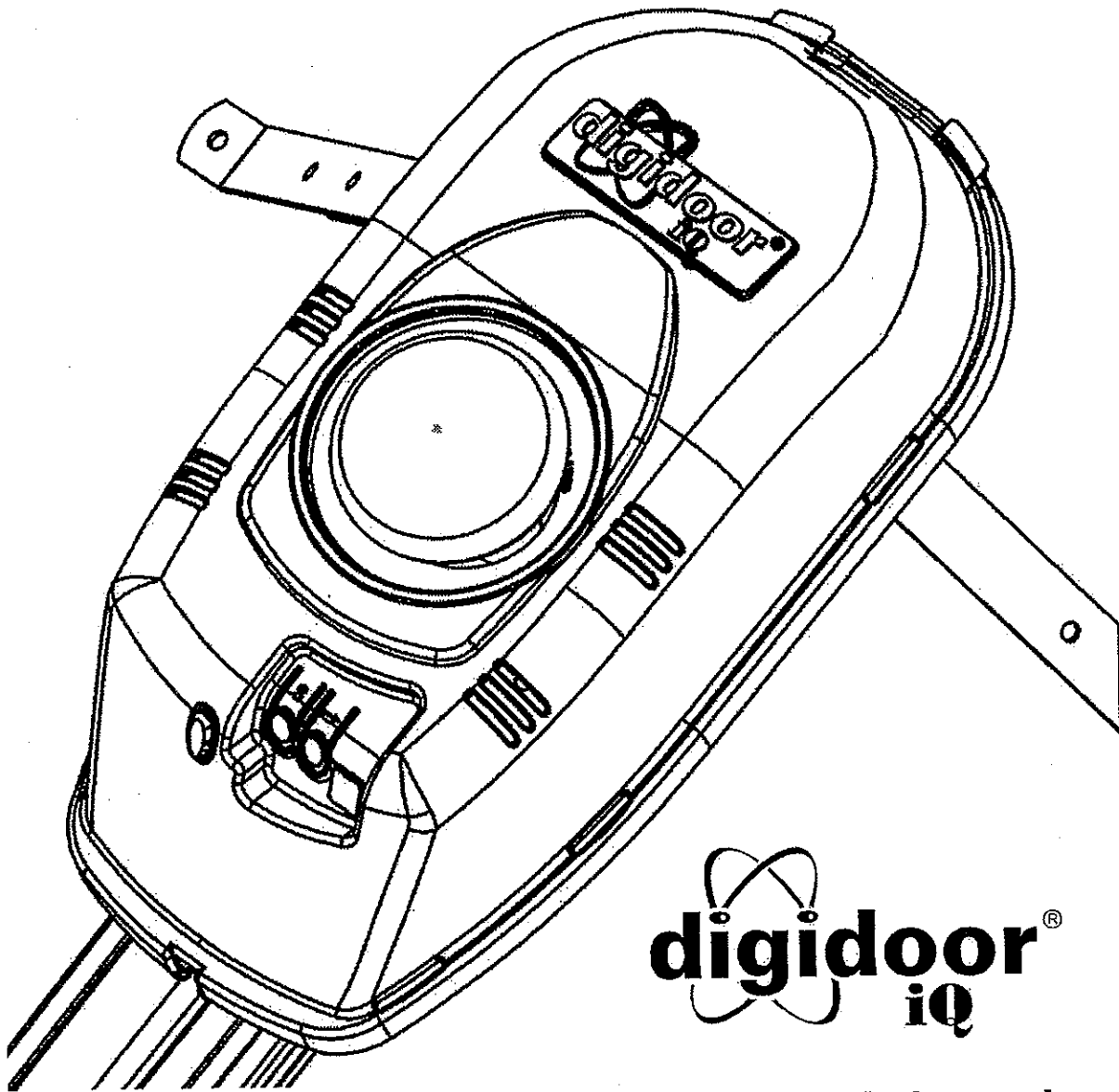




HYDRO DOORS

Quality Access Technology



digidoor[®]
iq

**High Speed
24Volt AC/DC Garage Door Operator
For Sectional Overhead Doors**

digidoor IQ Garage Door Operator

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Introduction

Congratulations on selecting the digidoor IQ Operator!
This internal residential garage door automation system is designed for low maintenance, long-term reliable service, convenience and security.

- ❖ *Before you proceed, please read these instructions and the instructions on the manual release cord carefully!
Incorrect installation can lead to serious injury or damage!*

Important Safety Points!

- Operate the door only while in view, free of obstructions and properly adjusted.
- Keep adults, children and pets clear of the moving door.
- Keep transmitter controls away from children.
- Use caution when operating the manual release with the door open as it may fall, if the spring tension is not correct.
- Frequently examine the door and operator for wear, damage and improper balance.
- Ensure that a Hydro Doors accredited installer services the door regularly

**Obstacle sensing is done electronically and must be properly adjusted.
This aspect must be tested at least once a year.**

Battery Disposal

This product contains re-chargeable sealed lead acid batteries. These batteries should be re-cycled and not disposed of as waste. Please return the batteries to a re-cycle centre when the batteries are replaced. All of our branches have dedicated disposal bins for the safe disposal of batteries.

General Issues

Types of Doors that can be automated using the digidoor IQ:

- Please Note: The speed of the **digidoor IQ** makes it unsuitable for Tip-up and Roll-up Doors. For these doors, the **digidoor III** is recommended.
- Sectional overhead doors, single/double, steel or timber. Use the 3.1m Strut.
- Special Height Sectional overhead doors. Use the 3.6m Strut.

Condition of Doors:

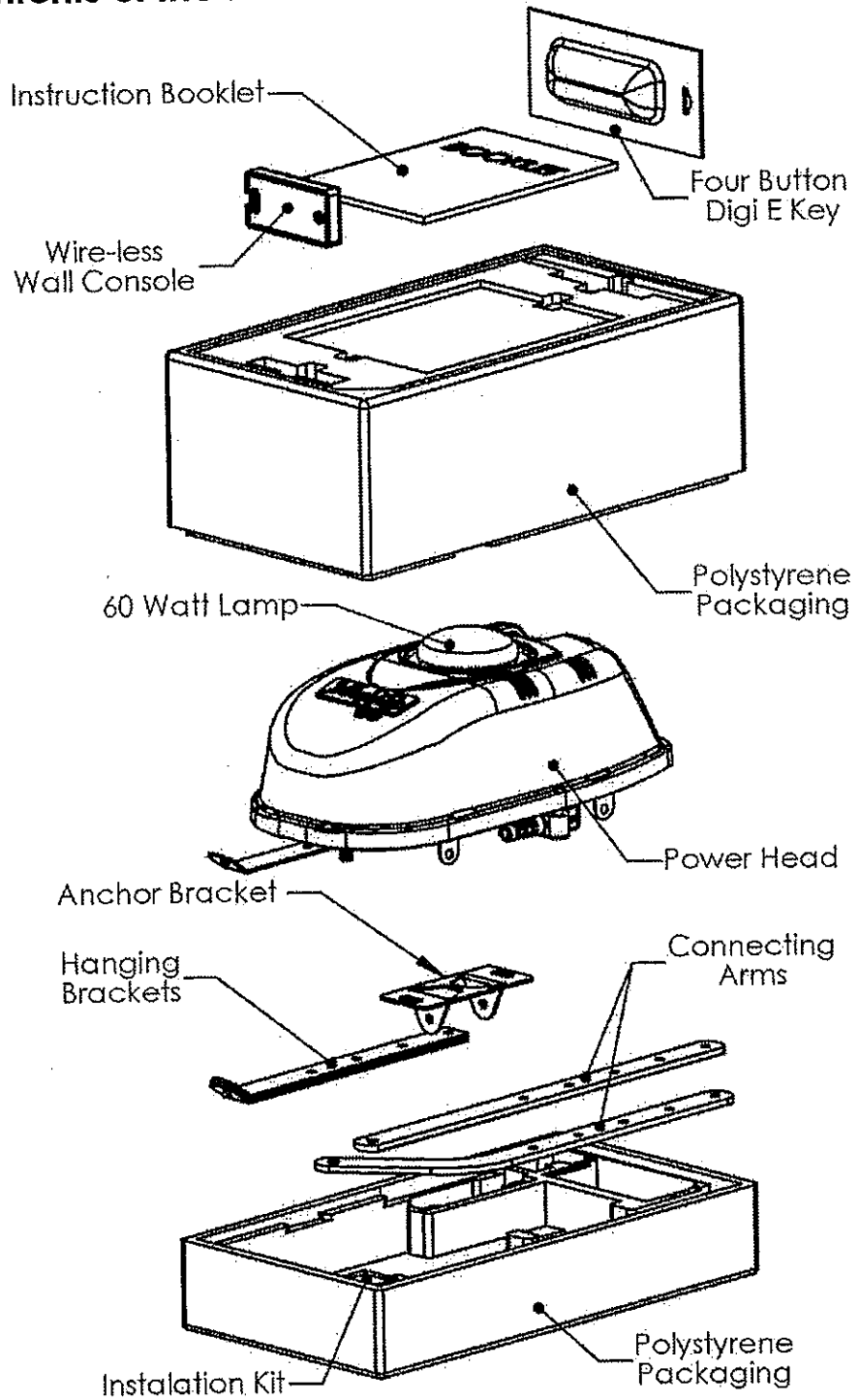
For successful automation, a door should be in good working condition, i.e. it should be possible to open and close easily with one hand, be correctly sprung and run smoothly without sticking or binding. Torsion springs should be greased. Tracks should be well secured with correct clearances and be clean and free of grime. Badly worn hinges, rollers and bushings should be repaired or replaced. Remove all unnecessary ropes, brackets, levers, etc.

Caution! Garage doors, door springs, cables, pulleys, brackets and hardware are under extreme force and can cause serious personal injury.

Note! Most complaints of unsatisfactory garage door operation can be traced to problems with the door itself. The digidoor IQ is not intended to correct any problems that are caused by an unbalanced or binding door. When operated manually, a properly balanced door will remain stationary, at any point of its travel, while being supported entirely by its springs.

For optimum reliability and lifespan of your digidoor IQ operator, have your garage door serviced regularly.

Contents of the Box



4. Within 30 seconds, press the required button on the Digi-e key transmitter. The light on the digidoor IQ will go off.

Features

1. **24 Vdc Motor with integrated gearbox:** A purpose-made 24vdc motor developed for the door industry, which has a greater power to weight ratio and greater efficiency than 12v motors, powers the **digidoor IQ**.
2. **Mains/Battery:** 230Vac with 24V battery backup.
3. **Controller:** The controller is microprocessor based with a plug-in printed circuit control board.
4. **Feature Selection:** Features are link-selected.
5. **Integrated Receiver:** A high performance receiver is integrated directly on the control board, supporting 28 users.
6. **Obstacle Sensing:** For added safety, obstacle sensing is implemented in software and by means of adjustable current sensing.
7. **Wireless Wall Console:** The console eliminates the time-consuming wiring. It has buttons for Control, Light and Lock. Adding extra remotes via the console is easy.
8. **Status Indicator:** The **digidoor IQ** has a prominent status indicator that shows whether in mains or battery mode, and if the lock function is on. It also indicates Set-up Mode.
9. **Audio Alert:** To assist with Set-up and provide audible warnings.
10. **Courtesy Lamp:** Both versions of the 60-watt lamp may be used.
11. **Adjustable Open-Position Stop:** The strut incorporates an adjustable stop that limits the travel of the door in the open position. This is set during installation to provide a reference, and serves as a safety stop when the door is used manually.
12. **Fast Operation:** This operator achieves a fast operating speed, with ramp-up and ramp-down for smooth operation. Opening or closing of a standard sectional door can be achieved in approximately 12 seconds.
13. **Supports Most Types of Safety Beams:** A 24volt connection is provided, which 'times-out' in order to conserve battery power.
14. **Auto-Close Mode:** Auto close may be selected, and occurs 30 seconds after opening. Before auto-closing, the light flashes and an audible warning sounds for 10 seconds prior to closing.
15. **Limits:** The closed limit of the door travel is set automatically during the installation phase; the open position is controlled by manually setting the open limit sensor.

Specifications

- Supply Voltage: 220 VAC \pm 10%
- Maximum Current: 2Amp
- Operating Speed: 178mm/sec (Typical)
- Receiver Frequency: 433.92MHz
- Receiver Range: Greater than 25m

Manufacturer's Warranty

- Hydro Doors and Gates (Pty) Ltd (Hydro) warrants the first purchaser of the digidoor IQ, that the product shall be free of any defects in materials and/or workmanship for a period of twelve months (one Year) from the verifiable date of purchase. Such verification shall include a valid proof of purchase by the first retail purchaser, which shall include, if possible, the Serial number of the motor under warranty. Upon receipt of the product the first purchaser is under obligation to check the product for any visible defects.
- This warranty is applicable to the product if sold and installed in the Republic of South Africa.
- If the product is sold and installed outside the Republic of South Africa, the obligations for repairing this product under warranty will be borne by the distributor of the product in the territory concerned. The terms and conditions of warranties in a territory outside the Republic of South Africa will be available from the distributor in that territory.

CONDITIONS:

The warranty shall constitute the sole remedy available under law to the first retail purchaser for any damages related to, or resulting from, a defective part and/or product. The warranty is strictly limited to the repair or replacement of the parts of this product, which are found to be defective.

The warranty does not cover:

- Non-defect damage caused by unreasonable use (including use not in complete accordance with this digidoor IQ installation/owner's manual),
- Labour charges for removal or re-installation of a repaired or replaced unit,
- Transport costs incurred in getting the product to Hydro. Hydro will quote for in-situ warranty repairs if requested.
- Damage to the product caused by lightning, power surges or incorrect installation.
- The product if used to automate more than one door at a time (excepting Roll-up doors).
- The product if installed outdoors, including carports.
- The product if installed in excessive traffic applications, for example, apartment blocks or parking garages.
- Any unauthorized, non-Hydro modification to the product or the components thereof. Such authorization to be in writing.
- Consequential or incidental damage to property or person.
- Batteries installed in the operator, remote controls or wall console.

- Hydro will repair, or at its option replace, any device, which is determined to be defective in materials and/or workmanship, at no cost to the owner for the repair and/or replacement part.
- Defective parts will be repaired or replaced with new or factory rebuilt parts at Hydro's option.
- Warranty repairs shall be effected, provided the product is returned to Hydro at the owner's expense.
- No representative or person is authorized to assume for Hydro Doors any other liability in connection with the sale of this product.
- For warranty service or shipping instructions, please refer to the addresses on p15.

Assembly

Power-head and Strut

1. Ensure that the bullet fitting (with which the carriage engages) in the chain drive is about in the middle of the Strut.
2. While aligning the motor shaft with the sprocket, fit the strut to the power head. Fit the two mounting saddles and secure them with the M6 bolts provided. See page 7, Fig. 1.
3. For a Sectional door, Install the digidoor IQ as follows:

Automating a Sectional Overhead Door

(Timber, Steel or Fibre Glass, Single or Double)

With the door closed, extend and mark the vertical **centre line** of the door on the wall above the door. Mark the cross line **50mm above the highest point** of the top edge of the door in its travel. Place the anchor bracket on the wall and align. Mark the position of the mounting holes, and secure the anchor bracket to the wall.

Important! This bracket handles all the operating forces.

Secure the foot-end of the Drive Strut assembly to the anchor bracket while supporting the motor.

Open the door and **vertically align** the Drive Strut assembly to the door centre line. Prop the unit up to a horizontal position. Determine the length of the hanging brackets needed to make a triangular fixing. Fit the hanging brackets to align with a joist, batten or concrete member, as close to the power head as possible.

Note! The Hanging Brackets may be angled forwards or backwards, and secured to either the front or rear mounting lugs.

With the door closed, pull the carriage release cord. Mount the door bracket to the inside face of the door, in the centre and **level** with the **top roller of the door**. Fit the curved door arm to the bracket and the straight arm to the Latch on the carriage as in Fig. 3 on p 8. Overlap the arms so that the short section of the **curved arm** is horizontal, and securely bolt them in two places.

With the door in the open position, move the Open Stop up against the Carriage and secure it in place by means of the Self-Drilling screw provided, as in Fig. 2, Step 1 on p8. Ensuring that the hook and clip on the plugs are aligned, connect the Open Limit cable to the plug on the Operator as in Fig. 2, Step 2 on p8.

Refer to Page 9 for Electrical Connections and Set-up.

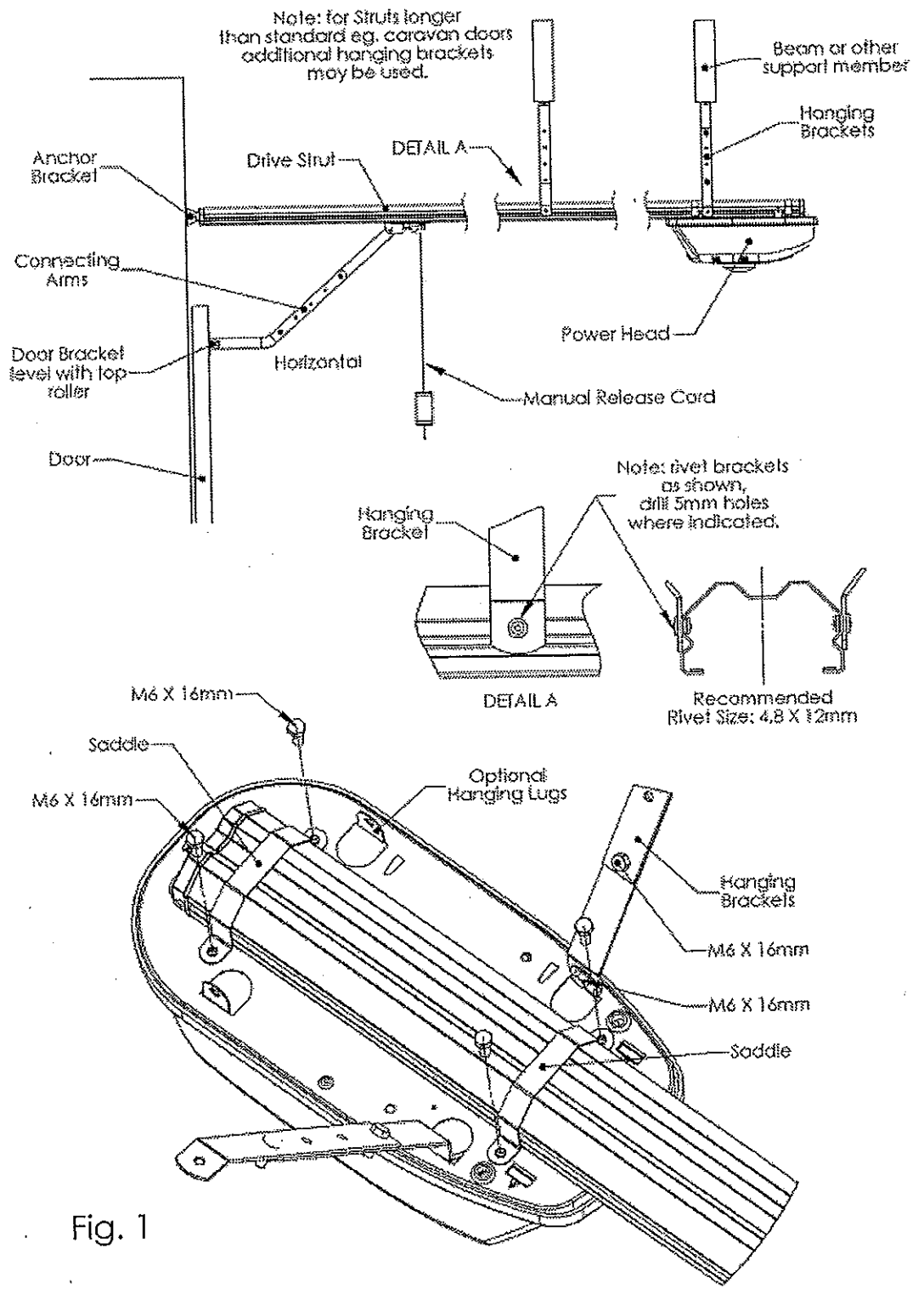


Fig. 1

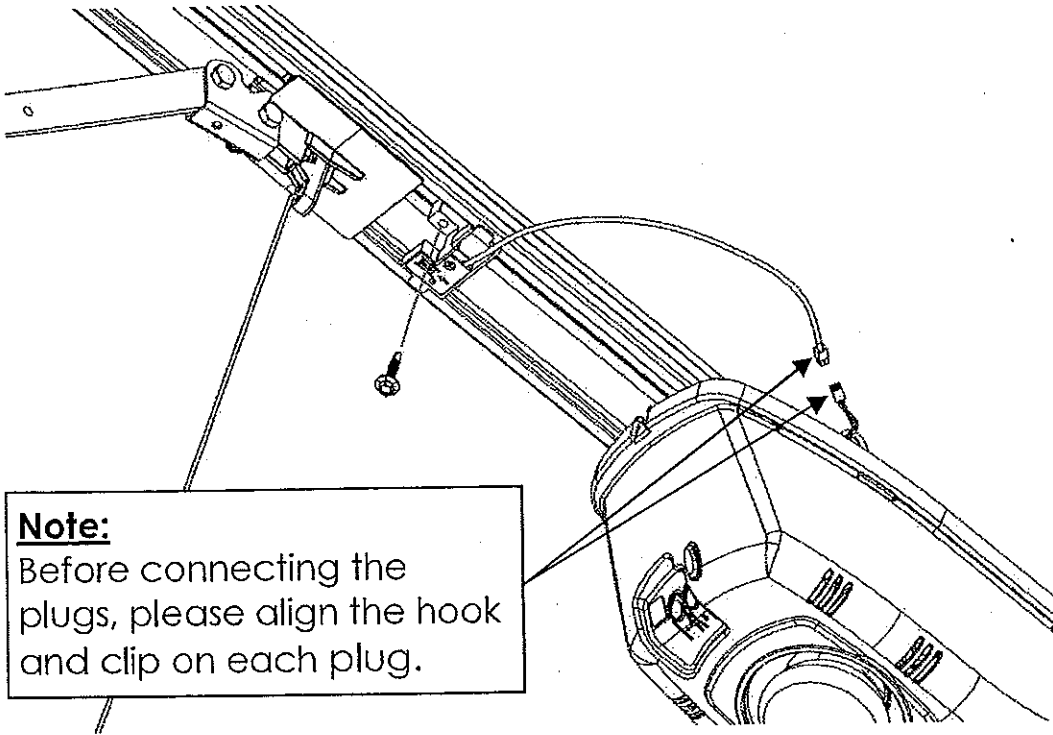


Fig. 2

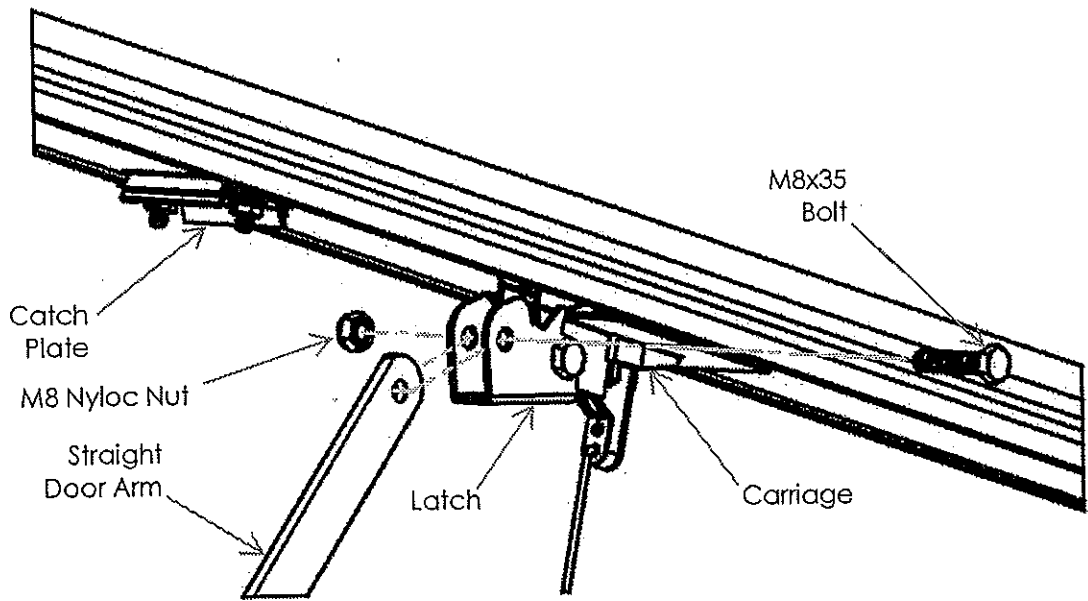


Fig. 3

Electrical Connections and Set-up

Note 1: If the Set-up needs to be repeated for any reason, refer to Factory Reset, page 11.

Note 2: If Mains supply is not available during installation, 'short' the 'Power Up Contacts' to make use of battery power for Set-up. Refer to Fig. 6 on page 13.

The digidoor IQ is fitted with a power cord and a 15Amp moulded plug. Plug this into a suitably positioned power socket, and:

1. Close the door manually then ensure that the manual lever is in the engaged position (Latch Lever horizontal), and move the door by hand until it engages with the operator.
2. Switch the power on. The controller will beep and the indicator will flash amber. (The indicator flashes amber during set-up mode.)
3. The obstacle control is set to minimum by the factory and can be left in this position for initial setup.
4. Press the Enter button (for a lightweight door press Enter Twice). The door will close slowly until the floor is reached. (**Note:** This process can be stopped, if necessary, by pressing the Enter button again, and a further press will continue or restart it.) The door will then open slowly until the open position is reached. The controller will beep twice to indicate that the limits have been established.
5. To program the first wall console (the 'master'), press the Enter button. The controller will beep and the indicator will flash amber rapidly.
6. Press the Operate button on the Wall Console. The controller will beep.
7. To confirm, press the Operate button on the Wall Console again. The controller will beep four times to show that the set-up is complete, and the indicator will show green (Ready).
8. Adjust the Obstacle Sensing by means of the trimmer shown in Fig.5, page 12, while physically checking the force of the door on the shoulder. Also check that the door is able to sense a block 40mm high placed on the floor in the centre of the doorway.
Note: This test should be repeated once a year.

Setting the Catch Plate

9. Close the door by pressing the Operate button on the Wall Console. With the door closed, pull the Manual release down. Slide the Catch Plate towards the carriage so that it passes above the Latch and stops against the carriage, as in Fig. 4 on page 10.
10. While manually pushing the carriage towards the door, and using an 11mm spanner, tighten the two flange-nuts on the Catch Plate.
11. If batteries are fitted as standard, connect these to the control board by plugging in the two-way connector as shown in Fig. 6 on Page 13.
12. To complete the installation check that the door operates reliably and inform the client/user of the safety features and the manual over-ride procedure.

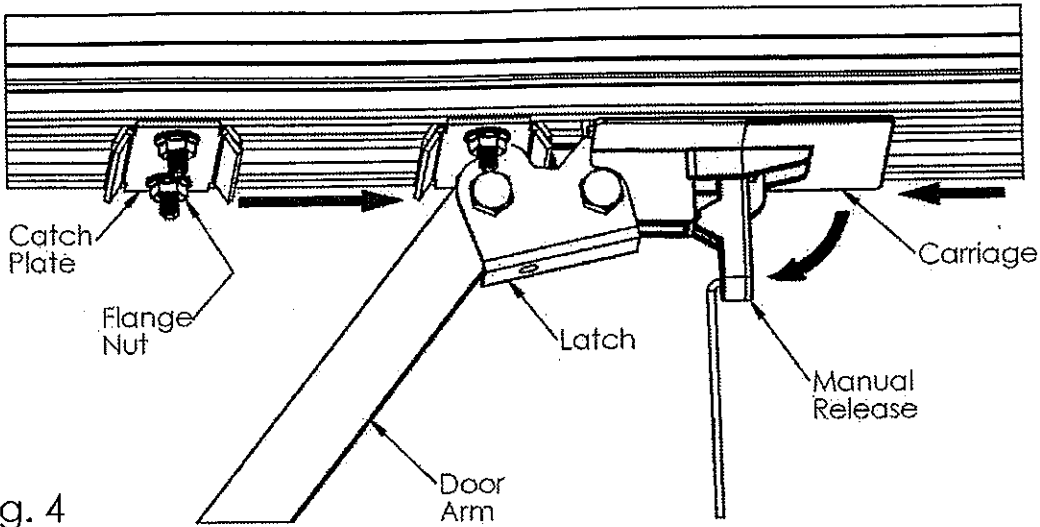


Fig. 4

Visual and audible indications:

Visual Indication	Feature
LED indicator = Green	Mains power on
LED indicator = Green flashing	Main off – running on battery
LED indicator = Red	Door locked
LED indicator = Red flashing	Battery voltage low
Audible Indication	
Single beep and lamp flash when attempting to operate door	Door in locked mode
Double beep while attempting to close door	Beam obstructed or not functional

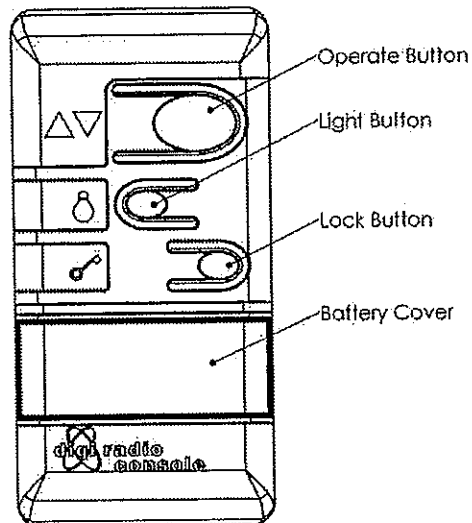
Wireless Wall Console

Mounting the Wireless Wall Console

Using the screws and screw-plugs provided, mount the Wall Console to the wall in a convenient position, out of the reach of children.

Note!

Only the first wall console (the 'master') will enable the user to record transmitters and complete the 'erase all' function described on pages 11 and 12.



Auto-close function

WARNING It is strongly recommended that the Auto-close function only be activated if safety beams are fitted.

To enable the Auto-close function, remove the jumper marked 'A-Close' on the control board. This function will close the door (from any position) after a period of 30 seconds. The lamp will flash and the buzzer will sound for a 10 second period prior to closing to warn the user. If beams are fitted and the beam is interrupted during this period, the 30-second count will re-start. The timer will also reset if the user operates a control input (remote/wall console) during the warning-flash period.

To override the auto-close function, stop the operator in any position and apply the lock function on the wall console.

The operator has a built-in safety feature that will disable the auto-close function after sensing three successive obstacles, while attempting to close the door. Once the obstacle has been removed and the door fully closed the Auto-close function will re-enable automatically. **For the jumper location see p12, Fig. 5.**

Lock function

The operator can be locked from the wireless wall console by pressing the lock button. When locked the LED indicator on the operator will turn to RED. If any user tries to open the door the light will flash once and the buzzer will beep once to indicate that the door is locked. To unlock, press the lock button on the wall console. The lock function also overrides the auto-close function when selected.

Factory Reset

If the installation setup has to be repeated for any reason, a factory reset can be performed to return the operator to its original factory default state. This procedure also erases the master wireless wall console, learned during step 5, but not the ekey remotes that have been recorded.

1. Remove power and un-plug the battery power (if fitted). (Disconnect the batteries by unplugging the 2-way connector on the battery charger board. Fig. 6, p13)
2. Hold the 'Enter' button while switching on the mains. The operator will beep and the indicator will flash amber.
3. All limit settings and the master wall console will be erased.
4. Re-start the setup procedure on page 9.

Using the digidoor IQ on-Board Receiver

Digi e Key The Digi e-key receiver is incorporated into the digidoor IQ control board. Each Digi e-key transmitter has a unique identity, which, together with the hopping code, must be recorded by the on-board receiver before the system will function.

Recording a new transmitter via the Wall Console

1. With power on, if need be, turn the light off using the light toggle button.
2. Press and hold the light toggle button. The light will come on and go off after 5 seconds.
3. Release the button and the light will come on again.

- To confirm, press the same button on the transmitter again and the light on the digidoor IQ will flash four times. The transmitter is ready for use. Repeat the above for additional transmitters. If the memory limit of 28 transmitters is reached the control board will beep for 4 seconds to indicate full and return to normal operation.

Note! The on-board receiver can store 28 separate e-key transmitters, using different buttons on each. An attempt to record the 29th transmitter will be ignored, followed by a four second beep.

If a transmitter is lost or stolen, it is important that the 'Erase All' function (below) is carried out to clear the receiver memory.

When recording, press the transmitter within 30s or the digidoor IQ will revert to normal operation. If a transmitter battery is low, the LED on the transmitter will flash. The receiver will respond to a single button per handheld transmitter. When a different button is recorded, it will replace the previous button for that transmitter.

Erase All

Warning! This function removes **all** of the e-key Transmitter codes that have been recorded but not the master wireless wall console recorded during installation.

- With power on, if need be, turn the light off using the light toggle button.
- Press and hold the light toggle button. The light will come on and after 5 seconds go off. Keep holding the light toggle button. After a further 5 seconds the light will flash 6 times to confirm that a complete erasure has taken place. Only the master wireless wall console will remain functional after this process.

Note! To erase the master wireless wall console see 'Factory Reset' on page 11.

External connections

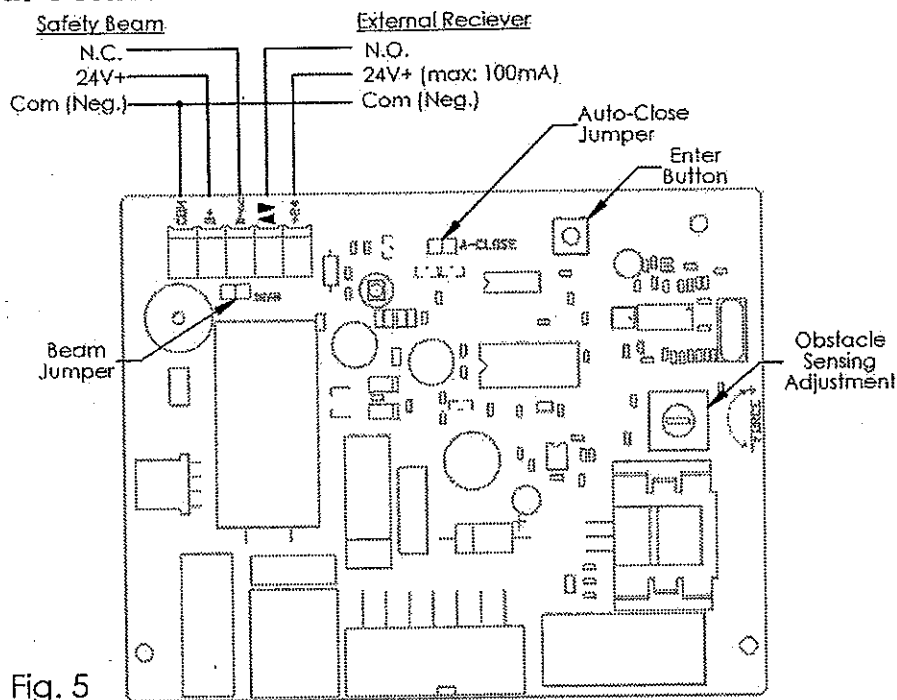


Fig. 5

Accessories

Battery backup

The digidoor IQ has an optional battery backup feature, which will allow operation during power failures. The battery feature can be fitted as standard or fitted as an option at a later stage. The battery backup feature allows at least 10 opening and closing cycles of the door during a power failure.

The amount of operations will depend on the door running load as well as the battery reserve remaining in the batteries after an extended power failure. The battery reserve will allow operation of the door up to 24hrs after a power failure has occurred depending on the amount of usage during that time.

The battery charger and control board use advanced electronics to minimize the drain on the battery during power failures and has a low voltage battery cut-out feature which will disconnect the battery when the reserve power in the battery reaches a pre-determined level. This extends the battery life and reduces the battery re-charge time (<6 hours) once the mains power is restored.

Fitting of external equipment drawing power from the digidoor IQ such as external receivers will significantly reduce the standby time and the amount of operations of the battery backup. However, the fitting of safety beams will not unduly drain the battery, since the beam supply 'times-out' after the door has closed.

Note: If Mains supply is not available during installation, short the 'Power Up' Contacts to make use of battery power for Set-up during installation.

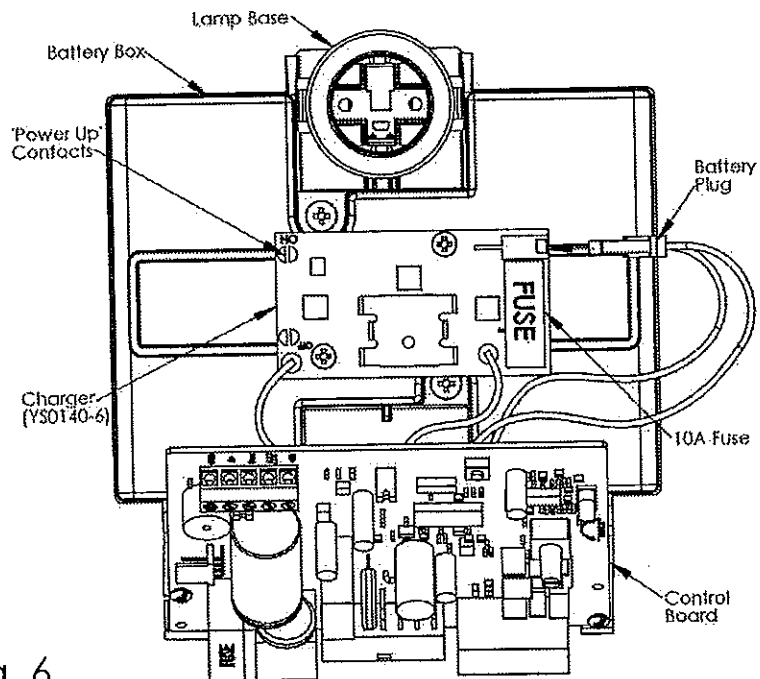
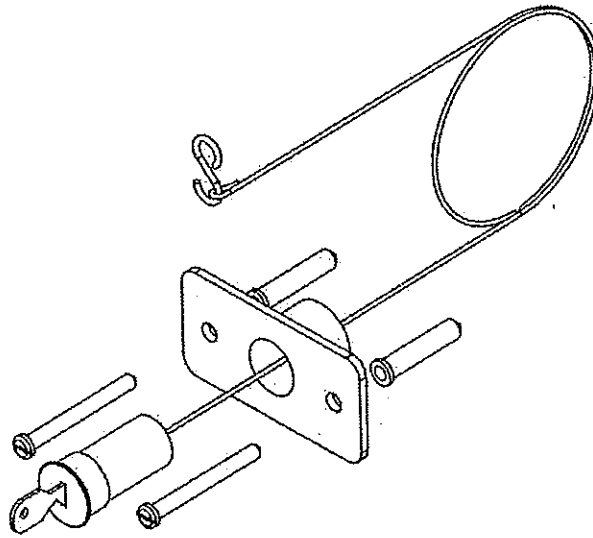


Fig. 6

Emergency Key Release

The emergency key release is required where a garage has no service door.

The key release allows the door to be manually released from the outside in the case of a power failure or low battery condition.



Safety Beams

Safety beams are comprised of two units, which may be mounted on either side of the doorway. The opposing faces to which the units are to be mounted should be reasonably parallel.

Important! Choose a suitable mounting height, low enough to protect toddlers and pets, but not lower than the underside of a typical motor vehicle. The wire to the Safety beams may be placed in the groove on top of the strut and wired through the spare grommet into the power head. To enable the safety beams after installation and wiring is complete, remove the jumper marked 'BEAM' on the control board. Refer to Fig.5 on Page 12.

Note: If an attempt is made to close the door while the beam is obstructed, the operator will beep twice to indicate that the beam is obstructed and the door cannot close.

Important Notes to Installers and End Users

An accredited installer, in compliance with the manufacturer's specifications and the following SANS standards, must do all new or retrofit installations:

- o SANS 10142-1: The Wiring of premises Part 1: Low Voltage Installations. (2003)
- o SANS 60335-1: Household and similar electrical appliances-Safety Part 1: General Requirements. (2005)
- o SANS 60332-2-95: Household and similar electrical appliances- Safety Part 2-95: Particular requirements for drives for vertically moving garage door for residential use. (2003)
- o SANS 60335- 2 -103: Household and similar electrical appliances- Safety Part 2-103: Particular requirements for drives for gates, doors and windows. (2003)

Important!

Your Garage door is the largest moving object in your home!

Ensure that once a year it is properly serviced and maintained by a professional accredited garage door installer!

Do not attempt to adjust the springs, cables or bottom brackets on your door as these are under high tension!

A properly maintained door will ensure reliable use of your door operator.

For added safety it is recommended that infra red safety beams be fitted to all automated garage doors, especially if there are children in the home.

Serial Number:.....Installation Date:.....
Installed By:.....
Installers Accreditation Number:.....

Door Service Record

Date:..... By:.....
Accreditation Number.....
Date:..... By:.....
Accreditation Number.....
Date:..... By:.....
Accreditation Number.....

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