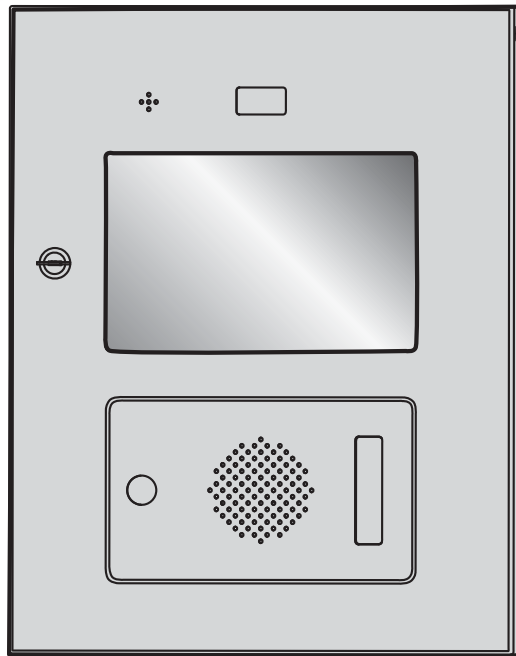


Large Display Access Controller

INSTALLATION MANUAL

Model ACXL



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 controller.

- 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.

INTRODUCTION



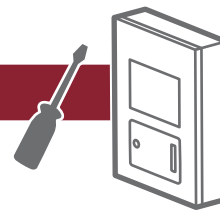
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1 PRE-INSTALL



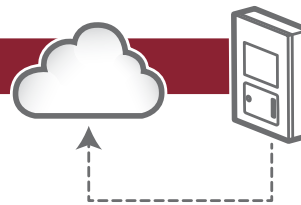
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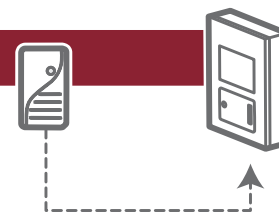
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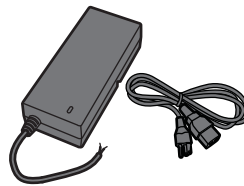
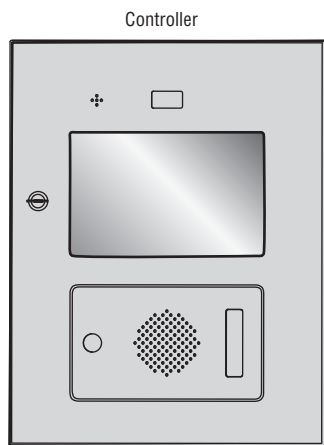


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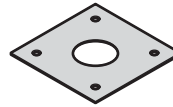
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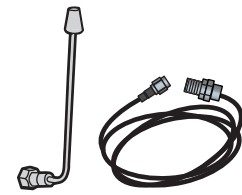
Carton Inventory



Power Supply



Gooseneck Gasket



Radio Antenna (Security+ 2.0®) and Cable



Ferrite Core



Keys (2)

S10K30MOV
(Metal Oxide Varistor)(4)

1N4005 Diode Kit (4)



Wi-Fi® Antenna and Cable

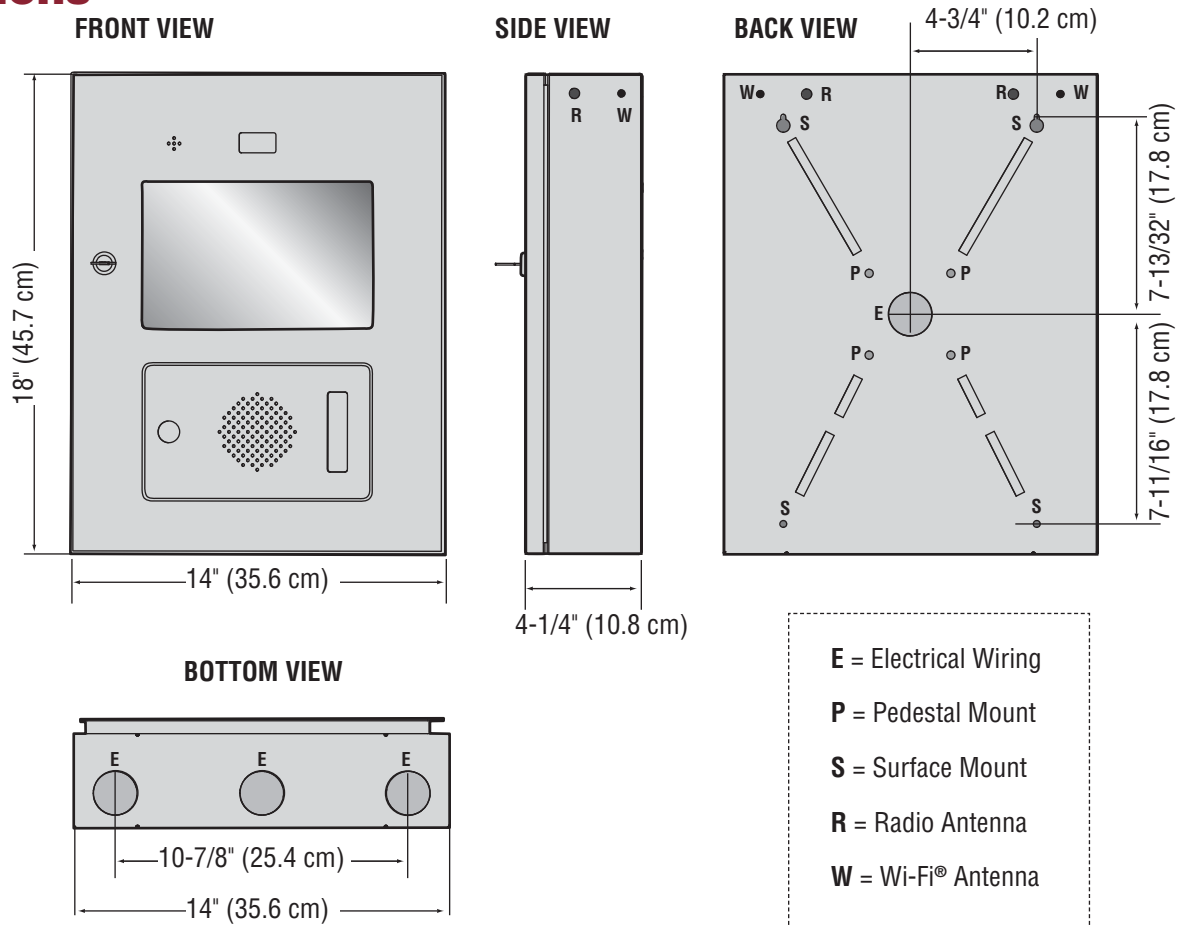
PROVIDED (NOT SHOWN)

- Hardware for Camera Kit
- Installation Manual

Tools Needed

- Assorted Screwdrivers
- Precision Screwdrivers
- 1/4" Nut Driver
- Multimeter
- Wire Fish Tape
- Bits for Hammer Drill Bits for Drill/Driver
- Drill Screw Bit
- Wire Strippers
- Wire Cutters
- Assorted Pliers
- Flashlight
- Drill/Driver
- RJ45 Crimping Pliers
- Measuring tape
- Work Gloves
- Conduit Bender
- Conduit Cutter/Reamer
- Hack Saw
- Center Punch Tool
- Hammer
- 7/64" Drill Bit

Dimensions



System Specifications

System Capacity	People: 50,000 / Activity Buffer: 500,000
Supply Voltage	12Vdc, 5A, Class 2, Level VI (Power Supply 100-240VAC, 50/60Hz, 1.2A, HK Yinghuiyuan Group YHY-12005000)
Operating Current	2.0 Amps - Without Accessories
Surge Suppression	EFT: 2 Kv Power Line, ESD: 15 Kv Hbm / 8Kv Direct / 200V Mm
Controller Operating Temperature Range	- 29°C to 54°C (-20°F to 130°F) - 35°C to 65°C (-31°F to 151°F) Ambient Capability
Enclosure	Stainless Steel
Storage and Shipping Temperature Range	-40°C To 65°C (-40°F to 149°F)
Wiegand Inputs (4)	26Bit, 30Bit, 12V, 250mA Power Output (Per Input)
4 Primary and 4 Auxiliary Relay Outputs	SPDT, Rated Load 3A at 30VDC
Accessory Compatibility	Refer to the accessory page for compatible accessories
Network Compatibility	RJ-45 Wired Ethernet
Wi-Fi® Compatibility	802.11 a/b/g/n
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

Wire Specifications

Use this chart to pull wires in preparation of your installation.

DESCRIPTION OF WIRE RUN	WIRE SPECIFICATION	MAXIMUM RUN DISTANCE
Power Wire, secondary DC output	2-Conductor 14 AWG	Up to 60 feet (18.3 m)
	2-Conductor 16 AWG	Up to 37 feet (11.3 m)
	2-Conductor 18 AWG	Up to 24 feet (7.3 m)
Local Area Network (LAN) CAT 5/6 Network Cable	8-Conductor, 24 AWG Twisted pair	328 feet* (100 m)
Grounding the Chassis	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.

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 controller.
- Distances exceeding 328 feet (100 m) can be accommodated with additional hardware. Contact Technical Support for more information.

1 Internet Service

The controller MUST be configured with the proper network settings to operate.

NETWORK

Internet service provider: _____

Wi-Fi Network Name: _____

Wi-Fi Password: _____

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)

2 SIP Provider

Phone.com is the preferred SIP provider. Visit Phone.com/liftmaster to set up an account.

SIP service provider: _____

SIP domain: _____
(example: sip.phone.com)

SIP port (usually 5060): _____

SIP username: _____
(example: 12345)

SIP password: _____
(example: s98hn&@f!idjs)

CP# for Controller: _____
(located on inside of the controller door and on the display when powered up)

3 Setup a LiftMaster Cloud Account

NOTE: If you have an existing MyQ® account, your LiftMaster Cloud account will have the same password.

1. If you do not have a LiftMaster Cloud Account, call LiftMaster Customer Care at 800.323.2276 to activate a LiftMaster Hosted Cloud Service account.
2. You will get a welcome email from LiftMaster. Accept the invitation and register your account.
3. You will get a second email to activate your account.
4. Login to your account.
5. Set up your site and add residents and credentials (refer to the available Help in LiftMaster Cloud).
6. Continue with the installation of the controller in this manual.



1 Remove Knockouts

1. Turn the key clockwise and open the controller.
2. Identify which knockouts need to be removed based on your application.
3. Use a center punch tool to remove the knockouts.
NOTE: Be careful when removing the knockouts to avoid damaging the controller components.

CAUTION

To prevent damage to the controller 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 controller, remove ANY accumulated water from the top of the controller.

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.

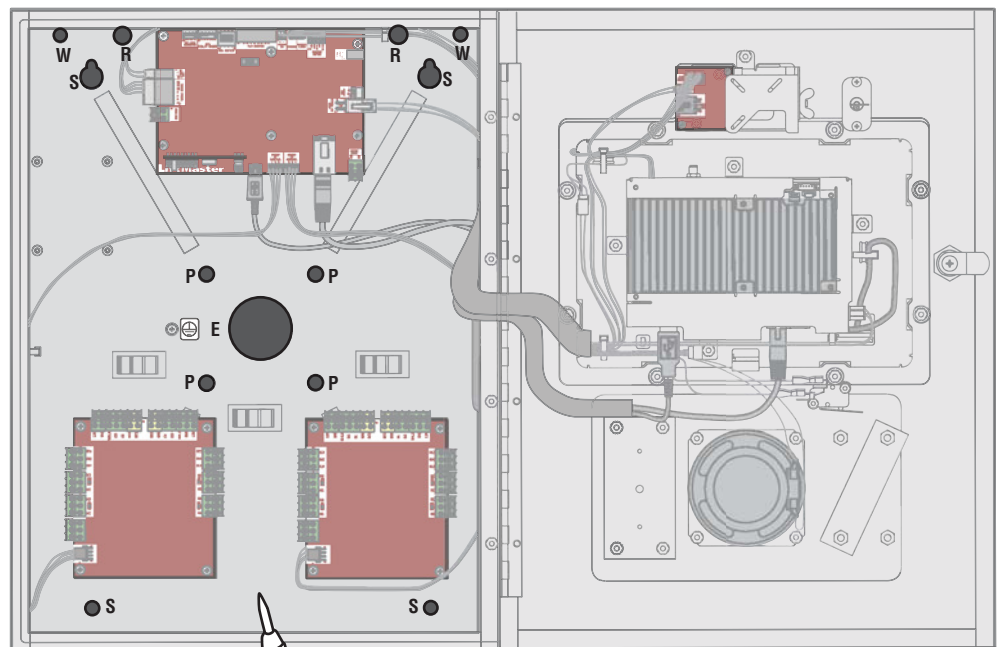
E = Electrical Wiring

P = Pedestal Mount

S = Surface Mount

R = Radio Antenna

W = Wi-Fi® Antenna



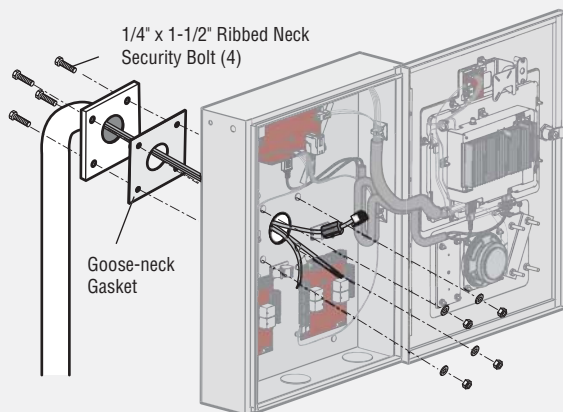
2 Mount Controller

1. Attach the goose-neck gasket (provided) if mounting to a goose-neck.
2. Mount the controller securely to a flat surface or pedestal with appropriate hardware taking care to route wiring through appropriate knockouts. **NOTE:** Ensure the cover can fully open to allow access after the installation is complete.

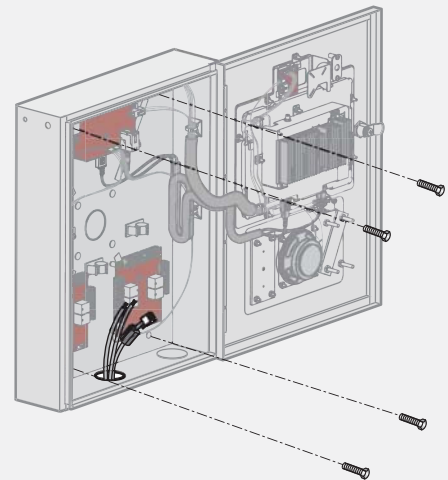
DO

Make sure the controller is properly sealed to prevent damage to the controller from moisture.

Pedestal Mount

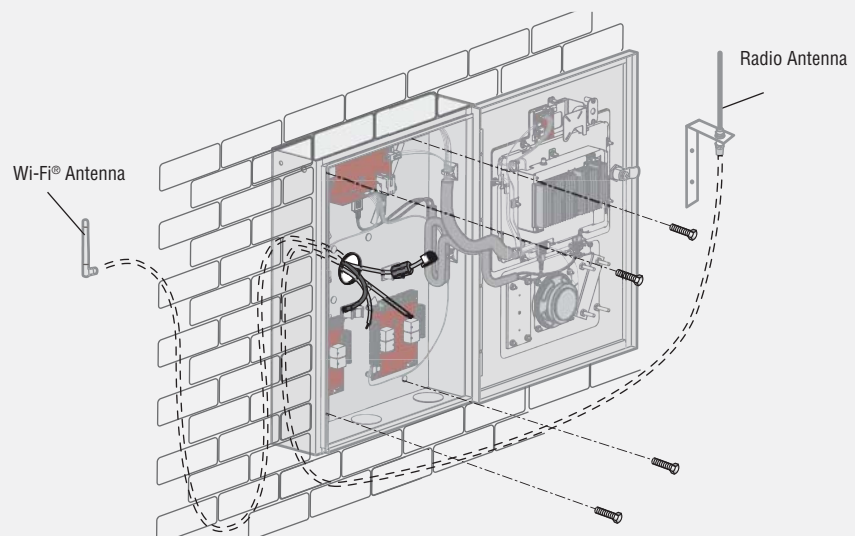


Surface Mount

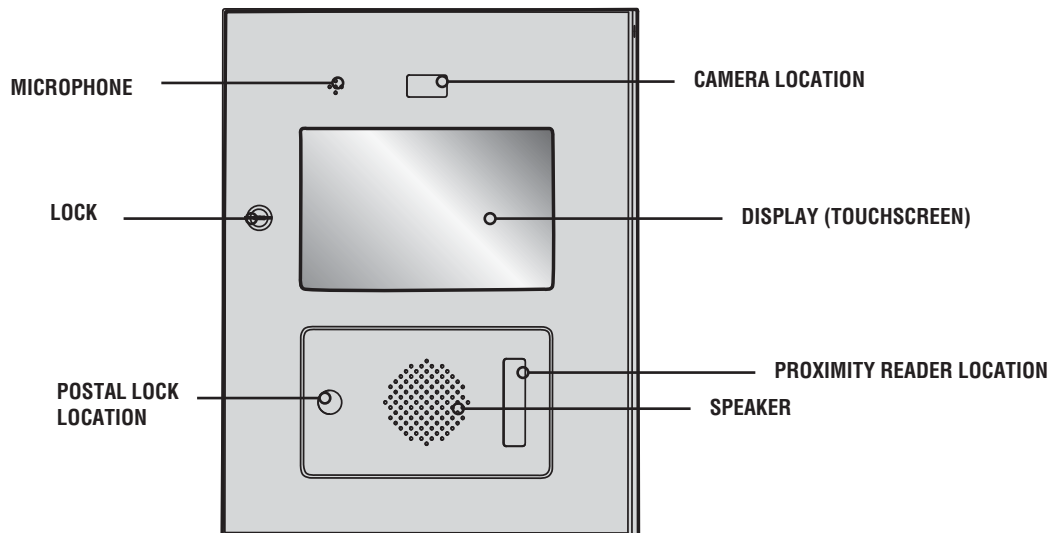
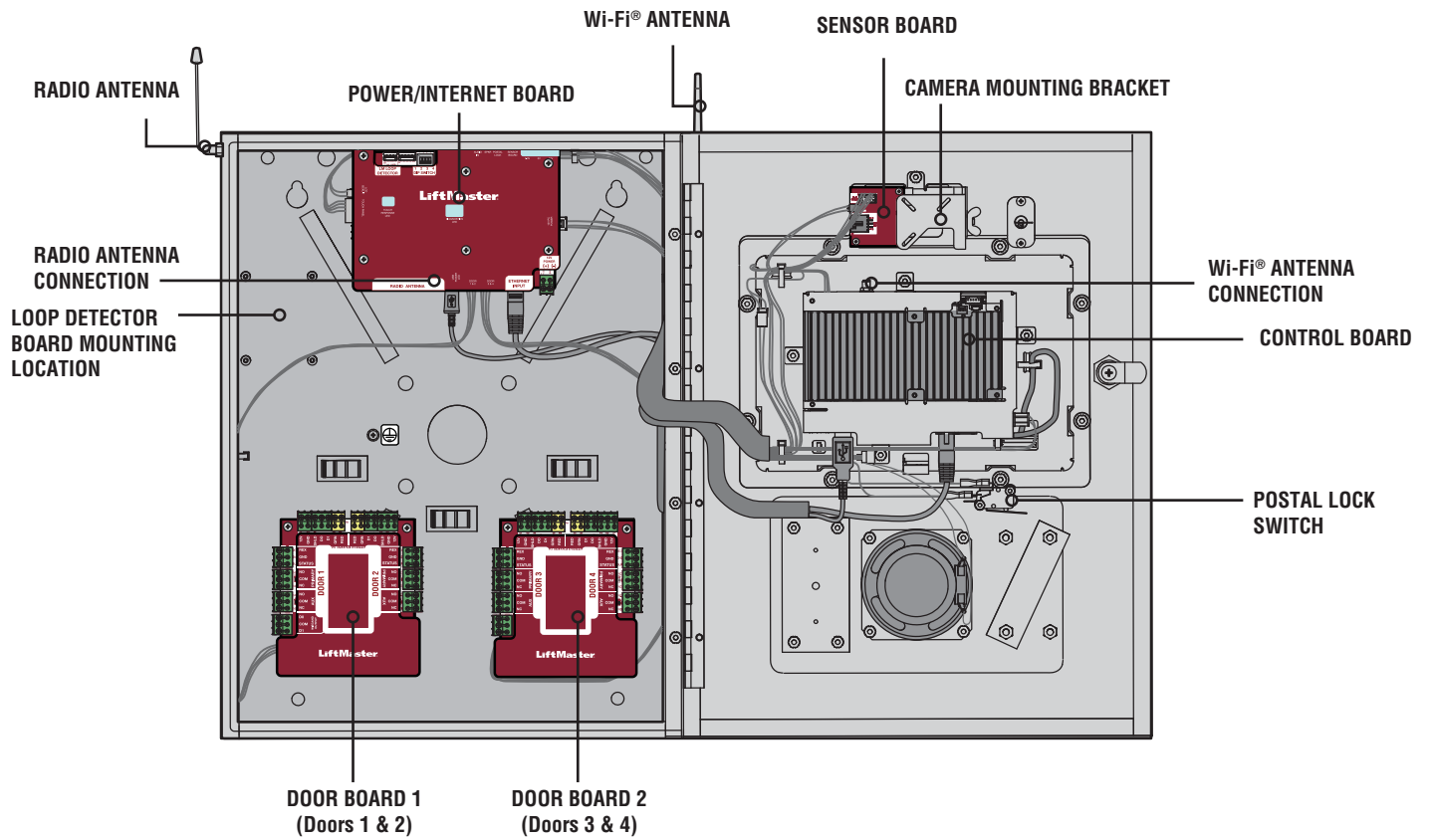


Flush Mount

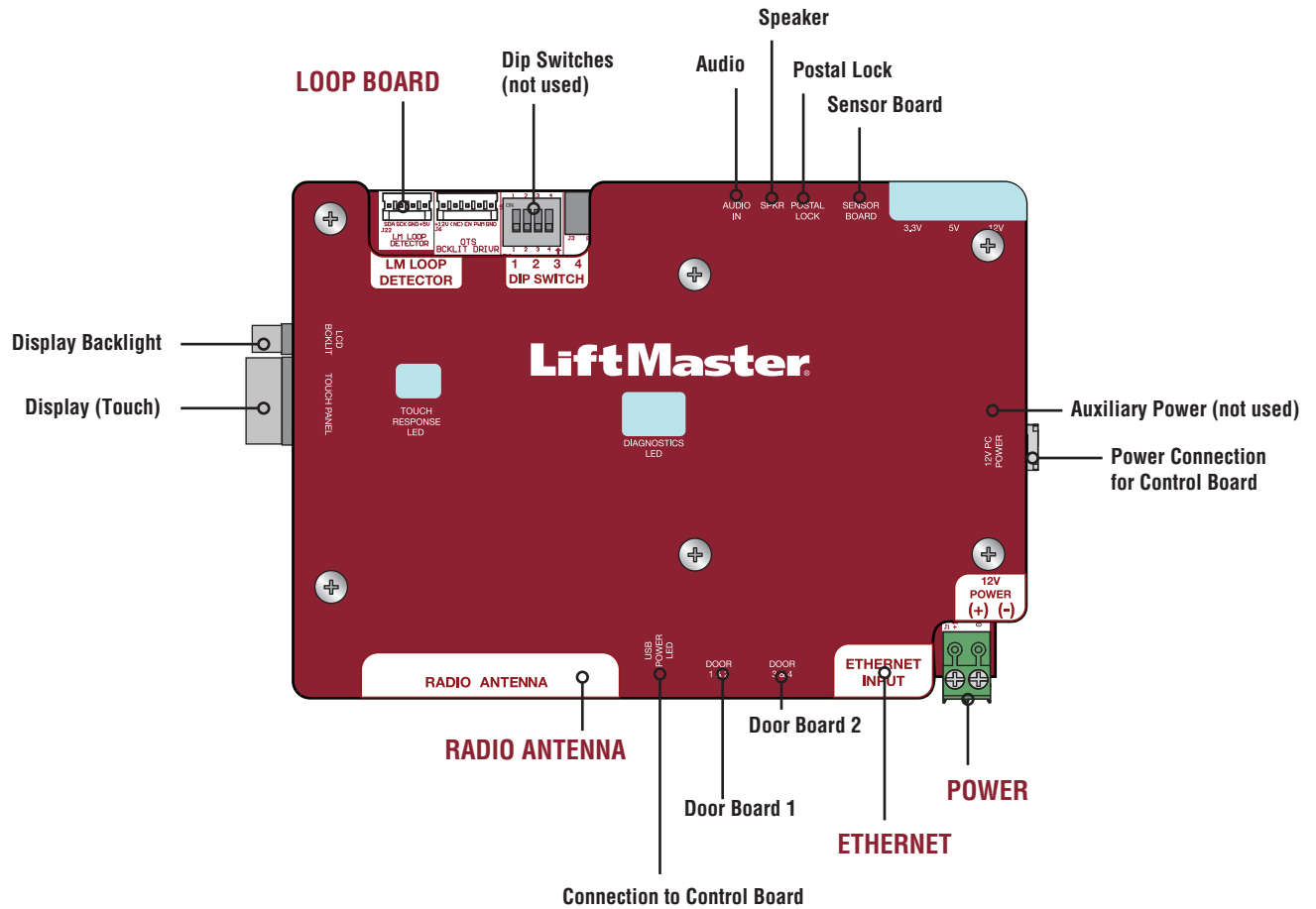
IMPORTANT: For flush mount applications it may be necessary to mount the antennas remotely. Optional antenna cable kits are available for remote antenna mounting (refer to accessories). Make sure you run the cables for the remote antennas before mounting the controller.



3 Controller Overview

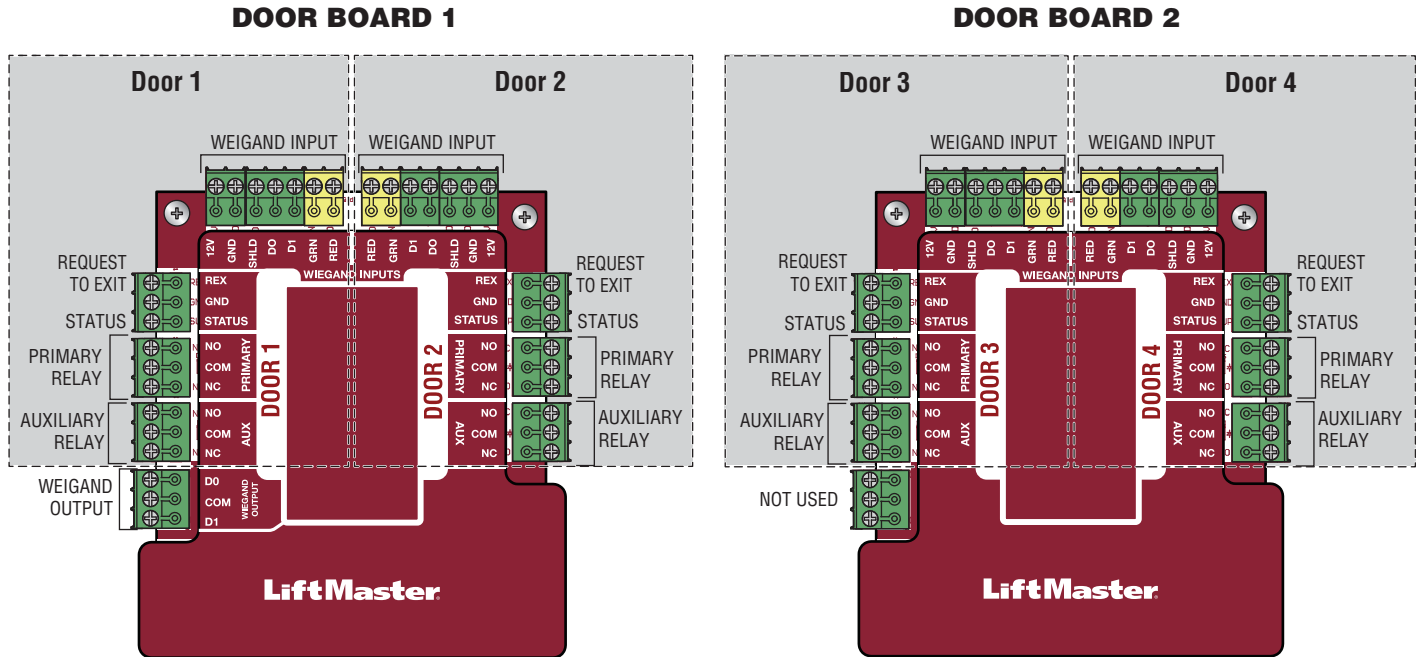


4 Power/Internet Board Overview



5 Door Board Overview

The ACXL 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, RFID Receiver, and Keypads
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	Gate Operators, Door Strikes, and Maglocks
Auxiliary Relay	Alarm Bypass, Maglocks, and Lights
Wiegand Output	26 Bit Access Granted Activity for integration with third party systems

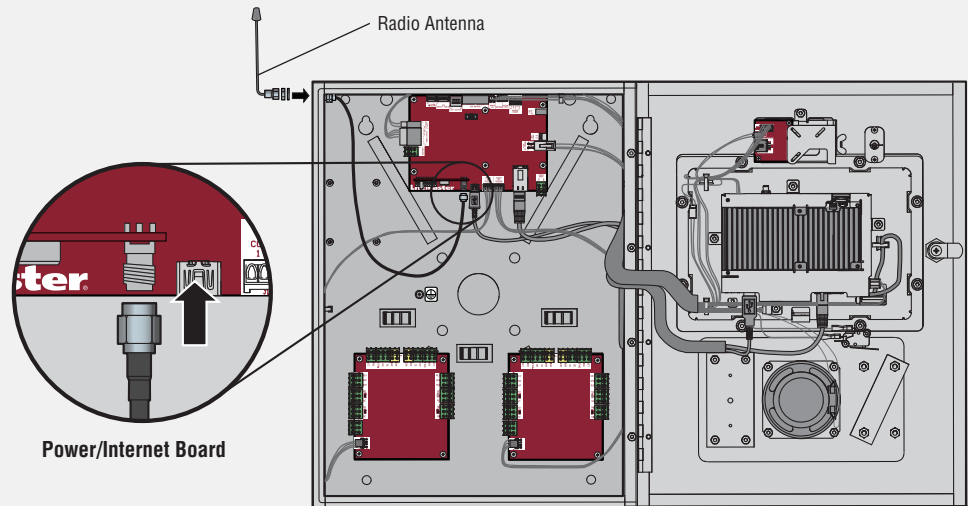
6 Install Antennas

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

Security+ 2.0® Radio Antenna (if applicable)

Used for transmitters and wireless gate communication.

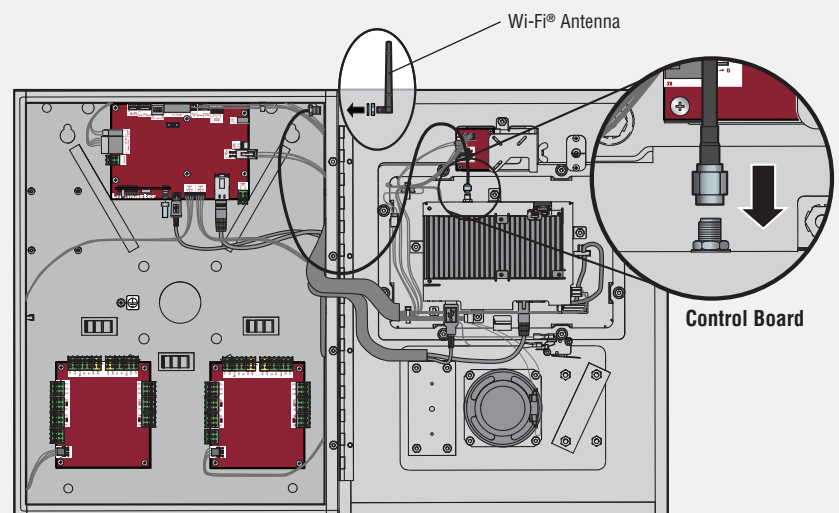
1. Secure the radio antenna to the desired knockout on the controller.
2. Connect the radio antenna cable to the Power/Internet Board as shown.



Wi-Fi® Antenna (if applicable)

Used for Wi-Fi® Internet.

1. Secure the Wi-Fi® antenna to the desired knockout on the controller with the provided gasket, washer, and nut.
2. Connect the Wi-Fi® antenna cable to the control board as shown.



7 Install the Ground

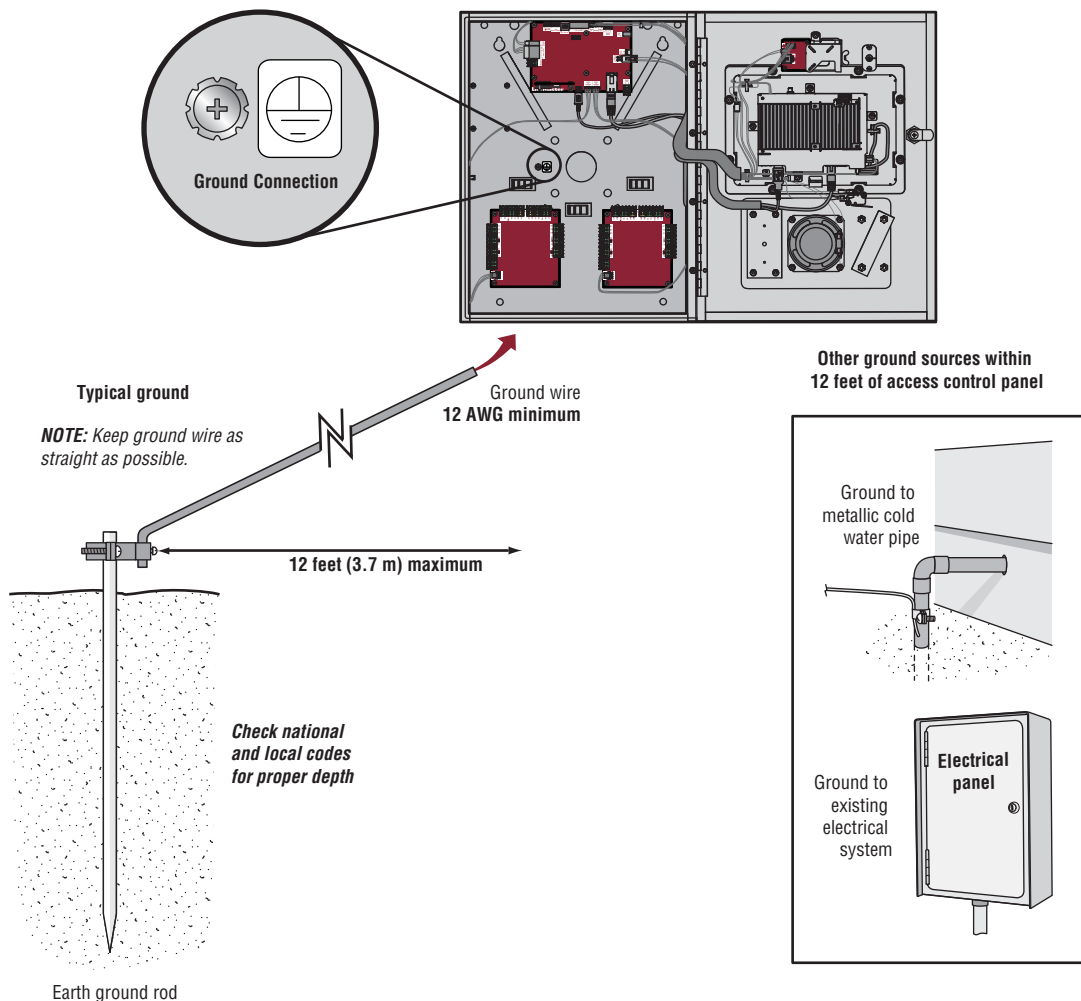
IMPORTANT: An earth ground rod is strongly recommended and should be no further than 12 feet (3.7 m) from the controller and use a minimum of 12 gauge wire in most cases. The type and length of earth ground rods vary by region. Contact the AHJ (Authority Having Jurisdiction) in the municipality where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

1. Connect the ground wire (12 AWG or larger) to the controller ground lug.
2. Run the wire from the controller to suitable earth ground.

NOTE: Shield connections on boards should not be connected to ground lug.

CAUTION

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



8 Connect Power

The outlet for the controller MUST be an external dedicated 120 Vac outlet located within 60 feet (18.3 m) cable run of the controller. This outlet should be wired back to its own 10 Amp minimum circuit breaker.

WIRE SPECIFICATION	MAXIMUM RUN DISTANCE
14 AWG	Up to 60 Feet (18.3 m)
16 AWG	Up to 37 Feet (11.3 m)
18 AWG	Up to 24 Feet (7.3 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 +12V 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 controller will display the LiftMaster logo while booting up. When boot up is complete, the user interface will appear.

5. Close the controller door.

CAUTION

- DO NOT use ANY power supply other than those supplied with your controller.
- 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 controller. 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 controller for AC powered devices and Diode for DC powered devices.

