

Mobile Duress

Dealer Training



Mobile Duress

System Overview



Wireless Technology

Wireless Science



Transmission without any loss

- Wood
- Glass
- Air
- Plastic
- Dry Wall



Reflection

- Metal
- Wire Mesh
- Grating
- Chain Link Fence



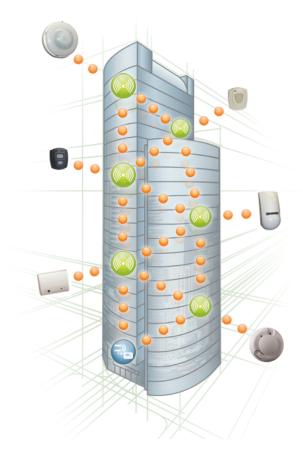
Absorption of some of the signal (attenuation)

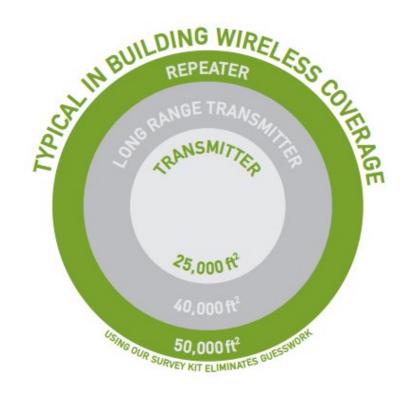
- Vegetation
- Humans/Animals
- Earth
- Brick/Concrete



Wireless Technology

Differentiating Commercial Wireless Repeaters to Scale to Any Size





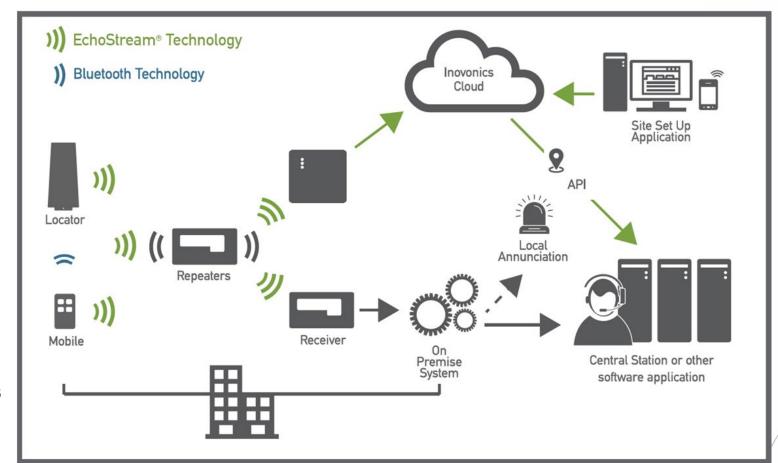


Inovonics Mobile Duress

Security systems can easily associate a fixed pendant with a specific location but determining indoor location when someone activates a pendant on their person while mobile has been significantly more difficult and cost prohibitive to deploy.

Responders may know an emergency occurred but not know where.

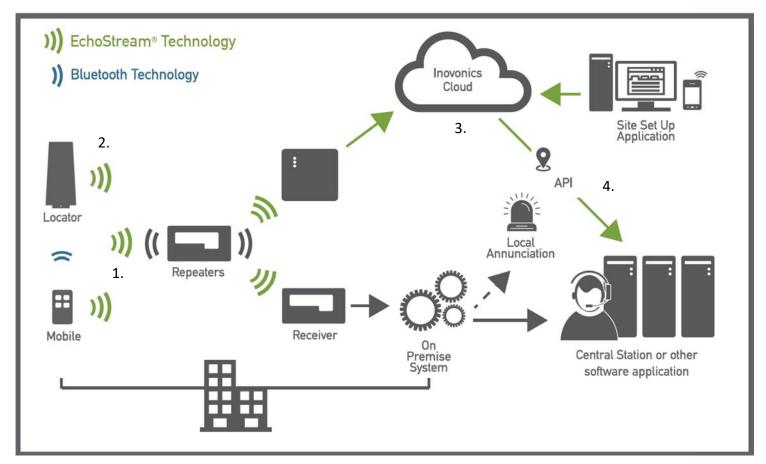
Inovonics mobile duress solves problem.





How It Works

- Alarm delivered to on premise system via EchoStream
- Concurrently, locators collect and report Bluetooth signal strength data to the mobile duress application
- Within ten seconds, the mobile duress application determines the precise location
- It then delivers that location directly to the central station, access control or other IP-based application



- Scalable to deliver the location granularity a specific site may require rooms, zones, floors, etc.
- Can work alongside any EchoStream intrusion detection system
- Properly installed, system delivers the right floor 99.99% of the time and the right room 90% of the time with the reporting the room immediately adjacent for the remaining 10%.



System Components

- ➤ Mobile Duress Pendants
- > Locators
- ➤ Mobile Duress Gateway
- ➤ Mobile Duress Application
- > Optional
 - Repeaters
 - Other EchoStream hardware





Mobile Duress

Endpoints and Infrastructure



EN7295 Mobile Duress Gateway

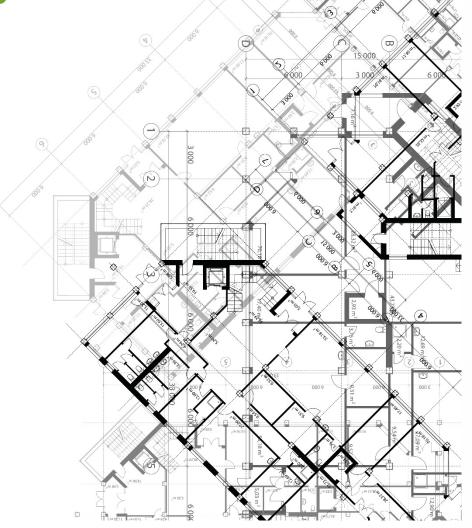


- EN4000 series receiver with IP output
- Kit includes gateway pre-loaded with mobile duress license, ACC610 with wire, mobile duress pendant to verify location accuracy/test site
- Receives EchoStream messages from EchoStream pendants, locators and repeaters in range
- Ignores messages from unregistered transmitter IDs (TXIDs)
- sends data to the mobile duress application
- Power via ACC610 transformer or POE
- Intended for Indoor, climate-controlled use, 32F to 140F
- Connectivity via Ethernet (recommended), cellular via external modem, WiFi configured natively or via external adapter
- On board data storage for messages for 150 transmitters @ 30 day



Mobile Duress Gateway Placement

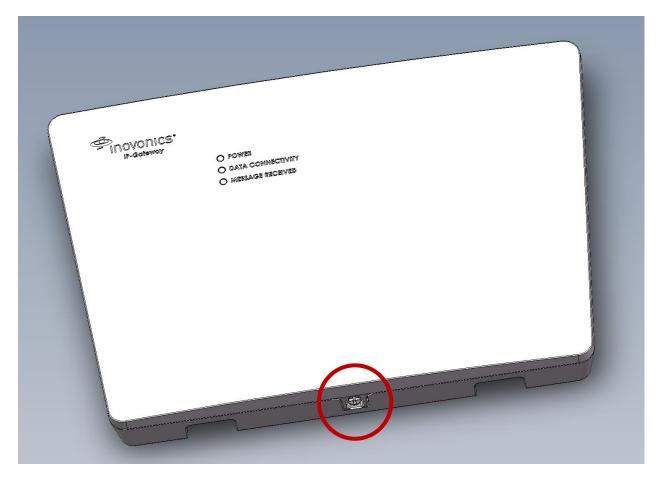
- 1. Determine where you will place the gateway
 - Consider an easily accessible central location
 - With access to line power or POE/IP connectivity
 - Indicate location of floor-plans to speed install and for future reference
 - Avoid locations that can disrupt the RF signal
 - See <u>Inovonics Device Installation</u>
 <u>Recommendations Tech note</u> for more information





Gateway: Open the Cover

2. Use a Philips screwdriver to open the gateway housing

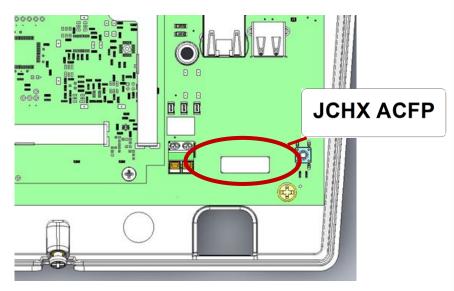




Gateway: Key Information

- 3. Record the following information for later in the configuration process:
 - Ethernet MAC address (Eth0 at right) to identify device in a network
 - Serial Number (SN) from the label on the back of the housing for site set up
 - Eight-character alphanumeric authorization code from the label on the lower right-hand portion of the printed circuit board (at right) for site set up.



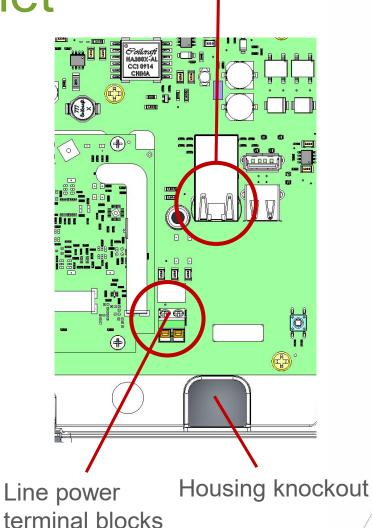




Gateway: Power over Ethernet

- 4. Connect power to the gateway, routing cabling through the housing knockout.
 - Network requirements
 - Default is DHCP, refer to the installation instructions to configure static IP if required
 - Ensure the following are open: DNS (UDP 53), HTTPS (TCP 443), NTP (UDP 123), TCP port 9000
 - If using power over Ethernet (POE), connect one end of a RJ45 Ethernet cable to the RJ45 Ethernet jack, and connect the other end to a POE capable network switch.
 - If using line power
 - Connect a power supply to the power terminal blocks per power supply instructions.
 - Connect one end of a RJ45 Ethernet cable to a RJ45 Ethernet jack and connect the other end to your LAN to establish Internet connectivity.

Note: Do not add line power if you already have Power over Ethernet.

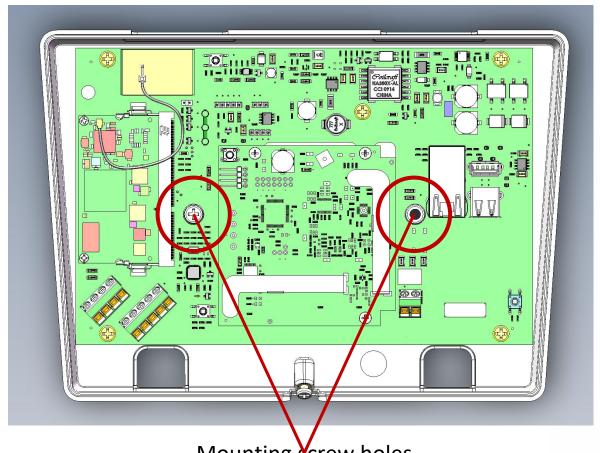


Ethernet jack



Gateway: Mounting

- 5. Use the included screws and drywall anchors to flush-mount the gateway.
 - See the Inovonics Partner Portal, www.inovonics.com/partnerportal, for more details to include installation instructions and the Mobile Duress User Manual



Mounting Screw holes



Locator



- Accepts the received signal strength indicator (RSSI) from the mobile duress pendants in range
- Rebroadcasts as an EchoStream message to an Inovonics mobile duress gateway.
- Operating environment: 32°F to 140°F (0°C to 60°C), Up to 90% (non-condensing)
- Check-in time frequency: 3 minutes supervised by mobile duress application or on site system (see EN1941-XS in EchoStream developer guide)
- Power: 240VAC 50/60 Hz accessed directly from the NEMA 5-15 non-polarized PCB mountable plug blades
 - Outlet must be a NEMA-5 three-prong with ground (hot-neutral ground) 125V AC 5-15 or 5-20 amp
 - If the installation requires a back-up power source, ensure the outlet is powered by an uninterruptable power supply
- Regulatory: UL 62368-1 Audio/video, information and communication technology equipment (per internal power supply)
 - Use mounting screw for U.S. installations only
- Sold in 5 count bulk packs
- Order in bulk, if possible, to avoid shipping delays required modify bulk package quantities.



Locator Mounting Considerations



Indoor coverage of up to 50-foot indoor radius, assuming obstructions

- Do install
 - In an unobstructed outlet, removed from metal
 - With the outlet Torx security screw, unless installing in Canada
 - In the upper outlet to allow access to the lower outlet
 - In the same/similar outlet location for adjacent rooms
 - With a protective cover, if needed, to secure unit
 - Interior dimensions of 5.5"x2.5"x1.5"
 - Allied Molded model # AMHMI86CCHTP shown
- Don't install
 - In a power strip
 - On a wall switch-controlled (hot or half hot) or GFI outlet
 - Behind furniture or any other obstruction
 - With country-specific outlet adapters

Always use application's location test feature to ensure desired locations are consistently reported

Protective cover





Locator Mounting Considerations



Large or outdoor area coverage

- Facing out
 - Up to a 300-foot line of site radius (no obstructions)
 - Up to a 50-foot radius, (assuming obstructions)
- Facing down, at a height of 15 feet, up to a 100-foot radius
- Do install
 - Multiple locators if needed to achieve the desired level of precision (i.e. "west side", "east side")
 - With NEMA enclosures, ACC650 shown, as needed

Always use application's location test feature to ensure desired locations are consistently reported





Mobile Duress Pendants



- Alarm and supervisory message identical to EchoStream only SKUs
- Bluetooth supervisory and alarm (location) messages to Locators within range
- Single, Double, Multi-condition, Neck (white) or belt worn (black)
- Packaging includes blank label for additional identification needs
- Typical battery life: 3 years
- Internal battery type: BAT608 CR2 lithium
- Operating environment: 32°F to 140°F (0°C to 60°C), Up to 90% (non-condensing)
- Check-in time frequency: 3 minutes
- Sold in 10 count bulk packs
- Order in bulk, if possible, to avoid shipping delays required modify bulk package quantities.
- Register into your choice of Inovonics receiver, intrusion panel, etc. per your existing procedure



Repeater



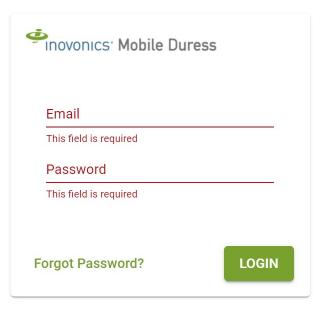
- EN5040-T ships with ACC610 transformer
- EN5040 customer supplied power supply
 - Input: AC100-240V,50Hz-60Hz, 0.3A
 - Output: DC12V, 1.0A
- 50,000 square foot range
- Operating environment: -4F to 140F
- 24 hour+ backup battery
- No programming required
- Self configuring
- Case tamper protection
- ACC610 transformer Intrinsically safe
- Mounting options
 - Mounting screws
 - Double sided tape
 - ACC650 outdoor enclosure
- Register into your choice of Inovonics receiver, intrusion panel, etc. per your existing procedure



Mobile Duress Application Managing Users

Login

Once you've completed the registration process login with your email and password.



By continuing with the login you implicitly agree to the <u>Terms and Conditions</u>.

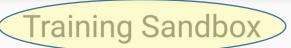
For log in assistance, please contact your system administrator. For help identifying your administrator or with other questions, please contact Inovonics technical support at support@inovonics.com or 1-800-782-2709.

Create an Organization









Inovonics will create your organization within the mobile duress application, identifying one person as an administrator.

The admin will be prompted to complete their registration and can then log on by navigating to security.inovonics.com.

Search

ADD SITE









Training Sandbox

Use ACCESS to manage users and their access to mobile duress sites within the application.

Search

ADD SITE



User Access





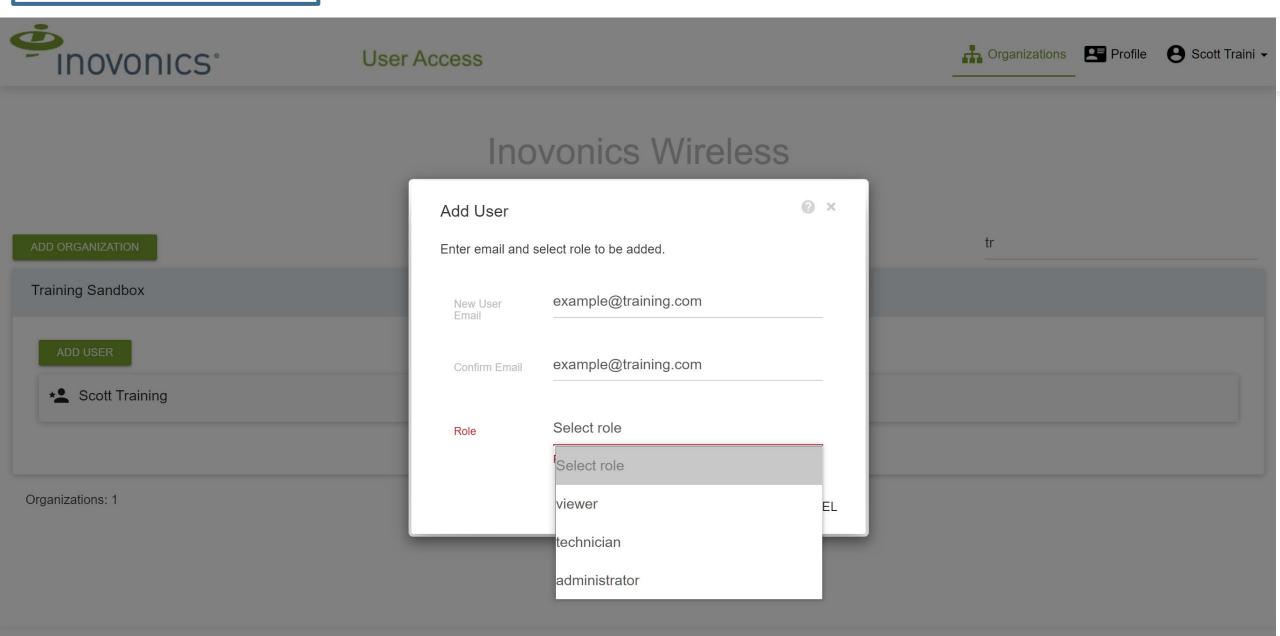


Inovonics Wireless

Organizations



ACCESS: Roles





User Roles

Viewer: Can only download and view information for sites they have access to. Inovonics recommends the viewer role for employees, subcontractors or end customers that only need to see site information or receive email or text notifications.

Technician: Can download, view and edit information in sites they have access to. Technicians can also reset passwords. Inovonics recommends the technician role for employees or subcontractors that routinely need to edit sites.

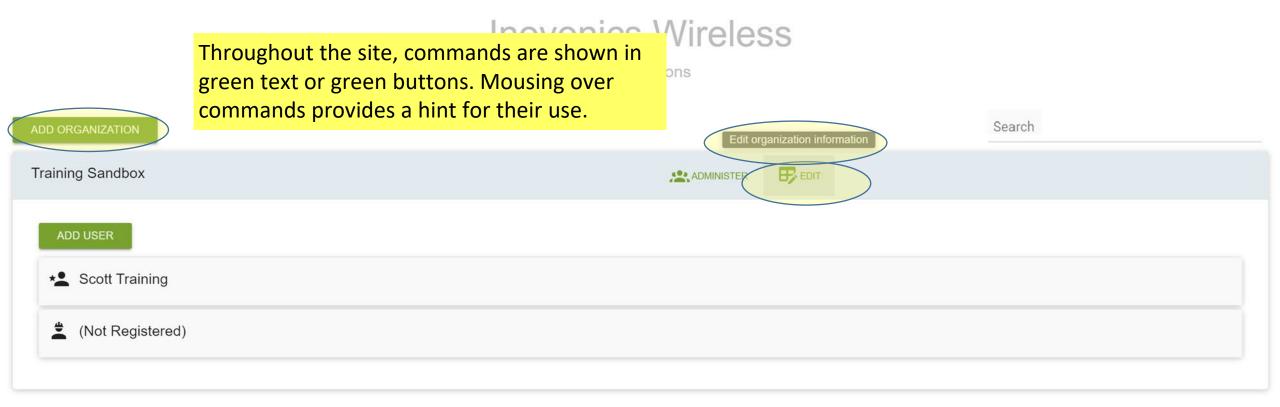
Administrator: Same as technicians but for all sites. They can also assign site access and add or remove users, including other administrators. Inovonics recommends the administrator role for only a finite number of employees to tightly manage access.

Navigation



User Access





ACCESS: Administer





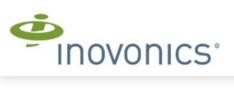








ACCESS: Manager Users



User Access







Selecting ADMINISTER let's you manage users

Inovonics Wireless

Organizations



ACCESS: Manager Users



User Access





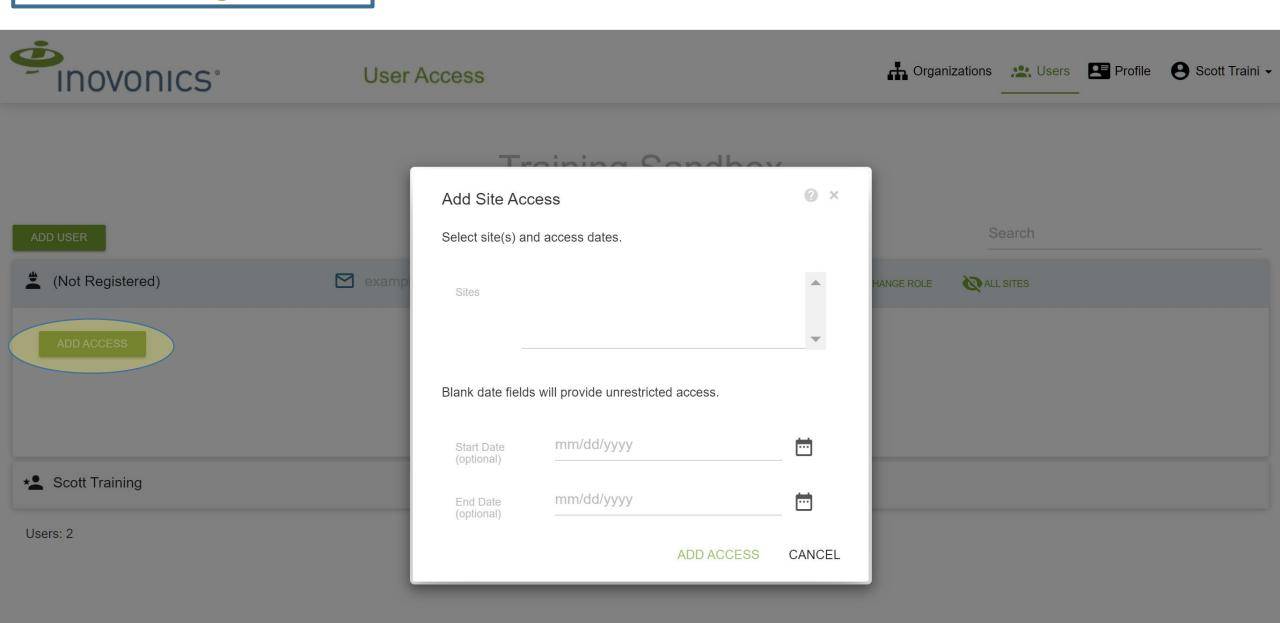




Training Sandbox



ACCESS: Manager Users



ACCESS: Profile



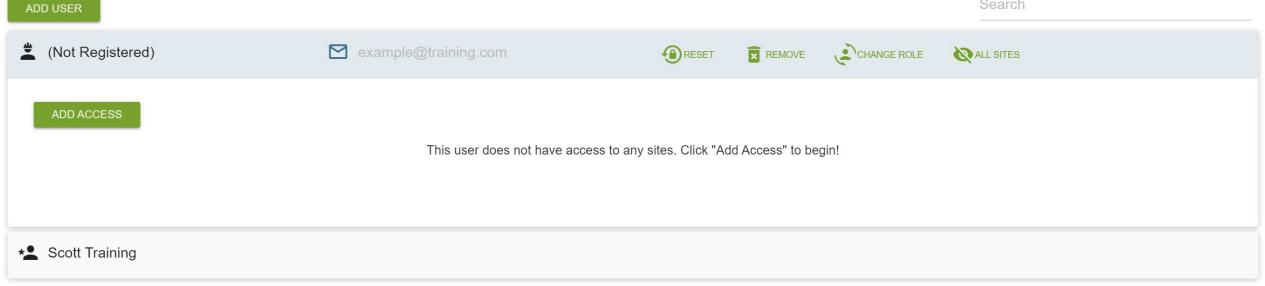
User Access



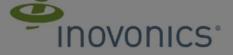
Training Sandbox

Select your profile to make changes.

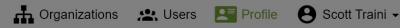
Search



Users: 2



User Access



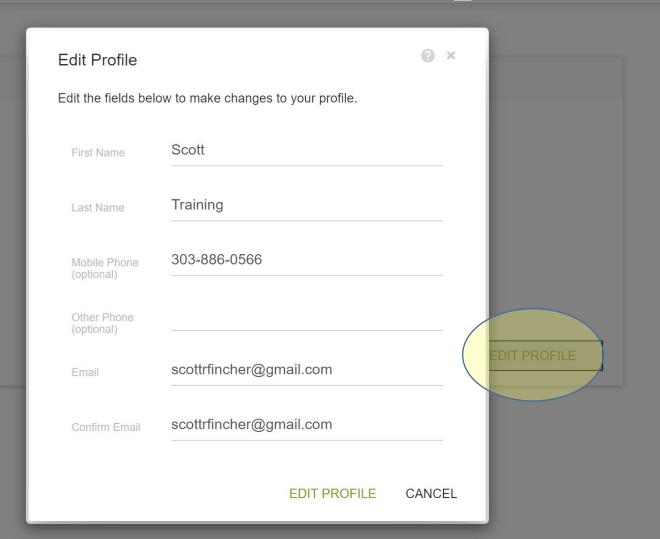






Profile

Select EDIT PROFILE and update as needed. Note, the application uses the email and mobile phone number listed here if a user elects to receive notifications.





User Management

- > Administrators are responsible for managing all users
- > This includes removing users within their portfolios to include those that have changed roles or are no longer employed by the organization in question.
- ➤ Inovonics strongly discourages the use of personal email addresses or email addresses the administrator cannot control.
- Inovonics strongly recommends administrators ensure their organization has standard operating procedures in place to manage user access.



Email/Text Notifications

- > Carefully consider use of email and text notification
- Can only be used as secondary option to primary API-based location notifications
- ➤ Will text or email alert sound, putting recipient at risk?
- What end customers will require it and how will they use the location notifications?
- ➤ How many to enable per site?



Mobile Duress Application Portfolio





Select ADD SITE from the portfolio page, filling in the fields and select ADD SITE to create it. While not required, we encourage you to enter a full address and select the local time zone for the site.

Add Site	?
Enter the site to be created.	
Name* Sandbox Site 1	
Address 397 South Taylor Ave, Louisville, CO, 80026	
Timezone Mountain Daylight Time Street, City, State, Zipcode	
Note	
CANCEL ADD SI	TE
Create the	site.

Search

PORTFOLIO: Manage a site







Training Sandbox

ADD SITE

Search

Sandbox Site 1

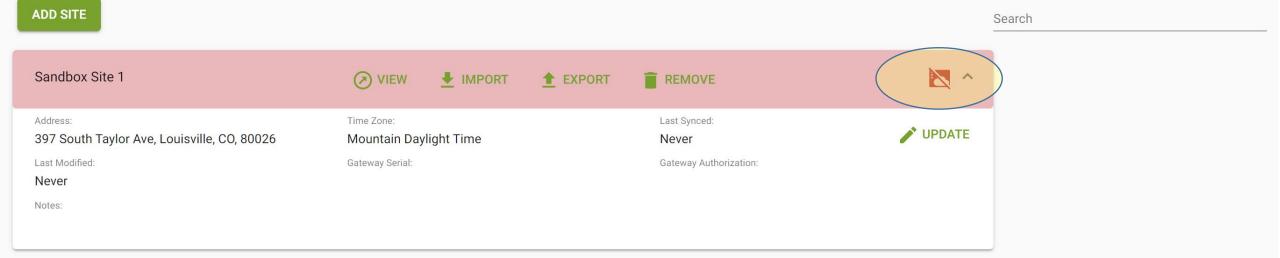


Icons to the right indicate site status, with inactive (highlighted in red) and untested sites appearing at the top of your portfolio list. No icon indicates the site's status is normal. Sites appear in alpha numeric order. Please refer to your user manual for details on site status icons.

PORTFOLIO: Manage a site



Training Sandbox



By selecting the status icon at right, you will see, and be able to update site details.

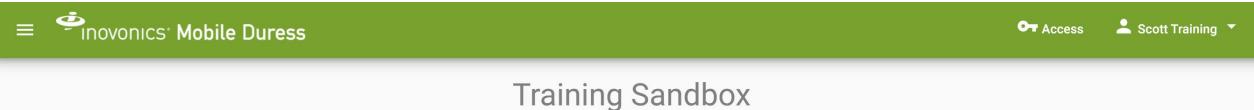
PORTFOLIO: Manage a site



Training Sandbox

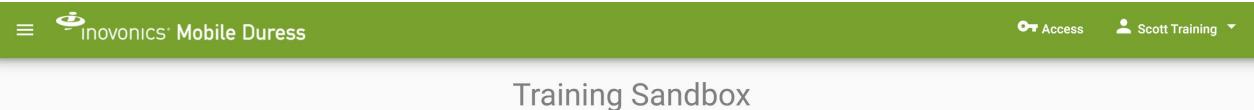


From here you will also be able to view site configuration, import/export site configuration or remove the site from your portfolio.



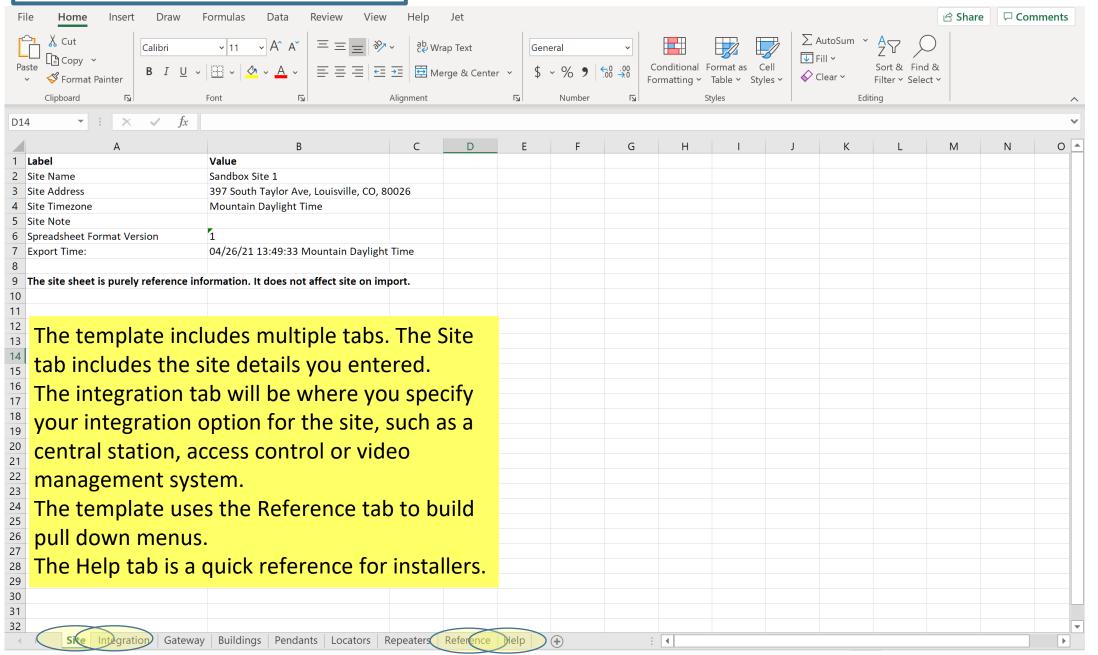


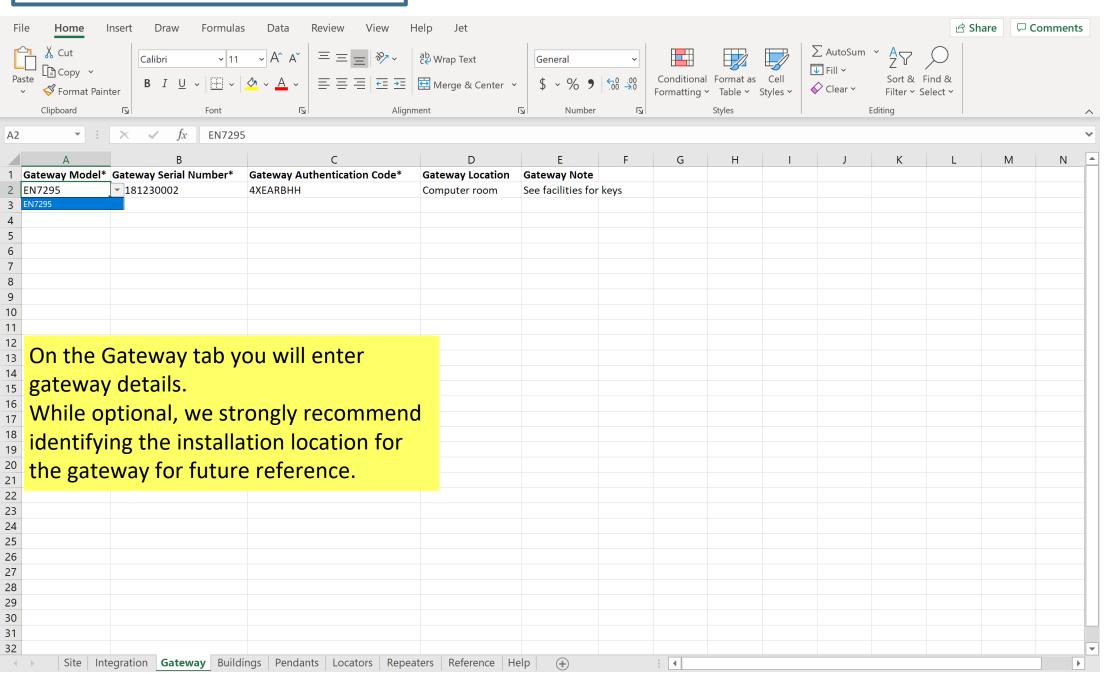
Select EXPORT to download the site's configuration template to your computer's downloads folder.

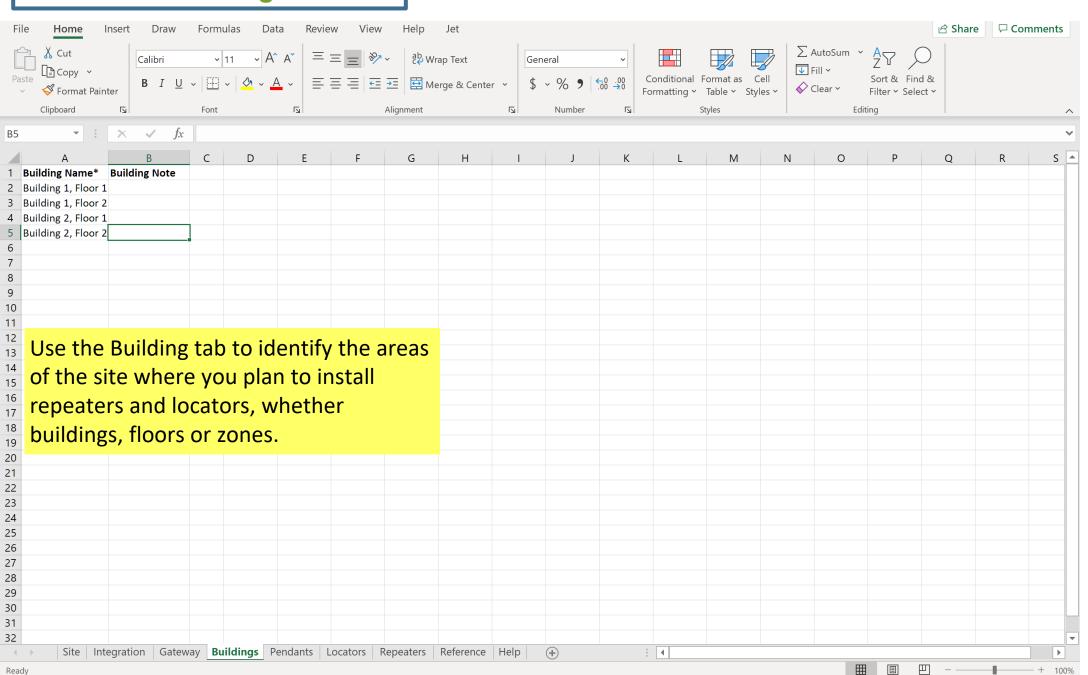


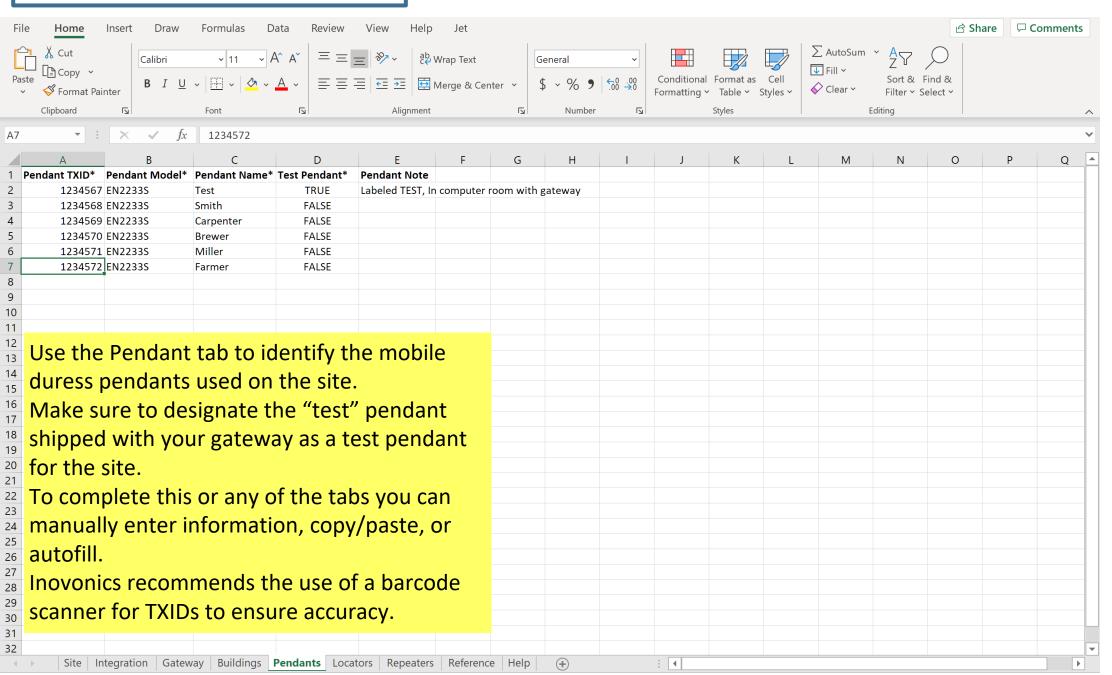


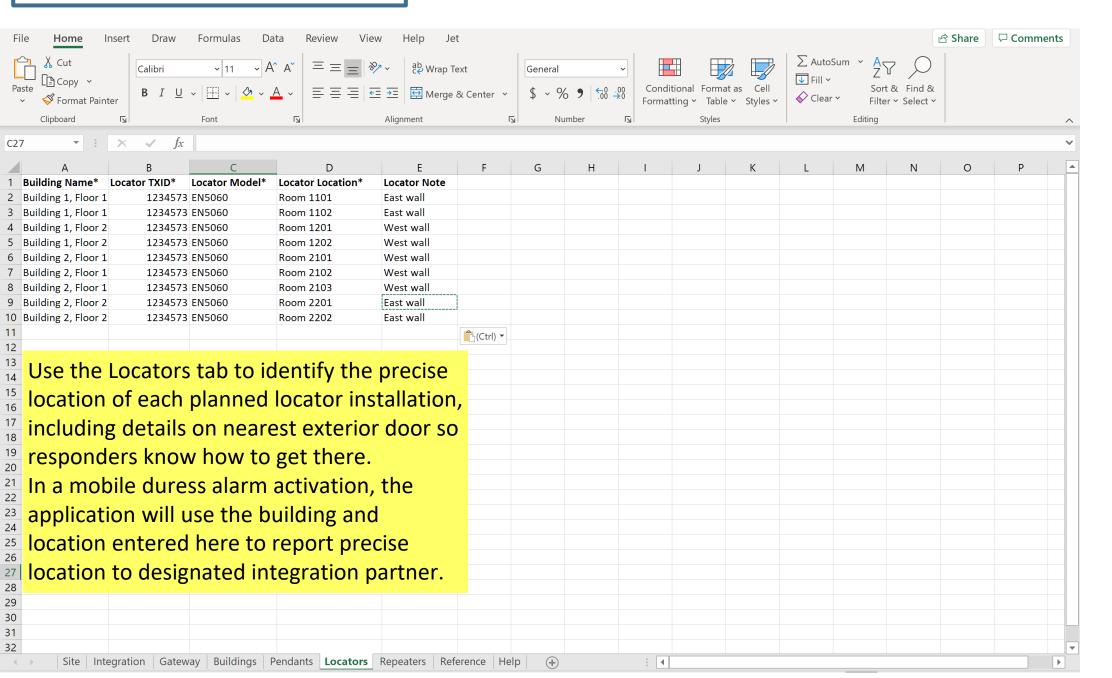
Select EXPORT to download the site's configuration template to your computer's downloads folder.







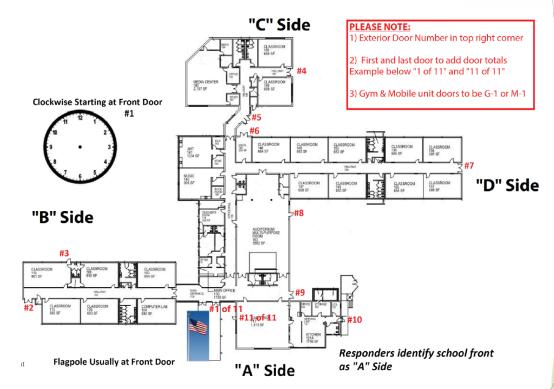


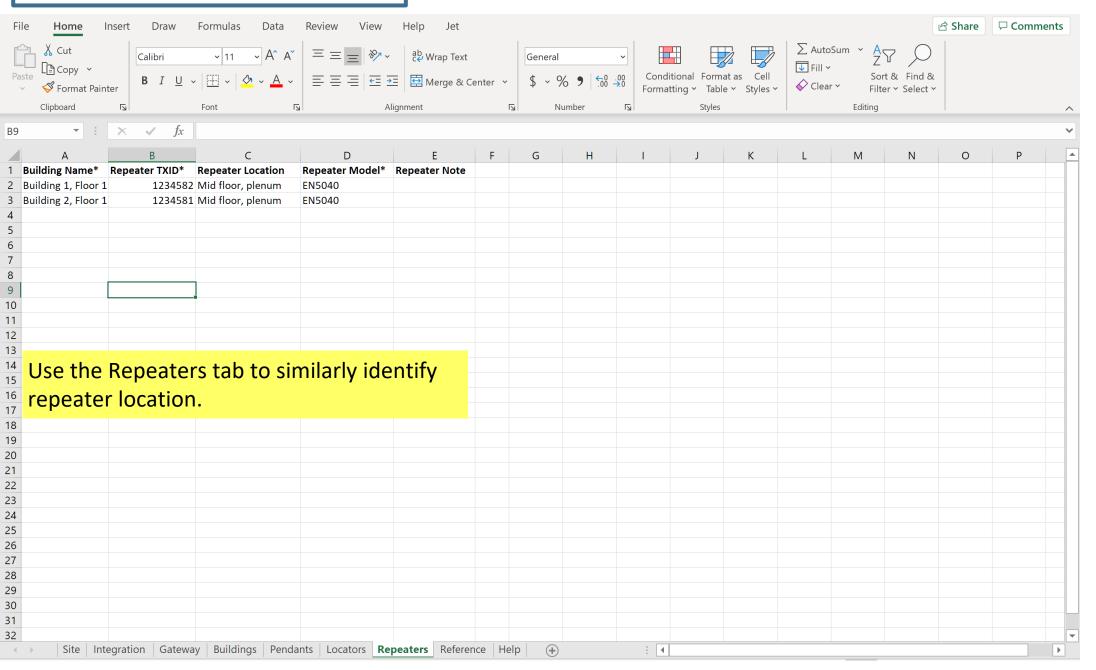


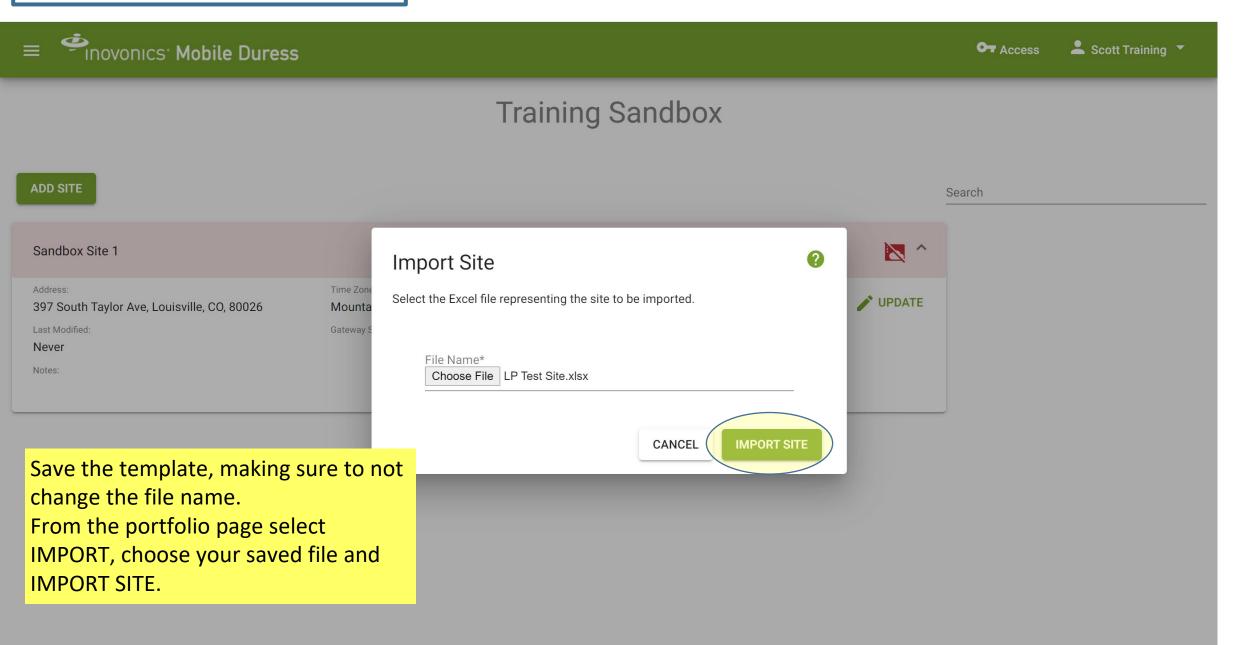


Locator Naming

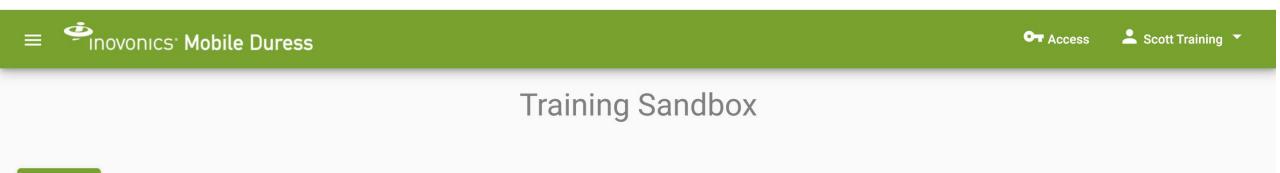
- Consider how responders will use location
- "Building" and locator names must intuitively describe where to go
- Consider inclusion of fasted route, exterior door names, etc.



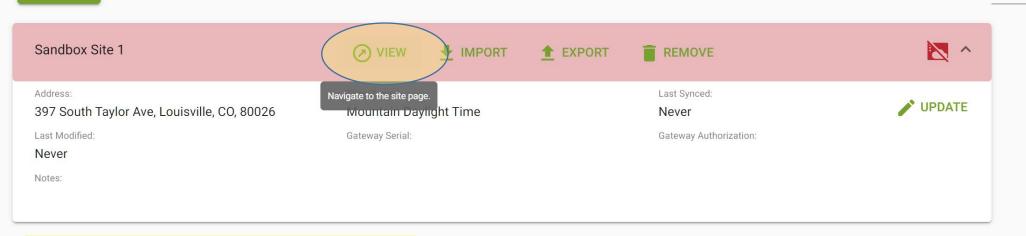




ADD SITE



Search



Select VIEW to ensure your configuration imported correctly.



Mobile Duress Application Activate a Site



Activate a Site: Install Wireless Infrastructure

- Create and configure new sites in a controlled setting prior to activation
- ➤ Label locators and repeaters per the configuration file to assist with installation
- Install all locators, repeaters and the gateway per the installation instructions
 - Ensure network requirements are met
- > Use a survey kit to assist with repeater placement as needed
- ➤ Label the pendant shipped with your gateway as the test pendant for the site, inserting the battery per its instructions
- Label the remaining pendants to distinguish between users and EchoStream only pendants if desired

Activate a Site: Gateway Sync





Search



Training Sandbox

ADD SITE

Address:

397 South Taylor Ave, Louisville, CO, 80026

Last Modified:
4/28/21, 9:16 AM

Notes:

Last Synced:
4/28/21, 2:27 PM

Gateway Serial:
VP181430002

Last Synced:
4/28/21, 2:27 PM

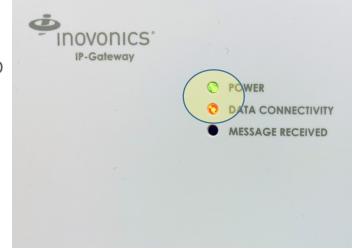
Gateway Authorization:
XWEPFHZS

Check the site details to make sure the gateway synced. This may take up to 15 minutes, while the gateway checks for firmware updates.



Gateway Connectivity

- 1. If after powering the gateway per the installation instructions the green LED is not lit ensure:
 - The power supply is properly connected to the terminal block
 - You are using a good know wire, power supply and outlet
- 2. If after connecting the gateway to the Internet per the installation instructions the amber LED does not become solidly lit verify
 - The gateway is registered to a site within the mobile duress application (auth code & serial #)
 - You are using a known good ethernet cable/port: Connect a laptop to the Ethernet cable attached to the IP gateway's RJ45 port and attempt to open a web site.
 - The WAN and Ethernet LEDs are illuminated
 - The network allows the following outbound connections on the following ports: DNS (UDP 53), HTTPS (TCP 443), NTP (UDP 123), TCP port 9000
 - Ethernet requirements: At least 10/100Base-T, DHCP (lease value greater than 30 seconds) or static IP
 - See following slide for gateway configuration
 - Note: Upon boot up, the gateway may take up to 15 minutes to check for firmware updates from the Inovonics cloud
- 3. If green and amber LEDs are lit and it is not reporting into the site confirm
 - The gateway's serial number and authorization code match those for the site within the application.
- 4. If any problems associated with these steps persist, contact Inovonics support

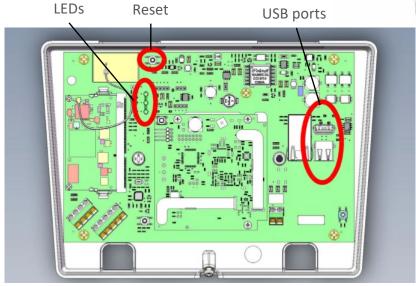






Gateway Configuration

- 1. Press the IP gateway's reset button, waiting for the green LED to flash
- Insert a USB flash drive into either of the IP gateway's USB ports, removing it when the red LED is solidly lit
- 3. Insert the USB drive into a PC, opening the file named en4080-XX-config-YYYYMMDDHHMMSS.yaml using a text editor such as notepad++
- 4. Enter the desired host name of the remote server where the IP-based application is running
- 5. As desired, change the default port from port 5500 to another port.
 - Network connectivity default is Ethernet. enabled with DHCP
 - See example at right to set static IP
- 6. Save the configuration file onto the USB drive as **en4080-config.yaml**
- 7. Safely eject the USB drive from the PC, press the IP gateway's reset button waiting for the green LED to flash.
- 8. Insert the USB flash drive into either of the IP gateway's USB ports, removing it when the red LED is solidly lit
- This indicates the gateway has finished processing the configuration file



Static IP example

∃network:

ethernet:

address: 192.168.90.x
dns: 192.168.1.35
gateway: 192.168.90.1
netmask: 255.255.254.0

power: enabled

Activate a Site: Confirm Configuration

0%







Click VIEW STATUS and the building tabs to verify locators and repeaters are checking in and signal/margin is at least "10." Add repeaters if needed. (note – training site only, no active locators or repeaters)

Sandbox Site 1 - View Status

Check-ins | Last 24 Hours

Repeaters	Pendants BLE Check-in	Pendants ES Check-in
0%	0%	0%

Search

Model	Building	Name / Location	TXID	Status	Last Heard	Signal Level	Signal Margin
EN5040	Building 1, Floor 1	Mid floor, plenum	1234582	?	Never		
EN5060	Building 1, Floor 1	Room 1101	1234573	?	Never		
EN5060	Building 1, Floor 1	Room 1102	1234574	?	Never		
EN5060	Building 1, Floor 2	Room 1201	1234575	?	Never		
EN5060	Building 1 Floor 2	Room 1202	1234576	?	Never		

Activate a Site: Test Location







Next you will test locations. Because you will be moving about the site, you may prefer to test location from a smart phone. Select TEST for the locator you're testing and move to the center of that room. Activate the pendant and wait in the same position until the LED on the pendant flashes red, indicating a restoral message had been sent.

Test Location

Untested

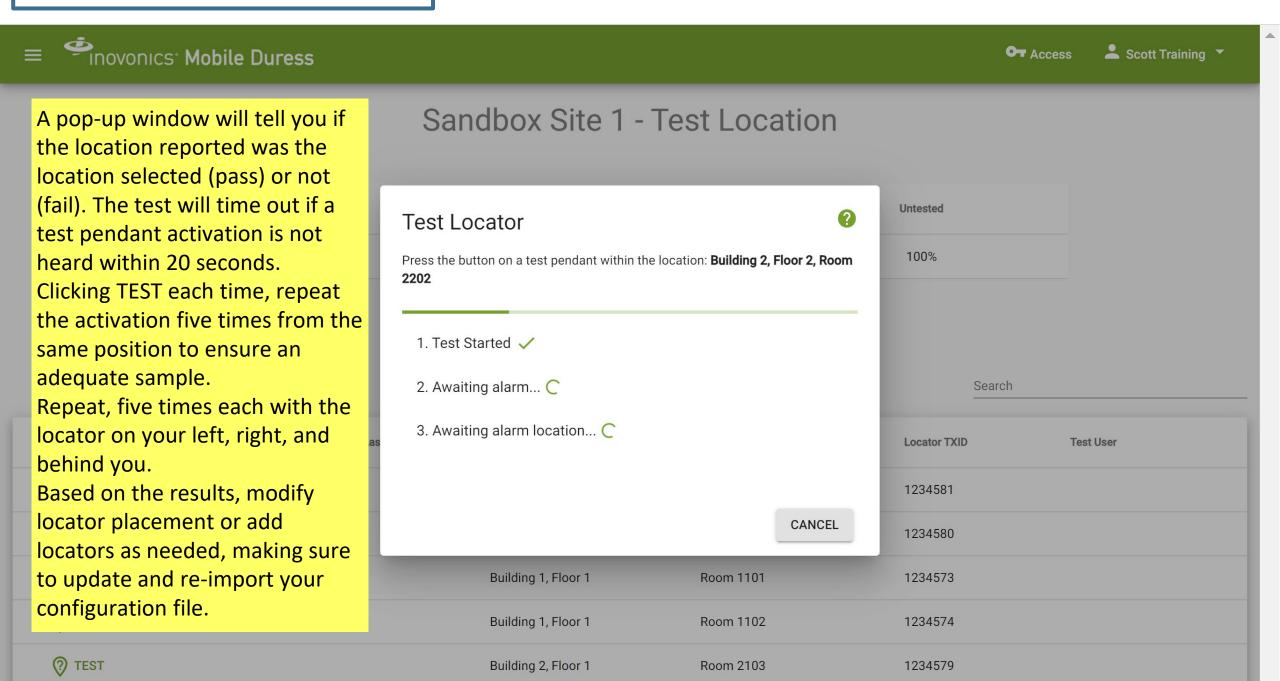
100%

Click the TEST button next to any row to begin testing a location on this site

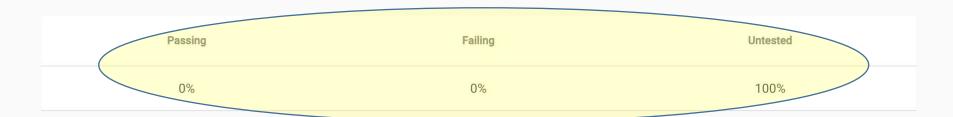
Search

	Pass/Fail	Last Test	Building	Name / Location	Locator TXID	Test User
? TEST			Building 2, Floor 2	Room 2202	1234581	
? TEST			Building 2, Floor 2	Room 2201	1234580	
? TEST			Building 1, Floor 1	Room 1101	1234573	
? TEST			Building 1, Floor 1	Room 1102	1234574	
? TEST			Building 2, Floor 1	Room 2103	1234579	

Activate a Site: Test Location



Sandbox Site 1 - Test Location



Click the TEST button next to any row to begin testing a location on this site

The total test results for the site will be shown at the top of the test location page, including the percentage of those devices which have passed, failed or remain untested.

Archive a copy of the test report for yourself and the customer for a record that the site is accurately reporting location.

Search

Locator TYID

Locator IXID	Test User
1234581	
1234580	
1234573	
1234574	
1234579	

Toet Hear

? TEST

? TEST

? TEST

(?) TEST

Building 2, Floor 1

Building 2, Floor 2

Building 1, Floor 1

Building 1, Floor 1

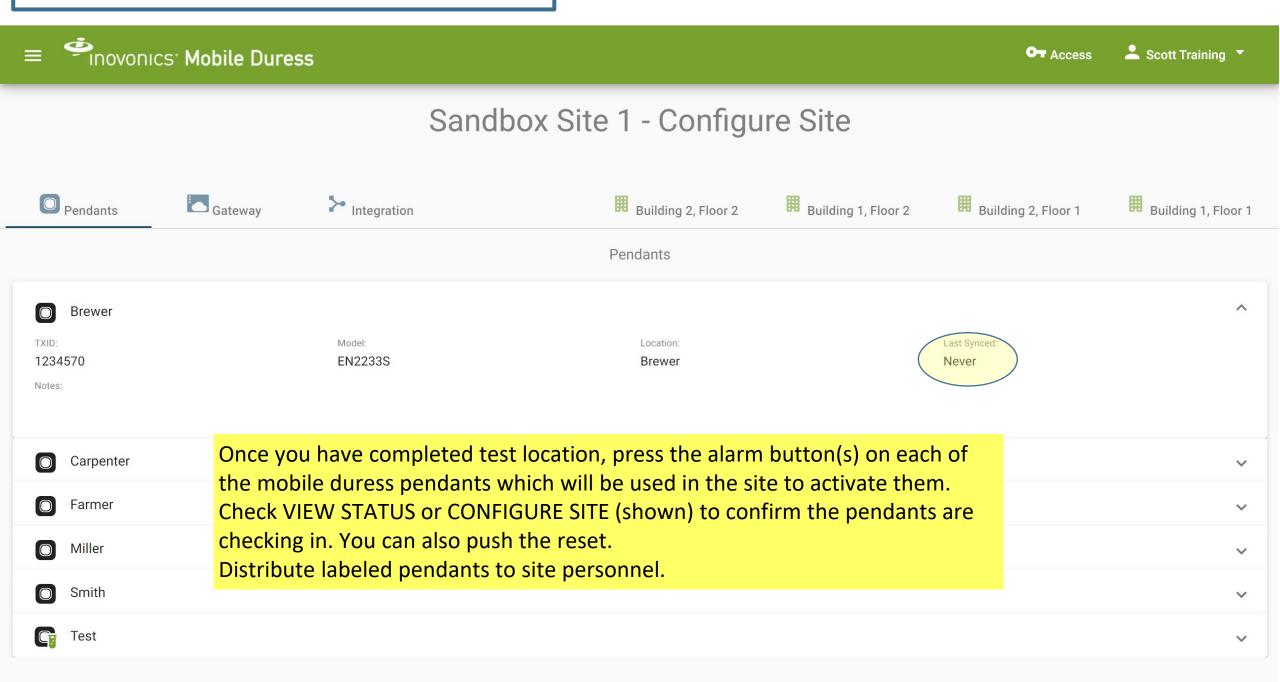
Room 2103

Room 2201

Room 1101

Room 1102

Activate a Site: Mobile Duress Pendants



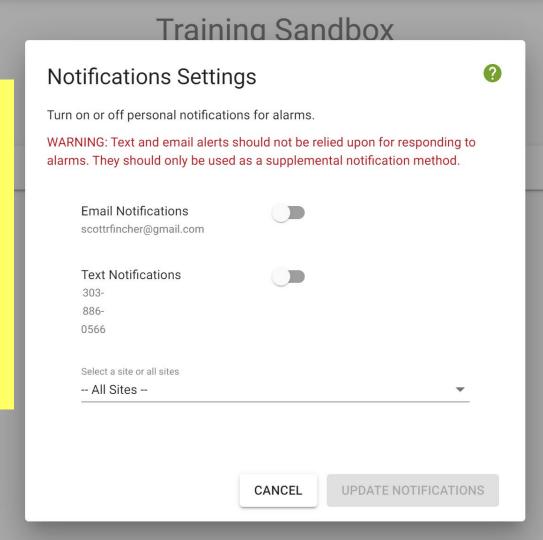




For a specific user to receive notifications they will log into the system and select their user name in the upper right.

A pop up window will allow them to select email, text or both, and the sites they want to receive notifications on.

The application will send confirmation codes to complete the process.







Mobile Duress Application Modify a Site



Modify a Site

- > EXPORT and open the configuration file for the site you are modifying
- > Any file you import will completely overwrite the previous configuration
 - If adding hardware, fill in the appropriate fields below the configuration details for existing hardware
 - If replacing hardware, only change the fields for the hardware you are replacing
- > IMPORT the file
- ➤ Check VIEW STATUS to confirm you changes
- > TEST LOCATION if you've added new locators
- > Activate any new mobile duress pendants
- > Future release will enable site changes within application



Partner Portal: https://www.inovonicspartnerportal.com/home, Password: it just works



RESOURCE

CO-OP FUNDS

SUPPORT

Welcome

Welcome to the Inovonics partner portal. Please use the buttons below to access resources and request available co-op funds as needed. We greatly appreciate your partnership and look forward to working with you as we continue to expand our mobile duress offerings.





Mobile Duress Application Creating a Sandbox Site



Hands On Exercise

- Using your user manual, training slides and your demo hardware
- Create your own sandbox site: (your name) (Company)
 Sandbox
 - Add a technician with all site access
 - Add a viewer with time limited access
 - Configure the site
 - Activate the site
 - Test location
 - Set notifications



Mobile Duress System Survey Kits & Trouble Shooting



Technician Toolkit

- ➤ Inovonics spare parts/accessories
 - Pendants, Locators, Repeaters
 - BAT604 CR123A batteries
 - ACC531 Tamper Spring
 - Survey kit
- > Torx screwdriver
- > Thumb drive
- > Ethernet cable
- ➤ Site blueprints/plans
- Exported site configuration file
- Installation instructions and user manual



EN7017 Survey Kit and App

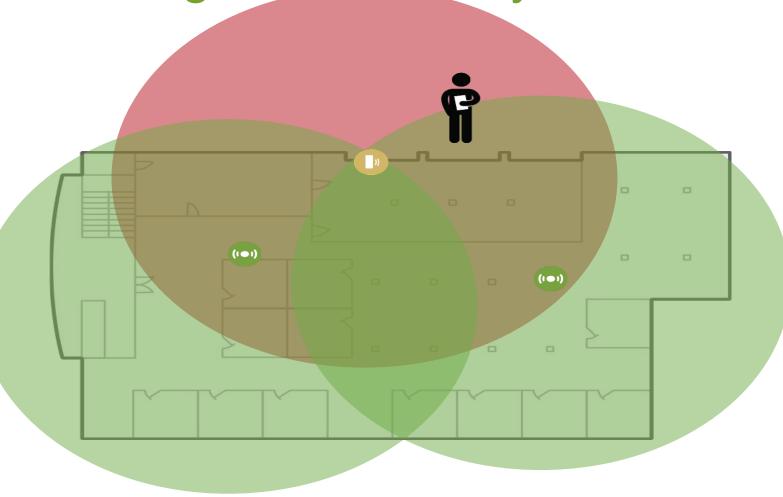
The EN7017 survey kit and app provides security integrators with a wireless blueprint in advance of installing devices, allowing the quick preparation of accurate quotes

- Automatic notification of both signal repeater signal strength
- Intuitive display
- Protective and professional storage
- Mobile flexibility





Performing a Site Survey







EN4016SK Survey Receiver

The EN4016SK wireless survey receiver is available for purchase or 30-day loan — you pay only the cost of shipping. Use it to determine optimal location for EchoStream transmitters and repeaters.

- Survey any facility quickly and easily
- Batteries operates receiver for up to eight hours
- Requires four AA batteries (not included)
- Up to eight hours of continuous operation
- Add other hardware as needed







EN4016SK, EN1223SK, ACC631 + EN1210, EN5040



Questions?



For More Information or assistance

- ➤ Inovonics Technical Support:
 - Call us at 1-800-782-2709
 - Email us at support@inovonics.com
 - Chat us on our website inovonics.com
 - Text us at 720-441-1947
- > Your Inovonics Account Manager



Thank you.

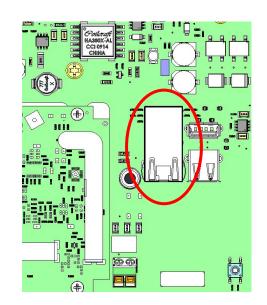


Connectivity Options

Use only if required for a specific dealer training session



Cellular Connectivity Option





Gateways can operate at speeds of 2GB and higher. For reference, a site with 500 transmitters will consume 25MB of data per day. Please consult with your cellular carrier to identify the data plan that best suits your needs.





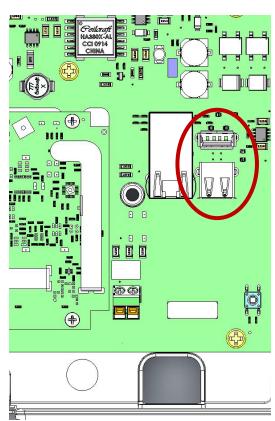




- 1. Insert the SIM card into the LB2120 per the manufacturer's instructions.
- 2. Connect the LB2120 to your computer Ethernet directly on the LAN (Yellow) port.
- 3. Open a browser and connect to http://192.168.5.1. This is the modem IP address.
- 4. When prompted, enter the password from the sticker on the bottom of the modem.
- 5. Download a copy of the Netgear LB210 installation guide and user manual from netgear.com.
- 6. Connect the LAN (yellow) port on the modem to the TapWatch gateway.
- 7. Refer to the TapWatch Application User Manual to complete site set up.

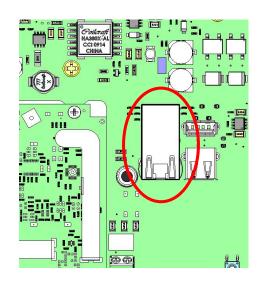


Wi-Fi via USB configuration



- 1. Referencing the installation instructions, press the gateway's reset button and wait for the green LED to flash.
- 2. Insert the USB flash drive into either of the gateway's USB ports.
- 3. When the red LED is solidly lit, remove the USB drive insert the USB drive into the computer.
- 4. On the computer, open the en4080-XX-config-YYYYMMDDHHMMSS.yaml file from the USB drive using a text editor such as Notepad ++.
- 5. In the "wifi" subsection of the "network" section of the config file, configure the WiFi network by only updating these fields:
 - country: Enter the two character ISO country code
 - power: Enter "enabled" to use WiFi.
 - ssid: Enter the name of the WiFi network the gateway will connect to.
 - passphrase: Enter the passphrase (password) of the WPA/2 WiFi network or leave empty for an open network.
 - address: Enter the IP address the gateway will use, static or dynamic
- 6. Save the configuration file onto the USB drive as en4080- config.yaml.
- 7. Load the configuration file onto the gateway:
 - Safely eject the USB drive from the computer.
 - Press the gateway's reset button.
 - Wait for the green LED to flash.
 - Insert the USB drive into either of the gateway's USB ports.
 - When the red LED is solidly lit, indicating the gateway has finished processing the configuration file, remove
 the USB drive.







Wi-Fi via Adapter

- 1. Ensure the availability of a WiFi signal where you plan to install the gateway.
- 2. Download the latest driver at https://www.iogear.com/support/dm/driver/GWU637.
- 3. Disconnect your computer from the Internet (Ethernet, WiFi, cellular).
- 4. Plug the WiFi adapter into your computer's USB and Ethernet ports.
- 5. Refer to the documentation at https://www.iogear.com/product/GWU637/ to configure the adapter to a local WiFi network.
- 6. When you are able to browse the web, unplug the WiFi adapter from your computer's USB and Ethernet ports.
- 7. Connect the gateway to the cloud
- 8. Unplug the gateway from power and modem.
- 9. Plug the WiFi adapter into power.
- 10. Connect the WiFi adapter to the WAN port on the gateway.
- 11. Plug the gateway into power.