



**Installation and Operation Manual
Operator SECTIONAL-500**

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2. General information

The electromechanical operator Sectional-500 of the company "DoorHan" is intended for automation of balanced residential sectional gates.

The electromechanical operator Sectional-500 is a chain operator.

It consists of a mechanical reducer and an electric motor with integral control unit. The reducer and the motor have a common housing.

The self-locking reducer enables mechanical lock of the gate, if the motor does not run. In case of power disconnection, the emergency manual release enables manual opening or closing of the gate.

2.1 Basic functions

- Microprocessor – It enables precise positioning in open and close positions, actuation of the force protection (gate's reverse movement in case of obstruction)
- Electric motor – Low noise level, soft start/stop guarantees long life of operator.
- Self-diagnostic – Setting and displaying of errors on DD (L-normal run, F-force protection, H-error, A-photocell actuation)
- Code protection – Unique radio code protects gates against unauthorized opening.
- Signalling device – The device will beep if the gate is open more than 10 minutes. After closing of the gate the beeping will stop.
- Emergency release – In case of power cut, you can release and open your gate manually.
- Add-on safety devices – Infrared sensors can be connected (photocells).
- Automatic closing – Automatic gate closing at the end of pause (range from 30 to 240 sec)
- Signalling 2000 operation cycles – After 2000 operation cycles the operator gives a signal to carry out maintenance.

2.2 Specifications

Model	Voltage	Gate area m ²	Operating temperatures range °C
Sectional-500	180-240	<=8	-20~+40

Guide

Model	G guide length	L travel	Aperture height
Sk-3000	3020 mm	2560 mm	<2240 mm

Consumed power	100 W
Waiting mode	6 W
Force	500 H
Control	Stepped (pulse) mode
Motor	24 V DC
Light	25 W
Opening speed	11 cm/sec
Fuses	Power supply 2.5 A ; Light 2.5 A
Radio control	433 MHz
Transmission	Chain
Moisture protection	For dry premises

3. Delivery set

N ^e	Name	Quantity
1	Electric operator	1
2	Curved bar	1
3	Intermediate bracket	2
4	U-shaped bracket	3
5	Fastening – to – lintel bracket	1
6	Bracket for fastening of bar to leaf	1
7	Slotted bushing	1
8	Guide with chain and carriage	1
9	Fastening set	1

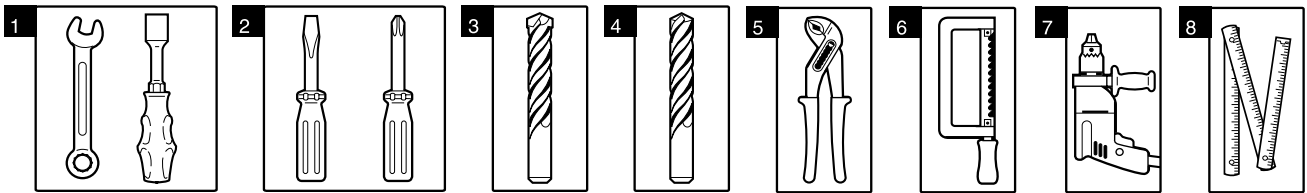
4. Safety instructions



Important!
Do follow safety instructions at operation of the operator

- Read carefully this manual.
- Have qualified personnel carry out installation and startup of the operator.
- Open and close the gate by hand, make sure that it moves smoothly.
- The gate shall be equipped with balance springs and balanced, otherwise the operator will fail. Before installation of the operator be sure, that the gate is balanced properly and is in good working condition.
- It is necessary to install mechanical stops on the guides, in order to avoid the exit of the gate from the guides.
- Check for compliance of the mains power with the requirements, specified in this manual.
- Do not let children use the opening button, in order to avoid spontaneous moving of the gate. Never let children play with the automatic system.
- Deenergize the operator before putting it into operation, after releasing or before removal its housing.
- Never go or drive through the gate during its closing or opening.
- Do not impede moving of the gate.
- Control of the gate shall be executed only under condition of its safe moving.
- Do not pull the chain by hand to open or close the gate.
- Ground properly all metal elements of the operator and the gate.
- Be sure, that the leaf is well balanced, if you stop it in any position, the leaf shall remain in this position.
- In case of failure, unblock the operator and contact qualified technicians.
- Only the intended use of the operator is allowed, any other use is forbidden.

5. Tools



- | | |
|--|--------------------------------|
| 1. Set of spanners | 5. Pliers |
| 2. Set of slotted and cross screwdrivers | 6. hacksaw for metal |
| 3. Set of drills for metal | 7. Electric drill |
| 4. Set of drills for concrete | 8. Tape measure (folding rule) |

6. Installation

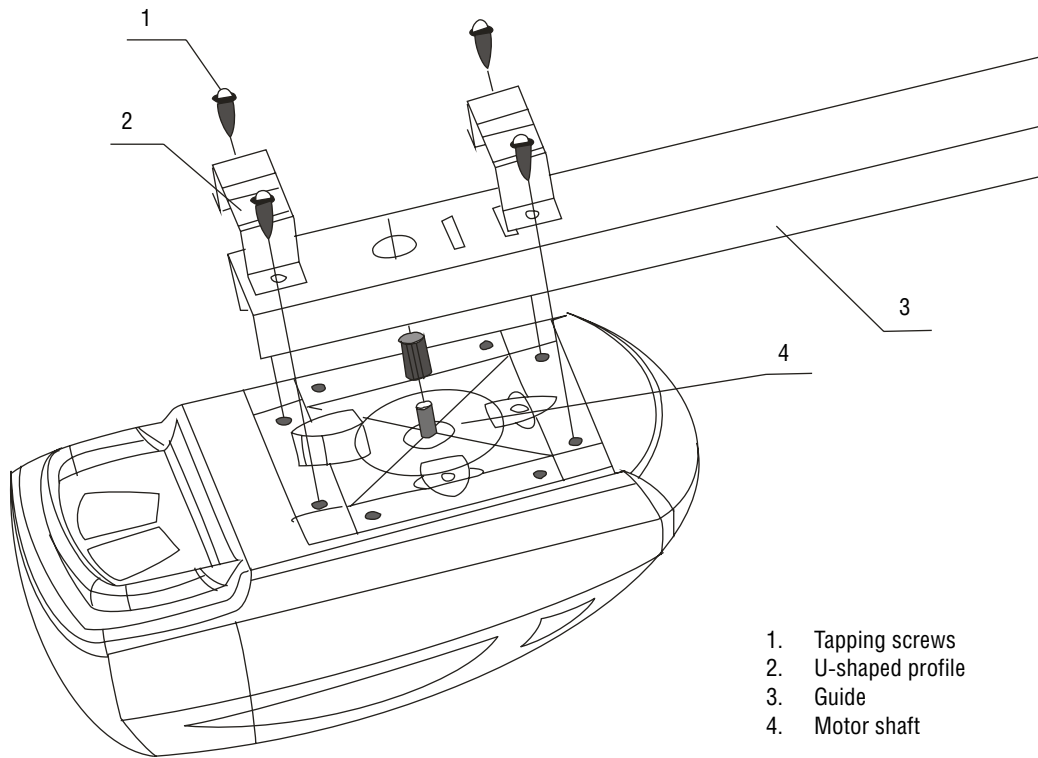


Before installation, make certain, that the gate is operable and the torsion springs balance the door leaf.

Following the instructions is important for proper operation of the operator.

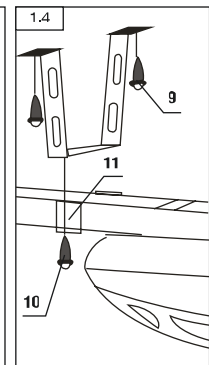
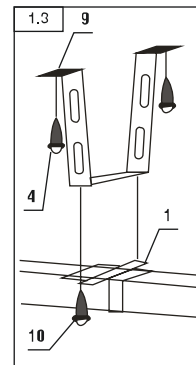
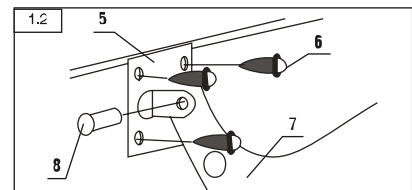
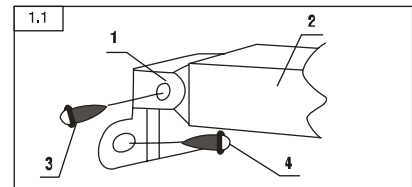
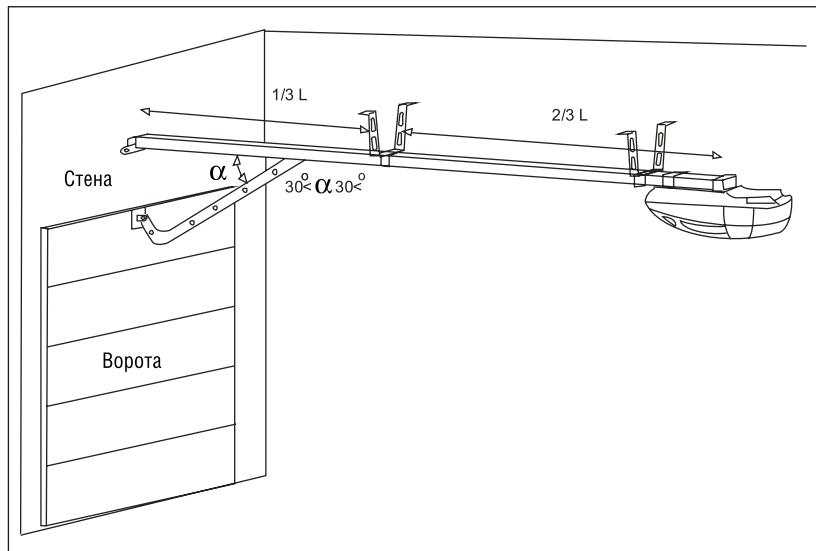
- Before installation of the motor, unpack the equipment, which is necessary after installation of the motor:
- Before installation of the motor, check, that the gate is balanced.
- Check, that the release cord is at a height not exceeding 1,8 m;
- Mount the control panel at a height not less than 1,5 m close to the gate;
- After installation has been completed, check, that the operator's adjustment is correct and the gate reverse when contact the obstruction 40 mm high, placed on the floor;

6.1 Connection of operator and guide



- 1. Tapping screws
- 2. U-shaped profile
- 3. Guide
- 4. Motor shaft

6.2 Fastening to ceiling



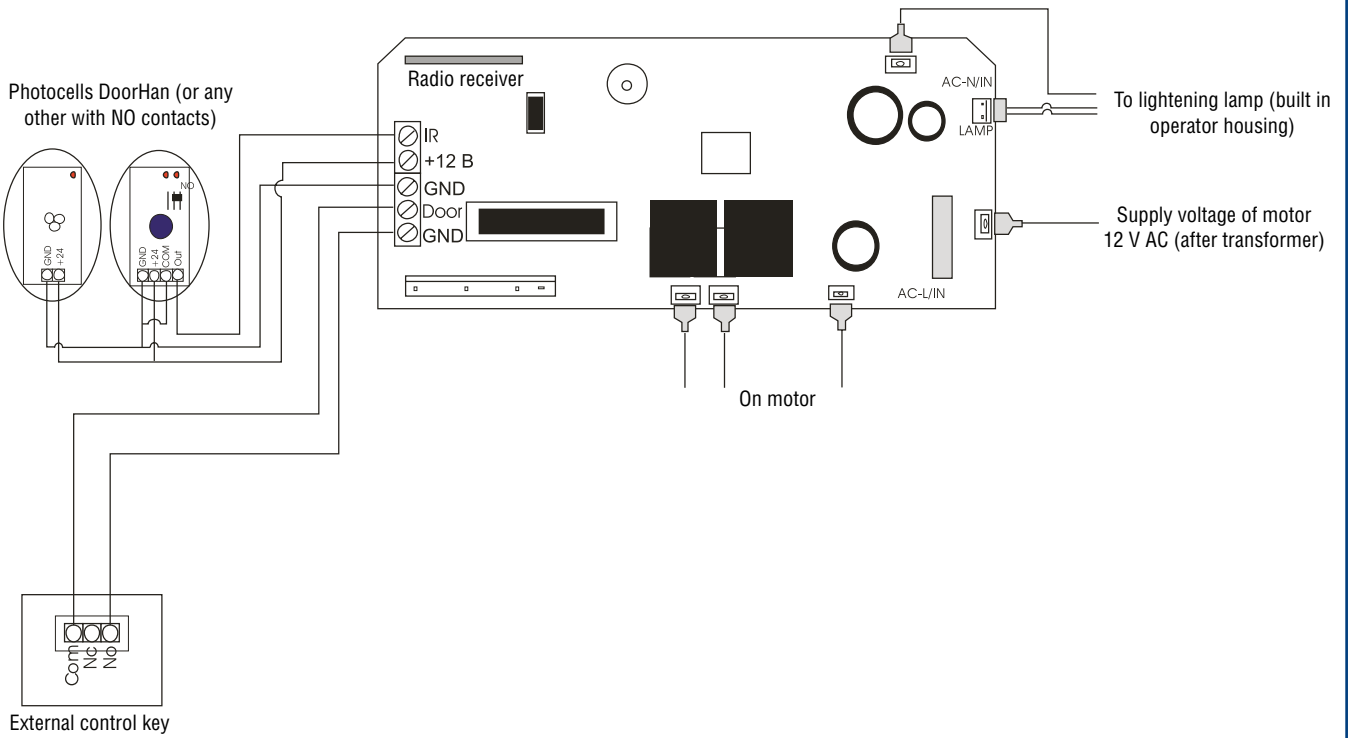
Height of operator's suspension depends on the maximum lift of the gate edge.

Distance from the guide to the upper edge of the rubber seal shall not be less than 10 mm.

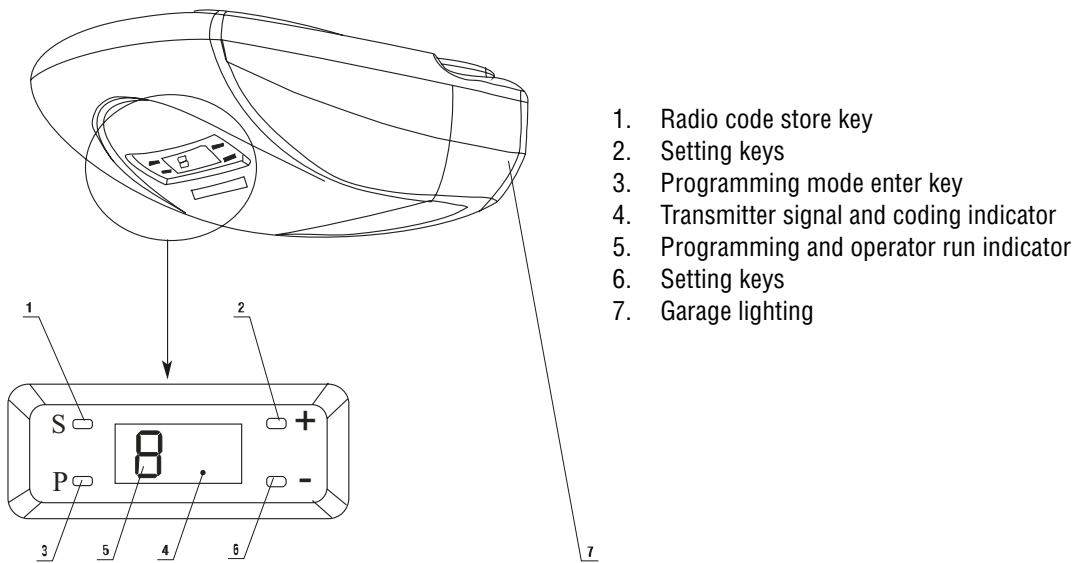
Key to Fig.1.1 - 1.4

- | | |
|----------------------|---------------------------------|
| 1. Bracket | 7. Curved lever |
| 2. Guide | 8. Splint axis 8x25 |
| 3. Bolts 60x80 | 9. Fastening-to-ceiling bracket |
| 4. Anchor bolt | 10. Bolt 8x20 |
| 5. Fastening to gate | 11. U-shaped bracket |
| 6. Bolt 6x15 | |

7. Wiring



7.1 Operator control keys



8. Programming

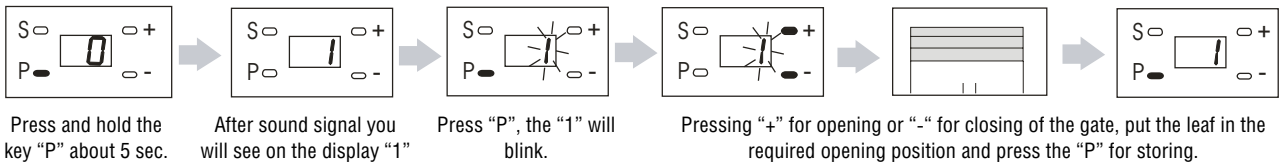
8.1 Preparation

Block the carriage.

Turn on power, the indicator of the operator will light, sound signal will be heard.

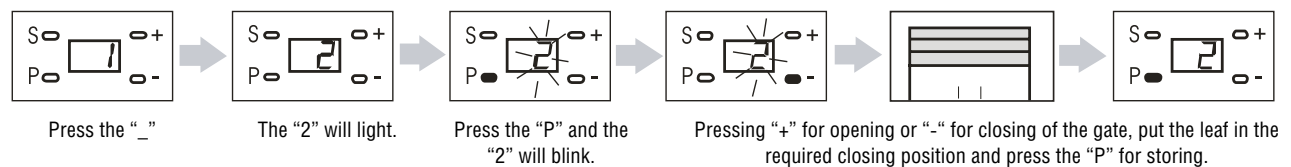
If programming has not been completed, the settings will not be stored. If there is a mistake in one of the settings, you can turn off power and reprogram.

8.2 Upper gate position



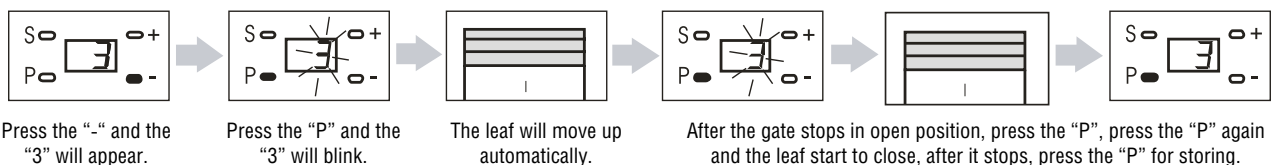
(A setting will be stored only when you program the UPPER gate position. The upper position shall be programmed before setting of the lower gate position.)

8.3 Lower gate position



(A setting will be stored only when you program the LOWER gate position.)

8.4 Automatic force setup

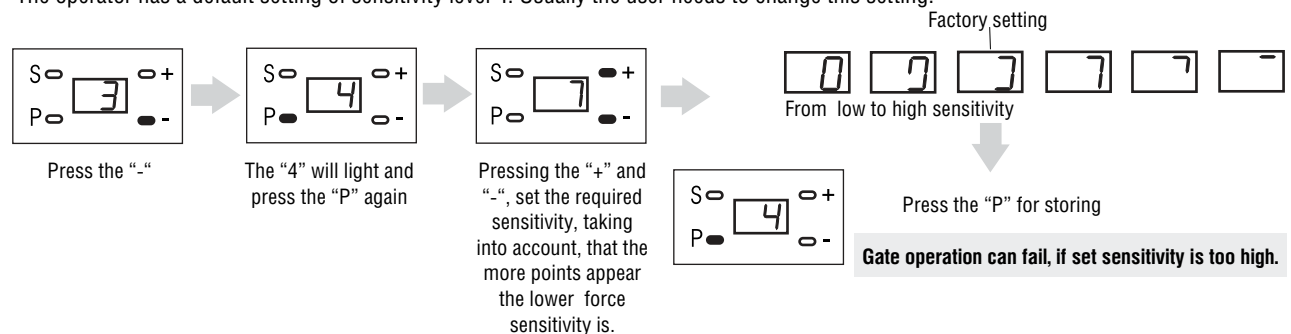


After the automatic force setup is performed, programming can be completed, as all other parameter have factory settings. To finish programming, pressing the "+", select the menu "1" and hold it unless the "0" appears on the display.

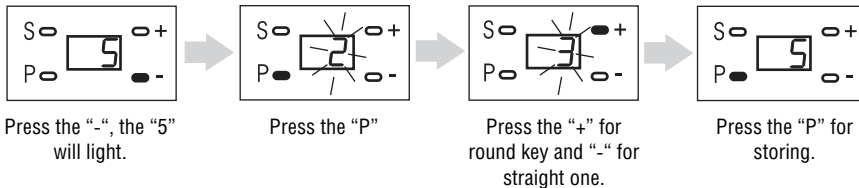
(After these setting operations are performed, programming can be finished.)

8.5 Force limit setup

The operator has a default setting of sensitivity level 4. Usually the user needs to change this setting.

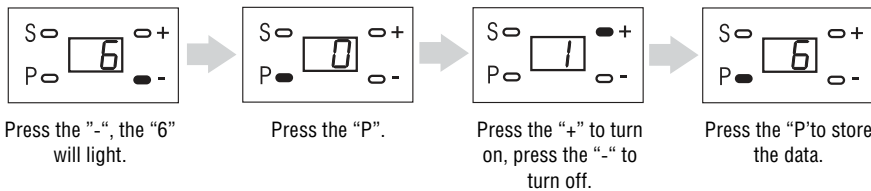


8.6 Control key setting

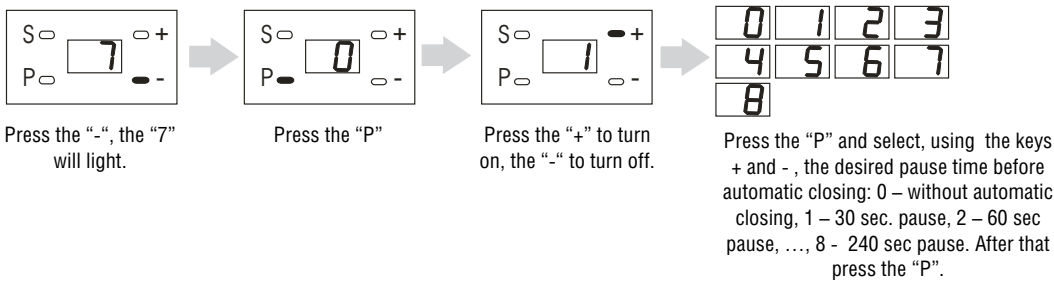


8.7 Signal actuation

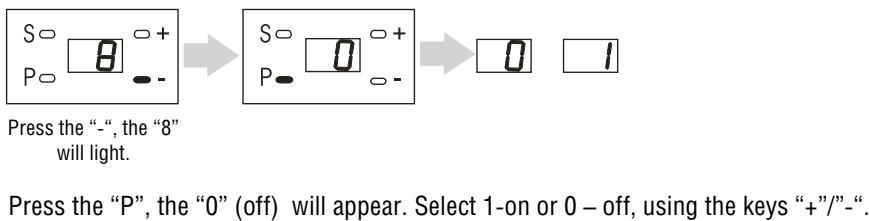
In the event you have forgotten to close the gate, a warning signal will sound in 10 minutes. After the gate close, the signal will be automatically off.



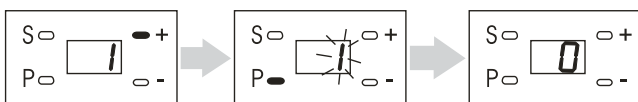
8.8 Pause time setup



8.9 Alarm actuation after 2000 cycles

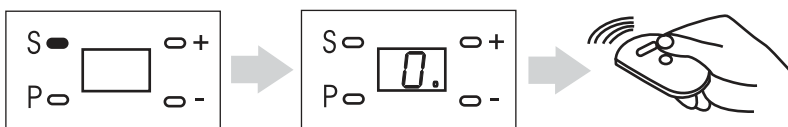


8.10 Programming completion



9. Remote control programming

9.1 Remote control entry

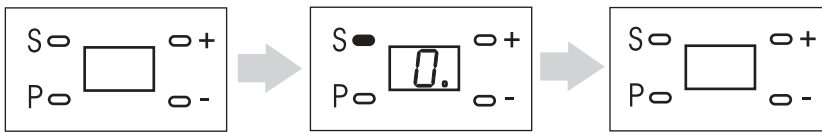


Remote control entry

- 1) Press and hold the key S, until the indicator (point) at the bottom of the display appears.
- 2) While the indicator (point) is on, press and hold the key on the remote control, until the indicator is off.
- 3) Repeat the operation to entry other remote controls (maximum quantity is 15 remote controllers)

Important! Before remote control entry, set the required control channel in item 5 of programming (according to the selected control key).

9.2 Remote control delete



To delete remote controls from the receiver memory, do the following: press and hold for 8 sec the key S, until the indicator (point) at the bottom of the display disappears, at that the short signal will sound.

10. Start

- Via remote control: The gate opens, stops and closes by successive pressing one remote control key.
- Manual opening: In the event of power cut the gate can be opened manually with unblocked carriage (see the relative section).

11. Maintenance

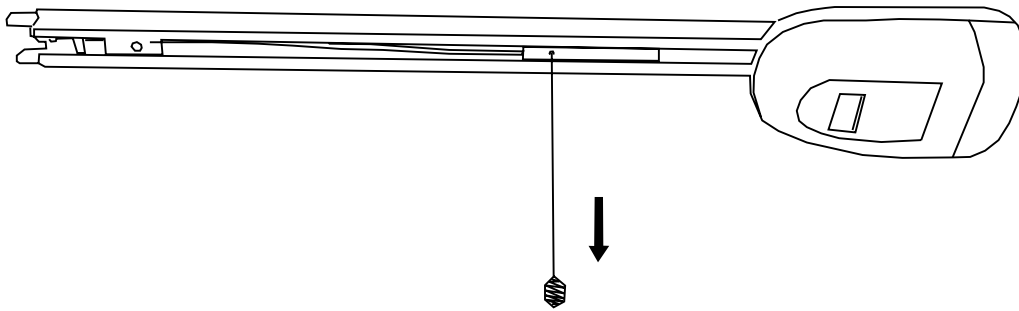
- The operator Sectional-500 does not require any special servicing.
- Check periodically balance and gate travel smoothness before start.
- Check periodically proper setup of open and close positions, operability of safety devices.

Lubricate the moving parts.

In the event of power cut, restoring of the operator's settings can be needed. For that after power is on operate one full cycle of opening/closing of the gate:

- When power is disconnected, the gate will stop.
- After power is on again, press the key on the remote control.
- The gate will move up and stop according to the programmed position.

12. Manual opening



In the event of power cut:

1. Check the carriage (if it is unblocked or blocked);
2. If the carriage is blocked, pull carefully the cord to release the operator:
 - the carriage is released and the cord is in tension.
 - Release the cord and the carriage will be engaged automatically.



Important! When the carriage is blocked, the gate will move automatically only after the carriage meshes with the chain support.

13. Trouble shooting

Symptom	Possible reason	Possible solution
Operator does not run	1. No power 2. Fuse is broken	Turn on the power Replace the fuse
Remote control does not run	1. Remote control is not entered. 2. Remote control battery is discharged	Re-entry the remote control, replace the battery
Remote control actuation distance is too little.	1. Remote control battery is discharged 2. Radio interference	Replace the battery
Chain moves and gate does not move	1. Carriage is not blocked 2. Carriage is not meshed with support	Block the carriage. Link it to the support.
Noise when operator runs	Chain is not properly lubricated	Lubricate the chain.
Chain makes noise and sags	Long-term operation of chain without lubrication	Tighten the chain using chain tension screw, lubricate the chain.

(All the operation shall be performed by specially trained qualified technicians)



DoorHan thank you for buying our products.
We hope you will be satisfied with the quality of our product.

If you need any further information about purchasing, distribution and maintenance, contact our regional agents or our central office at the following address:

120 Novaya street, Akulovo village, Odintsovo district,
Moskow region, 143002 Russia
Tel: +7(495)933-2400, 981-1133
E-mail: Info@doorhan.ru
www.doorhan.ru