



BIGFOOT STUDIOS, INC.

Arduino Lab



Elevator Security Console Guide

ARDUINO LAB • SPECIAL PROJECTS DEPARTMENT

Elevator Security Console Guide

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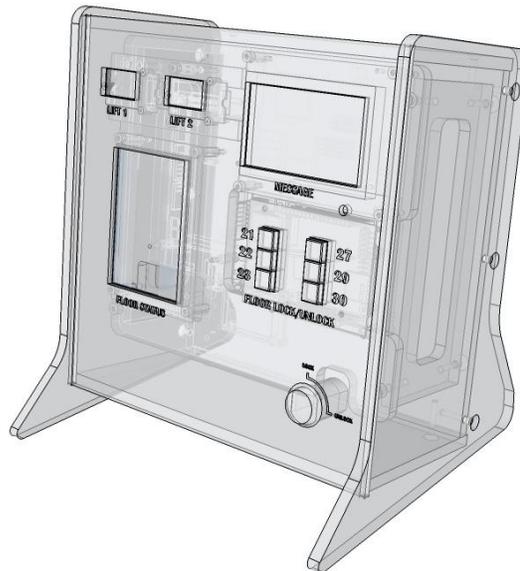
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Introduction

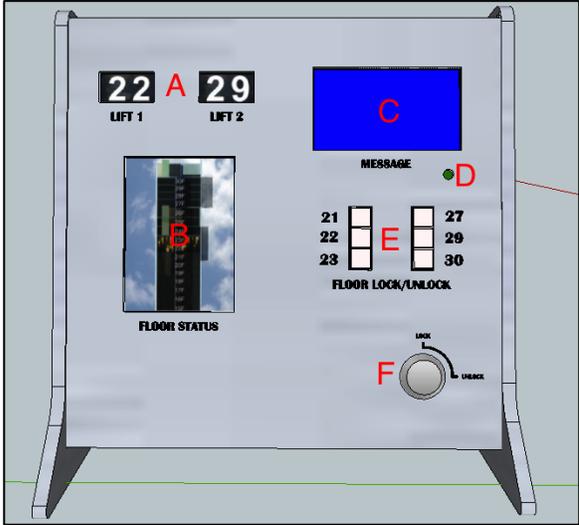
The following guide describes the Elevator Security Console's features that are utilized to keep the building's floors secure from unauthorized access.

The Elevator Control Panel was designed to further secure a building by granting security staff the ability to prevent or allow the elevators to access certain floors. By pushing a button the security staff can block the elevator from stopping on a floor that one wishes to prohibit people from entering. A pair of number display screens (OLED) notify the staff to which floor the elevator is currently on; while the push buttons and a TFT graphic screen displays which floors are currently locked and unlocked.

The device is also capable of receiving SMS messages from a cellular device - that will display on the message screen (LCD) - should one wish to convey a customized message to the staff on duty.

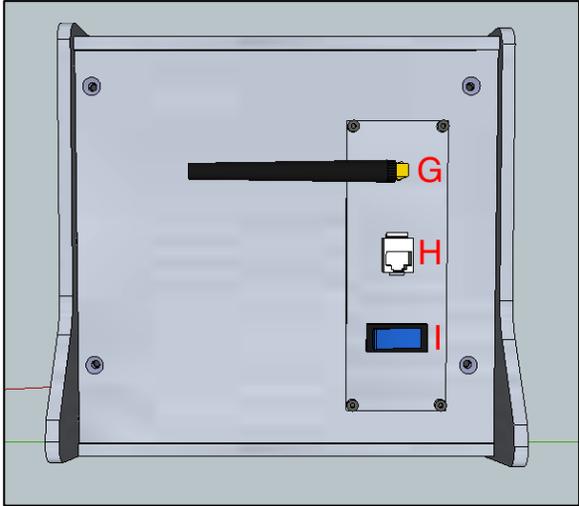


External Components



- A. OLED (Lift Displays)**
- B. TFT Screen**
- C. LCD Display**
- D. Status LED**
- E. Floor Lock/Unlock Buttons**
- F. Key Switch**

Figure 1 : Front Panel: User Interface



- G. GSM (SMS) Antenna**
- H. Ethernet (PoE)**
- I. Power Switch**

Figure 2 : Rear Panel: Connections

Installation

Note

Before installing the device, please be sure that the power switch is OFF on the device (the “-“ side of the power switch is pushed down).



Plug in an Ethernet cable into the Ethernet jack of the Elevator Security Console and connect it to the “Data & Power Out” jack of a PoE injector or switch (The PoE jack may be labeled something else, such as "PoE").

PoE Injector Specs:

Input = 220V AC

Output = 48V DC / 0.3A

Figure 3 : Example of PoE Injector device.

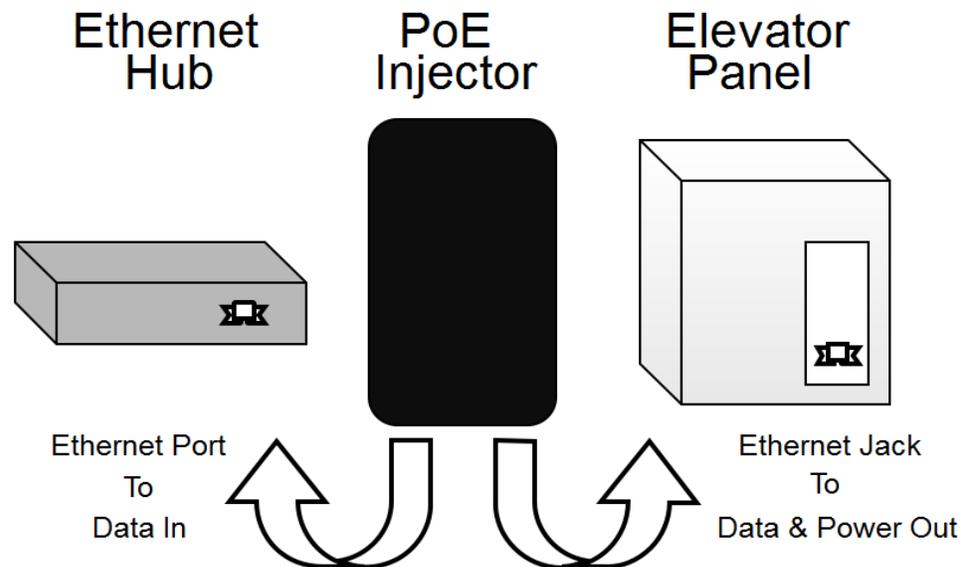


Figure 4 : Example of PoE Connection

The preceding image shows how to connect a PoE injector. Plug in an Ethernet cable to an Ethernet port on the Ethernet hub and connect it to the “Data In” jack of the PoE injector. A second Ethernet cable will join the Ethernet jack of the Elevator Security Console to the “Data & Power Out” of the PoE injector.

Turn the Elevator Security Control Panel power switch ON and wait for the device to initialize.

After about one (1) minute the Elevator Security Console will be ready to lock and unlock the floors. However, the GSM (SMS) board inside the device takes about five (5) minutes to initialize; so you will have to wait until that is finished before sending an SMS message.

The status indicator LED will turn off and remain off to indicate the GSM board is initialized.

How to Use

The Key Switch (lock or unlock the device)



Figure 5 : Locked

Unlock the device by turning the key switch in a horizontal position (clockwise).

By this state, lock/unlocking floor numbers is possible.



Figure 6 : Unlocked

Lock the device by turning the key switch in a vertical manner (counter-clockwise).



A key symbol, on lower left side of the LCD screen, shows that the device is locked.

By this state, lock/unlocking floor numbers is not possible.

Figure 7 : Key Symbol

Locking and Unlocking Floors



Figure 8 : Pushing Buttons

Follow these steps to lock and unlock the floors:

1. Press the button corresponding to the desired floors to lock/unlock.
2. The button color will blink and turns to a SOLID color when lock/unlock is confirmed.
3. Green = **Unlocked** | Red = **Locked**

SMS (Messaging)

The device has a capability of receiving text messages from authorized people for communicating with the guards. The text message will then be displayed on the LCD screen together with the status LED blinking for 5 minutes.

Error Status Messages

In case of network errors, status messages will display on the LCD screen:

“ERROR: Lost Network Connection. Reconnecting to Elev Web Server”	This error status message indicates that the connection to the elevator web server is lost. The device will automatically reconnect itself.
"Can't Initialize DHCP. Please restart system."	This error status message indicates that there is no connection to the elevator web server and the device cannot initialize. If the internet connection is back, try restarting the device by switching the power off and then on.
"ERROR: Lost Network Connection. Cannot connect. Please Reset System."	This error status message appears if reconnection fails 50 times. If the internet connection is back, try restarting the device by switching the power off and then on.

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