digidoor ®
twenty four

Digidoor 24 Domestic Garage Door Operator

**Congratulations on selecting the Digidoor 24 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 emergency release cord carefully!

<u>Warning!</u>
Incorrect installation can lead to serious injury or damage!

Because of battery back-up the machine remains active even with the mains switched off!

Important Safety Instructions!

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 should be tested quarterly.

Obstacle sensing is based on the weight and size of a balanced door.

Contents of the Box

Two Button
Digi E Key

Instructions

Wire-less
Wall console

Polystyrene
Packaging

60 Watt Lamp

Cover

Closed Stop Block

Anchor
Bracket

Carriage
Assembly

Hanging
Brackets

Connecting Arms

Polystyrene
Packaging

Installation Kit
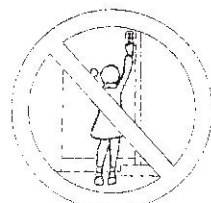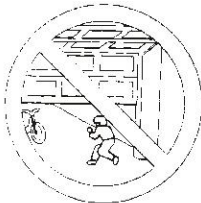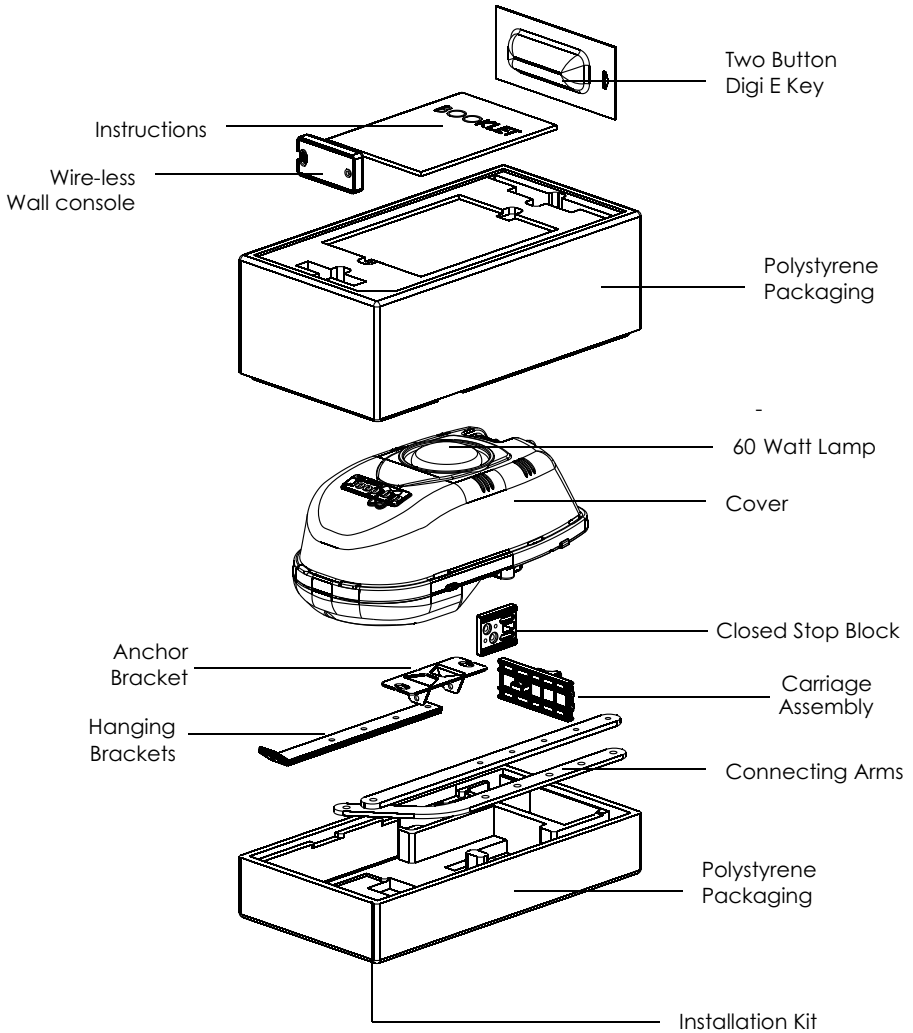
Exploded View of the Digidoor 24 Power Head

12Vdc battery

Sprocket cover

Chassis

Lamp Holder

PCB Holder

Transformer

24Vdc Motor and Gearbox

PCB

Cover

60-Watt Lamp
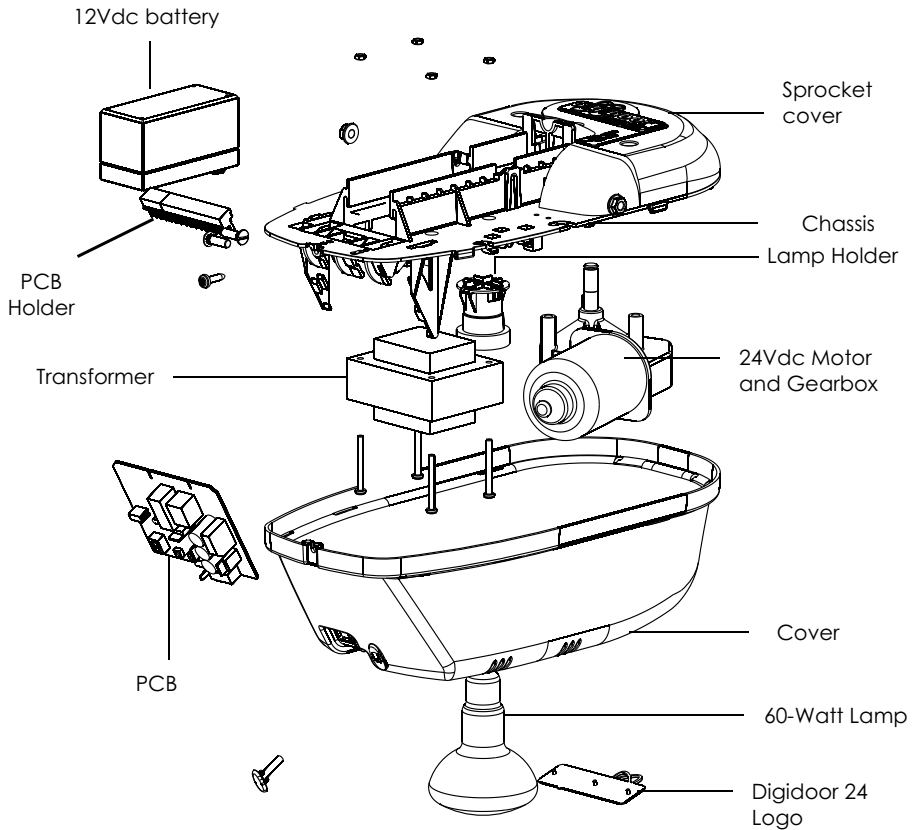
Digidoor 24 Logo

Features

24 V DC 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, powers the Digidoor 24.

Mains/Battery: 230Vac with 12Vdc battery backup.
   Note: In battery-backup mode, the machine operates at reduced speed.

Controller: The controller is microprocessor based with a plug-in printed circuit control board.

Feature Selection: Selection of features is menu-based.

Integrated Receiver: A high performance receiver, with an internally routed antenna, is integrated directly on the control board.

Obstacle Sensing: During the initial installation, the normal operating forces are established, enabling the controller to determine when an obstacle is encountered.

Wireless Wall Console: Eliminates the time-consuming wiring to the wall console.

Status Indicator: The Digidoor 24 has a prominent blue status indicator, which is normally off, on if the lock function is active, and flashes to indicate a fault.
In fault state, a diagnostic code appears on the 7-segment display.

Courtesy Lamp: Both versions of the 60-watt lamp fit the unit.

Adjustable Open-Position Stop: The guide rail 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.

Adjustable Closed Stop Block : Ensures automatic positive locking in the closed position.

Fast Operation: This operator achieves a faster 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.

Supports Most Types of Safety Beams: The controller software applies the 'smart beam' concept to any standard safety beam type. This means that when the door is required to close, the beams are automatically checked for proper operation before the door will close. If selected, this mode cannot be bypassed.

Auto-Close Mode: May be selected only if safety beams have been installed and are operational. Different Auto-close times may be selected.

Limits: The limits of the door travel are set automatically during installation.

Electrical Connections: The Digidoor 24 is fitted with a 1,5 meter power cord.

General Notes

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 the 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. Digidoor 24 is not intended to correct any problems
that are caused by an unbalanced or binding door. When operated manually,
a properly balanced door will stay at any point of its travel, while being supported
entirely by its springs.

Fault Codes (These codes also appear on the manual release card)
F1-Obstacle on opening   F2-Door fault   F3-Battery error   F4-Mains off
F5-Beam fault   F6-Sensor fault   F7-Service required

Manufacturers Warranty
**For optimum reliability and lifespan of your Digidoor 24 operator have your garage
door serviced regularly.**

Hydro Doors warrants the first purchaser of **Digidoor 24,** at the point of sale, that the
product be free of any defects in materials and/or workmanship from the verifiable
date of purchase. Upon receipt of the product the first purchaser is under
obligation to check the product for any visible defects.

Warranty Period: If the first purchaser is the end user who undertakes the installation
themselves or employs the services of an installer who is not accredited the
warranty period will be 12 months. If the first purchaser is a company utilizing an
accredited professional installer the warranty period will be 36 months.

Warranty Terms: Damage to the product caused by:
                        *Lightning, Power surge, or
                        *Incorrect installation is excluded.
The warranty shall constitute the sole remedy available under law to the purchaser
for any damages related to or resulting from a defective part and/or product.
The warranty is strictly limited to the reparation or replacement of the parts of this
product, which are found to be defective. The warranty does not cover non-defect
caused by unreasonable use (including use not in complete accordance with the
Digidoor 24 installation/owners manual).
(Continued overleaf)

(Warranty cont.)
The warrantor 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
the manufacturers discretion.
The warrantor shall not be liable for consequential or incidental damage to
property or person. 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 and shipping instructions contact the nearest **Hydro Door branch**. All items
must be sent to Hydro Doors for service at the owner's expense.

Accessories

Emergency Key Release
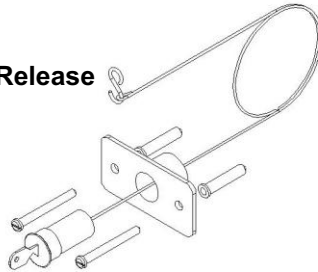
The emergency key release is required where a garage has no service
door. The key release allows the door to be manually released from the
outside in the case of a power failure or low battery condition.

Safety Beams

The Digitronic safety beam is comprised of two units, which are mounted on either side of the gate or the doorway. Alternatively, the units may be fitted to suitably mounted brackets or stanchions. The opposing faces to which the units are to be mounted should be reasonably parallel. **Important!** Choose a suitable mounting height on the pillars of the gate or doorway, low enough to protect toddlers and pets, but not lower than the underside of a typical motor vehicle.

Assembly Detail

Wiring For Normally Closed Contact
Linked To Com
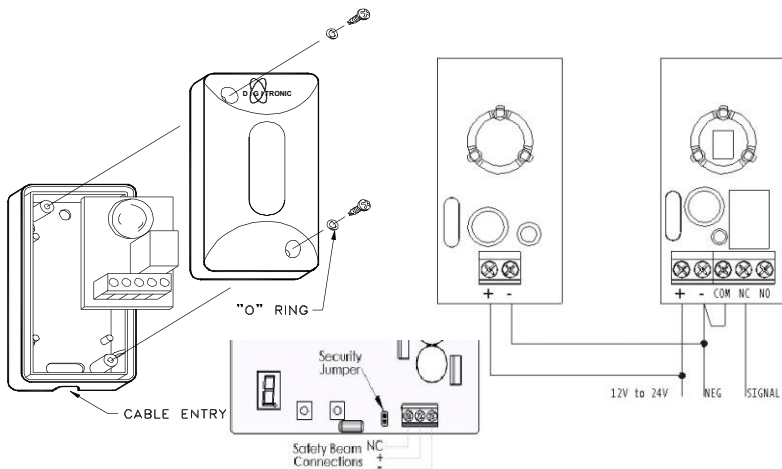
1. Remove the two cover screws, cover and the circuit board from the unit.
2. With the slot and the cable entry at the bottom, hold the base vertically in the chosen position and mark the fixing screw holes. If rear cable entry is to be used, also mark and drill the cable entry point.
3. Using a 5 mm drill bit; mount the base with the plugs and screws provided.
4. Tread the cable through the base and attach the wires according to the wiring diagram. Fit the circuit board, cover and cover screws, ensuring that the small "O" rings are under the heads of the cover screws.
5. Repeat steps 1-4 to mount the other unit on the opposite side.

Wiring to the Safety beams may be fed through the guide rail and wired into the power head.
***Note!** The selected Auto-close time only starts once the Safety beam is interrupted and re-established.*

Basic Assembly
Insert anchor tabs and screws as shown below:
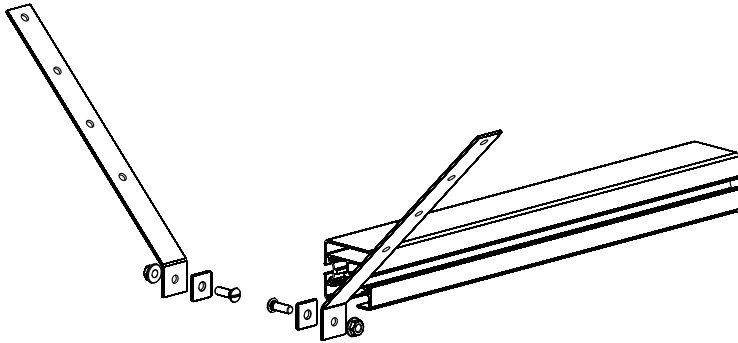
Slide the guide rail onto the power head until the rail stop is reached, and tighten the retaining nuts.

Rail Stop

Open side of guide rail must face downwards

Hole this end
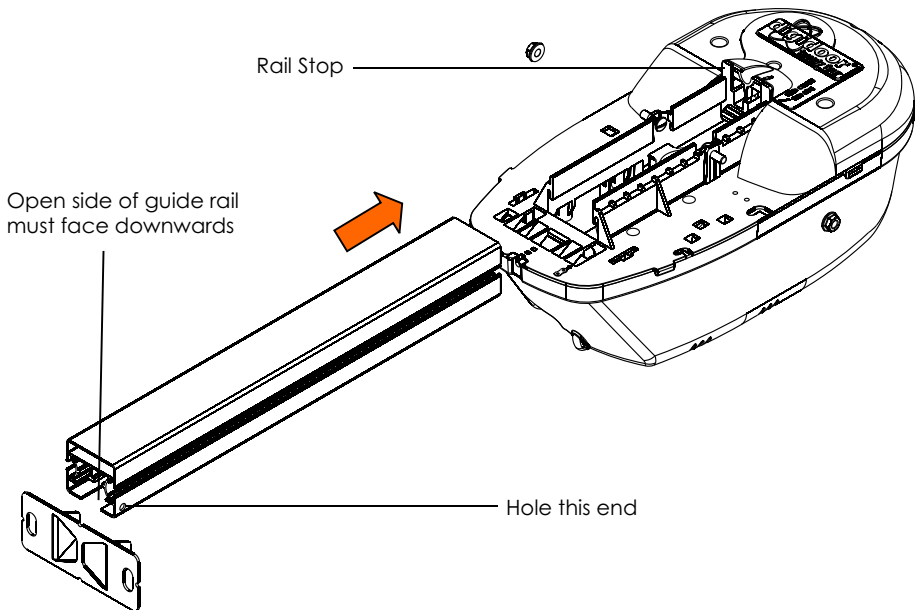
Installation and Commissioning of the Digidoor 24
Step 1

(For further information on option selection, please refer to p14)

a. Apply Mains power
b. Display flashes '1'
c. Press the 'S' button
d. Display flashes 'FC' to feed chain
e. Using the tip of a suitable screwdriver, firmly push the chain towards the power head
f. The chain will feed and stop automatically
g. Display flashes '2'

Note:-
If refitting the chain and driver assembly into the chain guide rail, note the correct orientation below.

Driver Assembly

Guide Rail

Feed Chain in this direction

Chain

Enter

'S' Select
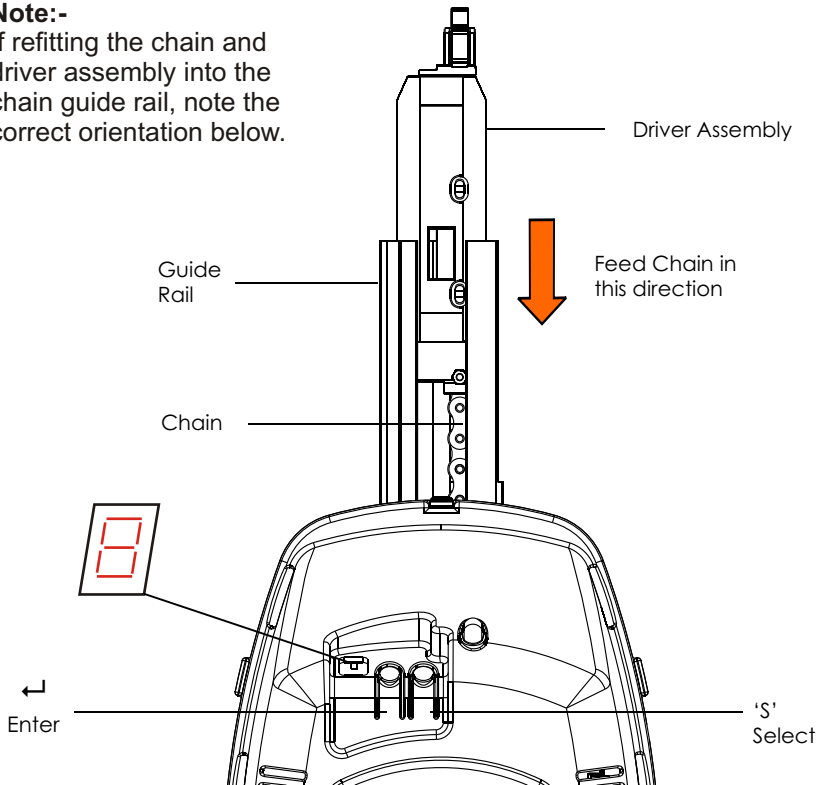
Step 2

a. Disconnect power
b. Slide the carriage into the guide rail, fit the closed stop block ensuring correct orientation (as per diagram)
c. Mount the operator using the anchor and hanging brackets
d. Fit the door bracket and connecting arms (refer to page 18)
f. Open the door to the desired position and set the open limit stop block, then tighten the nuts on the stop block. Fit Safety beams if required **(*Recommended*)**
g. Remove the lamp and cover, and connect the negative terminal to the battery.
h. Re-connect the mains power, close the cover, replace the lamp. With the carriage in the latched position close the door by hand until it engages with the driver.
i. Press the 'S' button. The operator will automatically establish the 'limits' and operating force, with the following sequence: ***Slow close, slow open, fast close, fast open*** *and the d*isplay will flash '3'

Hanging
Brackets

Anchor
Bracket

Closed Stop Block
Assembly

Guide Rail

Open Stop
Block

Door Bracket

Manual Release
Cord

Power
Head

Manual Release
instructions and
Fault codes

Connecting
Arms
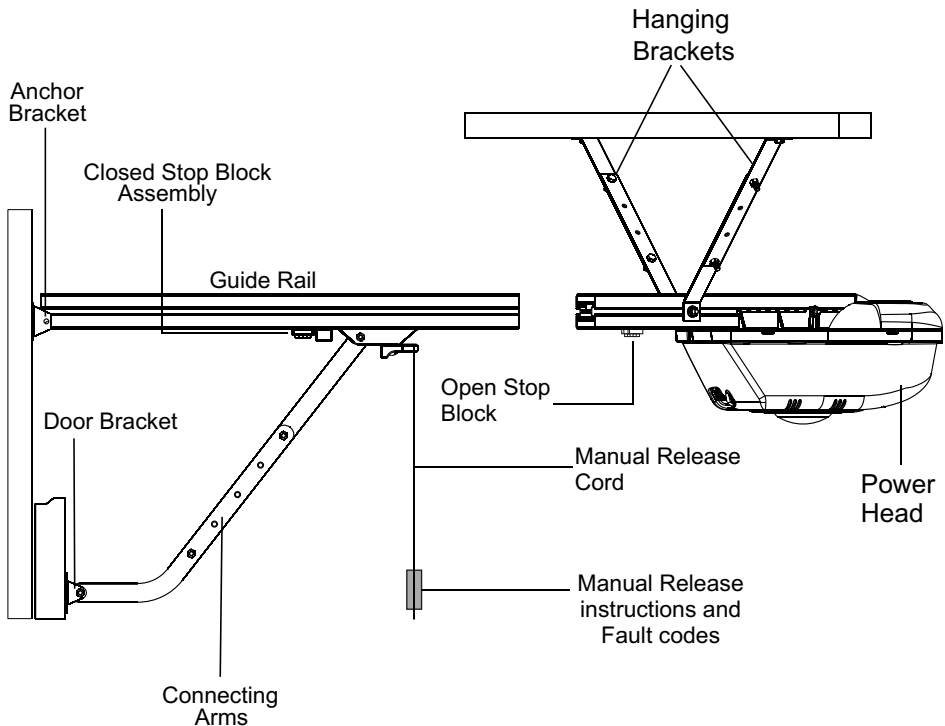
Step 3
Match the Wireless Wall Console to Receiver
Note! Only the first wall console will enable the user to record transmitters

a. Press the 'S' button on the power head and the display will flash 'nr'
b. Press the 'Operate' button on the console ($\nabla\Delta$)
c. Display flashes 'Cr' on the operator
d. Press the 'operate' button on console again to confirm, the lamp flashes 4 times
e. Fit the wall console with screws at a height of 1,7 meters inside the garage in a convenient position.

Note: When locked, the blue light on t he machine shows steadily. All recorded transmitters are locked out. An attempt to open the door will cause the courtesy light to flash once.

Operate Button

Light Button

Lock Button

Battery Cover
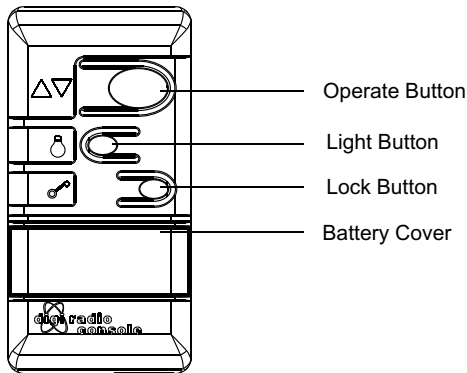
Step 4
Fit the Closed Stop Block Assembly

With the door fully closed, push the closed stop block firmly towards the carriage until the latch is heard to engage. Now tighten the nuts firmly.

Closed stop Block Assembly
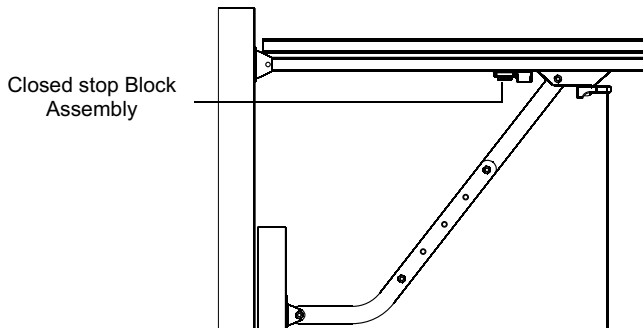
Option Selection

Selection of features is achieved by pressing the Enter (↵) and
Select 'S' buttons together. The seven-segment display will show 'P'. Thereafter every press of the 'S' button will cause a different letter to appear, representing different features. When the required letter appears, press Enter to program that feature, and the letter will start flashing. Use 'S' to step through the setting options and Enter to confirm the selection. After the display returns to 'P', press Enter to exit.

Limits (L)
As above, press ↵ and 'S' together and 'P' will appear on the display.
Press the 'S' button. The display will change to 'L'.
Press the ↵ button and 'L' will flash.
Press the ↵ button again. The operator will automatically establish the 'limits' and operating force, with the following sequence: ***Slow close, slow open, fast close, fast open.*** Press the ↵ button to exit.

Auto close delay (d)
Note! Auto-close requires a functional Safety Beam to be fitted and 'b 1' must be selected.
Press ↵ and 'S' to display 'P'.
Press 'S' until 'd' is displayed.
Pressing ↵ will cause the 'd' and 0, 1, 2, 3, 4 or 5 to flash. 0 indicates auto close is not selected. 1 = 30 second delay, 2 = 60, 3 = 90, 4 = 120 and 5 = 180 seconds.
Press 'S' until the desired option is displayed.
Press ↵ to confirm the selection.

Safety Beam (b)
Press ↵ and 'S' to display 'P'.
Press 'S' until 'b' is displayed.
Press ↵ to display a flashing 'b' and '0' or '1'.   0 = disabled. 1 = enabled.
Press 'S' to select 0 or 1.
Press ↵ to confirm the selection.

Obstacle Sensing (o) (Set automatically, but may be changed as follows)
Note:- Before making this change, refer to 'Door Condition' on page 7.
Press ↵ and 'S' to display 'P'.
Press 'S' until 'o' is displayed. Level 1 is the most sensitive and 3 the least.
Press ↵ and 'o' and a digit will flash.
Press 'S' until the desired option is displayed.
Press ↵ to confirm the selection.
Note! Start with this setting on 1, and increase it if, during normal running, the door stops and reverses while closing.

Record Transmitter (r)

Press ↵ and 'S' to display 'P'.
Press 'S' until 'r' is displayed.
Press ↵ and the display will flash 'r n' (for 'new' transmitter).
Press the desired button on the e-key Transmitter. The decimal point on the display will flash.
Release the button and 'r C' will flash. ('C' for 'confirm').
Press the same button to confirm the code and the lamp will flash 4 times.
Repeat for each e-key transmitter to be added.
Note! The controller can store thirty-two separate e-key transmitters, using different buttons on each. An attempt to record a thirty -third transmitter will be ignored.

Erase Transmitters (E)

Warning! This function removes all of the e-key Transmitter codes that have been recorded.
Press ↵ and 'S' to display 'P'.
Press 'S' until 'E' is displayed.
Press ↵ and 'E' will flash. *To exit without erasing at this point, press ↵.*
Press 'S' and '☰' is displayed.
Press ↵ and **all** codes will be erased.

Type (t)

Reserved for future use

Exit programming (P)

Press 'S' until 'P' is displayed.
Press ↵ to exit, or press 'S' to go through the options again.

Repair and maintenance procedures

1. Restoring factory defaults and replacing the master console

NOTE! Keep the carriage latch engaged at all times during this procedure

Start

Remove mains power and disconnect battery terminals

If a control board replacement is required remove the existing control board from the machine

While depressing the Enter button re -apply mains power

If required the removable memory chip can be transplanted from the old control board into the new control board. This will transfer all the user remote control codes and other setup information into the new system

The display will flash UF Ensure the door is fully closed

Once the door is fully closed remove the mains power. The unit now has returned to the factory default setup and the master console has been removed from memory

Insert the new control board into the machine

Re-apply the mains power and follow the standard insta llation instructions

1. Removing the power head from the chain guide

Disconnect the carriage latch

↓

Loosen the nuts and Remove the clamping plate from the closed stop block.

↓

Remove mains power and disconnect battery terminals

↓

While depressing the Enter button re -apply mains power

↓

The display will flash UF – and the motor will un - feed the chain from the power head

↓

Once the chain has stopped moving remove the mains power. The unit now has been returned to the factory default setup and the master console has been removed from memory

The two nuts securing the power head to the chain guide can now be loosened to allow for removal of the power head

↓

To remove the power head simply slide the complete power head from the guide rail

Sectional Overhead Doors
(Steel and Timber)

Guide Rail

Power Head

Anchor Bracket

Closed Stop Block Assembly

Connecting Arms

Manual Release Cord

Door Bracket level with top roller

Horizontal
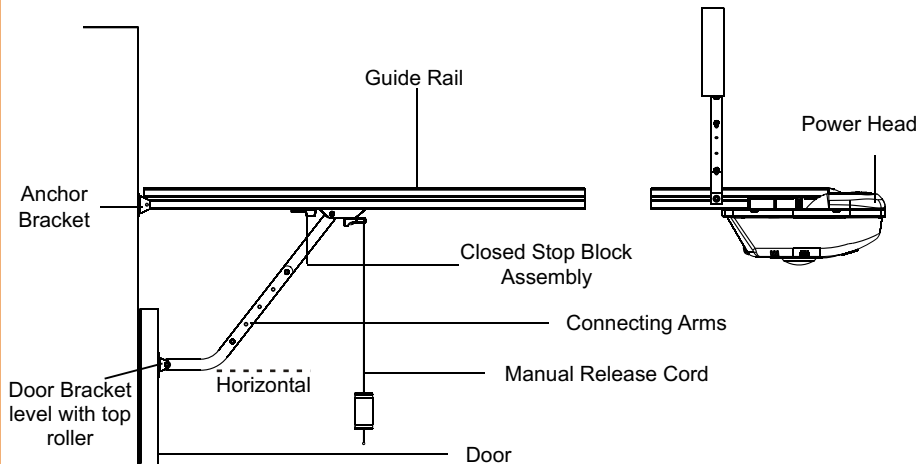
Door

With the door closed, extend and mark the **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 bracket to the wall.
**Important!** This bracket handles all the operating forces.
Ensure that the **carriage is fitted** with the large hole away from the power head. Secure the guide rail assembly to the anchor bracket while supporting the motor.
Open the door and **vertically align** the guide rail assembly to the door centre line. Prop the unit up to a horizontal position. Determine length of the hanging bracket needed to make triangular fixing. Fit the hanging brackets to align with a joist, batten or concrete member, as close to the power head as possible.

Note! Not further than **400mm** from the end of the power head.

With the door closed, pull the carriage release cord. Mount the door bracket to the inside face of the door **level** with the **top roller of the door.** Fit the curved door arm to the bracket and the straight arm to the carriage. Overlap the arms so that the short section of the **curved arm** is horizontal. Bolt in two places.

Hanging Brackets

Joist, Batten,
Concrete
Lintel

Hanging
Brackets

Guide Rail

Power Head
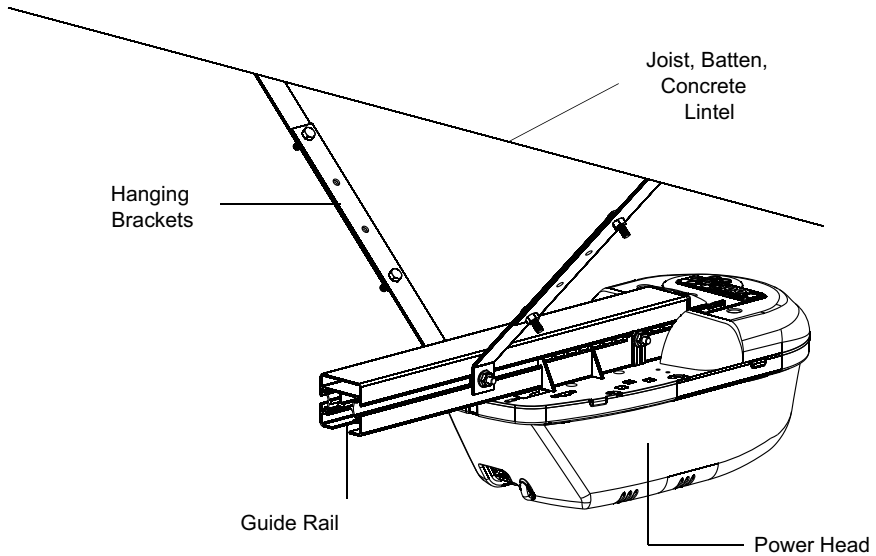
A variety of fixing methods may be achieved. For rigidity always join the struts by over-lapping and bolting at two points. Where a greater length is required extend the struts with suitable material. **Note!** This fixing must be able to withstand the torque reaction of the machine. The Digidoor 24 is also suitable for Low headroom situations.

Additional Digiekey transmitters

DigieKey
The Digiekey receiver is incorporated into the Digidoor 24 control board. Each *Digiekey* 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
Recording with onboard receiver via the wireless wall console.

With power on, ensure the light is off using the light toggle button.
Press and hold the light toggle button.
The light will come on and after 5 seconds go off.
Release the button and the light will come again.
Within 30 seconds, press the required button on the Digiekey transmitter.
   (If 30 seconds is exceeded, the controller exits the recording function)
The light on the Digidoor 24 will go off.
Press the same button on the transmitter again and the light on the
Digidoor 24 will flash repeatedly.
The Transmitter is ready for use.

Repeat the above procedure for each additional Digiekey transmitter.

Note!   A super secure mode allows the user to disable the above function
by removing the link on the control PCB (Refer to diagram on p9)

Note! The controller can store 32 separate Digiekey transmitters, using different
buttons on each. An attempt to record the 33rd transmitter will be ignored. If a
transmitter is lost or stolen; to maintain security, it is important that the **"Erase all"**
function is carried out to clear the receiver memory.

If a transmitter battery is low, the LED on the transmitter will flash during use.

The receiver will respond to a single button or a combination of buttons.
When a different button or combination is recorded by the receiver, it will replace
the previous button or combination.

Important Notes to Installers and End Users!

In case of a power failure the Digidoor 24 is capable of at least ten operation cycles (open and close) on battery power

Note: In battery-backup mode, the machine operates at reduced speed.

Battery endurance when mains is absent, is at least 12 hours.

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)*

Basic Fault Finding
Fault Indication and Codes

(This information also appears on the manual release card)

A Fault is indicated by a Flashing Blue Light and a Code
displayed on the front of the Digidoor 24

F1 - Obstacle on opening
Manually override the door and check for obstacles in the tracks or door path.
Check the spring system and the balance of the door and adjust if required.
(Caution refer to p 23)

F2 - Door fault
Check that the door is balanced; by disengaging the operator from the door
and positioning the door half way.
If the door falls, then the spring tension needs to be increased. If the door rises,
the tension must be reduced.
Note: Spring tension adjustments must only be undertaken by a qualified door technician.
Check all brackets, hinges, rollers, tracks, cables and springs.

F3 - Battery fault
Ensure that the battery is connected and the mains power is on. If the fault persists
after 10 minutes, the battery may need to be replaced.

F4 - Mains off
No mains supply, but the operator will work on battery power for at least ten cycles
Check the main distribution board for tripped circuit breakers or earth leakage.

F5 - Beam fault
Check and repair or replace Safety beams
Check wiring, connections and lenses.

F6 - Sensor fault
Internal sensor problem; requires an accredited technician to repair.

F7 - Door Service required
Use Hydro Doors accredited technicians to service the door installation.

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 great spring tension!

A properly maintained door will ensure your door operator functions reliably and safely.

As a further reminder, your Digidoor twenty-four operator will indicate when the door requires servicing.

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:…………………..………………………………………………………

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Accreditation Number…………………………….

Hydro Doors & Gates (Pty) Ltd

Head Office:
4 Staal Road, Stormill Ext 2 Florida RSA
PO Box 635 Florida 1710
Dialling Code: +2711, Tel: 474 9060, Fax: 474 9067
Website: www.hydrodoors.co.za

Lambert Anderson & Wood Training Academy
training@digidoor.co.za

Our Nationwide Network of Sales Branches:

Randburg : Dialling Code: +2711, Tel: 792 7117, Fax: 792 7117, Email: sales@digidoor.co.za
East Rand : Dialling Code: +2711, Tel: 397 8448, Fax: 397 8448, Email: eastrand@digidoor.co.za
Pretoria : Dialling Code: +2712, Tel : 653 6399, Fax : 653 6464, Email: pta@digidoor.co.za
Nelspruit: Dialling Code: +2713, Tel: 753 2176, Fax: 753 2176, Email: nelspruit@digidoor.co.za
Cape Town : Dialling Code: +2721, Tel: 933 5556, Fax: 933 5558, Email: ctn@digidoor.co.za
Durban: Dialling Code: +2731, Tel: 700 2110, Fax: 700 2111, Email: dbn@digidoor.co.za
Port Elizabeth: Dialling Code: +2741, Tel: 360 3551, Fax: 360 3550, Email: pe@digidoor.co.za