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## **IntelliSlide X6 Installation And Instruction Manual**

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**UL 325/991 Compliant**

**REV. C — 04/2020**

**[www.iqgatesystems.com](http://www.iqgatesystems.com)**

**1-801-455-7961**

# **IQ GATE SYSTEMS**

## **Warranty Information**

**This document pertains to all IQ Gate Systems manufactured products. All products that are sold, but not manufactured by IQ Gate Systems are not covered under this warranty. The following warranty covers models including but not limited to:**

**IQ-50 / IntelliSwing IQ-50-H Series\*\***

**IQ-500 / IntelliSwing IQ-500-S / IntelliSwing Y6**

**IQ-500c**

**IQ-5000 / IntelliSlide IQ-5000-S / IntelliSlide IQ-5000-HD / IntelliSlide X6**

**IQ-12B**

**IQ Gate Systems reserves the right to alter its warranty coverage and models including coverage duration without prior notification.**

### **Limited Warranty**

**\*\*IQ Gate Systems model IQ-50 / IntelliSwing IQ-50-H Series linear gate operator is covered by the following warranty for a period of two years (24 months) from the date of original purchase. IQ Control Boards sold independently of an IQ gate operator are only entitled to a 12 month warranty from the date of purchase by the original buyer. IQ Gate Systems new products, not including the IQ-50 linear actuator, are warranted to be free of defects in material or workmanship for a period of three years, (36 months), from the date of purchase. This warranty does not cover aesthetical defects in materials. This warranty extends only to wholesale customers who buy direct from IQ Gate Systems or through IQ Gate Systems normal distribution channels. This warranty also only covers and is extended to products that are manufactured by IQ Gate Systems. IQ Gate Systems does not warrant any products in any way to the end user consumer. Consumers must obtain warranty information from the selling dealer and/or installer as to the nature of the dealer's warranty, if any. All contact to IQ Gate Systems from the end user consumer will be referred to the consumer's selling dealer and/or installer. There are no obligations and/or liabilities on the part of IQ Gate Systems for consequential damages arising out of or in connection with use or performance of IQ Gate Systems products or other indirect damages with respect to loss of property, revenue, or profit, or cost of removal, installation, or reinstallation. Any use or change to IQ Gate Systems products not expressly approved by the manufacturer, and performed by an authorized dealer/installer will immediately void the warranty. All implied warranties, including warranties for marketability as well as implied warranties for suitability, are valid only until the warranty expires or is voided, whichever comes first.**

**This IQ Gate Systems Limited Warranty is in lieu of all other warranties express or implied and all IQ Gate Systems warranties are subject, but not limited, to the following conditions.**

## NEW PRODUCT POLICY

1. The products must be properly installed as specified; and maintained or used as intended.
2. Cause of product failure is not due to vandalism or malicious mischief, improper installation, abnormal physical or electrical stress, lightning, power surges, misuse, negligence, accidents, or Natural disasters. Normal "wear and tear" from use of equipment is not covered under warranty.
3. **Warranty is immediately null and void if the product has been altered, repaired, or modified without express written authorization from IQ Gate Systems Technical Department, with such authorization given only to manufacturer approved dealer/installers.**
4. Under no circumstances will IQ Gate Systems honor warranty on any product found to have been altered, repaired, and/or modified by the end-user consumer.
5. IQ Gate Systems reserves the right to repair the product, or replace a warranted product with a like product of equal value in the event original product cannot be repaired.
6. Distributors and/or Dealer-Installer must first obtain a Return Merchandise Authorization (RMA) number from IQ Gate Systems Technical Department before returning any product to factory for repair, whether under warranty or not. **No returns accepted without RMA.**
7. Return Merchandise Authorization (RMA) numbers will not be issued to the end-user consumers. Consumers must contact their selling dealer-installer for any/all warranty issues.
8. Distributor and/or Dealer-Installer are responsible for all shipping charges, incl. freight and insurance fees, for products shipped to IQ Gate Systems repair center.
9. IQ Gate Systems warranty does not guarantee any product to be free of operation error or service interruption in any way during the course of daily product operation.
10. IQ Gate Systems is not responsible for time, travel, and/or labor costs of any distributor and/or dealer-installer, including but not limited to, any expenses to install, uninstall or reinstall hardware/software/firmware related to warranty issues, product enhancements, or product failures.

## IQ GATE SYSTEMS NON-WARRANTY REPAIR LIMITED WARRANTY

### NON-WARRANTY REPAIR POLICY

IQ Gate Systems warrants repairs to be free of defects in material or workmanship for a period of three (3) months from the date of repair and invoice. **This warranty extends only to wholesale customers who buy direct from IQ Gate Systems or through IQ Gate Systems normal distribution channels. Consumers must obtain warranty information from the selling dealer and/or installer as to the nature of the dealer's warranty, if any. All contact to IQ Gate Systems from the end user consumer will be referred to the consumer's selling dealer and/or installer.**

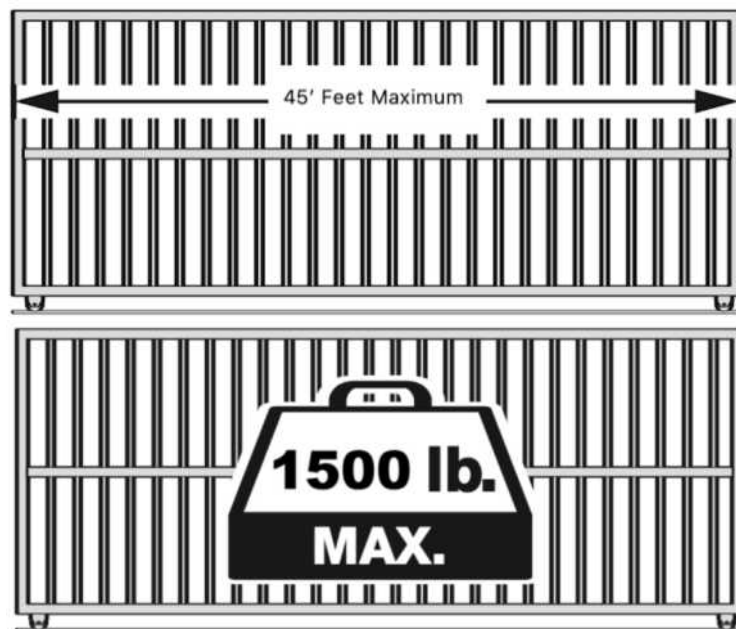
**This IQ Gate Systems Limited Warranty is in lieu of all other warranties express or implied** and all IQ Gate Systems warranties are subject, but not limited, to the following conditions.

1. The products must be properly re-installed as specified; and maintained or used as intended.
2. Cause of repaired product failure is not due to vandalism or malicious mischief, improper installation, abnormal physical or electrical stress, lightning, power surges, misuse, negligence, accidents, or Natural disasters.
3. **Warranty is immediately null and void if the product has been altered, repaired, or modified without express written authorization from IQ Gate Systems Technical Department, with such authorization given only to manufacturer approved dealer/installers.**
4. **Under no circumstances will IQ Gate Systems honor warranty of any product found to have been altered, repaired, and/or modified by the end-user consumer.**
5. IQ Gate Systems reserves the right to replace a previously repaired product with a like product of equal value in the event of repair failure, provided repair failure occurs within the specified warranty period.
6. Distributors and/or Dealer-Installer must first obtain a Return Merchandise Authorization (RMA) number from IQ Gate Systems Technical Department before returning any product to factory for non-warranty repair. **No repair returns accepted without RMA.**
7. Return Merchandise Authorization (RMA) numbers will not be issued to the end-user consumers. Consumers must contact their selling dealer-installer for any/all warranty issues.
8. Distributor and/or Dealer-Installer are responsible for all shipping charges, incl. freight and insurance fees, for products shipped to IQ Gate Systems repair center.
9. **IQ Gate Systems warranty does not guarantee any product, new or repaired, to be free of operation error or service interruption in any way during the course of daily product operation**
10. IQ Gate Systems **is not responsible for time, travel, and/or labor costs of any distributor and/or dealer-installer**, including but not limited to, any expenses to install, uninstall or reinstall hardware/software/firmware related to warranty issues, product enhancements, or product failures.

**IMPORTANT REPAIR NOTE:** IQ Gate Systems will perform a factory physical evaluation of all products submitted for repair at receipt of item, and reserves the right to decline repairs after said physical evaluation. In the event a returned product is deemed ineligible for repair; the product will be returned to sender via common carrier ground at IQ Gate Systems expense. **NO RETURNS WILL BE REPAIRED, CREDITED, OR RETURNED WITHOUT THE RMA# THAT WAS ISSUED FOR THE MENTIONED PRODUCT FROM IQ GATE SYSTEMS.**

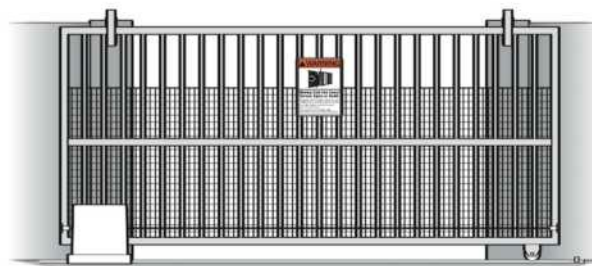
The IntelliSlide X6 Slide gate operator is a continuous duty operator that is capable of operating gates up to 45' in overall length or up to 1500 lbs in weight.

Be sure to inspect gate hardware and verify that the gate rolls smoothly. Replace gate hardware as needed to insure that the operator doesn't require excessive force to operate the gate

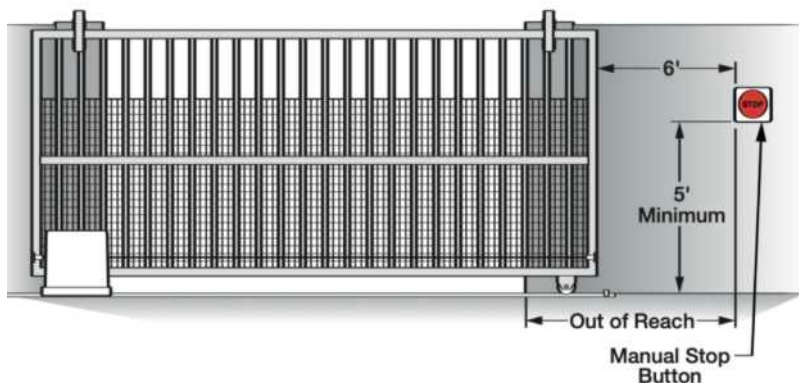


Do NOT Install the gate operator to lift gates

### Warning Placard Installation



All Warning Signs and Placards must be installed where visible in the area of the gate. A minimum of two placards shall be installed. A placard is to be installed in the area of each side of the gate and be visible.



The operator IS NOT intended to be used for any pedestrian gate.







**Warning:** Do not install this gate operator if you don't have experience or proper training with gate operators

### Important Safety Instructions

#### **WARNING –**

TO REDUCE THE RISK OF INJURY OR DEATH - READ AND FOLLOW ALL INSTRUCTIONS.

Never let children operate or play with gate controls. Keep the remote control away from children. Always keep people and objects away from the gate. NO ONE SHOULD CROSS THE PATH OF THE MOVING GATE.

Test the gate operator monthly. The gate MUST reverse on contact with a rigid object or stop when an object activates the non-contact sensors. After adjusting the force or the limit of travel, retest the gate operator. Failure to adjust and retest the gate operator properly can increase the risk of injury or death.

Use the emergency release only when the gate is not moving. Make sure that all power to the gate operator is off.

KEEP GATES PROPERLY MAINTAINED. Read the owner's manual. Have a qualified service person make repairs to gate hardware.

The entrance is for vehicles only. Pedestrians must use separate entrance.

SAVE THESE INSTRUCTIONS.

**Warning:** To reduce the risk of injury or death, please read the following:

1. Read, follow and understand all instructions
2. The automated gate is not for pedestrian use
3. Do not activate your gate operator unless it is in sight and you can determine that it will travel without interfering with any objects or persons. Always keep people and objects away from the gate and its area of travel
4. Keep all access devices such as key switches, push buttons, and telephone entry systems away from the gate. The recommended distance is a minimum of 10 feet.
5. **Make sure that all warning signs have been attached and that the operator has been installed correctly**
6. If edges and photoelectric sensors have been installed, they should be tested for proper operation.
7. Keep gates properly maintained. Grease and lubricate all hinges and brackets to prevent binding and unnecessary friction.
8. Have the operator tested and serviced by a qualified and experienced technician. The gate should respond and reverse to all obstructions both inherently and externally
9. Disconnect the operator only when it is not in motion
10. **DO NOT** turn on the automatic close timer unless the gate is equipped with at least one non-contact external obstruction sensor, e.g., a photo electric beam, a vehicle loop, etc.

# UL 325 Model Classifications

## CLASS I

Residential Vehicular Gate Operator - A vehicular gate operator (opener or system) intended for use in a home of one to four single family dwellings, or a garage or parking area associated therewith.



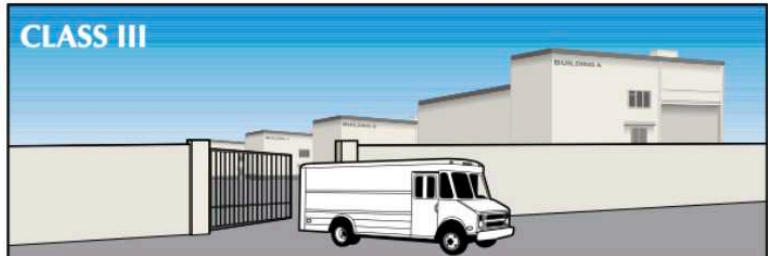
## CLASS II

Commercial/General Access Vehicular Gate Operator - A vehicular gate operator (opener or system) intended for use in a commercial location or building such as a multi-family housing unit (five or more single family units) hotel, garages, retail store or other building servicing the general public.



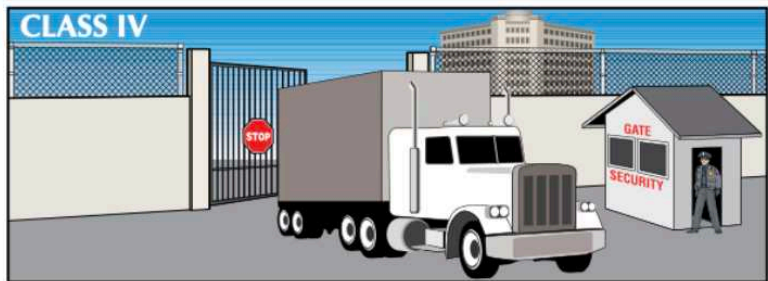
## CLASS III

Industrial/Limited Access Vehicular Gate Operator - A vehicular gate operator (opener or system) intended for use in a industrial location, loading dock area or other location not intended to service the general public.



## CLASS IV

Restricted Access Vehicular Gate Operator - A vehicular gate operator (opener or system) intended for use in a guarded industrial location or buildings such as airport security area or other restricted access locations not servicing the general public, in which unauthorized access is prevented via supervision by security personnel.



# UL 325 Required Entrapment Protection

## Entrapment Protection Requirements for Each UL 325 Classification

Proper installation must satisfy the entrapment protection chart as shown. The installation must have one PRIMARY means and a SECONDARY means of entrapment protection in both the OPEN and CLOSE direction of gate travel.

Gate Type	Protection	Class I & II	Class III	Class IV
Horizontal Slide Vertical Lift Vertical Pivot Gate	Primary Type	A	A, B1, B2	A, B1, B2, D
	Secondary Type	B1, B2, D	A, B1, B2, D, E	A, B1, B2, D, E
Swing Gate or Vertical Barrier (arm)	Primary Type	A, C	A, B1, B2, C	A, B1, B2, C, D
	Secondary Type	A, B1, B2, C, D	A, B1, B2, D, E	A, B1, B2, C, D, E

**A** - Inherent (built into the gate operator) entrapment protection.

**B1** - Non-contact sensor such as photo-eye or equivalent.

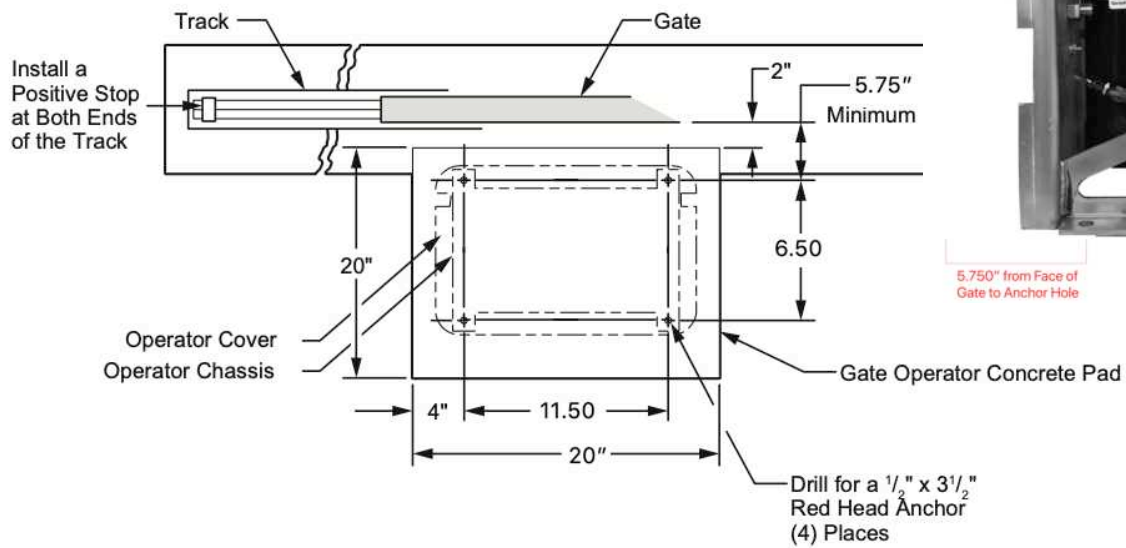
**B2** - Contact sensor such as edge sensor or equivalent.

**C** - Inherent adjustable clutch or pressure relief device.

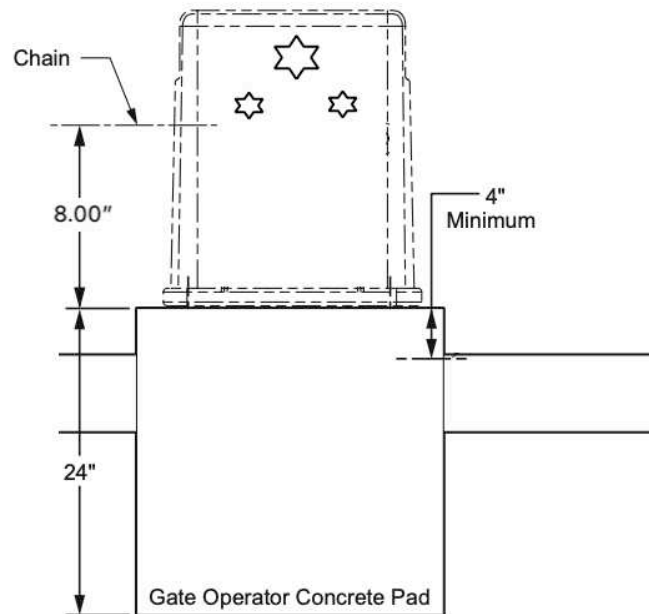
**D** - Actuating device requiring continuous pressure to maintain gate motion.

**E** - Inherent audio alarm.





5.750" from Face of Gate to Anchor Hole





The IntelliSlide X6 Slide Gate Operator is a residential/commercial slide gate operator.

1) Install the gate operator only when:

- The operator is appropriate for the construction of the gate (see the ASTM F2200 standard) and the usage UL Class of the gate,
- All openings of a horizontal slide gate are guarded or screened from the bottom of the gate to a minimum of 4 feet (1.22 m) above the ground to prevent a 2-1/4 inch (57.2 mm) diameter sphere from passing through the openings anywhere in the gate, and in that portion of the adjacent fence that the gate covers in the open position,
- Guarding is supplied for exposed rollers.
- All exposed pinch points are eliminated or guarded

2) The operator is intended for installation only on gates used for vehicles. Pedestrians must be supplied with a separate access opening.

3) The gate must be installed in a location so that enough clearance is supplied between the gate and adjacent structures when opening and closing to reduce the risk of entrapment. Sliding gates shall not open “into” public access areas.

4) The gate must be properly installed and work freely in both directions prior to the installation of the gate operator. Do not increase the operator amperage levels beyond the required operable amounts to compensate for a damaged gate.

5) For gate operators utilizing Type D protection:

- The gate operator controls must be placed so that the user has full view of the gate area when the gate is moving,
- The placard be placed adjacent to the controls,
- An automatic closing device (such as a timer, loop sensor, or similar device) shall not be employed
- No other activation device shall be connected.

6) Controls must be far enough from the gate so that the user is prevented from coming in contact with the gate while operating the controls. Controls intended to be used to reset an operator after 2 sequential activations of the entrapment protection device or devices must be located in the line-of-sight of the gate. Outdoor or easily accessible controls shall have a security feature to prevent unauthorized use.

7) All warning signs and placards must be installed where visible in the area of the gate. A minimum of two placards shall be installed. A placard is to be installed in the area of each side of the gate and be visible to persons located on the side of the gate on which the placard is installed.

8) For gate operators utilizing a non-contact sensor such as a photo beam:

- See instructions on the placement of non-contact sensors for each type of application,
- Care shall be exercised to reduce the risk of nuisance tripping, such as when a vehicle, trips the sensor while the gate is still moving

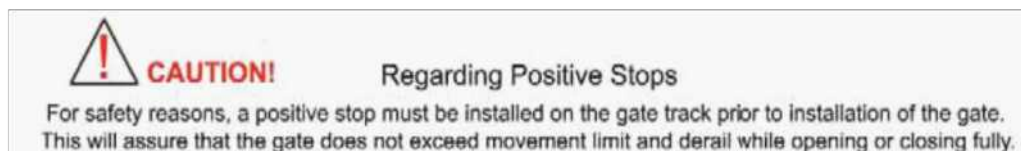
- One or more non-contact sensors shall be located where the risk of entrapment or obstruction exists, such as the perimeter reachable by a moving gate or barrier.

9) For a gate operator utilizing a contact sensor such as an edge sensor:

- One or more contact sensors shall be located where the risk of entrapment or obstruction exists, such as at the leading edge, trailing edge, and post mounted both inside and outside of a vehicular horizontal slide gate.
- One or more contact sensors shall be located at the bottom edge of a vehicular vertical lift gate.
- One or more contact sensors shall be located at the pinch point of a vehicular vertical pivot gate.
- A hardwired contact sensor shall be located and its wiring arranged so that the communication between the sensor and the gate operator is not subjected to mechanical damage.
- A wireless contact sensor such as one that transmits radio frequency (RF) signals to the gate operator for entrapment protection functions shall be located where the transmission of the signals are not obstructed or impeded by building structures, natural landscaping or similar obstruction. A wireless contact sensor shall function under the intended end-use conditions.

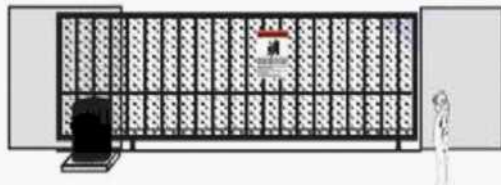
## Before installation:

- Read and follow all instructions
- Verify that the IQ Gate Systems operator that is being installed is the correct operator for the gate.
- Make sure that the gate has been properly installed and slides freely and level throughout its travel. Repair or replace any damaged or unsafe hardware. A gate that slides free of friction and binding will greatly increase the life of the gate operator.
- Review the operation of the system and the customers needs to make the installation as easy and efficient as possible.
- This gate operator is intended for vehicular gates only. A separate entrance must be provided for pedestrian use.
- The gate should be equipped with positive stops, as well as a mesh or fabric that prevents a gap larger than 2 inches. Please conform with the UL and ASTM standards on building safe and approved gates



### Regarding Ornamental Grill Styled Gates:

Injuries may be avoided if a mesh or screen is installed on the gate. Injuries resulting from hands and feet becoming stuck in gate or children riding the gate while in movement, can be greatly reduced if this "screen" or "mesh" is applied to gate as a safety precaution.



## During installation:

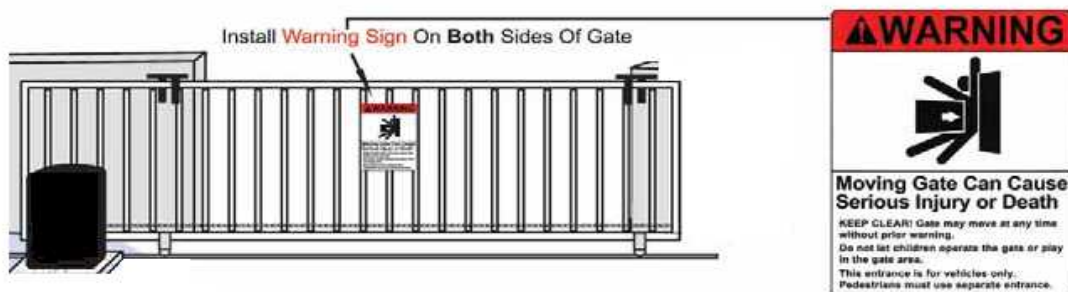
- Install the gate operator on the secured side of the property and away from public access.
- Be mindful of moving parts and pinch points. Avoid close proximities.
- Installation of contact and non-contact sensors such as edges and photoelectric sensors is suggested to enhance the prevention of entrapment.
- Determine the best level of open and close force for the installation. An improper level will defeat the inherent current sensing purpose and make the installation unsafe. By utilizing the **"Motor Diagnostic"** feature; proper and accurate levels can be obtained when adjusting the open and close force settings. **Improper testing and setting of the force adjustment can increase the risk of serious injury or death.**
- Mount all access controls away from the gate a recommended minimum distance of 10 feet. The gate must be in full view of controls but out of reach.

## After Installation:

- Review ALL safety instructions with the end user. Explain the basic operation and features including safety precautions of the entire gate operator system. Don't forget to include how to disconnect power to the operator and how to operate the gate manually.
- Attach all warning signs and placards as well as your own business contact information to the gates. It is recommended that you take a picture of the gates with the warning signs in place and record the date of the photo. Keep for your records.

## Installing the IntelliSlide X6 Slide Gate Operator

### Installing the Warning Sign



- **SAVE ALL INSTRUCTIONS.** Leave a copy of the manual and your contact information with the end user.

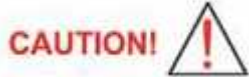
### Preparing to install the IntelliSlide X6

Consider the following when installing an IntelliSlide X6:

- Survey the desired location for the gate. Make sure that the opening is far enough away from a main road or heavy traffic. Be sure to allow enough distance away from the road so that a vehicle can approach the gate without obstructing traffic. Twenty-five feet from the road should be sufficient, but compliance with local codes should be observed.
- Keep power requirements in mind. AC power is recommended to consist of 110 to 220 volts. AC power is the preferred method of supply.
- Depending on soil conditions, set the concrete pad at least 2 feet in the ground with an abundance of concrete. Check and conform to local codes.
- Install the gate with the incline of the road in mind. For proper operation, the gate must slide back and forth at a level plane.

### For Master / Slave Applications:

- It is recommended that a total linear footage distance of 120 feet is not exceeded when running the power and communication wires between the master and slave operators. When using larger gauge wires, a junction or terminal block (not included) may be required. If the wire run distance is to exceed 120 feet, please consult IQ Gate Systems for other options.
- Be sure to provide a 3/4" conduit between the two gates if they will be set up as bi-parting.
- When programming the MC4 Board for a Master / Slave application, be sure to change the operator type in the "Motor Drive Menu" to a master or slave.

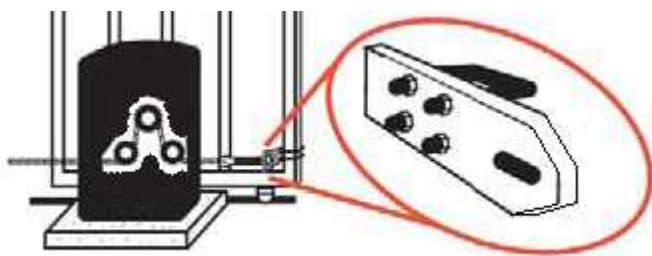


**DO NOT REVERSE BATTERY POLARITY AT THE BATTERY OR THE CIRCUIT BOARD. SEVERE DAMAGE WILL OCCUR**

**The IntelliSlide X6 is a 24 volt DC gate operator. Utilizing (2) 12 vdc batteries, the batteries must be connected in series, and then the positive (+) power wire (RED) is to be connected to the positive (+) battery terminal**

- Take note of the software version on the LCD display upon power up.

## Chain Attachment and Limit Settings



Using the supplied chain brackets, mount the brackets with the chain bolt holes at the same height as the bottom of the idlers. Roughly 9-10 inches from the base of the operator.

Once the chain is attached, it needs to be tightened. Be careful not to over tighten the chain. Proper adjustment is 1-2" of sag for every 10' feet of chain.

After the chain has been installed, the magnetic limits need to be installed. To do so, switch the MOTOR SWITCH to the MANUAL position. Push the gate in the open direction until the gate reaches the full open limit. Attach the Magnetic Limit Block to the chain so that it is flush with the edge of the operator frame on the road side opening. Then, push the gate closed to the desired closed position. Attach the Magnetic Limit Block to the edge of the operator frame on the opposite edge of the operator frame.

Be sure to install positive stops at each end of the gate. The positive stops should be no more than 2 inches beyond the limit travel



## Wiring the MC4 Control Board

All of the GND terminals on the board may be used for the “ – “ power terminal or for a common contact.

### PLUG IN LOOP DETECTOR SLOTS/TERMINALS

The terminals at the top left corner of the MC4 board are for the termination of ground loops. These terminals correspond with the 2 available plug-in loop detector slots. The loop detector slots are available for use as a OPEN, REVERSE, CLOSE, RESET, and DISABLE

- The RESET detector will provide a close contact to the controller after the the loop has been activated and then deactivated. This is a good option for Anti-Tailgating and Quick Close applications as it will override the Close Timer
- The DISABLE option will allow the detector to still detect and consume power, but no internal action will be taken by the MC4 board. This feature is great for troubleshooting suspicious detectors or power draw concerns

12v + Power  
SW/12  
GND  
GND

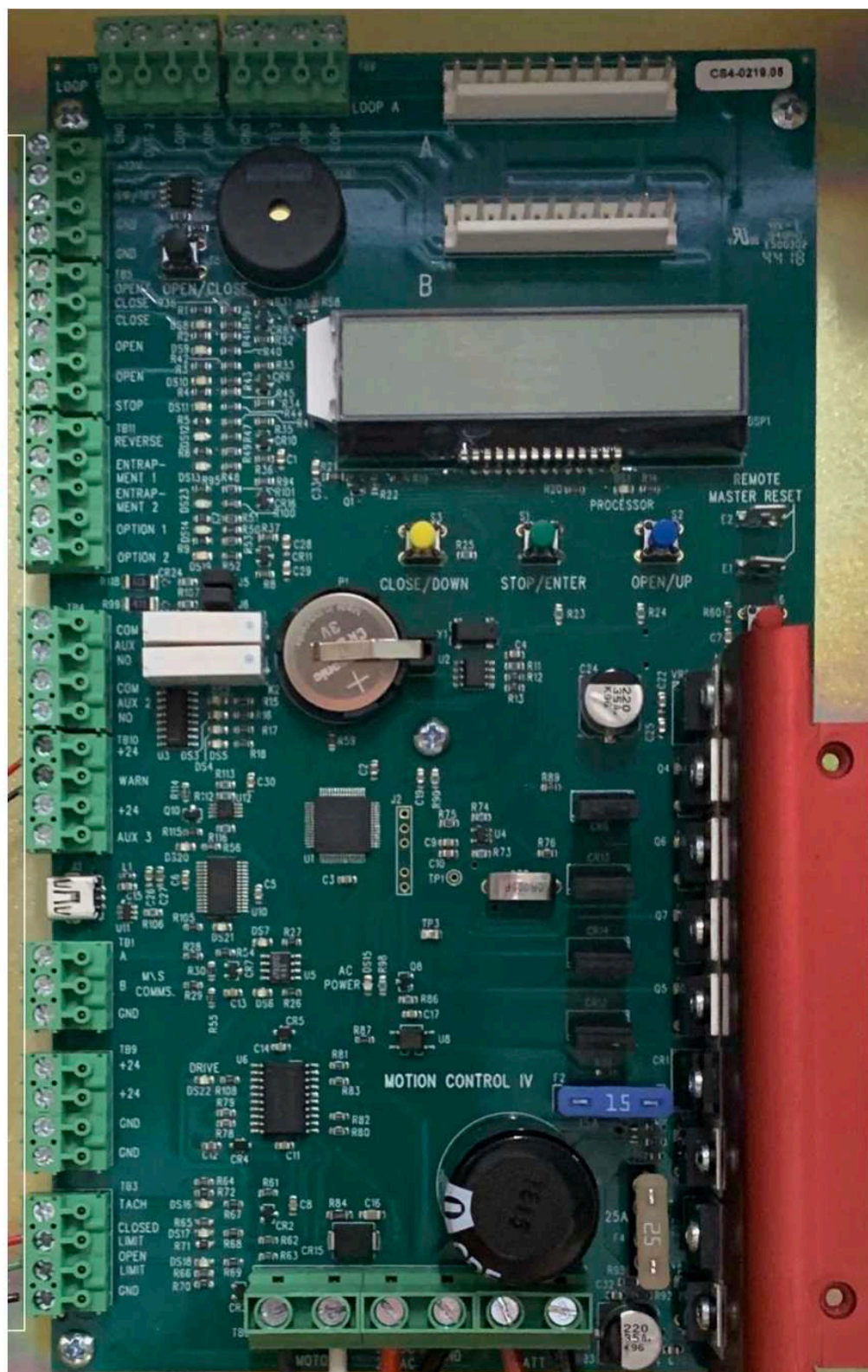
Open/Close  
Close  
Open  
Open  
Stop  
Reverse  
Entrapment1  
Entrapment2  
Option 1  
Option 2

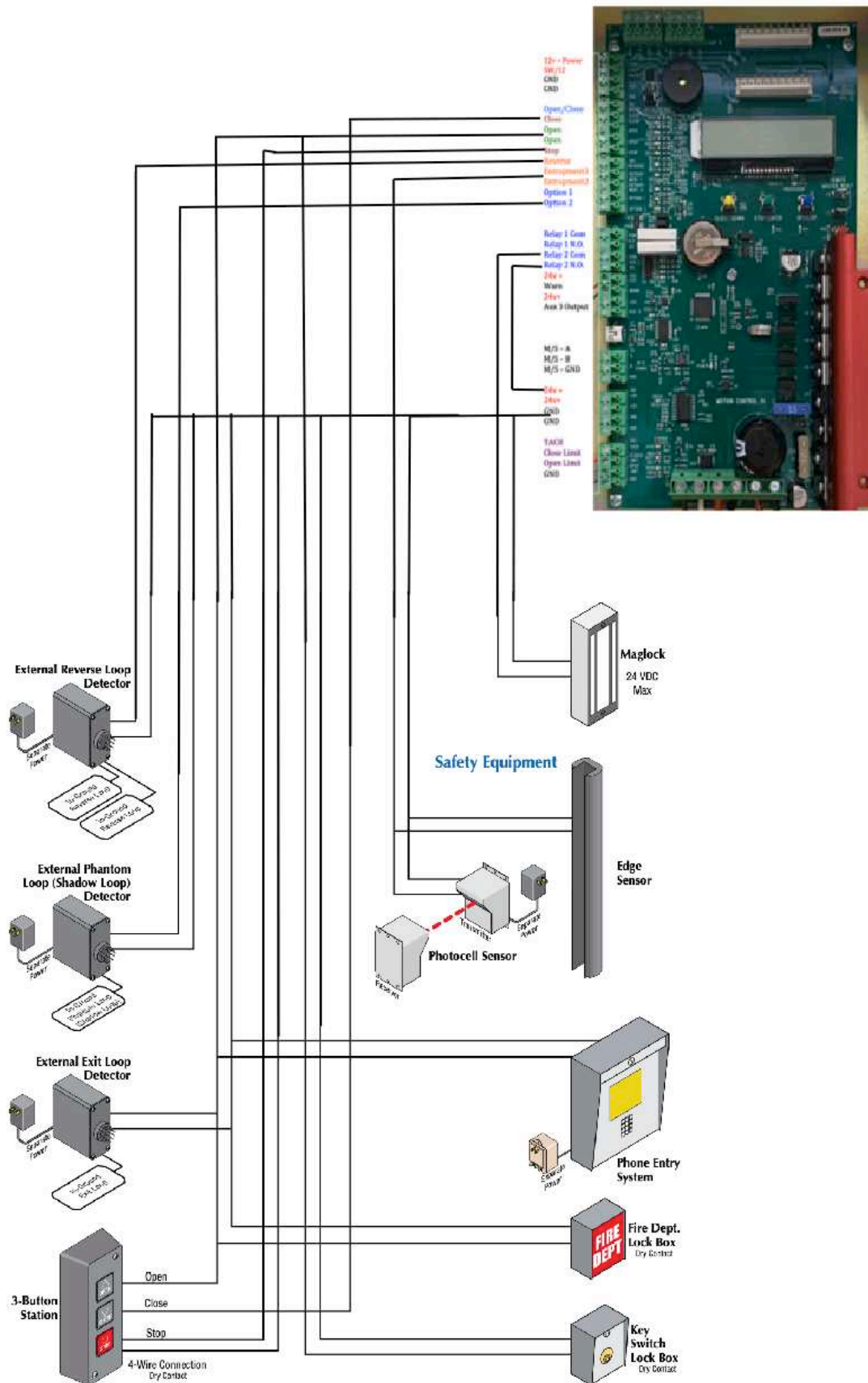
Relay 1 Com  
Relay 1 N.O.  
Relay 2 Com  
Relay 2 N.O.  
24v +  
Warn  
24v+  
Aux 3 Output

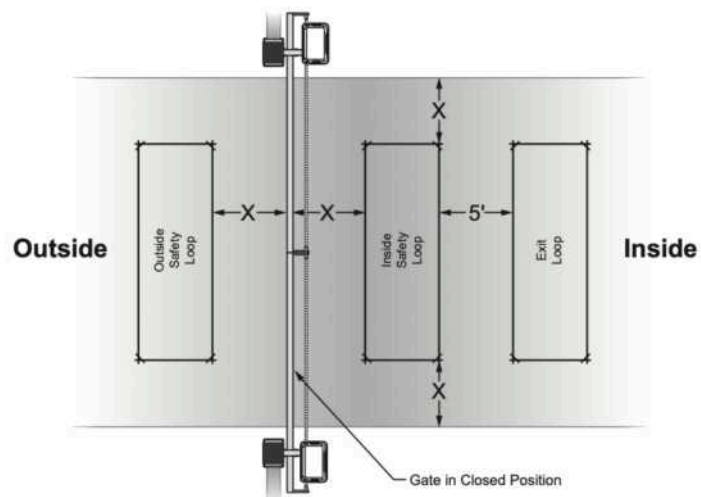
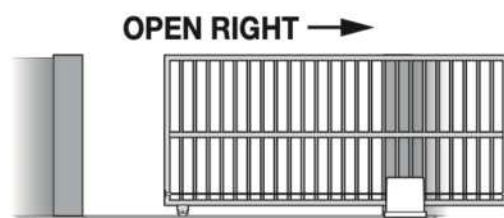
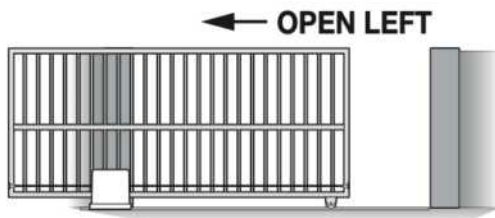
M/S - A  
M/S - B  
M/S - GND

24v +  
24v+  
GND  
GND

TACH  
Close Limit  
Open Limit  
GND







Be sure to keep the loops at least 5' from the gate

## Programming the MC4 Control Board

The following is a list of programming and available features. Please be aware that the MC4 Control Board is one of the most advanced gate operator circuit boards available and you should take care when programming and choosing desired features. Refer to this manual if a feature that you desire is needed or if any changes are necessary to be made in the menus.

The MC4 Control Board is divided into 8 menus. Using the YELLOW, GREEN, and BLUE buttons, you can navigate through the menus using the BLUE and YELLOW buttons and select an option or enter a menu by depressing the GREEN button. When changes are being made in any menus the programming “ \* “ will be displayed at the top right corner of the LCD display. The 8 menus consist of the following:

Adjust the Clock  
Adjust Time Settings  
Auxiliary Settings  
Maintenance Menu  
Motor Drive Menu  
Digi / Tach Learning  
Error and Fault Log  
Password Protected

To enter any of the menus from the Home Screen (the current Date and Time is displayed on the Home Screen), simply press the GREEN button. “Adjust the Clock” will be displayed. At this point, you have entered the menu and may navigate using BLUE and YELLOW buttons to make the adjustments that you desire. To enter a menu, navigate until the one you desired is displayed and push the GREEN button to enter. To exit a sub-menu, use the BLUE button all the way through the menu until “exit the sub-menu” is displayed and then push GREEN button. To exit the main menus, just press the YELLOW button until the Home Screen (time and date) is displayed.

### Adjust the Clock:

Adjust Date / Time

- Year =
- Month =
- Date =
- Day =
- Hour =
- Minute =

*Exit the sub-menu*



## Adjust Time Settings

- Maximum Run Timer = adjustable from 10 to 180 seconds, this timer amount represents the maximum number of seconds that the gate operator can run in one direction
- Close Delay Timer = adjustable from OFF to 4:15, this timer represents the amount of time from OFF to seconds to minutes of how long the gate waits to close from the open limit after all open and hold open inputs are removed
- Holiday Next \_\_\_\_ thru \_\_\_\_ (adjustable up to 8 days in advanced) This option is to be used to define what day of the week an upcoming holiday is (if it is desired that the gate not open with the 7-day open timer on that holiday) Just enter the first day of the holiday and the last day of the holiday.
- 7-day open timer = (Completely Off, Off to next {next on program}, On) this is the option in which the 7-day open timer could be activated

- P-1 Open @ 08:00am / Su Mo Tu We Th Fr Sa

(These P-\* options are the programmable 7 day auto open timers. You can choose the time and days that the gates automatically open and then close. There are 4 available auto open time slots. To program, adjust the desired time and then display what days you would like the timer to function. If a day is undesired, move the cursor under that day and press the programming knob to erase that day from the program. Then scroll clockwise and set the days and time for the auto close). Here is an example of the 7-day open timer:

P-1 Open: 07:00a

- 7Day Security Timer = (Completely Off, Off to next {next on program}, On)

(The security timer has 2 available time slots that can be programmed for desired days and times to allow or secure 5 inputs. The inputs that can be secured are: Open, Exit, Radio Terminal, AUX IN 1 and AUX IN 2. To program a secured input, simply program the desired time and the days to secure that input, and also when to release. Then allow the inputs by scrolling to "Secure Inputs, Allow" screen and move the cursor under a desired input. To secure that input, press the programming knob. The inputs that remain displayed will be allowed during the Secured Input timer.

P-1 Secure at 5:30p

- Secure Inputs, Allow = Open, Open/Close, Option 1 and Option 2

*{Some possible and popular uses for the security timer are as follows: a "Free Entrance" loop by day and a "Safety" loop by night; the automatic disabling of the free exit loop after work hours; a controlled output from the auxiliary relays utilizing the Aux In terminals; etc.}*

*Exit the sub-menu*

## Auxiliary Settings / Enter to View/Adjust

Option 1

- Option 1 Input Terminals

(These are available programmable inputs that can be programmed to take on the function that is selected when the Option 1 terminal is activated)

- Open
- Reverse
- Shadow
- Fire
- Close
- Photo Eye Close (stops the gate from closing but doesn't reverse the gate)
- Aux Out 1 (momentary activation of Aux 1 output relay)
- Aux Out 2 (momentary activation of Aux 2 output relay)
- Toggle Aux 1 (toggles Aux 1 output relay on/off)
- Toggle Aux 2 (toggles Aux 2 output relay on/off)
- 7-day Open Timer Off (turns off the 7-day open timer until the next open schedule)
- Hold Open (momentary contact will hold open gate and release it)

- Aux 1 Output Relay

- Aux 2 Output Relay

(These are available options for the Aux 1/2 output relays to perform if selected)

- Pulse on Open Limit (a 2 second relay activation on the open limit)
- Pulse on Close Limit (a 2 second relay activation on the close limit)
- Hold on Open Limit (latches the relay on the open limit)
- Hold on Close Limit (latches the relay on the close limit)
- Pulse on Motor Open (a 2 second relay activation when gate is opening)
- Pulse on Motor Close (a 2 second relay activation when gate is closing)
- Hold on Motor Open (latches the relay when gate is opening)
- Hold on Motor Close (latches the relay when gate is closing)
- Hold on UL-325 Alarm (latches the relay upon a UL-325 alarm)
- Aux Input Received (activates the relay when the Aux input is in use)
- AC Power Loss (activates the relay upon AC power loss detection which is measured when the gate receives less than 23.5 VDC)
- Low DC Power (activate the relay upon low DC power detection, a value of equal to or less than 75% of full power supplied)
- Thermostat Engaged (activates the relay when the thermostat is engaged)
- Maintenance Request (activates the relay upon a maintenance request)
- Hold on Motor Run (activates the relay whenever the gate is running)

- MRT Exp Limit Option =OFF, ON (This will signal a limit switch in its last direction if the Maximum Run Timer expires)

- Open/Close Terminal = Open-Stop-Close, Open Only, Partial Open
- Partial Open Timed Run = 03 Seconds (this is the programmable amount of time that the gate can run when a partial open signal is given through the Radio Terminal)
- Lock Relay – 2 seconds, 7 seconds, Full Cycle

*Exit the sub-menu*

## Maintenance Menu

- Main Power Fail = Hold Open or Normal (default is NORMAL)
- Maintenance Request in = Cycles or Days
- Maintenance Request after = \_\_ Cycles or \_\_ Days
- Current \_\_\_\_ Cycles/Days – Enter to reset (pressing the programming knob to enter will erase and reset the current maintenance count)
- Total Operator Cycle = M1 00,000,000 (this is displaying the total accumulated cycles and is non-resettable)

- Low Power Function =

Hold Open – the gate will hold open until battery is above 75% full

Normal – the gate will continue to function regardless of low power

Fire – the gate will only open from a FIRE input

- Alarm Relay = Pulsed or Continuous output

- Motion Warning Type =

3 Sec Pre-Warn – Activates the alarm relay for 3 seconds before motion

Motion Warning – Activates the alarm relay 3 seconds before motion as well as during gate motion

Off – no audible notification of gate motion

- Limit Secure = Off or On (this is fail-secure option recommended for use in the IQ-5000 only)
- Input Contacts = Momentary or Constant (affects the OPEN and CLOSE inputs) should be set on Momentary
- Activate De-Icing at Temp: 37 F = (user selectable temperature) this temperature setting is used to activate the De-Icing mode if activated. It can also be used to energize the output relays if they have been selected to activate on a temperature selection
- Motor Diagnostics Off or On (turns off or on the motor diagnostics) ([see below](#))
- Temperature Cal Display = (allows the thermostat to be calibrated accurately)

*Exit the sub-menu*

(The Motor Diagnostics option is an extraordinary feature that can allow precise adjustment of the motor maximum output force. When Motor Diagnostics are turned on, upon exiting the menus, the display will reflect the motor amperage high and voltage low in real time when the motor is running. At the end of the cycle, the highest amperage and lowest voltage that was last detected will be displayed. By using this feature, proper adjustment to the open and close force settings can be obtained. Be sure to turn the diagnostic features off when not required)

## Motor Drive Menu

- Operator Handing = Left or Right (determines the gate travel opening direction)
- Operator Type = Single (Single Operator), Master, Slave
- Open Force = user selectable amperage level from 00.1 to 20.0      Default=13.0 amps
- Close Force = user selectable amperage level from 00.1 to 20.0      Default=13.0 amps
- Force Delay= **0.5 (recommended)** this is the selectable time from .5 seconds up to 2 seconds in which the amperage may be reached or exceeded before the gate reverses due to a motor open or close force alarm
- Max Speed = user selectable maximum motor speed from 10% to 100%
- Min Speed = user selectable minimum motor speed from 10% to 90%
- Open Delay = sets the desired open delay from 0.0 seconds to 5.0 seconds
- Close Delay = sets the desired close delay from 0.0 seconds to 5.0 seconds
- Acceleration Step Size = sets the rate of motor acceleration- the higher the rate, the faster the ramp up to the maximum set speed
- Deceleration Step Size = sets the rate of motor deceleration- the higher the rate, the faster the ramp down to the minimum set speed

*Exit the sub-menu*

## Digi / Tach Learning – Enter if Applicable

(This is the menu that will allow you set the value of the soft stop in a percentage value.

- Close limit is \_\_\_\_ counts
- Open Limit is \_\_\_\_ counts
- Open Slow Down at \_\_\_\_% (this is the percent of gate travel that the soft stop would begin) [default is 86%]
- Close Slow Down at \_\_\_\_% (this is the percent of gate travel that the soft stop would begin) [default is 86%]

*Exit the sub-menu*

## Error and Fault Log – Press Enter to View

Error and Fault Log

This menu will display the recent faults, errors, or important notifications as well as the time and date that they occurred and what the recorded temperature was at that time. You may navigate back through the log using the YELLOW button and view the events as they occurred with the date and time displayed. To *exit the sub-menu*, just press the GREEN button.



## Troubleshooting Guide

[www.ig gatesystems.com](http://www.ig gatesystems.com)

1-801-455-7961

Because of the LCD display, LED terminal identifiers, and the on-screen messages, troubleshooting the MC4 Control Board is very easy if there is ever a problem that is encountered. Some of the on-screen messages that might be displayed are as followed:

This list consists of Displayed Actions. The highlighted ones will also be logged in the Fault/Error menu.

Close Timer On	UL-325 Alarm	Check Motor
Open Detected	UL-325 Reset	Setup Change
Stop Detected	Mon. Edge Detected	Max Run Expired
Open/Close Detected	FIRE Input	Low DC Power
Reverse Detected	Maint. Request	AC Power Lost
Option 1/2 Input Term	Close Force Close Force Exceeded	Open Force Open Force Exceeded
Loop B > 3min Active more then 3	ENCODER err	Close Detected
Loop A > 3min Active more then 3	Check Batt Fuse	Secured Input Secured Timer input
Open Limit	Close Lim Secure Close Limit Secured	Option 1 / 2 > 3min Active more then 3
Close Limit	Open Lim Secure Open Limit Secured	

## LED Indicators

### MC4 Control Board:

- DS 8 – OPEN/CLOSE =(GREEN)
- DS 9 – CLOSE =(GREEN)
- DS 10 – OPEN (2 terminals) =(GREEN)
- DS 11 – STOP =(GREEN)
- DS 12 – Reverse =(RED)
- DS 13 – Entrapment 1 =(RED)
- DS 23 – Entrapment 2 =(RED)
- DS 14 – Option 1 =(GREEN)
- DS 19 – Option 2 =(GREEN)
- DS 2 – Aux 1 =(YELLOW)
- DS 3 – Aux 2 =(YELLOW)
- DS 4 – WARN =(YELLOW)
- DS 5 – Aux 3 =(YELLOW)
- DS 20 – PC/GUI Comm
- DS 21 – PC/GUI Comm
- DS 7 – M/S Comm
- DS 6 – M/S Comm
- DS 22 – DRIVE (Motor activity status) =(GREEN)
- DS 16 – TACH =(YELLOW)
- DS 17 – CLOSE Limit =(RED)
- DS 18– OPEN Limit =(GREEN)
- DS 15 – AC/DC Supply POWER =(GREEN)
- DS 1 – Processor =(GREEN)

Every 6 months to 1 year, a qualified service technician should inspect, test, and adjust the inherent safety sensor as well as the batteries, belts, chains, and grease the bearings. Also, all bolts and nuts should be tightened and checked for wear. All external accessories should also be tested for proper operation and wiring compliance.

Problem	Possible Cause	Solution
Gate Won't Open		Check the Display and all LED's
	The input that is being used to open gate is being secured by the security timer	Check if security timer is active and what inputs are being secured.
	Open limit tripped/active	Verify limit position / reset limit
	Low Power – set on FIRE Option	Check battery voltage and F4 Fuse
	Stop command active	Remove stop signal / input
	Close command active	Remove close signal / input
	Abort command active (Option 1 or Option 2)	Remove abort signal / input
	Monitored Photoeye Open or Edge command active	Check Open Photoeye or edge for activation/failure
	Blown Battery Fuse	Check both board fuses
	Over Current on Accessory Output Power	Check and remove shorts or over voltages
	Gate is in UL325 entrapment	Survey the area surrounding the gate – when clear, activate the Master Reset button / terminal
	No Power	Check for any indication of power supplied
	Encoder Failure	Operate gate and view the “blinking” output from the Tach input
	Option 1 or 2 active	Verify Option 1 and Option 2 settings and remove contact
	Force Delay set to low	Increase force delay time to at least 0.5 seconds
	Comm. lost to other operator board	Verify communication via the M/S LED's and the MC4 Display

Gate Won't Close		Check the Display and all LED's
	Low Power	Check the Battery voltage and low power function setting. Check F4 Fuse
	7-day timer hold open	Check if the 7-day timer is on and if the program time is active
	Close timer not on / active	Check the close timer setting
	Open loop detector	Check for a vehicle present, reset loop detector, check the loop integrity
	Reverse loop detector	Check for a vehicle present, reset loop detector, check the loop integrity
	Shadow loop detector	Check for a vehicle present, reset loop detector, check the loop integrity
	Open input active	Remove contact from input
	Stop input active	Remove contact from input
	Fire input active	Remove contact from input and press the master reset button
	Tach/Encoder Failure	Check the LED of the Tach input terminal as well as the Tach Count at the bottom right of the LCD. Verify that the count is incrementing during motor action
	Gate is in UL Entrapment	Survey the area surrounding the gate – when clear, activate the Master Reset button / terminal
	Blown Fuse	Check both board fuses
	Comm. lost to other operator board	Verify communication via the M/S LED's and the MC4 Display
	Over Current on Accessory Output Power	Check and remove shorts or over voltages

Monitored Photoeye Close or Edge command active

Check Close Photoeye or edge for activation/failure

Option 1 or 2 active

Verify Option 1 and Option 2 settings and remove contact

Force Delay set to low

Increase force delay time to at least 0.5 seconds

<p>Gate reverses when closing</p>	<p>Check all of the above causes</p> <p>Check the Error and Fault Log</p>	<p>Check the Display and all LED's</p> <p>Check all of the above solutions</p>
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ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	X-6-BP	X-6 BACK PLATE	1
2	BISON MOTOR - G5-1		1
3	X-6-FP	X-6 FRONT PLATE	1
4	BSO-032-16		4
5	SL-G5-EB	ELECTRONICS BOX	1
6	FH-0420-10		2
7	XY-6 BAT BRKT		1
8	X-6 MLB		1

