

StrongArmPark

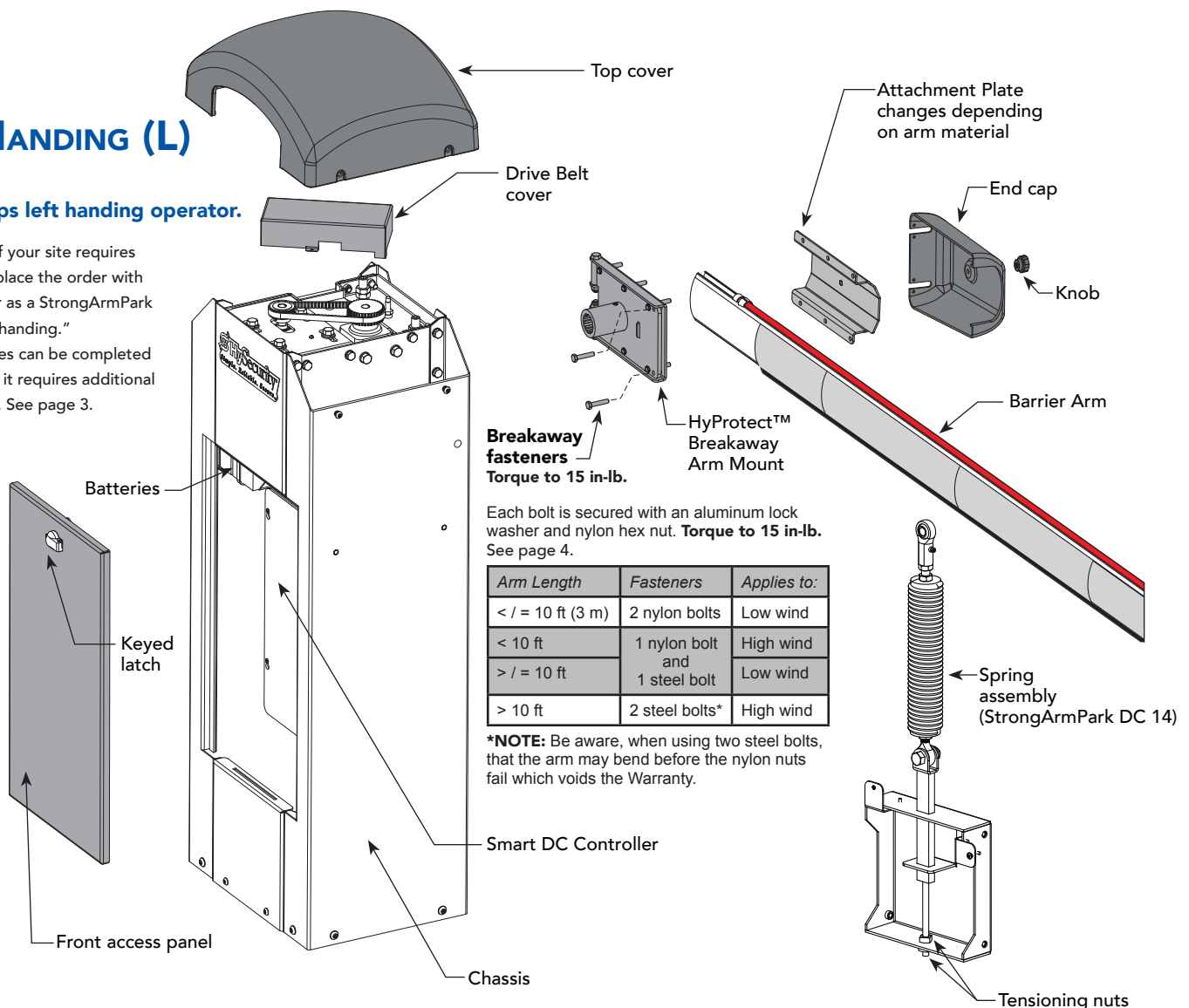
QUICK START STEPS

LEFT HANDING (L)

Standard.

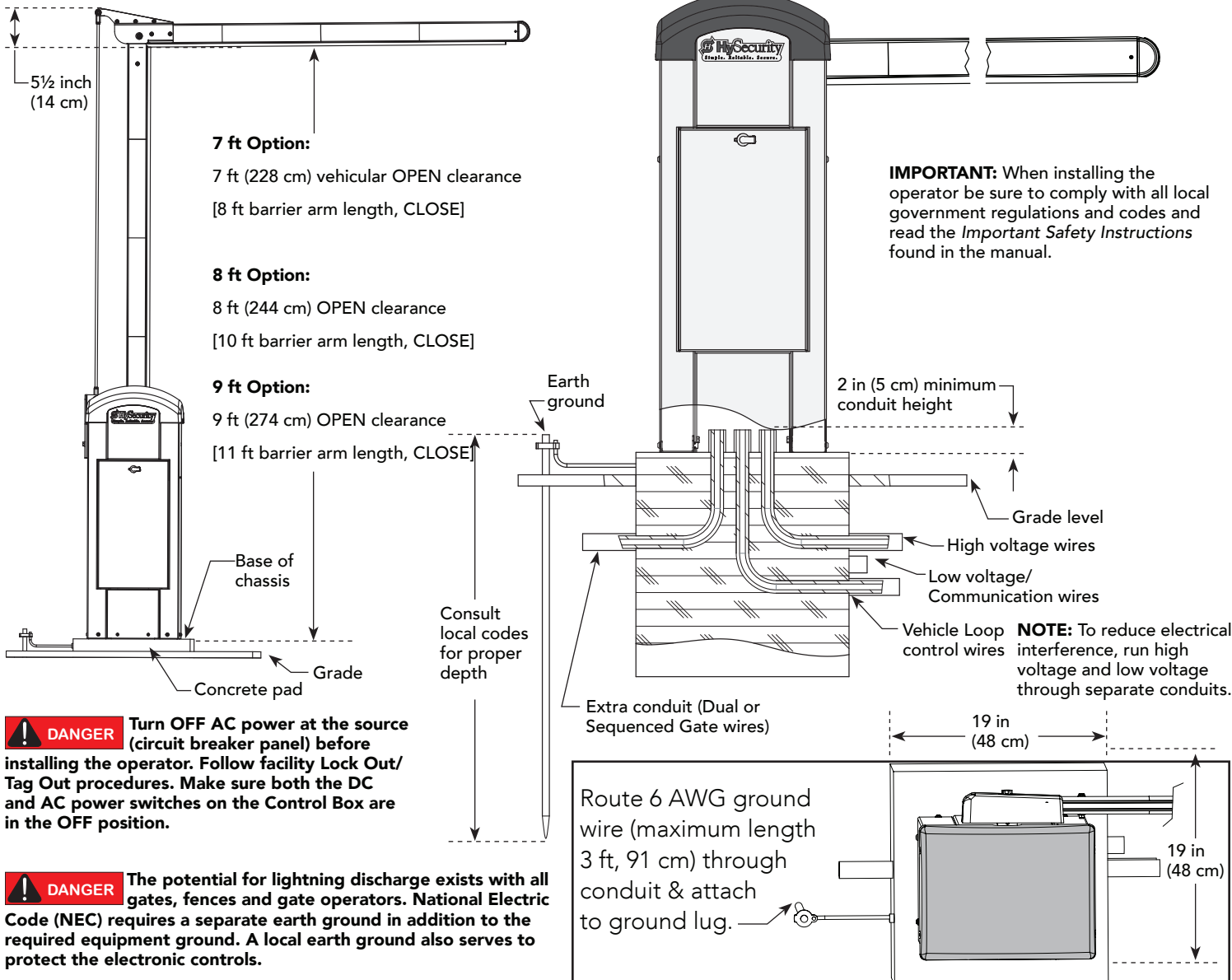
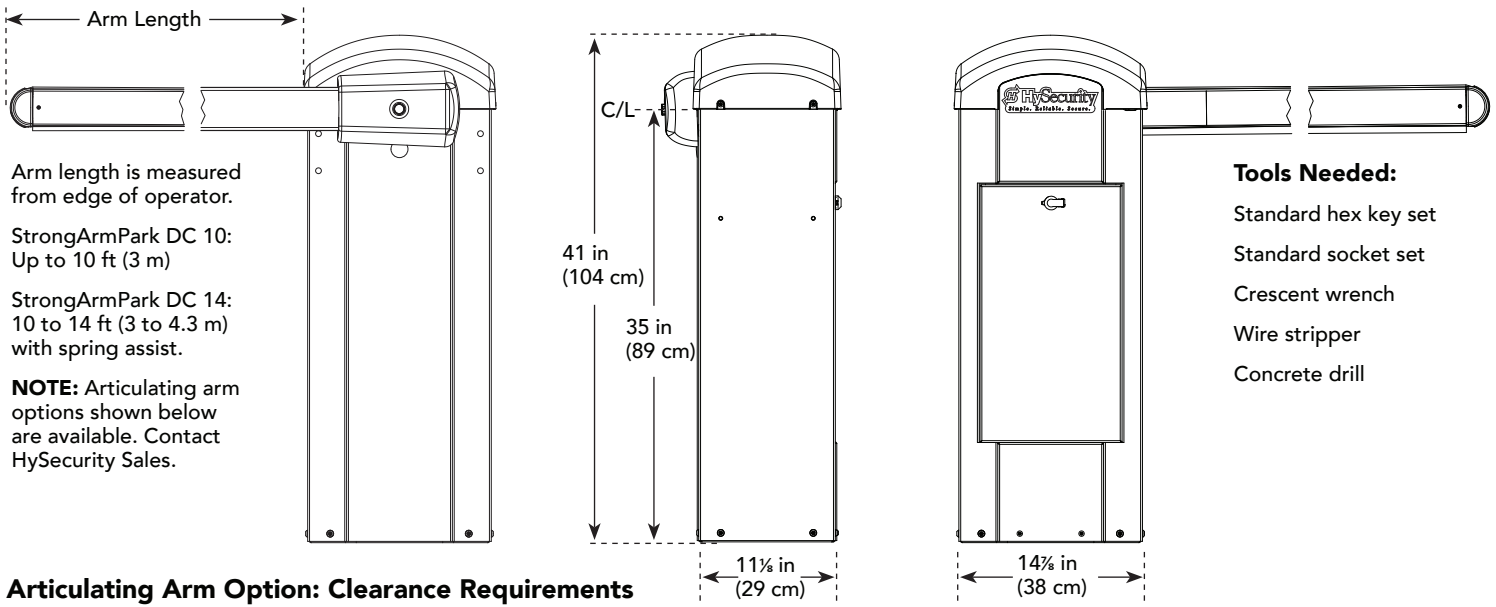
Factory ships left handing operator.

NOTE: If your site requires right handing, place the order with your distributor as a StrongArmPark DC with "right handing." Handing changes can be completed in the field, but it requires additional time and effort. See page 3.



**UNPACK
THE OPERATOR**

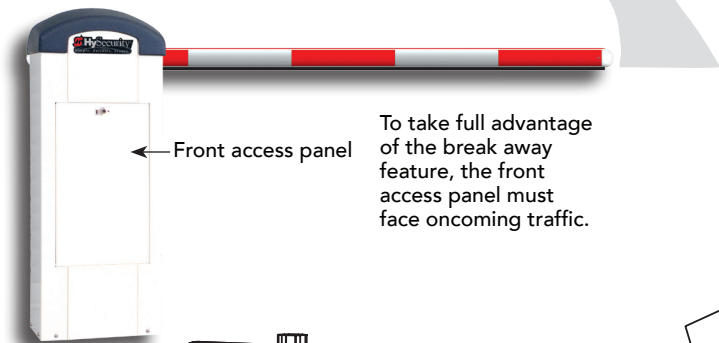
1 SITE PLANNING & OPERATOR INSTALLATION



2 REVIEW HANDING AND INSTALL THE CHASSIS

LEFT HANDING (L) Standard, Factory Default

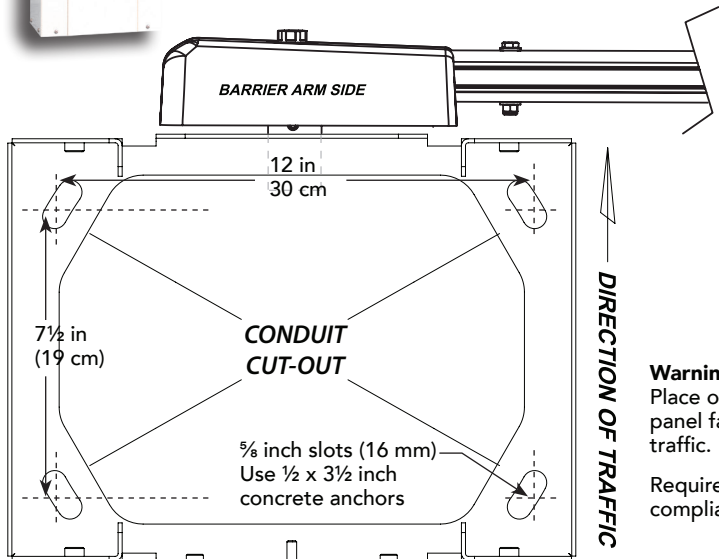
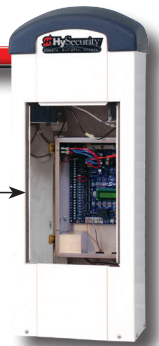
RIGHT HANDING (R)



Changes to operator handing in the field, must also be addressed in the Installer Menu.



Smart DC Controller



StrongArmPark DC14 Mounting Template

CUT OUT MOUNTING TEMPLATE

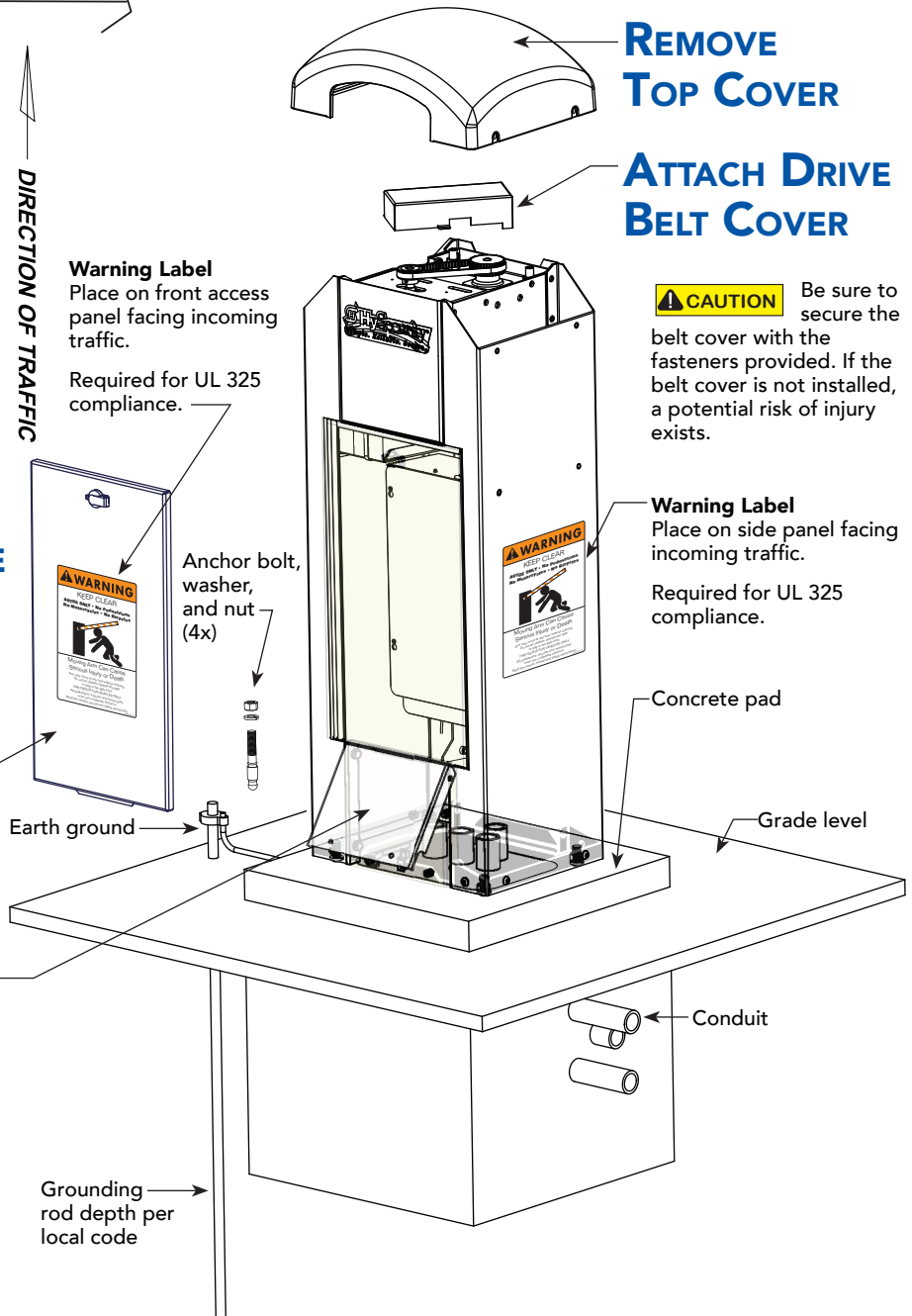
Cut out the base template on the shipping box and use it to mark the mounting locations on the concrete pad.

INSTALL THE CHASSIS

Remove front access panel.

To easily access and wrench-tighten the anchor bolts, swing the base panel open (or remove it).

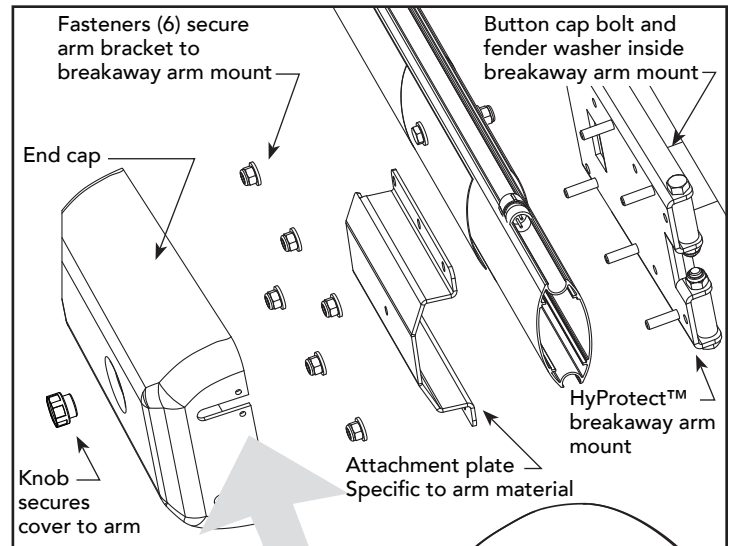
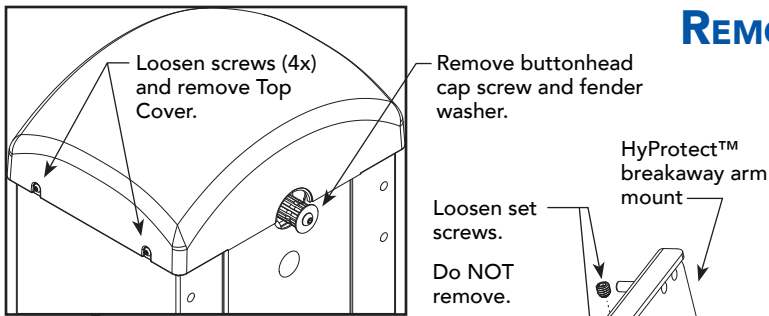
NOTE: The spring tension on StrongArmPark DC14, should be adjusted BEFORE fastening the operator to the concrete pad. The proximity of the conduit to the adjustment nut at the base of the spring makes it difficult to wrench-tighten.



3 INSTALL THE BARRIER ARM

REMOVE CAP SCREW, LOOSEN SET SCREWS

1. Use a 7/32-inch hex key to remove the button head cap screw and fender washer.
2. Loosen the set screws in the breakaway arm mount using a 5/32-inch hex key.
3. Loosen 4 cap screws and remove the top cover.



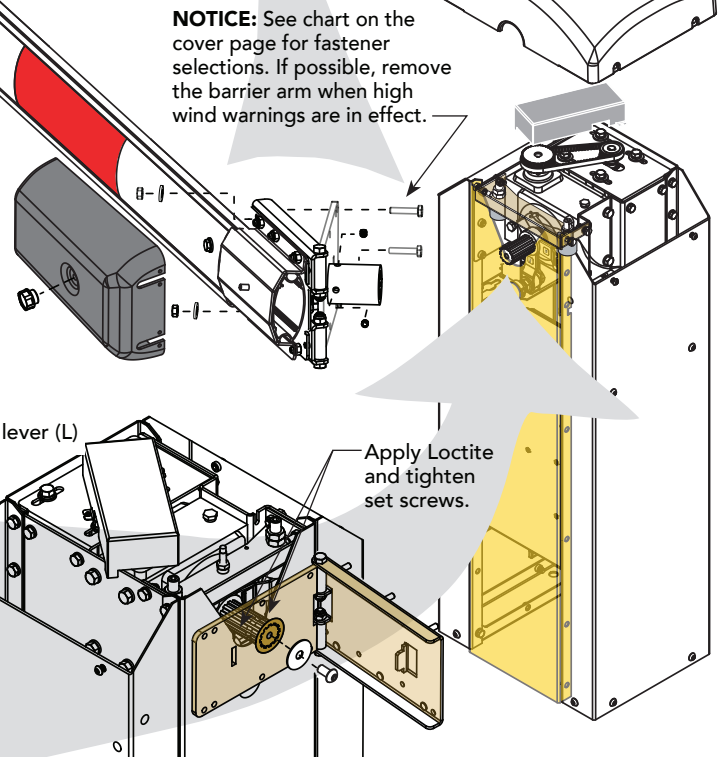
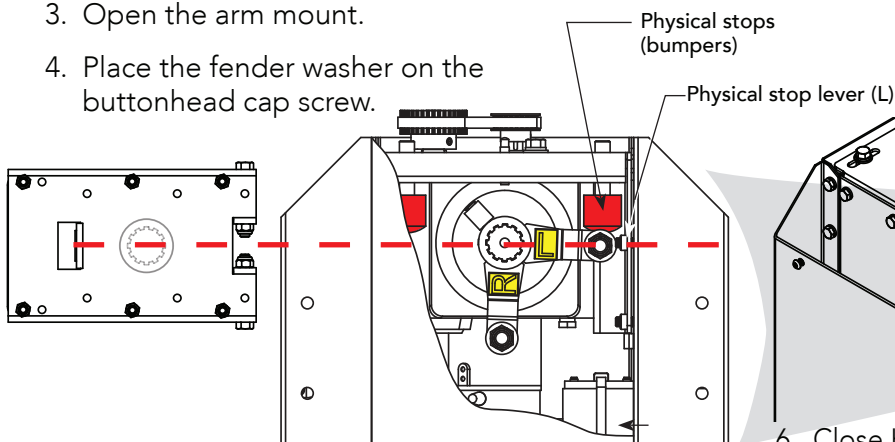
INSTALL THE HYPROTECT™ BREAKAWAY ARM MOUNT

LEFT HAND OPERATOR (SHOWN)

Standard shipment is L (left handing)

NOTE: For articulating arm assembly, see the instructions that accompany the arm package.

1. Hold the HyProtect breakaway arm mount so it is parallel to the physical stop lever, oriented to operator handing.
2. Align the splines and slide the arm mount so it contacts the physical stop lever.
3. Open the arm mount.
4. Place the fender washer on the buttonhead cap screw.



5. Apply Loctite® 242 blue to threads of buttonhead cap screw and the 2 set screws. Securely tighten all 3 fasteners.
6. Close HyProtect™ mount and insert two fasteners. To determine which fasteners to use, refer to the chart on the cover page. Secure using the supplied washers and nuts.
7. Continue arm assembly.

4 VERIFY POWER IS OFF, AND THEN CONNECT AC WIRES

TURN POWER OFF



DANGER Turn OFF AC power at the source (circuit breaker panel) before accessing the wires in the junction box. Follow facility Lock Out/Tag out procedures. Make sure both the DC and AC power switches are in the OFF position.

DC power switch disconnects motor and battery.

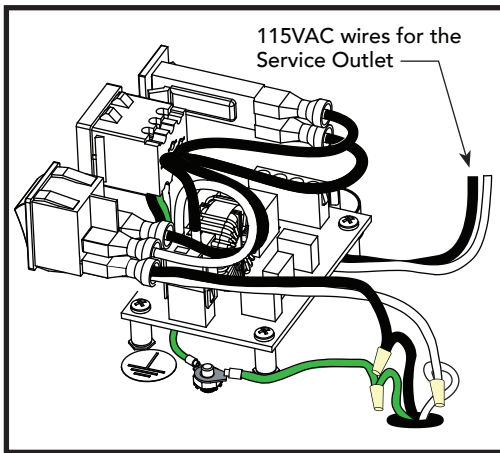
Place the power switches in the OFF position.

AC power switch disconnects incoming AC power to the operator.

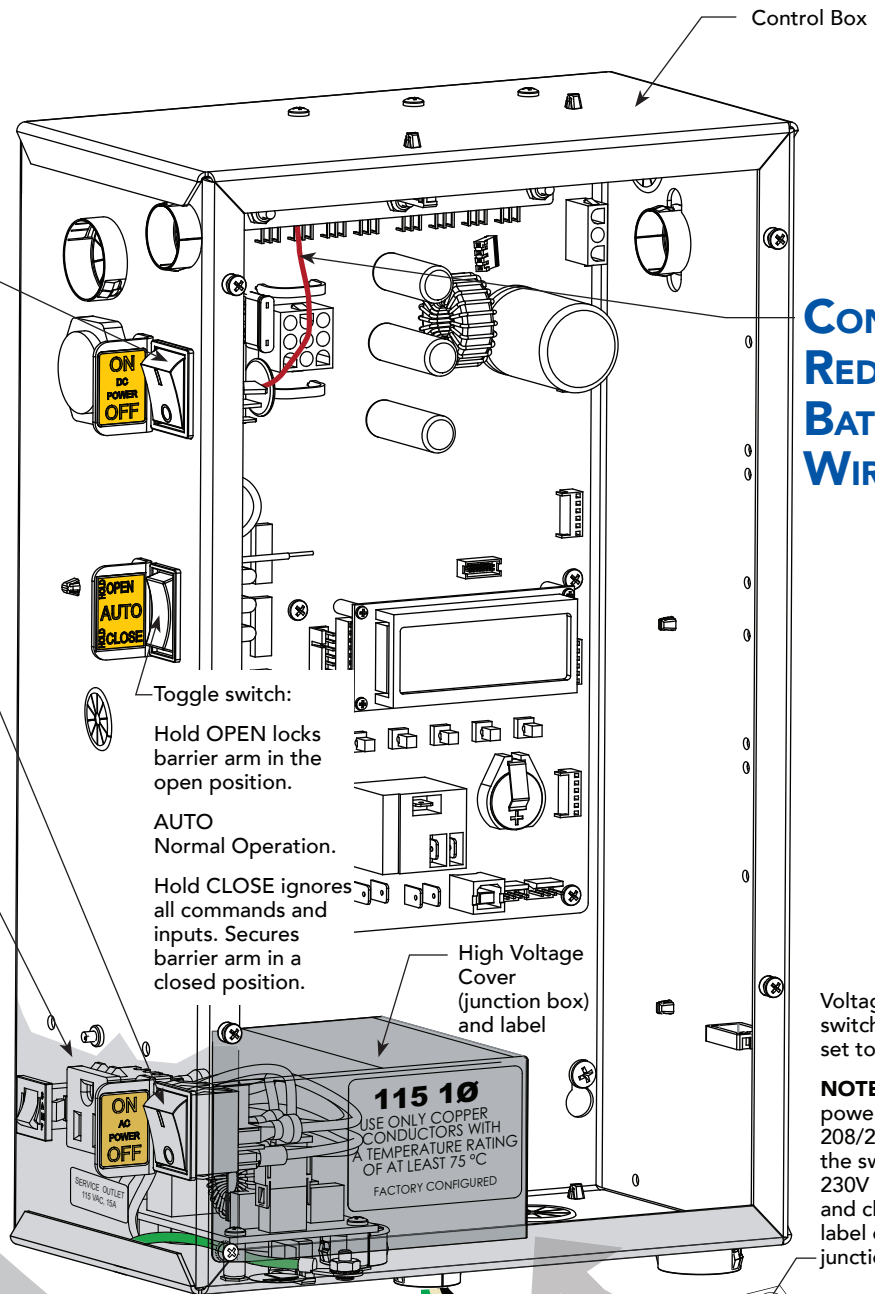


WARNING DO NOT connect the 115VAC service outlet to 208 or 230VAC power supply wires! To use the 115VAC service outlet on a 208 or 230VAC installation, the electrician needs to run an extra neutral wire to the operator from the power source and wire the service outlet per code.

Service Outlet
115VAC only



115VAC wires for the
Service Outlet



**CONNECT
RED
BATTERY
WIRE**

Toggle switch:

Hold OPEN locks barrier arm in the open position.

AUTO
Normal Operation.

Hold CLOSE ignores all commands and inputs. Secures barrier arm in a closed position.

High Voltage
Cover
(junction box)
and label

Voltage selector switch is factory set to 115V.

NOTE: If power input is 208/230V, move the switch so 230V appears and change the label on the junction box.

CONNECT AC POWER WIRING

1. Unscrew the two Phillips-head screws and remove the high voltage cover.
2. Connect the AC power and ground wires with wire nuts. If running 115VAC, also connect the Service Outlet wires.
3. Replace high voltage cover and secure with screws removed in step 1.



CAUTION Wiring of gate operators must conform to NEC standards and comply with all local codes.



CAUTION When connecting to 208/230VAC power, the voltage selector switch on the AC power board must be moved to the 230V position or damage to the operator will occur and void the Warranty. The label on the high voltage cover must be changed to state 230V.

5 CONNECT ACCESSORIES

All accessories require a minimum of two connections on the Smart DC Controller:

- ♦ A device input
- ♦ A Common Bus Terminal (COM)

NOTE: Other devices may require more connections or configurations. For example, the Fire Department (EMERG OPEN) input requires a +24 volt input. The connection must be activated by changing the setting through the Installer Menu. UL 325 - 2016 updates describing installation of external entrapment protection sensors can be found the *Programming & Operations Manual*.

NOTE: Smart DC Controller, Rev F shown without the 24VAC.

Two power supplies (2 terminals each) are available for peripheral connections:

24VDC & 12VDC

NOTE: Each power supply (and its corresponding terminals) can be used in any combination to draw the available 1A maximum.

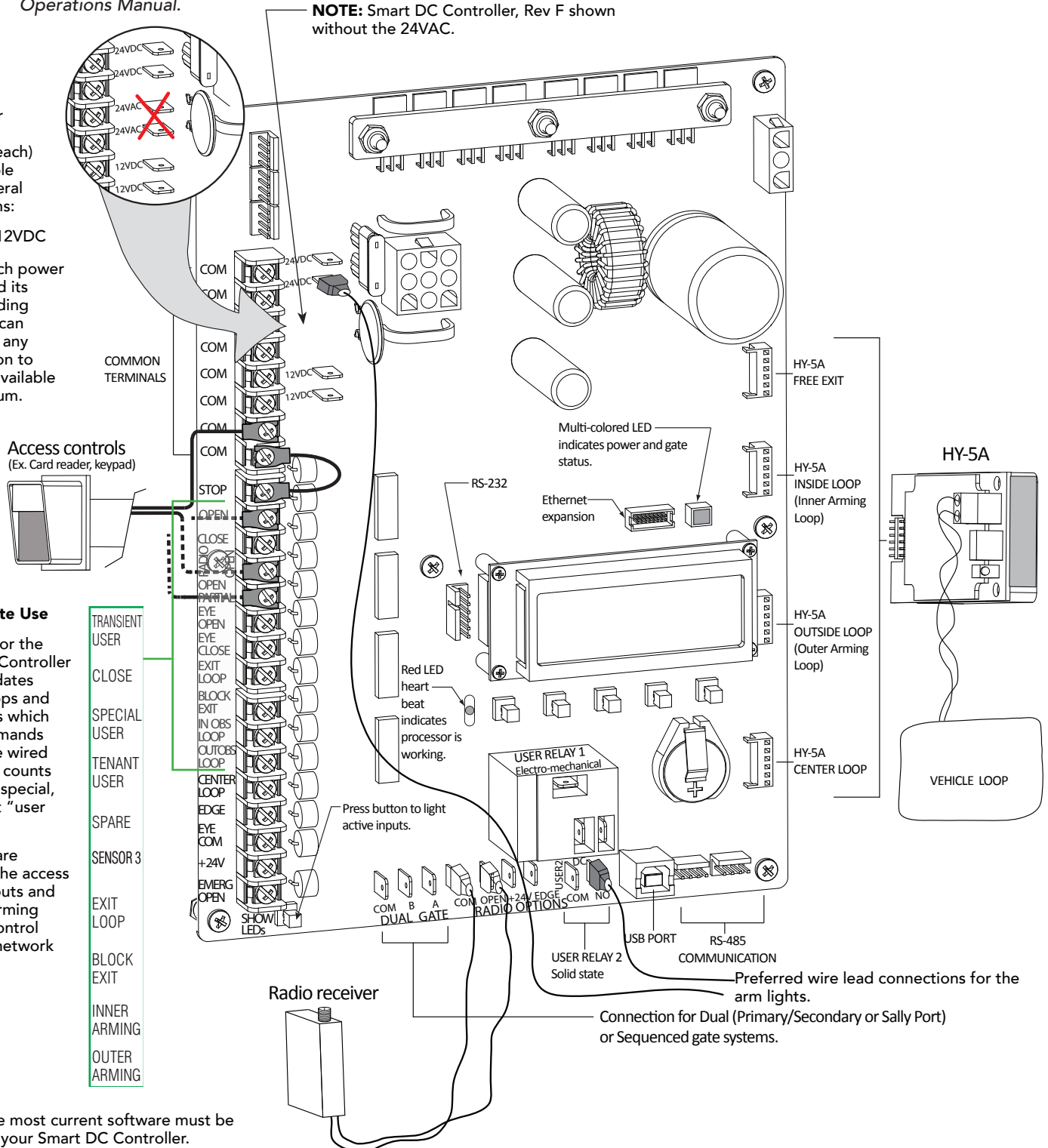
Access controls
(Ex. Card reader, keypad)

Parking Site Use

The label for the Smart DC Controller accommodates arming loops and establishes which open commands need to be wired for vehicle counts (transient, special, and tenant "user types").

The software identifies the access control inputs and uses the arming loops to control relay and network outputs.

TRANSIENT USER
CLOSE
SPECIAL USER
TENANT USER
SPARE
SENSOR 3
EXIT LOOP
BLOCK EXIT
INNER ARMING
OUTER ARMING



NOTE: The most current software must be loaded on your Smart DC Controller.

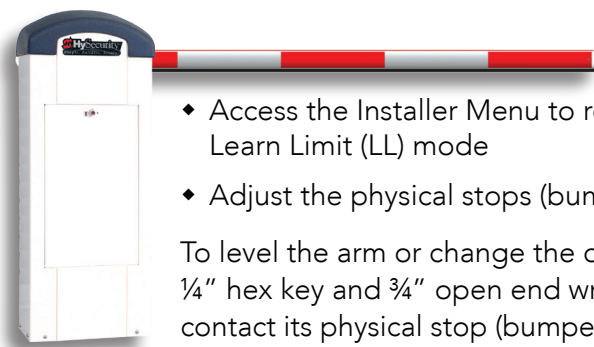
6 TURN ON POWER, LEVEL ARM & CONNECT LIGHTS

When both DC & AC power switches are in the OFF position and you turn them ON, the operator initiates a target search and the barrier arm travels open. No physical limit switches exist. The open and close limits are established by sensing the arm position. Even if AC power is lost and the batteries are fully drained, the limits remain intact. The only exception occurs when factory defaults are reinstated or the Smart DC Controller is replaced.

For more information, refer to the *StrongArmPark DC Programming and Operations Manual*.

LEVEL THE ARM & ADJUST PHYSICAL STOPS

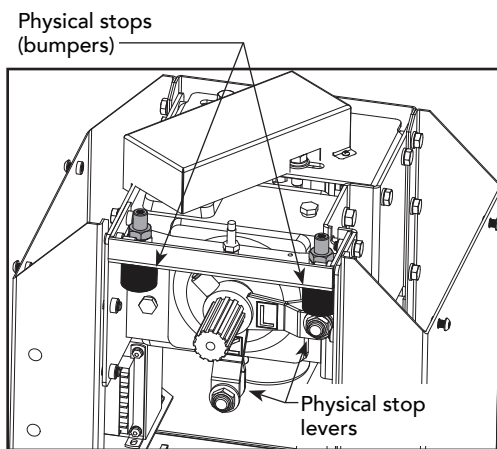
The limits are factory set at 90° and, if adjustments are needed, level the arm using the following procedures:



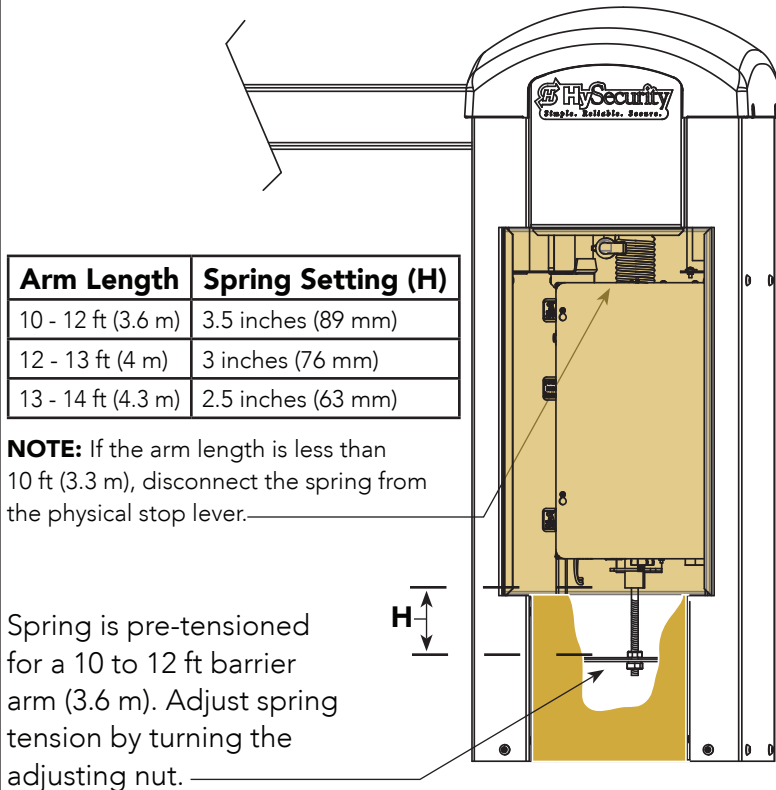
- ♦ Access the Installer Menu to re-establish Learn Limit (LL) mode
- ♦ Adjust the physical stops (bumpers)

To level the arm or change the degree of angle, bumpers can be adjusted up or down using a ¼" hex key and ¾" open end wrench. At full Open or Close, the physical stop lever should lightly contact its physical stop (bumper).

To make adjustments to the arm position, the operator needs to be in Learn Limits mode.



Setting the Spring on the StrongArmPark DC 14



NOTE: If you need to change a StrongArmPark DC 14 handing in the field, it requires moving the spring's eyebolt to the opposite physical stop lever. Refer to *StrongArmPark DC Programming and Operations Manual*.

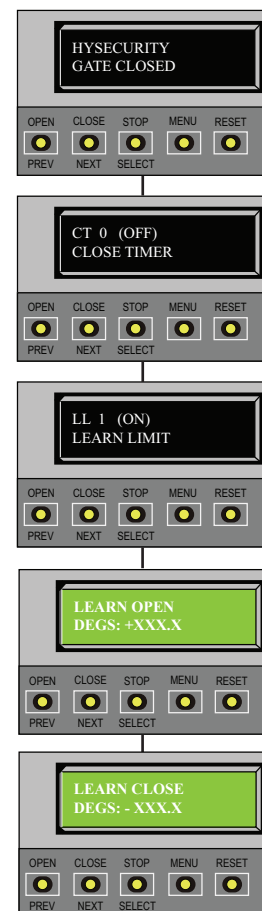
LEARN LIMITS MODE

Establish limit settings.

1. Start at a gate status display.
2. Press MENU, twice.
3. At the CLOSE TIMER display, simultaneously press and release the OPEN and RESET buttons.
4. At the LL 0 display, press SELECT and change the display to 1 using the NEXT button. Press SELECT again and the LEARN OPEN display appears.
5. Hold the OPEN button until the arm reaches the desired open limit. Release the OPEN button.

NOTE: Too far open or close? Press the opposing function button to reverse direction.

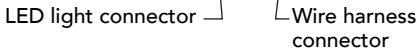
6. To preserve the limit setting, press STOP twice. LEARN CLOSE appears on the display.
7. Hold the CLOSE button until the arm travels to full close. Release the CLOSE button.
8. To preserve, press STOP twice.
9. Cycle the operator (Open/Close) several times.
10. If needed, adjust the bumpers so they contact the levers.



7

1. Make sure both AC and DC power switches are turned OFF.
2. Insert leads of wire harness through the hole in chassis. Feed the cable through the interior of the chassis, as shown. Pull enough cable to reach the Smart DC Controller terminals.

Feed cable through the Chassis



Secure cable with strain relief bushing.—

3. Attach the end of the wire harness (on outside of chassis) to the LED light connector on the arm. The wire harness connector is keyed. Be sure to properly seat the connectors before threading close.
4. Secure the harness to the chassis with the strain relief bushing.
5. Connect the one wire lead to the **24VDC** power supply terminal.
6. Connect the other wire lead to the NO terminal on User 2 Relay.
7. Turn on both AC and DC power switches. Arm will cycle to search for the target home position.
8. When the arm has stopped moving, access the Installer Menu.
9. Set User Relay 2 logic function to one of the following:
 - R2 "27": LED lights remain on throughout arm travel and turn off when open limit is reached.
 - R2 "28": LED lights flash throughout arm travel and turn off when open limit is reached.

CAUTION

COMPLETE THE INSTALL

- Refer to the installation manual to configure User and Installer Menu options such as gate speed, Close Timer, relay functionality, etc.
- When the operator is functioning properly, replace the operator's covers and secure the key latch.
- Review the *Important Safety Instructions* and the proper use of the barrier arm with the end user.
- Position WARNING labels per UL 325. Take photos of the barrier arm installation site.



Configure the Installer Menu: Relay 2 Logic