed 	<ul style="list-style-type: none"> • Replace Remote Control Battery • Reposition Receiver in different position
<p>Courtesy light flashes when operator is triggered</p>	<ul style="list-style-type: none"> • Lockout has been activated 	<ul style="list-style-type: none"> • Deactivate lockout using remote wall console



MOTORISED OPENER FOR OVERHEAD TYPE GARAGE DOORS

Section 12: Standard Guarantee

GEMINI AUTOMATION SYSTEMS manufactured by DMI Engineering are warranted against defects in material and faulty workmanship for 24 months from the date of purchase.

This warranty applies only to products purchased new from DMI Engineering or its authorized dealers. This warranty does not apply to products which have been subjected to lightning, flood damage or any other freak occurrence of nature, abused, modified, or repaired by someone other than DMI Engineering or its authorized dealers.

- A) No batteries are included in the warranty.
- B) Electronic components have a 12 month warranty.

If a DMI Engineering product proves defective in material or workmanship within 24 months after purchase, return it to any authorized dealer or DMI Engineering, transportation to and from DMI Engineering's factory prepaid, enclosing your name and address, adequate proof of date of purchase and a short description of the defect. DMI Engineering, at its discretion will repair or replace the defective product free of charge. Repairs or replacements are warranted as described above for the remainder of the original warranty period. DMI Engineering's sole liability and your exclusive remedy under this warranty is limited to repair or replacement of the defective product.

The foregoing warranty is exclusive and in lieu of all other warranties or condition, written or oral, expressed or implied all of which are hereby disclaimed. There shall be no liability, for incidental, consequential or special damages, or any other damages, costs or expenses, excepting only the cost or expense of the replacement or repair.

Use only authorized parts and/or accessories. Any damage or malfunction caused by the use of unauthorized parts is not covered by the warranty.

No warranty is applicable on products not registered with DMI Engineering within the prescribed time and on the correct form.



MOTORISED OPENER FOR ROLL-UP TYPE GARAGE DOORS

Section 13: Data Sheets

FOR YOUR RECORDS

GEMINI MODEL 24V DC SYSTEM

Installation Date:.....Dealer Name:.....

Tel No: ().....Installer's Name.....

Unit Serial No:.....

Door Size: Height.....mm, Width:.....mm, Mass: ±.....kg

Remote Control Type:.....

UNIT SERVICE RECORD

Date	Fault	Parts Required	Invoice No.	Serviced By	Job No.



MOTORISED OPENER FOR ROLL-UP TYPE GARAGE DOORS

Section 15: Warranty Registration Form

WARRANTY REGISTRATION FORM

**GEMINI MODEL 24V DC SYSTEM
FOR VERTICAL TYPE ROLL-UP DOORS**

Name of User:.....

Date:.....

Postal Address:.....

.....Code.....

Telephone No: ().....

Fax No: ().....

Date of Installation:.....Serial No. of Unit.....

Are you satisfied with the service provided by your Dealer/Installer: YES / NO

Comments:.....

.....

For Office Use Only	
Date Received:.....	
File No:.....	

Please cut out and forward this Warranty Registration to: The Manufacturer PO Box 36776 Menlo Park 0102

