

UltraQ-AMT

Installation Instructions

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Please read this entire manual before installing or operating the product.



Safety Icons

The following symbols are used throughout the manual to highlight important information and potential risks when installing, servicing or using the turnstiles covered in this manual.

**WARNING**

This symbol is used in this manual to warn installers and operators of potential harm. Please read these instructions very carefully.

**CAUTION**

This symbol is used in this manual to designate potential conditions that may pose a risk to pedestrians, personnel, property and equipment. Please read these instructions very carefully.

**NOTE**

This symbol is used in this manual to designate useful information for the installer and operator. Please read these instructions.



For questions, please contact Alvarado at (909) 591-8431, Monday – Friday 7:00am to 4:00pm PST. Please read this manual completely before installing or operating the purchased product.

Safety Precautions

**WARNING**

- Use only skilled individuals to install and service the turnstile.
- The turnstile is not a toy. Do not allow children to play on or near the turnstile.
- Follow a proper maintenance schedule using skilled individuals.
- Do not operate the turnstile if it has been damaged, or is functioning incorrectly, in any manner. Have the turnstile repaired by a skilled service person before placing back in use.
- Do not modify or alter the turnstile.
- Use only Alvarado parts when repairing or maintaining the turnstile.
- Ensure that patrons are supervised when using the turnstiles.
- Test the turnstile(s) daily, or prior to each event, to ensure proper functionality.

SAVE THESE INSTRUCTIONS

Upon completion of the installation process, it is the installer's responsibility to provide the project or site manager with these Installation Instructions and the Operation and Maintenance Instructions.

**Tools Required (Fixed Turnstile Installation)**

- Socket Wrench
- Hammer Drill
- 5/8" Concrete Drill Bit
- Shop Vac
- 3/32" Hex Key
- 5/32" Hex Key
- 3/8" Deep Nut Driver
- #1 Phillips Head Screwdriver
- Precision Flat Head Screwdriver
- Torque Wrench (ft-lbs)
- 9/16" Deep Socket
- Hammer
- Clear RTV Silicone

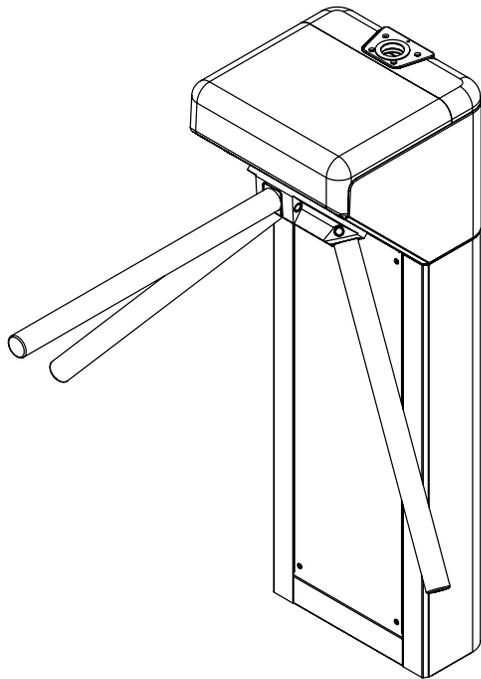
NOTE

Tools required for installing devices with portable bases are located in the *Appendix A - Portable Base Turnstile* section on page 28.

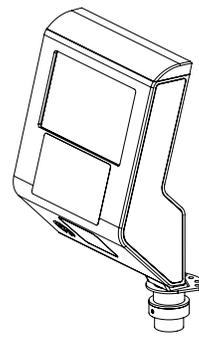


Parts List

This product is shipped with installation hardware. Make sure that no parts are missing or damaged before beginning installation. If parts are missing or damaged, please stop the installation and contact Alvarado.

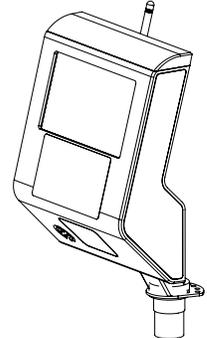


AMT Turnstile



Hardwired UltraQ Head
(Qty. 1)

OR



Wireless UltraQ Head
(Qty. 1)

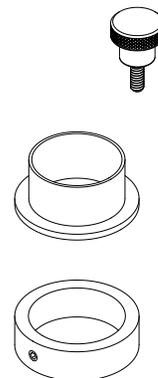
Concrete Anchor Kit
(1x per Turnstile)



x4

Each crate contains the
anchoring hardware for that
crate's contents.

UltraQ Mounting Kit
(1x per UltraQ Head)



Each UltraQ box includes its
own mounting kit.



Overview

This manual covers the physical installation process for UltraQ-AMT Intelligent Admission Turnstiles. At the end of this process, you will be able to power up the turnstile and perform a basic functions check to validate certain aspects of operation.

Power

The turnstile is powered in one of three ways:

- Primary power - Primary power is run to the turnstile location via conduit and connected to terminal block located inside the turnstile cabinet. Applicable to fixed installations only.
- AC outlet - The turnstile is connected to an AC outlet using an exterior mounted AC inlet and extension cord. Applicable to portable installations only.
- Rechargeable battery - The battery is charged by connecting to an AC outlet using an exterior mounted AC inlet and extension cord. Applicable to portable installations only.

Before you begin, understand how your turnstiles will be powered. This manual focuses on primary power connection for the basis of instruction. Instructions on AC outlet and battery connections can be found in the Appendices.

Communication

Alvarado's Motorized Intelligent Admission Turnstiles are networked devices that communicate with the validation server using wired or wireless TCP/IP. How a turnstile communicates with the network (wired or wireless) is dependent on the options specified during the ordering process and the type of network used at the host facility. The turnstile will ship pre-configured with any network settings provided to Alvarado during the ordering process.

When powered up, the turnstile should automatically connect to the server (provided the server is online). Network configuration and troubleshooting is outside the scope of this manual. If you require additional information or instruction, seek direction from your network administrator or project manager.

Installation Steps

Fixed Installation

1. Remove AMT from wood base.
2. Anchor the turnstile to the concrete slab.
3. Connect primary power.
4. Connect cables that interconnect the turnstile and UltraQ unit.
5. Connect the Ethernet cable for network communication (if applicable).
6. Mount the UltraQ unit to the turnstile lid.
7. Inspect installation.
8. Perform a post-installation functions check.
9. Hand off instruction manuals to the project or site manager.

Portable Installation

1. Remove AMT from wood base.
2. Attach AMT to platform.
3. Install the guide rail to the portable base plate.
4. Connect cables that interconnect the turnstile and UltraQ unit.
5. Connect the Ethernet cable for network communication (if applicable).
6. Mount the UltraQ unit to the turnstile lid.
7. Inspect installation.
8. Wire Neutrik connector to AC power cord (AC power cord not supplied by Alvarado).
9. Connect to an AC power source.
10. Perform a post-installation functions check.
11. Hand off instruction manuals to the project or site manager.



Before You Begin

Depending on whether you are installing fixed or portable turnstiles, certain sections of this manual may not be applicable to your installation.

- For fixed turnstile installations, proceed to the *Site Preparation* section on page 7.
- For portable turnstile installations, proceed to *Appendix A - Portable Base Turnstile* on page 24.

Site Preparation

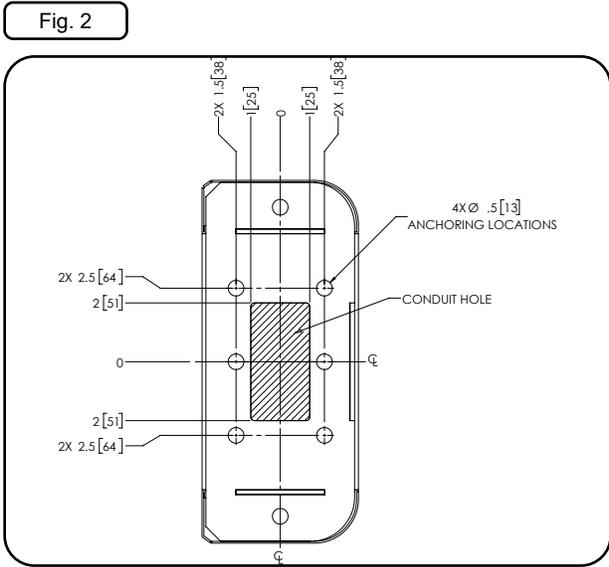
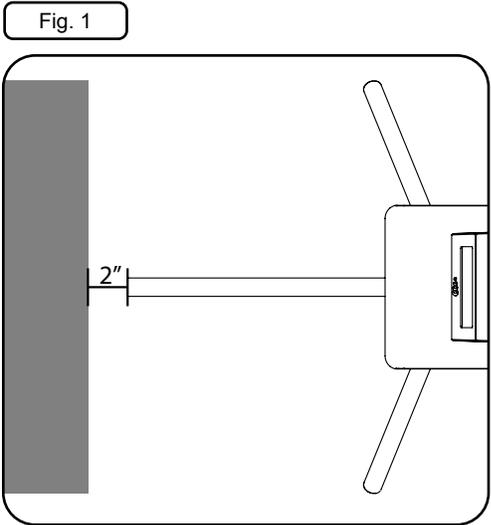
Use only skilled technicians for site preparation and installation of the turnstile using Alvarado’s instructions. Refer to the footprint and plan drawings [Fig. 1] & [Fig. 2] to determine the installation location and conduit requirements. See Appendix A - Portable Base Turnstile section on page 28 for footprint and plan drawings for the Portable Base Turnstile.

Slab Requirements

- Use a level, solid concrete pad with minimum size of 3' x 3' and a minimum thickness of 4" (101.5mm).
- Do not install the turnstile on asphalt.

Space & Conduit Requirements

- There must 2" (50.8mm) of clearance between the turnstile arm and the adjacent turnstile or barrier [Fig. 1].
- Stub up conduit in accordance with local electrical codes.
- Always verify the layout of the turnstile(s) before installation.





Space & Conduit Requirements (cont.)

Fig. 3

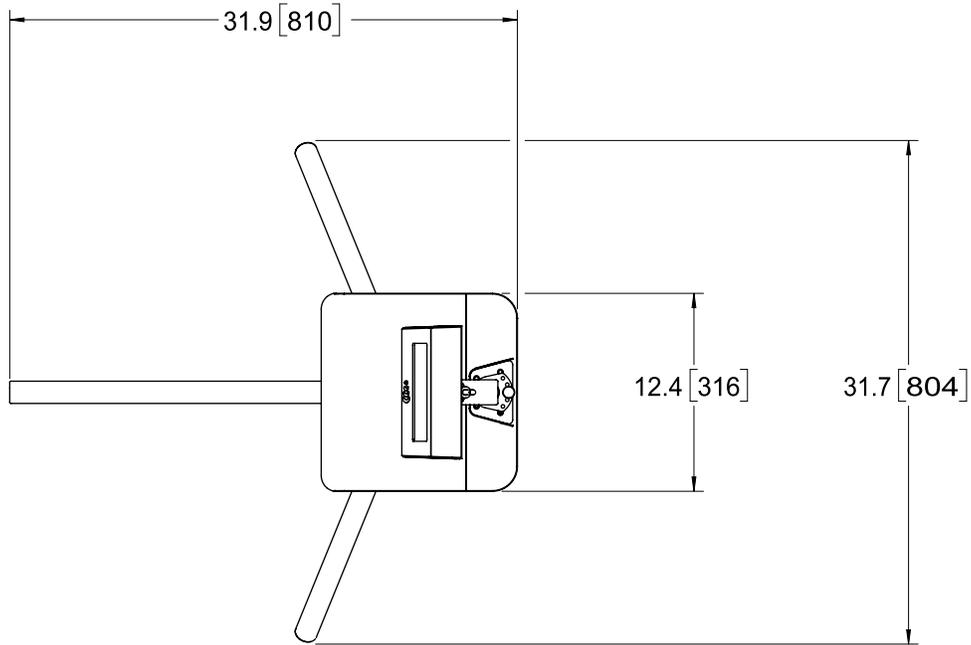
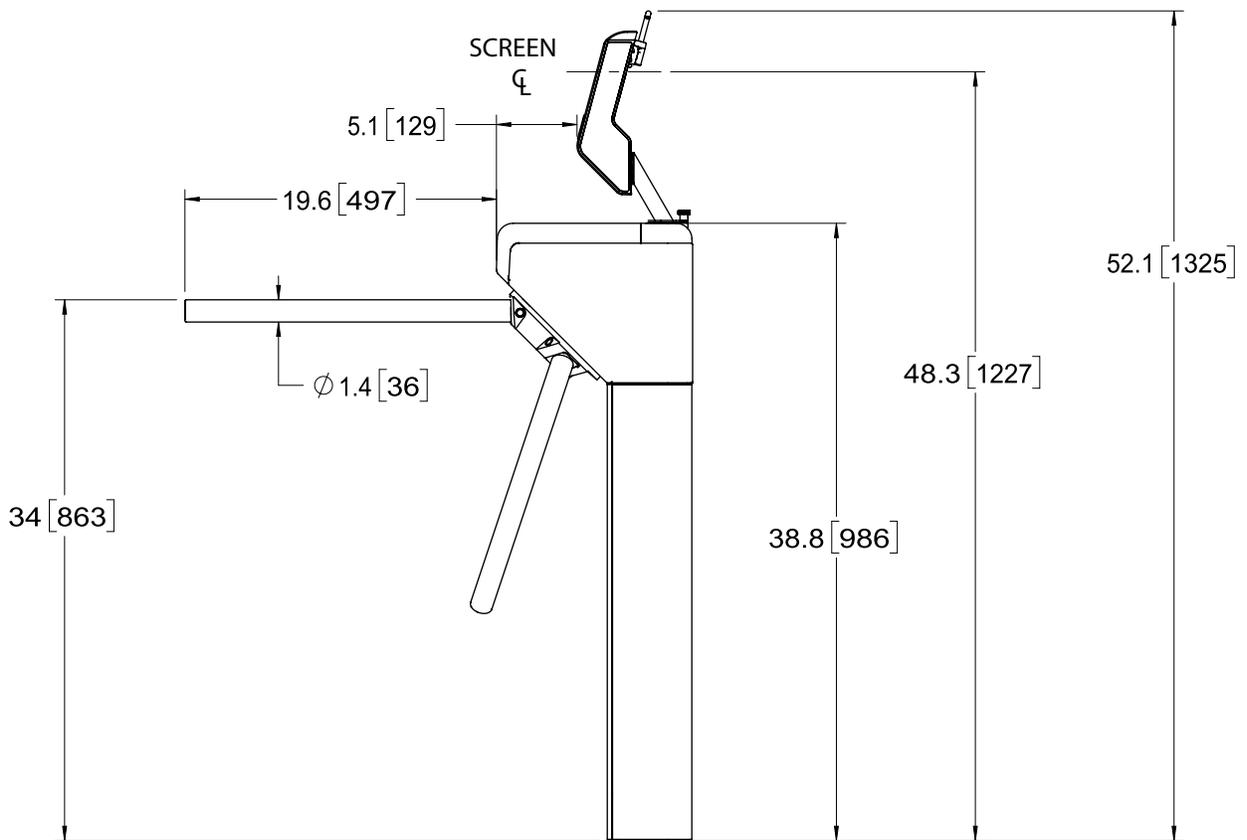


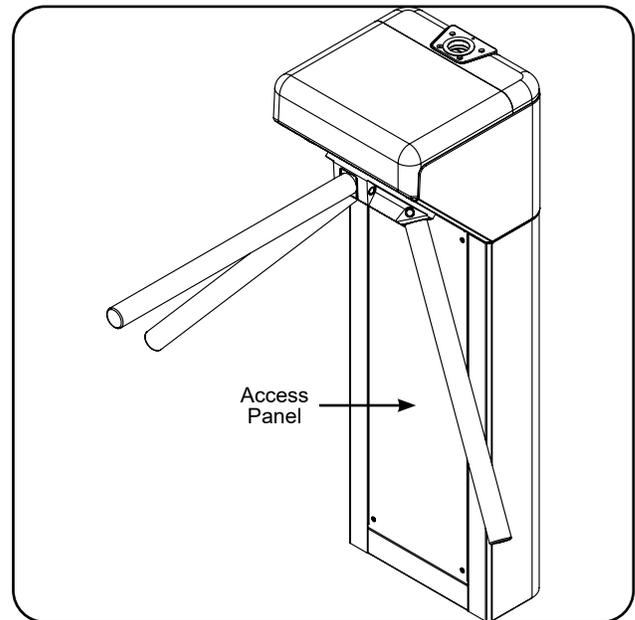
Fig. 4



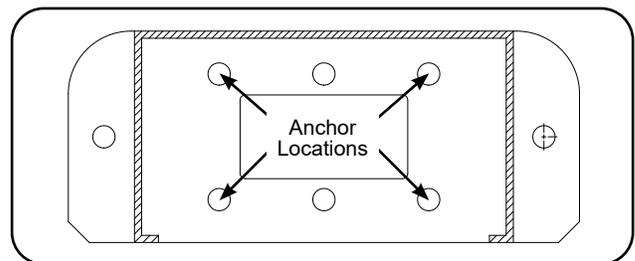


Anchoring the Turnstile

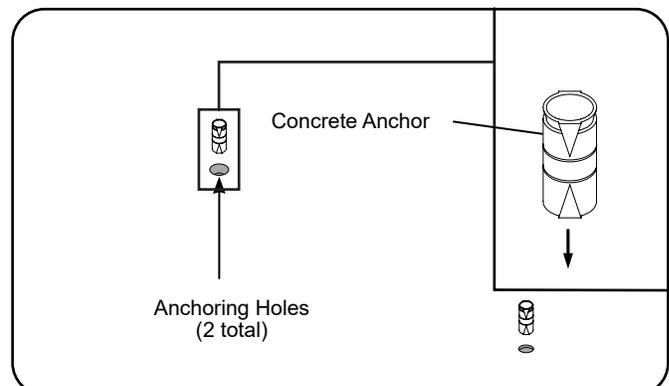
1. Using a #1 Phillips-head screwdriver, unlatch the four quarter-turn fasteners that secure the access panel to the turnstile cabinet [Fig. 5]. The screws will remain attached to the access panel.
2. Using a socket wrench with a 9/16" deep socket, remove the four (2) bolts that secure the temporary wood plate to the turnstile. Discard the wood plate.
3. Place the turnstile in the desired location. Check that the turnstile is level and does not rock. If the turnstile is not level, shimming will be required before anchoring.

Fig. 5

4. Transfer four (4) anchor locations to the floor [Fig. 6].
5. Move the turnstile to the side.
6. Using a hammer drill fitted with a 5/8" concrete bit, drill each anchor hole to a depth of 3" (76.2mm).
7. Using a shop vac, vacuum debris from the anchor holes before installing the anchors. If the holes are not clear of debris, the anchors may not tighten properly.

Fig. 6

8. Insert anchors into the drilled holes with the threaded ends down. If needed, use a hammer to tap the anchors into place. Ensure that the anchors are flush with the concrete floor [Fig. 7].
9. Return the turnstile to the install location, ensuring the anchors holes are aligned.
10. Route primary power wiring and network cable (if using) through the appropriate conduit opening into the turnstile. Primary power wiring will be connected in later steps.
11. Insert anchor bolts.
12. Using a torque wrench (ft.-lbs.) and 9/16" deep socket, torque the threaded rods to 20 ft.-lbs.
13. For outdoor installations, apply a thick bead of clear RTV silicone around the base of turnstile base to seal.

Fig. 7



Primary Power Wiring Instructions

NOTE

The following instructions are for fixed turnstile installations only. If you are installing a portable AC-powered or battery-powered unit, please refer to Appendix A - Portable Base Turnstile section on page 28.

WARNING

- Use a licensed electrician for the following steps and adhere to all applicable local codes.
- **MAKE SURE PRIMARY POWER IS TURNED OFF AT THE BREAKER.**

Fig. 8

1. Locate the six-pole primary power terminal block [Fig. 8].
2. Using a precision flat-head screwdriver, connect primary power wires according to [Fig. 9] and [Table 1].

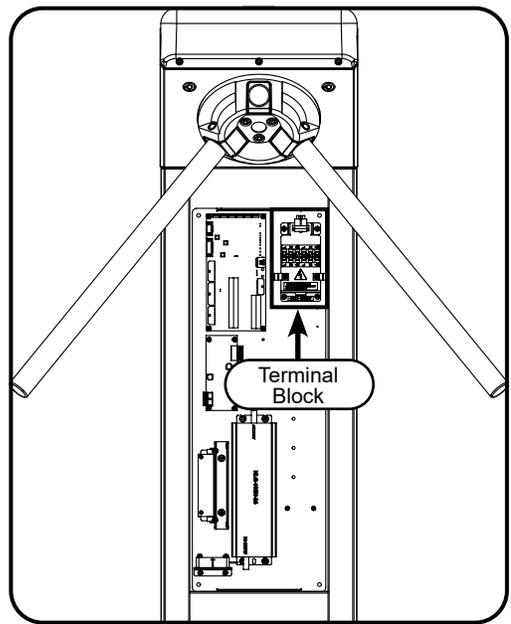
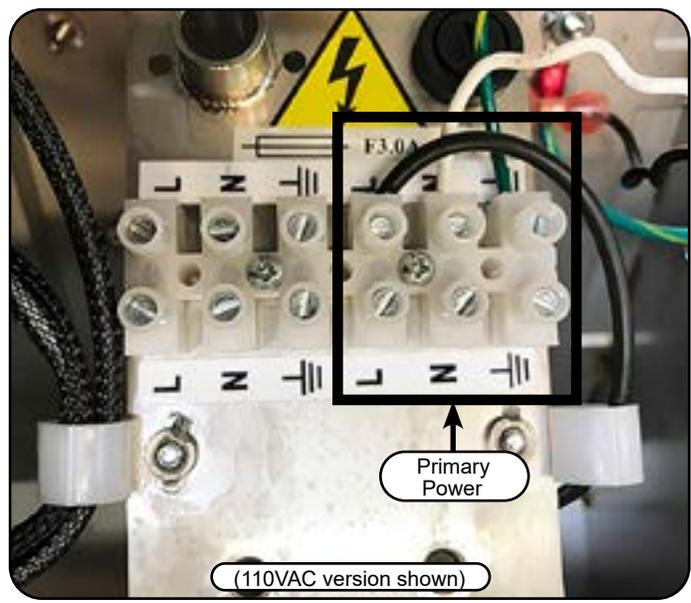


Table 1

Terminal	110V	220V
L ine	Black	Brown
N eutral	White	Blue
G round	Green	Green/Yellow

Fig. 9





Control Board Description

Signal Inputs and Outputs To / From Access Control System

Inputs - J4 Terminal Block

Signal inputs are wired into the EDM's I/O input terminal block. There are two types of input signals, momentary dry contacts (MDC) and sustained dry contacts (SDC). All input signals must be normally open, voltage-free, dry contacts.

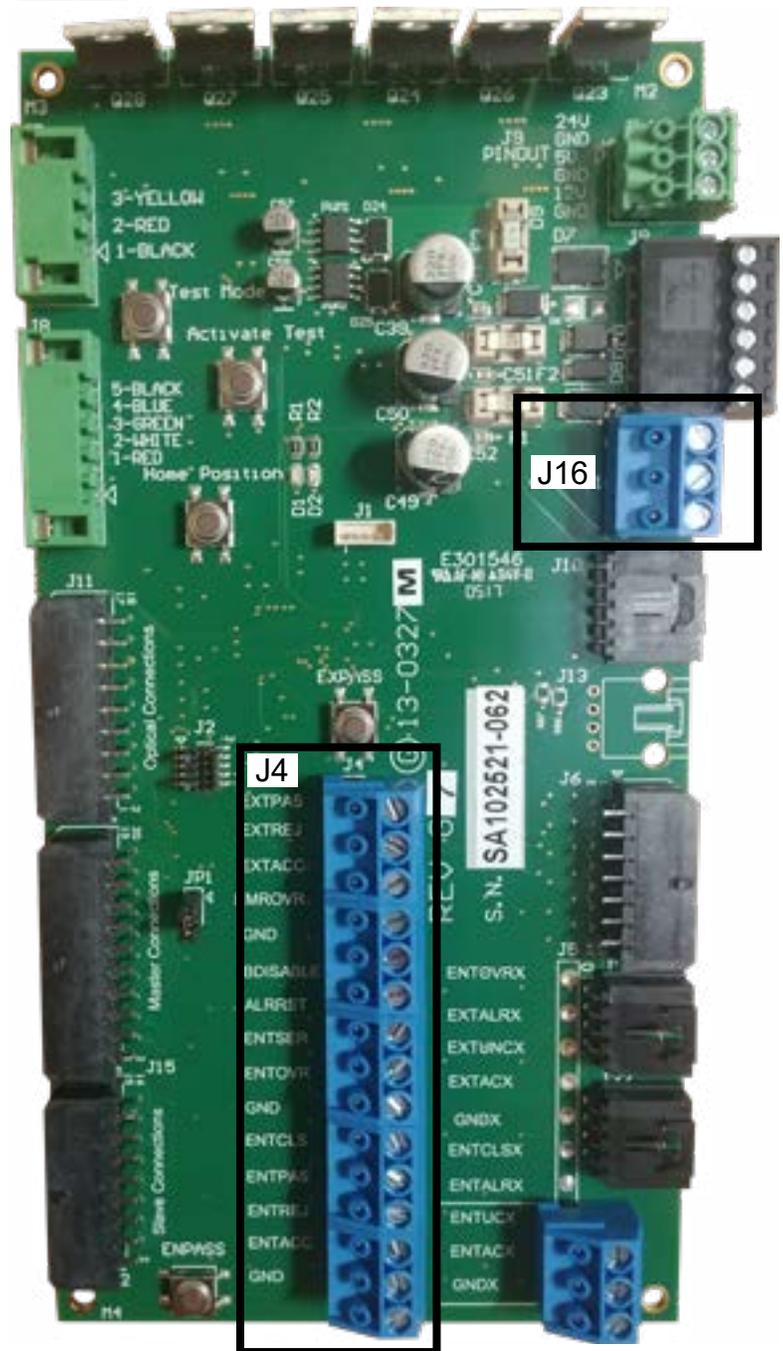
NOTE

NEVER connect signal lines containing voltage directly to the I/O terminal strips. This will damage the circuit board.

J16 Connector

The J16 connector is used to connect your computer to the EDM using the provided serial cable. This connection allows it to connect with the EDM Utility. See the EDM Utility section on page 24.

Fig. 10





Control Board Description (Cont.)

Refer to [Table 2] for pin locations on the terminal block related to the emergency override system.

Table 2

Pin #	Pin Name	Function Description	Contact Time	Function & Behavior Description
4	EMROVR	Emergency Override	SDC	Drops the arms for free egress. Arms remain down and turnstile is inactive until SDC is removed, or contact is reestablished if normally closed setting is enabled. (Typically used for fire alarm or life safety systems.)
5	GND	Ground	SDC	Common input ground signal.
7	ALRRST	Emergency Override State	SDC	Changes the EMROVR contact from normally open to normally closed.
10	GND	Ground	SDC	Common input ground signal.
15	GND	Ground	SDC	Common input ground signal.

Identifying Rotation Direction

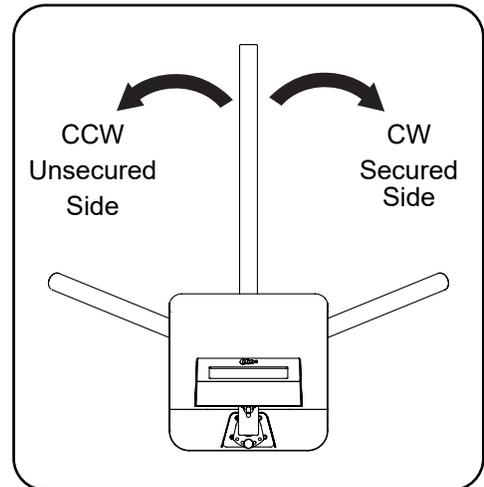
Clockwise (CW):

Turnstile arms rotate in a clockwise direction when viewed looking down from behind the cabinet.

Counter-Clockwise (CCW):

Turnstile arms rotate in a counter-clockwise direction when viewed looking down from behind the cabinet.

Fig. 11



Orientation shown for a right-handed cabinet.



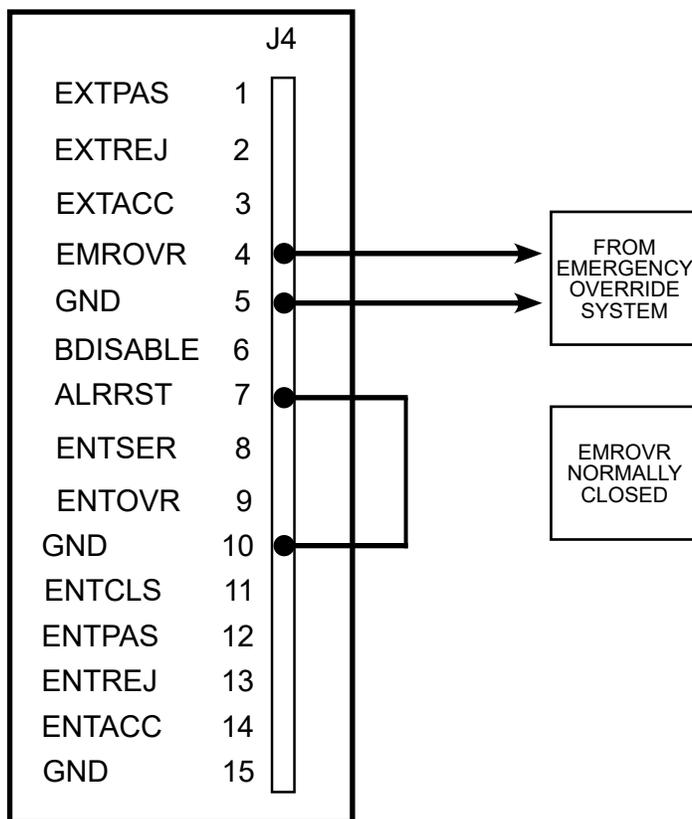
Wiring the Control Board for Emergency Override

Emergency alarm systems, such as fire alarms or life safety systems, can be connected to the AMT's control board. If the alarm is triggered and provides a sustained dry contact to the correct port on the controller board, the AMT will drop its arms to create a free passage to allow guests to exit the facility rapidly.

The dry contact signal to the emergency override pin can be normally open or normally closed. The EMROVR pin is normally open by default.

NOTE Ensure power to the turnstile is OFF when wiring the I/O Terminal Blocks.

Fig. 12



Wiring for Normally Open

- Locate the EMROVR and one of the GND terminals on the I/O J4 terminal block.
- Connect the leads from the emergency override system to the EMROVR and GND terminals.

Wiring for Normally Closed

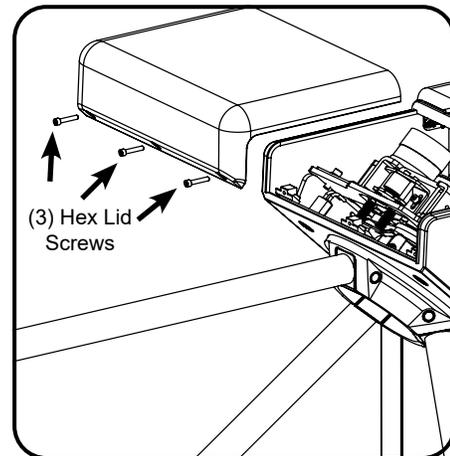
- Locate the ALRRST and one of the GND terminals on the I/O J4 terminal block.
- Connect the ALRRST terminal directly to one of the GND terminals.



UltraQ Installation

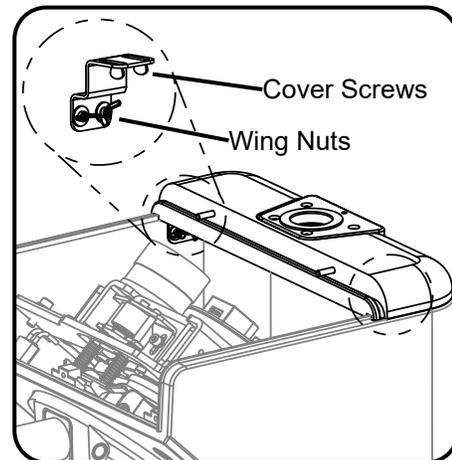
1. Use a 3/32" hex key to remove the three hex screws securing the lid to the turnstile cabinet and remove the lid. [Fig. 13]

Fig. 13



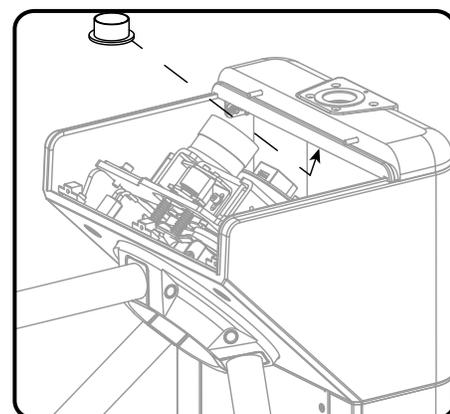
2. Verify that the cover screws and wing nuts are tightly secured [Fig. 14].

Fig. 14



3. Insert the plastic ring from the UltraQ mounting kit into the underside of the opening. [Fig. 15] The plastic ring must be held in place until it can be secured in step 4 below.

Fig. 15

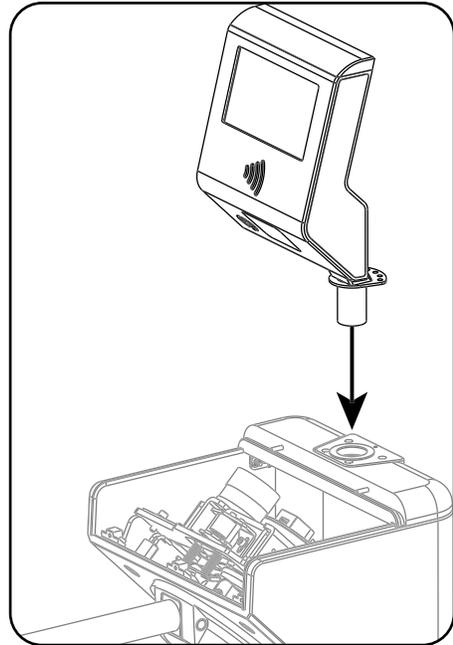




UltraQ Installation (Cont.)

4. Feed the cables through the top of the opening and slide the UltraQ into position. [Fig. 16]

Fig. 16



5. Guide the metal ring from the UltraQ mounting kit up through the cables coming from the UltraQ until you reach the UltraQ post. [Fig. 17] Use a 3/32" hex key to tighten the set screw in place.

Fig. 17

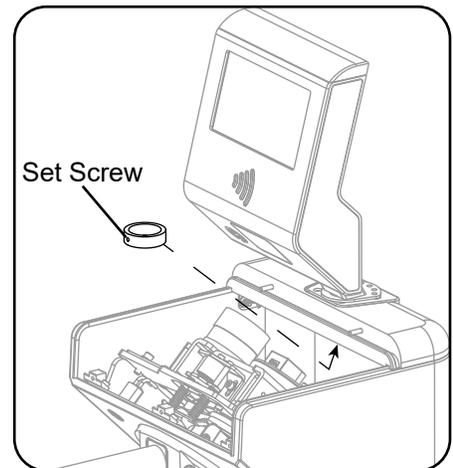
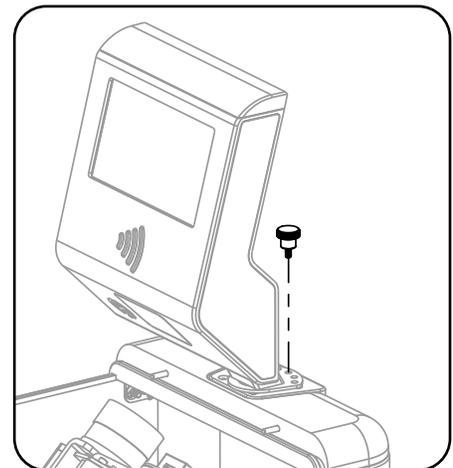


Fig. 18

6. Rotate the UltraQ head to the desired direction and angle and use the thumb knob from the UltraQ mounting kit to secure the UltraQ. [Fig. 18]



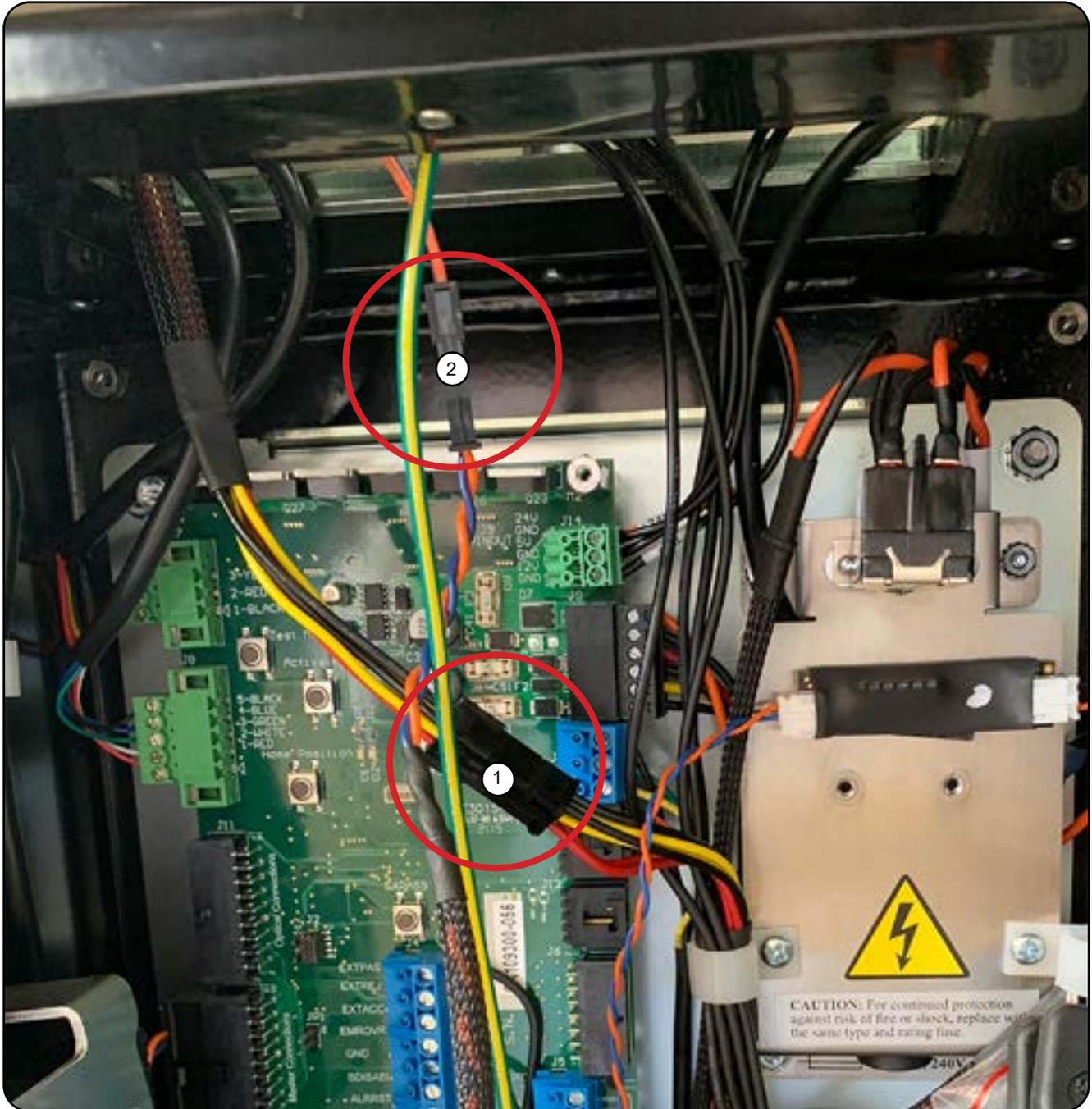


UltraQ Connection Instructions

NOTE Ensure turnstile power is OFF before connecting UltraQ cabling.

1. Connect the 6-prong power cable (yellow, red, and black wires) from the UltraQ to the power connector from the turnstile. [Fig. 19]
2. Connect the 2-prong feedback cable (orange and blue wires) from the UltraQ to the connector from the turnstile. [Fig. 19]

Fig. 19





UltraQ Connection Instructions (Cont.)

Fig. 20

3. Use the 3/8" nut driver to remove the nut on the upper-right corner of the electrical panel. [Fig. 20]
4. Place the ground wire (green and yellow) ring connector on the grounding screw.
5. Replace and use the 3/8" nut driver to tighten the 10-32 hex nut [Fig. 21].

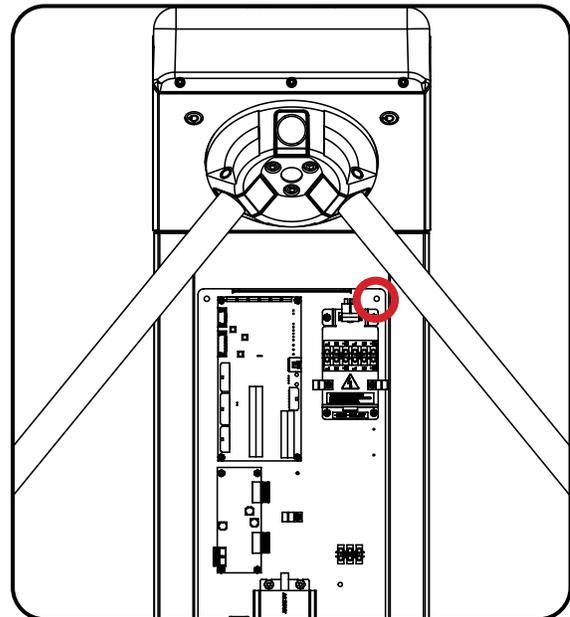
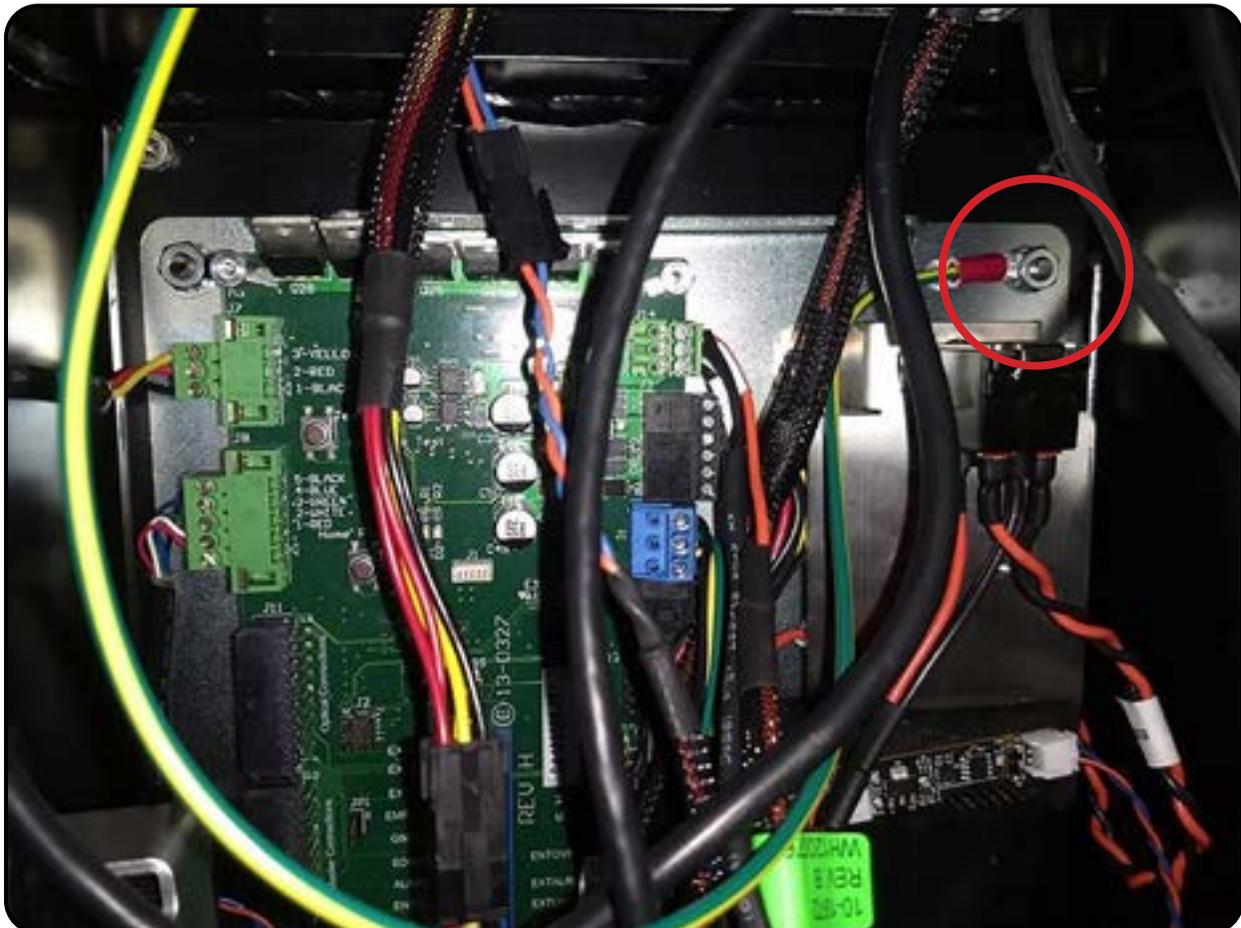


Fig. 21





Post-Installation Inspection

Perform this post-installation inspection **BEFORE** powering on the turnstile for the first time.

1. Anchoring (fixed installations only): Verify the anchor bolts are tensioned to 20 ft-lbs. Tighten if necessary.
2. UltraQ: Verify the mounting hardware is secure. Tighten if necessary.
3. Dust, Dirt, & Debris: While the unit is powered down, open the cabinet panel to reveal the interior electronics. Blow any dirt, dust, and small debris out of the turnstile with low-pressure compressed air such as Dust-Off.
4. Wiring: Inspect all wires and contacts for exposure to any metal parts that may lead to a short.

Post-Installation Functions Check

Perform the following checks to verify the turnstile is performing properly. Function checks are included for optional peripherals and may not be applicable to your installation. If any problems are encountered, please refer to the Troubleshooting section on page 23.

NOTE

The following is assumed:

- The validation server is online and configured for use.
- The network is up and running.
- Sample credentials (i.e. barcode tickets, RFID cards, NFC tickets, etc.) are available and have been configured as valid credentials in the validation application.
- The turnstile passed the Post-Installation Inspection.

CAUTION

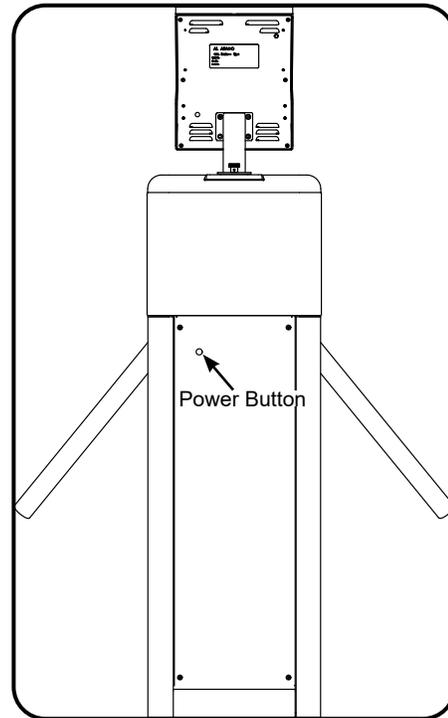
WHEN THE TURNSTILE IS POWERED ON, THE ARMS ROTATE FOR THE DURATION OF THE BOOT UP PROCESS. BEFORE POWERING ON, PLEASE MAKE SURE THE AREA IS CLEAR OF PERSONS OR PROPERTY.



Power On

1. Power on the turnstile by pushing the recessed power button on the back of the turnstile cabinet using the eraser end of a pencil (or similar shaped object). [Fig. 22].

Fig. 22

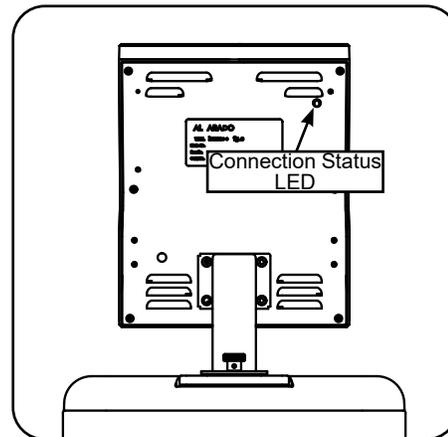


2. The turnstile boot up routine will take approximately 1 minute.

During boot up:

- The arms will undergo test rotations.
- At the end of the boot up routine, the arms will rest in the home position, and the UltraQ screen will display a message instructing the guest to scan a ticket.
- After the application launches, the rear-facing connection status LED will flash continuously while it establishes a connection with the validation server. It will be solidly illuminated when the connection has been established. [Fig. 23].

Fig. 23



NOTE

If the connection status LED continues to flash after boot up, communication has not been established with the validation server. Refer to the *Troubleshooting* section on page 27 and notify your network administrator.



Perform UltraQ Device Tests

NOTE The use of a stylus is recommended for all touch screen operations.

1. Make sure the turnstile is online and communicating with the validation server.
2. Tap the UltraQ screen three times to bring up the *Operator Login Screen* [Fig. 24].
3. Using the on-screen number pad, enter the default Login ID **123** or **111**, and press the **LOGIN** key

NOTE If the default Login ID is invalid, obtain a valid Login ID from the system administrator.

Fig. 24



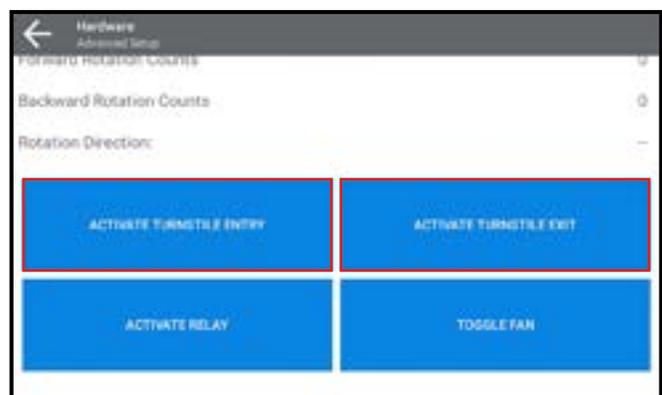
4. From the *Operator Functions Menu*, press the **Device Setup** button [Fig. 25].
5. If prompted, use the on-screen keyboard to enter **alvarado** for the setup screen password.
6. Press the **ADVANCED SETUP** button.

Fig. 25



7. Scroll down and press **Hardware**.
8. Scroll to the bottom of the *Hardware* menu and press **ACTIVATE TURNSTILE ENTRY**. Verify the arms unlock and complete one rotation when pressure is applied in the entry direction. [Fig. 26]
9. Press **ACTIVATE TURNSTILE EXIT**. Verify the arms unlock and complete one rotation when pressure is applied in the exit direction. [Fig. 26]

Fig. 26



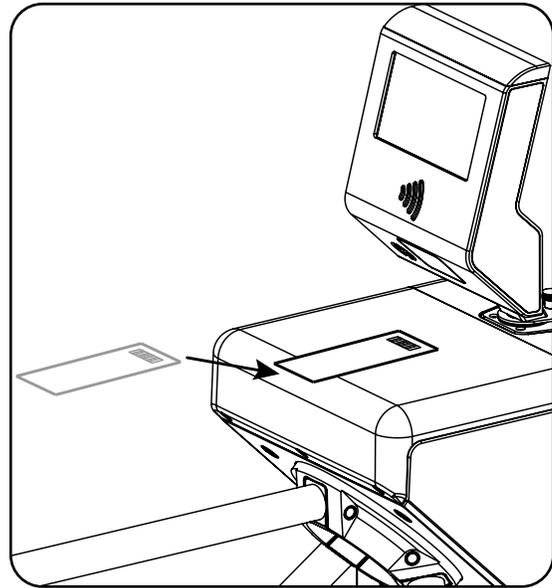


Scan a Sample Barcode Ticket

To scan a barcode on a printed ticket or a mobile phone screen, place the barcode on the blackout pad facing up towards the imager [Fig. 27]. Line the barcode up with the green guide light. The imager will beep when the ticket has been scanned. If the device is connected to the validation server, it will display the validation response from the server on the screen.

- If the ticket is **valid**, the LED bank on top of the device will turn green, a "valid ticket" chime will sound, the screen will indicate a valid ticket scan and prompt the user to enter, and the turnstile arms will move slightly in the entry direction. Rotate the turnstile arm to return to the "Please Scan" screen.
- If the ticket is **invalid**, the LED bank on top of the device will turn red, an "invalid ticket" alarm will sound, the screen will indicate an invalid ticket scan, and the turnstile arms will remain locked.

Fig. 27

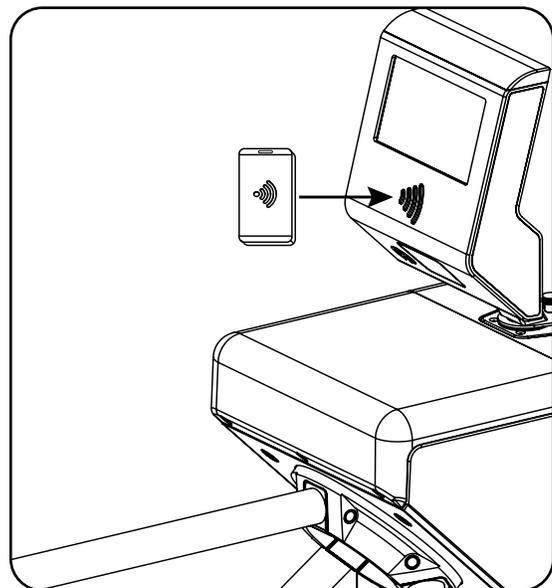


Validate RFID/NFC Media

To scan an RFID card or NFC ticket, place an RFID card or a phone with an NFC ticket against the RFID symbol on the front of the UltraQ [Fig. 28].

- If the NFC ticket is **valid**, the LED bank on top of the device will turn green, a "valid ticket" chime will sound, the screen will indicate a valid ticket scan and prompt the user to enter, and the turnstile arms will move slightly in the entry direction. Rotate the turnstile arm to return to the "Please Scan" screen.
- If the NFC ticket is **invalid**, the LED bank on top of the device will turn red, an "invalid ticket" alarm will sound, the screen will indicate an invalid ticket scan, and the turnstile arms will remain locked.

Fig. 28



NOTE

NFC transmitters are typically located on the back surface of mobile devices. Apple devices typically place their transmitter towards the top of the phone while other devices typically place their transmitters near the center.



Test Drop Arm Operation

The turnstile is designed for the horizontal arm to drop upon loss of power.

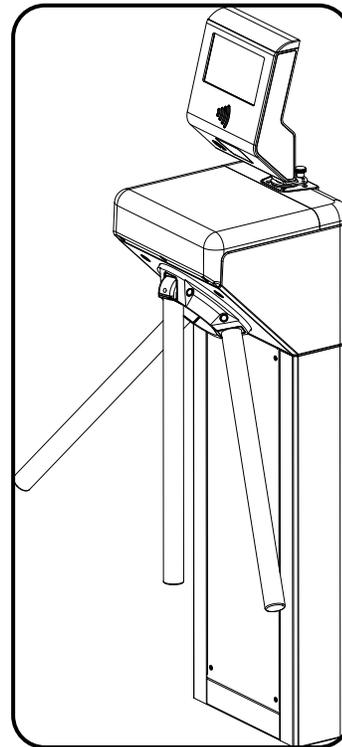
To test drop-arm functionality:

1. Power OFF the turnstile
2. Verify the horizontal arm drops allowing free egress [Fig. 29].
3. Power ON the turnstile and verify the arms reset and lock in the home position.



When the turnstile is powered on, the arms rotate for the duration of the boot up process. Before powering on, please make sure the area is clear of persons or property.

Fig. 29



Using the Test Buttons

The test buttons on the control board, ENPASS and EXPAS, are used to simulate a valid credential activation [Fig. 30] & [Fig. 31]. You can use these buttons to test the turnstile even if the UltraQ head is disconnected.

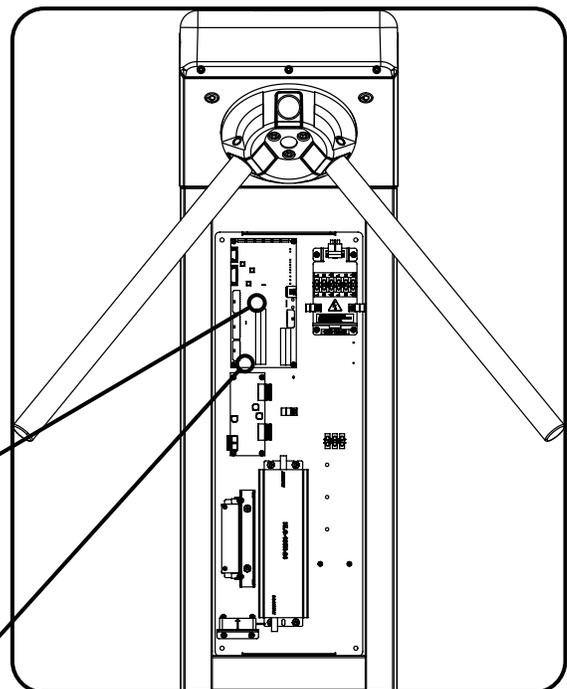
- ENPASS is used to simulate an activation in the CW direction. It is located in the bottom left corner.
- EXPAS is used to simulate an activation in the CCW direction. It is located above the J4 terminal block.

These test buttons can be found on the motor controller board on the turnstile's electrical panel.

Fig. 30



Fig. 31

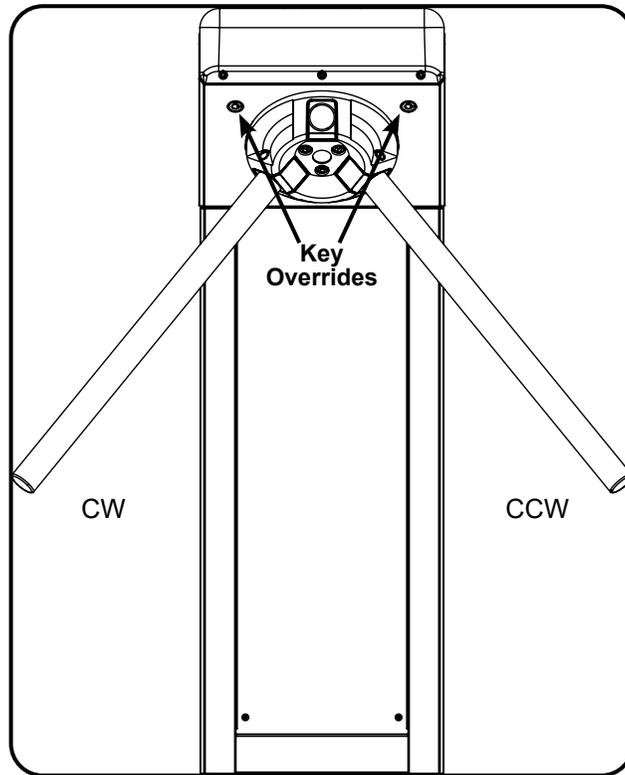




Test Key Override Operation

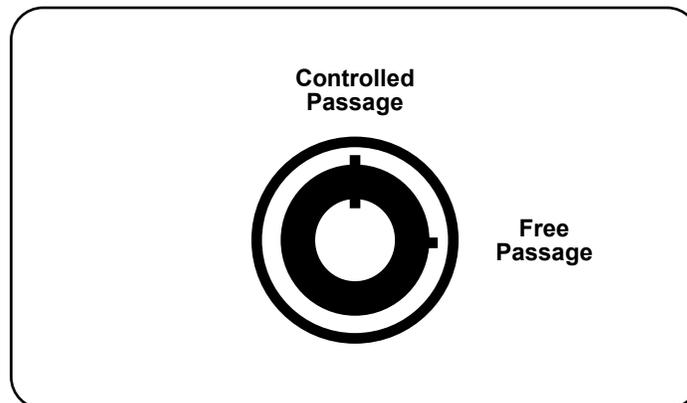
Key Override switches are provided to manually place the turnstile in one of two passage modes: Free Passage and Controlled Passage. There is one key override switch per rotation direction. The key switches are located on the underside of the of the turnstile adjacent to the head and arms [Fig. 32].

Fig. 32



1. Turn key to the CENTER position for Controlled Passage mode [Fig. 33]: Verify the arms are locked in the appropriate direction and unlock with valid credentials.
2. Turn key to the RIGHT position for Free Passage mode [Fig. 33]: Verify the arms rotate freely in the appropriate direction.

Fig. 33





EDM Utility

The UltraQ-AMT ships with the EDM Utility which allows adjustment of settings and tests turnstile functionality. The EDM Utility is on a USB drive included with the turnstile. Copy the file from the USB drive to your laptop. There is no installation required.

The tools required to use the EDM Utility are:

- Laptop computer
- RS-232 programming cable
- USB-to-Serial converter cable

- 1) Open the cabinet and identify the control board.
- 2) Connect the RS-232 programming cable to the J16 terminal on the control board. Refer to page 11 for location.
 - A) Use a USB-to-Serial converter cable if the laptop does not have a serial port.
- 3) Double-click the utility icon to launch the utility. This will bring up the EDM Utility main screen.
- 4) Select COM Port from the drop-down menu and click Open. [Fig. 34]
- 5) All fields are populated with current settings.

NOTE

Depending on the computer, the COM port number may differ.

Fig. 34



NOTE

Contact Alvarado technical support **BEFORE** changing settings.

- Select the check box "Customize Panel Movement" to enable modification of settings. [Fig. 34], Item 23
- To check the current value of a parameter, click READ.
- To customize a parameter, enter a value in the text box and click SET.

See next page for descriptions of settings.



Item #	Settings	Description
1	Com Port	Sets the communication port necessary for the EDM Utility to interface with the turnstile.
2	Access CW	Activates the turnstile in the Clockwise direction.
3	Access CCW	Activates the turnstile in the Counter-Clockwise direction.
4	Return Arm	Rotates the arms back to the home position.
5	Halt Arm	Stops the arm motor movement.
6	Drop Arm	Tests the drop arm functionality.
7	Reset Arm	Performs start up sequence and re-locks drop-arm.
8	Set Home	Sets the current arm position as the home position.
9	Panel Profile	Sets arm rotation profile: 1) Entertainment arm 2) Regular arm - Default profile.
10	Get Status	Queries turnstile for arm and motor status/position. Displays active impacts or failures.
11	Motor ID	Not applicable.
12	Breakaway	Sets current threshold before arms release when pushed. Do Not Change.
13	Impact	Sets the current threshold to identify obstructions. Default: 115.
14	Motion Profile	This is the algorithm used to control the arm movement speed. Do Not Change.
15	Return Arm Time	Sets the length of time required to return arms to home position if motor is halted or activation time-out. Default: 2000 ms.
16	Rotate Arm Time	Sets the length of time required to complete one rotation. Units are milliseconds. Default: 800 ms.
17	PID Setting	Sets motor movement characteristics. Do Not Change.
18	Access Time-out	Sets the length of time a user has to enter the turnstile after an activation before the turnstile resets. Default: 20,000 ms.
19	Clutch Duration	Designates the amount of time the clutch stays engaged when arms are pushed without an activation. Default: 1000 ms.
20	Prompt Angle	Sets the amount the arms will rotate during an activation to prompt the direction of passage. Default: 2 degrees.
21	Impact Duration	Sets the length of time turnstile will wait for obstruction to clear before arms will move again. Default: 2000 ms.
22	Rotate Angle	Sets the range of motion arms must be moved before motor engages to complete passage and generate an output count. Default: 120 degrees.
23	Customize Panel Movement	Allows modification of arm movement settings.



Post-Installation Checklist

1. Power On
 - Verify the UltraQ boots up successfully.
2. Perform UltraQ Device Tests
 - Activate the relay
 - Test the green/yellow/red attendant notification lights
3. Credential Validation
 - Scan a sample barcode ticket
 - Validate a sample RFID or NFC ticket
4. Turnstile Operation
 - Test Drop-Arm functionality
 - Test Key Override operation
5. Battery Operation
 - Verify battery is charging properly after being plugged into an AC power source. (Portable Battery-Powered Option only)
6. Attachment
 - Check that the mounting bolts and screws are secure and tightened per the requirements in this manual.
7. Finish
 - Stainless Steel – Wipe down the entire turnstile with a damp cloth or used the Alvarado recommended commercial products (see Operation and Maintenance Instructions).
 - Powder Coated - Wipe down entire turnstile with a damp cloth.
8. Manuals Handoff
 - Provide both these Installation Instructions, and the Operation and Maintenance Instructions to the project or site manager.



Troubleshooting

This basic troubleshooting section is provided to aid installers with the most commonly encountered installation problems. If you require more troubleshooting assistance, see the Operations and Maintenance Instructions.

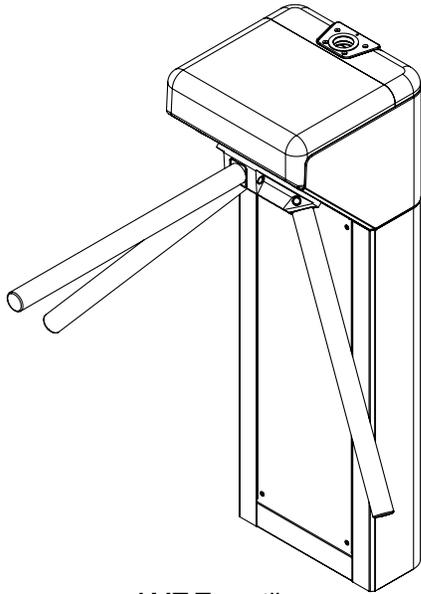
Problem	Possible Cause	Solution
After powering ON the turnstile, the UltraQ display screen does not light up.	No primary power to the turnstile.	Verify power is ON at the circuit breaker.
	The AC electrical cord is unplugged (portable models only)	Ensure the AC electrical cord is firmly connected at both ends.
	The battery charge is depleted. (Portable battery-powered models only)	Check the battery status meter on the battery located in the turnstile leg. Recharge the battery if under 50% charge.
	Primary power wiring is connected improperly.	Refer to Primary Power Wiring Instructions on page 11. Ensure wiring is connected accordingly.
	UltraQ power connector is disconnected.	Check power connector and reconnect if necessary.
The green LED on the back of the UltraQ unit is flashing, indicating it is offline.	Unplugged Ethernet cable (wired configuration only).	Reconnect the Ethernet cable to the UltraQ and the switch/access point.
	Wireless antenna is not connected properly or damaged (wireless configuration only).	Verify the wireless antenna is connected properly and not broken.
	Incorrect UltraQ device IP	Verify the UltraQ device IP is correct with your network administrator.
	Incorrect server IP.	Verify the server IP is correct: <ol style="list-style-type: none"> 1) Touch the UltraQ LCD screen to enter your Login ID. <p>NOTE: Obtain Login ID from your network administrator or site manager.</p> <ol style="list-style-type: none"> 2) Select the Device Configuration menu. 3) Verify the server IP is correct with your network administrator.



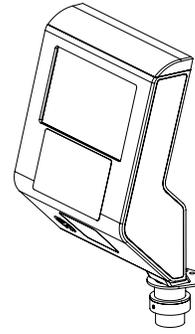
Appendix A - Portable Base Turnstile

These supplemental instructions cover installation steps specific to portable base models only. When the installation is complete, proceed to the *Post-Installation Inspection* section on page 18.

Portable Base Plate Illustrated Parts List

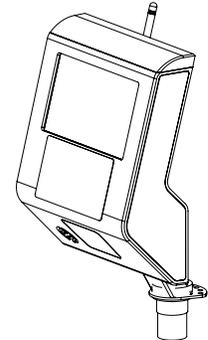


AMT Turnstile
(Qty. 1)

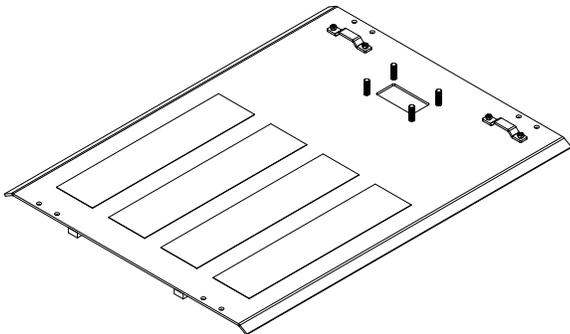


Hardwired UltraQ Head
(Qty. 1)

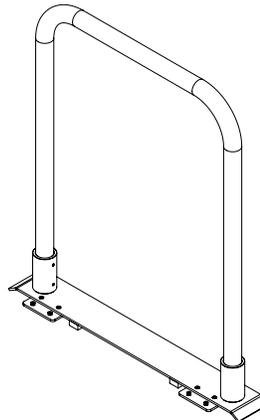
OR



Wireless UltraQ Head
(Qty. 1)



AMT Portable Platform



(Optional) Add-On
Handrail Platform
(Qty 1)

Hardware Included

Standard Hardware

- 7/16-20 Hex Nut (Qty 4)
- 7/16 Flat Washer (Qty 4)

Electrical

- Neutrik Connector Kit (Qty 1)

Optional Add-On Hand Rail Hardware

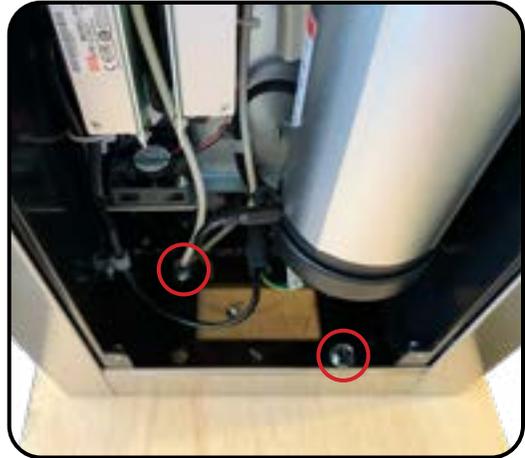
- Hand Rail Assembly Plate Screws (Qty 4)

Tools Required

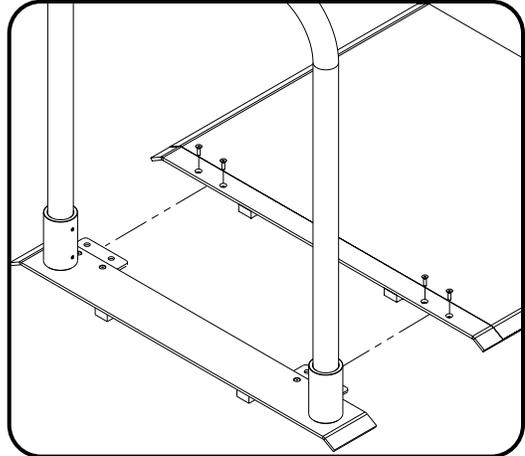
- Socket Wrench
- 5/8" Deep Socket
- 9/16" Deep Socket

**Appendix A - Portable Base Turnstile (Cont.)****Fig. 35**

1. Remove the turnstile from shipping crate.
2. Use a 9/16" deep socket to remove the two bolts securing the turnstile cabinet to the temporary wood base [Fig. 35].
3. Place the turnstile cabinet on the baseplate, lining up the holes in the cabinet foot with the studs on the baseplate.
4. Secure the turnstile cabinet to the baseplate using the four 7/16-20 nuts and 7/16 flat washers with the 5/8" deep socket.
5. Attach the UltraQ unit. See the *UltraQ Installation* section on page 14.

**Fig. 36**

6. If using an optional hand rail, slide the hand rail platform into position. Use a 5/32" hex key to tighten the 1/4-20 set screws. [Fig. 36].

**NOTE**

Portable turnstiles can be maneuvered with the pedestal dolly, available separately from Alvarado.



Appendix C - Setting the Home Position

NOTE Power must be on.

Fig. 38

1. Identify the control board attached to the electrical panel in the turnstile cabinet. [Fig. 37]. The (D2) LED will be blinking indicating normal operation mode.
2. Press and hold the 'Test Mode' button for 2 seconds. The (D2) LED will be lit solid. This indicates the turnstile is in Test Mode [Fig. 38].
3. Hold arm and rotate 3 times in either direction.
4. Return arm to center position.
5. Press the 'Home' button to set.
6. Press and hold the 'Test Mode' button for 2 seconds. The (D2) LED will return to blinking status indicating normal operation mode.

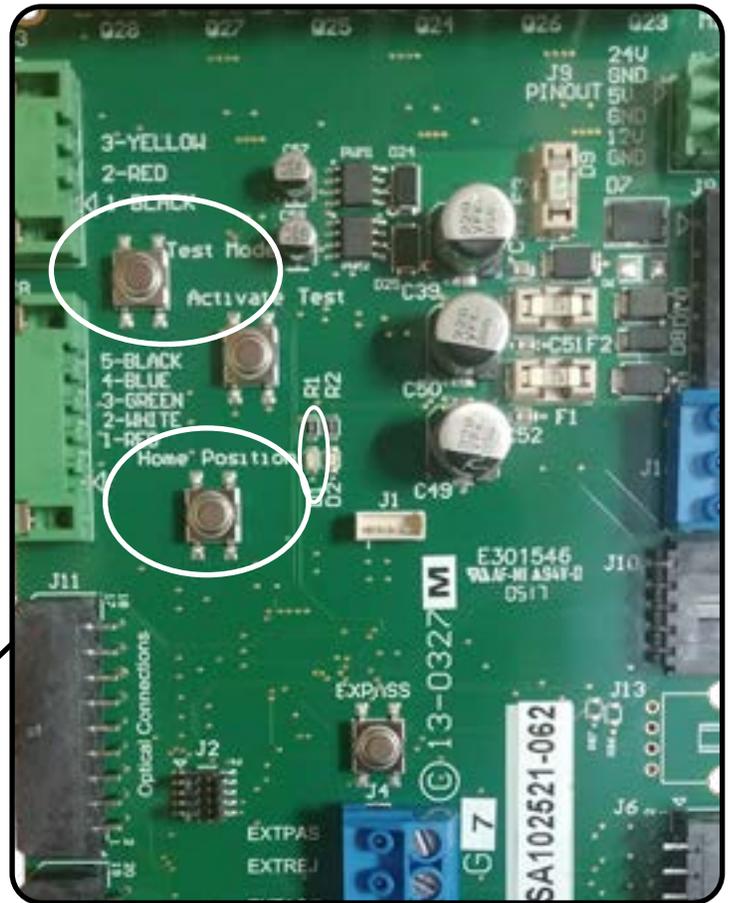
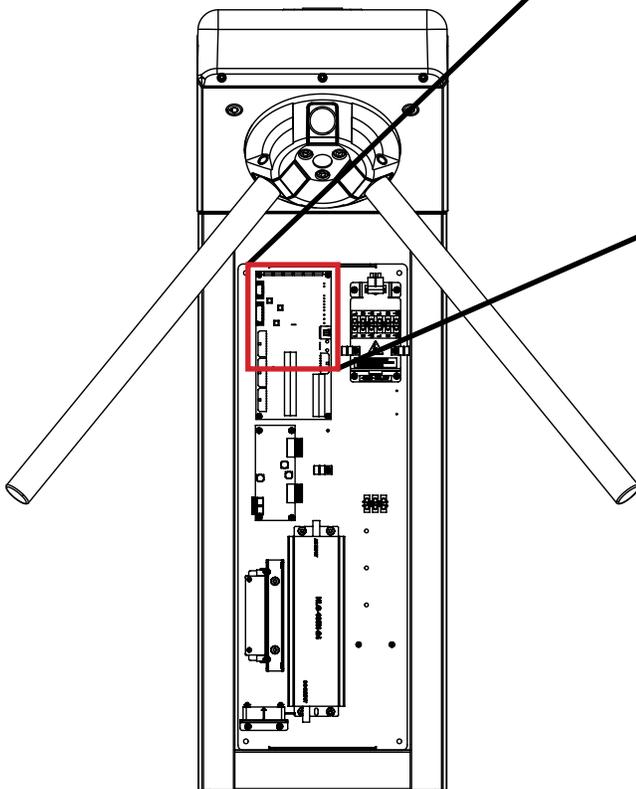


Fig. 37

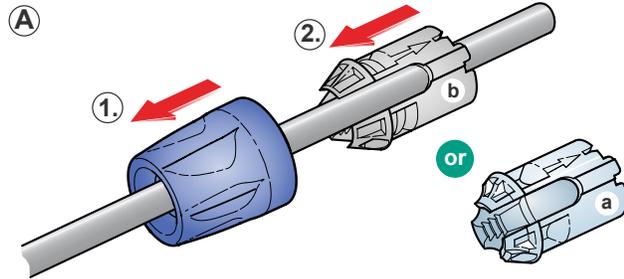




Appendix D - Installing Neutrik Connector to AC Cord

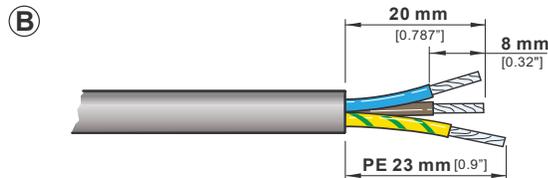
NOTE

Portable Base Turnstile units do not ship with power cables. Instead, each turnstile ships from the factory with a disassembled Neutrik connector. Use the connector to create power cables per your facility's requirements and specifications.



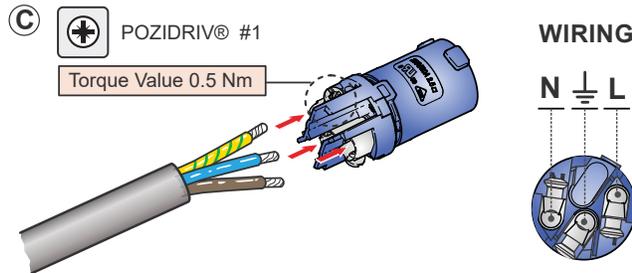
A Place the bushing (1) and the chuck (2) over the cable.

White chuck (a):	6.0 - 11.0 mm [0.236 - 0.433"]
Black chuck (b):	9.5 - 15.0 mm [0.374 - 0.59"]
VDE:	9.5 - 14.0 mm [0.374 - 0.551"]



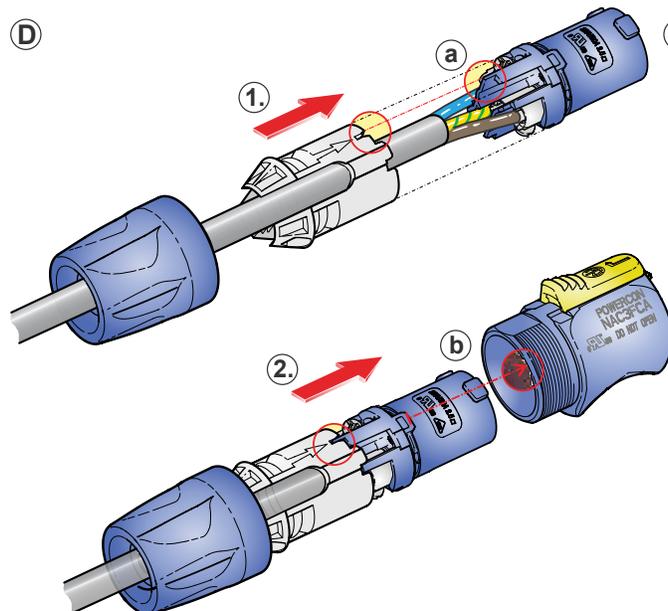
B Prepare the cable as shown.

Cable O.D.:	6.0 - 15.0 mm [0.236 - 0.59"]
Wire size:	2.5 mm ² (AWG #14)



WIRING

C Insert the wire into the terminals and fasten the clamping device with a POZIDRIV® #1, max. Torque 0.5 Nm (0.37 lb-ft).



D Slide the insert and the chuck (1) into the housing (2).

Important:

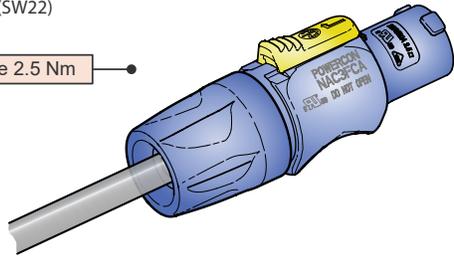
- (a) Align the chuck by positioning the nose into the recess.
- (b) Pay attention to the guiding keyway!



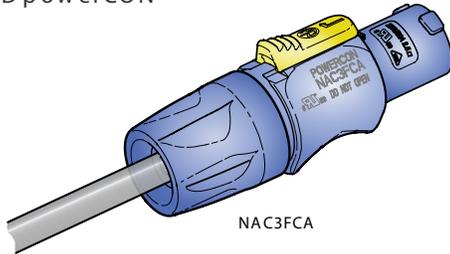
Installing Neutrik Connector to AC Cord (cont.)

E  Wrench size
7/8" (SW22)

Torque Value 2.5 Nm



FINISHED powerCON



E Fasten bushing by means of a fork wrench 7/8" (SW 22), min. Torque 2.5 Nm (1.8 lb-ft).

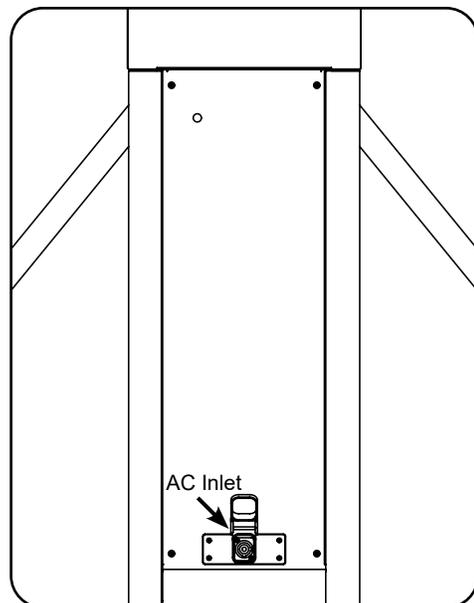
Connecting AC Power to the Portable Turnstile (AC-Powered Option Only)

To connect AC power to the turnstile [Fig. 39]:

1. Lift AC power receptacle cover.
2. Plug the extension cord into the turnstile AC inlet and twist to lock.
3. Plug other end of the extension cord into an AC power source.

This completes the installation process for Portable AC-Powered turnstiles. Proceed to the Post-Installation Functions Check on page 14.

Fig. 39





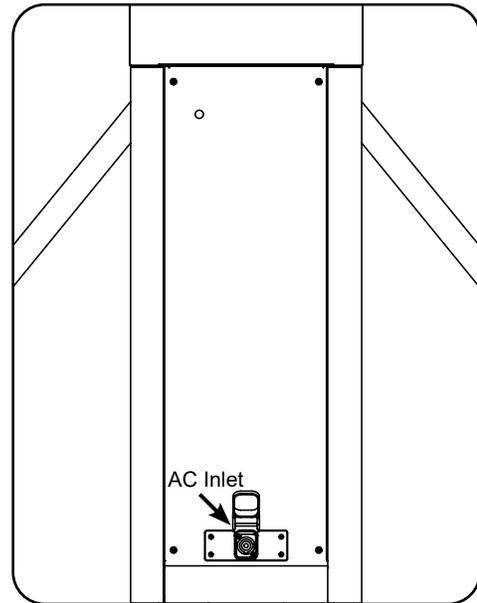
Appendix E - Charging the Portable Turnstile (Battery-Powered Option Only)

Power OFF the turnstile prior to charging the batteries.

Fig. 40

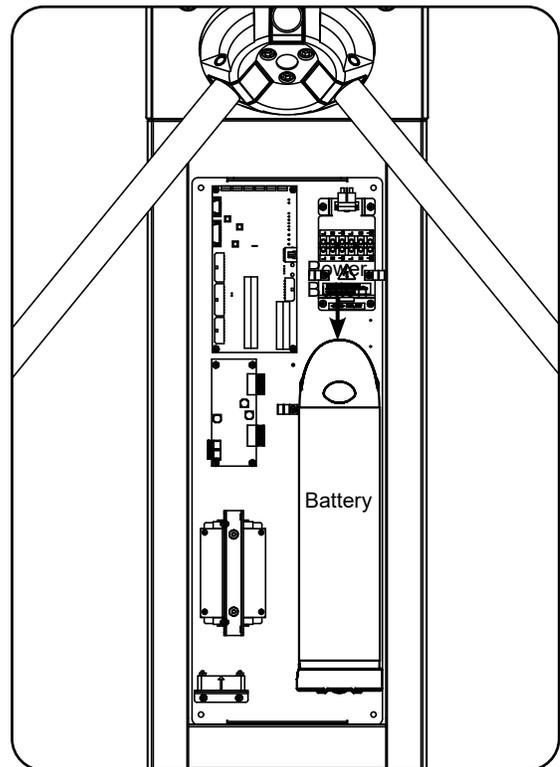
To charge the turnstile [Fig. 40]:

1. Lift charge receptacle cover.
2. Plug the extension cord into the turnstile AC inlet.
3. Plug other end of the extension cord into an AC power source.



4. To access the battery, open the access panel on the leg located on the secured or internal side of the facility [Fig. 41].
5. Press the POWER button on the battery to display charge level. When all 5 LEDs are lit, the battery is fully charged [Fig. 41].

Fig. 41



NOTE

It typically takes approximately 4-6 hours to fully charge a battery.

This completes the installation process for Portable Battery-Powered turnstiles. Proceed to the Post-Installation Functions Check on page 14.



Appendix F - Portable Base Turnstile - Plan, Elevation and Footprint Drawing

Fig. 42

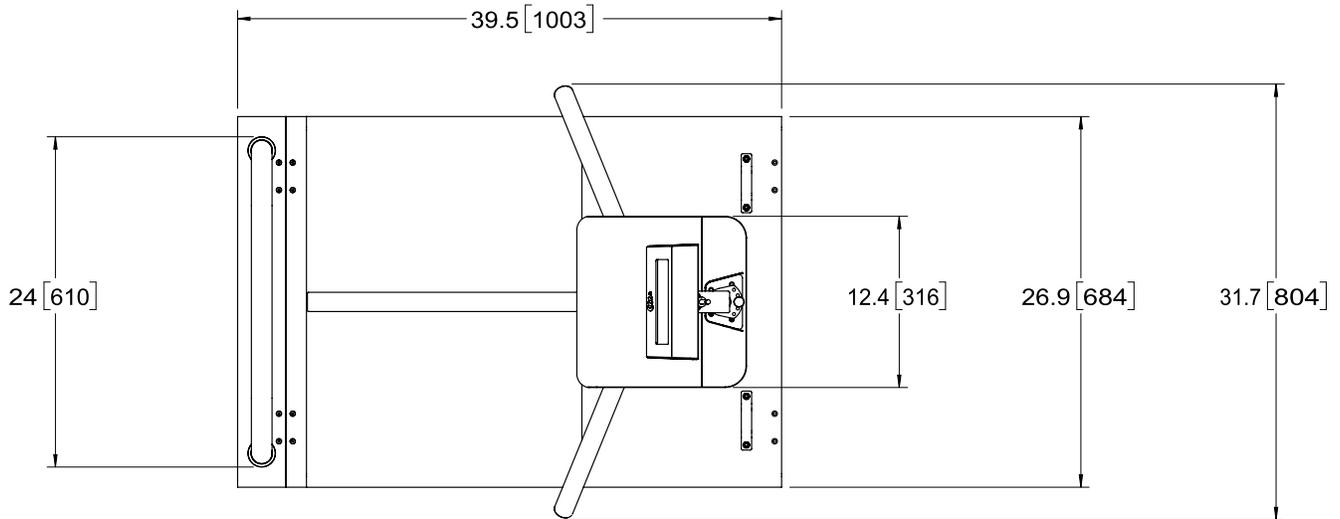
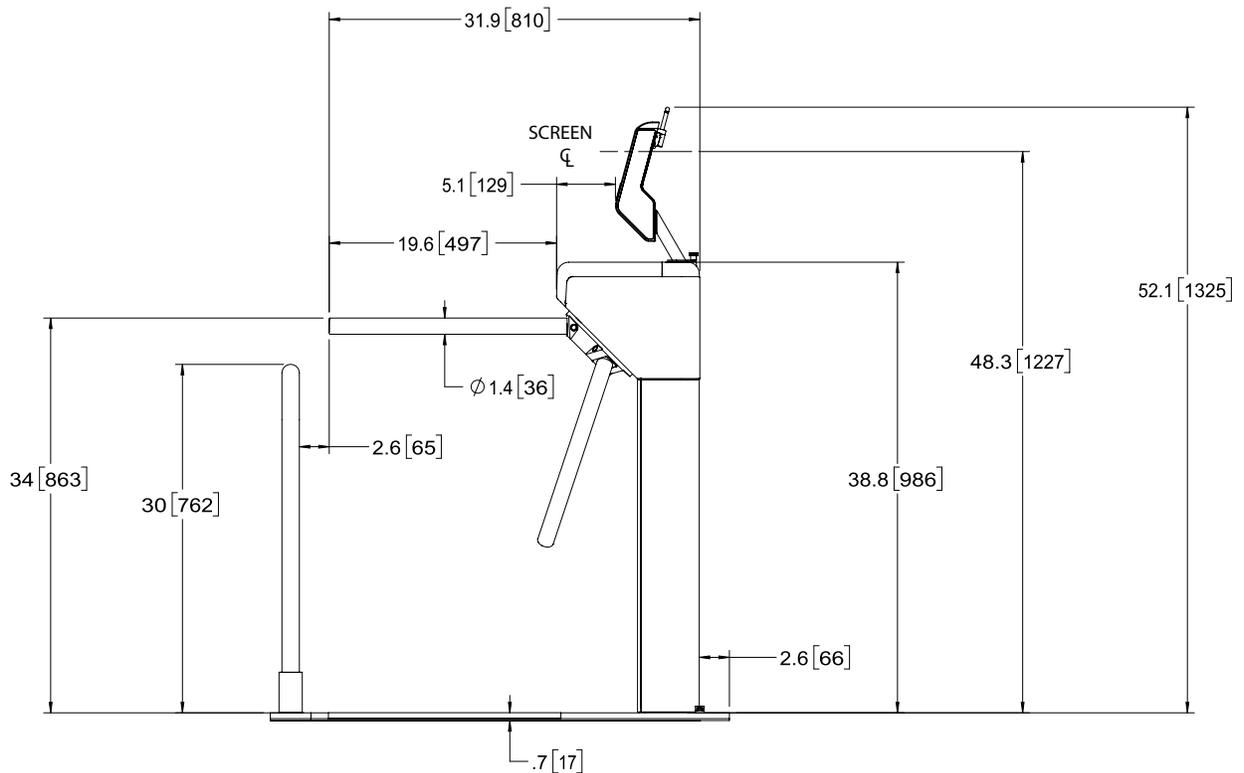


Fig. 43





Revision History

Revision	Date	Author	Description
1.0		D Bohannon	Original document.



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