

myQ® Business™

# Connected Access Portal - High Capacity

## INSTALLATION MANUAL

Models CAPXL / CAPXLV



**LiftMaster®**

# Safety

## Safety Symbol and Signal Word Review

When you see these Safety Symbols and Signal Words on the following pages, they will alert you to the possibility of serious injury or death if you do not comply with the warnings that accompany them. The hazard may come from something mechanical or from electric shock. Read the warnings carefully.

When you see this Signal Word on the following pages, it will alert you to the possibility of damage to your property or product if you do not comply with the cautionary statements that accompany it. Read them carefully.

 **WARNING**

MECHANICAL

 **WARNING**

ELECTRICAL

 **CAUTION**

  **WARNING**

To reduce the risk of SEVERE INJURY or DEATH:

- Disconnect power at the fuse box BEFORE proceeding.
- To AVOID damaging gas, power or other underground utility lines, contact underground utility locating companies BEFORE digging.
- ALL electrical connections MUST be made by a qualified individual.
- ALL power and control wiring MUST be run in separate conduit.

To protect against fire and electrocution:

- Disconnect power BEFORE installing or servicing CAPXL / CAPXLV.
- NEVER connect a keypad/reader or lock to doors without first consulting the applicable fire code.
- You MUST consult with, and get approval from, local fire officials BEFORE installing locks or devices on ANY doors that may be fire exits.
- Use of egress push buttons may not be legal. Single action exits may be required.
- ALWAYS obtain proper permits and approvals in writing BEFORE installing equipment.

 **WARNING:** This product can expose you to chemicals including lead, which are known to the State of California to cause cancer or birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

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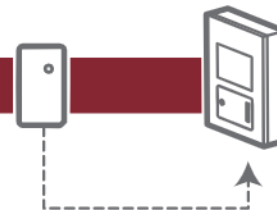
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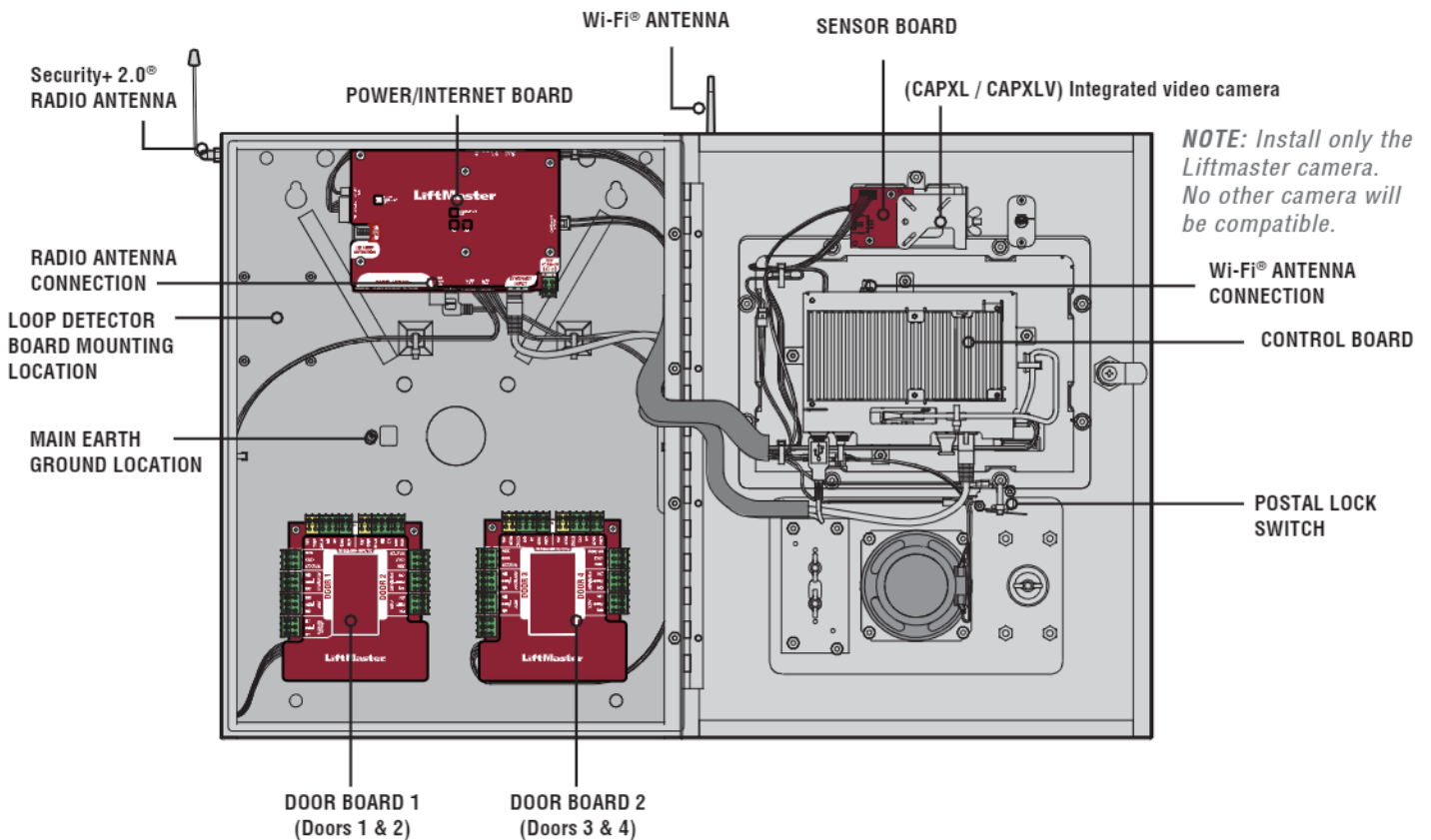
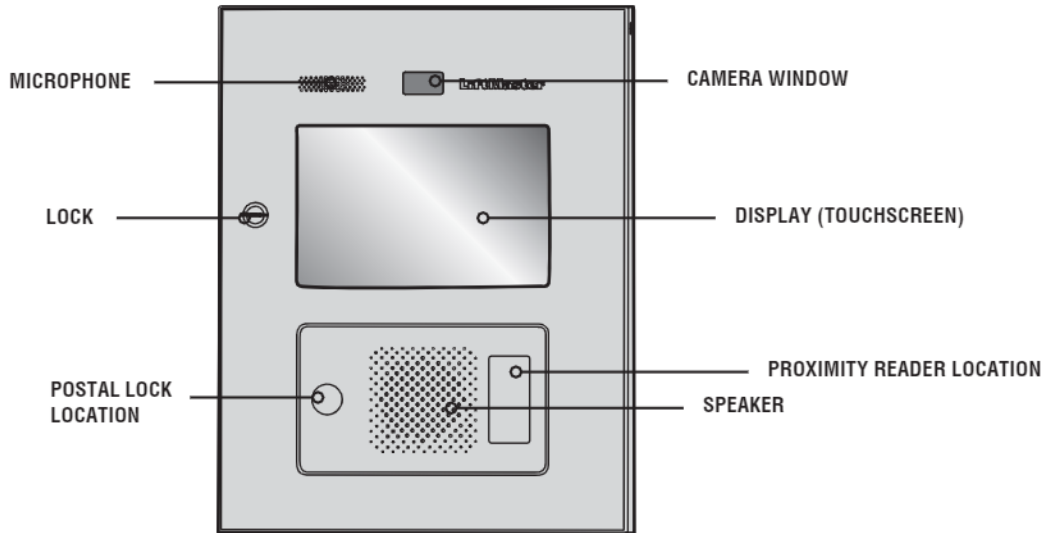
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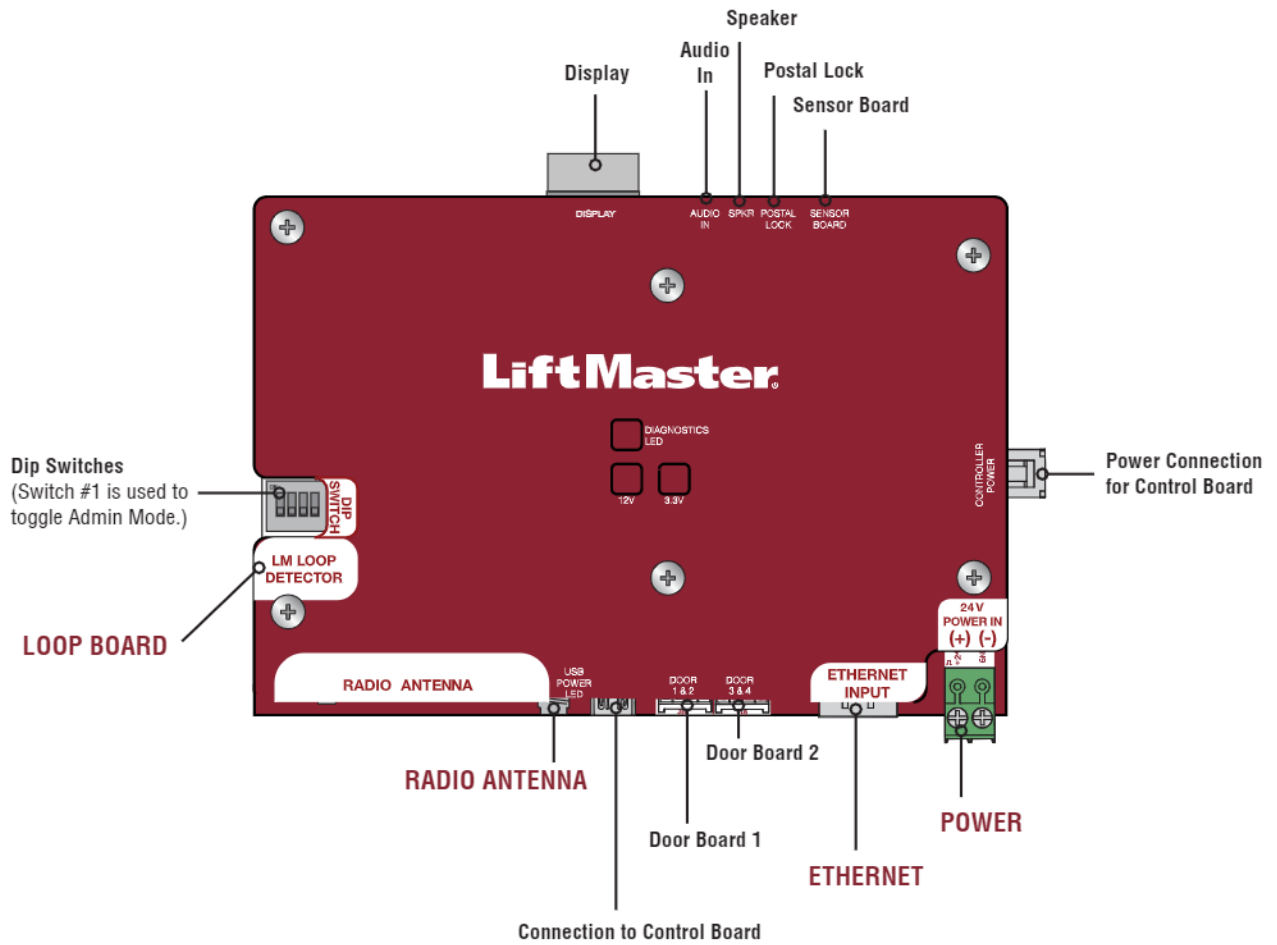


## CAPXL / CAPXLV Overview

CAPXL/CAPXLV are cloud based access control solutions for residential communities. CAPXLV includes an integrated video camera enabling advanced video features.

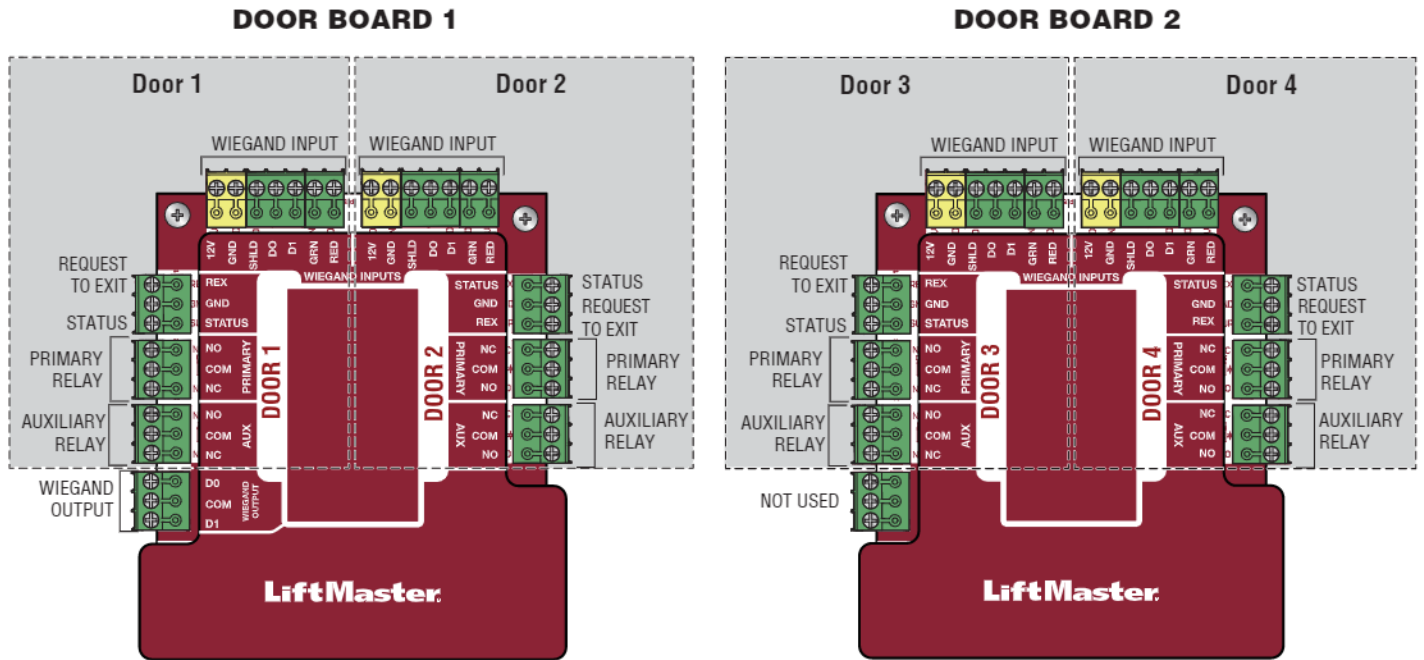


# Power/Internet Board Overview



## Door Board Overview

The CAPXL / CAPXLV has a combination of access control inputs/outputs on the Door Boards that work in conjunction to control up to 4 access points.



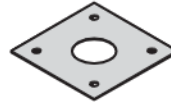
INPUT/OUTPUT	USED FOR
Wiegand Input	Proximity Readers, ASCII keypads, RFID readers transmitting 26-bit *30-bit, *32-bit Mifare, *and *37 bit with or without facility code. (12 Vdc Power for readers only. Do not use to power external devices)
Request to Exit	External Free Exit Loop Detectors, Push Buttons, and Proximity Sensors
Status	Door Sensors, Supervised Gate Operators, and EOL (End of Line) Wiring
Primary Relay	Closed Door Sensor, Closed Gate Sensor, Supervised with EOL (End of Line) or unsupervised Gate Operators, Door Strikes, and Maglocks
Auxiliary Relay	Gate Operator, Door Strikes, Alarm Shunt, Maglocks and Lights (for control only - power to be provided by external supply)
Wiegand Output	26 Bit Access Granted Activity for integration with third party systems

**\*NOTE:** Only the 26-bit weigand protocol is compatible in UL installations.

## Carton Inventory



Power Supply



Goose-neck Gasket



Radio Antenna (Security+ 2.0®) and Cable

S10K30MOV  
(Metal Oxide Varistor)(4)

Keys (2)



Ferrite Core



1N4005 Diode Kit (4)



Wi-Fi® Antenna and Cable

### PROVIDED (NOT SHOWN)

- Installation Manual
- Quickstart Guide

## Tools Needed

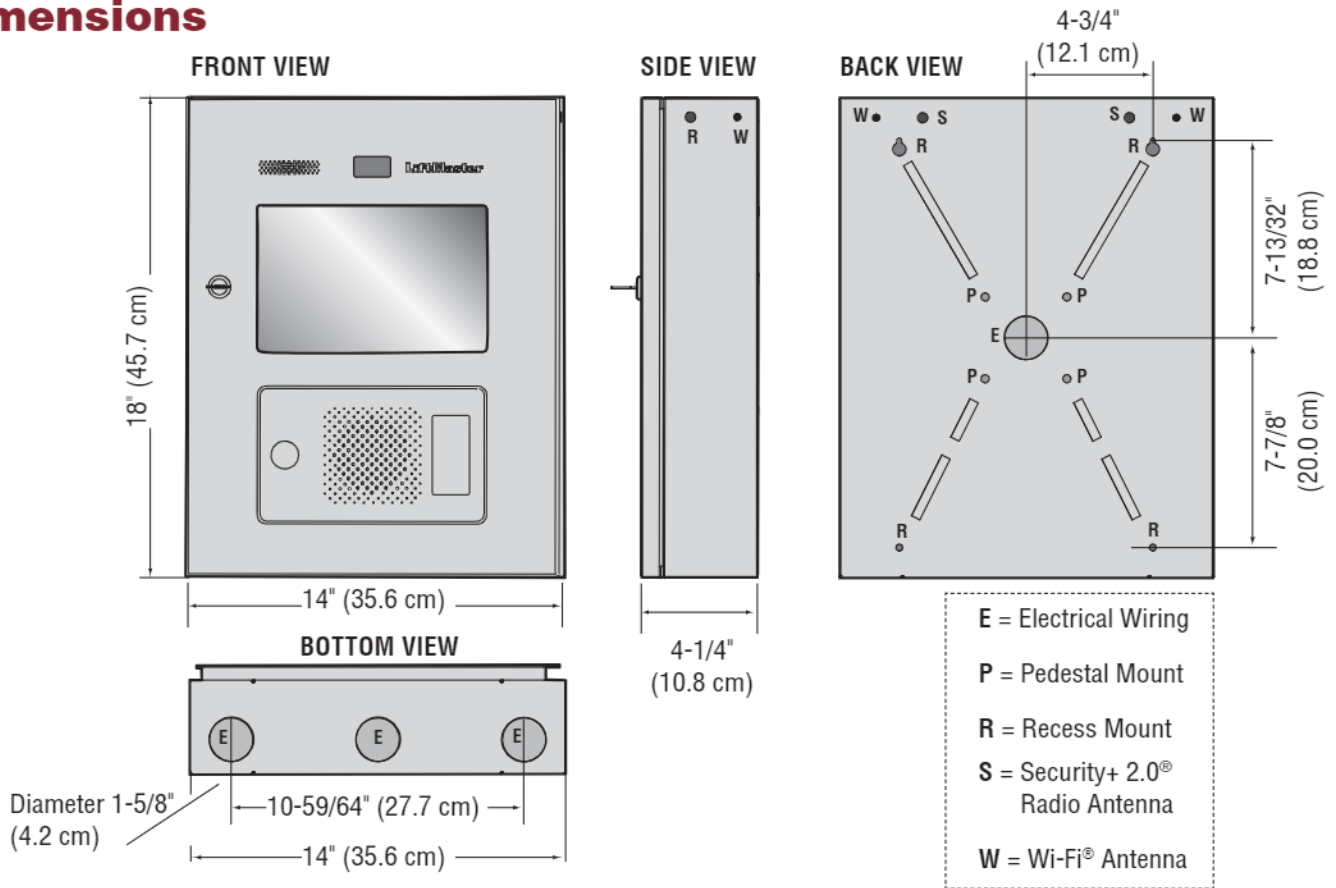
- PH2 Phillips Screwdriver
- Precision 1/8" Flat or PH0 Phillips Screwdriver
- 1/4" Nut Driver
- Drill/Driver
- 7/64" Drill Bit
- Hammer Drill Bits for Drill/Driver
- RJ45 Crimping Pliers
- Multimeter
- Measuring tape
- Conduit Bender
- Conduit Cutter/Reamer
- Hack Saw
- Center Punch Tool
- Hammer

## Additional Tools Recommended

- Network LAN Cable Tester
- Wi-fi Analyzer App (smart phone app)
- Network Analyzer software



## Dimensions



## Specifications

CAPXL / CAPXLV Capacity	Resident Capacity 50,000 / Local Event History 50,000
Supply Voltage	24VDC, 60W (minimum), Class 2 Output, Level VI Efficiency, (Power Supply 100-240VAC, 2A, 50/60Hz)
Operating Current	1.25 Amps - Without Accessories
Surge Suppression	EFT: 2 kV Power Line, ESD: 15 kV HBM / 8 kV Direct / 200V MM
CAPXL / CAPXLV Operating Temperature Range	- 29°C to 54°C (-20°F to 130°F)
Enclosure	Stainless Steel
Storage and Shipping Temperature Range	-40°C To 65°C (-40°F to 149°F)
Wiegand Inputs (4)	26-bit, *30-bit, *32-bit Mifare, *37-bit with and without facility code, and ASCII (for keypads). 12VDC, 250mA power output (per input).
4 Primary and 4 Auxiliary Relay Outputs	SPDT, Rated Load 3A at 30VDC (each)
Accessory Compatibility	Refer to the accessory page for compatible accessories
Network Compatibility	10/100/1,000 Ethernet
Wi-Fi® Compatibility	802.11 a/b/g/n and 802.11 ac 2.4 GHz
Wi-Fi® Security	CAPXL / CAPXLV is compatible with routers using the following security protocols: WPA2-PSK, (AES) (Recommended), WPA2-PSK (TKIP) (Recommended), WPA2 Personal (Recommended), WPA-PSK (AES), and WPA-PSK (TKIP). CAPXL / CAPXLV is NOT compatible with routers using the following security protocols; WPA2 Enterprise, WEP, Open (No password or encryption)
Wi-Fi® Range	Up to 500 feet (152.4 m), Open Air/Line-of-Sight (range will vary depending on obstructions)
Built-in LiftMaster Passport Receiver	Security+ 2.0®
Wireless Communication to Gate Operator	Up to 750 feet (228.6 m), Open Air/Line-of-Sight (range will vary depending on obstructions), Compatible with LiftMaster Security+ 2.0® gate operators
CAPXLV Video Camera	1080p, Viewing angle - 135 degree diagonal

**\*NOTE:** Only the 26-bit weigand protocol is compatible in UL installations. Wi-Fi® and wireless ranges were not evaluated by UL.



## Wire Specifications

Use this chart to pull wires in preparation of your installation. Check the national and local building codes **BEFORE** installation.

DESCRIPTION OF WIRE RUN	WIRE SPECIFICATION	MAXIMUM RUN DISTANCE
Power Wire, secondary DC output	2-Conductor 14 AWG	Up to 300 feet (91.4 m)
	2-Conductor 16 AWG	Up to 200 feet (60.9 m)
	2-Conductor 18 AWG	Up to 100 feet (30.4 m)
Local Area Network (LAN) CAT 5 or better Network Cable. CAT 5e and higher is preferred for video.	8-Conductor, 24 AWG Twisted pair	328 feet* (100 m)
Grounding the Chassis (use grounding lug in CAPXL / CAPXLV)	12 AWG Copper	12 feet (3.7 m)
Door Strike	2-Conductor 18-22 AWG Shielded	100 - 250 feet (30.5 - 76.2 m)
Magnetic Lock	2-Conductor 18-22 AWG	50 - 125 feet (15.2 - 38.1 m)
Dry Contact Closure (Most Gate Operators)	2-Conductor 18-24 AWG Shielded	500 - 2500 feet (152.4 - 762 m)
Exit Request (REX)	2-Conductor 18-24 AWG	500 feet (152.4 m)
Supervised Input	2-Conductor 18-24 AWG	500 feet (152.4 m)
Wiegand/Proximity Readers	7-Conductor 18-22 AWG Shielded	500 feet (152.4 m)
Postal Lock Box	2-Conductor 18-24 AWG	250 - 1000 feet (76.2 - 304.8 m)

**NOTE:** Main power supply and control wiring **MUST** be run in separate conduits. Conduits must be UL approved for low and high voltage. Refer to the NEC for additional wiring requirements.

Category 5 cabling is the minimum performance category recommended.

Wiring shall be in accordance with the National Electrical Code (ANSI/NFPA 70), local codes and authorities having jurisdiction.

Always provide power from a dedicated source. Plug provided transformer into an outlet wired to its own 10 Amp minimum circuit breaker. This will prevent two problems:

- Other equipment cannot introduce spikes, noise, surges or dips into the power circuit that will affect the system.
- The system's operation will not be affected if any other equipment develops a short circuit across the power line.

**\* CAT 5/6 NETWORK CABLE NOTES:**

- For outdoor distances exceeding 140 feet (42.7 m), a UL497 compliant primary surge protector **MUST** be installed at the CAPXL / CAPXLV.
- Distances exceeding 328 feet (100 m) may be accommodated with additional hardware (available through third-party sources).

## Internet Requirements

When selecting a router, use the information below to ensure compatibility.

**MODEL:** CAPXL / CAPXLV – Connected Access Portal, High Capacity

CAPXL/CAPXLV can be connected to a router via a wired connection or Wi-Fi. LiftMaster recommends an Internet speed of 25Mbps (Mbits per second) download, 10Mbps upload for best video performance (minimum 10Mbps download speed, 5Mbps upload speed for each CAPXL supporting video camera feeds).

**NOTE:** These upload/download speeds should be met when considering usage of other devices on the network like cameras and computers.

### CAPXL / CAPXLV IS COMPATIBLE WITH ROUTERS USING THE FOLLOWING Wi-Fi COMMUNICATION PROTOCOLS:

- 802.11a
- 802.11b
- 802.11g
- 802.11n

### CAPXL / CAPXLV WI-FI SECURITY COMPATIBILITY

#### COMPATIBLE

- WPA2-PSK (AES) (Recommended)
- WPA2-PSK (TKIP) (Recommended)
- WPA2 Personal (Recommended)
- WPA-PSK (AES)
- WPA-PSK (TKIP)

#### NOT COMPATIBLE

- WPA2 Enterprise
- WEP
- Open (No password or encryption)

### ADDITIONAL COMPATIBILITY CONSIDERATIONS:

- Don't use Wi-Fi extender devices. These may introduce latency in the connection leading to choppy or loss of reliable video transmission.
- If using a Wi-Fi signal strength tool or app, a continuous Wi-Fi signal strength connection of at least -65 DBM (numbers closer to zero are stronger strength) at the CAPXL / CAPXLV must be guaranteed to ensure an acceptable connection to the local network.
- Hidden network SSID's are not supported. The network must be selectable from the CAPXL / CAPXLV display.
- Wi-Fi networks requiring secondary authentication are not supported (E.g. Hotels and airport Wi-Fi).
- When checking signal strength in CAPXL / CAPXLV admin mode, we recommend at least two bars two bars, as shown on the CAPXL screen.
- If two bars are not available, relocate the router, the antenna or use accessory WFAEXT (Wi-Fi Antenna Extension Kit – 15') to move the CAPXL / CAPXLV antenna higher up or to a location resulting in two or more bars.

The following services are required for CAPXL / CAPXLV to fully function

# 1 Setup a myQ® Business™ Account



**NOTE:** If you have an existing myQ® account, your myQ® Business™ account will have the same password. Go to: [myQBusiness.com](http://myQBusiness.com) and login.

1. If you do not have a myQ® Business™ account, call LiftMaster Customer Care at 800.323.2276 to activate a myQ® Business™ account.
2. You will get a welcome email from LiftMaster. Accept the invitation and register or login to your account.
3. Setup the facility, select a subscription plan, add residents, and credentials (refer to the available Help in myQ® Business™).
4. Continue with the installation of the CAPXL / CAPXLV in this manual.

# 2 Internet Service

CAPXL / CAPXLV MUST be configured with the proper network settings to operate.

## NETWORK

Internet service provider: \_\_\_\_\_

## WIRELESS

Wi-Fi® Network Name: \_\_\_\_\_

Wi-Fi® Password: \_\_\_\_\_

## WIRED

Automatic IP addressing: DHCP (preferred setting)

OR

Static IP Addressing: (**NOTE:** Write down the following for future reference: IP, Netmask, Gateway, Primary, Secondary, Server Port)

# 3 Phone Service

A subscription with Phone.com, a SIP provider, is required to make video calls. Sign up through myQ® Business™ after a CAPXL / CAPXLV is added to a Facility. For all other type of phone calls, LiftMaster does not guarantee and support calling performance if using an alternate SIP provider. If another SIP provider is being used, the following information will be required:

- SIP Username \_\_\_\_\_
- SIP Password \_\_\_\_\_
- SIP Domain \_\_\_\_\_
- Server Port \_\_\_\_\_
- Outbound Proxy (Opt.) \_\_\_\_\_
- SIP Authorization ID (Opt.) \_\_\_\_\_
- Stun Server (Opt.) \_\_\_\_\_

### Does customer already have a phone.com account?

If yes, Phone.com account email address: \_\_\_\_\_

If yes, phone.com account password: \_\_\_\_\_

### If customer does not have a phone.com account.

Use the portal on the CAPXL / CAPXLV screen to register a new account.

**CP# for CAPXL / CAPXLV (TE2-XX-XXXX):** \_\_\_\_\_

(Located on the CP label on top of the Control Board bracket and on the display when powered up)

# 1 Remove Knockouts

1. Turn the key clockwise to unlock the CAPXL / CAPXLV.
2. Open the door and lay the CAPXL / CAPXLV face down on a table with the door hanging off the edge of the table as shown.
3. Identify which knockouts need to be removed based on your application.
4. Use a center punch tool to remove the knockouts from the outside of the box inward using an appropriately sized punch and hammer. **NOTE:** *Be careful when removing the knockouts to avoid damaging the CAPXL / CAPXLV components.*

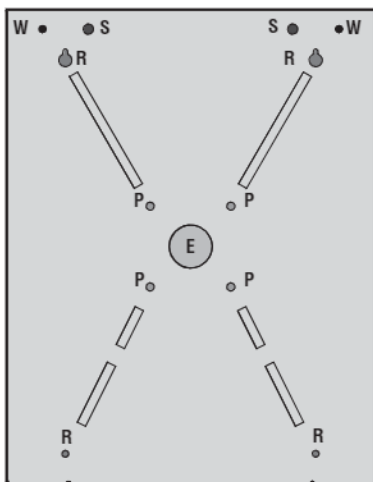
## ! CAUTION

To prevent damage to the CAPXL / CAPXLV from moisture or water:

- DO NOT install during rain. Internal components MUST be kept free from of water and moisture.
- BEFORE opening the front cover of the CAPXL / CAPXLV, remove ANY accumulated water from the top of the CAPXL / CAPXLV.

To prevent damage to ANY internal components:

- DO NOT attempt to remove the knockouts with a hammer. Banging on the knockouts may result in shock to the circuit boards, which could cause permanent damage.



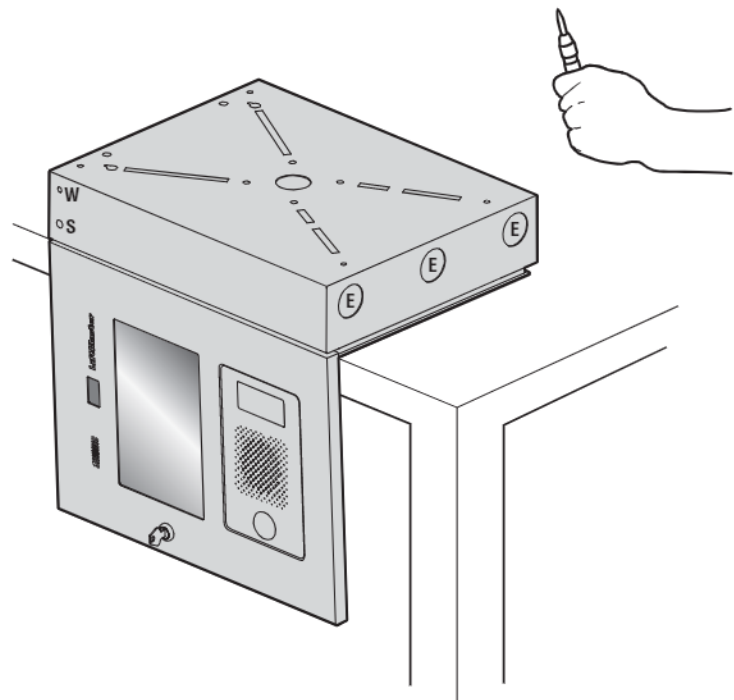
E = Electrical Wiring

P = Pedestal Mount

R = Recess Mount

S = Security+ 2.0®  
Radio Antenna

W = Wi-Fi® Antenna



## 2 Mount CAPXL / CAPXLV

1. Attach the goose-neck gasket (provided) if mounting to a goose-neck.
2. Mount the CAPXL / CAPXLV securely to a flat surface or pedestal with appropriate hardware taking care to route wiring through appropriate knockouts. Stainless steel hardware is recommended to mount the CAPXL / CAPXLV. Use of zinc plated or galvanized hardware is at risk for galvanic corrosion.

### NOTES:

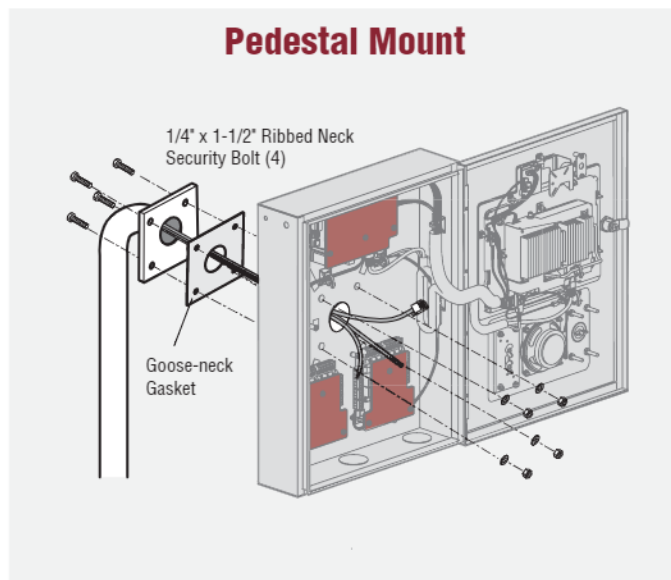
-Ensure the cover can fully open to allow access after the installation is complete.

-ADA Compliance: When mounting the CAPXL / CAPXLV at a pedestrian entrance, to meet ADA compliance, mount the top of the CAPXL / CAPXLV screen no higher than 54 inches from the ground.

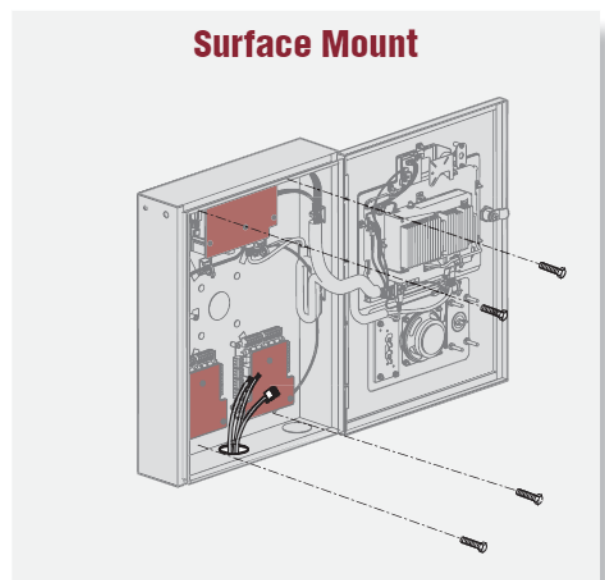
### DO

Make sure the CAPXL / CAPXLV is properly sealed to prevent damage to the CAPXL / CAPXLV from moisture.

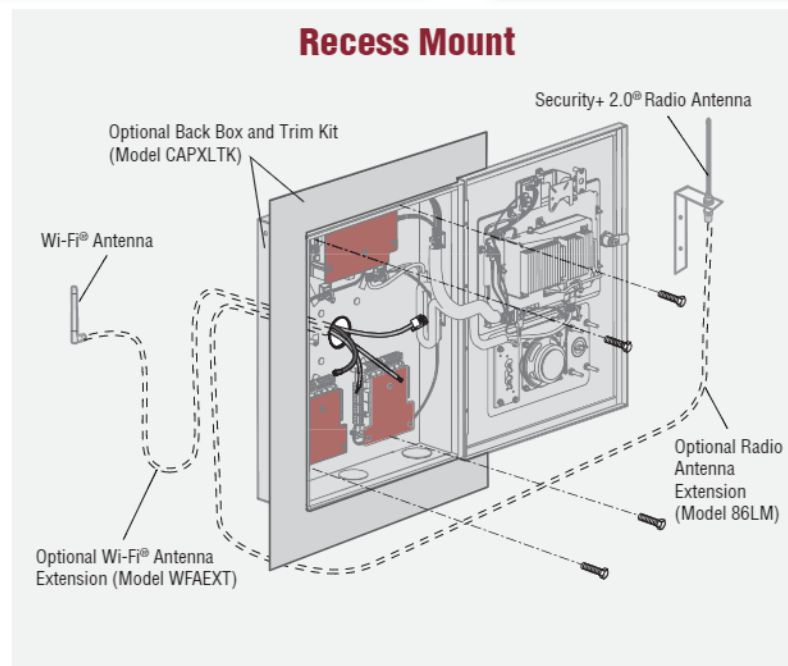
### Pedestal Mount



### Surface Mount



### Recess Mount





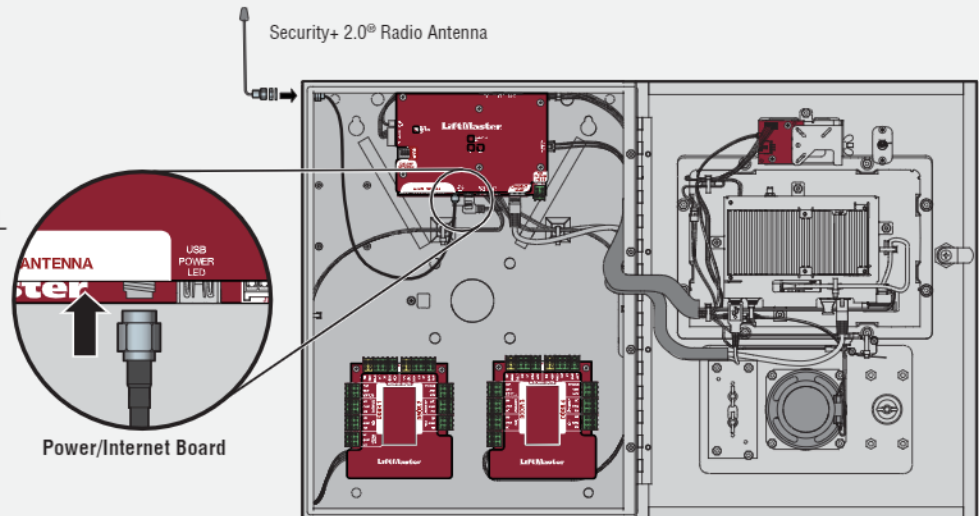
# 3 Install Antennas

The Security+ 2.0® radio antenna and Wi-Fi® antennas must be a minimum of 8 inches (20 cm) apart. Install the antennas on opposite sides of the CAPXL / CAPXLV. Optional antenna cable kits are available for remote antenna mounting (refer to accessories).

## Security+ 2.0® Radio Antenna (If applicable)

Used with LiftMaster Passport Security+ 2.0® and wireless communication with LiftMaster UL325 2016 compliant gate operators.

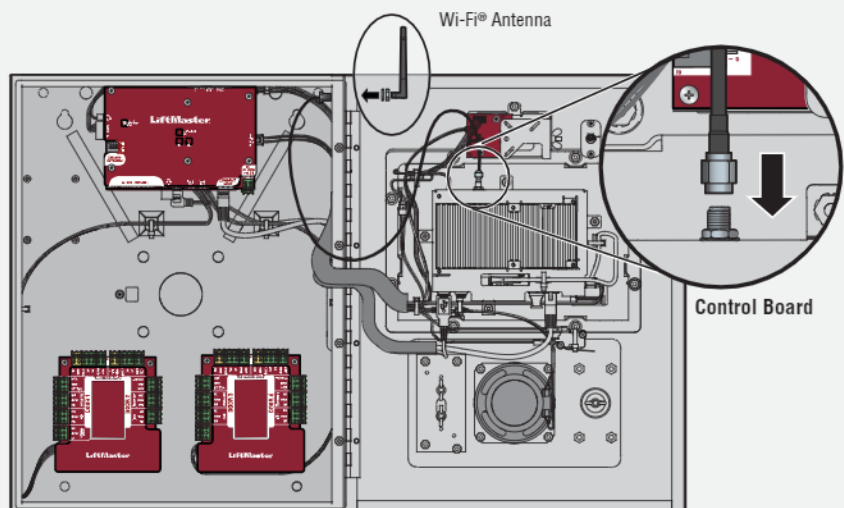
1. Remove 3/8" knockout on the side or back of the CAPXL / CAPXLV.
2. Secure the radio antenna to the desired knockout on the CAPXL / CAPXLV.
3. Connect the radio antenna cable to the Power/Internet Board as shown.



## Wi-Fi® Antenna (If applicable)

Used for Wi-Fi® Internet.

1. Remove 1/4" knockout on the side or back of the module.
2. Secure the Wi-Fi® antenna to the desired knockout on the CAPXL / CAPXLV with the provided gasket, washer, and nut.
3. Connect the Wi-Fi® antenna cable to the control board as shown.



# 4 Install the Ground

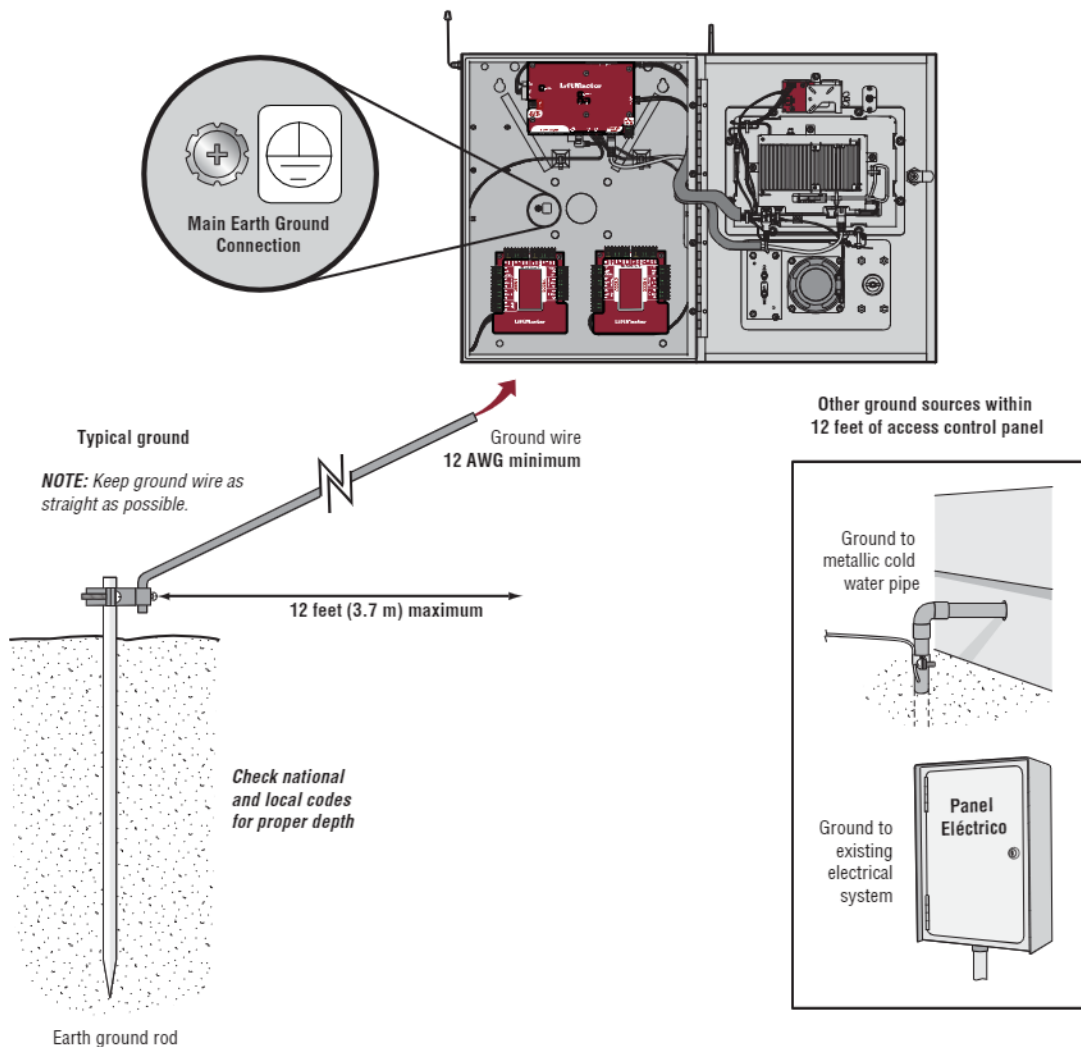
**IMPORTANT:** An earth ground rod is strongly recommended and should be no further than 12 feet (3.7 m) from the CAPXL / CAPXLV and use a minimum of 12 gauge wire in most cases. The type and length of earth ground rods vary by region. Contact the AHJ (Authority Having Jurisdiction) in the municipality where you plan to install the CAPXL / CAPXLV for correct grounding materials and installation procedures. A proper ground is critical to minimizing risk for the CAPXL / CAPXLV from damaging electrical transients.

1. Connect the ground wire (12 AWG or larger) to the CAPXL / CAPXLV main earth ground connection.
2. Run the wire from the CAPXL / CAPXLV to suitable earth ground.

**NOTE:** Shield connections on boards should not be connected to main earth ground connection.

## CAUTION

To AVOID damaging gas, power or other underground utility lines, contact underground utility locating companies BEFORE digging.





# 5 Connect Power

The outlet for the CAPXL / CAPXLV MUST be an external dedicated 120 Vac outlet. Refer to the table below for maximum wire run distances. This outlet should be wired back to its own 10 Amp minimum circuit breaker.

WIRE SPECIFICATION	MAXIMUM RUN DISTANCE
14 AWG	Up to 300 feet (91.4 m)
16 AWG	Up to 200 feet (60.9 m)
18 AWG	Up to 100 feet (30.4 m)

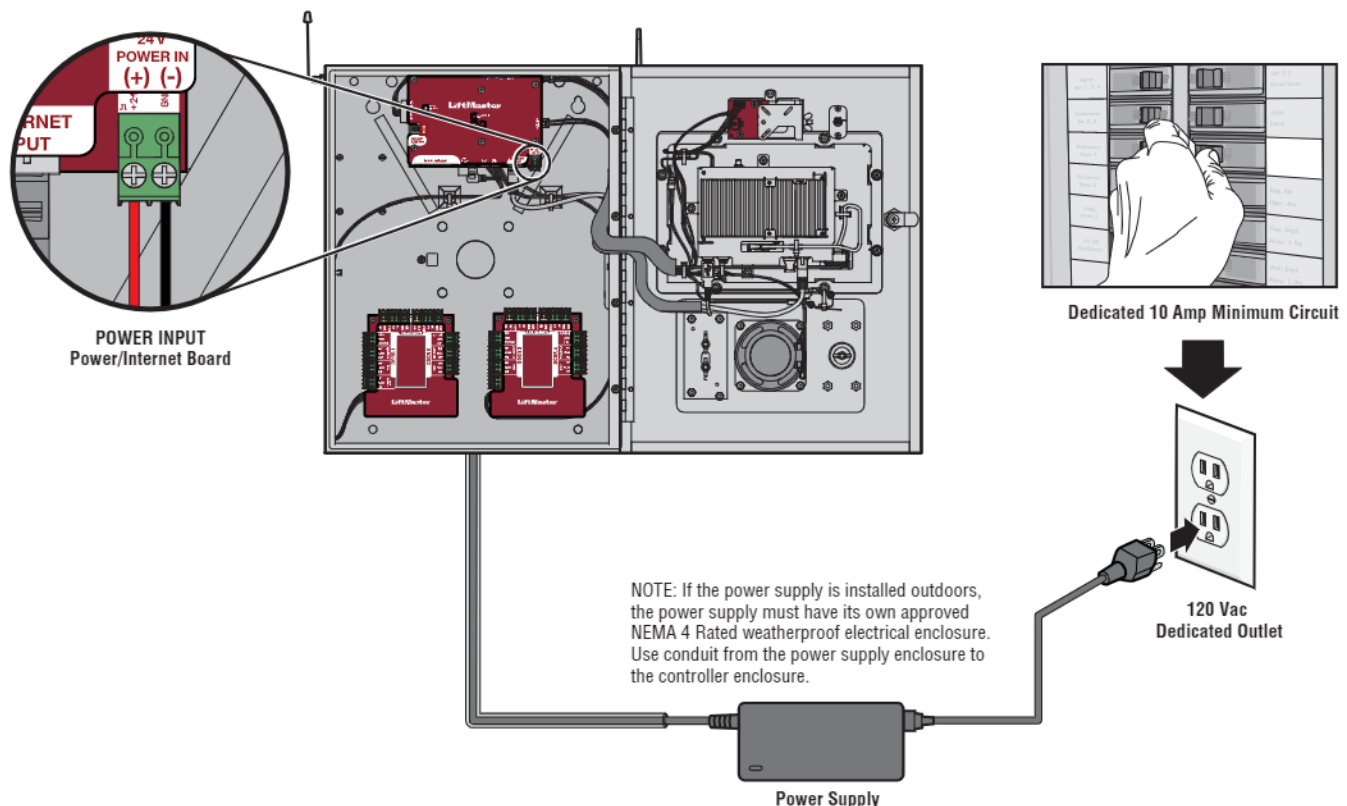
1. Connect 14-18 AWG wire to the stripped secondary DC output wires on the power supply. Black is negative and red is positive.
2. Remove the PWR INPUT terminal block from the Power/Internet Board.
3. Connect the power supply wires to the PWR INPUT terminal block (red to +24V and black to GND). Reattach the terminal block to the Power/Internet Board.
4. Plug the power supply into a 120 Vac outlet after all connections have been made.

**NOTE:** The green LED on the door board will blink and the green LED on the Power/Internet Board will light solid when powered up. The CAPXL / CAPXLV will display the LiftMaster logo while booting up. When boot up is complete, the user interface will appear.

5. Close the CAPXL / CAPXLV door.

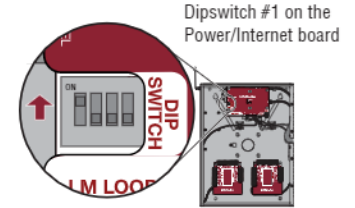
## ⚠ CAUTION

- DO NOT use ANY power supply other than those supplied with your CAPXL / CAPXLV.
- DO NOT power electronic strikes and latches with the same power supply used to power the access control panel; doing so will cause DAMAGE to the CAPXL / CAPXLV. Use ONLY a UL listed burglar alarm or access control system to power electronic strikes and latches.
- DO NOT connect the power supply to a switched outlet or otherwise controlled AC outlet.
- DO NOT connect the power supply to the 120 Vac outlet until ALL wiring is completed.
- Install the transient noise suppression device (MOV) supplied with the CAPXL / CAPXLV for AC powered devices and Diode for DC powered devices.



# 1 Connect Internet

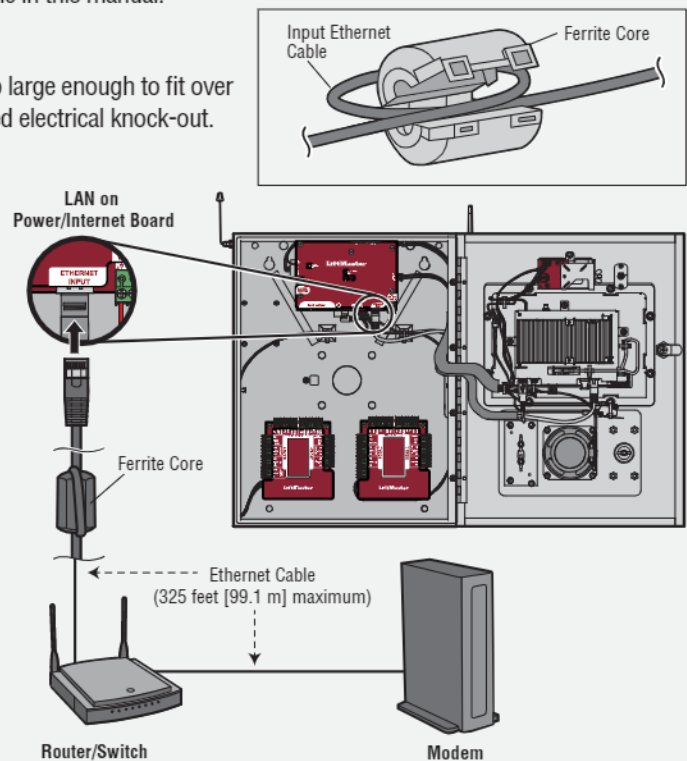
The CAPXL / CAPXLV can connect to the Internet with a wired connection or with Wi-Fi® (wireless). See page 10 for Internet requirements. Make sure you are in the Admin Mode before you connect to the Internet. If you are not in Admin Mode, flip dipswitch #1 to the ON position on the Power/Internet board, press the Network tab on the CAPXL / CAPXLV display, and press the “Change Network Settings” button. Follow the instructions according to your application.



## OPTION 1 Wired Connection

The Local Area Network (LAN) port is a 10/100/1000 Ethernet interface with an RJ45 jack for connecting the CAPXL / CAPXLV to a hub, switch, or router in order for it to gain connectivity to the Internet. Use a straight, (i.e., non-crossover) Cat5, Cat5e, or Cat6 cable to connect to a local hub, switch or router. This type of cable is referred to as an Ethernet cable in this manual.

1. Open the Ferrite Core.
2. Loop the Input Ethernet cable around itself one time, creating a loop large enough to fit over the length of the Ferrite Core. Locate the cable loop near the intended electrical knock-out.
3. Place looped section of Input Ethernet cable over one side of the open Ferrite Core.
4. Close the Ferrite Core securely and plug the Input Ethernet cable into the Power/Internet board.
5. Connect an Ethernet cable from the hub, switch, or router to the LAN port on the Power/Internet Board. When connected properly, the green and amber LED on the Ethernet port of the control board will light/flicker (the control board is located on the back of the CAPXL / CAPXLV display). If the green LED is not lit, check the connections on the CAPXL / CAPXLV and the Ethernet hub.
6. On the display, select **Wired Network** if dynamic configuration (DHCP) is desired or select **Manual Setup** for a static IP address.



## OPTION 2 Connect through Wi-Fi® (Wireless)

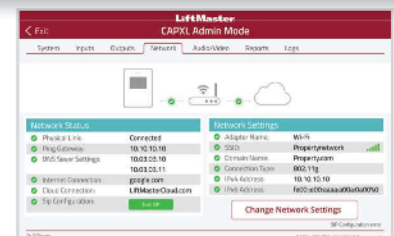
1. On the display select **Wi-Fi® Network**.
2. Select the network the CAPXL / CAPXLV will use.
3. Enter the password for the network.
4. Select **Login**.

### Additional compatibility considerations:

- When checking signal strength in CAPXL / CAPXLV admin mode, we recommend at least two bars.
- If two bars are not available, relocate the router, the antenna or use accessory WFAEXT (Wi-Fi® Antenna Extension Kit – 15') to move the CAPXL / CAPXLV antenna higher up or to a location resulting in two or more bars.
- If using a Wi-Fi® signal strength tool or app, a continuous Wi-Fi® signal strength connection of at least -65 DBM (numbers closer to zero are stronger strength) at the CAPXL / CAPXLV must be guaranteed to ensure an acceptable connection to the local network.
- Hidden network SSID's are not supported. The network must be selectable from the CAPXL / CAPXLV display.
- Wi-Fi® networks requiring secondary authentication are not supported (E.g. Hotels and airport Wi-Fi®).

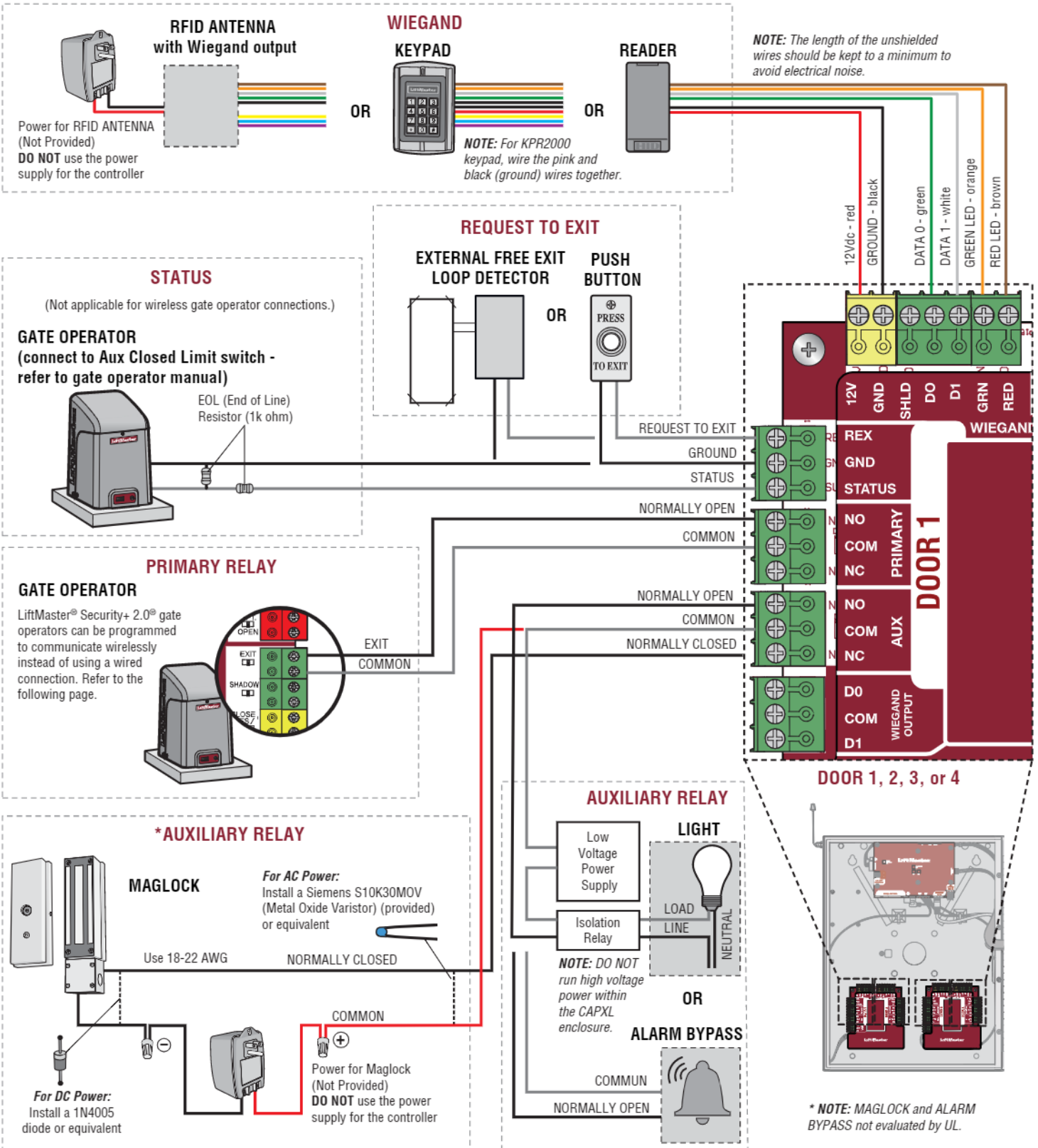
# 2 Validate Setup

On the display, select each tab in Admin Mode to validate setup (network, inputs, outputs, etc.). Once you have validated the setup, exit Admin Mode.



# Gate Access (Wired)

Disconnect power BEFORE making electrical connections. Below is an example of a wiring setup for gate access. Gate access can be wired to Door 1, 2, 3, or 4 on the Door Boards. LiftMaster® Security+ 2.0® gate operators can also be programmed to communicate wirelessly instead of using a wired connection (refer to the following page).

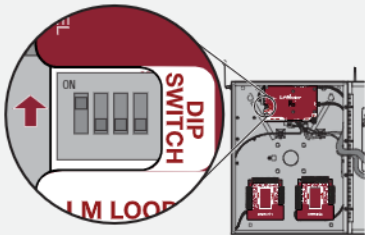


## Gate Access (Wireless)

The CAPXL / CAPXLV can communicate wirelessly to LiftMaster® UL325 gate operators to send open commands, monitor gate position, and send email notifications if an error occurs in the operator (email notifications are configured in myQ® Business™). Up to 8 gate operators can be paired with the CAPXL / CAPXLV - one for each primary and auxiliary relay. If using dual gates, program the CAPXL / CAPXLV to the primary operator.

### 1 Enter Admin Mode

Flip dipswitch #1 to the ON position to enter Admin Mode.



**NOTE:** For new installations press the login button without entering information in the Admin Username and Admin Password fields.

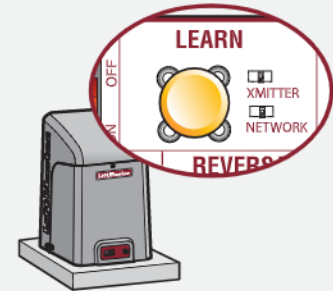
### 2 Select Outputs and Relay

Select the **Outputs** tab. Then select the desired relay on the left-hand side (1 through 4).



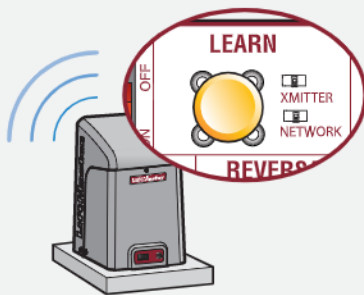
### 3 Press LEARN button on gate operator

Press and release the LEARN button on the primary operator. The green XMITTER LED will light. **NOTE:** The operator will time out of programming mode after 180 seconds.



### 4 Press LEARN button on gate operator again

Press and release the LEARN button again on the primary operator. The yellow NETWORK LED will light.



### 5 Select LEARN on display

Select the LEARN button on the display and the Learn button will go from blue to red. The gate operator and the CAPXL / CAPXLV will beep once and the NETWORK LED on the gate operator will turn off indicating programming is successful.

**NOTE:** 4 beeps/blinks indicate you are not programming to the primary operator. Attempt programming from the other operator.



### 6 Validate

Validate functionality by selecting **Test Relay** on the CAPXL / CAPXLV display.

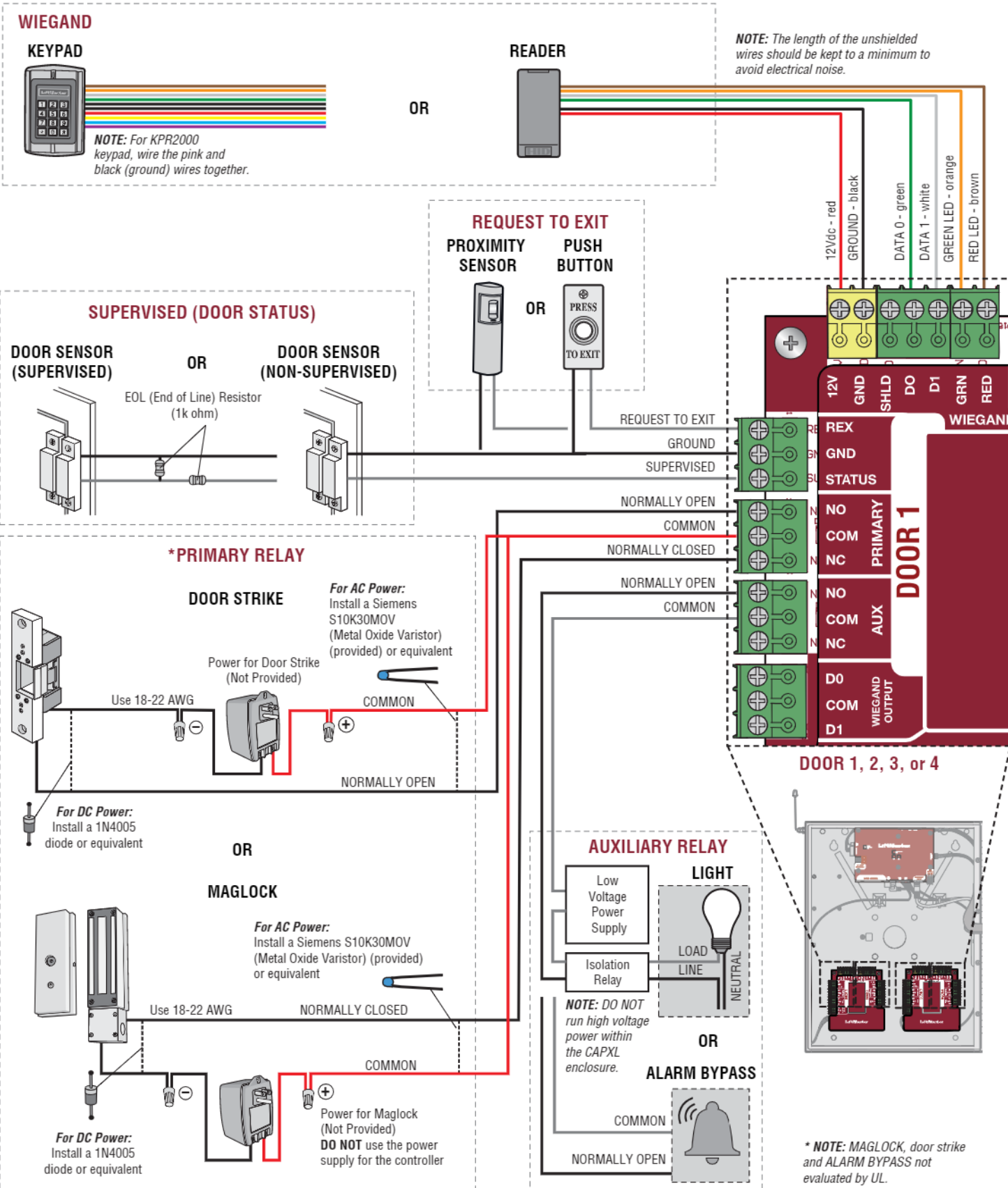


Visit [myQBusiness.com](http://myQBusiness.com) for more information on how to set up doors for wireless linking.



# Door Access

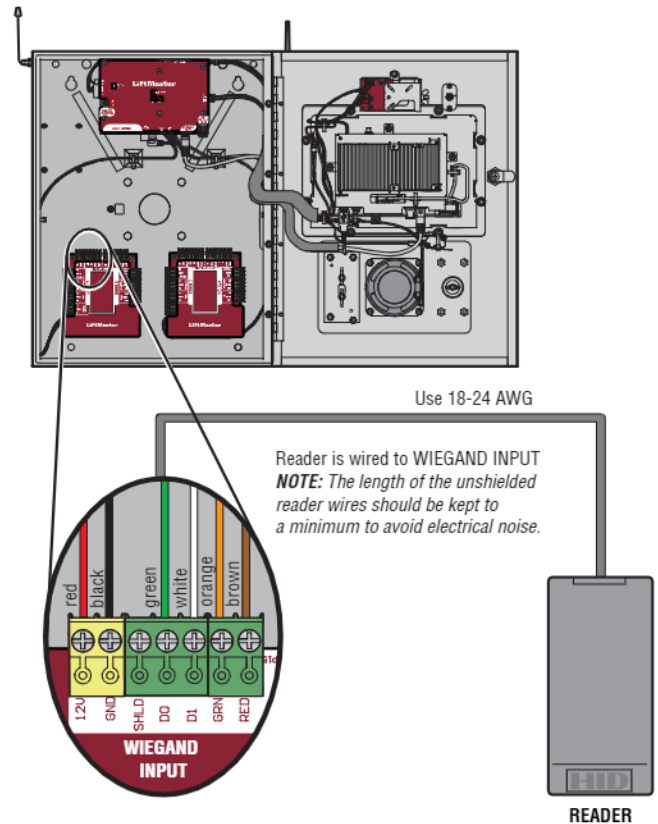
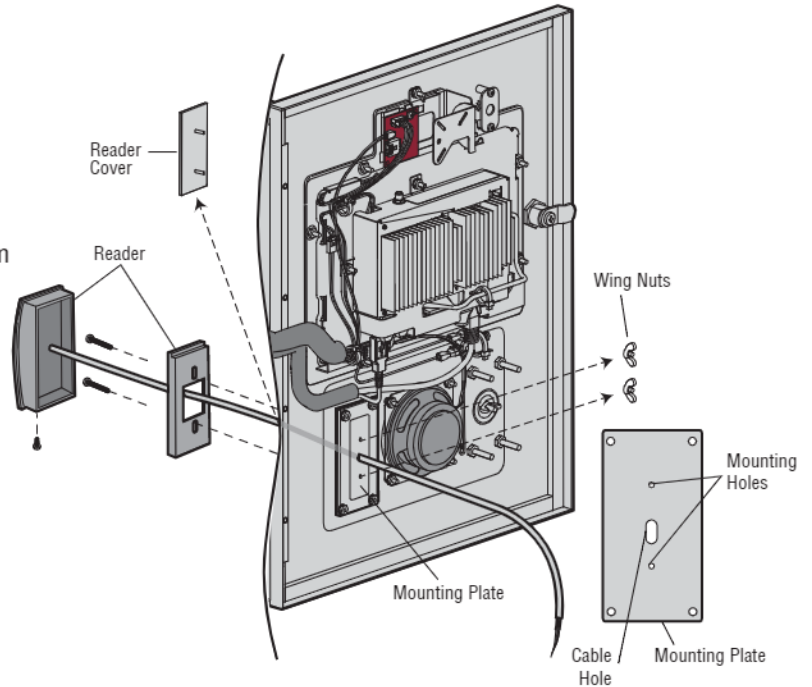
Disconnect power **BEFORE** making electrical connections. Below is an example of a wiring setup for door access. Door access can be wired to Door 1, 2, 3, or 4 on the Door Boards.



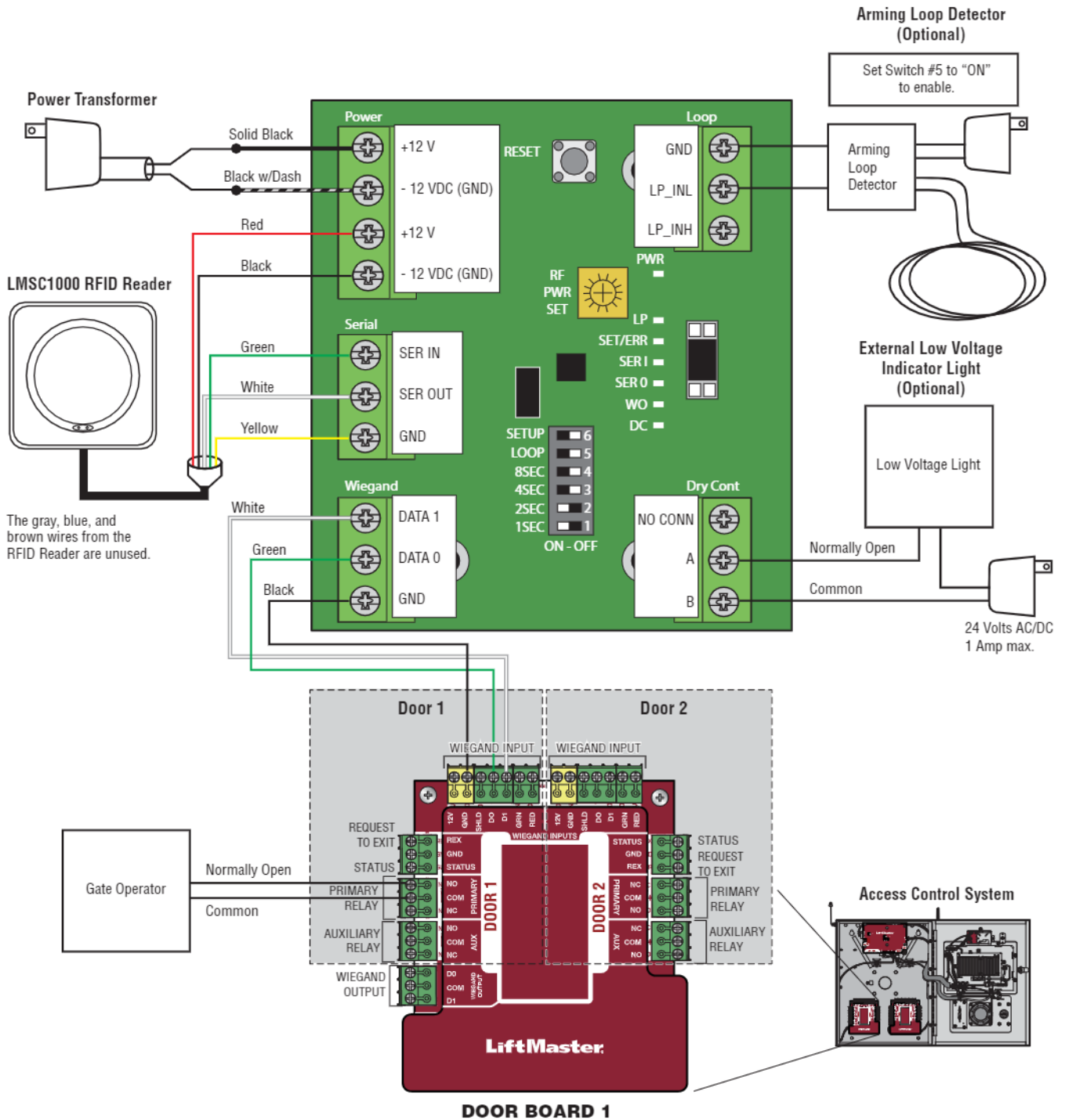
## Card Reader

The CAPXL / CAPXLV is designed specifically for the LMMC-MINI reader to be mounted on the faceplate.

1. Disconnect power from the CAPXL / CAPXLV.
2. Remove and discard the wing nuts and reader cover from the CAPXL / CAPXLV.
3. Install the reader and secure with the screws.
4. Apply silicon around the cable hole.
5. The reader can be wired to any of the 4 Wiegand Inputs on the door control boards. Insulate any unused wires from the CAPXL / CAPXLV to prevent a short. (Refer to instructions provided with your reader for more information.)
6. Reconnect power to the CAPXL / CAPXLV.
7. Refer to myQ® Business™ for programming.



# LiftMaster LMSC1000 RFID Reader Wiring Diagram

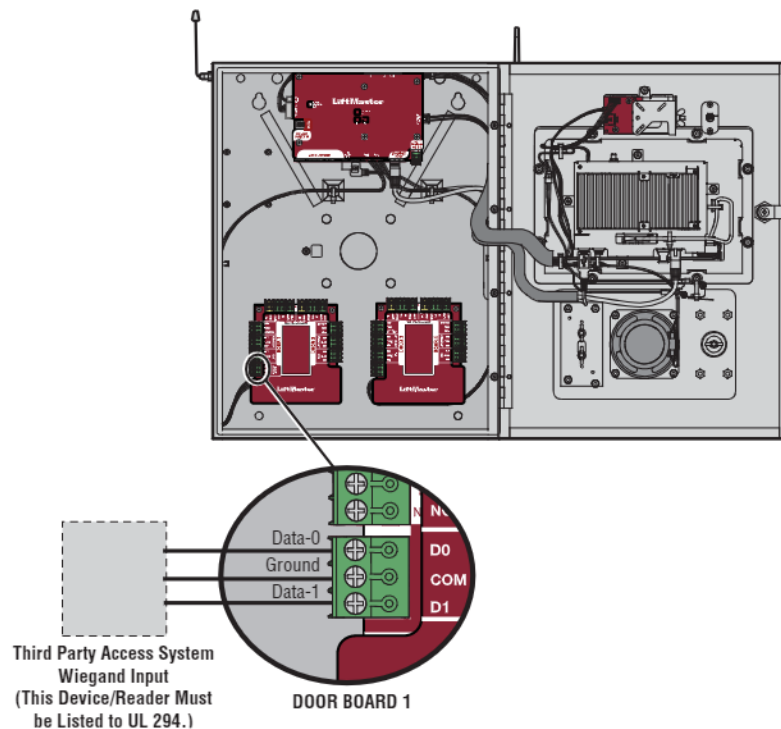




## Wiegand Output

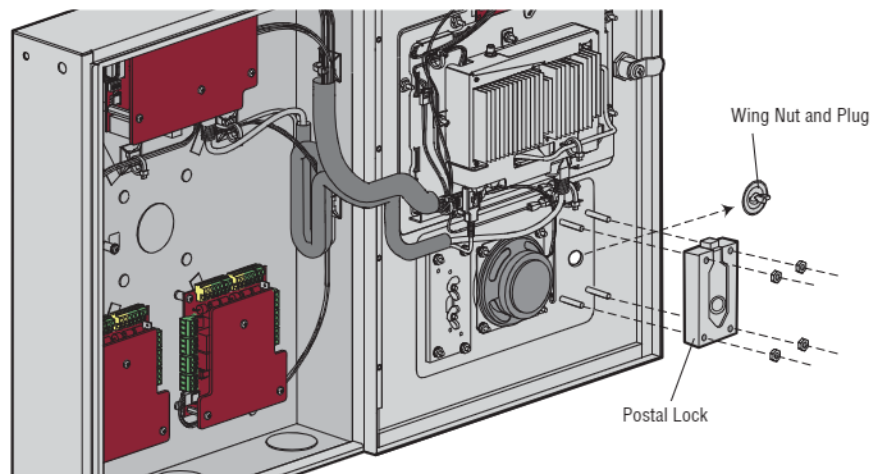
Disconnect power **BEFORE** making electrical connections. The CAPXL / CAPXLV offers a Wiegand output capable of 26 bit transmission of the following data:

- Success Call with access granted by the resident. The CAPXL / CAPXLV will provide a myQ® Business™ specified facility code followed by the Directory Code of the resident that granted access.  
**And/Or**
- Successful access through Entry Code. The CAPXL / CAPXLV will provide a myQ® Business™ specified facility code followed by the successful Entry Code.  
**And/Or**
- Successful access with a Wiegand credential. The CAPXL / CAPXLV will pass along the successful credential Facility Code and ID.



## Postal Lock

1. Remove the wing nut and plug. Discard the wing nut and plug.
2. Remove 4 mounting nuts from studs.
3. Install postal lock using 4 nuts from step 3.
4. Cut the factory installed wire tie from the postal lock switch.
5. The postal lock switch is wired from the factory.



## Upgrade CAPXL with CAPXLCAM

**NOTE:** CAPXLCAM is the only USB camera supported by CAPXL and myQ® Business™ video features. CAPXLCAM is the only camera evaluated by UL for use with CAPXL.

### PRIOR TO CAMERA INSTALLATION

1. **Make note of all Internet connectivity settings before any firmware update.** When updating firmware Internet settings will be deleted. Go to the CAPXL connection screen in admin mode and write down or take picture of settings.
2. Ensure CAPXL is running Firmware version 2.0 or higher. Warning: The CAPXL upgrade process requires a restart and could be non-functional for up to 30 minutes while this upgrade takes place. Please ensure the gates/doors are open or residents have an alternate means to enter to the community during this brief period prior to hitting the upgrade button in myQ® Business™. This may require a technician on site to ensure safe operation and resident flow.
3. Login to myQ® Business™ to update the CAPXL to the latest firmware version. Turn off power by disconnecting the power input on the I/O board.
4. Remove the protective LENS cover from the camera assembly lens.

**NOTE:** Camera lens cover must be removed prior to mounting in the CAPXL.

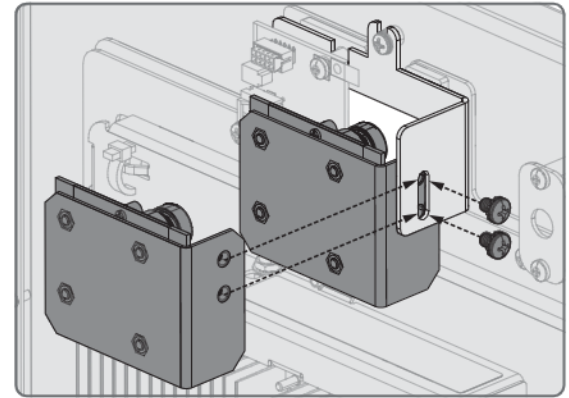
## Installation

1. Open CAPXL and remove the existing black camera bracket (top middle) by loosening and removing the wingnut.
2. Ensure CAPXL camera window is clean and free of any obstructions. Cleaning the camera window with a clean lens wipe or lens cloth is recommended.
3. Remove all items from shipping carton and ensure all required items are present: camera assembly, camera bracket, USB cable, and mounting hardware bag.
4. Use the mounting hardware to attach the new bracket with camera to the CAPXL. Securely tighten.
5. Use pliers to unplug the upper right dummy plug from USB socket on control board (controller). (Figure 1.A)
6. USB Port #3 must be used to connect the camera. The Micro USB end of the USB cable goes into the camera and the standard USB end of the cable specifically connects to USB port #3, (the upper right USB port on the controller.) (See Figure 1.B)
7. Route and secure USB cable with included tie-wraps. (Figure 2)
8. Turn on power to the CAPXL.
9. Enter CAPXL Admin Mode using the #1 dip switch. Select the "Audio / Video" tab and confirm the video feed appears, the angle and orientation is correct. (Figure 3)
10. Refer to the myQ® Business™ Quickstart Guide and visit the help section of the myQ® Business™ website for tutorial videos and further assistance with setting up the camera functions. Features such as the recording of events, the Guest View Feature, and more are set up within the myQ® Business™ account.

Access your myQ® Business™ account at:  
<https://www.myQBusiness.com>

myQ® Business™ Help and Tutorial Videos:  
<https://www.myQBusiness.com/Help>

**NOTE:** Options such as live streaming within myQ® Business™ are included with an access control subscription.



### Recommended Tools

- Network Test Software
- Philips Screwdriver
- Network LAN Cable Tester
- Wi-Fi / Wi-Fi Hotspot
- Wi-Fi Analyzer App
- Pliers

### Carton Inventory

- Camera assembly
- Camera bracket
- USB cable
- Mounting hardware bag (2x Screws)

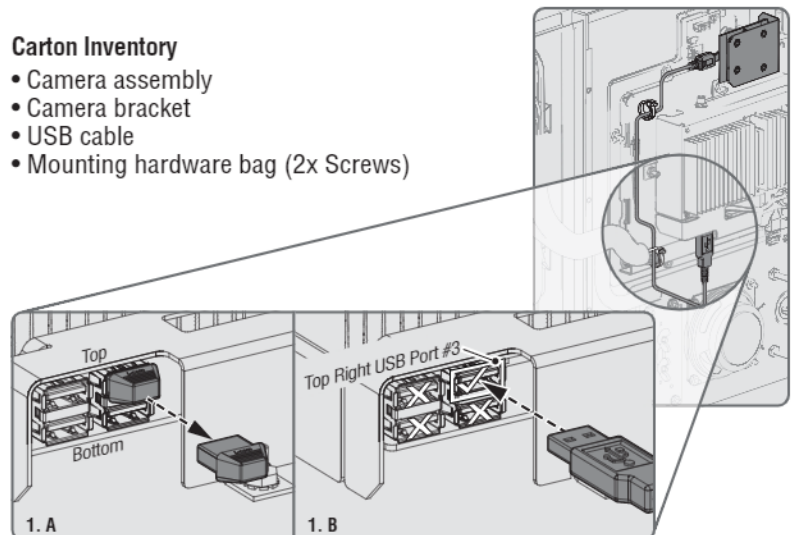


Figure 1. Removing the dummy USB and connecting to USB Port #3 on the upper right side of the controller.

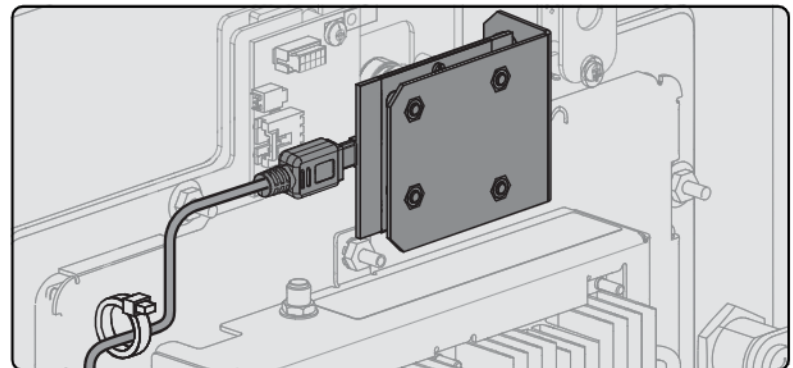


Figure 2. Routing the USB cable.

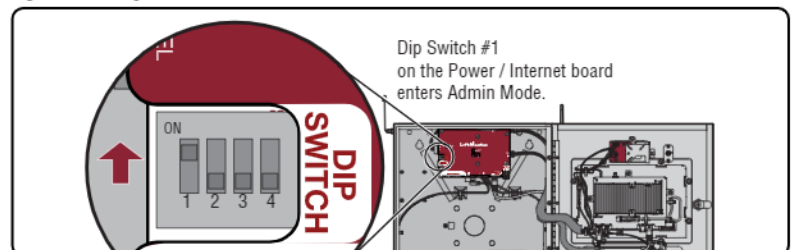


Figure 3. Admin Mode.

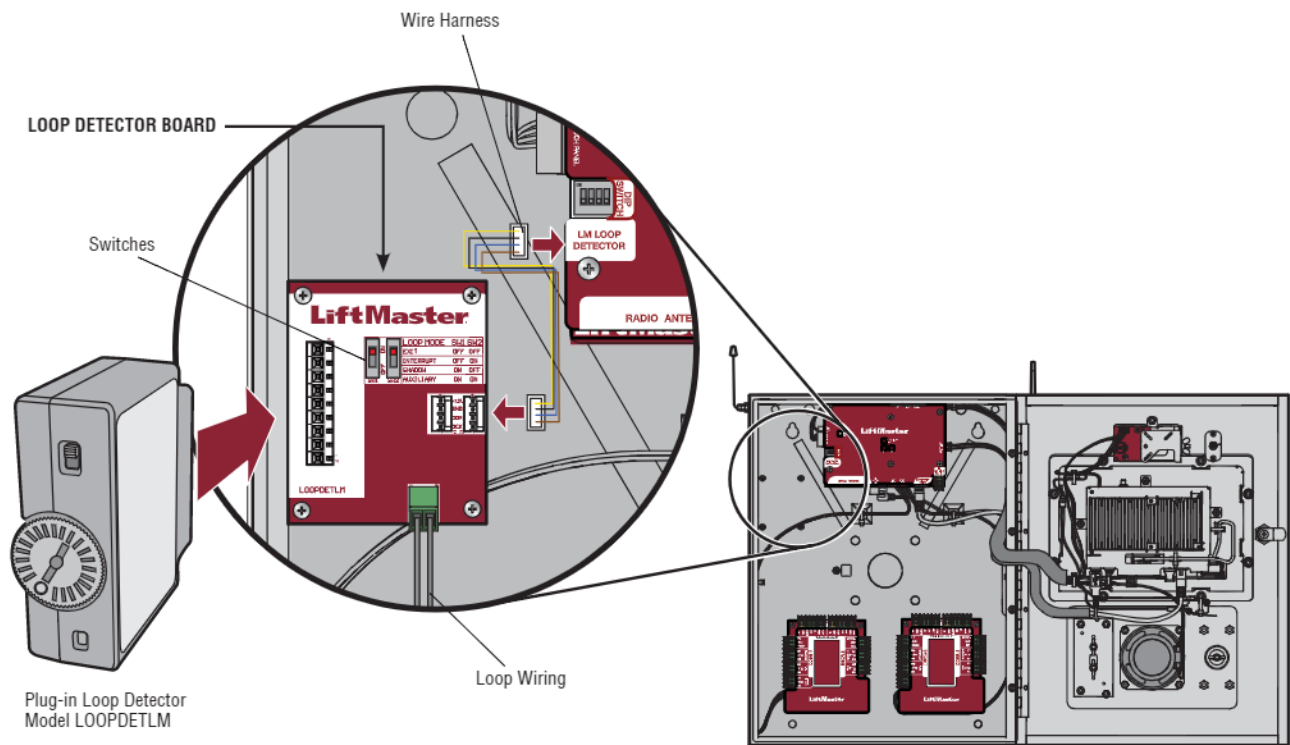
**NOTE:** Please refer to the specific jurisdiction to determine if specific signage will be required for video use and monitoring.

## Auto-Call Feature

Disconnect power **BEFORE** making electrical connections. The Loop Detector Board (model LPEXP, not provided) combined with the LOOPDETLM, provides Auto Call functionality that is available through the auxiliary switch setting. The LPEXP and LOOPDETLM can be purchased together as a kit (LPEXPKIT). When the loop detects a vehicle the number programmed into the “Quick call” field in myQ® Business™ is automatically dialed.

1. Secure the Loop Detector Board (model LPEXP) to the standoffs in the CAPXL / CAPXLV with the provided screws.
2. Connect the wire harness from the Loop Detector Board to the Power/Internet Board.
3. Connect the loop wires to the input on the Loop Detector Board.
4. Plug in the loop detector (model LOOPDETLM).
5. Set both switches on the Loop Detector Board to ON (auxiliary setting).
6. Activate the loop input in the CAPXL / CAPXLV main Admin screen (Toggle dip switch #1)

LOOP MODE	SW1	SW2
EXIT	Not supported	
INTERRUPT	Not supported	
SHADOW	Not supported	
AUXILIARY	ON	ON

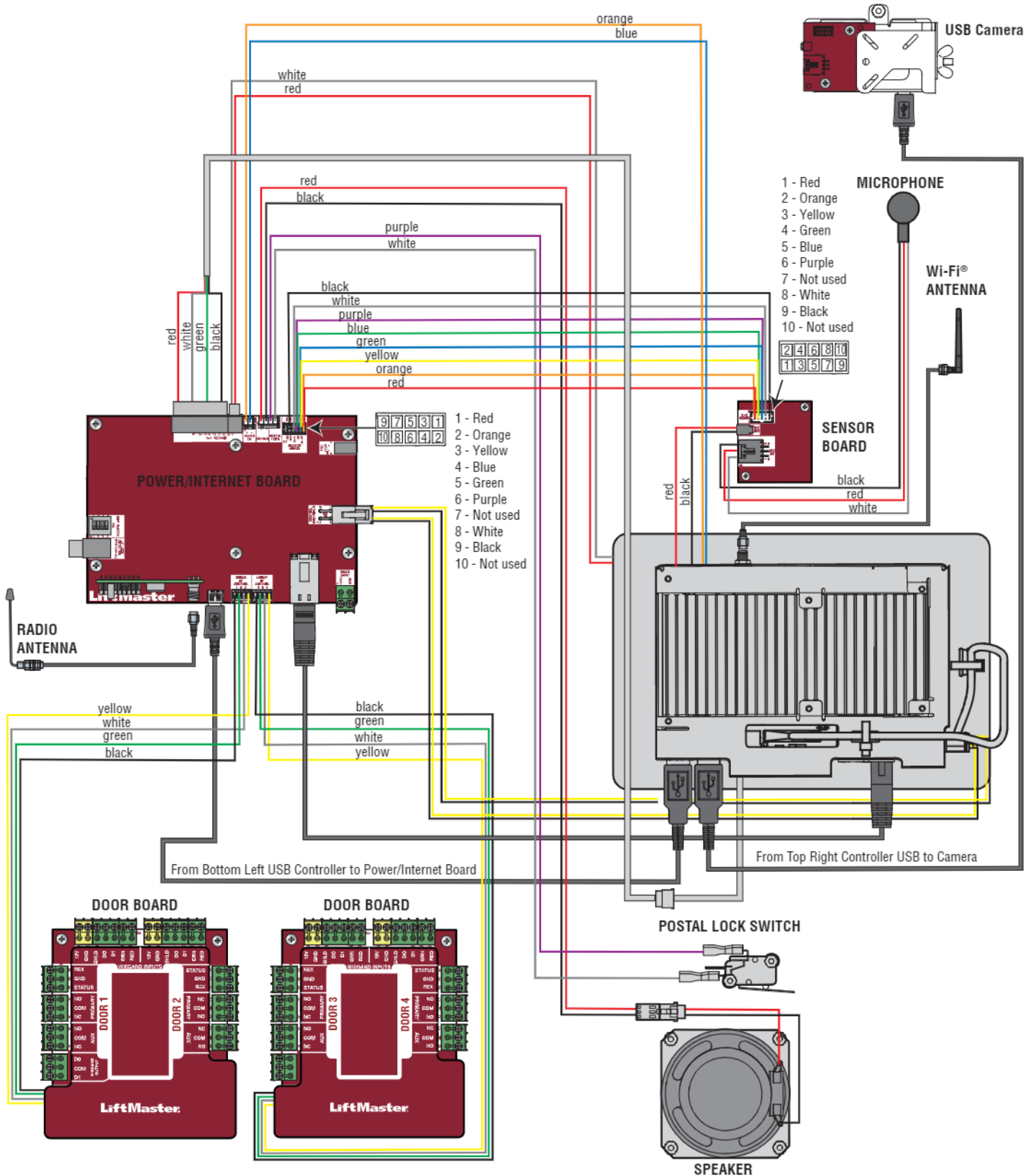


**NOTE:** Loop Detector Board not evaluated by UL.

# Wiring Diagram

## CAUTION

Not responsible for conflicts between the information listed in the wiring diagram and the requirements of your local building codes. The information is for suggested use ONLY. Check your local codes BEFORE installation.





## Repair Parts

ITEM	PART NUMBER
Cam And Lock Kit	K002B0799-3
Power Supply	K002A1978
Wi-Fi® Antenna Kit	K76-38957
Radio Antenna Kit	K76-38958
Faceplate Kit	K41-0104-000
Sensor Board	K001D8592
Camera Window And Gasket	K41-0110-000
Touchscreen Display	K41-0103-000
Control Board	K41-0112-000
Power/Internet Board	K001D8439
Door Board And Covers	K001D8478
Microphone Kit	041B0692
Reader Mounting Plate	K012B1067
Postal Lock Switch	K041B0996-1
Rear Housing Assembly	K75-38330
Wiring Kit	K94-38407
Speaker	K002B1910
Faceplate and Display Assembly	K41-0117-000

## Accessories

ITEM	PART NUMBER
Back Box and Trim Kit	CAPXLTk
Reader Multi-class SE RP10 Mini Mullion	LMMC-MINI
Radio Antenna Extension (15 foot)	86LM
Wi-Fi® Antenna Extension (15 foot)	WFAEXT
UHF Long Range RFID reader	LMSC1000
Wiegand Keypad/Proximity Reader	KPR2000*
Loop Detector Input Board	LPEXP
Cellular Modem 4G/LTE	CAPCELL
Connected Access Portal 2 Door	CAP2D
All LiftMaster® myQ®/UL325 compatible gate operators	
Passport 3-Button Visor Remote Control MAX	PPV3M
Passport 3-Button Mini Remote Control MAX	PPK3M
Passport 3-Button Mini Proximity Remote Control MAX	PPK3PHM
Passport Lite 1-Button Visor Remote	PPLV1-X**
Passport Lite 1-Button Key Chain Remote	PPLK1-X**
Passport Lite 1-Button Mini Proximity Remote	PPLK1PH-X**
New USB Camera Kit	CAPXLCAM
RFID Long Range Reader	LMSC1000
RFID Universal Tag (windshield/headlamp)	LMUNTG
RFID Vehicle Hang Tag	LMHNTG

\* KPR2000 verified for supplementary use only

\*\* Available in 10 and 100 packs, replace X with 10 or 100

**NOTE:** A current list of compatible readers and keypads is maintained at [LiftMaster.com](http://LiftMaster.com). If you have a specific model of reader or keypad that is not listed on the LiftMaster website, please contact LiftMaster Technical Support to determine compatibility.

# Configuration Sheet

Record device information and configuration settings below.

<b>CAPXL / CAPXLV Name:</b>
<i>NOTE: Any user of the system is subject to the terms outlined in the product EULA.</i>
Notes:

## DEVICE CONFIGURATION:

<b>DOOR 1</b>	DOOR/GATE NAME:		
<b>INPUTS</b>	WIEGAND	REX	STATUS
			EOL (Y / N)
<b>OUTPUTS</b>	PRIMARY RELAY		AUXILIARY RELAY
	N.O.	N.C.	N.O.      N.C.
Notes:			

<b>DOOR 2</b>	DOOR/GATE NAME:		
<b>INPUTS</b>	WIEGAND	REX	STATUS
			EOL (Y / N)
<b>OUTPUTS</b>	PRIMARY RELAY		AUXILIARY RELAY
	N.O.	N.C.	N.O.      N.C.
Notes:			

<b>DOOR 3</b>	DOOR/GATE NAME:		
<b>INPUTS</b>	WIEGAND	REX	STATUS
			EOL (Y / N)
<b>OUTPUTS</b>	PRIMARY RELAY		AUXILIARY RELAY
	N.O.	N.C.	N.O.      N.C.
Notes:			

<b>DOOR 4</b>	DOOR/GATE NAME:		
<b>INPUTS</b>	WIEGAND	REX	STATUS
			EOL (Y / N)
<b>OUTPUTS</b>	PRIMARY RELAY		AUXILIARY RELAY
	N.O.	N.C.	N.O.      N.C.
Notes:			

# Legal Disclaimers

## Federal Communications Commission (FCC) Compliance

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation or when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Increase the distance between the equipment and receiver.
- Connect the equipment to a circuit other than the one to which the receiver is connected.
- Consult the dealer for help.

## Canada-Underwriters Laboratories Compliance

The CAPXL / CAPXLV shall be installed in accordance with Part 1 of the Canadian Electrical Code.

## Documentation Disclaimer and Restrictions

Information in this document is subject to change without notice and does not represent a commitment on the part of LiftMaster. For the most up-to-date information, visit LiftMaster.com.

This document and the data herein shall not be duplicated, used or disclosed to others for procurement or manufacturing, except as authorized with the written permission of LiftMaster. The information contained within this document or within the product itself is considered the exclusive property of LiftMaster. All information in this document or within the hardware and software product themselves is protected by the copyright and/or other intellectual property laws of the United States.

## UL 294 Access Control Unit Endurance: Level 4, Line security: Level 2, Destructive Attack: Level 1, Power Standby: Level 1

NOTICE: This device complies with part 15 of the FCC rules and Innovation, Science and Economic Development Canada licence-exempt RSSs. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device must be installed to ensure a minimum 20 cm (8 in.) distance is maintained between users/bystanders and device.

This device has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules and Industry Canada ICES standard. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

NOTICE: When mounting the CAPXL / CAPXLV at a pedestrian entrance, to meet ADA compliance, mount the top of the CAPXL / CAPXLV screen no higher than 54 inches from the ground.

**NOTE:** When installing CAPXLV or retrofitting with a video camera, please refer to the local jurisdiction for any specific requirements such as physical signage that may be required.



## Warranty

LiftMaster ("Seller") warrants to the first purchaser of this product, for the structure in which this product is originally installed, that it is free from defect in materials and/or workmanship for a period of two years from the date of purchase.

The proper operation of this product is dependent on your compliance with the instructions regarding installation, operation, maintenance and testing. Failure to comply strictly with those instructions will void this limited warranty in its entirety.

If, during the limited warranty period, this product appears to contain a defect covered by this limited warranty, call 1-800-528-2806 before dismantling this product. Then send this product, pre-paid and insured, to our service center for warranty replacement. Products returned to Seller for warranty replacement, which upon receipt by Seller are confirmed to be defective and covered by this limited warranty, will be replaced (at Seller's sole option) at no cost to you and returned pre-paid. Defective parts will be replaced with new or factory-rebuilt parts at Seller's sole option.

THIS LIMITED WARRANTY IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, AND OF ANY OTHER OBLIGATIONS OR LIABILITY ON SELLER'S PART. THIS LIMITED WARRANTY DOES NOT COVER NON-DEFECT DAMAGE, DAMAGE CAUSED BY IMPROPER INSTALLATION, OPERATION OR CARE (INCLUDING, BUT NOT LIMITED TO ABUSE, MISUSE, FAILURE TO PROVIDE REASONABLE AND NECESSARY MAINTENANCE, UNAUTHORIZED REPAIRS OR ANY ALTERATIONS TO THIS PRODUCT), LABOR CHARGES FOR REINSTALLING A REPAIRED OR REPLACED UNIT, PROBLEMS RELATED TO INTERFERENCE, OR REPLACEMENT OF BATTERIES.

UNDER NO CIRCUMSTANCES SHALL SELLER BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL OR SPECIAL DAMAGES ARISING IN CONNECTION WITH USE, OR INABILITY TO USE, THIS PRODUCT. IN NO EVENT SHALL SELLER'S LIABILITY FOR BREACH OF WARRANTY, BREACH OF CONTRACT, NEGLIGENCE OR STRICT LIABILITY EXCEED THE COST OF THE PRODUCT COVERED HEREBY. NO PERSON IS AUTHORIZED TO ASSUME FOR US ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF THIS PRODUCT.

Some states do not allow the exclusion or limitation of consequential, incidental or special damages, so the above limitation or exclusion may not apply to you. This limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state.