Instruction Manual for the

Estate SWING

Medium Duty Series
Carriage Door Instructions

!Warning!

Read all instructions before begining installation or use of this door opener.

This operator exurts a high level of force.

Exercise caution at all times and stay clear of the system during operation.

Estate Swing Summary of Functions

The Estate Swing is only to be used for vehicular swing doors in a Class I setting.

Class I: A vehicular door opener (or system) intended for use in a home of one-to-four single family dwelling, or a garage or parking area associated therewith.

The Estate Swing automated system was designed and built for controlling vehicle access. Do not use for any other purpose.

The internal/external automation with articulated arms automates residential swing leaf carriage doors with leaves of up to 8' in length. It consists of an irreversible electro-mechanical operator with guard and an articulated arm activation system to be fitted to the door with the appropriate accessories. The irreversible system ensures the door is mechanical locked when the motor is not operating. A manual release makes it possible to move the door in the event of a power cut or fault.

For your assistance

Keep this manual safely stored after installation.

Serial Number_____

Date of Purchase_____

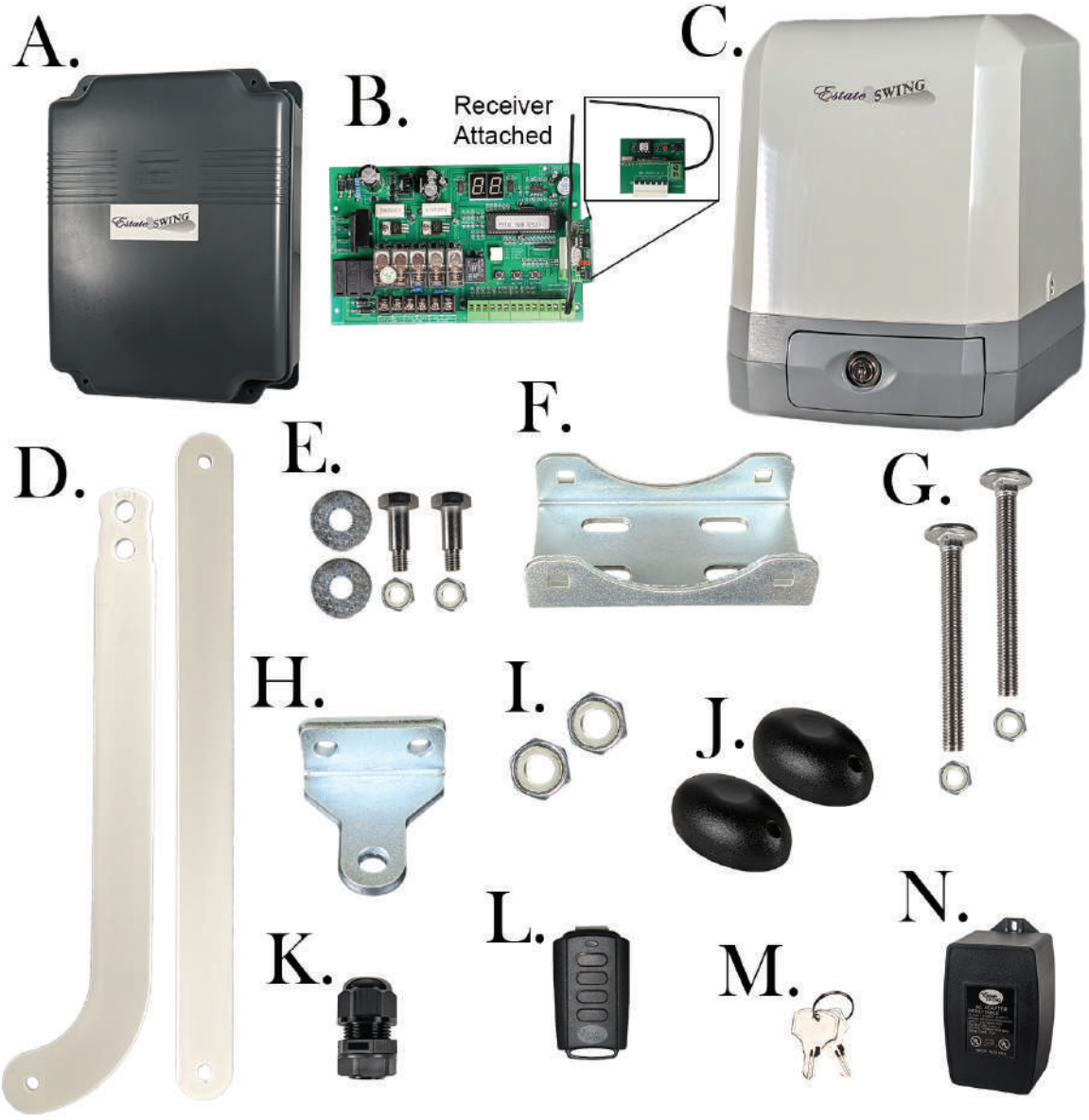
Place of Purchase_____

Have this information on hand while handling all service and warranty issues.

Table of Contents

The table of contents are listed to assist you locating a desired section. We do however strongly suggest studying every page of the instruction manual before attempting installation.

Estate Swing Parts List



A. Control Box (Qty 1)
B. Control Board & Receiver (Qty 1)
C. Operator Motor (Qty 2)
D. Articulating Arm (Qty 2 Sets)
E. Articulating Arm Hardware (Qty 2 Sets)
F. Wall Mount Bracket (Qty 2)
G. Mounting Hardware (Qty 2 Sets)
H. Door Bracket (Qty 2)
I. Motor Nuts (Qty 2 Sets)
J. Photo Eyes (Qty1 Set)
K. Wire Strain Relief (Qty 2)
L. Remote (Qty 2)
M. Manual Release Keys (Qty 2 Sets)
N. Transformer (Qty 1)

Tools Needed

- Power Drill & Proper Sized Bits
- Crescent Wrench
- Flat Head Screwdriver
- Nuts, Bolts, Anchors & Washers (see below)
- C-Ring Pliers

- Phillips Head Screwdriver
- Tape Measure
- Level
- Wire Strippers
- C-clamps
- Carpenters Clamps

Other items that may be needed prior to commencing installation.

• **16, 14 or 12 gauge, 2 conductor stranded low voltage wire will be required to run power to your operator.** Length is determined by distance between transformer power supply and the control box.

• A voltage meter and digital camera may be necessary to run diagnostic checks.

• **4 - 3/8" fasteners will be needed to connect the Base Plate to the wall.** Length and style will be determined by what is needed for a secure anchor for your material door. The kit comes with anchors for solid concrete anchoring (typical header for block construction homes). If you have a wood header or hollow block header you will need to get the appropriate 3/8" anchors recommended by your local hardware store.

• **3 - 5/16" fasteners will be needed to connect the Door Mounting Bracket to the door.** Length and style will be determined by what is needed for a secure anchor for your material door.

• Hardware to attach the control box to a wall.

Emergency Manual Operation Mode

Manual operation mode will disengage the gears from the motor and allow the doors to be open and closed manually. It is also useful for emergency situations where as using the motor is not an option for operation the doors.

Fit the supplied release key in the hole and turn it until the key stops and does not spring back to its original position.

Restoring Standard Operation

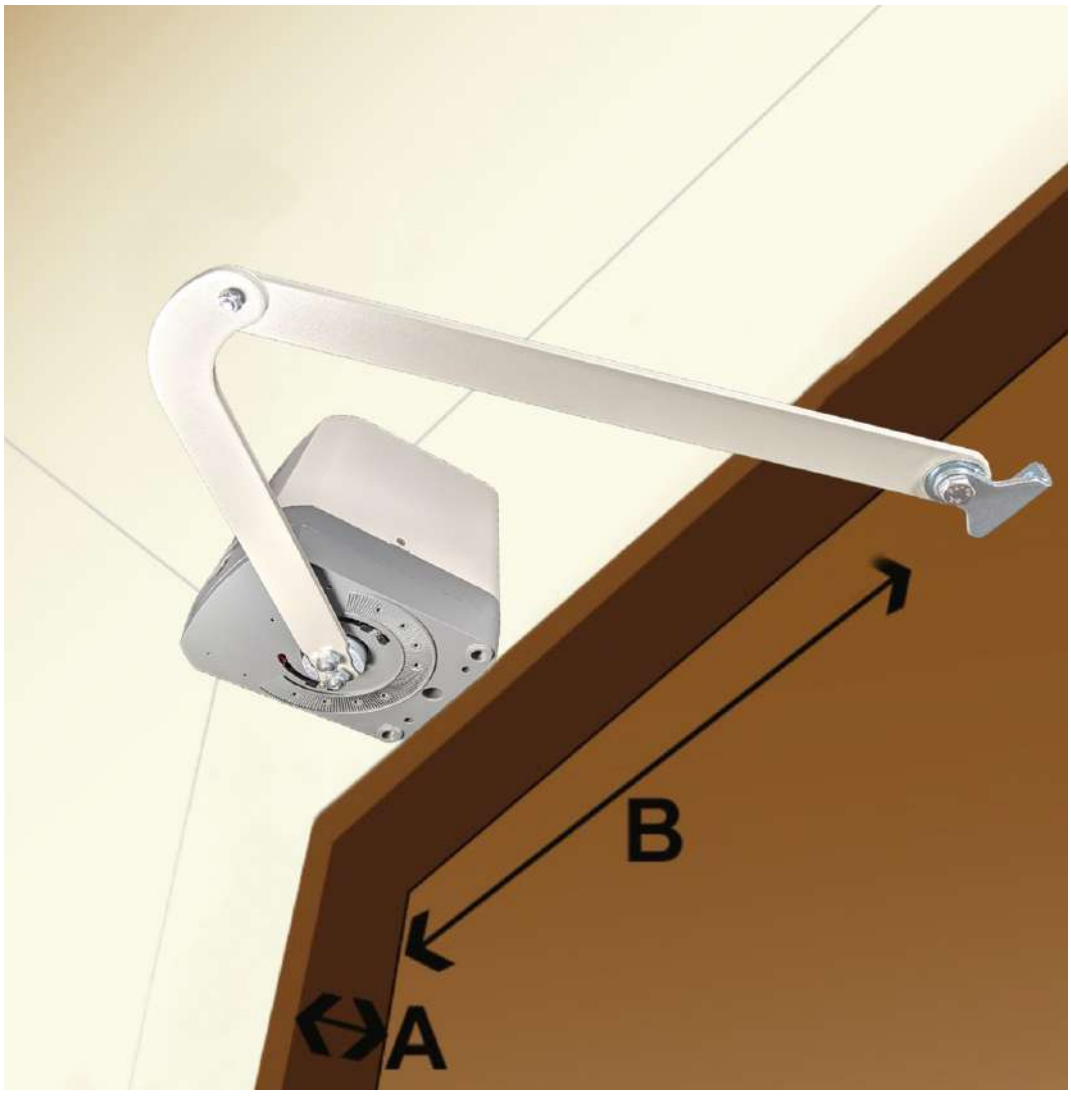
To avoid an involuntary pulse activating the doors during the maneuver, before relocking the operator, switch off all power.

Fit the supplied release key in the hole and turn it until the key springs back to its original position.

IMPORTANT: Determining Correct Position

A = 0” ➡ 8”	B = 24” - A

A	0”	1”	2”	3”	4”	5”	6”	7”	8”
B (24”- A)	24”								
		23”							
			22”						
				21”					
					20”				
						19”			
							18”		
								17”	
									16”



Installation of Operator

The operator base plate and articulated arm are designed either for right-handed or left-handed installation. There is no pre-determined designation.

1. Begin by mounting your base plate using the appropriate 3/8” fasteners for your wall material (anchors for solid concrete headers, commonly found on block construction homes, are provided - if you have hollow blocks or wood please consult your hardware store for correct fasteners)

2. Secure the base plate to the wall with the outside edge of the base plate inline with the edge of the door frame above the header.

3. Fit the motor back onto the base plate and secure it with two long bolts provided.

Important: The transmission shaft must always face downward.

4. Assemble the first piece of the articulating arm to the base of the motor using the provided M10x20mm bolt and M10 lock washer. You can tighten using a 8mm allen wrench or substitute a 5/16 allen wrench if you do not have a metric set.

Installation of Operator

5. Assemble the middle point of the articulating arm. The part of the arm attached to the motor is on top. Slide a M8 x 45mm carriage bolt through the hole so the square part of the bolt enters the square hole. Put a washer between the first part of the articulating arm and the second part. Put the second part of the arm on the bolt and tighten on using the lock nut.
   Tighten the lock nut down all the way and then back it off a quarter turn.

6. Assemble the end of the arm (curved part) to the door bracket using a M8 x 30mm bolt. The bracket is on top of the arm with the square part fitting into the bracket. Put a washer between the bracket and the arm. Put the arm on the bolt and tighten on using the lock nut.
   Tighten the lock nut down all the way and then back it off a quarter turn.

7. Manually release the operator (From section 2)

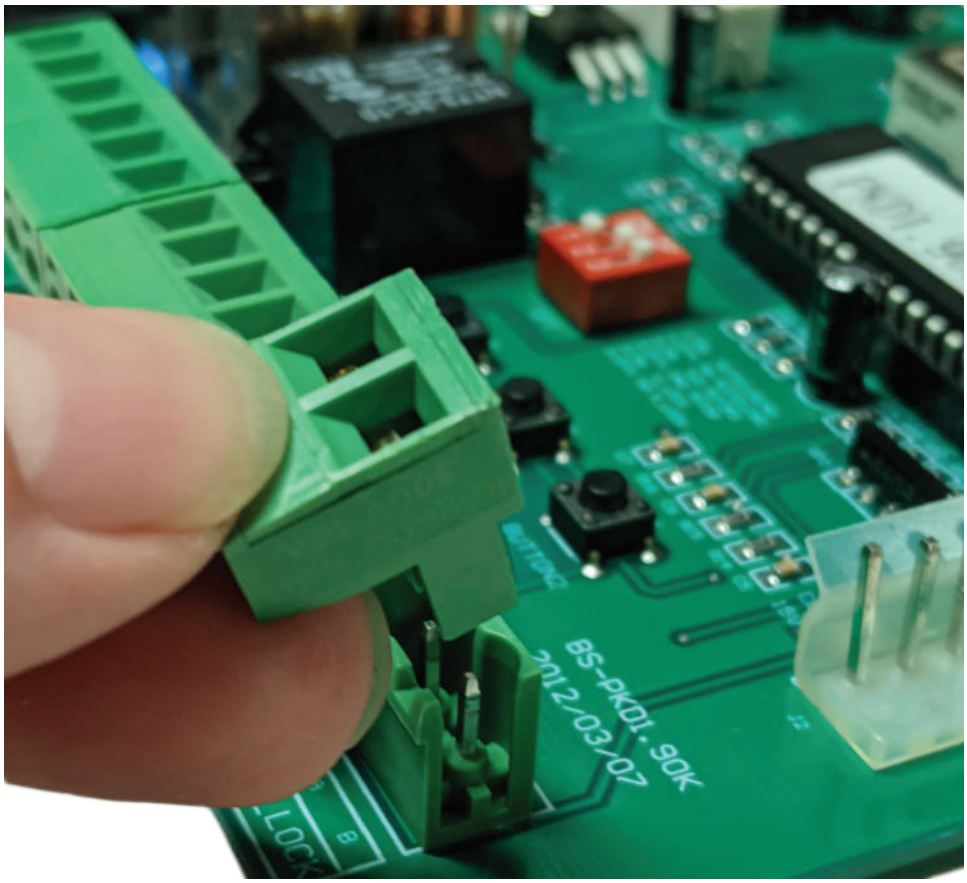
8. Find securing point **B** from the mounting set back determined from the previous page. Verify the arm is level, then temporarily remove the coupling from the arm in order to attach the door mounting bracket. Attach the door mounting bracket to the door using nuts, carriage bolts and washers.

9. Reconnect the coupling from the door mounting bracket to the arm.

10. Relock the operator.

For Your Convenience

The green terminal strips on the control board are easily removed for wiring. Simply pull straight out on the terminal strip to remove it from the board. It will slide right off. Slide it back on when you are finished with your wiring connections.

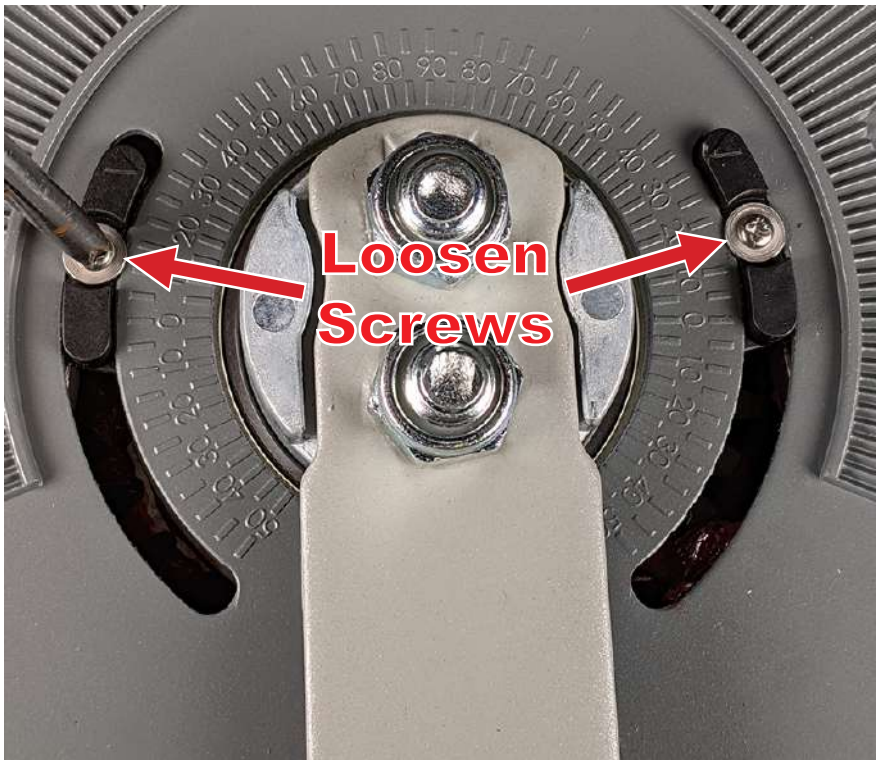


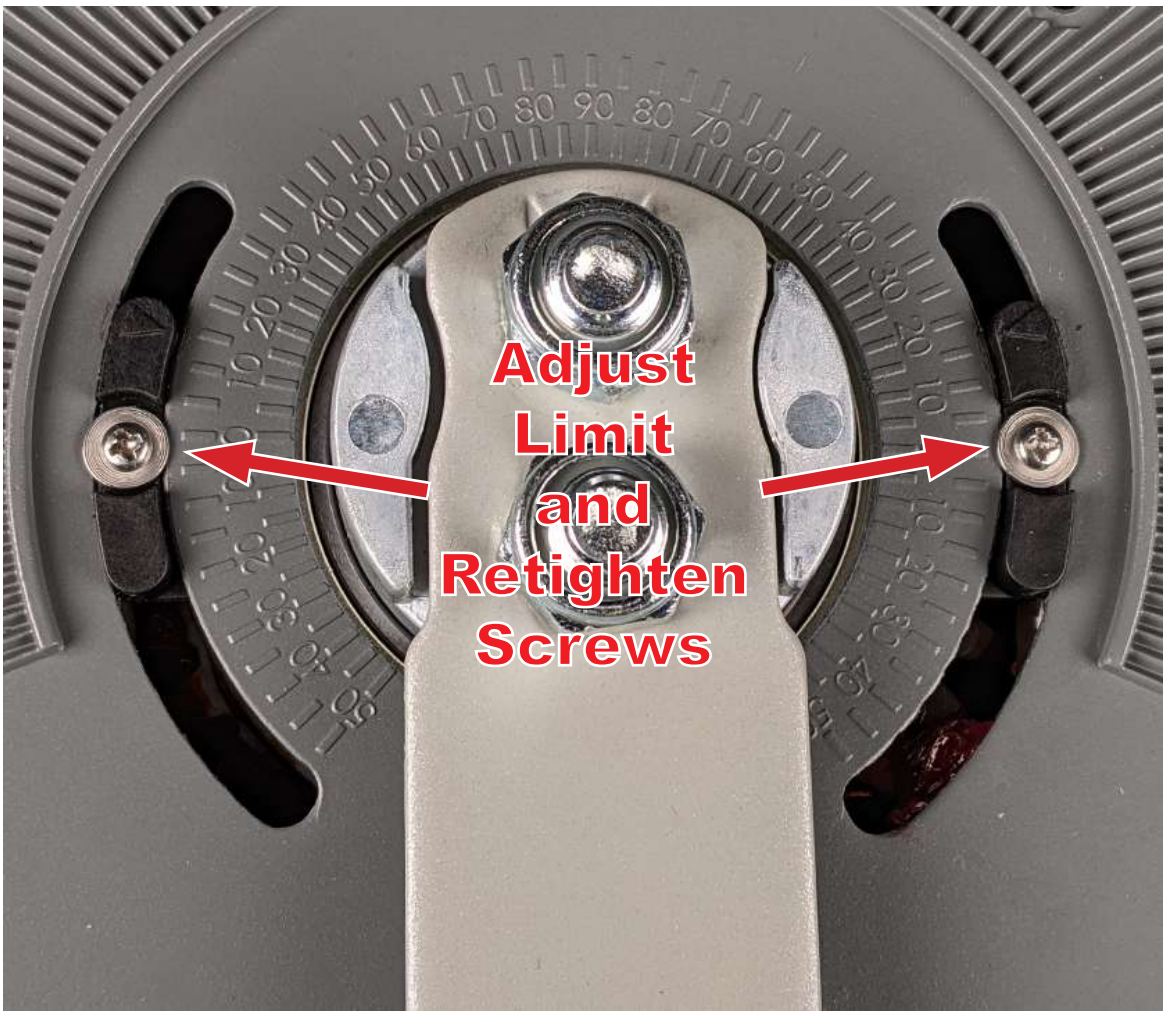
Positioning of Limit Switches

1. To set your limit positions. First release the manual release and move the doors to the closed position.

2. Move the limit trip that triggers the top limit switch to that it is triggering the top limit switch in the closed position. The Philips head screw loosens the limit trip and the flat head screw moves the limit trip. Once you have the limit trip in position tighten the Philips heads screw so it is locked in place.

3. Move the doors open and repeat the above step with the limit trip that triggers the bottom limit switch.





Temporary Safety Jumpers

For the highest level of safety, the Estate Swing systems are set up with Normally Closed safety terminals. This means that in order for the door opener to move these terminals must be closed either through a safety device (recommended) or with jumpers. Temporary safety jumpers are preinstalled and should be removed and replaced with the provided photo eye after setup.
It is recommended not to use any accessories until setup and programming are complete.

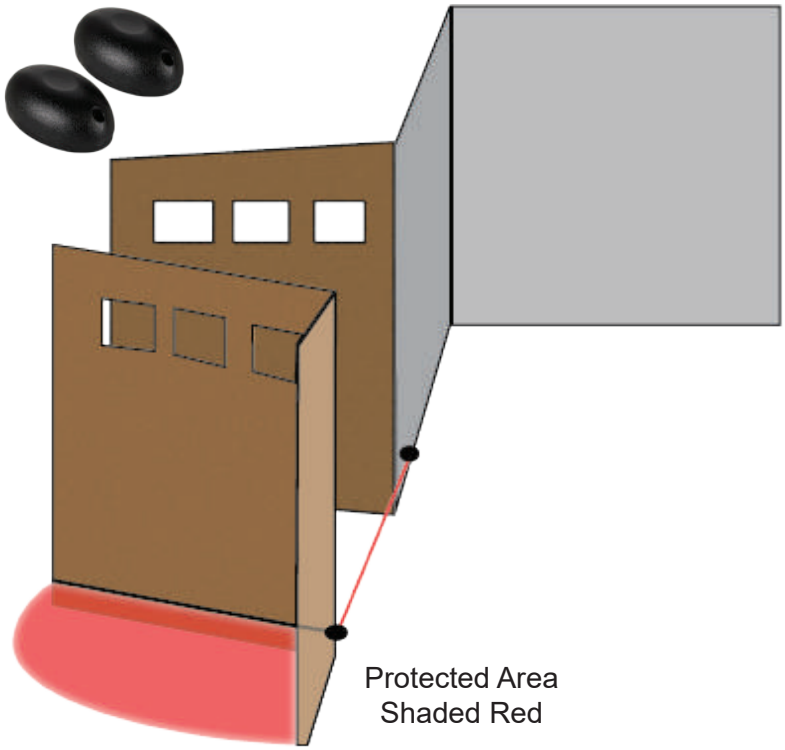
NOTE: If opting to ignore use of provided and recommended safety devices the temporary safety jumper must remain in. In order for the door operator to move closed, photo must be jumped to ground.

Connection of photo eyes:

1. Connect terminal OUT on the sensor Terminal Photo on terminal block PHOTO.
2. Connect terminal COM on the sensor to Terminal GND on terminal block PHOTO.
3. Connect terminal - on the sensor to Terminal GND on terminal block PHOTO.
4. Connect terminal + on the sensor to Terminal V+ on terminal block PHOTO.

Set the jumper to NC on the sensor.

The secondary sensor gets connected to the + and - terminal of the main sensor.

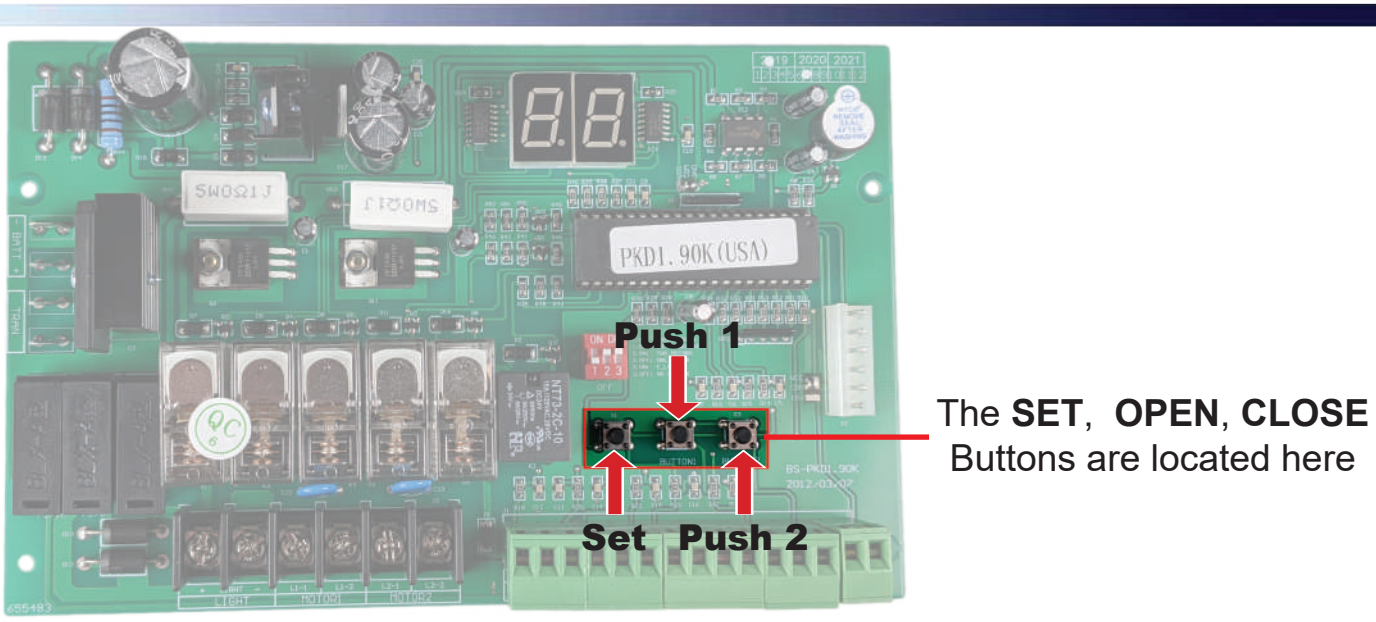


To the left is our recommended safety set up. It consists of safety edges mounted on the door on the outside to react rapidly to impact and photo beams at the base of the door to halt movement of the doors with obstruction.
The photo cell would be in the photo cell terminal.
The edge sensor would be in photo terminal.
We provide the photo eyes I each kit, however the edge needs to be sized by doors and purchased separately.

Wiring the Operator Arms

Motor 1	Motor 2
R ⟶ Y	R ⟶ W
B ⟶ W	B ⟶ Y

Limit Switches	
R ⟶ B	R ⟶ B
B ⟶ BL	B ⟶ G
Y ⟶ G	Y ⟶ BL



1. LED shows P1: **P1 is for setting your run time.** The run time exists to allow to have the P2 slow down setting. This should always be set at least 5 seconds longer than it takes to open and close. This will allow the gate to go the full motion when moving slower on cold or windy days. If the number of P1 is reached on the counter during a cycle prior to reaching the limit switch the gate will stop on the number. The options are 0-99 seconds.

2. LED shows P2: **P2 is for setting your slow down time**. The gate opener will slow down to partial speed after the counter has reached the setting of P2. If you wish to have the gate open and close faster make the slow down start time a higher number. If you want to put less stress on the gears and gate set the slow time lower number. The options will adjust to match the previously set run time.

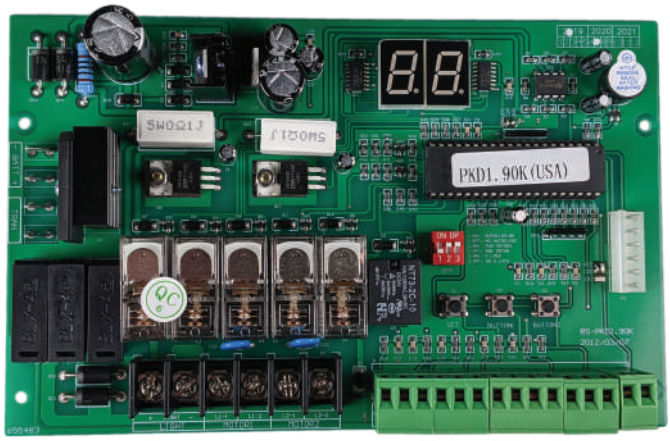
3. LED shows P3: **P3 is the force setting**, the lower the number the easier the gate will reverse directions when it meets resistance. This number may have to be changed to a higher setting if your gate is obstructing unexpectedly. The number should be set to the highest number during initial setup and reduced to the point of reliable operation that takes into account change in gate resistance through out the year. The options are 0-32.

4. LED shows P4: **P4 is for setting a delay between leafs** if you have overlapping gates or a gate lock. The motor wired into the primary terminals (1) opens first if there is a delay and closes second. It is recommended to have a delay of 3 seconds to avoid any jamming issues between leafs.

5. LED shows P5: **P5 is the release for the gate lock** - this option determines the length of time 24VDC will be sent out of terminals E_LOCK. The options are 1-4 seconds.

6. LED shows P6: **P6 is the delay for automatic reclose** from the open position - this option needs to be turned on using the dip switch on the board. The options are 0-99 seconds.

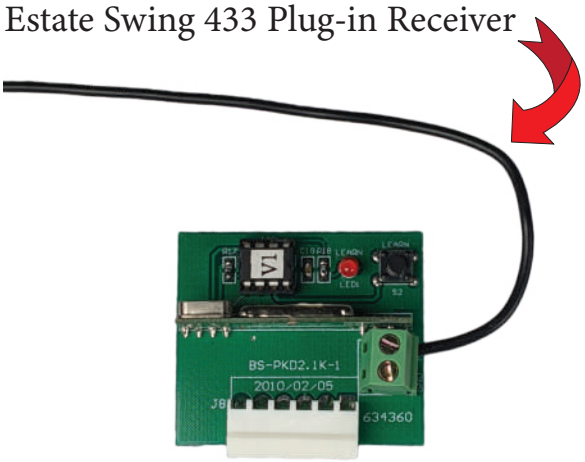
How to:
Program Remote Transmitters to the Estate Swing 433 Plug-In Receiver



Estate Swing 1600/L and 1602/L Control Board

Estate Swing Remote

Estate Swing 433 Plug-in Receiver



1. Press and release the learn button on the estate swing 433 receiver once for Channel 1 which will open and close the gate. Press and release the learn button twice for Channel 2 which will only open the gate. The first press of the learn button will turn the Red LED on. The second press will cause the Red LED to blink once and then stay on

2. Press and hold one of the four buttons on the remote until the Red LED blinks and turns off.

3. Once the light turns off the remote and receiver are now synced

Troubleshooting

If the gate opener will not move but the board is counting the run time:

- Check the F1 fuse for the primary arm (right hand fuse) and the F2 fuse for the secondary arm (center fuse).

If the gate opener moves a few inches or feet and stops or reverses directions:

- Increase the force setting (P3).
- Check the setback. The setback of the operator is important to correct operation due to leverage the arm will have on the gate.
- Remove the PUSH terminal block and the receiver plug, trigger the gate via BUTTON1, if issue is resolved one of the accessories or the receiver is double triggering the gate opener.
- For existing gate openers, lubricate the screw drive and pivot points. See maintenance section.

The gate does not reach the desired stop points:

- When the gate stops short, press and hold SET to enter PL mode. Depending on open or closed position, motor 1 or motor 2; use BUTTON1 to scroll to the appropriate indicator 01, C1, 02, C2. If the BEEPING is on, then the limit switch is triggered and stopped the gate short: if it is a new installation adjust the limit switch placement. If it is an existing installation it is more likely a bracket shifted than the limit switch moved. The gate bracket has 3 holes for bolts, if the center bolt is left out it can shift horizontally on the remaining two bolts. If BEEPING is off then lengthen the run time parameter (P1).
- Check setback- if setback is incorrect it will limit how far the gate will move per inch of stroke length.

If the gate will open but will not close:

- If the gate is open AND auto reclose is on when you power the system the board will display AU but will not go closed. Remove power and move the opener off the open limit switch, when auto reclose is on the gate opener cannot be powered on in the open position. If there was a power outage this may have occurred accidentally, power down, manually move off open position, and power up again.
- If PH is on the display the safety circuit is triggered. If you have a safety device, it is triggered, if not using a safety device a jumper is required between terminals PHOTO and GND.
- While the gate is open press and hold SET until PL shows on the display. Press BUTTON1 to scroll to C1 and if dual also scroll to C2. If there is a BEEPING sound on C1 or C2 the closed limit switch is malfunctioning, closed limit wire is damaged, or (if it is a new installation) wiring is incorrect. If there is not a BEEPING sound on C1 or C2 in the open position the limit switch is not the issue.
- Remove the PUSH terminal block and receiver. If the gate can then go closed, one of the accessories or the receiver is malfunctioning.
- If auto-reclose is on (dip switch 1 is in up position) AU should be on the display, if it is not press BUTTON1. If AU then is shown on the display, wait the time closing time that was set in parameter P6. If BUTTON1 or an accessory in PUSH1 is triggered while in AU countdown the countdown will be paused until pressed again.

Troubleshooting

The gate opener is moving past a limit switch or switches:

- Press and hold SET to enter PL mode. Use BUTTON1 to display the limit switch that is the issue, 01, C1, 02, C2. Manually move the gate opener from fully retracted to fully extend, listen for a BEEPING. If BEEPING occurs, stop the piston at the beeping, if this is not your desired position for open or closed then adjust the limit switch. ON an existing installation, before moving the limit check the brackets for shifting - the gate brackets has 3 holes for bolts and if only two are used it can shift left or right. If no BEEPING occurs, use a piece of steel (a washer works well) and locate the magnet inside the tube assembly (the tube the piston extends in and out of). While the piece of metal is being attracted to the magnet, move the piston in and out and notate if the magnet is moving. If magnet is NOT moving a new tube assembly is needed. If magnet IS moving and it is a new dual gate installation check that Motor 1 is wired to Limit1 block and Motor 2 is wired to Limit 2 block. Check to make ensure the small yellow, red and black limit wires do not have any part of the bare wire touching each other. Typically this would be in the terminal itself where the stripped ends are very close to each other. If all the above is eliminated, a new limit switch is needed.

One or both arms are not moving:

- If the gate is open AND auto reclose is on when you power the system the board will display AU but will not go closed. Remove power and move the opener off the open limit switch, when auto reclose is on the gate opener cannot be powered on in the open position. If there was a power outage this may have occurred accidentally, power down, manually move off open position, and power up again.
- If PH is on the display the safety circuit is triggered. If you have a safety device, it is triggered, if not using a safety device a jumper is required between terminals PHOTO and GND.
- While the gate is halfway between open and closed press and hold SET until PL shows on the display. Press BUTTON1 to scroll to 01 and C1 and if dual also scroll to 02 andC2. If there is a BEEPING sound on any of those setting the corresponding limit switch or limit switch wire is the issue. If it is a new installation review wiring of limit switches.
- Remove the PUSH terminal block and receiver. Use BUTTON1 to trigger the gate opener, it it operates then one of the accessories or the receiver is malfunctioning.
- If auto-reclose is on (dip switch 1 is in up position) AU should be on the display, if it is not press BUTTON1. If AU then is shown on the display, wait the time closing time that was set in parameter P6. If BUTTON1 or an accessory in PUSH1 is triggered while in AU countdown the countdown will be paused until pressed again.
- Push or pull on the gate - if it moves the gears are disengaged and the gate is in manual release mode.

Dual gate - Only one arm moves:

- Check your dual settings - if the dip switch is changed to dual with the power on the setting will not take effect, turn the power off and then back on to have the dual dip switch take ef-fect. NOTE: If one leaf of a dual gate ever reaches its end limit before the other leaf starts moving, the leaf that hasn't started moving will not begin: correct this by cycling the gates again and let it travel the full stroke or decrease the delay between leafs. The options are 0-9 seconds delay.

Troubleshooting

When SET button is pressed and held it immediately changes to P1 instead of PL:

- This manual is for circuit boards manufactured after 4/15/15. If you have a previous versions of the circuit board an updated logic chip can be purchased and installed to make the board operate like the instructions. Please contact your Estate Swing dealer.

During Limit Programming if BEEPING is not sounding when moving limit switch:

- Ensure you are moving the correct limit switch (note Pull to Open vs Push To Open)
- If the correct limit switch per the manual is being moved, check to ensure the limit switch wire color pattern matches the installation (note Pull to Open vs Push To Open)
- If the piston is not almost fully retracted, the setback is not correct. The limit switches have limited travel intentionally to ensure most of the stroke length is used. If the limit switch cannot be adjusted to reach the magnet trigger when the gate is open the setback has to be moved further from the hinge of the gate.

During Limit Programming if BEEPING is sounding no matter the position of the limit:

- Check wiring connections to ensure the limit switches are connected to the board. If the limit switches are not connected the BEEPING will sound constantly because the circuit will always be open.
- Ensure the motor 1 limits are wired to limit 1 terminals and, if a dual, motor 2 limits are wired to limit 2 block.
- If a single gate opener: unhook the power to the gate opener, move the center dip switch up and then back to the DOWN position. Reapply power.

Cannot scroll to 02 or C2 settings when in PL programming mode:

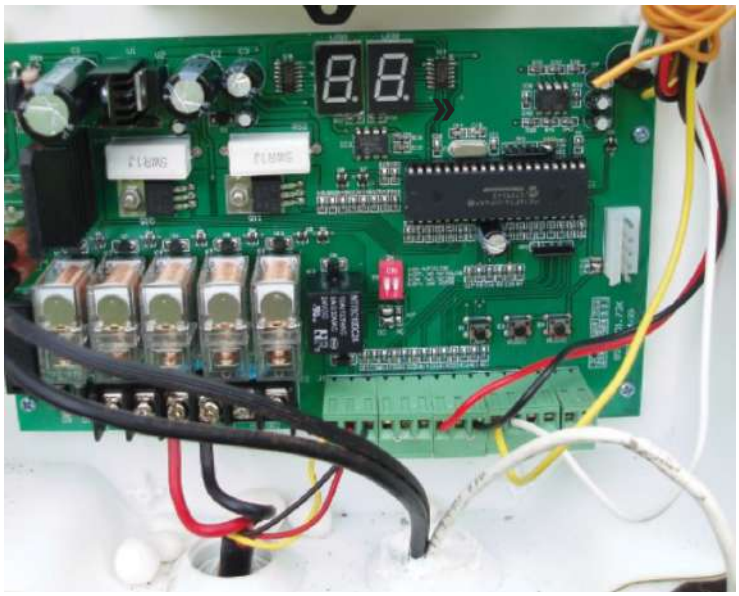
- Unhook the power to the gate opener, move the center dip switch down and then back to the UP position. Reapply power. Press and hold the SET button until PL is on the display and then press BUTTON1 3 times until on 02.

Warranty/Tech Support

If you call in for technical support or warranty support: Before any control board or motor will be permitted to be sent in for testing or warranty you will be required to e-mail digital photos to the technician.

This is done in your best interest to save unnecessary shipping expenses and time lost. Many times we can come up with solutions to issues by seeing pictures that relay information that is impossible to relay through a phone conversation.

Below are examples of control board pictures and motor pictures that we will be looking for:



Pictures shown are actual customer photos

Control Board Overview

CAUTION! Do not run 110V AC power direct to the board. This will cause permanent damage to both boards and void your warranty. Caution!

Gate Opener reactions to signals:
PUSH1 and Receiver (PUSH 1 terminal, PUSH 1 button, 5 Prong Receiver):

Details:
• Will activate gate with momentary contact (momentary contact between PUSH1 and V+) or if you momentarily press the PUSH1 button.
• Controls both leaves in 2 leaf mode (Dip switch 2 in the ON position).
• Acts as party mode control to suspend auto reclose by activating while counting down auto reclose in the open position.

Operational Sequence for terminal with auto-close ON (Dip switch 1 in on position):

1. In closed position - momentary contact will open gates.
2. When opening - momentary contact will stop gates and then it will auto reclose.
3. When stopped mid cycle waiting auto reclose - momentary contact will move the gate in the direction opposite what it was moving before stopped.
4. When open and counting auto reclose pause time - momentary contact will stop pause time.
5. Stopped in open position from override of auto reclose from PUSH1 or Receiver - momentary contact will reactivate pause time and close gate.
6. When closing - momentary contact will stop the gate and then it will auto reclose.

Operational Sequence for terminal with auto-close OFF (Dip switch 1 in off position):

1. In closed position - momentary contact will open gates.
2. When opening - momentary contact will stop gates.
3. When stopped mid cycle - momentary contact will move the gate in the direction opposite what it was moving before stopped.
4. When open - momentary contact will close gates.
5. When closing - momentary contact will stop the gate.
6. When stopped mid cycle - momentary contact will open the gate.
7. When open with auto reclose off - momentary contact will have no effect.
8. When closing - momentary contact will reopen the gate.

Control Board Overview

CAUTION! Do not run 110V AC power direct to the board. This will cause permanent damage to both boards and void your warranty. Caution!

Gate Opener reactions to signals:
PUSH2 (PUSH 2 terminal and PUSH 2 button):

Details:
- Will activate gate with momentary contact (momentary contact between PUSH2 and V+).
- Controls both leaves in 2 leaf mode (Dip switch 2 in the ON position).
- **Only opens the gate, never closes it.**
- Pause time is able to be reset if this terminal is closed through a momentary contact. Then the time will be reset, count down the pause time, and reclose.
- **Ideal for exit wand or exit loop.**

Operational Sequence for terminal with autoclose ON (Dip switch 1 in on position):

1. In closed position - momentary contact will open gates.
2. When opening - momentary contact will have no effect.
3. When stopped mid cycle from PUSH 1 or the Receiver - momentary contact will open the gate.
4. When open with auto-reclose on - momentary contact will re-set pause time and will start counting again after release of momentary contact.
5. When pause time countdown is stopped in open from a momentary contact of PUSH 1 or the Receiver - momentary contact will have no effect.
6. When closing - momentary contact will re-open the gate.

Operational Sequence for terminal with auto-close OFF (Dip switch 1 in off position):

1. In closed position - momentary contact will open gates.
2. When opening - momentary contact will have no effect.
3. When stopped mid cycle - momentary contact will open the gate.
4. When open with auto-reclose off - momentary contact will have no effect.
5. When closing - momentary contact will re-open the gate.

PUSH 1 and PUSH 2 *- these terminals can hold as many normally open connections as needed, they will be wired in parallel. They are used for keypads, push buttons, universal receivers, etc.*

Control Board Overview

Light: Sends pulses of 24VDC only while gate is running, and whether it is open or closed.

Motor 1: L 1-1, L 1-2 = 24 VDC power to single motor or primary motor

Motor 2: L2-1, L2-2 = 24VDC power to secondary motor

Limit 1: OL 1 = Open limit for single motor or primary
(normally closed) V+ = Common for limits,
+12VDC
CL 1 = Closed limit for single motor (normally closed)

Limit 2: OL2 = Open limit for secondary motor
(normally closed) V+ = Common for limits,
+12VDC
CL2 = Closed limit for secondary motor (normally closed)

Photocell: Photo = Input for safety eye photo beam connection (normally closed)
GND = Ground for photocell power/ground for photo
connection V+ = +12VDC, Max 100 milliamps for photocell power
+24V = +24VDC, Max 200 milliamps for accessory power

Button: PUSH 1 = Ground for Push 1 Accessory
**PUSH 1 IV+ is for push buttons, keypads, receivers, or any other dry and momentary contact.*

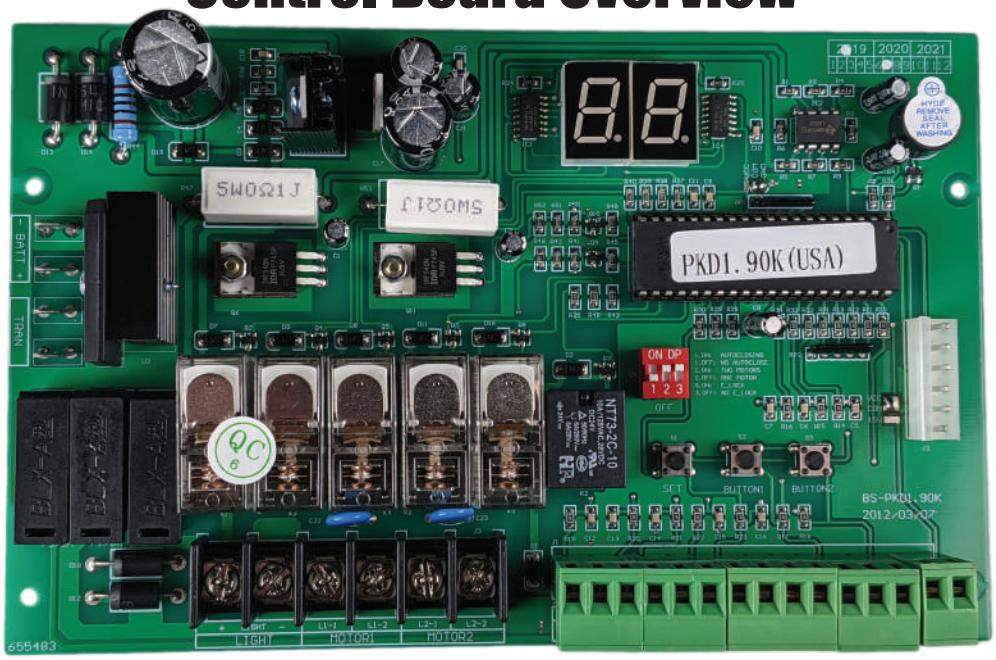
COM = Positive voltage +12VDC for Push 1 or Push 2 accessory
(relay only, not main power)

PUSH 2 = Ground for Push 2 accessory
**PUSH 2 IV+ is for exit wand, exit loops or other open only dry contact and momentary contact.*

E_Lock: Solenoid lock output - 12VDC (4 Amp max)
A = Positive B = Negative

Fuses: F1 = 8A 250V, protects motor 1
F2 = 8A 250V, protects motor 2
F3 = 2A 250V, protects accessory output +24V

Control Board Overview



CAUTION! Do not run 110V AC power direct to the board. This will cause permanent damage to both boards and void your warranty. Caution!

Display Indicators:

Lights off on board & stand by I normal operation

Lower right hand "dots" flashing normal pace
Active / Awaiting command
EL: Sending voltage to EL terminals (electric lock)
OP: Opening cycle
AU: Auto-reclose countdown
CL: Closing cycle
PH: Photo cell disruption

Buzzer/Obstructions:

If the gate(s) come in contact with an obstruction the gate(s) will reverse direction for 2 seconds and stop to allow the obstacle to be cleared from the gate path.

If the gate(s) obstructs 3 times in a row the gate(s) will go into a hard shutdown mode and a buzzer alarm will sound. At this point no accessories or remotes will be able to activate the gate opener until the gate opener is reset by disconnecting primary power battery.

Accessory Wiring

The manufacturer instructions that come with your accessory should have markings for wires or terminals to connect to the gate opener. Please look for terminals named below in the instructions for the accessory.

Keypads & Receivers:

Normally Open {NO) or Input {INP) or Relay of entry device = COM terminal (to right of PUSH 1) of PUSH block on gate opener control board.
Common {COM) or Ground {GND) or Relay of entry device = PUSH1 terminal of PUSH block on gate opener control board.

NOTE: If the power for the accessory shar es a Gr ound wire/terminal with the relay - Do Not power that accessory off this control board (example: WKP-P keypad). Instead power that device with batteries.

24V Power positive {+) or {24V) or {PWR) of entry device = +24V terminal of PHOTO block on gate opener control board.
24V Power Negative{-) or {GND) or {PWR) of entry device = GND terminal of PHOTO block on gate opener control board.

Push Button & Intercoms:

Normally Open {NO) or Input {INP) or Relay of entry device = COM terminal (to right of PUSH 1) of PUSH block on gate opener control board.
Common {COM) or Ground {GND) or Relay of entry device = PUSH1 terminal of PUSH block on gate opener control board.

Push buttons do not require power and Intercoms draw too much power to power from the gate opener.

Exit Wand/Sensor, Exit Loop Detector & Exit Device:

Normally Open {NO) or Input {INP) or Relay of exit device = COM terminal (to right of PUSH 2) of PUSH block on gate opener control board.
Common {COM) or Ground {GND) or Relay of exit device = PUSH 2 terminal of PUSH block on gate opener control board.

24V Power positive{+) or {24V) or {PWR) of exit device = +24V terminal of PHOTO block on gate opener control board.
24V Power Negative{-) or {GND) or {PWR) or Shield wire of exit device = GND terminal of PHOTO block on gate opener control board.

Accessory Wiring

Photo Eye, Safety Edge, Safety Loop:

Normally Closed (NC) of safety device = Photo terminal of PHOTO block on gate opener control board. **Common (COM) or Ground (GND) of safety device** = GND terminal of PHOTO block on gate opener control board.

12V Power positive (+) or (12V) or (PWR) of safety device = V+ terminal of PHOTO block on gate opener control board.
12V Power Negative(-) or (GND) or (PWR) of safety device = GND terminal of PHOTO block on gate opener control board.

** Remove safety jumper from PHOTO terminal if using a safety device.*
** 12V is not a misprint, the V+ terminal has a 12V output.*

Solenoid Gate Lock:

Positive Lead of lock = A terminal of E_LOCK block on gate opener control board. **Negative Lead of lock** = B terminal of E_LOCK block on gate opener control board.

Magnetic Gate Lock:

** Magnetic gate locks must have their own power supply and their own relay.*

Coil of relay for magnetic lock = A terminal of E_LOCK block on gate opener control board.
Coil of relay for magnetic lock = B terminal of E_LOCK block on gate opener control board.
Connect positive lead of the power supply directly to the positive lead of the mag lock.
Connect negative lead of the power supply to the N/C terminal of the relay.
Connect the COM terminal of the relay to the negative lead of the mag lock.