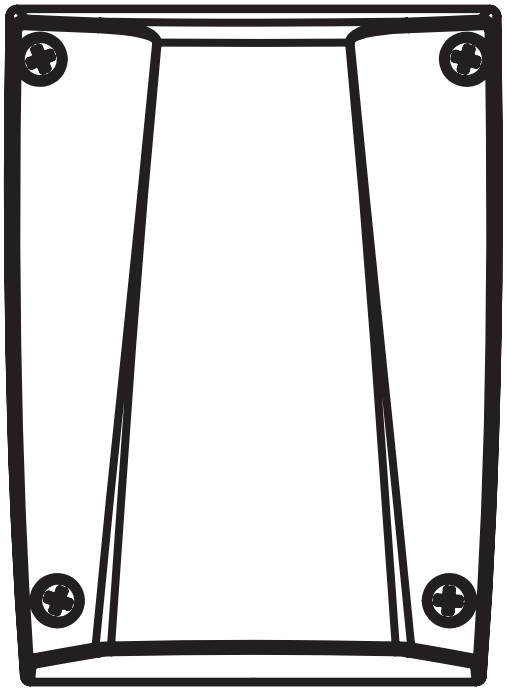
CB17 CONTROL SYSTEM

USER MANUAL



Reuse
Reduce
Recycle

INDEX

CONTROL BOX INSTALLATION

1. Decide the installation position of control box first, it is suggested to be installed near the gate and should be protected from possible damage. Be aware of the motor cable length before deciding the installation position.
2. Remove the cover by unscrewing the four screws on the cover. See ***Figure 1(1)***.
3. Puncture the holes beneath the bottom of the control box for cables to go through. See ***Figure 1(2)***.
   * Be careful of this process, should not damage the main panel inside the box
4. Secure it on the wall. See ***Figure 1(3).***

Figure 1(1)

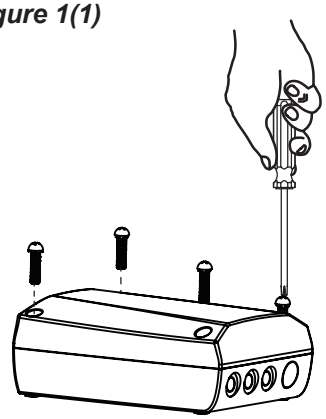


Figure 1(2)

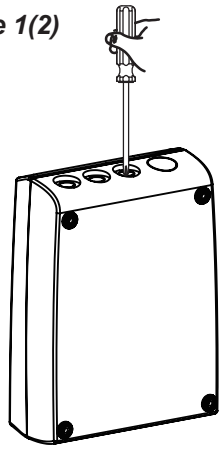
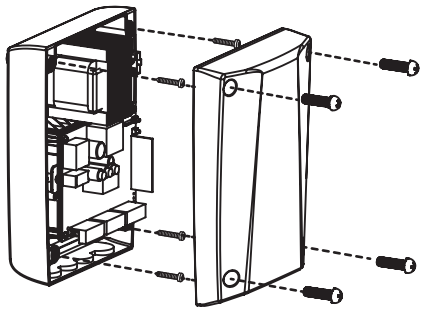


Figure 1(3)



5. Wiring Connection:
   Prepare all the wires of the accessories beforehand and connect the wires to the gear motors and accessories on the PCB as shown in ***Figure 1(4)***. All of the wiring connections of the accessories are not requested to distinguish the positive (+) and the negative (-) polarity.

1). Flashing light: Connect the two wires from the flashing light to the terminal L+ and L- on the PCB.

2). Electric Latch: Connect the two wires from the electric latch to the terminal Lo + and Lo- on the PCB.

3). Gate openers: Refer to Figure 1(4) and connect the wires separately to the terminals on the PCB.
   Motor 1: Connect the motor wire (White +) to the terminals Mo1 +, and (Yellow -) to the Mo1-.
   Motor 2: Connect the motor wire (White +) to the terminals Mo2 +, and (Yellow -) to the Mo2 -.

Notes:

For gates opened outward,
Motor 1: Connect the motor wire (Yellow -) to the terminals Mo1 +, and (White +) to the terminals Mo1-.
Motor 2: Connect the motor wire (Yellow -) to the terminals Mo2 +, and (White +) to the terminals Mo2 -.

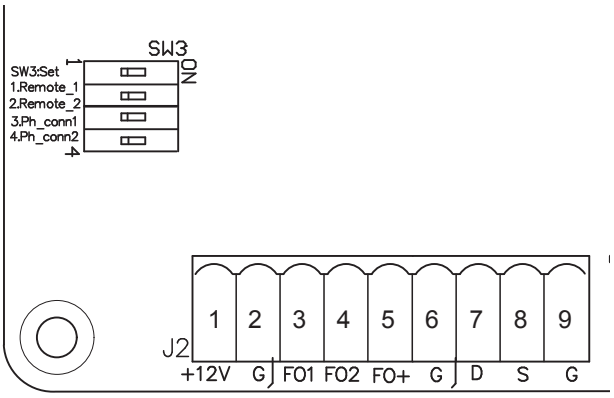
4). Photocells: ***See Figure 1(4)***

(A) installed one set Photocell to FO1, SW3 setting as below:
3. Ph_conn1 > OFF and 4. Ph_conn2 > ON

(B) installed one set Photocell to FO2, SW3 setting as below:
3. Ph_conn1 > ON and 4. Ph_conn2 > OFF

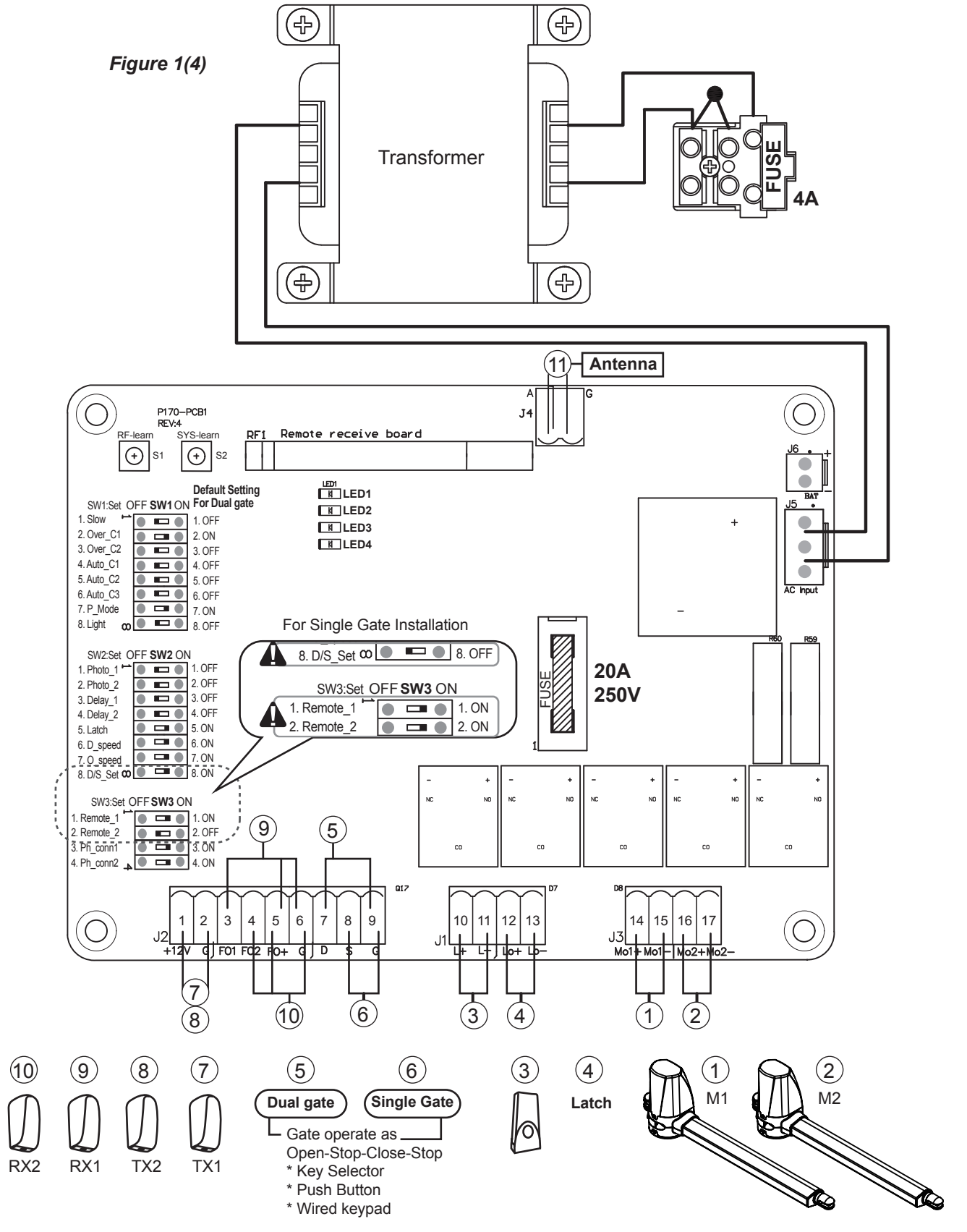
(C) installed two sets Photocell, SW3 setting as below:
3. Ph_conn1 > OFF and 4. Ph_conn2 > OFF

(D) No Photocell has been installed, SW3 setting as below:
3. Ph_conn1 > ON and 4. Ph_conn2 > ON



2. CB17 CONTORL PANEL LAYOUT AND WIRE CONNECTION INDICATION

Figure 1(4)

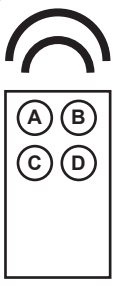


SW3:Set OFF **SW3** ON

3. Ph_conn1 — 3. OFF
4. Ph_conn2 — 4. OFF

IF FO1 connected with photo beam > 3. Ph_conn1 must turn to OFF

IF FO2 connected photo beam > 3. Ph_conn1 must turn to OFF



Dual gate

SW3:Set OFF **SW3** ON

1. Remote_1 — 1. ON
2. Remote_2 — 2. OFF

A: Dual gate
B: Single gate / partial open
C/D non active

Single gate

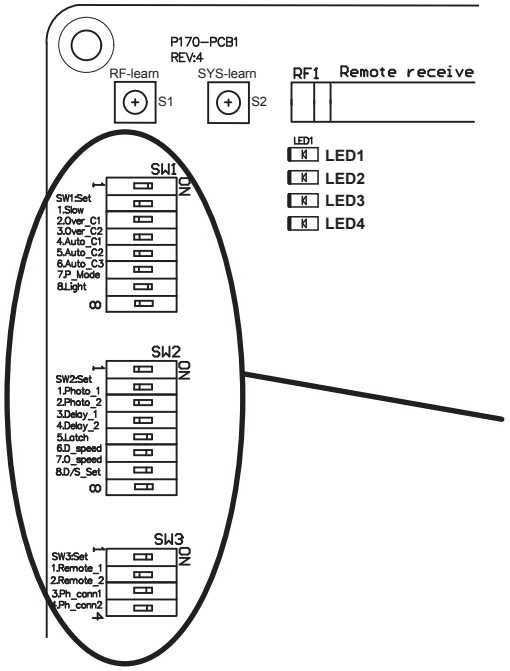
SW3:Set OFF **SW3** ON

1. Remote_1 — 1. ON
2. Remote_2 — 2. ON

A: Single gate
B/C/D non active

3. SYSTEM SET UP PROCEDURE

! IMPORTANT: Before the system set up procedure, make sure the DIP Switches are set to correct pattern



SW1:Set OFF **SW1** ON	Default Setting
1. Slow	1. OFF
2. Over_C1	2. ON
3. Over_C2	3. OFF
4. Auto_C1	4. OFF
5. Auto_C2	5. OFF
6. Auto_C3	6. OFF
7. P_Mode	7. ON
8. Light	8. OFF

SW3:Set OFF **SW3** ON	
1. Remote_1	1. ON
2. Remote_2	2. OFF
3. Ph_conn1	3. ON
4. Ph_conn2	4. ON

SW2:Set OFF **SW2** ON	
1. Photo_1	1. OFF
2. Photo_2	2. OFF
3. Delay_1	3. OFF
4. Delay_2	4. OFF
5. Latch	5. ON
6. D_speed	6. ON
7. O_speed	7. ON
8. D/S_Set	8. ON

Default setting is based on dual motor installation for dual gate

Follow below ***3 STEPS*** to complete the basic set up of the control system

STEP1 : Memorize the transmitter to the receiver board on the main panel ***(procedure 3.1)***

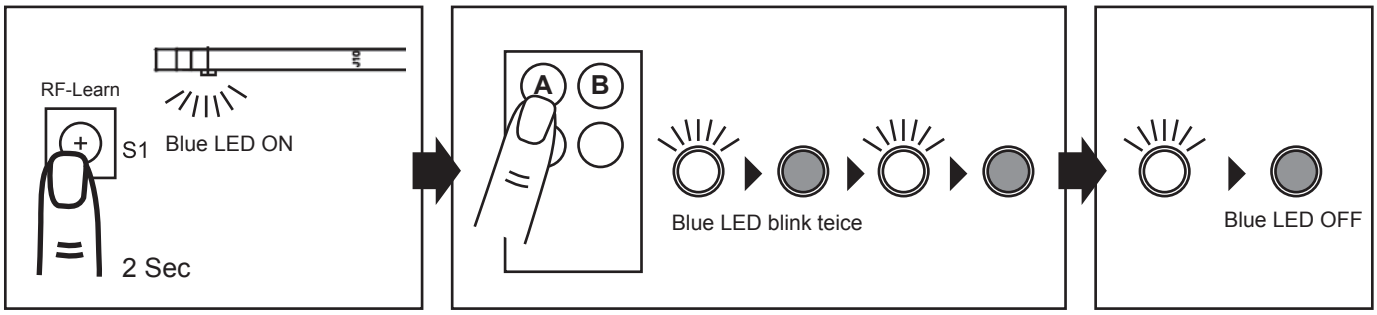
STEP2 : Complete the system learning procedure of the main panel ***(procedure 3.2)***

STEP3 : Operate the gate automation system by trigger the memorized transmitter and make sure the gate operates correctly.

3.1 TRANSMITTER MEMORIZING AND ERASING PROCESS

A. TRANSMITTER MEMORIZE

Press “RF-learn” button for 2 seconds, and the Blue LED will be on; then press the transmitter (A) button;
The Blue LED will blink twice and stay on for 10 seconds then be off. And the remote memorize has completed.



* To memorize more than one transmitter during this process, press the (A) button on the new transmitter within the 10seconds of the above procedure, then all remotes will be memorized at once.

B. ERASING TRANSMITTER MEMORY:

Press and hold the “RF-learn ” button for 10 seconds, once the LED light turn off on the receiver board, release the “RF-learn” button and memory is cleared

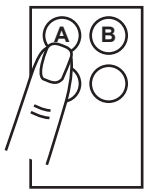
C. MEMORIZING NEW TRANSMITTER WITHOUT TAKING THE CONTROL BOX COVER OFF :

Press and hold (A) and (B) button at the same time for 7 seconds and release both button, press any un-memorized transmitter with (A) button to memorize. Press the (A) button again on the new remote to make sure the process has completed.

* A flashing light will blink after 7 seconds to indicate if installed

3.2 SYSTEM LEARNING PROCESS

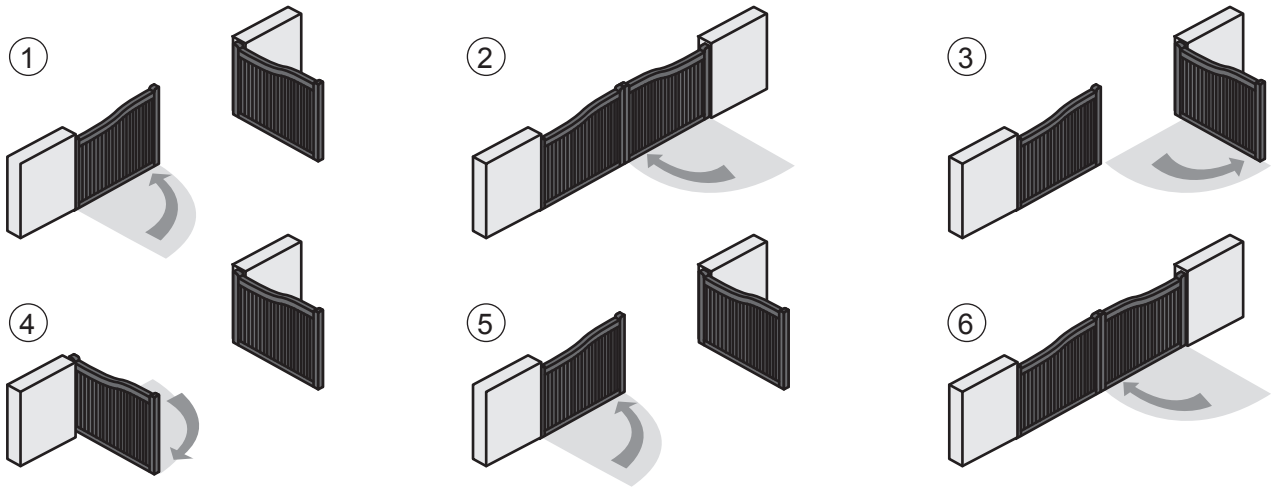
! CAUTION: Before proceeding to system learning, the transmitter memorizing process has to be completed.



Press “SYS-learn” button for 2 seconds, after press button (A) on the remote. System learning will be executed step by step as followings: Wait for the learning process to be completed without any interruption.

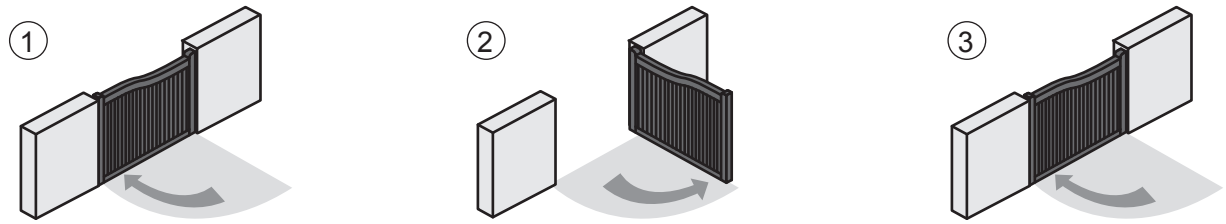
A. Dual Gate:

(1) Slave Gate Close → (2) Master Gate Close → (3) Master Gate Open →
(4) Slave Gate Open → (5) Slave Gate Close → (6) Master Gate Close



B. Single Mode :

(1) Master Gate Close → (2) Master Gate Open → (3) Master Gate Close



! Aware: If install of Single motor, set SW2 DIP8.D/S_Set to OFF, for single gate operation.

3.3 LED INDICATION

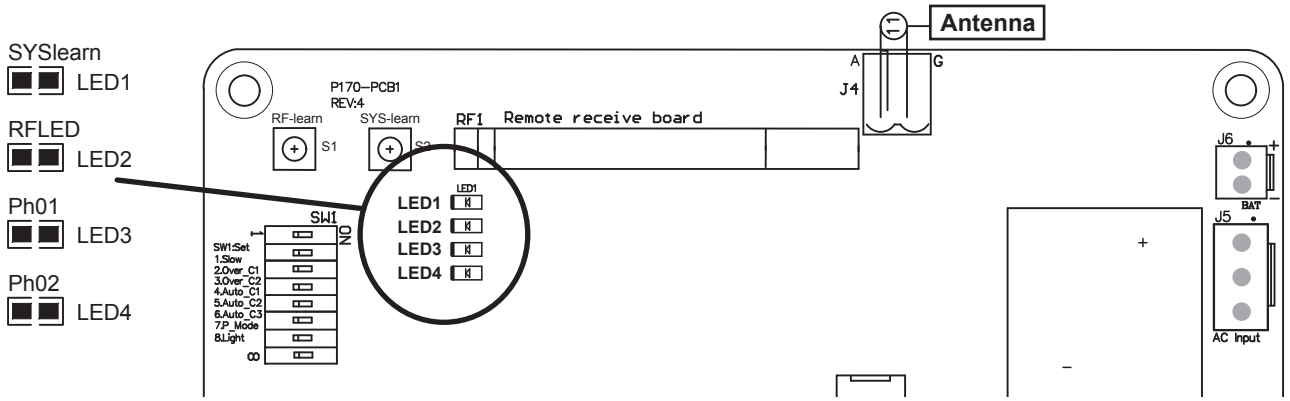
LED1 System Learning: LED1 is always ON when the system learning in not completed.
LED1 blinks once when single-gate learning is completed ;
LED1 blinks twice when dual-gate learning is completed.

LED2 : If the wired keypad, key selector, or the push button is activated, LED2 will be on.

LED3 Photocells 1 : LED3 will be on when the first pair of the photocell is activated.

LED4 Photocells 2 : LED4 will be on when the second pair of the photocell is activated.

RF Indicator : Blue LED on the receiver board will be on once the transmitter has been triggered.



4. DEFULT SETTING

4.1 SW1 DIP SWITCH SETTING

4.1.1 SLOWDOWN ADJUSTMENT (DIP 1.SLOW)

ON: The gear motors do not slow down before the gates completely close or open.
OFF: The gear motors slow down before the gates completely close or open.

4.1.2 OVER-CURRENT ADJUSTMENT (DIP 2.OVER C1 & DIP 3.OVER C2)

OVER C1	OVER C2	Current (Amp)
Dip Switch 2 OFF	Dip Switch 3 OFF	2A
Dip Switch 2 OFF	Dip Switch 3 ON	3A
Dip Switch 2 ON	Dip Switch 3 OFF	4A
Dip Switch 2 ON	Dip Switch 3 ON	5A

4.1.3 GATE AUTO-CLOSE ADJUSTMENT (DIP 4.AUTO C1, DIP 5.AUTO C2 & DIP 6.AUTO C3)

Auto C1	Auto C2	Auto C3	Effect
Dip switch 4 OFF	Dip Switch 5 OFF	Dip Switch 6 OFF	No auto-close
Dip switch 4 OFF	Dip Switch 5 OFF	Dip Switch 6 ON	3 sec.
Dip switch 4 OFF	Dip Switch 5 ON	Dip Switch 6 OFF	10 sec.
Dip switch 4 OFF	Dip Switch 5 ON	Dip Switch 6 ON	20 sec.
Dip switch 4 ON	Dip Switch 5 OFF	Dip Switch 6 OFF	40 sec.
Dip switch 4 ON	Dip Switch 5 OFF	Dip Switch 6 ON	60 sec.
Dip switch 4 ON	Dip Switch 5 ON	Dip Switch 6 OFF	120 sec.
Dip switch 4 ON	Dip Switch 5 ON	Dip Switch 6 ON	360 sec.

Note: Auto-close mode activates when the gates move to the end position or stopped manually. If the transmitter, push button, or the key selector is activated before the auto-close counting, the gate will close immediately.

4.1.4 PARTIAL OPENING ADJUSTMENT (DIP 7.P MODE)

ON: Partial Opening setting opens the gate for 45degree
OFF: Partial Opening is disabled, opens the gate fully for single gate

4.1.5 FLASHING LIGHT ADJUSTMENT (DIP 8.LIGHT)

ON: The flashing light blinks for 3 seconds before the gate moves, and blinks simultaneously during the movement.
OFF: The flashing light blinks and the gate moves simultaneously.

4.2 SW2 DIP SWITCH SETTING

4.2.1 PHOTOCELL ADJUSTMENT (DIP 1.PHOTO1, DIP 2.PHOTO2)

1. SW2 Set: DIP 1 = OFF, DIP 2 = OFF Photocell OPEN/CLOSE (Standard set up)

Position of Gate	When safety devices are activated	
Type of Safety Device	Safety Device2 : Photocell-OPEN	Safety Device1 : Photocell-CLOSE
FULLY CLOSED	Open not allowed	No effect
FULLY OPENED	No effect	Reload automatic closing time
STOP DURING MOVING	Open not allowed	Reload automatic closing time
CLOSING	No effect	Open
OPENING	Close	No effect

2. SW2 Set: DIP 1 = ON, DIP 2 = OFF Safety Edge

Position of Gate	When safety devices are activated	
Type of Safety Device	Safety Device2 : Safety Edge	Safety Device1 : Photocell-CLOSE
FULLY CLOSED	Open not allowed	No effect
FULLY OPENED	Reload automatic closing time	
STOP DURING MOVING	Locks	Reload automatic closing time
CLOSING	Reverse to open for 2 seconds	Open
OPENING	Reverse to clsoe for 2 seconds	No effect

3. SW2 Set: DIP 1 = OFF, DIP 2 = ON Open Only Device (Vehicle detector)

Position of Gate	When safety devices are activated	
Type of Safety Device	Safety Device2 : Opening Device	Safety Device1 : Photocell-CLOSE
FULLY CLOSED	Open	No effect
FULLY OPENED	Reload automatic closing time	
STOP DURING MOVING	Open	Reload automatic closing time
CLOSING	Open	Open
OPENING	No effect	No effect

4. SW2 Set: DIP 1 = ON, DIP 2 = ON Double photocell set up

Position of Gate	When safety devices are activated	
Type of Safety Device	Safety Device2 : Photocell-OPEN/CLOSE	Safety Device1 : Photocell-CLOSE
FULLY CLOSED	Open not allowed	No effect
FULLY OPENED	Close not allowed, Open for 2 seconds when auto closing is ON	
STOP DURING MOVING	Locks	Close not allowed
CLOSING	Stop	Open
OPENING	Stop	No effect

4.2.2 CLOSE DELAY OF DUAL GATE OPERATION ADJUSTMENT (DIP 3.DELAY1, DIP 4.DELAY2)

Close/Open delay of two leaves of gate can be adjusted from 2 to 6 seconds

DIP switch		Open Delay	Close Delay
Dip3. Delay 1	Dip4. Delay 2		
OFF	OFF	2 sec	3 sec
ON	OFF	2 sec	4 sec
OFF	ON	3 sec	5 sec
ON	ON	3 sec	6 sec

4.2.3 ELECTRIC LATCH ADJUSTMENT (DIP 5.LATCH)

ON: The master leaf will move toward closing direction for 0.25 second once command the remote, then unlock the latch to open the gate.

OFF: Once command the remote, the the latch will be unlocked to open the gate immediately

4.2.4 DECELARATION SPEED ADJUSTMENT OF THE GEAR MOTORS (DIP 6. D SPEED)

ON: The speed is 70% output of the full speed.

OFF: The speed is 50% output of the full speed.

4.2.5 OPERATION SPEED ADJUSTMENT OF THE GEAR MOTORS (DIP 7.O SPEED)

ON: The speed is 100% output of the full speed.

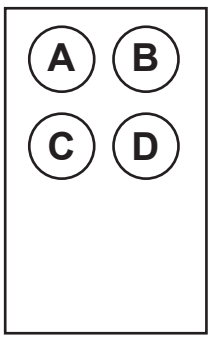
OFF: The speed is 70% output of the full speed.

4.2.6 SINGLE AND DUAL GATE OPERATION ADJUSTMENT (DIP 8.DS/SET)

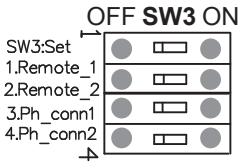
ON: Dual Gates operation in system learning and normal operation.

OFF: Single Gate operation in system learning and normal operation.

4.3 ADVANCED OPERATION OF THE TRANSMITTER (SW3 DIP1/2 REMOTE 1 & REMOTE2)



See the following description:



SW3 DIP 1. Remote_1 and DIP 2. Remote_2

This function is to select the command button of the remote	
Option 1 (default setting for double gate)	
1 ON	Button A for double gate operation
2 OFF	Button B for single gate operation
Option 1 (default setting for double gate)	
1 ON	Button A for single gate operation
2 ON	Button B for double gate operation
Option 1 (default setting for double gate)	
1 OFF	Button C for single gate operation
2 ON	Button D for double gate operation
Option 1 (default setting for double gate)	
1 OFF	Button C for dual gate operation
2 OFF	Button D for single gate operation

4.4 WIRE CONNECTION OF H2 PHOTOCELL (SAFETY BEAM)

Figure 5(1)

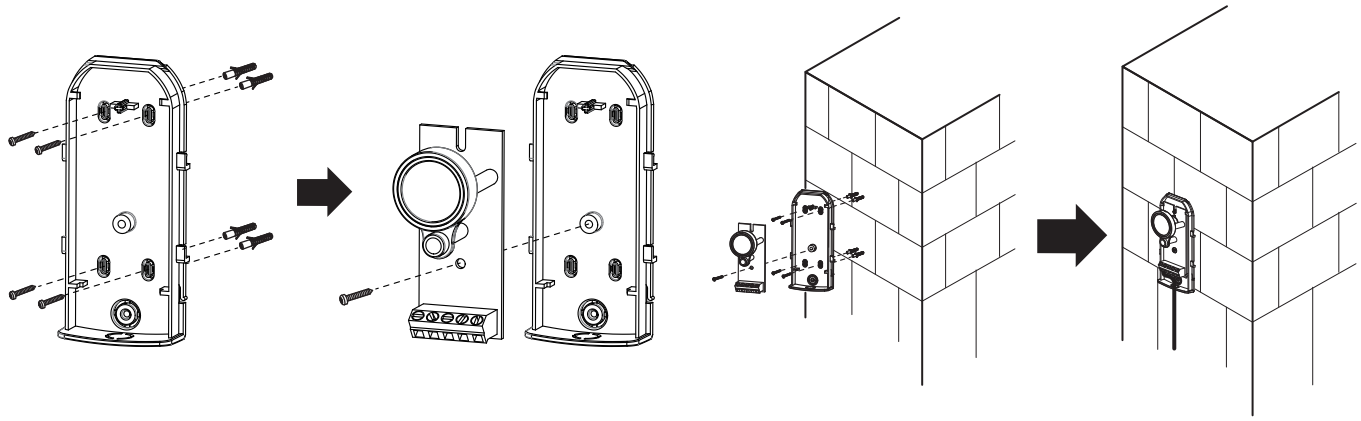


Figure 5(2)

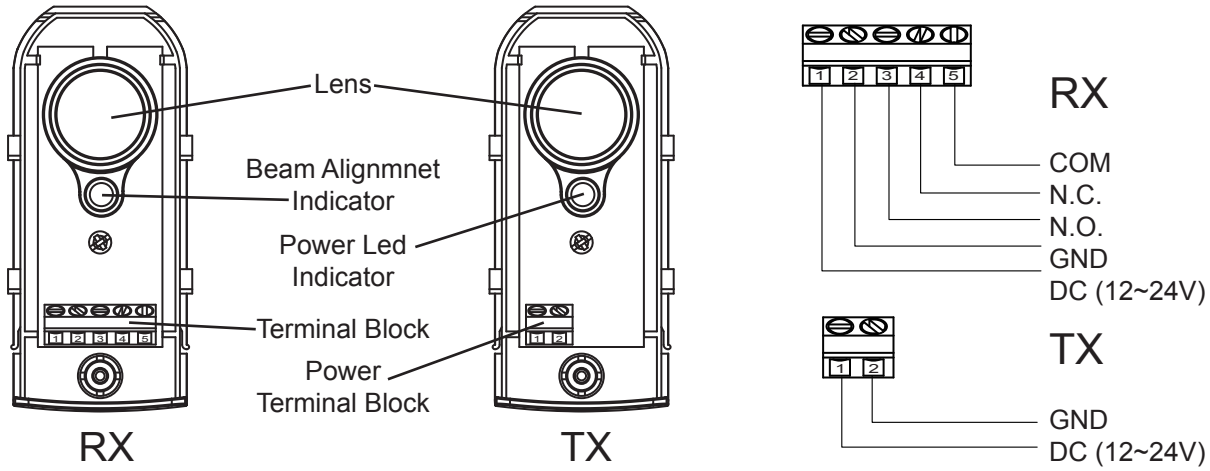
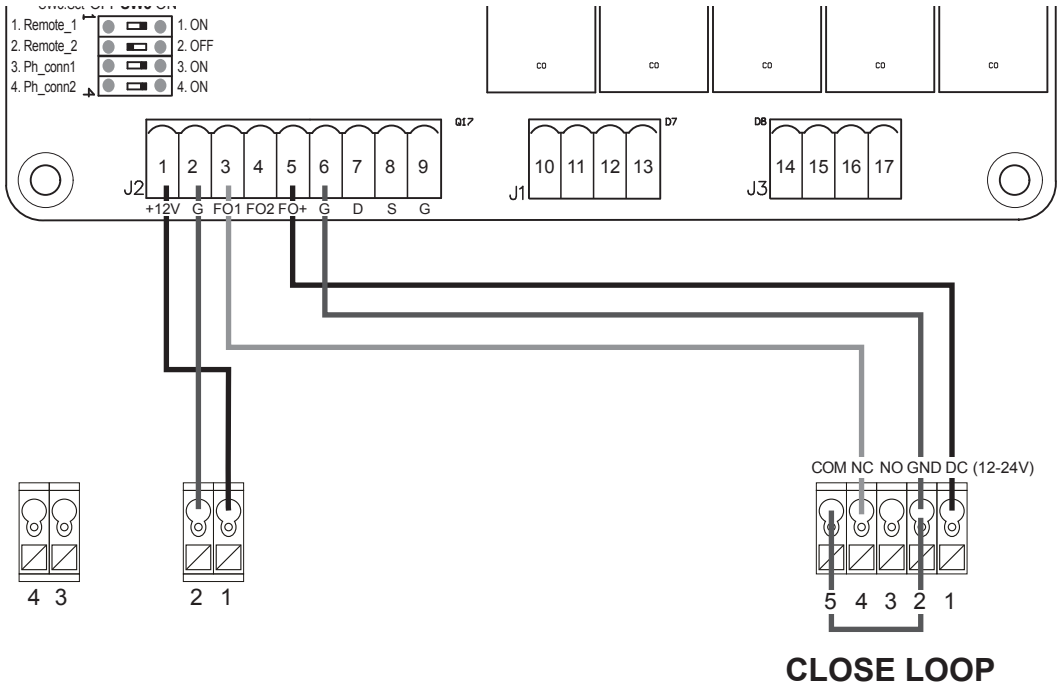
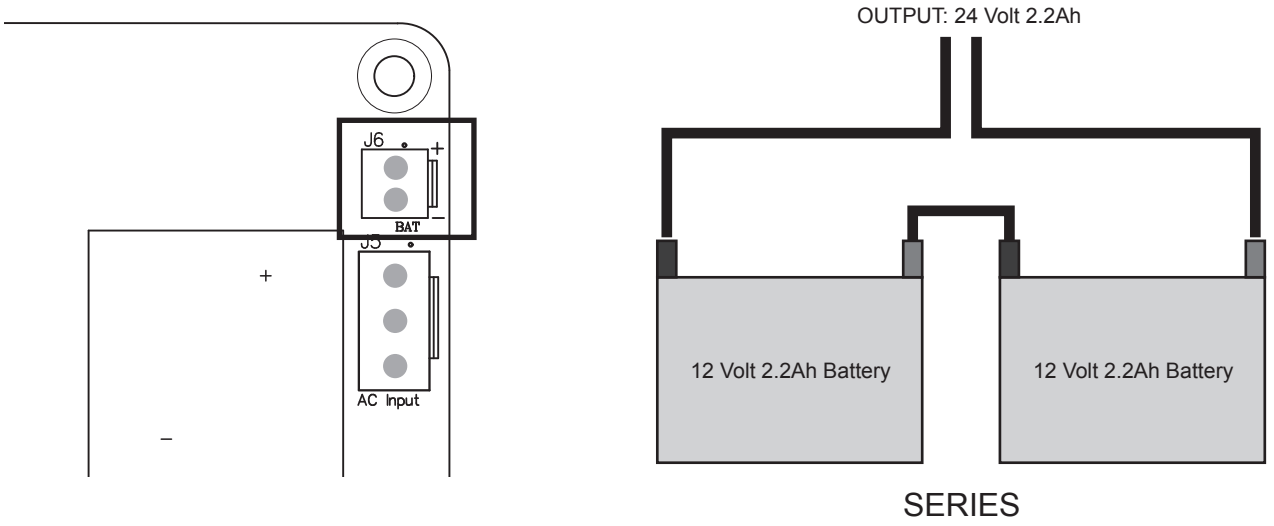


Figure 5(3)



4.5 BACK-UP BATTERY

Battery Power: The battery white connector must be fitted the correct way round (positive red to +positive) or you will short circuit the control board. There are 2 x 12v batteries fitted under the control board. They are connected together in series to make 24vDC via a black cable with a yellow fuse with positive of one battery to negative of second battery. The remaining positive and negative terminals go to the control board as per the photo above



5. TROUBLE SHOOTING (BASED ON DIP SWITCHES IN DEFAULT)

Issue:	Solution:	Parts to look at:
No power on the board.	- Power at the wall is on. - Check that the power cable is connected via the fuse (15amp for stand-alone transformer) - Fuses are both working. - There is 24V+ flowing to the board. - The batteries are higher than 23.0V+ - Both battery and power clips are connected to the board. - Try removing optional extras such as beams and probes to see if they are draining the power. - Check DIP switches are set correctly for single arm. SW2 DIP8 Set to OFF	- Fuse - Battery - Transformer
A single arm activation isn't working.	- Make sure the ram is connected to motor 1 and not motor 2. - Your remote is programmed in. - You have done a systems learn. - There is adequate power going to the board.	
Remotes or wireless keypad not working.	- Re program remotes by pressing the RF learn button until a blue light next to it comes on. Press the remote ONCE and it should flicker. Now wait until the light goes off and try again. - You can program in several remotes or devices at a time however all signals need to be sent before the blue light goes off again. - Push the button fairly solid and hold it in for a whole second. The blue light should flicker. - When programming remotes press the top left button ONLY. The rest of the buttons will program themselves in with it. - If the blue light is on continuously without pressing the RF learn button it means the receiver is faulty and needs to be replaced. - The blue light will still flash when a remote that has not been programmed in is used. It will however not activate.	RF Learn button

Issue:	Solution:	Parts to look at:
Lights on the board but arm(s) not moving.	- Check that the battery is 24V+ - Make sure your connections aren't loose. - The power input is feeding in 24V+ - The gate is free from any obstructions. - The arm is locked into place (A good way to test this is if you can move the gate freely, then it won't work via the motors). - Ensure a systems learn has been done from start to finish. - You have correctly wired the wires from the rams to the control box.	The gate Power sources Arm wires.
Blue light stays on permanently	- Ensure you have waited the full 10 seconds. - Try depowering and repowering the board. - If it still keeps glowing please call or email EasyGate. Receiver may need replacement.	
Gates remain open after systems learn/one arm stays open and the other one closed.	- Ensure you have matched the + and - of each ram to the equivalent + and – motor symbols on the board. - Clear any obstructions to the gates. - Make sure that the rams are going no further than 100 degrees. - The dip switch setting should be set for a double swing and not a single.	
Gates not fully opening or closing	- Ensure there is nothing obstructing the gate or the rams. - If the gate is a bigger or heavier gate change the power settings using the dipswitches (1st set of dip switches). You should not have to use the maximum power setting. This is intended for a 500kg double swing gate (or 250kg single). - Re-do the systems learn.	
One gate opens part of the way/not at all	- Make sure you are pressing the top left hand button. The other buttons do have their individual functions. - Dip Switch 7 setting has been set correctly. - Both rams are wired onto the control board correctly. They should identical. I.E. black, red. Black, red.	

Warranty: Any damage or loss caused by not following any of the instructions will void the warranty. It is your responsibility to ensure correct installation of the system and any changes to recommend installation is down to the owners' risk. EasyGate does not take any responsibility for any loss or damages caused by faulty installation. We will cover any faults that are factory errors or caused by EasyGate personnel.