



GARAGE DOOR OPENER



PDS-101

WARNING: IT IS VITAL FOR THE SAFETY OF ALL PERSONS INSTALLING AND USING THIS OPENER TO FOLLOW THE INSTALLATION INSTRUCTIONS AND SAFETY WARNINGS. FAILURE TO COMPLY MAY RESULT IN SERIOUS PERSONAL INJURY AND/OR PROPERTY DAMAGE AND FAILURE OF THE OPENER SYSTEM

Owner's Manual and Installation instructions

Functions

- Micro intellectual control unit.
- One button controls open, stop and close
- Unit light will operate while opening or closing the door, the light will stay on for three minutes and will switch off automatically.
- Force protection system when operating the door, this optional function is a photo beam, auto-close, lock door, etc...the door will pause momentarily then rebound when it reaches the hinder point on the closing way. The protecting functions are for overload, over heat or low power input etc.
- DC motor improved functions with advanced low noise, soft start, soft close until the door has stopped, and this advanced function reduces the wear and protect the unit to ensure it can be used for a long time.
- LED display working situation can be shown on the LED screen for easy programming and fault diagnostics.
- Decoding and Rolling code.
 - Common PRNG (Pseudo Random Number Generator) preferably cryptographically secure in both transmitter and receiver
 - Transmitter sends 'next' code in sequence
 - Receiver compares 'next' to its calculated 'next' code.
 - A typical implementation compares within the next 256 codes in case receiver missed some transmitted key presses.
- Manual Disengagement, this function allows the user to manually operate the garage door in-case of a power failure or unit malfunction. This will allow you to open and close the door by hand without the use of the remote unit.
- Optional Functions, there are some very clever and practical accessories that can be attached to the PDS-101 opener such as, Photo beam, battery backup, wall button and flash light...etc.

Technical Specifications

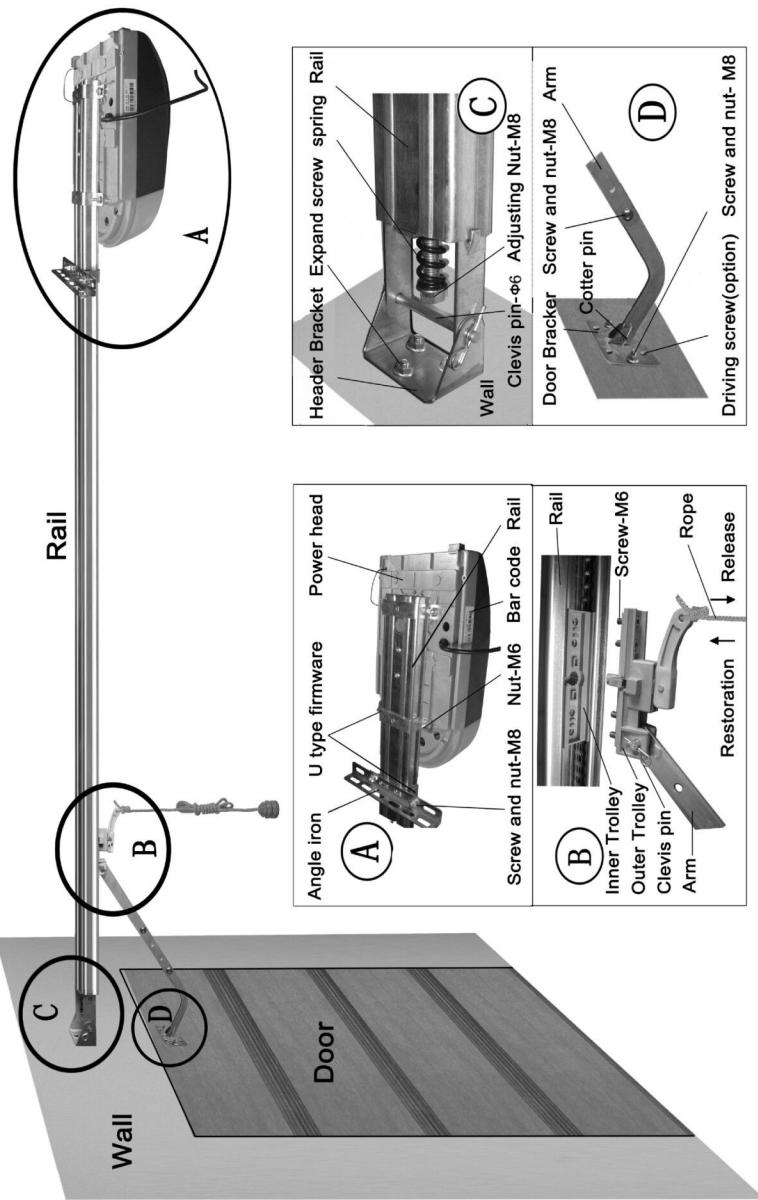
Power input	240VAC±10% 50~60Hz	Reception	433.22MHz
Motor	24VDC	Decoding	Rolling code
Working temperature	-20~50℃	Transmitter	27A 12V Battery
Relative Humidity	≤90%	Global frequency	24V 5W
Open and close force	800N	Courtesy light	3 minutes time

Installation Instruction

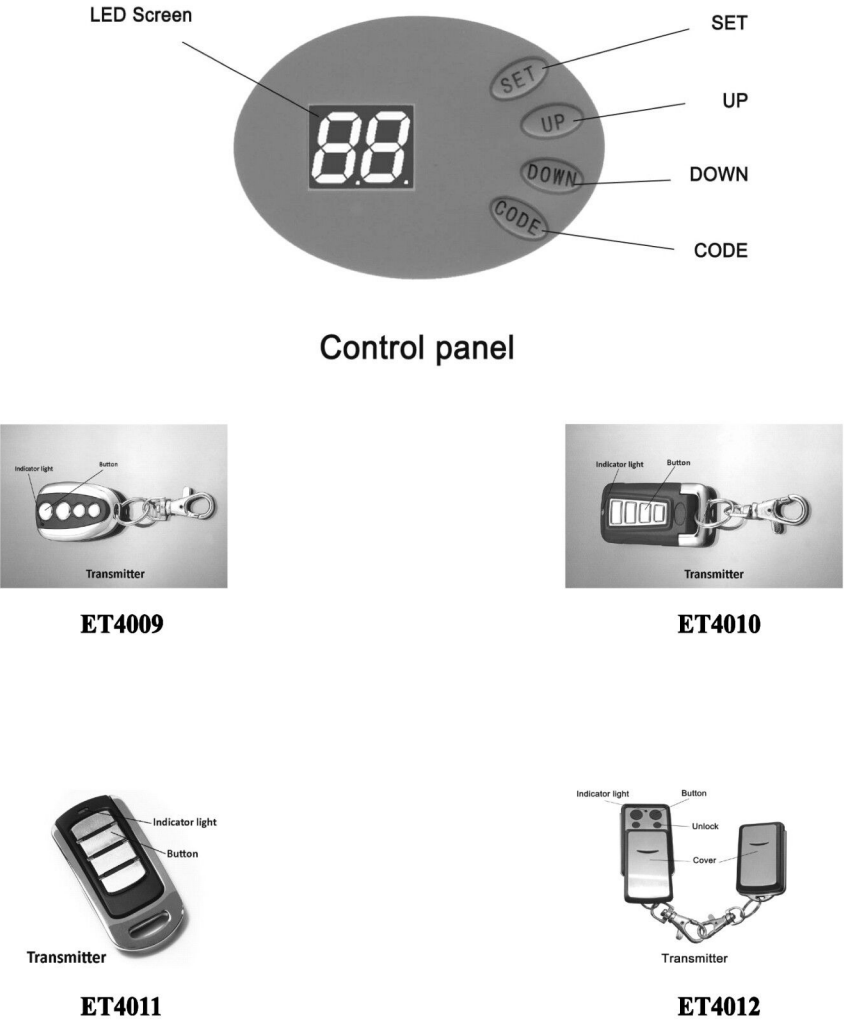
Recommended Tools to be used for installation of MARK-1

	Tools required
1	Drill and Drill bits (to suit Timber and Concrete)
2	6 Foot Step ladder
3	Sockets Set with extension bars and swivel socket head
4	Tape measure
5	Carpenter's level, straight edge
6	Insulated Screwdriver set
7	Lazer alignment tool (to centralize the Motor and Drive)
8	Pliers, side cutter and Vise grips
9	Neon-electroscope, millimeters
10	Adjustable wrench
11	Hammer

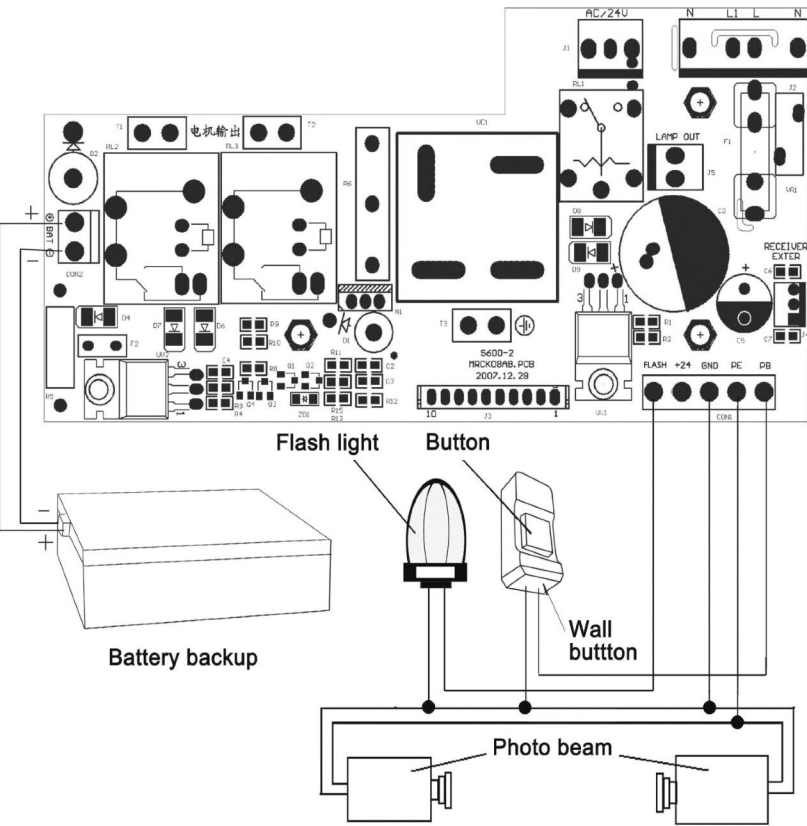
Installing the Operator and Rail



Control panel and Transmitter



Optional Terminals and Connections

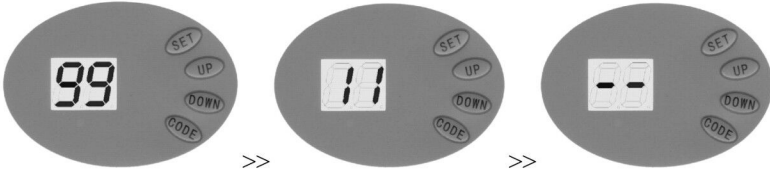


Programming the Operator

1 Preparation before installation begins

Chain Tension: tighten the chain by turning the adjusting nut-M8 in the direction shown above (picture C). Make sure the shuttle is locked, pull or push the door to confirm the shuttle connects with the chain.

Turn on the power, the courtesy light will switch on for several seconds, at the same time, the LED displays the number from **99** to **11**.Then the unit turns to standby mode.

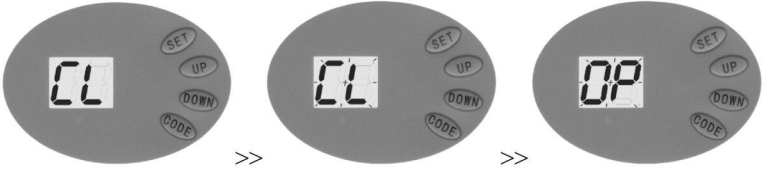


Turn on the power, The LED displays from **99** to **11**. At last, it displays **--**

Setting Open and Close Positions



Press and hold **SET** until it displays **"P1"**, press **SET**, it displays **"OP"**. Then press **UP**, when the door has reached the open position, press **SET**.



Display will show **"CL"**, then press **DOWN**, it displays **"CL"**. When the door has reached the closed position, press **SET**.

The door will now open and close automatically to map the open and close sensitivity force requirements.

Programming self Learning Transmitter

The unit will store 20 codes this will be displayed as flashes **"Fu"**. To preventing coding mistakes, **it is necessary** to cancel all the stored codes.

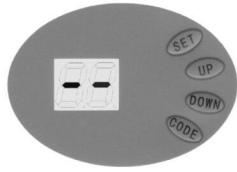


When unit displays **"Fu"**, press and hold **CODE** more than 8 seconds until it flashes **"dl"**, all the codes will be cancelled.

Adding extra transmitters of changing transmitters



Press **CODE**, it displays **"Su"**, press a button on the transmitter, then release and press the same button again, **"Su"** flashes, then it displays **--** to show setting is complete.



Repeat previous steps to code a **maximum of 20** different transmitters' and/ or wall buttons.

Force and overloading adjustments

The door meets hinders will rebound and it stops automatically when it overloads.



Press and hold **SET**, LCD will display **"P1"**, press **UP** once, it displays **"P2"**, press **SET** once again, it will show the current situation. Press **UP** to increase the force one degree and press **DOWN** to decrease one degree. Maximum degree is **"F9"** and minimum is **"F1"**. Press **SET** to confirm. The default setting is **"F9"**.

Photo Beam programming



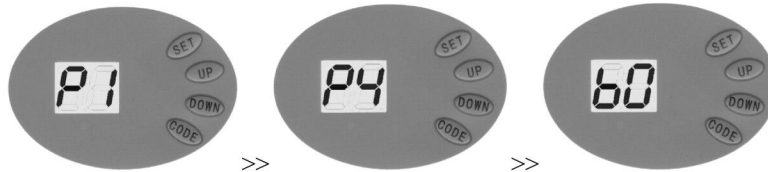
Press and hold **SET**, LCD displays **"P1"**, press **UP** twice, it displays **"P3"**. Press **SET** to show current situation. Press **UP** once it displays **"H1"**, the photo beam is enabled.



Press **down** once, LCD displays **"H0"**, the photo beam is disabled. Press **SET** to confirm and quit. **Note:** If you do not use photo beam device, **please make sure it displays "H0"**, to close this function.

Auto-Close ON/OFF

Recommended that it's not programmed unless by request from customer



Press and hold **SET**, LCD displays **"P1"**, press **UP** three times, it displays **"P4"**. Press **SET** to show current situation. Press **UP** to increase the Auto-close one minute and press **DOWN** to decrease one minute. Maximum degree is **"b9"** and minimum is **"b0"**. Press **SET** to confirm. The default setting is **"b0"**, **"b0"** shows auto-close off.

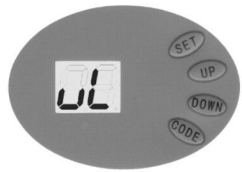


Lock Door Programming

When you use **uncovered transmitters**, it is recommended using lock door function. When this function works, you can't open the door until you press the "unlock" button first.



Press and hold **SET**, LCD displays **"P1"**, press **UP** four times, LCD displays **"P5"**, press **SET** to show current situation. Press **UP**, it displays **"Lc"**, lock door function works, press **DOWN**, LCD displays **"uL"**, the lock door function doesn't work. Press **SET** to confirm the function you need.



Owners' Guide

Operation of garage door and motor instructions,

- The first time you use the door, please test the driving system to see if it moves well. (Test method: unlock the shuttle, pull and push the door by hand.)
- All power electrical work must be conducted by licensed electricians
- Using the transmitters ensure that you do not stand or walk under a moving door, the transmitters should be out of reaching of children.
- Please ensure the garage door and openers are away from fire, excessive moisture and electromagnetism.
- Check at least twice a year to make sure the door is properly balanced and that all working parts are in good working order, contact Automatic Remote Access if adjustments are required to the tensile force of the chain or if unit malfunctions.
- It's recommended that you ensure your garage operates manually with ease and if required, add suitable amount of lubricant to the active system on the door guides and rollers.

Owner's Maintenance Check List

It is very important to adhere to the **Warranty informational terms and conditions** and only authorized technicians are allowed to carry out any maintenance to the MARK-1 unit as well as any accessories fitted to it. Failure to do so may provoke the unit warranty.

Problem	Causes	Solution
Noisy chain	The chain is too loose	Adjust nut-M8 referring to 6.1.1
The motor does not work	Power Supply Issue	Ensure adequate power is supplied to the unit also Check the fuses
After setting open and close positions, the motor does not work	The screws of fixing the Hall components are loose or Programming mistakes	Tighten the screws. Resetting open and close positions as well as any other functions
The door can't be closed	If Photo beam function are installed and programmed	Cancel the photo beam function and test

The wall button works well, but the transmitter doesn't work	No transmitter learning Transmitter battery is weak or flat	Code referring to manual and /or Change new transmitter or battery
Too short of transmitter distance	The transmitter battery is near flat	Change new transmitter battery