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Essence Security
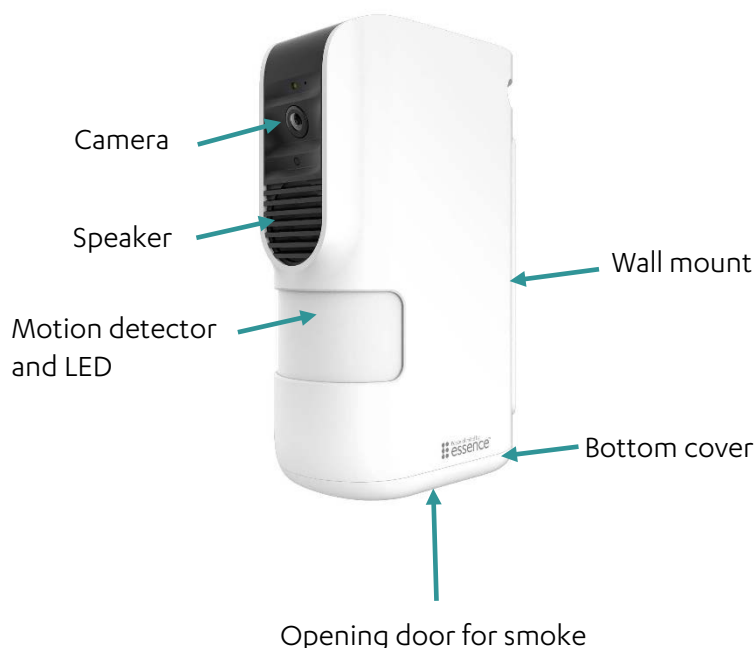
MyShield
User Guide

December 2023

essence

Thank you for buying MyShield, the world's first standalone, smoke-generating security solution for intruder detection and discouragement. Please take the time to read and understand this guide to make sure you achieve the maximum performance from your MyShield. If you have any questions, please call your supplier.

Table of Contents

1. Overview

Camera

Speaker

Wall mount

Motion detector
and LED

Bottom cover

Opening door for smoke

MyShield is a remotely triggered, smoke-generating security device for detection and discouragement of intruders. It can be monitored and operated either by a professional monitoring center, or using a smartphone app.

If MyShield is armed and its motion detector senses a movement within its coverage area, it does the following:

- Plays a voice message saying, "Protected area – leave immediately"
- Sends a notification to the monitoring center or smartphone app

On receipt of a notification, the monitoring center can evaluate the situation by viewing real-time imaging from the MyShield HD camera, and deploy smoke if desired. When deployed, the proprietary smoke diffuser fills the room with harmless but disorienting smoke in 30 seconds.

MyShield can be installed as a standalone device or integrated into an existing security system. It uses bi-directional cellular communication and is battery powered, making it independent of the local power supply and communication infrastructure.

1.1. Main Components

- Intrusion detection

- ■ PIR (Passive Infrared) Motion detector
- Intrusion verification
  - ■ HD Camera
- Automated voice messages
- Movement detection for Tamper alert
- Smoke
  - ■ Disorienting
  - ■ Harmless
  - ■ Quickly fills room
- Power
  - ■ Battery powered

1.2.   Main Features

- Connectivity (CAT-M)
  - ■ Connect to any CAT-M network worldwide (pending network availability)
- Intrusion cycle step by step
  - ■ PIR detect
  - ■ Video recording
  - ■ Video upload
  - ■ Voice announcement
  - ■ Deploy smoke + voice announcement ("Deploying smoke – clear the area")
  - ■ Image recording
  - ■ Image upload
- Pet immunity (option) for pets up to 40kg
- Tamper detect, 3 types
  - ■ Remove from wall
  - ■ Remove canister
  - ■ Input wire cut (future)
- Multi users, adding multiple users to manage the same device
- Multi devices, adding multiple MyShield devices for a single user or multiple users
- Force arm, force the system to arm even in case of tamper event
- Delay arming, user configures how many seconds would pass from arming command and until the system is armed
- Extend time, to extend the device control time during intrusion

2. Safety Instructions and Terms of Use

Below are the terms of use and safety instructions for MyShield and its canisters:

1. A sign indicating the presence of a vision obstruction device should be placed at the protected premises in accordance with the following graphic and dimensions:

Table B.1 — How to calculate the size of sign you need

Height of signs and maximum viewing distances		
Maximum viewing distances m	Minimum symbol height mm	Recommended letter height supplementary text signs mm
7	60	5
9	80	7
14	120	10
21	180	15
28	240	20

WARNING

OBSCURATION SECURITY DEVICE INSTALLED

2. In addition to the sign requirement above, the canister MSDS (material safety data sheet) and these safety instructions must be provided to the end customer and kept at the installation site to be made available to first responders in case of need.

3. The device includes a canister which is a pyrotechnic article: a smoke generator with an anti-theft function. The contents of the canister are isolated and protected from direct contact. The smoke produced during the intended use is not classified as dangerous to human health; however, it may cause skin, eye, respiratory, and throat irritation.

4. The canister should be used only with MyShield and only in accordance with its intended use.

5. The device should be installed, maintained, and activated only by authorized personnel.

6. The device should be installed at least one meter from flammable objects, such as but not limited to, furniture, textiles, carpets, drawings, carton objects, and any flammable substance such as chemicals, oils, and/or fuels.

Further recommended distances are provided in the installation drawing in section Error! Reference source not found..

7. The device must not be covered or blocked at any time after installation.

8. Do not block exit and/or escape ways at the installation site.

9. Smoke activation should be performed by a trained professional only after verifying a real trespassing event via video, photo, and/or voice, and making sure that no unrelated bystanders are at the premises.

10. The device canister should be replaced periodically to ensure its maximum effectiveness.

11. The canister should be replaced only by authorized personnel.

12. It is recommended that the device be installed in areas with windows or other accesses that allow proper ventilation after activation and smoke generation. If the property is not ventilated within a maximum of two hours of smoke generation, it is recommended to clean the area where smoke was generated. The residue that might be left by the smoke is easily removed with water.

13. It is recommended not to install the device in areas intended for the sale, breeding, or care of live animals, or in rooms for minors or people with respiratory disorders.

14. Do not eat, handle, market, or feed animals any food that has been exposed to the smoke.

15. While the device is generating smoke, do not touch or stand in front of it (at a distance of less than two meters) as it may cause burns.

16. Upon activation, the smoke generated by the device will trigger smoke detectors and fire alarms, and the customer or their representative is responsible for notifying the fire department and any other relevant first responder of the presence of the device on site, and of its activation. Essence shall not be liable for any cost or liability rising from the triggering of such a fire alarm and/or smoke alarm, or for the dispatching of first responders.

17. Once the device is activated and smoke is generated, leave the area immediately. The maximum stay should not exceed 15 minutes. Ventilate the area as soon as possible. Return only when the smoke is ventilated.

18. After smoke generation, wait at least 30 minutes before handling the device and/or canister to allow for cooling and to avoid burns.

19. Warnings:

-                                  Fire or projection hazard
- Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources.
- NO SMOKING.
- Keep only in original packaging.
- In case of fire: Explosion Risk. Evacuate area. DO NOT fight fire when fire reaches explosives (canisters).
- Dispose of canisters and/or their contents in accordance with local regulations.
- In case of exposure to smoke produced during the intended use, no specific measures are necessary. In case of unexpected symptoms or effects, contact a doctor.

- It is absolutely forbidden to attempt to open and/or tamper with and/or modify the MyShield device, the canister, or any part of either of these in any way.
- Canisters must be intact without any damage or impacts. Damaged canisters should not be installed or used.
- Do not remove the anti-humidity seal protecting the smoke outlet at the bottom of the canister.
- Do not block, cover, or plug the smoke outlet at the bottom of the canister
- Do not expose the device and/or the canister to high moisture, or wet environments. Do not introduce water and/or liquids to the device and/or the canister
- Always use original and certified spare parts from the original manufacturers.

3. Setting Up MyShield

MyShield setup includes the following:

- Installing the app
- Installing MyShield

3.1. Installing the App

If the MyShield app is provided by the reseller, follow the instructions provided.

To install the MyShield app, if not provided by the reseller:

1. Search for Essence MyShield on Google Play or App Store.

2. Install the app and follow the onscreen instructions to create a user.

   For app configuration instructions, including how to add users and devices, see Operating MyShield.

3.2. Installing MyShield

For further information on installing the MyShield device, and working with the mobile app, see the *MyShield Installation Guide*.

4. Operating MyShield

MyShield enables you to:

- Detect intrusions
- Verify intrusions
- Deploy smoke
- Add multiple users

- Add multiple devices
- Force arming
- Delay arming
- Extend time
- Take another video

If you are using a monitoring center, MyShield is operated for you. If you are not using a monitoring center, use the MyShield app to operate your MyShield, as detailed in this chapter.

MyShield operation includes:

- [Arming and disarming](#)
- [Responding to an intrusion notification](#) (viewing real-time video and deploying smoke)
- [Action after deploying smoke](#)
- [Tamper alerts](#)
- [Setting the language of the app](#)
- [Changing voice announcement settings](#)
- [Viewing the status of a MyShield device](#)
- [Viewing the RF reception levels of a MyShield device](#)
- [Adding multiple users](#)
- [Adding MyShield devices](#)
- [Forcing the system to arm](#)
- [Delaying arming the system](#)
- [Extending the MyShield control time](#)
- [Taking an additional video](#)

4.1. Arming and Disarming

MyShield detects intrusions when armed.

To arm MyShield, from the MyShield app Home screen, tap   . MyShield is armed.

To disarm MyShield, from the MyShield app Home screen, tap   . MyShield is disarmed.

4.2. Responding to an Intrusion Notification

When MyShield detects an intrusion, you receive a notification on your smartphone. You can then view a real-time video from MyShield and deploy smoke if desired.

To respond to an intrusion notification:

1.   On your smartphone, tap the intrusion notification. The intrusion verification screen appears.

2. Tap to receive real-time video from MyShield.

3. After viewing the video, do one of the following, as appropriate:

- To dismiss the notification without deploying smoke, tap .
- To deploy smoke:

    a. Tap . A popup window appears.

    b. Tap **Activate** to deploy smoke.

       After MyShield deploys smoke, a verification picture appears.

       After deploying smoke, take the actions detailed in section 4.3.

4.3. Action after Deploying Smoke

> ⚠️ WARNING! **The canister is hot after deploying smoke. Do not touch it for at least 30 minutes after deploying smoke.**

After deploying smoke, replace the canister and batteries in the following order:

1. Remove the old canister.

2. Remove the batteries.

3. Insert new batteries.

4. Insert a new canister.

For more details, see Replacing the Batteries (page 31) and Replacing the Canister (page 28).

4.4. Responding to Tamper Alerts

When anyone tampers with MyShield, it sends a tamper alert to the monitoring station or smartphone app. There are 3 types of tamper alert:

- Unmount from wall—sent when anyone removes MyShield from the wall or it falls off
- Canister—sent when anyone removes the canister from MyShield
- Wired input cut—sent when someone cuts the wired input, which is a future option for wiring MyShield to an external security system and enabling that system to control MyShield.

You can respond to a tamper alert the same as to an intrusion notification, by viewing real-time video and deploying smoke if desired: see sections 4.2 and 4.3.

4.5. Setting the Language of the App

1. In the App menu, tap **Settings**.
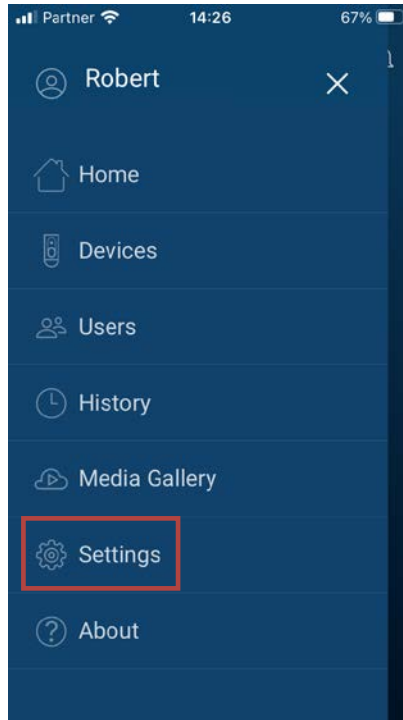
2. Tap **Language**.
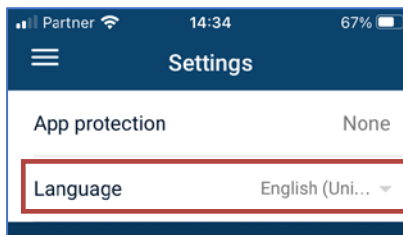
3. Select the desired language from the drop-down menu.

## 4.6. Changing a MyShield's Voice Announcement Settings

By default, MyShield is set to make the following voice announcements:

Condition	Announcement	Repetition
Motion detected when MyShield is armed	"Protected area – leave immediately"	Twice with two second interval between announcements

Condition	Announcement	Repetition
Deploying smoke	"Deploying smoke – clear the area"	Twice with two second interval between announcements

You can change which voice announcements MyShield plays and at what volume, as follows:

1. In the App menu, tap **Devices**.
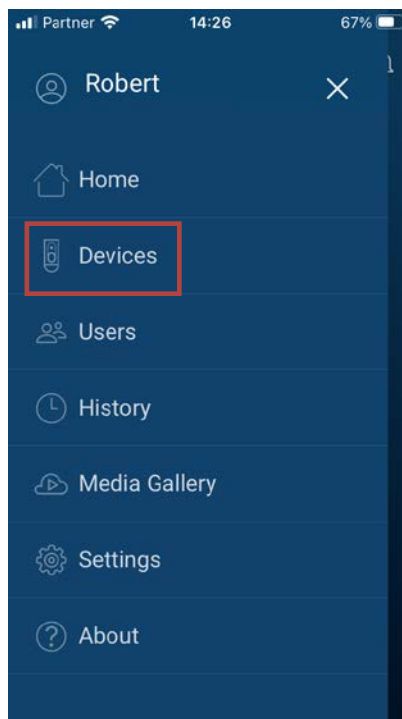
2. Tap the name of the MyShield whose settings you want to change.

   The relevant MyShield's status and settings screen opens. Here you can change its settings as follows:
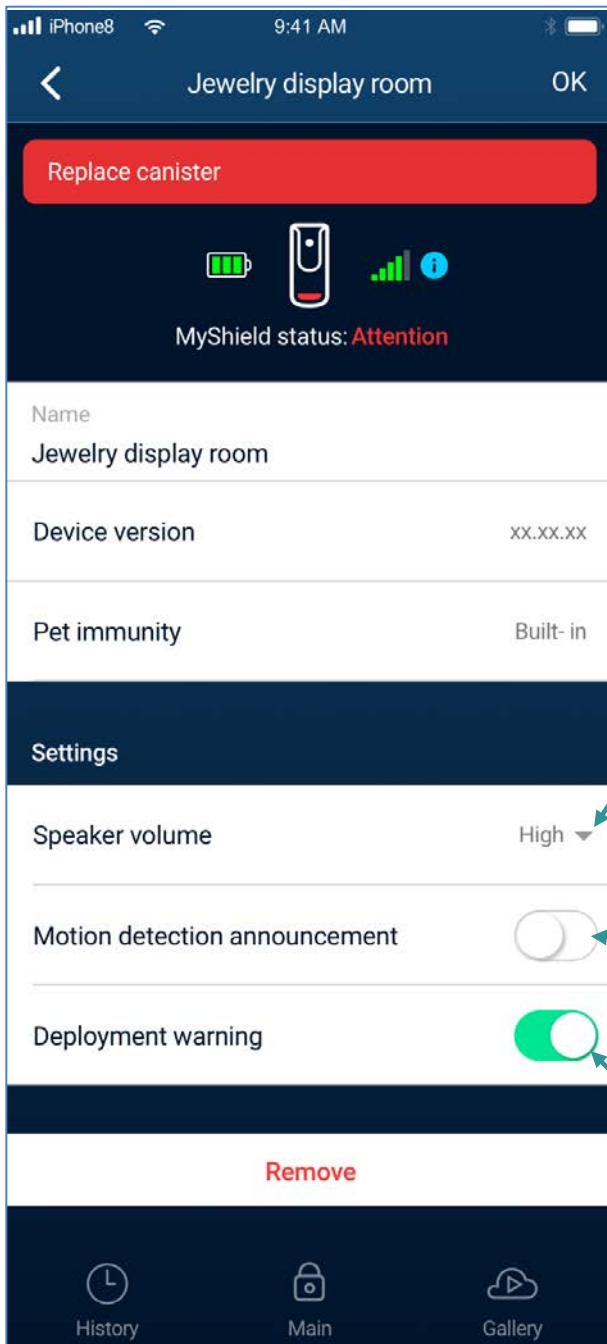
Tap to open the volume menu, where you can select the desired volume for announcements.

Tap to toggle between playing and not playing an announcement when the MyShield detects motion.

Tap to toggle between playing and not playing an announcement when deploying smoke.

4.7. Viewing the Status of a MyShield Device

You can view the status of a MyShield's battery, smoke canister, and cellular network connection as follows:

1. In the App menu, tap **Devices**.
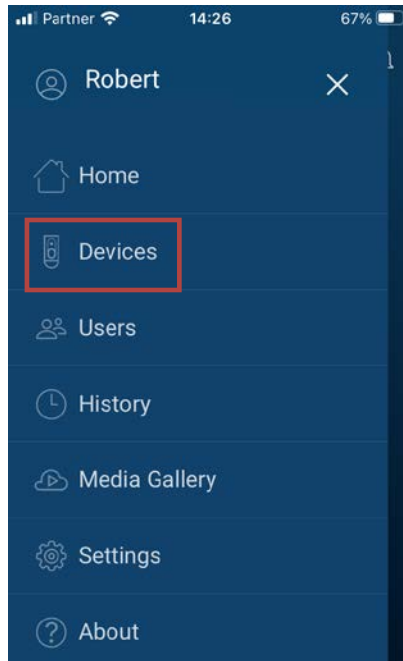
2. Tap the name of the MyShield whose status you want to view.

   The selected MyShield's status and settings screen opens. Here you can view icons for the status of the battery, smoke canister, and cellular reception, as detailed in the next figure and table.
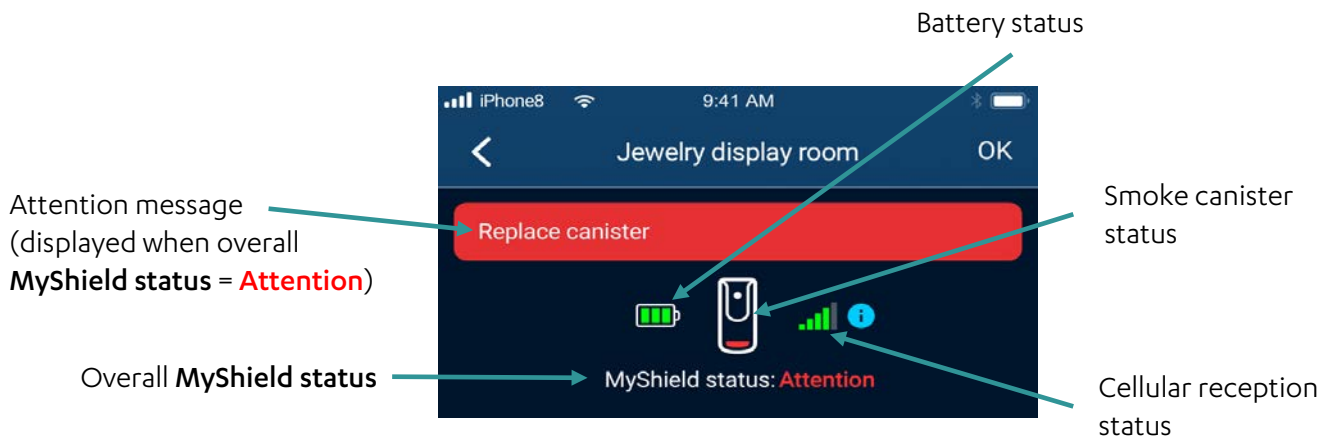
Item	Icon/Status	Meaning
Battery		2/3 charged or more
		1/3-2/3 charged
		1/3 charged or less

Item	Icon/Status	Meaning
		Very close to 0 charge
		Technical problem with battery
Smoke canister		Full
		Empty
Cellular reception		Excellent
		Very good
		Good
		Adequate
		Weak
MyShield status	OK	MyShield in working order
	Attention	Check the icons and attention message to see what requires fixing

When the battery voltage falls to 7.9V, the device sends a low battery message. In this state, the device will be fully operational for a minimum of 30 days.
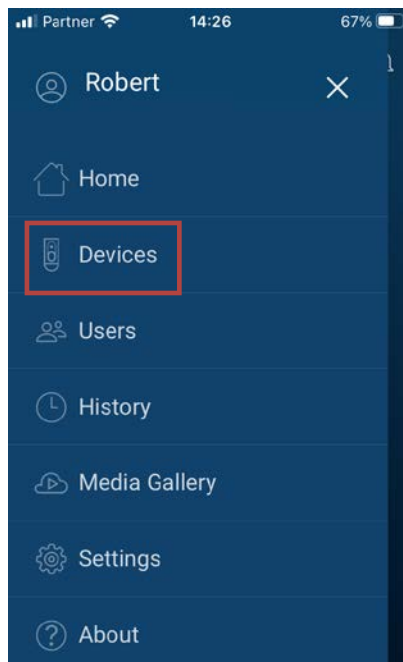
4.8. Viewing the RF Reception Levels of a MyShield Device

You can view the following indicators of a MyShield's RF (radio frequency) reception level:

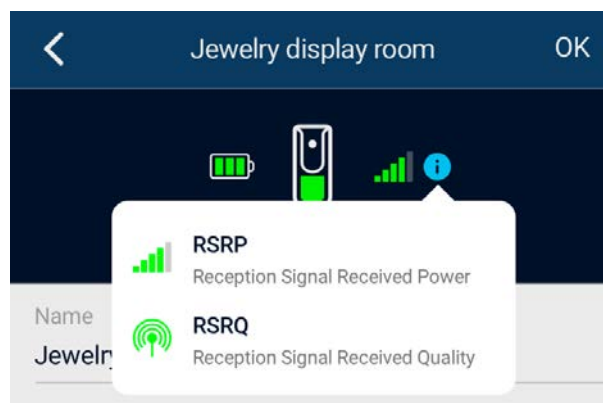- RSRP (reference signal received power)
- RSRQ (reference signal received quality)

To view the reception level indicators:

1. In the App menu, tap **Devices**.

2. Tap the name of the MyShield whose status you want to view.

3. Tap [i].

   The selected MyShield's RF reception level indicators appear, as detailed in the next figure and table.

RSRP Indicator	RSRQ Indicator	Reception Level Indicated
		Excellent
		Very good
		Good
		Adequate

RSRP Indicator	RSRQ Indicator	Reception Level Indicated
		Weak

4.9. Device Information

The device sends information periodically and per event. The information is sent to the cloud and includes the following information:

- Device identification, with a unique security key
- Battery voltage level
- Tamper event status
- Temperature
- RSSI level
- Periodic BIT result

4.10. Adding Multiple Users

A premises can have multiple installations of MyShield devices, and they can be monitored and controlled by multiple users.

When a user performs any action via the mobile app, the action is also reflected in the application of the other users.

A user can have one of two roles – master user or standard user.

A user can add, remove, and edit other users and devices.

To add multiple users:

1.   In the App menu, tap **Users**.
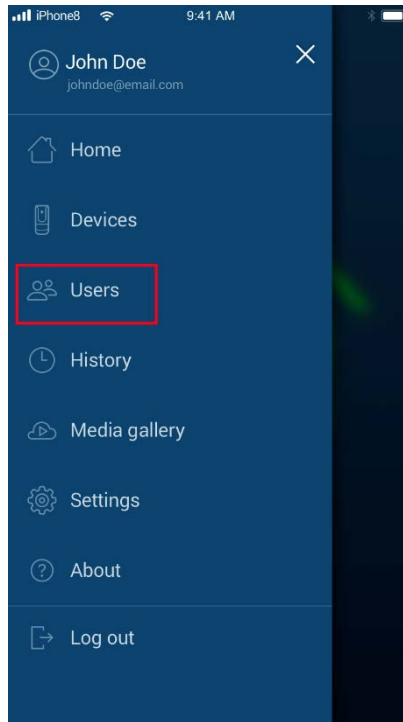
The list of configured users displays.

2. Tap ⊕.

3. Enter the name and email address of the new user and tap Invite.

   An invitation email is sent to the user.
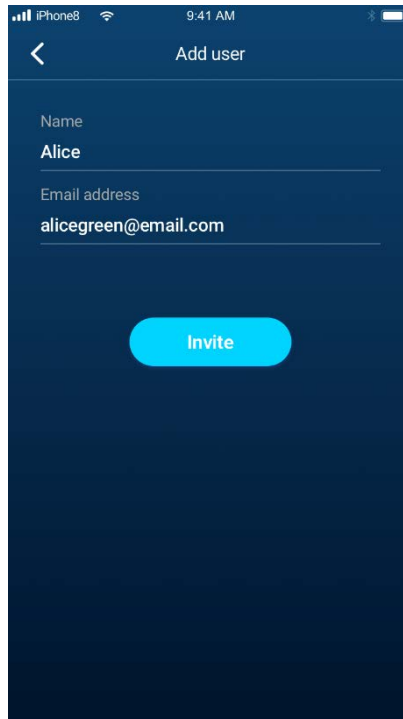
Until the user accepts the invitation, "Invitation pending" displays on the screen.

When the user accepts the invitation, you receive a notification message, and the user appears in the list of configured users.
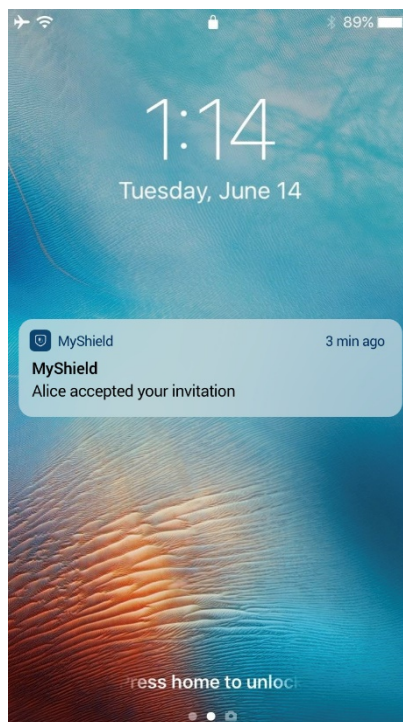
4.   Repeat the procedure to add additional users.

4.11. Adding MyShield Devices

This section describes how to add your first MyShield device or multiple devices to a single user or to multiple users.

To add multiple MyShield devices:

1. In the App menu, tap **Devices**.
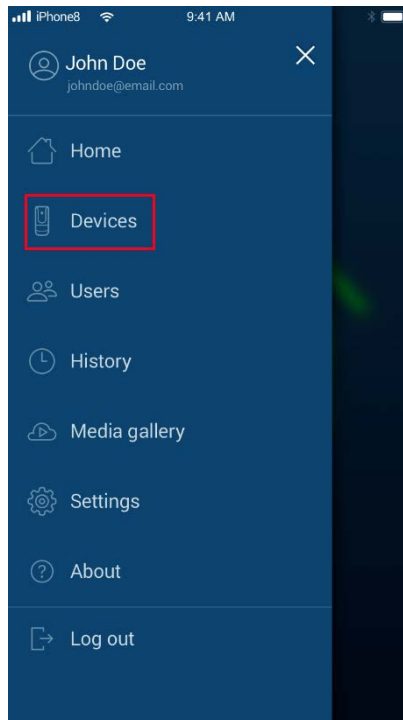
2. Allow MyShield to access your camera.

3. With your QR reader, scan the QR code or manually enter the serial number for the device.
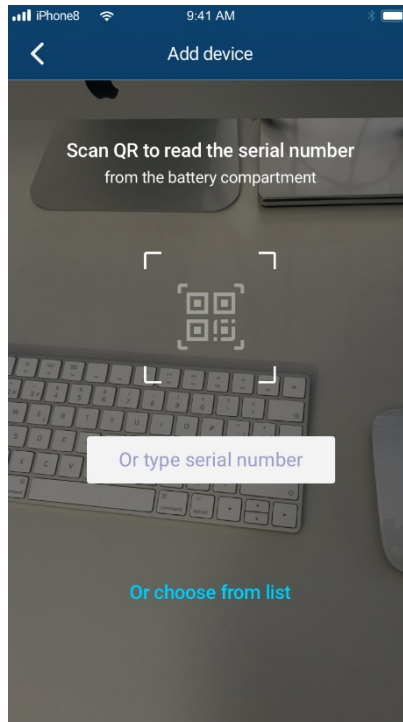
4. Change the device name if necessary, and click OK to add the device.
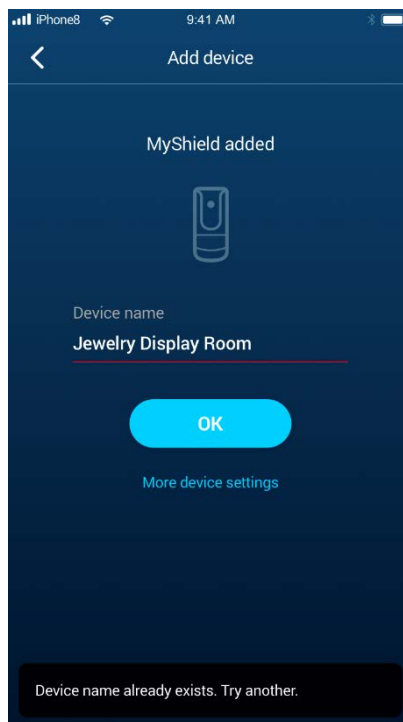
5. Repeat the procedure to add additional MyShield devices.

4.12. Forcing MyShield to Arm

You can force MyShield to arm even in the case of a tamper event.

To force MyShield to arm:

1.   In the App menu, tap **Home**.
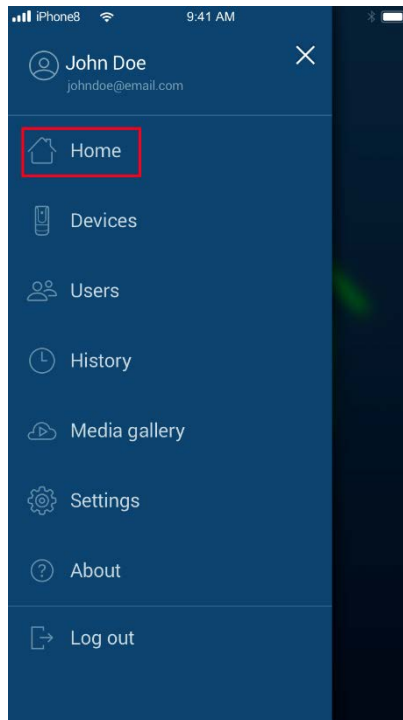
The Home screen displays the disarmed status of the device.
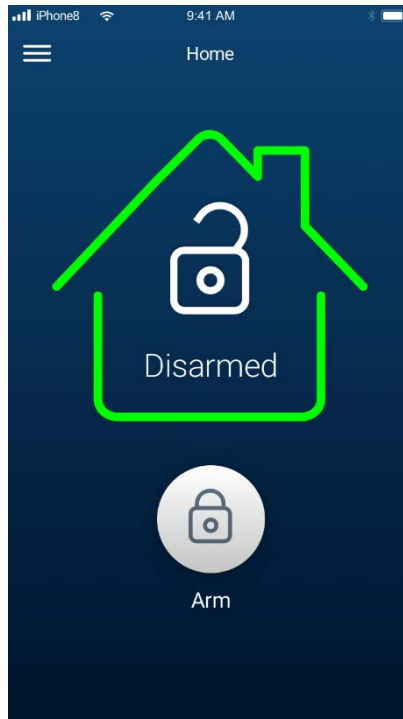
2. Tap .

    If tampering has occurred, the following message displays:
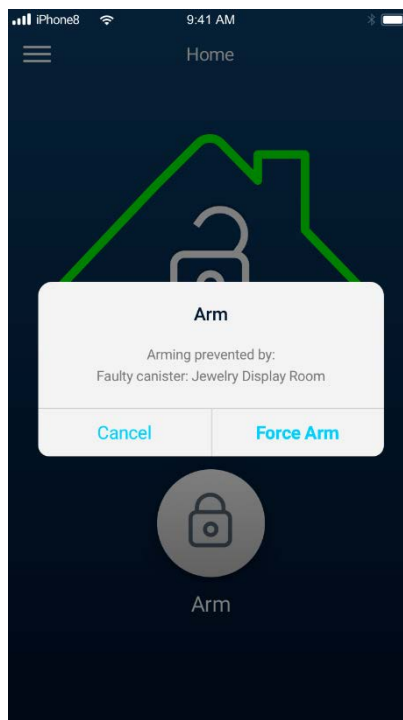
3. Tap Force Arm.

    The Home screen displays the armed status of the device.

4.13. Delaying Arming MyShield

You can delay arming MyShield to give yourself time to exit the building before arming.

You can configure the number of seconds that MyShield waits to arm after receiving an Arm command.

To delay arming MyShield:

1. In the App menu, tap **Settings**.
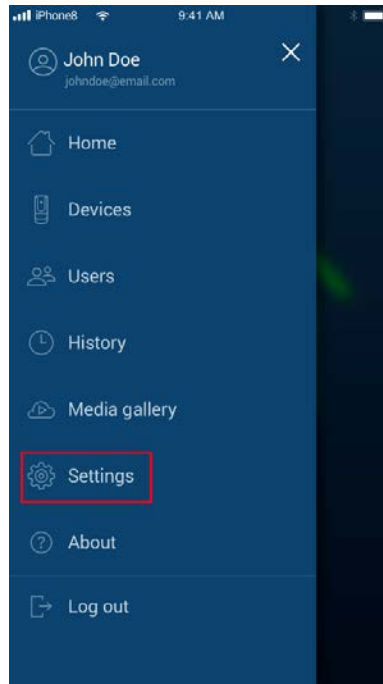
2. From the Delayed arming drop-down list, select the time delay you require. Options are:

● 3 seconds
● 40 seconds (default)
● 60 seconds
● 80 seconds
● 100 seconds
● 120 seconds
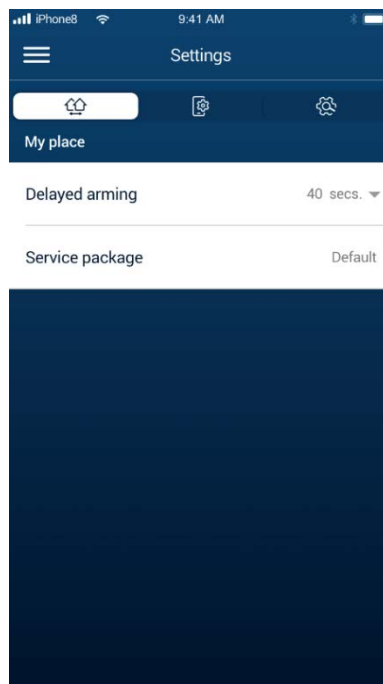
4.14. Extending MyShield Control Time

You can extend the MyShield control time during intrusion. By default, MyShield becomes inactive after five minutes of recording an intrusion. The user can maintain MyShield in the Arm state. Further detected movement will trigger the alarm again.

To extend the MyShield control time:

1. When an intrusion is in progress, MyShield can respond to commands from the user (for example, to upload video files) for a period of five minutes. The mobile app displays a counter showing how much time remains, as shown below:
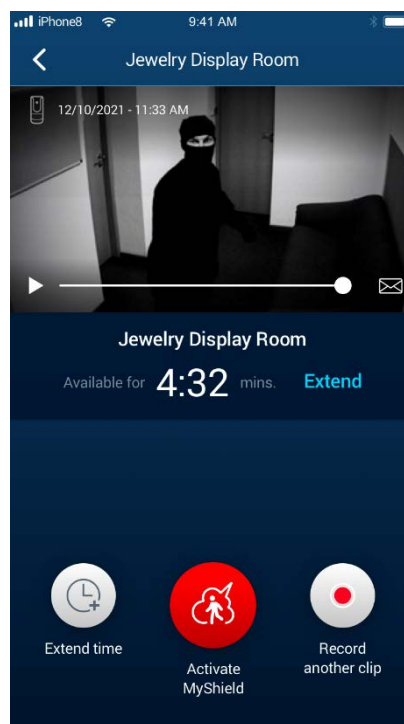
2. Tap Extend or Extend time to instruct MyShield to continue recording for an additional five minutes.

3. Repeat the procedure to add an additional five minutes.

   If the control time expires, the "Time to manage expired" message displays.

   If the control time expires, the "Time to manage expired" message displays and the user cannot instruct MyShield to deploy smoke until a new intrusion is detected.
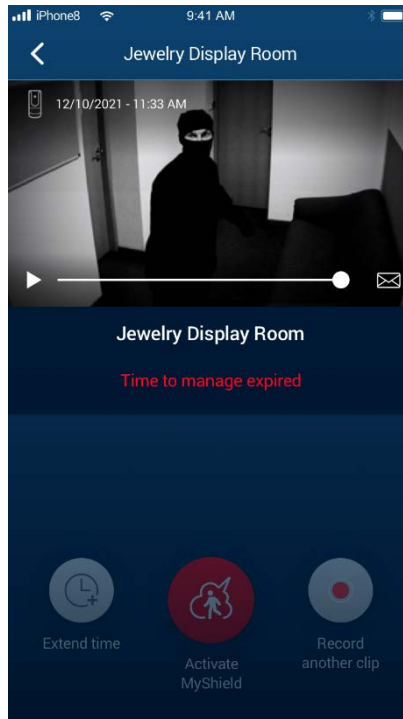
4.15. Taking an Additional Video

Tap Record another clip to instruct MyShield to begin recording a new clip.

Recorded clips can be viewed later from the History and Media Gallery screens.
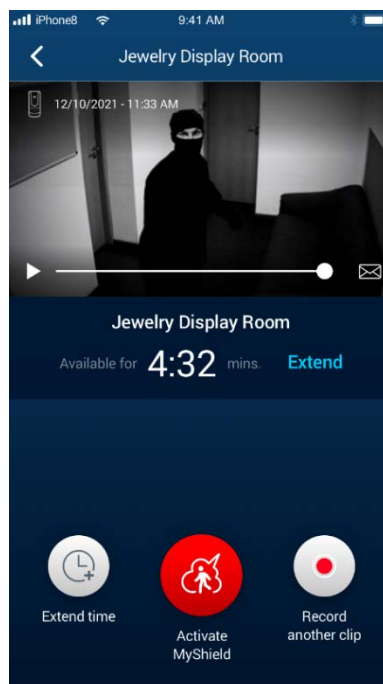
4.16. Troubleshooting

Question	Answer
Smoke is not deployed	In the app, check whether the canister is empty: see section 4.7 Viewing the Status of a MyShield. If the canister is empty, replace it.
App does not receive video	Check if the LED is pulsing red every 5 seconds, which indicates that MyShield is disconnected from the server. If it is, do the following: 1. Make sure that the SIM card is inserted properly. 2. If the SIM card is inserted properly and the problem persists, contact your service provider.

5. Replacing the Canister

⚠ WARNING! **The canister is hot after deploying smoke. Do not touch or replace the canister for at least 30 minutes after deploying smoke.**

After deploying smoke, the canister and batteries must be replaced. For battery replacement, see section 6 Replacing the Batteries on page 31.

To replace the canister:

1. Slide MyShield's bottom panel until it clicks.

2. Remove the bottom panel.

3. Pull down the canister handle.

4. Turn the canister handle counterclockwise until it clicks.

5. Pull the canister out of MyShield.

6. Pull down the new canister's handle.

7. Slide the new canister into MyShield until it stops.

8. Turn the canister handle clockwise until it clicks.

9. Push up the canister handle until it clicks.
10. Place the bottom panel over the bottom of MyShield.
11. Slide the bottom panel toward the back of MyShield until it clicks.

6.   Replacing the Batteries

Replace batteries after each smoke deployment, and when the MyShield app notifies you that batteries are low. The canister must be removed before you can replace the batteries.

To replace the batteries:

1.   Slide MyShield's bottom panel until it clicks.

2.   Remove the bottom panel.

3.   Remove the canister:

    a.   Pull down the canister handle.

b. Turn the canister handle counterclockwise until it clicks.

c. Pull the canister out of MyShield.

4. While pressing the release, pull out the battery compartment.

5. Remove the old batteries.

6. Insert new batteries, observing the correct polarity.

⚠️ WARNING! **A new battery may explode if incorrectly installed. Use only the same or equivalent battery type recommended by the manufacturer.**

7. Slide the battery holder into the battery compartment until it clicks.

8. Slide the canister into MyShield until it stops.

9. Turn the canister handle clockwise until it clicks.

10. Push the canister handle up until it clicks.

11. Place the bottom panel over the bottom of MyShield.

12. Slide the bottom panel toward the back of MyShield until it clicks.

After you insert the batteries, the MyShield device resets itself and automatically begins to check the quality of its cellular network connection, as described in the MyShield Installation Guide.

7. Specifications

MyShield's technical specifications appear in the following table.

Category	Details	
Part numbers	MyShield	ES900MS
	Simulator canister for demo	ES900CANS-GN-M01
	Simulator canister for installation	ES900CANS-GN-M02
	Smoke canister	ESPL06219
Communications	Protocol	● LTE CAT-M cellular network ● MQTT
	Operation mode	Pass-through
Security	Tamper alarm	● Remove from wall ● Remove canister ● Wired-input cable cut
Power	Batteries	Six CR123A 3V batteries Operating voltage 9VDC Standby current 55uA
	Battery life	Up to two years Replace batteries after smoke deployment

Category	Details	
Motion sensor	PIR	FOV 155° up to 12 m (39 ft.)
	PIR with pet immune lens	FOV 146° up to 10 m (33 ft.)
Audio	Microphone	MEMS-type digital
	Speaker	40mm, 4 Ohm, 3W
Video	Camera	HD CMOS
	Shooting range	● Daylight: 12 m (39.4 ft.) ● Darkness: 6 m (19.7 ft.)
	Color night recording	With white LED
	Resolution	1280 x 720 pixels
	Video angle (H x V)	140° x 79°
	Video compression	H.264 encoding
	Trigger mechanism	PIR detection
Dimensions	Size (H x W x D)	208 mm (8.2 in.) x 132 mm (5.2 in.) x 78 mm (3.1 in.)
	Weight	~1 kg (~2.2 lbs.) including batteries and canister
Environment	Storage ambient temperature range	-20°C to 70°C (-4°F to 158°F)
	Operating ambient temperature range	-10°C to 55°C (14°F to 131°F)
	Operating humidity	Up to 95% non-condensing at 50ºC (122°F)
	Water and dust resistant	IP21 compliant
Canister	Smoke duration	~30 seconds
	Saturable volume	70 m3
	Size (D x H)	63 mm (2.5 in.) x 115 mm (4.5 in.)
	Weight	400 g (0.88 lbs.)
	Storage ambient temperature range:	-20°C to 75°C (-4°F to 167°F)
	EC category	P1
	Transport class	1.4S
	Life span	Five years

Category	Details	
Certifications, approvals or tests	Alter Technology TÜV NORD S.A.U. ● EN 50131-1:2006 + A3:2020 ● EN 50131-13:2020 Grade 2 (tested) ● EN 50131-6:2017 + A1:2021 – Type C ● EN 50130-4:2011 + A1:2014 ● EN 50130-5 Environmental Class II ● EN 50131-10: 2014 ● EN 50136-2:2013 + A1:2023 SP3	Other certifications ● EN 62368-1 ● EN 61000-6-3 ● EN 301 489-1 ● EN 301 489-3 ● EN 901-908-CAT-M ● EC category: P1 (canister) ● UN 0432 class code 1.4S (canister)

Appendix A   LED Indications

MyShield's LED displays the following operational information:

LED Behavior	Meaning
1 red pulse (2 seconds long)	● Failed self-test ● Motion detected ● Tampering detected
1 green pulse (2 seconds long)	Passed self-test
Green and orange pulses alternating as follows: ● ½ second green pulse (approximately) ● ½ second interval (approximately) ● ½ second orange pulse (approximately) ● 10 second interval ● ½ second green pulse (approximately) ● And so on	Starting cellular network registration
Pulsing red every 10 seconds	Failed cellular network registration
Pulsing red every 5 seconds	Successful cellular network registration, awaiting MQTT connection

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Media Privacy Compliance

Many laws prohibit recording a person in a private environment without their consent. Those laws make it a criminal offense to covertly record a person in a private environment. Yet in many cases, the law does allow this kind of recording if it is made for the purposes of safety and security, so long as proper signs are posted notifying of the video recording. You must therefore follow these two rules:

1. *You may only use the product for legitimate security purposes (and not, for example, for any obscene, lewd or improper purpose)*

   AND

2. *You must post a clear sign of the use of surveillance camera that is sufficiently conspicuous to be observed by any person who may be captured by the camera.*

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