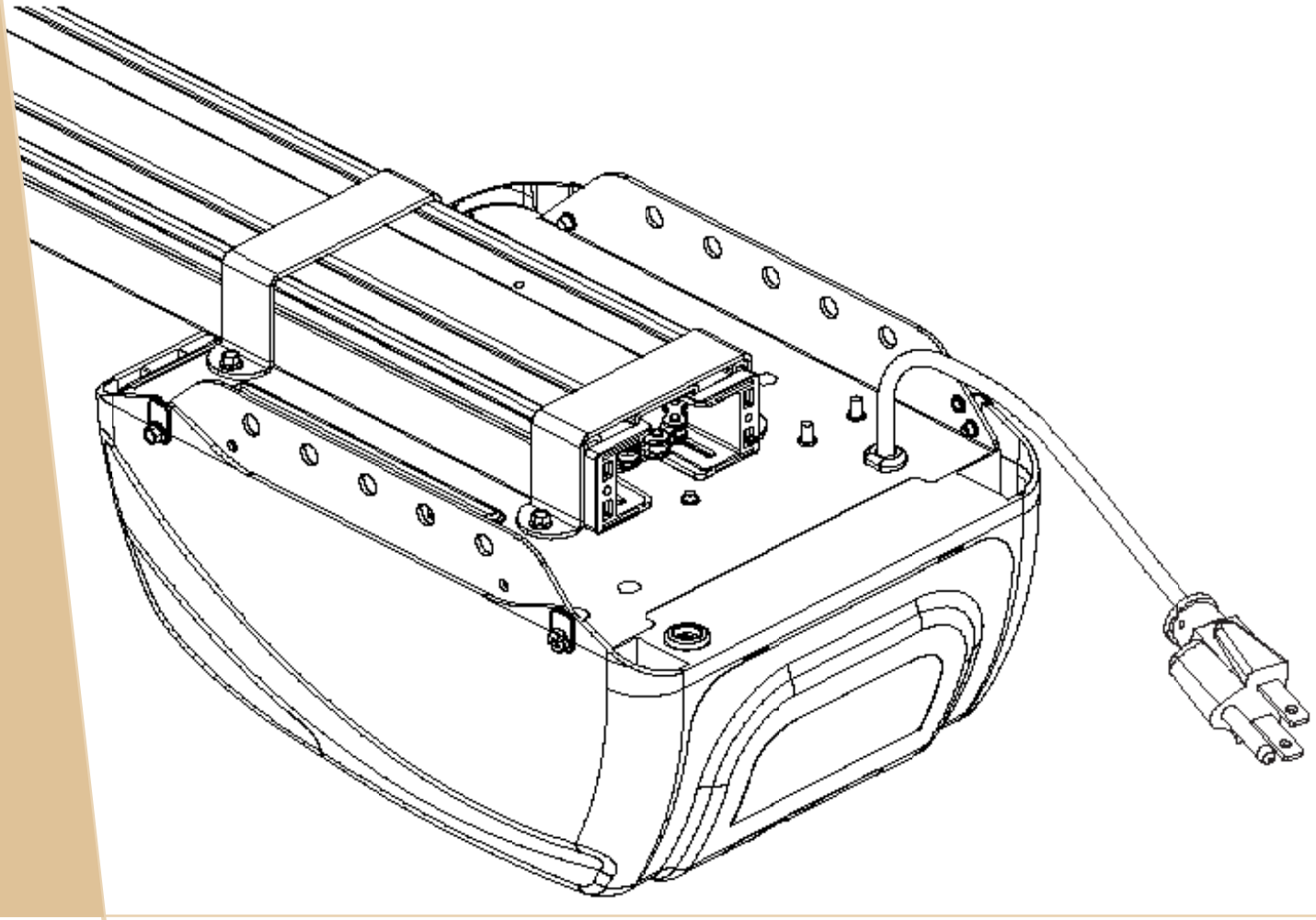
PA1000 - Overhead Garage Door Operator

Instruction Manual
(Notice D'exploitation)



FOR RESIDENTIAL USE ONLY

Part Number #40020
Model: PA1000V1
October 2011

WARNING: It is vital for the safety of persons to follow all instructions. Failure to comply with the installation instructions and the safety warnings may result in serious personal injury and/or property and remote control opener damage. Please save these instructions for future reference.

AVERTISSEMENT: pour la sécurité des usagers, il est essentiel de suivre toutes les instructions. Le non- respect des instructions d'installation et des avertissements de sécurité peut causer de graves blessures et/ou endommager l'appareil et la télécommande. Veuillez conserver ces instructions pour future référence.

To reduce the risk of electric shock, this equipment has a grounding type plug that has a third (grounding) pin. This plug will only fit into a grounding type outlet. If the plug does not fit into the outlet, contact a qualified electrician to install the proper outlet. Do not change the plug in any way.

Pour reduire les risques de choc electrique, cet appareil est quipe d'une fiche avec mise a la terre comportant une troisieme broche (broche deterre). Cette fiche ne peut etre branche que dans une prise avec mise a la terre. S'il n'est pas possible de la brancher dans la prise, faire poser une prise appropriee par un electricien qualifie. Ne pas modifier la fiche.

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PA1000V1 Overhead Garage Door Operator

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PA1000V1 Overhead Garage Door Operator

Safety Rules
(Les règles de la sécurité)
Please read these important safety rules

These safety alert symbols indicate a personal safety or property damage instruction exists. READ THESE INSTRUCTIONS CAREFULLY.

This automatic garage door operator 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 installation instructions and the safety warnings may result in death, serious personal injury and/or property damage.

CAUTION: If your 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.

Position the Garage Door Operator so that the power plug is accessible when inserted into the power outlet.

This opener should be installed in accordance with relevant US and Canada Standards.

Do not allow children to play with door controls.

Keep transmitters away from children.

Watch the moving door and keep people away until the door is completely opened or closed.

Activate the operator only when the garage door is in full view, free of obstructions and with the opener properly adjusted.

Keep the garage door balanced. Sticking or binding doors must be repaired. Garage doors, door springs, brackets and their hardware are under extreme tension and can cause serious personal injury. Do not attempt any garage door adjustment. Do not use if repair or adjustment is needed. Call for professional garage door service.

Install the wall transmitter in a location where the garage door is visible, but out of the reach of children at a height of at least 5 feet (1.53m).

Disconnect electric power to the garage door operator before removing covers.

Door must have Safety Beams fitted.

Do not wear rings, watches or loose clothing while installing or servicing a garage door operator.

This operator is not suitable for commercial, industrial or common entry applications.

To avoid serious personal injury from entanglement, remove all unnecessary ropes or chains and disable any equipment such as locks which are not needed for powered operation.

Installation and wiring must be in compliance with your local building and electrical codes. Connect the power cord only to properly earthed mains. If an extension lead must be used, make sure it is a 3-core lead and approved to 7 amp capacity.

To reduce the risk of electric shock, this equipment has a earthing type plug that has a third (earthing) pin. This plug will only fit into a earthing type outlet. If the plug does not fit into outlet, contact a qualified electrician to install the proper outlet. Do not change the plug in any way.

If the power cord is damaged, it must be replaced by the manufacturer, its service agent or a similarly qualified person in order to avoid a hazard.

This operator is a plug in domestic appliance and is designed for indoor use only. It must be installed in a dry position that is protected from the weather.

The opener is not intended for use by young children or infirm persons without supervision.

WARNING! It is vital for the safety of persons to follow all instructions. Save these instructions.

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System Specifications

Factory Default Settings

	Default	Step	Maximum
Maximum motor run time	30 Secs.	-	-
Courtesy light time	3 Mins. approx.	-	-
Obstruction force margin	2	1	14
Auto close time	30 Secs	-	-

Technical Specifications

Input Voltage	120Vac / 60Hz
Fuse (primary)	1.3A (slow blow)
Input power (max)	200 Watts
Standby power, less than	2 Watts
Transformer secondary output Voltage	24Vac
Motor type	24Vdc geared motor with permanent magnet
Shuttle travel distance in the C-Rail	9.19ft (2.8m) approximately (standard)
Maximum shuttle travel distance in the C-Rail	16.4ft (5m) (with extended C-Rail)
Maximum door area	177sq.ft (16.5 m^2)
Maximum door hanging weight	441lbs (200kg)
Receiver type	UHF Multifrequency FM-Receiver
Receiver code storage capacity	14 X 4 button transmitter codes
Transmitter frequency	433.47MHz; 433.92MHz; 434.37MHz
Coding type	TrioCode™
Number of code combinations	Over 4.29 billion random codes
Code generation	Nonlinear encryption algorithm
Remote control battery	CR2032 3 Volts
Courtesy light	2 LED Modules
Controller fuse	10A (slow blow)

NOTE: Intermittent operations may occur in areas which experience very strong winds. The strong wind puts extra pressure on the door and tracks which may in turn trigger the safety obstruction detection system intermittently.

About Your Operator

Thank you for choosing a PA1000 automatic garage door operator.

The technically advanced construction of this operator ensures you enjoy the following benefits:

Warranty
xxx (x) years / xxxx cycles full parts and labour warranty on motor, electronics and mechanical components of the operator when installed by a garage door professional (conditions such as annual garage door servicing apply).

TrioCode™ Frequency Hopping Technology
Every time a transmitter is used, it simultaneously sends a signal over three different frequencies, reducing the chance of interference from other radio frequency sources.

Code Hopping Technology
Every time a transmitter is used a new security code is generated from over 4.29 billion possible code combinations. This greatly enhances the security of the system and makes "code grabbing" a thing of the past!

Multi-Channel Transmitter
Multi-channel transmitters allow you to operate other devices such as an adjoining garage door or automated gate from the same handy unit.

Warranty Expired Indicator
The operator will indicate that the number of cycles covered by the warranty has been reached by flashing the courtesy light 10 times after each operation. This flashing will continue for 20 cycles unless it is reset by pressing the SET button while the courtesy light is flashing.

S-ALPS (Semi Automatic Limits Positioning System)
The S-ALPS system does away with manual adjustment of the door's limits position using mechanical parts, such as cams and microswitches.

Safety Reversing System
The automatic safety reverse system significantly reduces the risk of death or serious injury if trapped by a closing door. The safety reverse force can be adjusted for environmental conditions such as windy areas.

Safety Infra-Red Beam Protection
The Safety Beam is the infrared (IR) invisible light beam system which shall protect the doorway. The door stops and reverse to the full position if anything passes through the beam.

Soft Start/Soft Stop
The operator eases into and out of an operating cycle. This makes operation smoother and quieter and most importantly reduces wear and tear on the door and operator.

Courtesy Light
The courtesy light automatically switches on for approximately three (3) minutes when operating the door. This can also be programmed to turn on and off from a transmitter.

Memory Retention
In case of a power failure, the operator does not lose the transmitter codes or limit settings.

Soft Start/Soft Stop
The opener eases into and out of each cycle making for smoother and quieter operation, as well as reducing wear and tear on the door and operator.

Manual Release
The manual release handle allows the door to be operated by hand in the event of a power failure.

Self Locking
There is no need to manually lock your garage door, as the operator 'positively' locks the door when closed.

Periodic Maintenance Indicator
The SERVICE LED will illuminate to indicate that periodic maintenance is required. Contact your garage door professional for service.

Service Fault Indicator
Flashing LEDs on the control panel easily identify operational problems or service requirements.

Dynamic Door Profiling
Changing door characteristics are automatically compensated for and "learnt" with each operation of the door.

External Aerial
An external aerial can be connected for sites where radio reception is a problem.

Vacation Mode
A transmitter can be programmed to disable the garage door operator radio receiver. This is ideal if the door is to be left idle for prolonged periods.

Pet (Pedestrian) Mode
A transmitter can be programmed to open the door partially to allow pets access to the garage. The door opening height is adjustable via a handheld programmer.

Auxiliary Output
You can program a spare button on your transmitter to operate this output, which can control items that use a momentary close switching mechanism.

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Operating controls

01. Terminal is used to connect Vac to the control board.

02. 10 Amps fuse to protect the electronic circuit board.

03. This connector is used to connect Battery Charger SBC02 to the opener.

04. DC 24V motor connects to this connector.

05. Operate (blue) Button is used during installation to test the open, stop and close cycles for the opener. The opener has to be initialised by the Limit set button before the Operate Button becomes operable.

06. Plus (+) Green Button is used during installation to help set the open limit position. Pressing and holding this button will move the door in the open direction. Movement stops when the button is released.

07. Prog input is used to connect a PG-3 Programmer for editing functions, diagnostic purposes and accessing special features.

08. Open Limit (Green) LED illuminates and flashes when the door is opening and remains steady on when the open limit position has been reached.

09. Force Margin Set The obstruction force pressure is set automatically by the opener during installation. The pressure can be adjusted manually using the Force Margin Set Button. Holding the Force Margin Set Button and pressing the Plus (+) or Minus (-) Button will increase or decrease the amount of force. The force margin set is only ever used if other environmental factors (wind, etc..) Affect the operations of the door/opener.

10. Close Limit Red LED illuminates and flashes when the door is closing and remains steady on when the close limit position has been reached.

11. Minus (-) Red Code Set Button is used during installation to help set the close limit position. Pressing and holding this button will move the door in the close direction. Movement stops when the button is released.

12. Code Set LED light flashes when a code is being stored or when a transmitter button is pressed.

13. Limit set Button is used during the installation phase together with the open and close buttons to set the door limit positions. The Limit set button is also used to re-initialise the opener.

14. Service LED (yellow) indicates when the opener requires service or repairs.

15. Courtesy LED Light Module Connectors are used to connect +24V LED light modules.

16. Terminal Block **(J4):**

V+ (+35V/+24V) is used to power Accessories such as external receiver (200mA max).
EB1 (mandatory) input is used to connect to Safety Beam.
0V is a 0 volt connection for Safety Beam.
EB2 input is used to connect to Safety Beam.
0V is a 0 volt connection for Safety Beam.
OSC (Operate) is used for the connection of a wired switch (momentary contact). This switch can then be used to open, stop or close the door. Install the wall switch in a location where the switch is out of reach of children and the garage door is visible.
AUX allows the opener to operate other devices such as an alarm system.

Operating controls

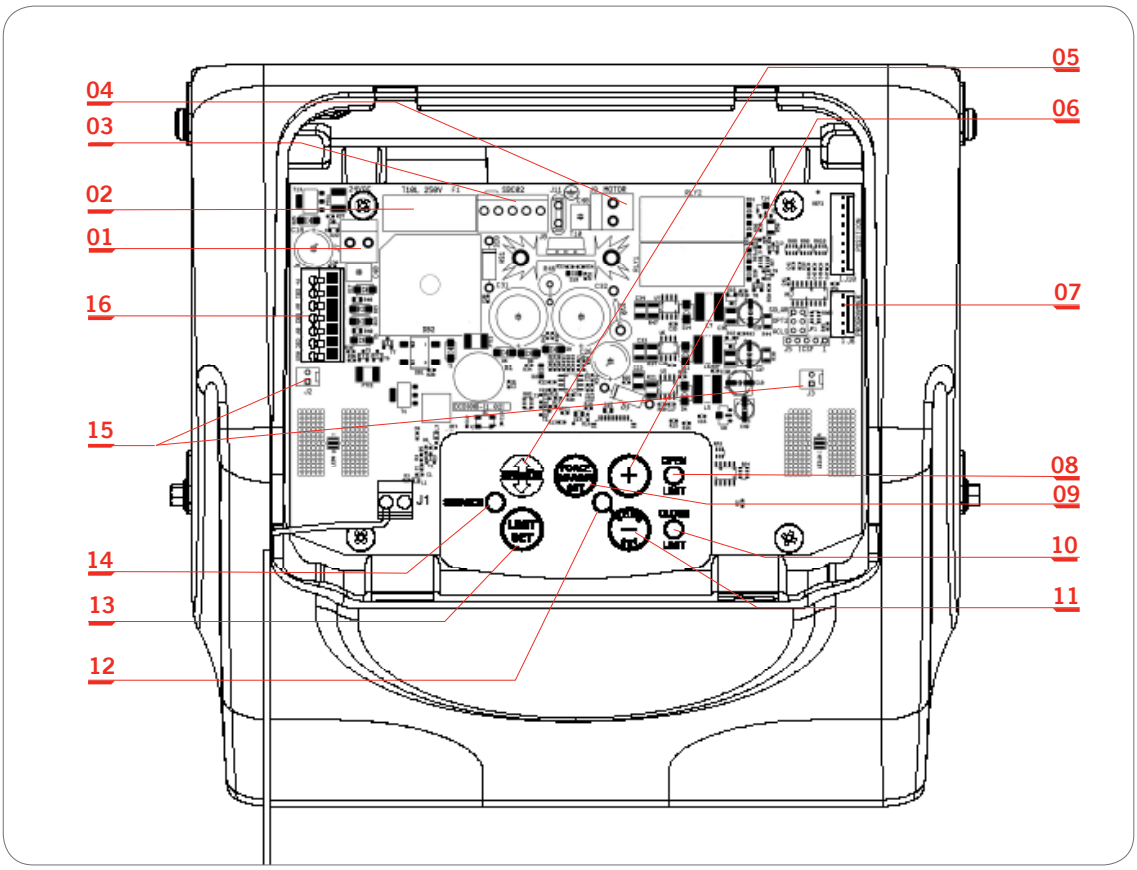

Fig.01

01. 24V power input connector.
02. 10Amp fuse.
03. SBC02 Battery Backup Connector
04. Motor connector
05. **OPERATE** (Blue) button
06. Plus (+) (Green) button
07. PG-3 Programmer connector
08. Open Limit LED
09. **FORCE MARGIN SET** Button
10. Close Limit LED
11. Minus (-) (Red) **CODE SET** button
12. Code Set LED
13. **LIMIT SET** Button
14. Service LED
15. Courtesy light module Connectors
16. Accessories (J4) Connector

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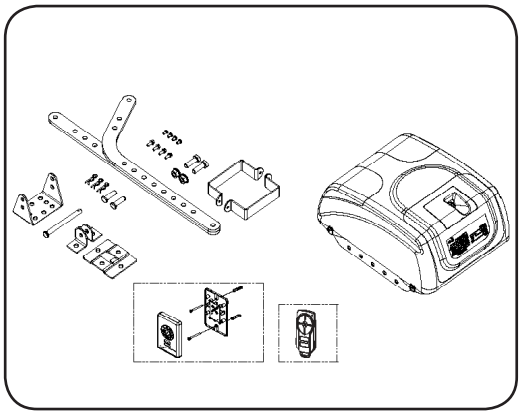
Kit contents:

Fig.02

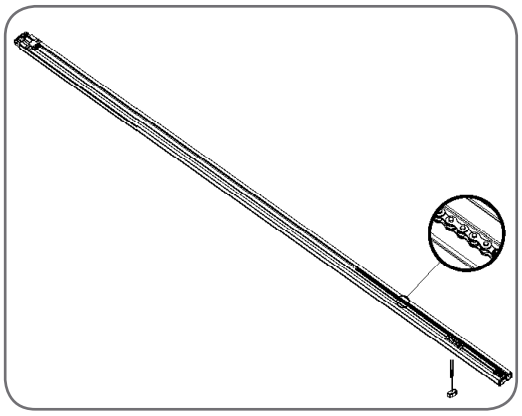


Powerhead Drive Unit Kit (Fig.02).

1 X PA1000 drive unit;
1 X Handheld Transmitter with battery;
1 X Wall mount Transmitter with battery;
2 X Door attachment arms;
1 X Accessory and hardware pack.

PLUS

Fig.03



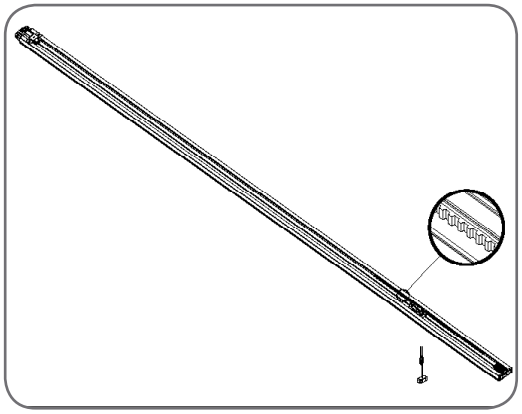
Single Piece Track With Pre-Assembled Chain (Fig.03)

NOTE: Chain in one piece rail has been tensioned by the factory. Do not adjust the tension of the chain.

IMPORTANT NOTE: If modification to the track length required, adjustment must be made only from power head End.

OR

Fig.04



Single Piece Track With Pre-Assembled Timing Belt (Fig.04)

NOTE: Timing belt in one piece rail has been tensioned by the factory. Do not adjust the tension of the timing belt.

IMPORTANT NOTE: If modification to the track length required, adjustment must be made only from power head End.

Kit contents:

OR

Multi-Piece Knockdown Track with Pre-Assembled Chain (Fig.05)

IMPORTANT NOTE: If modification to the track length required, adjustment must be made only from power head End.

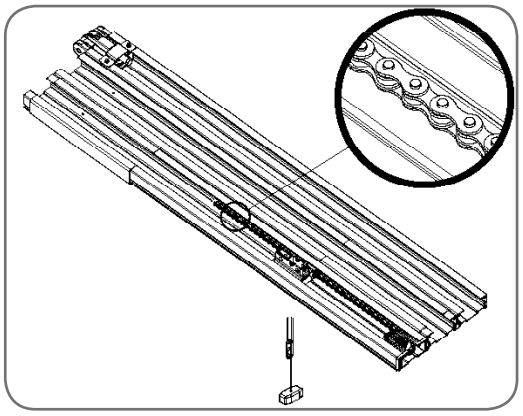


Fig.05

OR

Multi-Piece Knockdown Track With Pre-Assembled Timing Belt (Fig.06)

IMPORTANT NOTE: If modification to the track length required, adjustment must be made only from power head End.

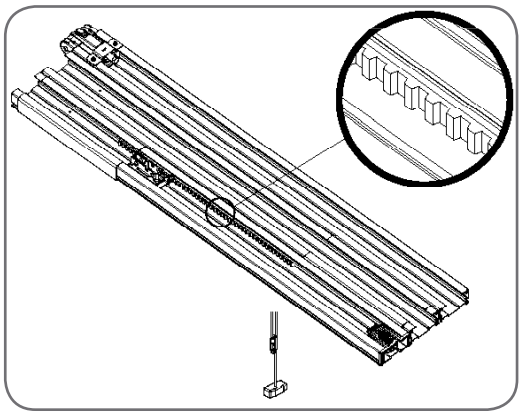


Fig.06

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Knockdown C-Rail Assembly

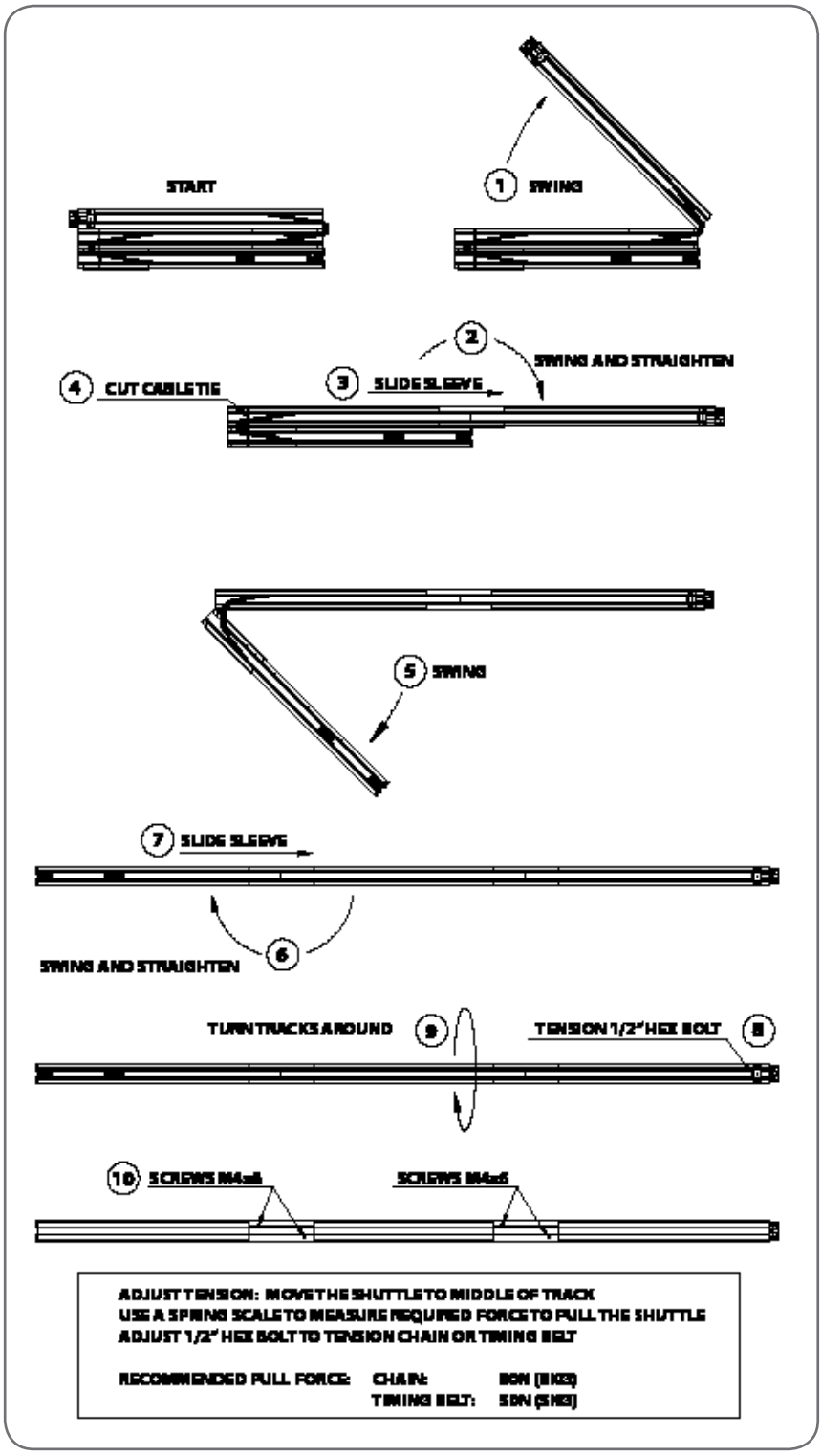

Fig.07

Step 1
Unpack and assemble the C-Rail as shown above in **Fig.07**.

C-Rail Assembly

Step 2
Locate and insert the shaft of drive unit into sprocket as shown in **Fig.08**.

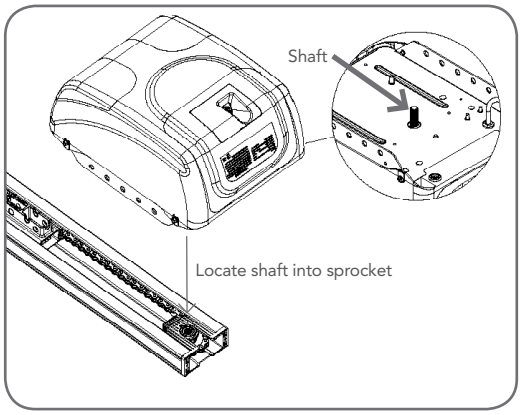

Fig.08

Step 3
Fix the two track brackets with four screws supplied in accessory pack as shown in **Fig.09**.

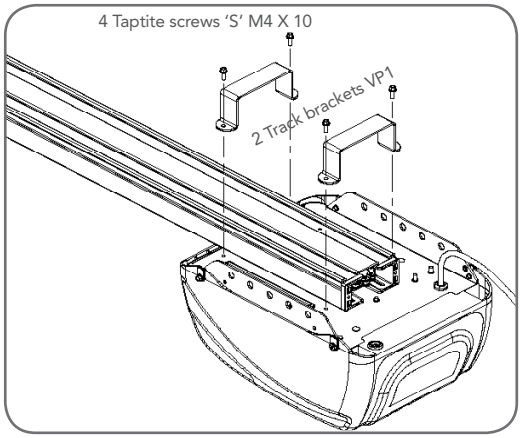

Fig.09

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Mounting Operator for a Track Type Door

Fig.10

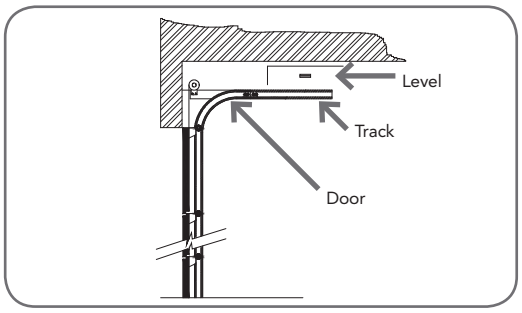


Fig.11

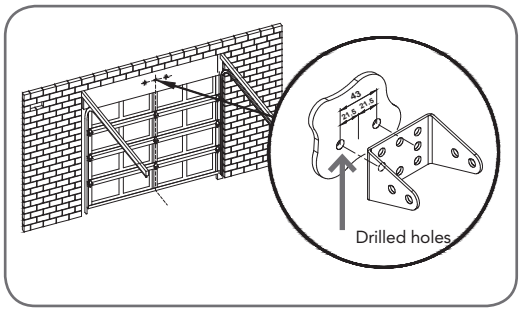


Fig.12

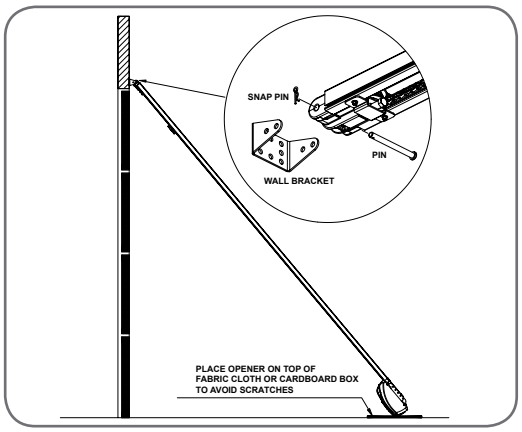
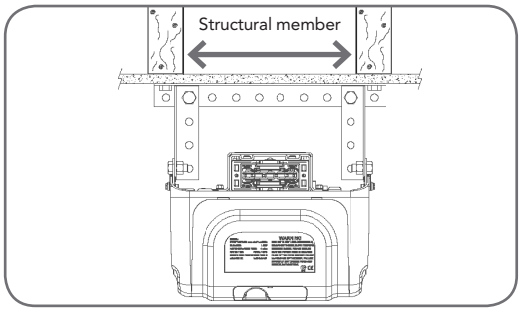


Fig.13



Step 4 - Determine Bracket Position

Open the door and find the highest point of travel of the top door panel. Using a level, transfer this height to the wall above the door (**Fig 10**) and mark a line 0.197" (60mm) above it.

Determine the centre point on the wall above and on top of the door. Then draw two lines 0.0705" (21.5mm) on each side of the centre point (**Fig.11**).

Step 5 - Mounting the Wall Bracket

The wall bracket should be mounted 0.197" (60mm) above highest point of the doors travel, 0.0705" (21.5mm) from the centre point (**Fig.11**).

If the wall bracket is mounted onto concrete or brick wall, use 8mm or 5/6 loxins or dynabolts. If mounting onto wooden lintel or beam, use wood screw #20 or equivalent (minimum 1.97" (50mm) long).

WARNING: Make sure concrete, brick wall or timber lintels are solid and sound so as to form a secure mounting platform.

Step 6 - Attach the C-Rail to the Wall Bracket

When the wall bracket is firmly secured in its proper position, attach the C-Rail support assembly to wall bracket with 0.295" (90mm) long clevis pin and secure with supplied snap pin (**Fig.12**).
Leave the drive unit in its packing box for protection during installation.

Step 7 - Securing the Powerhead to the Ceiling

Raise the drive unit from the packing box and support it in a horizontal position with a step ladder, then open the garage door. Rest the operator on the open door and use a scrap piece of wood to bring it to horizontal level. Line up the track perpendicular to the wall.
Secure the perforated angle (not supplied) to the ceiling above where drive unit mounting holes will be once fully installed (**Fig.13**).
Connect angle and drive unit with two flat perforated strips of angle (not supplied) with M8 x 20mm screws, and nuts. Strips should not extend more than 0.059" (18mm) below centre of drive unit mounting holes (**Fig 13**).

For an alternative mounting option go to **Step 8** Page 15.

WARNING: The operator must be securely fastened to a structural support of the garage. Failure to fasten the operator correctly may lead to operator failure causing serious personal injury and/or property damage.

Mounting Door Bracket and Arms

Step 8 - Alternative Mounting Option

The operator can be fastened to the roof by drilling a hole in the centre of the C-Rail and driving a bolt through it into structural timber support. The height of bolt head must not exceed 0.24" (6mm) (**Fig.14**).

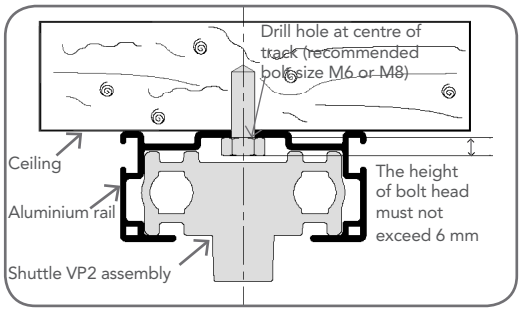


Fig.14

Mounting door bracket and arms

Step 9 - Mounting Door Bracket

The door bracket comes in two parts. The bottom plate with two mounting holes is used on its own for any one piece doors. The top plate is placed over the bottom plate and uses 4 mounting holes for extra strength. This is used on sectional doors (**Fig.15**).
Mount the door bracket to the centre line of the door, 1/3 panel down (**Fig.15**) using M6 or equivalent screws (not supplied) alternatively it can be welded on steel doors.

NOTE: As various types of doors exist, if in doubt about the strength of the door, reinforcement may need to be added to the frame of the door panel where necessary. Damage to the door panel may occur if the bracket is installed incorrectly on a panel with insufficient strength. The door operator warranty does not cover damage caused by the operator to the door and/or door panel.

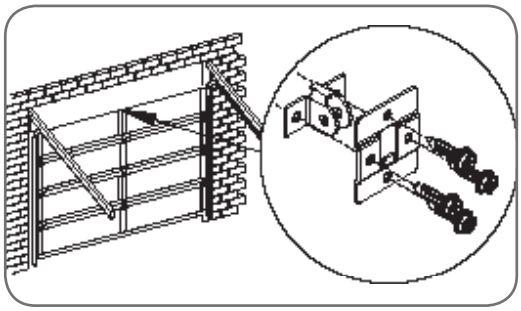


Fig.15

Step 14 - Attaching the Arms

Assemble bent and straight arms (as shown in **Fig.16**) with bolts and nuts supplied in accessory pack. Then connect assembled arm to the door bracket and the trolley by clevis pin and snap pin. Trolley must be in disengage position. Always use both the bent and straight arm.
The angle "A" must not be less than 10 degrees (See **Fig. 16**).

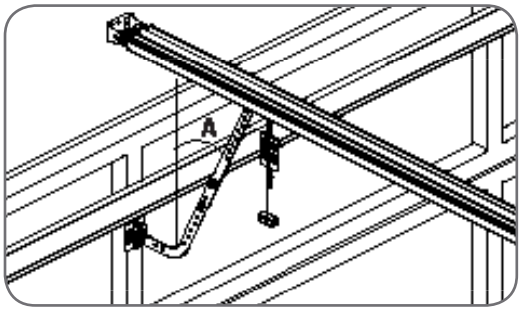


Fig.16

WARNING: connecting the bent arm other way around may damage the door.

IMPORTANT NOTE: If the manual release handle is more than 5.91ft (1.8 meters) from floor level when the operator is installed, extend the handle to a height less than 5.91ft (1.8 meters).

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Safety Beam Installation

Fig.17

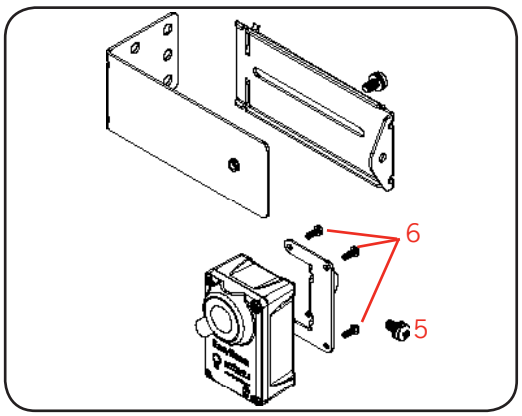


Fig.18

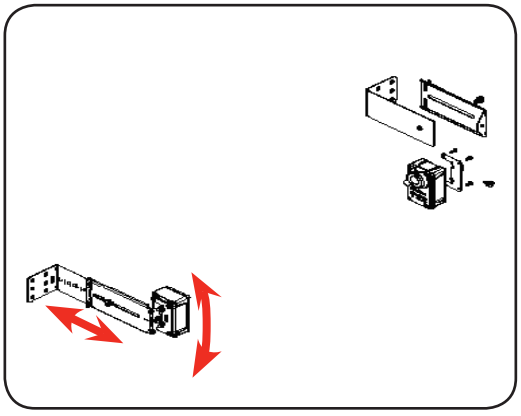
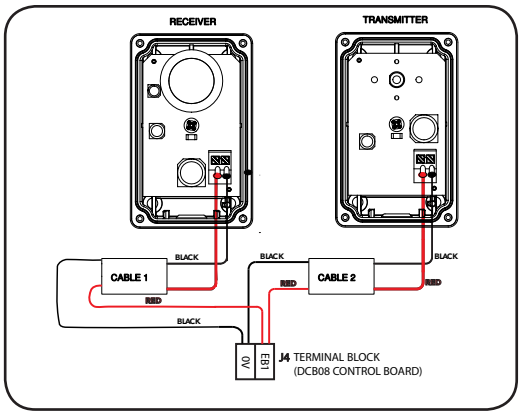


Fig.19



IMPORTANT NOTE: The Safety Beam must be installed and connected before the travel limits are set.

Step 15 - Safety Infra-Red Beam

A Safety Beam extends across the door opening. This Safety Beam is designed to detect an obstruction while the door is closing and to send a signal to the door operator to reverse or stop the door movement.

Step 15.1 - Fitting the Safety Beam

a. Attach the mounting bracket (4) to the adjustment bracket (3) with the pan head screw (5) (supplied). (**Fig. 17**).
b. Attach the bracket (2) to the Safety Beam transmitter (PE3-V1-TX) (1) with four taptite screws (6) (M3x5) and attach the other side to the adjustment bracket (3) with the pan head screw (5) (supplied).
c. Repeat steps "a" and "b" to assemble the Safety Beam (PE3-V1-RX) receiver.
d. Locate the Safety Beam in a strategic location in the door opening. **We recommends** that the sensor is placed no higher than 6" and no lower than 5"above the floor level. Connect as per the wiring diagram **(Fig. 19)**.

Step 15.2 - Alignment

a. Power up the PA1000 with the Safety Beam connected. The green LED of the transmitter should be ON to indicate that power is present.
b. If the receiver is connected properly and the red LED is flashing while the green LED of the transmitter is ON, the transmitter and/or receiver are not aligned.
c. Make horizontal and/or vertical adjustment **(Fig. 18)** on the transmitter and/or receiver until the red LED of the receiver turns steady on, indicating alignment.

WARNING: When the Safety Beam is fitted, the doorway must be clear of all obstructions and persons at all times. The location of the beams and manner in which it is installed might not give safety protection at all times. Check to make sure that the height of the beam and type used give maximum protection possible.

WARNING: Install the Safety Beam as per diagram in **Fig. 19**. Tampering with the Safety Beam could result in serious personal injury and/or property damage and will void the warranty.

Setting Speed and Limits

Step 16 - Setting Speed Mode

The default speed of the operator has been set to suit the majority of applications. However, there are 3 speed modes available if required:

1. SLOW - suits one piece door without tracks.
2. MEDIUM (default) - suits majority of applications.
3. FAST - suits some special applications.

The speed settings can only be changed before setting the travel limits. If the operator speed needs to be changed, please complete the following steps below. If medium (default) mode is appropriate skip straight to **Step 17.1** (Setting Travel Limits). Pressing the OPERATE button will cycle through all three speed modes. To change the speed setting, use the following steps:

a. Engage the C-Rail's trolley (attached to the door via the arms) with the chain index by moving the door.
b. If the trolley does not "click" firmly onto the chain index, ensure that the manual release cord is not in the disengaged position by pulling it backwards.
c. Turn on the power to the operator. The **Close Limit LED** will be flashing.
d. Remove the buttons cover with a blade screwdriver **(Fig. 20)**.
e. Press the **OPERATE** button once, twice or three time to select **SLOW**, **MEDIUM** or **FAST** speed mode.

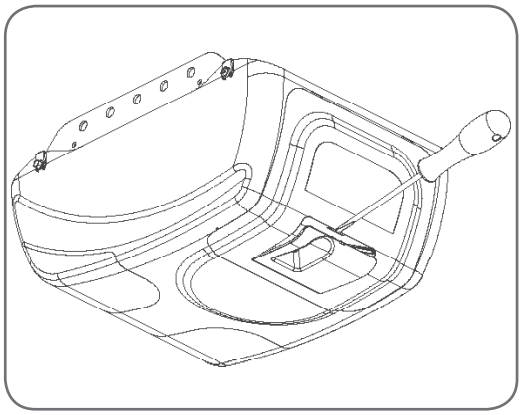


Fig.20

Door Opener Speed Mode	Open LED (green) status	Open LED (red) status	Beeper
Medium (Default)	ON	ON	ON
Fast	ON	OFF	ON
Slow	OFF	ON	OFF

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Setting Speed and Limits

Fig.21

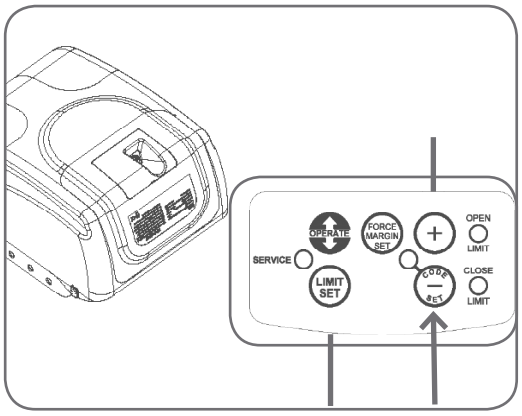
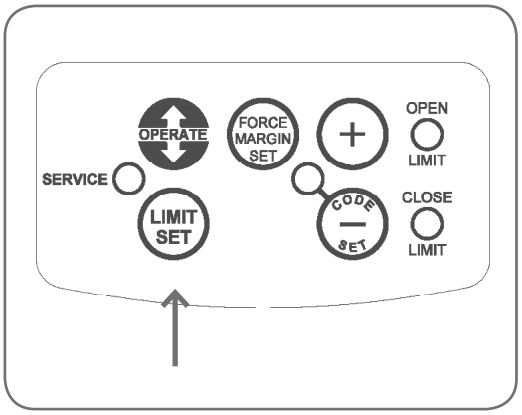


Fig.22



IMPORTANT NOTE: The operate button will not function until the open and close limits positions are set.

Step 17 - Setting Travel Limits

NOTE: The door and shuttle must be engaged into the chain/belt index. The door should be open approximately half way.

Remove the controls cover (**Fig.20**) to access the controls panel and place it back when finish programming.

17.1 - Setting Limits Positions (Fig.21)

1. Press red Minus (**-**) Button and hold it, the door will start closing. Release the button once when the door has reached your desired closed limit position.
2. Press the limit set button. This action will store into memory the closed limit position.
3. Press the green Plus (**+**) Button and hold it, the door will start opening. Release the button once when the door has reached your desired open limit position.
4. Read the **WARNING** below.

IMPORTANT WARNING: Please be aware that the garage door will start closing automatically once Step 4 is performed. The door will also automatically re-open after fully closing with a small pause between the cycles.

5. Press the Limit set button. This action will store into memory the door limit position. The door will now automatically close to its limit position then fully open to calculate the safety obstruction forces. **Please be aware of the above warning.**

The door operator can now be operated via the **OPERATE** button.

17.2 Resetting Door Limit Positions (Fig.22)

The door travel limit positions can be deleted for new positions by the following steps below:

1. Press and hold Limit set button for six (6) seconds until you hear three beeps and the red Close Limit LED starts to flash.
2. Release the button.
3. Follow **Step 17.1** to set new travel limit positions.

Testing Safety Obstruction Force

CAUTION: Please take care when testing the safety obstruction force. Excessive force may cause serious personal injury and/or property damage can result from failure to follow this warning.

18.1 - Testing the Close Cycle

1. Press the OPERATE button to open the door (**Fig.23**).
2. Place an object approximately 1-1/2"(38mm) high (or a 2"x 4" board laid flat) on the floor under center of garage door opening (**Fig.24**).
3. Press the OPERATE button to close the door.
4. When door contacts the object, the door must stop (within 2 seconds) and reverse to open position.

If the door does not properly reverse.

- Check the "close" limit position. It should not have reached its "close" limit before hitting board.
- If the door STOPS but does not reverse, decrease FORCE (refer to **Step 18.4**).

18.2 - Testing the Open Cycle

1. Press the OPERATE button to close the door (**Fig.23**).
2. Press again to open the door. When the door is reaching half of the opening distance, grab the bottom rail of the door firmly, the door should stop.

If the door does not stop when opening, the force may be excessive and need adjusting, refer to **Step 18.4**.

IMPORTANT WARNING: If the door is closing and is unable to re-open when obstructed, discontinue use. Do not use a door with faulty obstruction sensing. Repair fault and re-test before using.

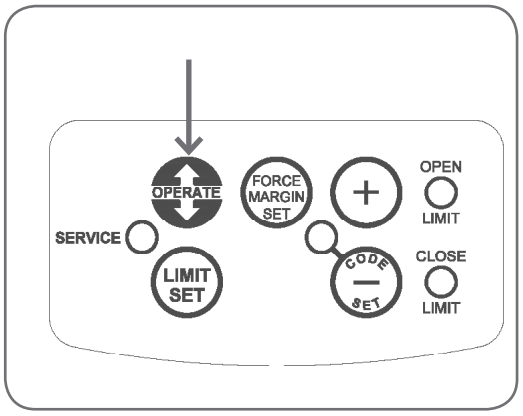


Fig.23

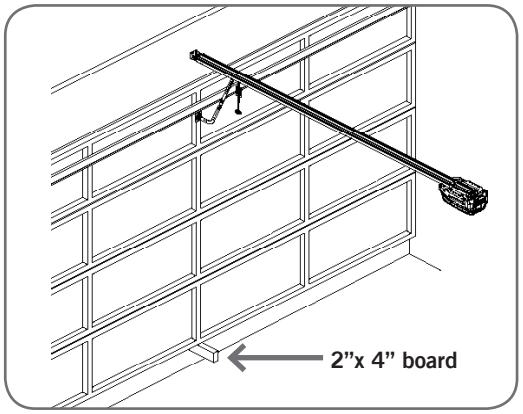


Fig.24

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Setting Safety Obstruction Force

Fig.25

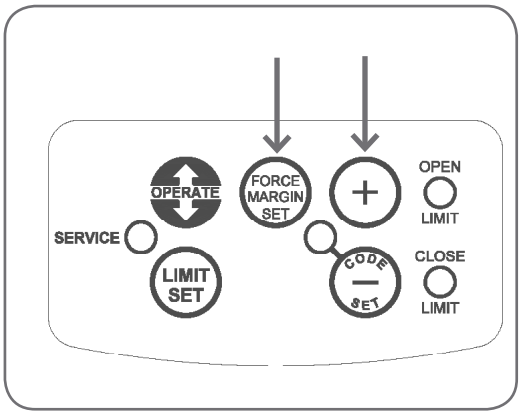


Fig.26

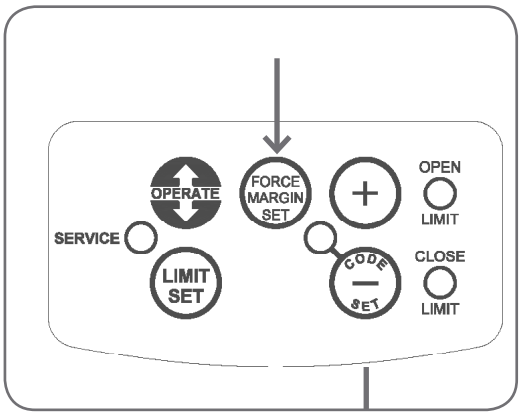
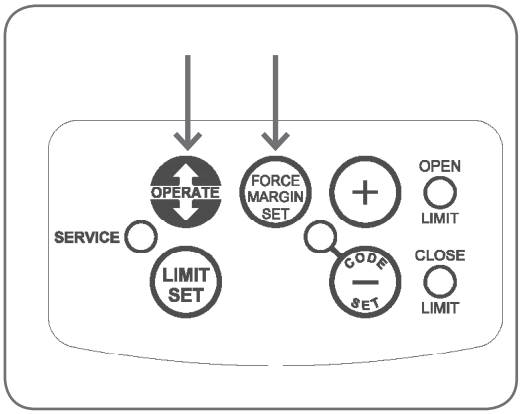


Fig.27



Adjusting Safety Obstruction Force

The safety obstruction force is calculated automatically and set in memory on the operator. It is usually not necessary to adjust the safety obstruction force. The only time the force may need to be increased is due to environmental conditions, for example, windy or dusty areas, and areas with extreme temperature changes.

WARNING: Safety Beam must be installed if the closing force as measured at the bottom edge of the door exceed 200N (20kg).

18.3 To Increase Force Pressure (Fig.25)

1. Press and hold the FORCE MARGIN SET button.
2. While holding down the FORCE MARGIN SET button, press the Plus (**+**) button. Each press increases the force margin.
3. The Open Limit LED will flash each time the plus button is pressed to indicate an increase in force.
4. If the Open Limit LED flashes continuously when the plus button is being pressed, this indicates that the maximum force pressure setting has been reached.
5. Test the force again as per **Step 17.1** and **17.2** above.

18.4 To Decrease Force Pressure (Fig.26)

1. Press and hold the FORCE MARGIN SET button.
2. While holding down the FORCE MARGIN SET button, press the Minus (**-**) Button. Each press decreases the force margin. The Close Limit LED will flash each time the minus button is pressed.
3. If the Close Limit LED flashes continuously when the minus button is being pressed, this indicates that the minimum force pressure setting has been reached.
4. Test the force again as per **Step 18.1** and **18.2** above.

18.5 To Recall Factory Set Force

1. While holding down the FORCE MARGIN SET button, press the LIMIT SET button (**Fig.27**) for two seconds.
2. Release both buttons. The default setting should now be recalled.

Coding Transmitters

Step 19 - Setting Transmitters Codes

The garage door operator can only operate from remote control transmitters that have been programmed into the opener's receiver. The receiver needs to learn the codes of any remote control transmitter that will be used with the operator. Up to 14 codes can be stored in the receivers memory.

19.1 - Storing the Transmitters Code (Fig.28)

1. Make sure that the battery is inserted in the handheld (or wall) transmitter.
2. Press the CODE SET button on the operator, the CODE SET LED will illuminate to indicate that the opener is in Code Learn mode. If a valid code is not stored within 15 seconds the opener will exit Code Learn.
3. Press the transmitter button (one of four) that you want to control the door for two seconds. The CODE SET LED will begin to flash.
4. Press and release the same transmitter button again. The CODE SET LED will illuminate for one second and then go out.
5. The transmitter is now coded to operate the door. Press that button to test.

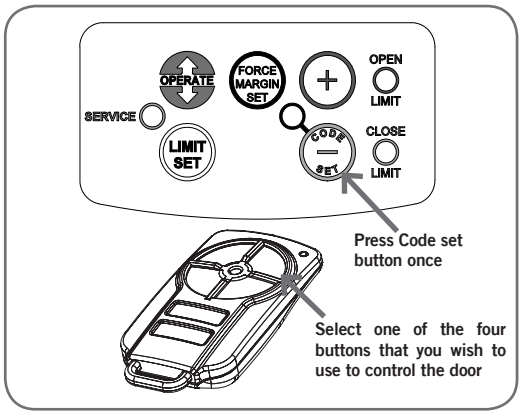


Fig.28

19.2 - Setting the Transmitter to Operate the Courtesy Light (Fig.29)

Although the courtesy light comes on with each operation of the operator, it may also be controlled (ON/OFF) by a transmitter without operating the door.

1. Press CODE SET button twice. The CODE SET LED will start illuminate and the courtesy light will turn on to indicate that the light code learning is active.
2. Choose a transmitter button, which is not already coded into the receiver. Press this button for two seconds and CODE SET LED will begin to flash.
3. Press the same transmitter button again. The CODE SET LED will illuminate for one second and then go out.
4. The transmitter is now coded to operate the light. Press that button to test.

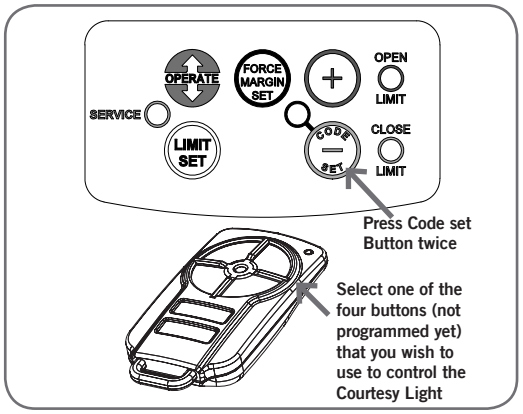


Fig.29

Transmitters Compliance Statement

Transmitters comply with all United States and Canadian legal requirements as of the date of manufacture. To comply with FCC Part 15 and or RSS 210 of Industry Canada (IC) rules, adjustment or modifications of this receiver and / or transmitter are prohibited, except for changing the code setting or replacing the battery. THERE ARE NO OTHER USER SERVICEABLE PARTS. Tested to Comply with FCC Standard FOR HOME OR OFFICE USE. Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

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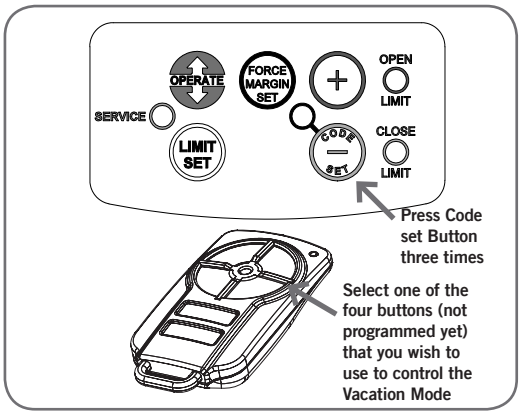
Coding Transmitters

Fig.30

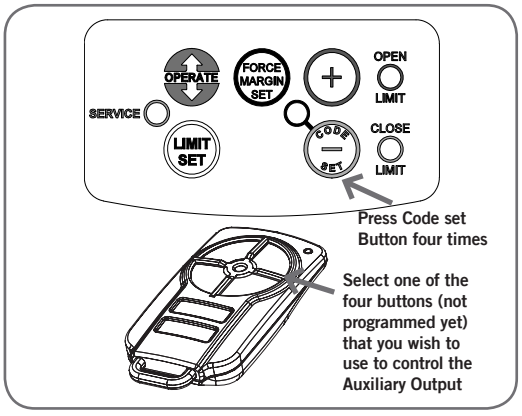


19.3. Setting the Transmitter to Operate Vacation Mode

The opener can be programmed into a "Vacation Mode" where the operator will not respond to any transmitter except one programmed unit.

1. Press CODE SET button three times. The CODE SET LED will illuminate and the courtesy light will flash slowly (once every two seconds) to indicate Vacation learning mode is active.
2. Choose a transmitter button that is not already coded into the receiver. Press this button for two seconds and the CODE SET LED will begin to flash.
3. Press the same transmitter button again. The CODE SET LED will illuminate for one second and then go out, and the courtesy light will also switch off. This indicates that the code has been stored.
4. To activate the Vacation Mode facility, close the garage door and press the coded transmitter button for 5 seconds. The CODE SET LED will illuminate to indicate that the operator is in "Vacation Mode".
5. To exit "Vacation Mode", press the transmitter button momentarily until the CODE SET LED turns off.

Fig.31



19.4. Setting the Transmitter to Operate Auxiliary Output (Fig.31)

It is possible to operate other devices (e.g. alarm systems) using one of the spare buttons of a multi-channel transmitter coded into the Auxiliary Output feature.

1. Press CODE SET button four times. The CODE SET LED will illuminate and the courtesy light will flash quickly (twice per second) to indicate that learning mode for the "Auxiliary Output" is active.
2. Choose a transmitter button that is not already coded into the receiver. Press this button for two seconds and the CODE SET LED will begin to flash.
3. Press the same transmitter button again. The CODE SET LED will illuminate for one second and then do out, and the courtesy light will also switch off. This indicates that the code has been stored.

NOTE: *This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encourage to try to correct the interference by one or more of the following measures:*

- *Reorient or relocate the receiving antenna*
- *Increase the separation between the equipment and receiver*
- *Connect the equipment into an outlet on a circuit different from that to which the receiver is connected*
- *Consult your local dealer or an experienced radio/TV technician for help.*

Coding Transmitters

19.5 - Setting the Transmitter to Operate Pet (Pedestrian) Mode (Fig.32)

The opener can be programmed into a "Pet Mode" where the door opens partially to allow pet to enter/exit the garage.

1. Press CODE SET button five times. The CODE SET LED will illuminate and the courtesy light will flash quickly (twice per second) to indicate that the learning mode for "Pet Mode" is active.
2. Choose a transmitter button that is not already coded into the receiver. Press this button for two seconds and the CODE SET LED will begin to flash.
3. Press the same transmitter button again. The CODE SET LED will illuminate and then go out, and the courtesy light will also switch off. This indicates that the code has been stored.

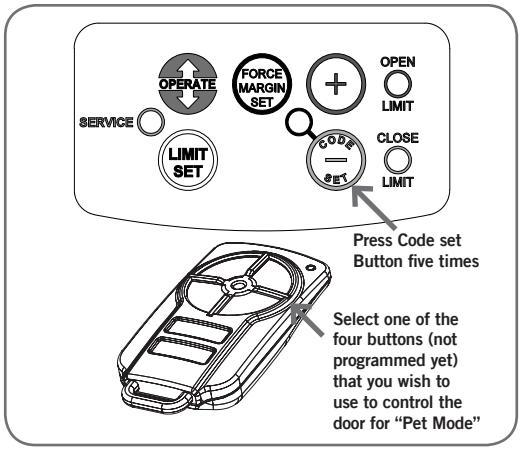


Fig.32

19.6- To Erase Programmed Codes (Fig.33)

If the Code Set button is pressed and held on for 6 seconds, the LED will blink rapidly for one second to indicate that all programmed codes have been erased.

WARNING: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

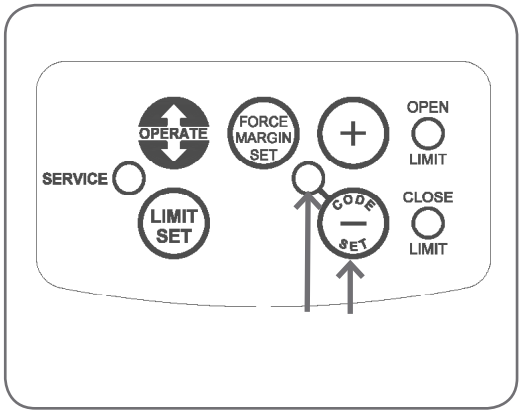


Fig.33

19.7 Installation of Wall Mounted Transmitter (Fig.34)

IMPORTANT WARNING: Locate the Wall Mounted Transmitter:

- **Within sight of door.**
- **At minimum height of 5 feet so shall children are not able to reach it, and**
- **Away from moving parts of the door.**

To set the transmitter codes refer to **Step 19.1**.

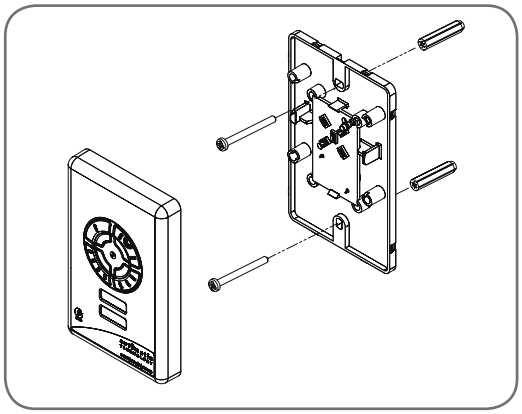


Fig.34

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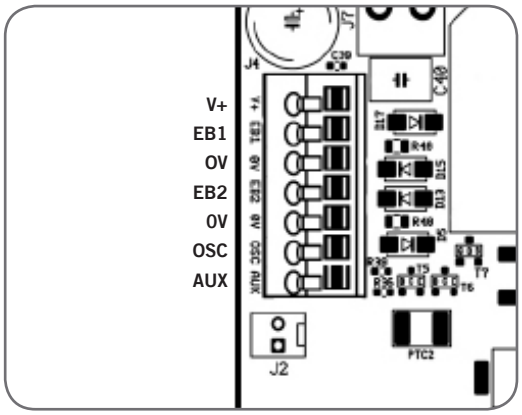
Accessories

Fig.35



Terminal Block

A variety of wired accessory items can be connected to the terminal block **J4** such as Safety Beam, Electric Key Switch and more **(Fig. 35)**.
Terminal connections from top down are as follows:

1. **V+** (+35V/+24V);
2. **EB1** (Safety Beam input, mandatory);
3. **0V** (0V for Safety Beam);
4. **EB2** (Safety Beam input);
5. **0V** (Common ground for accessories and Safety Beam);
6. **OSC** (Open/Stop/Close trigger)
7. **AUX OUT** (Auxiliary output trigger)

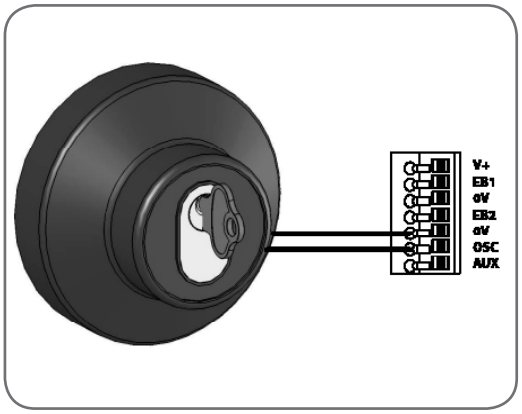
Remote Aerial (optional)

Some sites can cause poor radio reception, i.e. wherever there is a large mass of metal like all steel garages or underground car parks (large masses of steel reinforced concrete). Metal mass can cause the radio signal to be reduced.
Poor radio reception will be noticed by a reduction in the operating range of the remote control transmitters used for this garage door operator.
You can test to evaluate if fitting an external aerial will benefit as follows:

- test the maximum operating range of the remote control transmitter with the garage door closed; then
- test the maximum operating range of the remote control transmitter with the garage door open.

If the range is improved with the door open then you can install a remote aerial kit to improve the radio reception.
Mount the aerial to a suitable location on the outside of the garage. The radio receiver in your garage door operator is similar to the receiver in your television set; the better the position of the aerial, 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 to the position where you would normally operate your remote control transmitter.

Fig.36



Wired Wall Switch/Electric Key Switch (optional)

A wired wall switch or electric key switch can be connected to the operator as an alternative to using the remote control transmitter. The electric key switch (**Fig.36**) also acts as an external release mechanism which is ideal if your garage does not have a pedestrian door.
To connect the switch to the operator's terminal block refer to **Fig.36**.
The switch behaves just like a remote control transmitter: each turn of the key will cycle through an open - stop - close function.

NOTE: Please refer to the Electric Key Switch/Release unit's instruction sheet for installation procedure.

Battery Backup Installation (Optional)

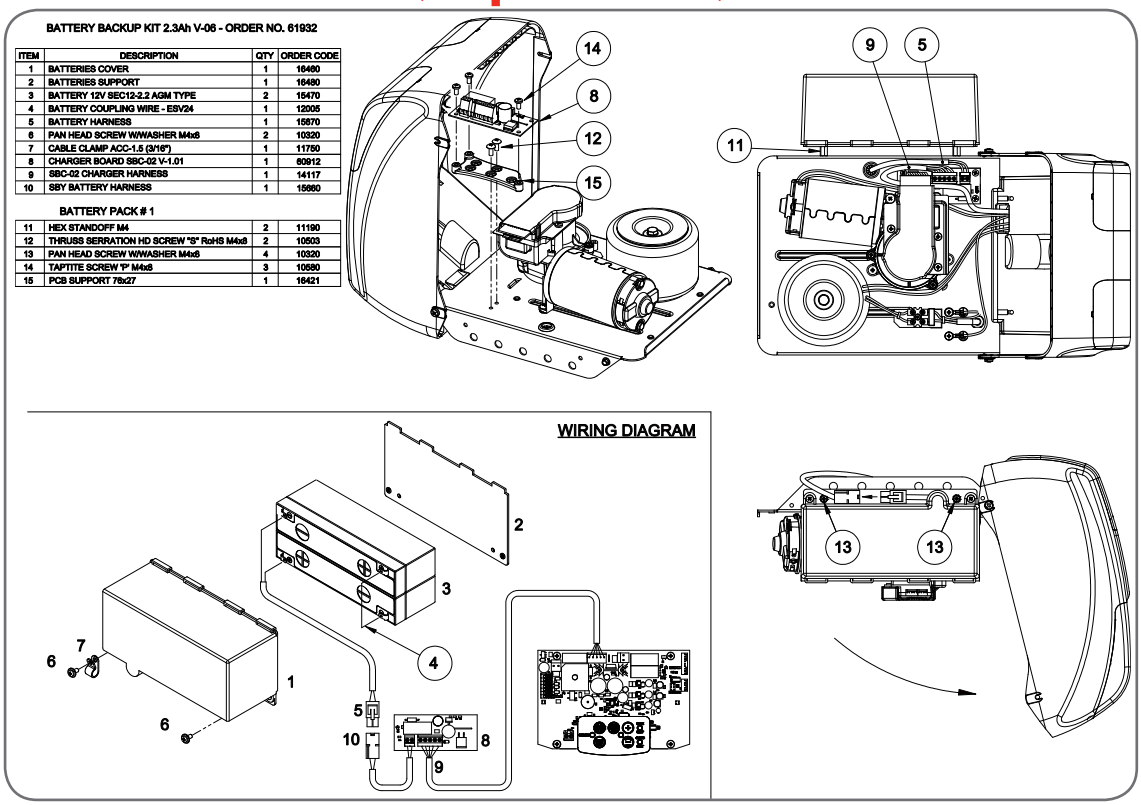


Fig. 37

Battery Back Up (optional)

The operator has provision for a Battery Back Up kit that allows continued operation of the door in the absence of mains power.

Installation

1. Disconnect power to the operator.
2. Remove screws and swing open the cover **(Fig 37).**
3. Mount the PCB support with two screws item # 12. Secure the SBCO-2 Charger Board onto the PCB support with three (3) screws item #14.
4. Feed the 2-wire battery harness item # 5 through the grommet on the base plate and connect to SBCO-2 battery charger board.
5. Feed charger harness from SBCO-2 battery charger board to the control board and plug onto the 5 pin connector marked "SBCO-2" on the control board.
6. Mount Battery Backup and secure with item 11 and 13.
7. Connect item 5 and 10 together **(Fig 37).**
8. Reconnect power.

WARNING: After the next step the operator may become active (even when power is off) due to a residual charge in the batteries.

Testing Battery Back Up

1. Press either the OPERATE button or transmitter to activate the operator.
2. Whilst the door is in motion disconnect mains power - the operator should continue to operate.

NOTE: Wait for the door to complete its travel before proceeding to the next step

3. Press either the OPERATE button or transmitter to activate the opener.
4. Whilst the door is in motion re-connect power. The door should complete the cycle as normal.

Troubleshooting

If door stops or moves very slowly under battery power, then the batteries may have little to no charge.

To remedy this connect mains power and leave the batteries to charge. The batteries may take 24 to 48 hours to reach their maximum charge capacity.

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How to Use Your Operator

For maximum efficiency of your operator, your garage door must be in good operating condition.

An annual service of your garage door by an authorised dealer is recommended.

CAUTION: Activate the operator only when the door is in full view, free of obstructions and with the operator properly adjusted. No one should enter or leave the garage while the door is in motion. Do not allow children to play near the door.

WARNING: This opener is a mains voltage plug in domestic appliance and there are no user serviceable parts inside this operator.

Remote Control Transmitter

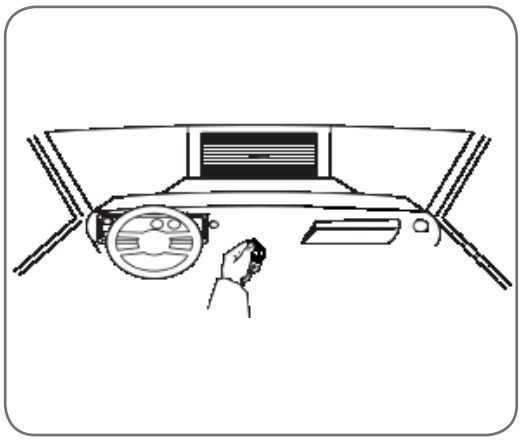

Fig.38

- To operate the garage door operator, press the programmed button of the remote control transmitter until your door begins to move (usually 2 seconds). Make sure you can see the door when you use the remote control transmitter.
- If you are in a vehicle you should aim the remote control transmitter through your windscreen. If your remote control transmitter has a visor clip, it should be secured to the visor so that when the remote control transmitter is operated it is transmitting through the vehicle windscreen (**Fig.38**).
- Check that the door is fully closed before you drive away.
- If you press the remote control transmitter whilst the door is moving the door will stop. The next press of the transmitter will move the door in the opposite direction.

The remote control transmitter may also be programmed to operate the following features (see **pages 21** to **22** - Coding Transmitter Features):

- to turn the courtesy light on and off without operating the door,
- to activate the Auxiliary Output,
- to put the door into "Pet Mode" where it opens partially to allow pet access to the garage, and/or
- to put the garage door operator into "Vacation Mode" where it will not respond to any remote control transmitters.

NOTE: Additional remote control transmitters may be purchased at any time.

How to Use Your Operator

In-built Locking Facility

DO NOT lock your door with the locking bars when your operator is engaged. This operator has an in-built locking facility. With the operator engaged your door will be locked whether the power is on or off.

Manual Door Operation

CAUTION: When operating the manual release while the door is open. It may fall rapidly due to weak or broken springs, or an improperly balanced door.

CAUTION! Do not disengage the operator to manual operation with children/persons or any objects including motor vehicles within the doorway.

To disengage the operator from the door, (preferably with the door in the closed position) pull down on the string handle on an angle towards the door. This will allow you to manually open or close the door. To re-engage the operator pull the string handle away from the door.

WARNING! When the operator is manually disengaged, the door is no longer locked. To lock the door manually, re-engage the operator after the door is closed.

Power Failure

When there is a power failure, the operator will be unable to automatically open or close your garage door. To use your door whilst there is no power you will need to disengage the opener and use the door manually – see Manual Operation above.

Removing the battery from transmitter

(**Battery Type:** 3V Lithium Battery **CR2032**). Use a nonmetallic object (e.g. plastic Pen) to remove the battery (**Fig.39**).

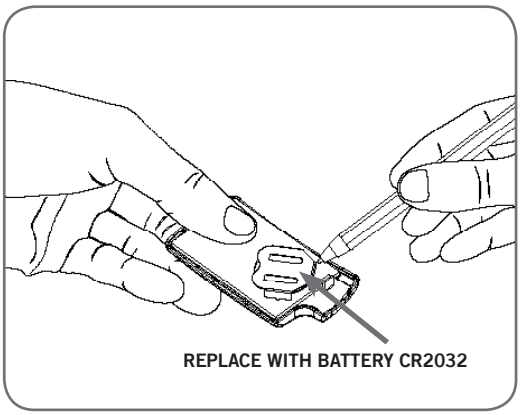

Fig.39

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How to Use Your Operator

Safety Beam Option

A Safety Beam Kit must be fitted to this operator.

- When this Kit is fitted, the operation of this device is such that if an object (i.e. car, child, etc.) blocks the Safety Beam, then the garage door opener will not close the door automatically.
- When the Safety Beam is fitted but not operating correctly, then the door once opened automatically, will not close automatically. The door may be closed by reverting to manual operation – see Manual Operation.

Auto Close Option

To have the Auto Close option you must also have a Safety Infra-Red Beam fitted and functioning. To enable the Auto close function remove the back cover from the opener and place the AUTO-CLOSE jumper near the right hand side LED light module.
When this option is selected the garage door operator will attempt to close the door automatically 30 seconds after opening.
If the Safety Infra-Red Beam is interrupted whilst the door is closing (e.g. by a person walking through the doorway), the door will reverse to the fully open position.
If the door does not close automatically, you may close the door using the Manual Operation.

Courtesy Light

The Courtesy Light will illuminate for approximately 3 minutes each time the door is operated automatically.
Spare buttons of multi-channel remote control transmitters can be programmed to turn the light on and off by remote control.
See **Step 19.2** for more information.

Auxiliary Output

This function allows the operator to operate other devices such as external lights, or an alarm system.
To use this function, a spare button of a remote control transmitter must be programmed to operate the Auxiliary Output feature.
See **Step 19.4** for more information.

Vacation Mode

The radio receiver of the garage door operator can be turned off using a remote control transmitter to activate the Vacation Mode facility. Whilst in vacation mode the operator will not respond to any remote control transmitter.
To activate the Vacation Mode facility, see **Step 19.3**.

NOTE: Program only one button to control "Vacation Mode". This will reduce the possibility of accidental activation of this feature.

Pet Mode

A remote control transmitter can be programmed to open the door partially to allow pet access to the garage.
To activate "Pet Mode" press the transmitter button that has been programmed for "Pet Mode". The door will open partially. Pressing the button again will return the door to the closed position.
See **Step 19.5** for more information.

Service

While the door operator does not require regular servicing, to function correctly the door must be in good operating condition. As a reminder the PA1000 has a built in maintenance counter. This counter has a factory default of 3000 cycles, which is the recommended service interval.

When this counter expires the yellow SERVICE LED will light up and opener beep three times at the start of each cycle. In addition the courtesy light will flash and the operator beeps five times at the end of open cycle (when the door is fully open).

These warning signals will self extinguish after 30 cycles. **When this service counter is triggered it is strongly recommended you contact your garage door dealer to arrange a door service.**

However, if you choose not to have your door serviced the counter can be reset simply by pressing the LIMIT SET button.

Maintenance

The Service LED will indicate the requirement for a service and/or adjustment. To reset the Service LED when the door is serviced, reprogram the Door Travel Limits and the Door Travel Force – on completion of this programming the Service LED will go out.

Whilst your operator does not require any periodic maintenance, the door that it is fitted to does. Your garage door is a large, heavy, moving object and should be tested regularly to ensure it is in good condition. A poorly maintained door could cause fatal or serious injuries.

To ensure long and trouble free life of your operator the following is recommended:

Monthly

- Disengage the operator and manually operate the door: The door must be smooth to operate by hand, an operating force on the bottom rail should not exceed 150N (15kg (33lb)) force.
- Each month check that the operator reverses when the door contacts a 1-1/2" high object placed on the floor. Refer to Testing the Safety System (see **Pages 18-19**).

NOTE: If the door does not operate smoothly or the safety reverse test failed, **CONTACT A TRAINED DOOR SYSTEM TECHNICIAN.**

CAUTION: Frequently examine the installation, in particular cables, springs and mountings, for signs of wear, damage or imbalance. Do not use if repair or adjustment is needed since a fault in the installation or an incorrectly balanced door may cause injury.

Adjustments should only be carried out by experienced persons, as this function can be dangerous if not performed under strict safety procedures.

WARNING! Failure to maintain your garage door may void the warranty on your garage door operator.

Yearly

We suggest that you contact your nearest Authorised Dealer to perform an annual door service.

Warranty Expired Indicator

When the opener reaches the number of cycles covered by warranty the courtesy light will flash 10 times after each operation to indicate that the warranty has expired. This flashing will continue for twenty (20) operations unless the user acknowledges the warranty expiry indicator and stops the light from flashing. To stop the courtesy light flashing press the LIMIT SET button while the light is flashing after an operation.

Service Record

Record any maintenance in the following table to assist in any warranty service.

Date	Service by	Signature	Invoice No.	Amount

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Troubleshooting Guide

Symptom	Possible cause	Remedy
The opener does not work from the hand remote control transmitter	Garage door in poor condition e.g. springs may be broken	Check the door for normal operation – see monthly maintenance.
	The opener does not have power	Plug a device e.g. a lamp, into the power point and check that it is OK.
	The battery in the remote control transmitter is flat	Replace the battery
	The opener has been put into "Vacation Mode"	Turn off "Vacation Mode" by pressing transmitter button
	The transmitter code has not been set	See remote control transmitter & code setting procedure
The motor runs but the door does not move	The opener is disengaged	Re-engage the opener
The remote control transmitter range varies or is restricted	Variations are normal depending on conditions e.g. temperature or external interference	See Instructions for correct use of remote control transmitter
	The battery is flat or faulty	Replace the battery
	Position of the remote control transmitter in the motor vehicle	Change the position – see Instructions for correct use
	Position of the aerial will not pick up the radio signal	Install an external aerial kit – see Accessories Section
The light does not work	Light module is not inserted/ connected properly	Check for correct connection otherwise replace module If both fail contact your dealer for support
The door reverses for no apparent reason	This may occur occasionally from weather changes	The opener automatically adjusts to compensate for changes in the door operating force
The door opens but will not close	Auto close or safety Infra-Red beam not operating correctly	Check the installation

If You Need a Service Call

If the operator needs service, call the dealer who installed the garage door operator (for product assistance contact .....)

Before calling for service you should have the following information to assist in providing the appropriate service:

1. Has anything happened since the door was last operating OK e.g. storm, a jolt to the door etc?
2. How easy is it to manually open and close the door?
3. What model is the operator?
4. Who installed the operator?
5. When was it installed?

Fault Indicator

When a fault is detected the service LED will start to flash and a number of beeps will sound to indicate that there is a fault. The fault will be active each time an attempt is made to operate the door.

Pressing the LIMIT SET button will reset the operator. If the fault continues to be tripped contact your dealer for assistance.

Parameters

Door status indicators

Door opener state	Open LED green	Close LED red	Door status LED yellow	Beeper
Open	On			
Close		On		
Opening	Flashing			
Closing		Flashing		
Door travel stopped	Flashing	Flashing		
Door obstructed when opening	Flashing			
Door obstructed when closing		Flashing		Beeps while door is moving
Opener overloaded	Alternating flashes	Alternating flashes		
Door in open position with auto-close mode selected	One second flashes			
Mains power interrupted	Rapid flashes			

Button	Function
OPERATE	Opens/Stops/Closes the door
CODE SET	Codes a transmitter button for operate function
FORCE MARGIN SET & PLUS (+)	Increases the obstruction force margin setting
FORCE MARGIN SET & MINUS (-)	Decreases the obstruction force margin setting
FORCE MARGIN SET (then) SET	Reloads the factory set default obstruction force margin setting
Press SET (for 6 sec)	Clears the door limits set positions. Limits then need to be reset.
SET press and hold until all LEDs are off	Deletes control parameters excluding transmitter storage memory
DOOR CODE press and hold until DOOR CODE LED starts flashing	Deletes all transmitter storage memory.
SET & DOOR CODE press and hold until all LEDs are off	Deletes all control parameters and transmitter storage memory.

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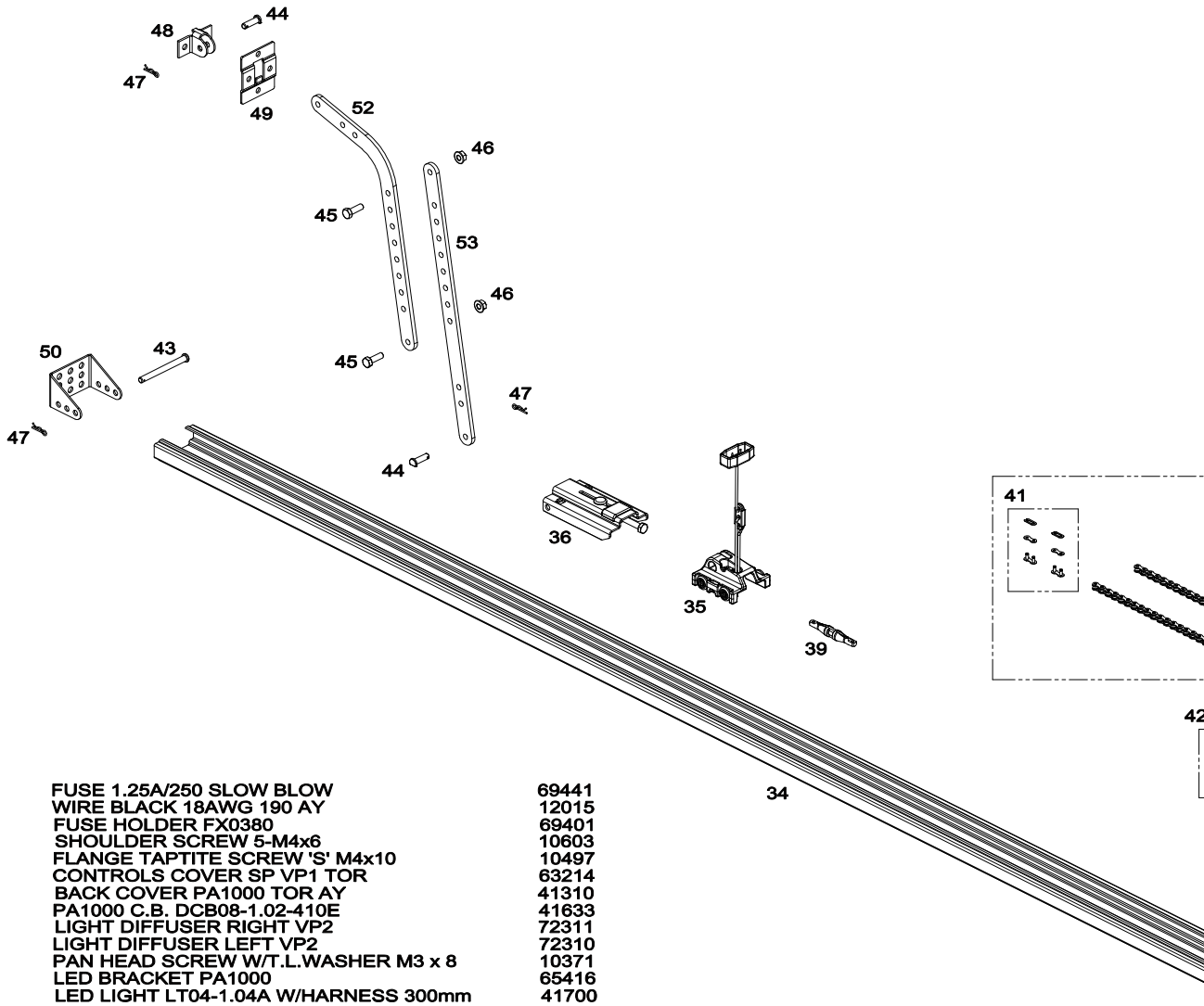
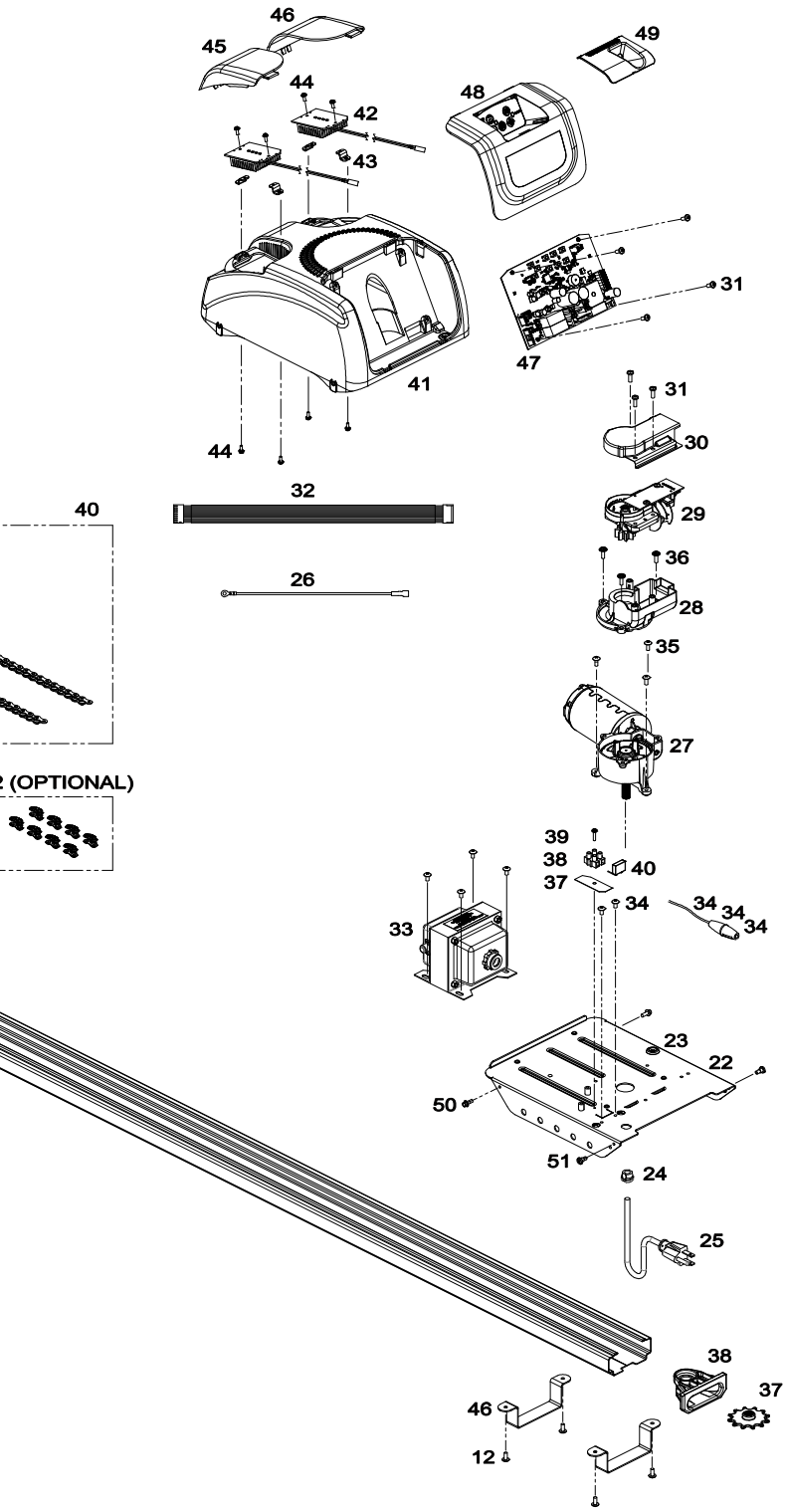
Spare Parts List



ITEM NO.	DESCRIPTION	ORDER CODE
33	FUSE 1.25A/250 SLOW BLOW	69441
32	WIRE BLACK 18AWG 190 AY	12015
31	FUSE HOLDER FX0380	69401
30	SHOULDER SCREW 5-M4x6	10603
29	FLANGE TAPTITE SCREW 'S' M4x10	10497
28	CONTROLS COVER SP VP1 TOR	63214
27	BACK COVER PA1000 TOR AY	41310
26	PA1000 C.B. DCB08-1.02-410E	41633
25	LIGHT DIFFUSER RIGHT VP2	72311
24	LIGHT DIFFUSER LEFT VP2	72310
23	PAN HEAD SCREW W/T.L.WASHER M3 x 8	10371
22	LED BRACKET PA1000	65416
21	LED LIGHT LT04-1.04A W/HARNESS 300mm	41700
20	MAIN COVER PA1000 ALCAL GR SP	42110
19	CAP POLYFILM 0.1UF K X2 275VAC	67575
18	PAN HEAD SCREW W/T.L.WASHER M3x 14	10361
17	TERMINAL BLOCK 500/02DS 2 POS	65421
16	TERMINAL BLOCK SHIELD	14057
15	PAN SERRATION HEAD SCREW M4 x 12	10380
14	THRUSS SERRATION HD SCREW 'S' M4x10	10504
13	THRUSS SERRATION HD SCREW 'S' M4x8	10503
12	TRANSFORMER-15001MWL_150VA_120V_24V AY	40904
11	TIMING HARNESS 350 ASSY	61792
10	TAPTITE SCREW 'P' M4x12	10569
9	DUST COVER TOP	63223
8	TIMING ASSY	61732
7	TIMING SUPPORT GMA-18(ALPS)	16233
6	GEARED MOTOR GMA-19-59-Y84	60339
5	WIRE EARTH ASSY 230L	12150
4	POWER CORD 1.5M W2P+1R	14150
3	CORD GRIP GROMMET SB5P-2	65606
2	GROMMET 101422	65603
1	METAL CHASSIS VP1-3 ASSY	62783

ITEM NO.	DESCRIPTION	ORDER CODE
53	STRAIGHT ARM	62790
52	BENT ARM	62800
51	TRACK BRACKET VP2	64592
50	WALL BRACKET_TS01	62522
49	DOOR BRACKET LOCATOR	62515
48	DOOR BRACKET	62511
47	PIN SNAP SSP 8 ZNU 31080	10720
46	HEX SERRATION FLANGE NUT M8	10148
45	HEX HEAD SCREW M8x25	10110
44	CLEVIS PIN 0829	62551
43	PIN 0890	65790
42	CHAIN CLIP IM KIT	71643
41	CHAIN JOINT LINK	62950
40	CHAIN 1/2"x1/8" (487 LINKS) W/2CL	63005
39	CHAIN INDEX V3	62941
38	SPROCKET SUPPORT_TS01	64921
37	SPROCKET 12T-12.7_TS01	64698
36	TENSION CHAIN ASSY_TS01	61453
35	SHUTTLE ASSY_TS01	60276
34	C RAIL TRACK 77.8x31.8x3160_TS01	64653



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Warranty

1. Definitions

2. .

Warranty

Purchased From: _____

Installed By: _____

Installed Date: _____

The Purchaser shall complete this certificate and keep it together with a copy of the receipt of purchase in a safe place – production of such information will assist the handling of a claim made under this warranty.

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Optional Accessories

There is a range of additional accessories for your convenience and security.

- **Safety Infra-Red Beams** - Gives additional protection if the door is closing onto your property or person. Simply breaking the beam "stops" the door! Must be fitted if auto closing feature is operational.
- **Keyring remote control transmitter** - Ideal for personal use when entry into the house may be via the garage.
- **Remote Control Transmitter Wall Button** - Allows you to operate your operator within 32.8ft (10 metres) of the door. Ideal for mounting inside the house.
- **Combo Access Kit** - Keyswitch function will open the door without a remote control transmitter. Can be used to manually disengage the operator, recommended when the garage door is the only access to the garage.
- **Remote Aerial Kit** - For sites where radio range may be reduced (metal garages).

Contact your authorized dealer for installation of these accessory items.

When installing Accessories, always follow the manufacturer's instructions included with the product.

Only our Accessories purchased from an authorised garage door professional offer the highest quality and assure you of trouble free opener operation.

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