SAFETY SECTION

USAutomatic gate operators are certified to UL325 Vehicular Class I, II, III and IV swing gate standards.

UL325 identifies four different classes of gate operators these classes are listed below:

Class I: Residential vehicular gate operator- vehicular gate operator (or system) intended for use in a home of one to four single family dwellings or a garage or parking area associated therewith.

Class II: Commercial/General access vehicular gate operator- vehicular gate operator (or system) intended for use in a commercial location or building such as multi-family housing unit (five or more single family units), hotel garages, retail, or other buildings servicing the general public.

Class III: Industrial/Limited access vehicular gate operator- vehicular gate operator (or system) intended for use in an industrial location or building such as a factory or loading dock area or other locations not intended to serve the general public.

Class IV: Restricted Access vehicular gate operator- vehicular gate operator (or system) intended for use in a guarded industrial location or building such as an airport security area or other restricted access locations not servicing the general public, in which unauthorized access is prevented via supervision by security personnel.

INSTALLATION

- Install the gate operator when:
- Operator is appropriate for the construction of the gate and usage class is correct for the installation.
- All exposed pinch points are eliminated or guarded.
- Only install on vehicle gates, pedestrians must be supplied with a separate access opening.
- The gate is installed in a location where enough space is supplied between adjacent structures and the gate that when opening or closing the chance of entrapment is reduced.
- Swing gates shall not open into public access areas.
- The gate is properly installed and swings freely in both directions. Do not over adjust the sensitivity adjustment to compensate for an improper gate installation.
- Locate all controls at least six feet away from the gate to eliminate the chance of the person operating the gate from coming in contact with the moving gate. Do not install external buttons, which can be used to operate the gate within the reach of children.
- All placards must be installed one on each side of the gate visible in the gate area.
- Contact sensors used for secondary entrapment safety devices and their wiring must be installed in a manner which protects them from mechanical damage.
- Non-Contact sensors used for secondary entrapment safety devices must be located so that the signal from the transmitter to the receiver is not interfered with by adjacent structures. All exposed wiring must also be protected from mechanical damage.

SECONDARY ENTRAPMENT DEVICES

USAutomatic designs all control boards with secondary entrapment inputs and secondary safety devices must be installed with all installations. USAutomatic recommends the use of UL325 listed safety devices.

NOTE: USAutomatic recommends that these devices be connected after proper gate installation and operation has been verified. Then connect one device and verify proper operation before installing the next device. Ensure that power is disconnected from the control board prior to wiring any accessory.

WARNING: TO REDUCE THE RISK OF INJURY OR DEATH

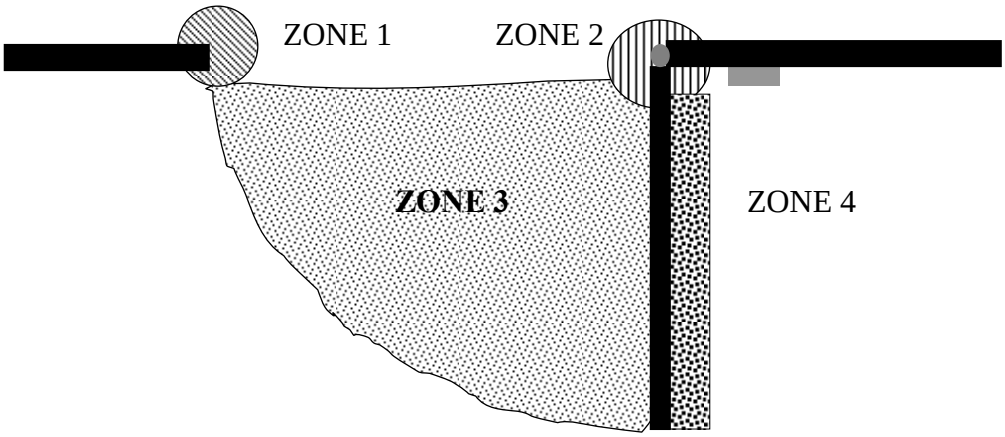
1. READ AND FOLLOW ALL INSTRUCTIONS
2. Never let children operate or play with gate controls. Keep remote control away from children.
3. Always keep people and objects away from the gate.
4. NO ONE SHOULD CROSS THE PATH OF A MOVING GATE.
5. Test gate operator monthly. The gate must stop and reverse directions upon contacting a rigid object or when the secondary entrapment device is activated.
6. After all adjustments have been made to the sensitivity (current sense) circuit, secondary entrapment devices and all other external devices installed the safety devices must be checked again. Failure to adjust and retest the gate operator can increase the risk of injury or death.
7. Verify that the emergency release (manual release) pin can be easily removed.
8. KEEP GATES PROPERLY MAINTAINED. Tighten all bolts and grease hinges and pivot points.
9. THE ENTRANCE IS TO BE USED BY VEHICLES ONLY. Pedestrians must use a separate entrance.
10. SAVE THESE INSTRUCTIONS

All safety features required by UL 325 are incorporated in the capabilities of all USAutomatic Control boards and should be utilized, including but not limited to, safety edges, photo electric eyes, reverse sensing.

Cautions - Very Important

- Do not attempt to enter the gate area while the gate is moving. Wait until the gate comes to a complete stop.
- Operate the gate only when it is fully visible, free of persons or obstructions, and properly adjusted.
- Do not allow children to play in the area of the gate. Do not allow anyone to ride on the gate.
- Do not allow children to play with the remote control or any other activation device. Do not attempt to "beat the gate" while the gate is opening or closing. This is extremely dangerous.
- Test the current sense feature and all safety devices regularly to insure correct operation.

Study this entire Safety Section paying particularly close attention to the entrapment zones shown below and be aware of these areas not only during use but also during any adjustments to the unit.



ENTRAPMENT ZONES

Zone 1 The leading edge of the gate & catch post.

Zone 2 Area between the gate and hinge post.

Zone 3 The arc of the gate or gate path.

Zone 4 The space between the gate when open and any obstruction such as fence, wall, landscaping, etc.

Zone 5 The point where two bi-parting gates come together when closing. (Not shown above)

Every installation is unique and it is the installer's responsibility to recognize and remedy all safety concerns. Please consult a qualified dealer or the factory for a complete explanation of the remedies and additional tips pertaining to your installation.

Periodic Service

All gate operators require periodic checking and adjustments of the control mechanism for force (load), speed and sensitivity. All accessories and secondary safety devices must be checked. Secondary safety devices need to be checked at least once a month for proper operation.

Periodic checking is also advised for the following:

1. Battery terminals for corrosion, clean with baking soda solution.
2. Hinges and pivot points need to be greased.
3. Mounting bolts if used for correct tightness.
4. Inspect weld points for cracks or other defects.
5. Inspect wiring for cuts, nicks or other defects.
6. Inspect hinge post to ensure it is not moving or twisting.
7. Charge device verify proper operation, refer to charge controller operation check.
8. Verify monthly that the inside of the control cabinet remains clean and free of insects. Do not spray control board with bug spray or oil based products.

Troubleshooting Guide Outline

NOTE: Gate 2 is defined as the gate on the other side of the drive from the control box.

1. Gate 1 or Gate 2 will not operate. Single gate installation.
2. Gate 1 or Gate 2 will not operate. Dual gate installation.
3. Gate 1 and Gate 2 will not operate. Dual gate installation.
4. Single or Dual gate installation opens or closes very slow.
5. Single or Dual gate installation will not automatically close.
6. Single or Dual gate installation automatically opens instead of automatically closing.
7. Gate begins to open or close, but stops and reverses after a couple of seconds.
8. Transmitter (Remote control) will not operate the gate.
9. Photo eye or other safety accessory will not reverse the gate when closing.
10. Pressing the "RESET" button only, causes the gate to operate (open, close or stop) like a transmitter.
11. Transmitter operating range seems short.

Terms and Definitions

Control board -
See page 15, figure 23.

Receiver -
See page 18, figure 32

Transmitter -
Hand held unit with 2 buttons, used to operate the gate, sends signal to receiver when button is pressed see page 18 figure 32.

Linear Actuator -
Connected to gate and hinge post, contains the motor, gearbox.

Connector -
Control board has Six, two white 8-pin connectors (X1 and X2) are used to connect linear actuator to control board and one 13-pin connector (J2) (located bottom center of control board) for accessory wiring, two 2 pin header (J3, J4) for entrapment siren & external "Reset" and one four pin header (J1) for receiver.

Push Button -
Three are located on the control board. "Open/Close command" used to operate the gate, "Reset" used to reset the control board after current sensing twice before a limit is reached see page 14 figure 21 and the "LED Indicator" must be pressed and held to activate troubleshooting lights.

Control Switches -
Used to turn "ON" or "OFF" specific control board functions see page 15 figure 24.

Sensitivity adjustments-
Located on the control board see page 14 figure 20. These adjustments are the primary safety feature. If the gate comes in contact with an object it will stop and reverse. These adjustments control the amount of pressure applied to an object before reversing the gate.

Charge Controller -
Located inside the control box see page 11 figure 15. This is the battery charger. The input power for this device can be either from a transformer (supplied) or from a solar panel.

Transformer -
This device connects to a 110 VAC electrical outlet and converts it to a low AC voltage that can be connected to the charge controller to provide continuous charging of the battery.

Open and Close Limit -
Refers to fully open or closed gate position. Adjustments are on the control board see page 14, figure 22.

Entrapment Siren -
If the control board sensitivity circuit senses an obstruction it will reverse the gate and if a second obstruction is detected before the gate reaches a fully open or close limit the control board will shut down the opener and sound the entrapment alarm for five minutes or until the "Reset" button is pressed.

1. My single gate will not operate: (connected to Gate I or Gate II)

STEP 1 Open control box cover and locate the "Open/Close Command" push button and press it to operate the gate.

STEP 2 Press the "Reset" push button located above the open close command, then push the "open/close command" push button to operate the gate.

STEP 3 When pressing the "open/close command" push button, listen for a clicking sound, if click is heard then verify:

A. Verify the correct control switch is "ON" corresponding to the Gate 1 or Gate 2 connector the linear actuator is connected to.

B. If step A above check good, then press the "Open/Close Command" push button on the control board. If a clicking sound is heard coming from the control board then the problem is most likely low power.

C. Low power can be caused by two things – Low battery voltage or a bad connection at the battery. Battery will need to be load tested to verify it is good. Replace battery or correct connection problem at battery.

STEP 4 Remove the receiver connector that is plugged into the J1 connector. Press the "Open/Close Command" button and verify gate operates.

STEP 5 Disconnect linear actuator connector from the control board and connect it to the other (Gate 1 or Gate 2) connector on the control board. Then set the corresponding control switch to the "ON" position. Press the "Open/Close Command" button and verify gate operates. If gate operates on the other connector that is acceptable.

STEP 6 If gate still does not operate please call USAutomatic for more information.

2. Gate 1 or Gate 2 will not operate. Dual gate Installation

STEP 1 These instructions are for the failure of one gate to operate in a dual gate installation.

STEP 2 Identify the gate that will not work and check the control switch for that gate and verify that it is turned "ON".

STEP 3 Swap the Gate 1 and Gate 2 linear actuator connectors on the control board. If problem moves to other gate then the control board is bad.

STEP 4 If problem remains in the same gate then the problem is either a wire problem or linear actuator problem. Since it is a possible wire problem we need to check the following:

A. Wire harness for cuts, nicks or bad splices if splice exist.

B. If gate with problem is the gate located on the other side of drive from control box (Gate 2) the cable under the drive needs to be verified good. This is done by using a voltmeter and going to the junction box located below the Gate 2 linear actuator. Locate the red wire with white stripe and the black wire with white stripe and then operate the gate and check voltage on these two wires (expect 12 VDC).

C. If voltage is present when gate should be operating then the problem is most likely the linear actuator.

D. If voltage is not present when gate should be operating then move back to the control box side and check voltage on same two wires located in the wire compartment.

E. If voltage is present on the control box side of drive then the cable in the ground must be damaged.

F. If voltage is not present in the control box then we have missed something in steps 2 or 3, recheck.

3. Gate 1 and Gate 2 will not operate. Dual gate installation

STEP 1 These instructions are for the failure of both gates to operate in a dual gate installation.

STEP 2 Verify that control switches 3 and 4 are turned "ON".

STEP 3 Verify the red and black wires on the Quick Connect harness are connected to the battery correctly. Red connects to positive and black connects to negative post on the battery.

STEP 4 Verify that the battery is charged, press the "Open/Close Command" push button, if a clicking sound is heard from the control board then most likely the battery is dead. Have the battery load tested to verify it is bad.

STEP 5 If battery checks good (passed the load test) then the control board is most likely the problem. To think that 2 motors have gone bad would not make sense but is also a possibility.

4. Gate 1 or Gate 2 (Gate 1 and Gate 2 if dual gate) operating speed has slowed down

NOTE: When the gate is running slow the reason is low power, two things need to be considered. Battery condition (replace or charge) and the ¼" ring terminals located on the Quick Connect harness which are connected to the battery. The ring terminals can become corroded and need replacing over time.

STEP 1 Determine which situation your operator falls into below: