SafeHound ferrous detection security portal
User Manual Version 1.6
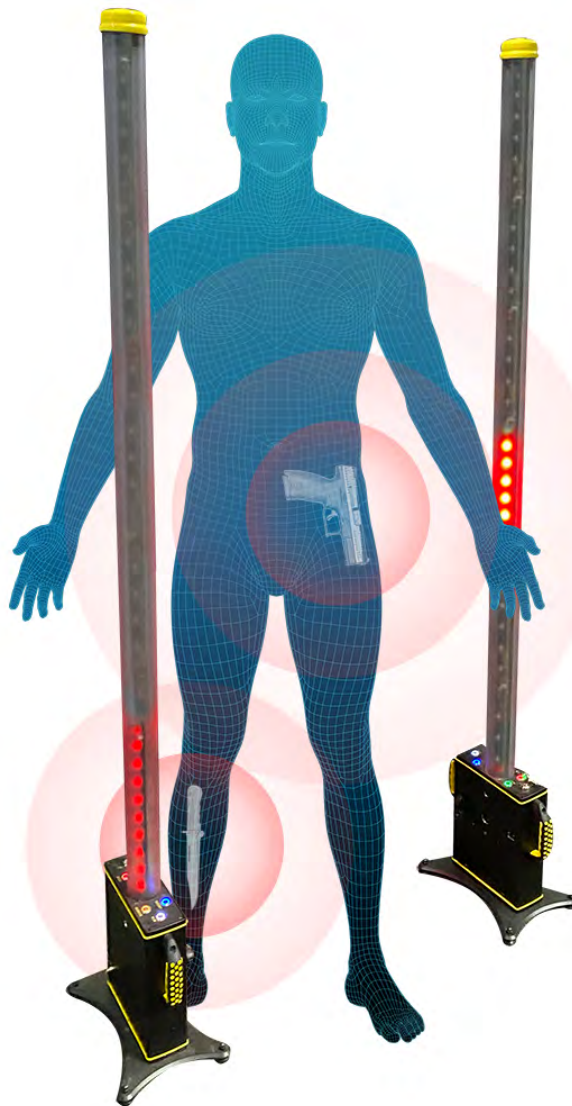
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Introduction

SafeHound™ ferrous detection security portal for weapons is sensitive enough to detect hidden guns and knives without false triggering on more common items such as belt buckles, jewelry, keys, medical implants and more. This allows foot traffic to safely flow through the inspection portal for large sporting events, concerts, schools, courtrooms and any safe public or private gathering space. SafeHound features (6) detection zones per sensor pole with multi-object detection to ensure that any subject will be scanned from head to toe for ferrous weapons or contraband. Both poles are independent but invisibly tethered with advanced motion detection and background noise monitoring to ensure that ultra-sensitive scanning only occurs while people pass through the portal. Each sensor zone indicates approximate ferrous detection location making further manual searches go faster than ever. SafeHound portals are physically lockable by key, lightweight and can be deployed immediately into any space for instant security checkpoints using the internal battery for a full day of power.

Setup is simple and can be done anywhere - Plug and play out of the box with less than 30 seconds from powering up to full operation. No software or assembly required. **SafeHound™** ferrous detection portal is lightweight (only 17 pounds per sensor pole) so it can be easily transported and deployed by any security personnel instantly. Unlike most walk-through or gated metal detection systems, SafeHound detects full head-to-toe (75 inches) with light-up zones to pinpoint the area or zone of interest. The unit is fully sealed against the elements for rugged indoor and outdoor use. It contains a sealed gel cell internal rechargeable battery for a full day of continuous power anywhere if needed. SafeHound also features security key lock and dry trigger contacts for alarms, DVRs, video surveillance and intrusion detection systems as well as our popular WallHound-Pro Cell Phone Detector & Deterrent.

- Sensitive weapon detection from head to toe with 360 degree visual and audible alerts

- (6) independent detection zones per sensor pole that pinpoint contraband with reduced false triggers

- Lightweight, portable, versatile & rugged with all day battery power

- Bright alerts on sensor poles viewable from any angle from a distance

- Safety for schools, concerts, sporting events, court rooms and any safe public or private space

- Designed and manufactured in the U.S.A.

- Lightweight, versatile & all day battery power

- Sealed against the elements for rugged indoor/outdoor use

- Vastly reduced false detection compared to standard metal detectors

- Full ferromagnetic security checkpoint zone up to 64" wide by 75" high

- Key lockable for security reassurance

- Advanced motion detection, multi-object detection and background noise monitoring

- Confiscate hidden weapons to prevent school shootings and violence in public spaces

- Perfect for FBoP, DoD, NSA, FBI & any secure government or military SCIF

- Designed and manufactured entirely in the U.S.A.

Unpacking Your Unit

SafeHound ships in a protective carton designed specifically for the hardware. Be sure to keep this box and all packing materials in case unit needs to be sent back to factory for repairs or updates. Each SafeHound box ships with (1) sensor pole, (1) power supply, (1) power cable, (1) base plate and all necessary bolts. The only assembly required is attaching the base plate to the bottom of the sensor pole. Since most customers prefer the 2 pole portal configuration, SafeHound usually ships with (2) of these boxes. Once you have unpacked all items and have made yourself accustomed with SafeHound features, typical setup for the unit can be accomplished in only 30 seconds.
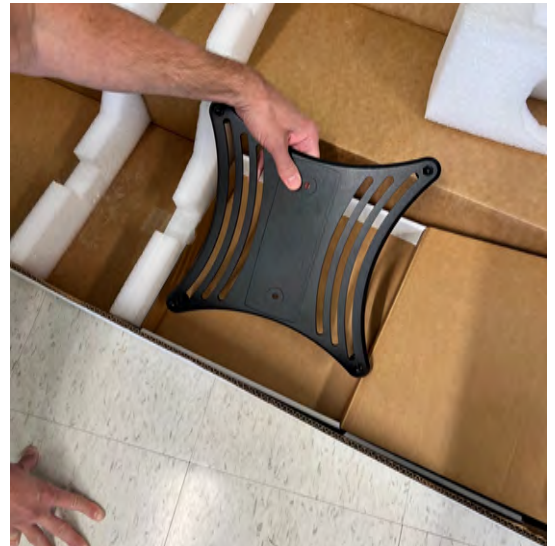
Shipping box dimensions (one pole per box) are 70" x 13" x 7" and 25 lbs. with accessories

Powering Up Unit

Be sure to keep the unit charging using the included charger in case you need to move it into an area where there are no nearby power outlets. It can take several hours to fully charge. When you first power the unit on, it will automatically enter into a calibration procedure taking approximately 30 seconds to complete. SafeHound self-calibrates so you do not need to calibrate manually unless the unit is moved to a different location. After the unit has been moved, you should always press the CALIBRATE button and wait 30 seconds. While the unit calibrates, do not stand within 5 feet of it and make sure there is no movement of large ferrous objects in the area. If calibration is interfered with in any way, you can simply press the CALIBRATE button again.

Controls and Alerts

SafeHound is housed in a rugged aluminum chassis with weather resistant seals and buttons. The internal 12V sealed lead acid battery takes approximately 3 hours to fully charge and lasts approximately 24 hours under normal operation. The unit includes 5 color-coded buttons, a physical lock and key, dry trigger contact and USB port on the top of the base.

The front side (product name etched in this side) of the base includes a motion sensor that only triggers the alarms if ferrous material is detected while someone is moving past this sensor. On the bottom left of the front side of the base is the power input connector for charging the internal battery.

The rear side of the base includes a motion sensor just like on the other side of the base and also an infrared sensor for communication between two pole configurations. This is useful for setting up various configurations detailed later in this user manual.

Each pole contains (6) alert zones that detect ferrous material all the way from the floor up to over the top of the pole. This ensures that the tallest subjects passing through the poles cannot hide contraband in their shoes or any kind of headwear. Each zone blinks to indicate the approximate area where the ferrous material is detected. All LEDs on the pole can change color to indicate the current mode or setup or operation.

Detection Zones Layout

Left Pole Zone 1 (head, shoulders and above) Example shows no alerts because contraband is not close enough to detection zone. Zones 1 and 6 are extended area zones while zones 2, 3, 4 and 5 are smaller to better pinpoint hidden contraband. This zone covers entire head area and above for taller individuals and those wearing hats. Detection can extend a full 12" above top of sensor pole in some cases.

Left Pole Zone 1 (head, shoulders and above) Example shows no alerts because contraband is not close enough to detection zone. Zones 1 and 6 are extended area zones while zones 2, 3, 4 and 5 are smaller to better pinpoint hidden contraband. This zone covers entire head area and above for taller individuals and those wearing hats. Detection can extend a full 12" above top of sensor pole in some cases.

Left Pole Zone 4 (lower torso area) The zone on this sensor pole is dimmer due to multi-object detection. Strongest (knife on ankle) detection is brightest zone on this pole but since the gun on the opposite side is also detected, Zone 4 is light dimmer.

Right Pole Zone 4 (lower torso area) The alert in this zone on this sensor pole is bright due to the strong ferrous detection of the gun. The other sensor pole indicates the inversion of this alert due to the placement of multiple objects. Sensor poles always detect independently of one another so we always advise additional passes through the portal to ensure accurate screenings.

Left Pole Zone 6 (lower leg and below) Example shows brightest alerts indicating contraband knife located closest to left pole near the ground. Zone 4 also indicates detection of another object - SafeHound will never light up adjacent zones to indicate multiple object detection. As with all security screening, it is always recommended to re-screen individual after removal of each item of contraband detected.

Right Pole Zone 6 (lower leg and below) Lowest zone shows dimmer alert indicating distance from gun in Zone 4 as well as the detection of another object (knife). Zone 6 covers entire foot area all the way to the ground to detect contraband inside or under footwear.
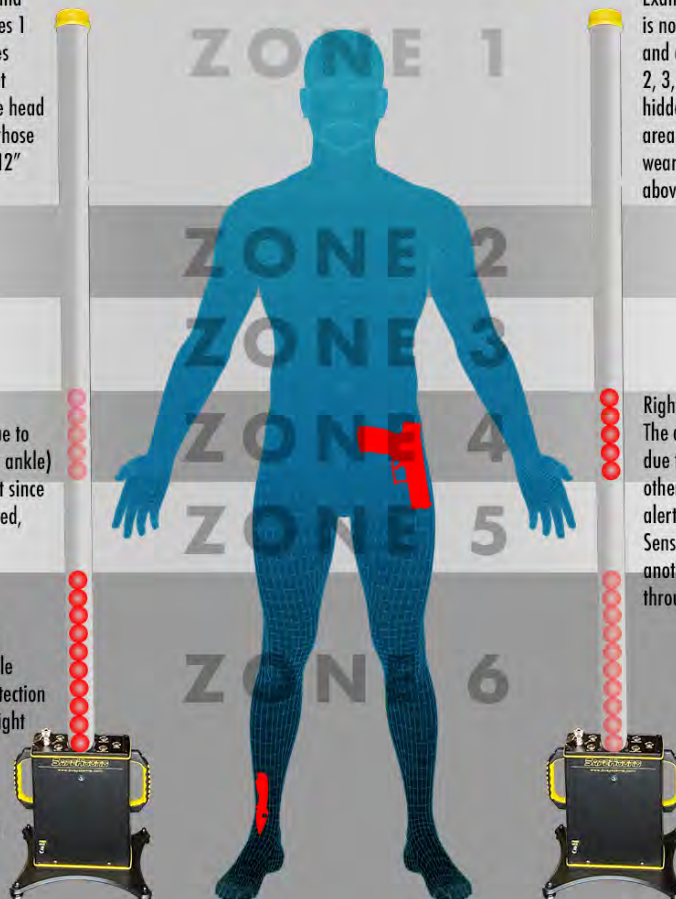
LED Alerts Explained

The brightness intensity of LED during an alert is determined by several factors. It depends on both the distance and the quantity of ferrous material detected, which are influenced by the selected sensitivity in the settings. The LED that reaches its maximum brightness has detected the strongest level of ferrous material in close proximity.

Green LEDs indicate that SafeHound is ready for the subject to walk through the portal

SafeHound detects a single piece of contraband.

Only the left sensor pole shows alerts due to the proximity of the contraband to that sensor pole.

Notice the brightest LEDs at the level of the contraband with dimmer LEDs above and below that level.

SafeHound detects and alerts on multiple pieces of contraband at the same time. These alerts appear on both sensor poles in this example. The LEDs appear brightest on the areas of the sensor pole where the contraband passes through.

We always recommend that security personnel require multiple passthroughs regardless of how many items of contraband are detected in a single pass.
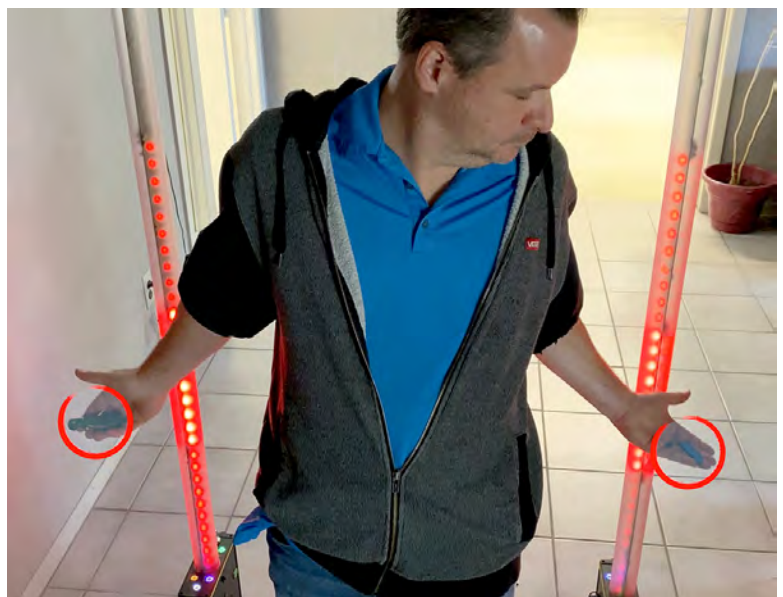
Controlling SafeHound

SafeHound buttons are color-coded to match the color of the LED alerts and configuration modes in the pole. Some buttons are multi-function and may require holding down in combinations during specific function states to unock different detection configurations. This user manual corresponds to controller version 1.0.12 Consult this manual fully and included quick start guide for more details.

 ON/OFF – Push this button to power on SafeHound. Hold button in for 3 seconds to power the unit back off.

 BATTERY– Push this button to check the level of the internal battery power remaining. There are up to 8 levels of power shown.

 CALIBRATION – This is a multi-function button depending upon the position of the physical key lock. If the unit is locked, the button only calibrates the unit. Unit is always self-calibrating so manual calibration isn't generally necessary unless unit has been moved or encountered major change in nearby ferrous activity. Manual calibration takes about 25 seconds to complete – be sure to allow calibration to complete (green LEDs in sensor pole indicate completion) before resuming screening and maintain a distance of at least 6 feet from sensor poles during calibration process.

If physical key is in unlocked position, calibration is used to turn on/off background noise monitoring mode. This mode is covered in more detail later in this user manual.

 SENSITIVITY – Push this button adjust detection sensitivity. There are 8 sensitivity settings (indicated by blue LEDs lit from bottom of the sensor pole). The higher the sensitivity setting (more blue LEDs lit on the pole) allows for smaller amounts of ferrous material to trigger an alert, but the unit will also be prone to more false triggers. The lower the sensitivity is set to, the less alerts will be triggered but also less false detections. Each environment is unique so some experimentation is required.

 VOLUME – Push this button to cycle through various alert audio and visual durations.

KEY – Turn and remove this key to lock or unlock the unit to prevent tampering. When in the locked position, all settings are static (including main power) and cannot be changed until key is inserted and turned back to the unlock position. When unlocked, all settings are adjustable including the calibration button which will toggle the background noise monitoring mode on and off.

DRY TRIGGER CONTACT – Connect this contact to an external speaker, camera, DVR or visual alert to add additional functionality each time the unit is triggered by ferrous detection.

MOTION SENSOR / INFRARED SENSOR – Be sure that unit bases (single or dual pole configurations) are free from obstructions so that these sensors can detect motion and communicate between bases during setup procedures.

POWER INPUT – Use only the provided AC adapter to power and charge the unit here.

USB – This port is primarily for BVS factory use only. Always consult your BVS sales engineer or support before attempting to upgrade or interface with your SafeHound via this USB port.
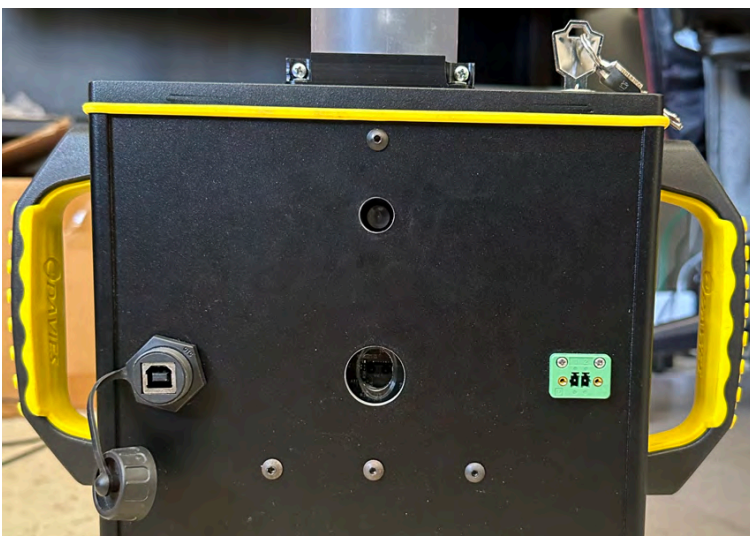
This is the side of SafeHound that most people passing through the portal will see. It contains the IR sensor that detects movement and will only trigger an alert if ferrous material is detected while this movement is detected. It also contains the a USB port for factory upgrades and a dry contact switch for attaching external DVRs, speakers, cameras, etc. as additional alerts.

MORE ABOUT FERROUS DETECTION

Charging SafeHound

Be sure to only use the supplied 13.8V 1.5A power adapter and cable when charging SafeHound and the 3-pin connector when orientation when connecting.

EXTERNAL POWER SUPPLY
00-63256

NANO-CHANGE 3P FEMALE 900
BradConnectivity 403007A10M040
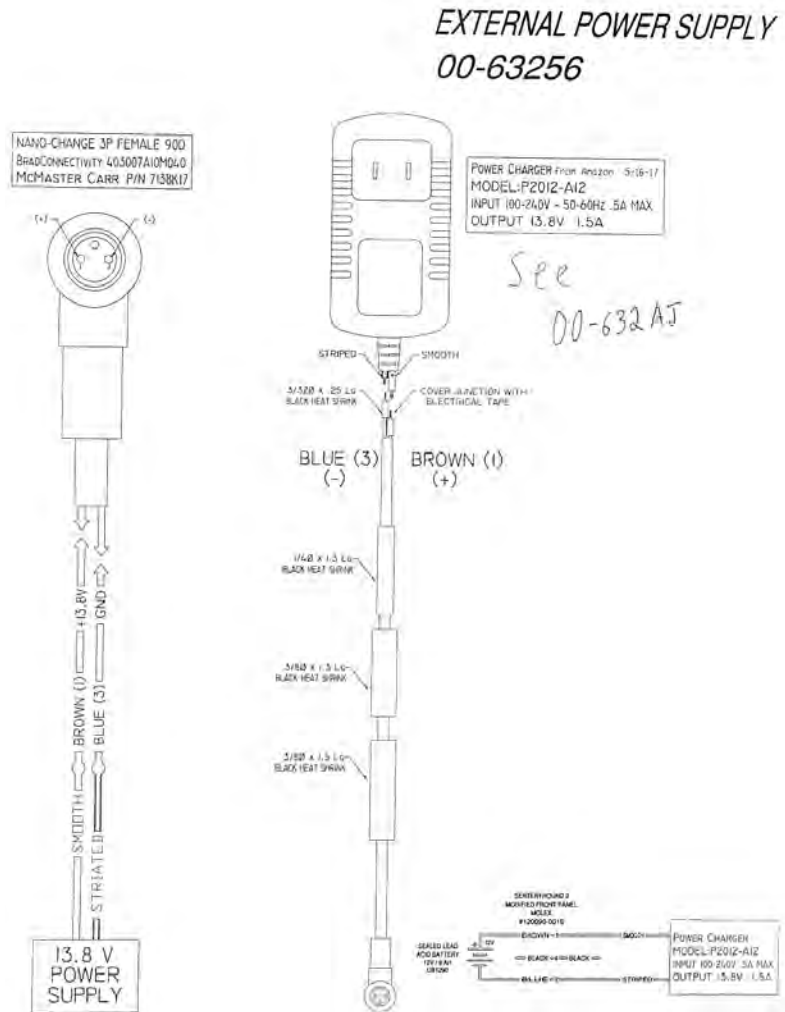McMaster Carr P/N 7138K17

POWER CHARGER from Amazon 5-16-17
MODEL: P2012-A12
INPUT 100-240V ~ 50-60Hz .5A MAX
OUTPUT 13.8V 1.5A

See
00-632AJ

STRIPED   SMOOTH

5/32Ø X .25 LG
BLACK HEAT SHRINK

COVER JUNCTION WITH
ELECTRICAL TAPE

BLUE (3)   BROWN (1)
(-)   (+)

1/4Ø X 1.5 LG
BLACK HEAT SHRINK

3/8Ø X 1.5 LG
BLACK HEAT SHRINK

3/8Ø x 1.5 LG
BLACK HEAT SHRINK

BROWN (1)
+13.8V

BLUE (3)
GND

SMOOTH

STRIATED

13.8 V
POWER
SUPPLY

SENTRY/HOUND 2
MODIFIED FRONT PANEL
MOLEX
#120090-0010

BROWN - 1   SMOOTH   POWER CHARGER
MODEL: P2012-A12
INPUT 100-240V .5A MAX
SEALED LEAD   12V   OUTPUT 13.8V 1.5A
ACID BATTERY
12V/18AH   BLACK -4- BLACK
LR1290
BLUE -3-   STRIPED

More About Ferrous Detection

Ferrous detectors are used to detect changes in the earth's omnipresent magnetic field in a space. The detector is initially conditioned to the earth's magnetic field and its immediate surroundings. Many variables can change the magnetic field measured by a ferrous detector such as the introduction of ferrous material around the detector or physical movement of the ferrous detector itself.

Ferrous materials are materials that can be magnetized and also known as ferromagnetic material. They are mostly iron, but can also be nickel, cobalt and some alloys of rare-earth metals, or common magnets. Some common non-ferrous metals are copper and aluminum. Depending upon the composition and purity of material, brass and stainless steel might have some trace of ferromagnetic material in them even if they do not appear to be magnetizable.

Introduction of nearby ferrous material causes perturbation in the earth's magnetic field, and that change is picked up by the ferrous detector. Digital signal processing is applied to the detected change and a visual/audio alert is issued. There are six ferromagnetic sensors in each SafeHound pole, linearly arranged and equidistant apart from each other so that the sensor with the strangest signal will be visually indicated.

Please note that the following items (not exhaustive list) might have enough ferrous material to trigger a highly sensitive ferrous detector: rolling office chairs, large trucks moving outside, metal eyeglass frames, belt buckle, shoes, wristwatches, metal zipper, metal buttons or studs within fabric. Another potential source of interference are power supplies in close proximity to the system. Keep power supplies for any electronics and power supply cables of any electronics away from the system. Awareness of these materials will help isolate contraband vs. false triggers which will accelerate screenings and security checkpoints.

Physical stability of the SafeHound system is very important for proper operation. As noted above, any movement or vibration of the system during operation might disturb the magnetic field and potentially trigger the detector. SafeHound should NOT be used on any carpet or flooring that has the slightest give when someone walks nearby. If a system is moved at all, it will self-stabilize after 5 seconds or so to resume detection. However, in certain instances, the extreme movement of the system could trigger a full calibration procedure (as indicated by yellow lights on the sensor pole), and after about 30 seconds the system will again be ready for detection. Users can, at any time, initiate this calibration manually by pressing the CALIBRATE button.

Operational Modes

There are six unique modes of operation:

MODE 1: Free standing gated tethered portal
MODE 2: Free standing gated untethered portal
MODE 3: Wall-mounted unidirectional
MODE 4: Free standing unidirectional
MODE 5: Free Standing omnidirectional
MODE 6: Free standing bidirectional

Modes 1 and 4 are the most commonly used so this manual will focus mostly on them but all modes are supported using the dual pole configuration. By default, the single pole SafeHound ships supporting modes 3 and 5. If you have received the dual pole configuration, the default modes are 1 and 2. Modes 4 and 5 require a button combination to activate.

Mode 1: Free standing gated tethered portal

In this mode, two SafeHound poles are used as a tethered portal in order to guide foot traffic and increase detection distance up to 64 inches between poles. Be sure that both units are placed on solid, level flooring (preferably concrete or tile) with no give or else they might falsely trigger. Once the poles are linked, even small amounts of ferrous material passing anywhere in between the two poles, from ground level up to 75 inches above the ground, will trigger an alert. Poles will only trigger while someone is moving between them meaning security staff can move freely around the portal without triggering any alert.

Setting up this configuration is simple. Be sure both units are placed a few feet apart (you can adjust final spacing later) and that the IR sensors are facing each other. The alert LEDs on one side of the poles, the buttons and the SafeHound etching on the base should all be viewable and easily accessible from the outside of the portal allowing only foot traffic within the portal to be detected as they pass through.

Once aligned, pressing the POWER button on both units within 4 seconds of each other will automatically link the two poles. The first unit powered on will automatically become the master pole making the other unit the slave. The master unit VOLUME button will blink 3 times to indicate that tethering is successful.

Note: If ferrous material passes through the portal at the same time that someone else moves near the portal, there is a risk of false detection. SafeHound should always be setup in an area with minimal ferromagnetic activity. This activity can include large moving ferrous objects such as wheeled office chairs, filing cabinet drawers, steel doors and even large trucks in a nearby parking lot.

Mode 2: Free standing gated untethered portal

In this mode, two or more SafeHound poles can be used as a row of multiple untethered portals in order to guide foot traffic through a virtual gate or wall. In this configuration, units allow for foot traffic on either side of the unit without the need for tethering to each other. Be sure all units are placed on solid, level flooring (preferably concrete or tile) with no give or else they might falsely trigger. Once the units are powered on, even small amounts of ferrous material passing anywhere in between the units, from ground level up to 75 inches above the ground, will trigger an alert. Poles will only trigger while someone is moving between them meaning security staff can move freely around the portal without triggering any alert.

Since this configuration does not require any tethering, units may be powered on at any time and do not need to be facing in any particular direction. Press the POWER button on the first unit and wait a few seconds for the VOLUME button to blink. Next, turn on the second unit and wait for that ALERT button to blink. Continue doing this to as many units as you would like to align for a full gated effect.

Note: If ferrous material passes through the portal at the same time that someone else moves near the portal, there is a risk of false detection. SafeHound should always be setup in an area with minimal ferromagnetic activity. This activity can include large moving ferrous objects such as wheeled office chairs, filing cabinet drawers, steel doors and even large trucks in a nearby parking lot.

Mode 3: Wall-mounted unidirectional

In this mode, one SafeHound unit is typically mounted to a wall near a doorway or down a narrow hallway using the optional wall mounting kit. Single pole detection range typically falls between 18 and 32 inches so be sure that foot traffic is not too far away from the sensors in the pole. Also be sure that there are no ferrous sources that could be moving on the other side of the wall.

In this configuration, the base of the unit must be removed in order to allow mounting to the included wall bracket. Be sure the unit is mounted on solid wall as low as possible toward the floor, otherwise contraband could be slip by the sensors undetected. Once the units are powered on, even small amounts of ferrous material passing anywhere in between the units, from ground level up to 75 inches above the ground, will trigger an alert. Poles will only trigger while someone is moving between them meaning security staff can move freely around the portal without triggering any alert.

This configuration requires the unit to face away from the wall it is mounted to in order to see the LED alerts and have access to the controls. Press the POWER button and wait a few seconds for the VOLUME button to blink. The images below depict a SentryHound-Pro pole being mounted but the basic steps are the same for wall mounting your SafeHound as well.
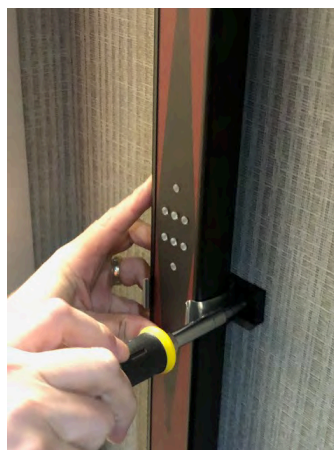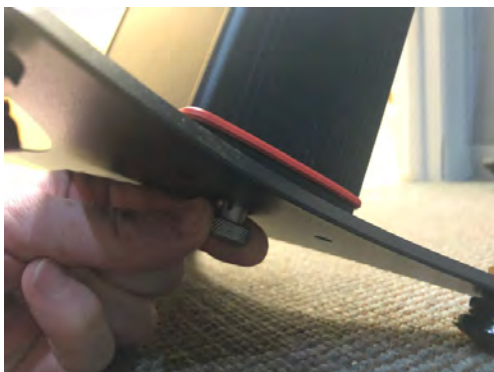
Mode 4: Free standing unidirectional

In this mode, one SafeHound unit can be used for foot traffic passing by only one side of the unit. Be sure that unit is placed on solid, level flooring (preferably concrete or tile) with no give or else it might falsely trigger. Once powered on, even small amounts of ferrous material passing within 18 to 32 inches from the pole and from ground level up to 75 inches above the ground, will trigger an alert. The unit can only trigger while someone is moving past the sensors meaning security staff can move freely around the portal without triggering any alert.

The alert LEDs on one side of the poles, the buttons and the SafeHound etching on the base should all be viewable and easily accessible for security personnel while foot traffic should only move on the opposite side of the unit.

Hold the POWER + CALIBRATION + VOLUME buttons while powering up to enter this mode. The VOLUME button will then blink 5 times to indicate that this mode has been entered. Remember that even after powering off and on again, this mode will still be active unless you return to the factory defaults by holding down POWER + VOLUME buttons while powering on unit.

Note: If ferrous material passes by the unit at the same time that someone else moves near the portal, there is a risk of false detection. SafeHound should always be setup in an area with minimal ferromagnetic activity. This activity can include large moving ferrous objects such as wheeled office chairs, filing cabinet drawers, steel doors and even large trucks in a nearby parking lot.

Mode 5: Free standing omnidirectional

In this mode, one SafeHound unit can be used for foot traffic passing in any side of the unit for situations such as the middle of a hallway or corridor. Be sure that unit is placed on solid, level flooring (preferably concrete or tile) with no give or else it might falsely trigger. Once powered on, even small amounts of ferrous material passing within 18 to 32 inches from the pole and from ground level up to 75 inches above the ground, will trigger an alert.

Hold the POWER + SENSITIVITY + VOLUME buttons while powering up to enter this mode. The VOLUME button will then blink 4 times to indicate that this mode has been entered. Remember that even after powering off and on again, this mode will still be active unless you return to the factory defaults by holding down POWER + VOLUME buttons while powering on the unit.

Note: If ferrous material passes by the unit at the same time that someone else moves near the portal, there is a risk of false detection. SafeHound should always be setup in an area with minimal ferromagnetic activity. This activity can include large moving ferrous objects such as wheeled office chairs, filing cabinet drawers, steel doors and even large trucks in a nearby parking lot.

Mode 6: Free standing bidirectional

In this mode, one SafeHound unit can be used for foot traffic passing in either direction such as the middle of a hallway or corridor. Be sure that unit is placed on solid, level flooring (preferably concrete or tile) with no give or else it might falsely trigger. Once powered on, even small amounts of ferrous material passing within 18 to 32 inches on either side of the pole and from ground level up to 75 inches above the ground, will trigger an alert.

When the unit is powered on, the VOLUME button will blink once to indicate this default mode. If it does not behave this way, you can return to the factory defaults by holding down POWER + VOLUME buttons while powering on the unit.

Note: If ferrous material passes by the unit at the same time that someone else moves near the portal, there is a risk of false detection. SafeHound should always be setup in an area with minimal ferromagnetic activity. This activity can include large moving ferrous objects such as wheeled office chairs, filing cabinet drawers, steel doors and even large trucks in a nearby parking lot.

Sensitivity Settings

Since we are surrounded by ferrous material all over the planet, nearby movement of this material can falsely trigger the unit depending upon how much material and how close it is to the unit while someone passes through. Depending upon the placement of the senor poles in a particular ferrous environment and amount of nearby activity, users may need to adjust sensitivity to suit their needs. See **Background Noise Monitoring Mode** immediately after this section for more details on how to gauge the best placement for SafeHound.

Sensitivity setting 1 (bottom blue LED) is recommended for all users as a starting point but since it contains the highest level of filtering, you might need to change the setting if you find that some ferrous material is able to pass by the unit undetected. Be sure to thoroughly test a variety of ferrous contraband objects in various environments to learn the best setting for each environment before you put SafeHound into service for your security needs.

SafeHound contains 8 sensitivity settings total. The settings level is represented by blue LEDs at the bottom of the sensor pole. The less number of blue LEDs lit, the lower the sensitivity. This is recommended for active, ferrous-noisy environments that include nearby (~20 feet for smaller ferrous objects and ~75 feet away for large vehicles) active, heavy machinery, large vehicles moving constantly, large, active doorways, office furniture being used or moved around, etc. If you plan to situate your SafeHound in a relatively ferrous-quiet environment, a higher sensitivity level setting is more suitable.

Sensitivity settings also correspond to the detection range. For instance, a sensitivity setting of 2 might not detect a weapon passing by 32 inches from the nearest sensor but a sensitivity setting of 4 would stand a better chance of detecting that same weapon passing by 32 inches from the nearest sensor. Of course, sensitivity setting 4 would also be prone to more nearby interference which could lead to false triggers. Each time you relocate SafeHound into a new environment, you might have to go through each of the sensitivity settings to find the right balance of affirmative detection compared to false detection.

Push the SENSITIVITY button to see the current setting. After 3 seconds, the sensitivity display will stop but if you push the SENSITIVITY button before that, it will increment each time you push the button.

Level 1   Level 2   Level 3   Level 4   Level 5   Level 6   Level 7   Level 8
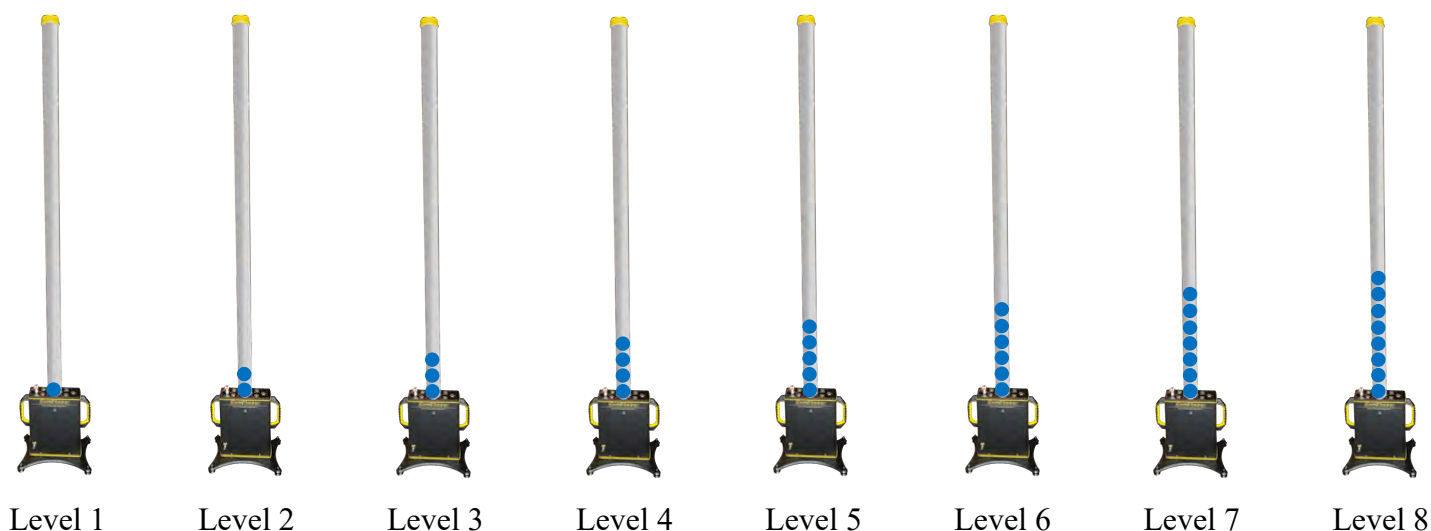
Choose levels 1-2 for low sensitivity to avoid false positives including large ferrous objects passing nearby. This may include rolling office chairs, active doorways (large steel doors that swing) or even large trucks outside in a nearby parking lot or roadway during regular use.

Choose levels 3-6 for medium sensitivity to avoid false positives such as nearby activity from large ferrous objects moving in the same room as the sensors during regular use. This is the recommended range setting for any initial setups in a new environment.

Choose levels 7-8 for high sensitivity to detect small amounts of ferrous material passing through the portal including small weapons as well as smartphones and some other more common items.

Background Noise Monitoring Mode

Before deploying and using SafeHound, it is wise to discern just how much typical ferrous activity can be found in a possible environment at a given moment. This is best determined by entering into Background Noise Monitoring Mode. You may wish to maintain this mode for an extended period of time so that certain nearby ferrous activity and objects become more apparent. Knowing this information ahead of time can greatly aid in troubleshooting false triggers. Remember, since SafeHound only scans for ferrous activity while someone is passing through its portal, nearby ferrous interference can only lead to false triggers at that moment but monitoring mode offers immediate feedback on the ferrous environment without passing through the portal.
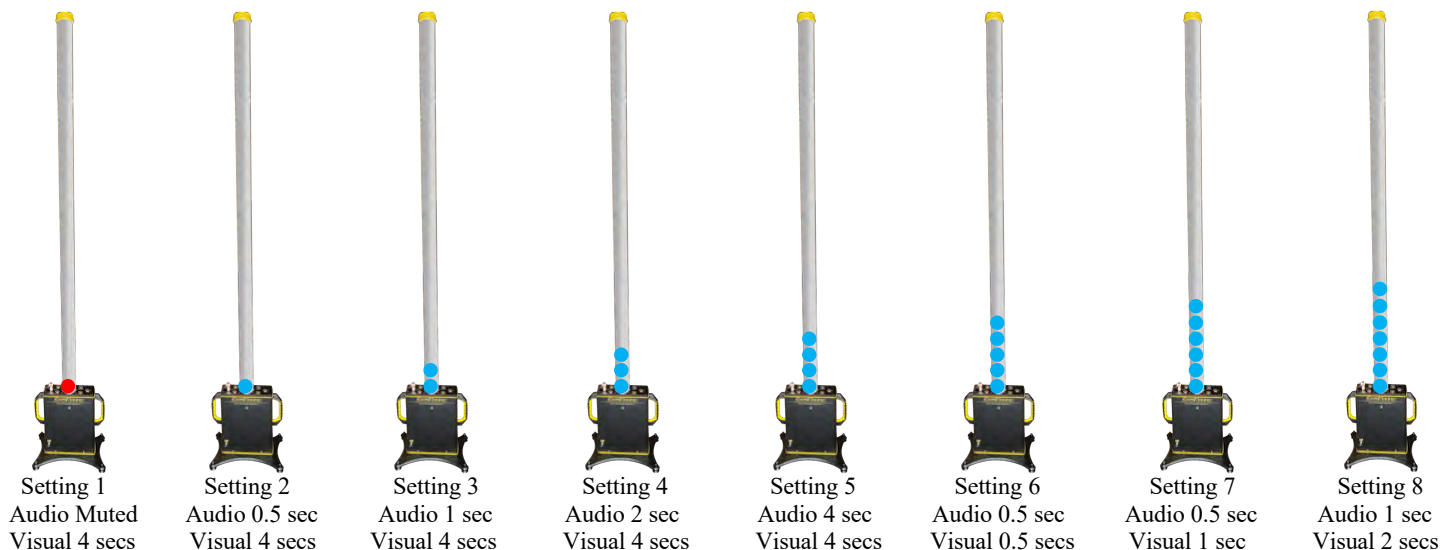
Be sure that the physical security key is in the unlocked position before beginning as SafeHound will not enter into Background Noise Monitoring Mode while locked. Press the CALIBRATION button to enter into this mode. A series of 1 to 5 color-coded LEDs will light up near to top of the sensor pole to indicate the amount of ferrous noise. This noise can be attributed to ferrous objects inches away from the sensor pole or ferrous objects moving all the way outside of the room or building containing the sensor pole. Any object outside of the room capable of triggering an alert in this monitoring mode, must be large such as a moving truck or heavy machinery in operation. The longer you leave this mode enabled during high activity, the more you can discover about your ferrous environment during this time. After 3 minutes, monitoring mode automatically shuts off.

The bottom green LEDs indicate low ferrous noise. Yellow LEDs indicate moderate ferrous noise and when you see a red LED, you will also hear an alert indicating high ferrous activity. Some environments will contain high ferrous activity most of the time. The simplest way to see the results is to bring your smartphone closer to the sensor pole. Try bringing a variety of different objects near the sensor pole while in this mode to better understand the nature of ferrous material and the resulting detection and alerts.

Volume Alert Settings

Upon positive detection, SafeHound emits an audio and visual alert, but these can be customized to fit your needs. The unit contains 8 different alert settings that can be toggled through by pressing the VOLUME button. The first level is indicated by a single red LED where all audio alerts are muted. From there, audio alerts are indicated by blue LEDs in a range from 1 to 7. Push the VOLUME button to check the current alert settings. After 3 seconds, the alert display will stop but if you push the VOLUME button before that, it will increment to the next setting each time you push the button.

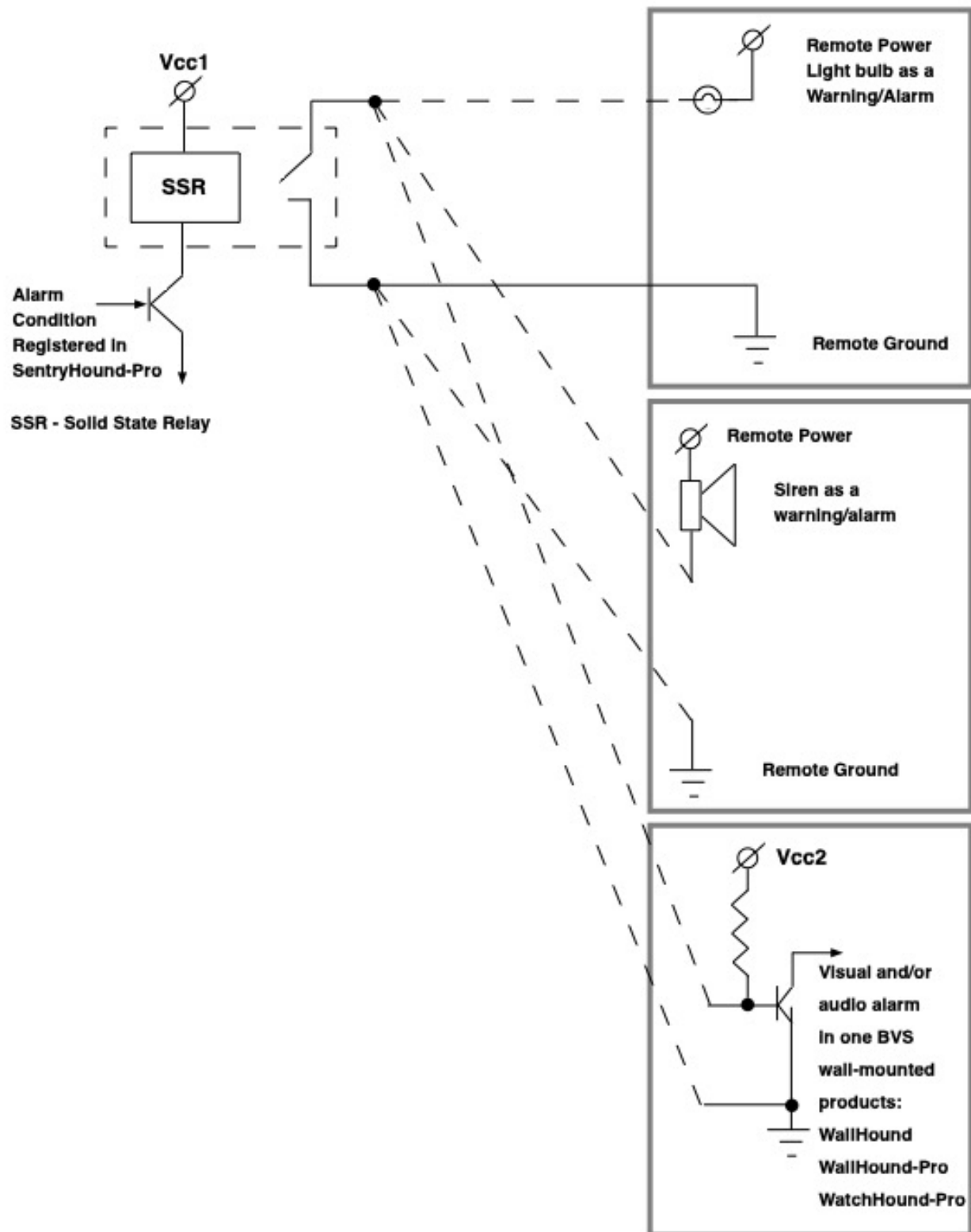| Setting 1	Setting 2	Setting 3	Setting 4	Setting 5	Setting 6	Setting 7	Setting 8
Audio Muted	Audio 0.5 sec	Audio 1 sec	Audio 2 sec	Audio 4 sec	Audio 0.5 sec	Audio 0.5 sec	Audio 1 sec
Visual 4 secs	Visual 4 secs	Visual 4 secs	Visual 4 secs	Visual 4 secs	Visual 0.5 secs	Visual 1 sec	Visual 2 secs

Battery Level

SafeHound contains an internal, sealed lead acid 12V battery. This battery takes 3-4 hours to charge fully and can operate the unit without any AC power for over 24 hours. Battery power can be checked at any time by pressing the BATTERY button. The LED clusters on the sensor pole will display (for 3 seconds) the remaining battery power in 8 levels with more red LEDs indicating more power remaining.

Level 1 Level 2 Level 3 Level 4 Level 5 Level 6 Level 7 Level 8
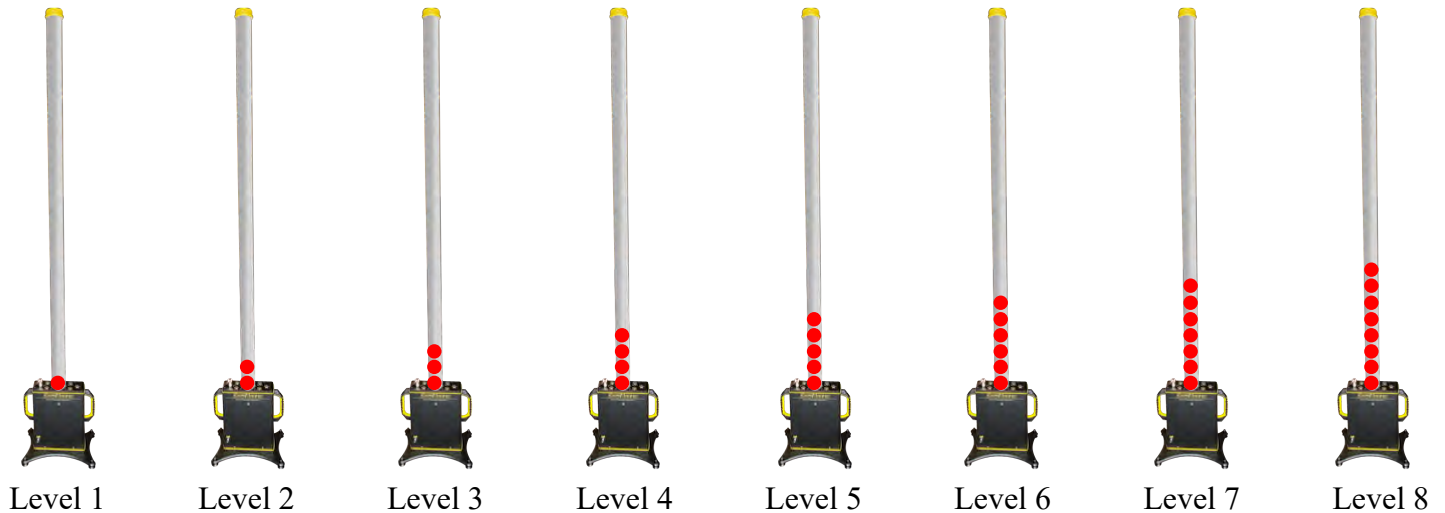
Three examples of remote alarm triggered from a dry contact in your BVS product
(Similar outputs are provided in all wall-mounted BVS products)

Vcc1

SSR

Alarm
Condition
Registered in
SentryHound-Pro

SSR - Solid State Relay

Remote Power
Light bulb as a
Warning/Alarm

Remote Ground

Remote Power

Siren as a
warning/alarm

Remote Ground

Vcc2

Visual and/or
audio alarm
in one BVS
wall-mounted
products:

WallHound
WallHound-Pro
WatchHound-Pro

Optional Ferrous Weapons Training Kits

Contact your BVS sales engineer about purchasing an optional ferrous weapons training kit to get your security team training on track. These kits are the standard used by law enforcement and counter terrorism agencies around the world and were also used to provide real world testing and calibration data for the SafeHound weapons kit testing report on the following pages.

Safehound test plan (6/28/2022)

- Contrabands to profile:

  - Guns
    - TSK3700

    - TSK0600

    - Small

- Knife

- Pipe bomb
  - TSK0200

- Grenade
  - TSK0005

- Test kits: BLUE and Official DSA Detection test kits

- Test methodology/setup:

  - Gated and tethered pole configuration;
  - Two poles 40 inches apart;
  - Walking through the gate right in the middle;

- **Stats to collect**: positive detection ratio:(x/y), where x is # of positive detection, y=6 for total # of try).
- Definition of positive detection: one or more poles triggered when contraband passing through the gated tethered portal

- Tester: CZ

- Location: CZ Office

Test result:

Table 1: Positive detection ratio at FEET, with contraband strapped to the inner side of ankle

	Sensitivity Level = 1	Sensitivity Level = 4	Sensitivity Level = 8
Gun (TSK3700)	4/6	6/6	6/6
Gun (TSK0600)	1/6	6/6	6/6
Gun (small)	0/6	1/6	6/6
Knife (TSK0016)	0/6	0/6	6/6
Pipe bomb (TSK0200)	6/6	6/6	6/6
Grenade (TSK0005)	6/6	6/6	6/6

Table 2: Positive detection ratio at MID SECTION, with contraband tucked under the belt in the middle

	Sensitivity Level = 1	Sensitivity Level = 4	Sensitivity Level = 8
Gun (TSK3700)	4/6	6/6	6/6
Gun (TSK0600)	5/6	6/6	6/6
Gun (small)	0/6	6/6	6/6
Knife (TSK0016)	0/6	1/6	6/6
Pipe bomb (TSK0200)	6/6	6/6	6/6
Grenade (TSK0005)	5/6	6/6	6/6

Table 3: Positive detection ratio at SHOULDER, with contraband held in the middle at the shoulder level.

	Sensitivity Level = 1	Sensitivity Level = 4	Sensitivity Level = 8
Gun (TSK3700)	6/6	6/6	6/6
Gun (TSK0600)	4/6	6/6	6/6
Gun (small)	1/6	4/6	6/6
Knife (TSK0016)	0/6	1/6	6/6
Pipe bomb (TSK0200)	3/6	6/6	6/6
Grenade (TSK0005)	4/6	6/6	6/6

Thank you for your purchase, we look forward to supporting you and your team.

Customer Support

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