

GUARD-Dog - smart detector of the latest generation



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Introduction

Guard-Dog scans all cellular, Wi-Fi (2.4 GHz and 5 GHz), Bluetooth and Bluetooth low energy as well as continuous wave 2.4 GHz and 5 GHz continuously for PEDs (Personal Electronic Devices) including cell phones, smart watches, tablets, computers, wireless headphones or earbuds, digital cameras and any wireless recording devices or bugs.

The unit is designed to function with minimum interaction from any security personnel while scanning for wireless device usage that has been discouraged or prohibited from certain spaces. Spaces requiring wireless threat detection include government SCIFs (Sensitive Compartmented Information Facility), court rooms, visiting centers, military bases, law enforcement facilities, correctional centers, conference rooms, etc.

Guard-Dog is completely self-contained and requires no connection to any PC to fully function. The unit can be affixed to any wall or optional stanchion mount making it portable. **Guard-Dog** alerts are visible to all staff, visitors and security personnel making it a wireless threat detector and also a deterrent that reminds everyone to refrain from using any wireless devices in secured areas where they are prohibited or illegal.

Once **Guard-Dog** detects wireless activity, the device and its user) must be located and then determined to be a threat or not. If the device and user are deemed harmless, the device can be whitelisted using **Guard-Dog's** built in software so that it will not trigger any future alerts.

All parameters and adjustments are made only from **Guard-Dog's** built-in touchscreen by designated security personnel including auto and manual thresholds, alert settings, international cellular bands and more. **Guard-Dog** supports optional direction finding antennas allowing users to pinpoint specific corridors and areas of interest without triggering alerts in other areas where wireless devices are allowed.

Unboxing

Guard-Dog unit ships with omni-directional antennas and power supply. The optional DF antenna kit will arrive in this same box but optional stanchion kit will arrive in one separate box.

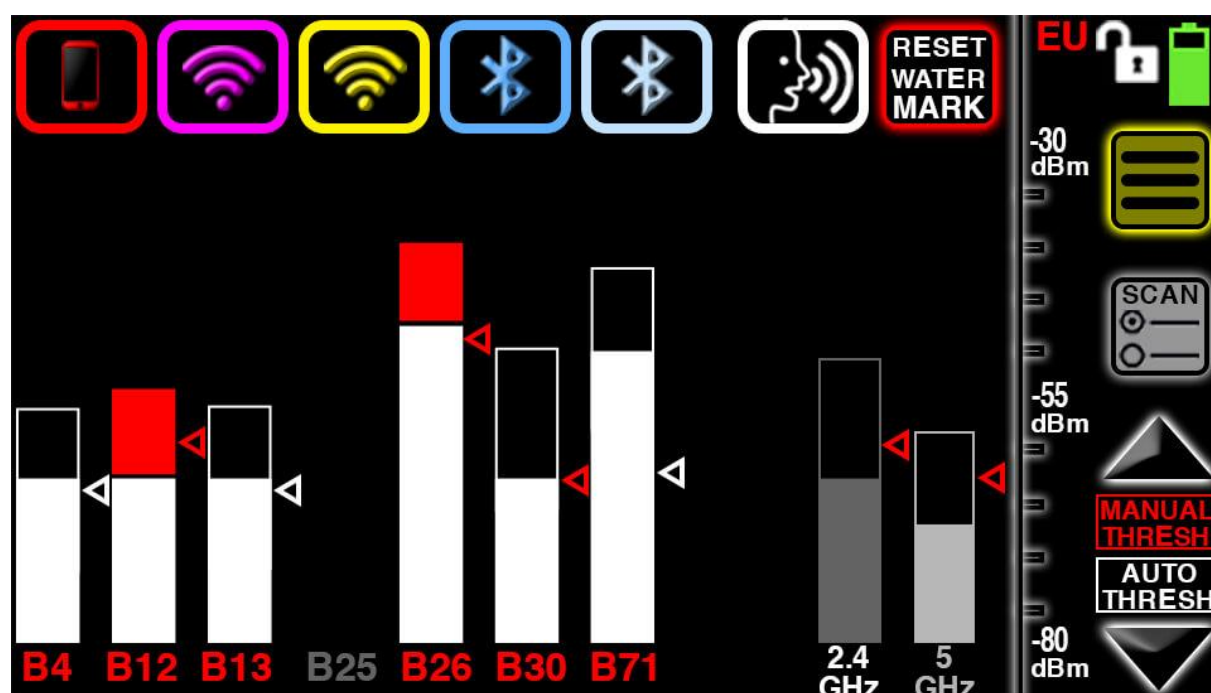


Guard-Dog optional stanchion mount ships in one box that includes base weight, pole and L bracket with handle.



Main Measurement Screen

Guard-Dog Main Measurement screen allows control and monitoring over all CW wireless signals detected as well as alerts for demodulated devices. The buttons at the top flash when demodulated devices trigger alerts as well as navigate to those lists of detected devices.





Navigates to cellular phone screen.



Navigates to list of 2.4 GHz Wi-Fi detected access points.



Navigates to list of 5 GHz Wi-Fi access points.



Navigates to list of Bluetooth detected devices.



Navigates to list of Bluetooth Low Energy (BLE) detected devices.



Toggles between audible voice alerts, audible siren alert or muted alerts with no audio at all.



Resets all watermarks (thin green line above the current signal strength detected).



Displays current country code of cellular bands being scanned. Touch this country code to see all cellular and Wi-Fi band designations that are currently being scanned.



Shows security status of physical lock and key. A locked lock icon does not allow any changes.



Displays current charge to internal battery system. Internal battery lasts 2-4 hours depending upon amount of nearby wireless activity.



Cellular band being actively scanned (red indicates active).



Cellular band not being actively scanned (grey indicates no scanning).



Thin green watermark indicates strongest signal strength detected since last watermark reset.



Red bar indicates signal has surpassed the currently set threshold.



Manual threshold setting indicated by red color. Touch this indicator and once it blinks, it can be adjusted using the up/down threshold arrows only while the 'manual thresh' button blinks.



Auto threshold setting indicated by white color. Auto threshold can be toggled on and off by tapping the white 'auto thresh' button. If you have already manually adjusted any thresholds, you will probably see those white indicators automatically move into their auto threshold spots.



2.4 GHz continuous wave (CW) energy measurement. This measurement does not reflect any demodulated signals used in Bluetooth or Wi-Fi devices. 2.4 GHz CW can originate from cellular phones and also a variety of devices including wireless cameras, baby monitors and microwave ovens.



5 GHz continuous wave (CW) energy measurement. This measurement does not reflect any demodulated signals used in Bluetooth or Wi-Fi devices. 5 GHz CW can originate from cellular phones and also a variety of devices including wireless cameras and drones.



Navigates to main menu where users can fine tune a variety of alert and scan settings.



Inhibits scanning of all cellular, Wi-Fi, bluetooth, BLE, 2.4 GHz CW and 5 GHz CW signals. Simply touch this button and then choose one or more buttons on the top to inhibit.



Raises the threshold manually for any blinking red indicators. This should decrease the amount of alerts triggered for those particular signals.



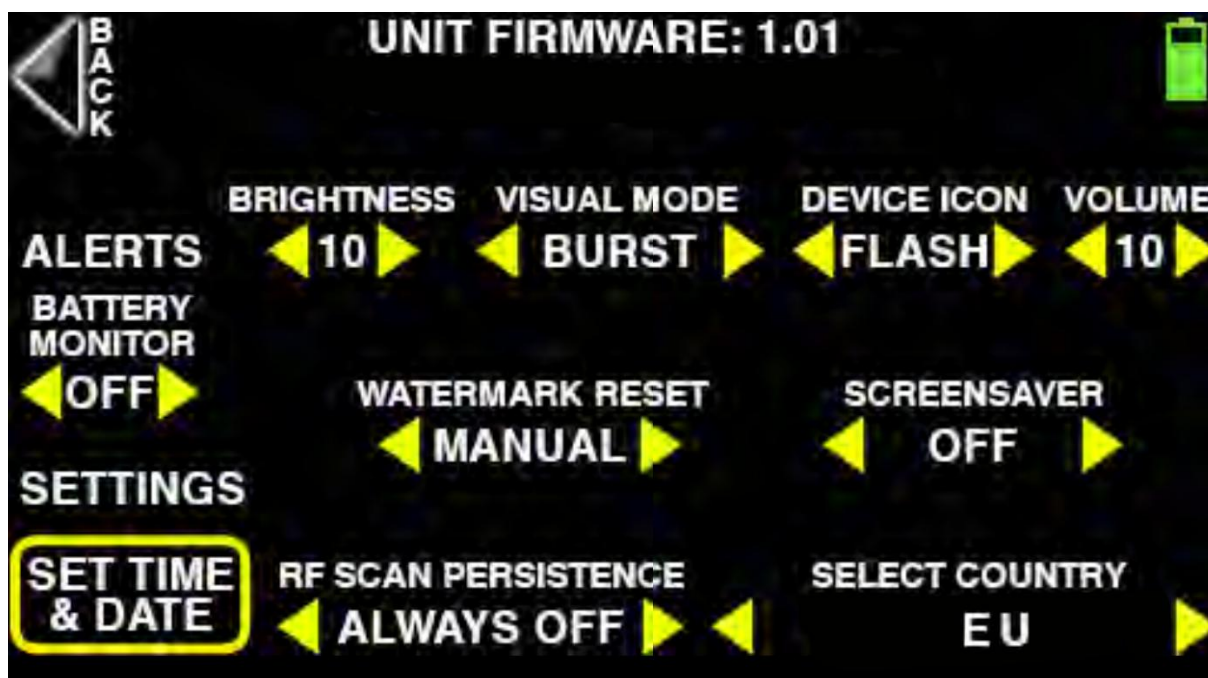
Toggles thresholds to be adjusted manually. This button will continue to blink while in manual mode allowing each signal's threshold to be manually adjusted.



Toggles thresholds into automatic mode allowing **Guard-Dog** to determine the noise floor and most reliable threshold settings by itself.



Lowers the threshold manually for any blinking red indicators. This should increase the amount of alerts triggered for those particular signals.



Main Menu Options

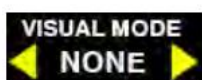
Guard-Dog's Main Menu screen can be reached from nearly any other screen by touching the rectangular icon with three lines. This screen provides many adjustments as well as the unit's serial number and firmware.



Touch this button at any time in any screen to return to the previous screen.



Press the left yellow arrow to decrease brightness of the main alert display on a scale of 1 to 10. Press the right yellow arrow to increase brightness.



Press the left or right yellow arrow to toggle between 3 different visual alert modes: burst, strobe or none. Burst is a gradual fade up and down. Strobe flashes on and off. None turns off the large visual alerts.



Press the left or right yellow arrow to toggle between 2 different visual alert modes on the LCD touchscreen: flash or none. The device detected will flash on and off when flash is shown.



Press the left or right yellow arrow to adjust siren or voice alert volume on a scale from 1 to 10.



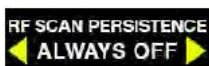
Press the left or right yellow arrow to toggle the battery audible alert ON or OFF. **Guard-Dog** normally operates on AC power, so this monitor only refers to the power remaining in the internal sealed backup battery. The internal battery provides 2-4 hours of power depending upon amount of nearby wireless activity.



Toggles between 3 different screensaver modes displayed on the touchscreen when the unit is not being actively used: OFF, STEALTH and CLOCK. OFF shows all RF activity measurements and no screensaver at all. STEALTH simply shows nothing, as if the unit is turned off entirely. CLOCK shows time, date and current temperature. The actual temperature is accurate and displayed in either Celsius or Fahrenheit degrees. The temperature sensor is mounted in the back of the unit shown here. Touch the BACK button to begin the screensaver of your choice and touch anywhere on the screen again to exit screensaver mode.



Set the time and date for both the screensaver clock mode and the timestamps of every measurement.



Change the rate at which Wi-Fi, BT, BLE measurements are displayed on their respective screens by choosing between 4 rates: always on, always off, 10 seconds and 10 minutes. These settings only affect the demodulated measurements. For example, only the last Wi-Fi scan result will be shown when it is set to always off. You might need to experiment with these settings depending upon environment. Bundpol Security Systems recommends 10 seconds for busy RF environments and 10 minutes for less busy RF environments.



Change the country you are operating WallHound-Pro within, thereby changing the cellular channels being scanned and displayed as well as international Wi-Fi bands. Choose between EUROPE, UNITED STATES, CANADA, AUSTRALIA, NEW ZEALAND, ISRAEL, INDIA, BRAZIL, SWEDEN, JAPAN, CHILE, PHILIPPINES, SOUTH KOREA, GUATEMALA, COSTA RICA and TRINIDAD. The country selected is also displayed on the MAIN MEASUREMENT screen according to its 2 letter country code in the upper right corner of the Main Measurement Screen.

BACK	BLUETOOTH LE DEVICE ID MAKER	RSSI (dBm)	LAST DETECT	
	00:E0:FC:0D:A1:17 HUAWEI DEVICE	-43	05-24-19 13:05:20	WHITE + LIST
	08:3F:BC:E6:00:26 ZTE DEVICE	-44	05-23-19 10:12:29	WHITE o o LIST
	08:8C:2C:0E:1B:23 SAMSUNG DEVICE	-78	04-20-19 04:02:39	▲
	08:6D:41:8E:71:15 APPLE DEVICE	-79	04-28-19 11:34:02	▲
	08:9E:08:0E:1B:23 GOOGLE DEVICE	-84	05-22-19 17:30:57	PAGE
				▲ -45 dBm THRESH ▼

Demodulated Device Measurement Screen

Guard-Dog lists all Wi-Fi 2.4 GHz, Wi-Fi 5 GHz, Bluetooth and Bluetooth low energy demodulated devices detected in their respective lists. The screen shown above is only for Bluetooth devices, but the same descriptions and features apply to all types of demodulated devices.



Sort through all devices detected based upon their RSSI (Received Signal Strength Indicator) in dBm. Touch button to toggle between highest and lowest signal strength.



Sort through all devices detected based upon their timestamp of the last time that device was online.

00:E0:FC:0D:A1:17 HUAWEI DEVICE	-43	05-24-19 13:05:20
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Each device detected includes MAC address, device name, RSI in dBm and

time stamp of last detection. Device names that appear in red have broken the threshold set by the user.



Scroll between multiple pages of devices detected.



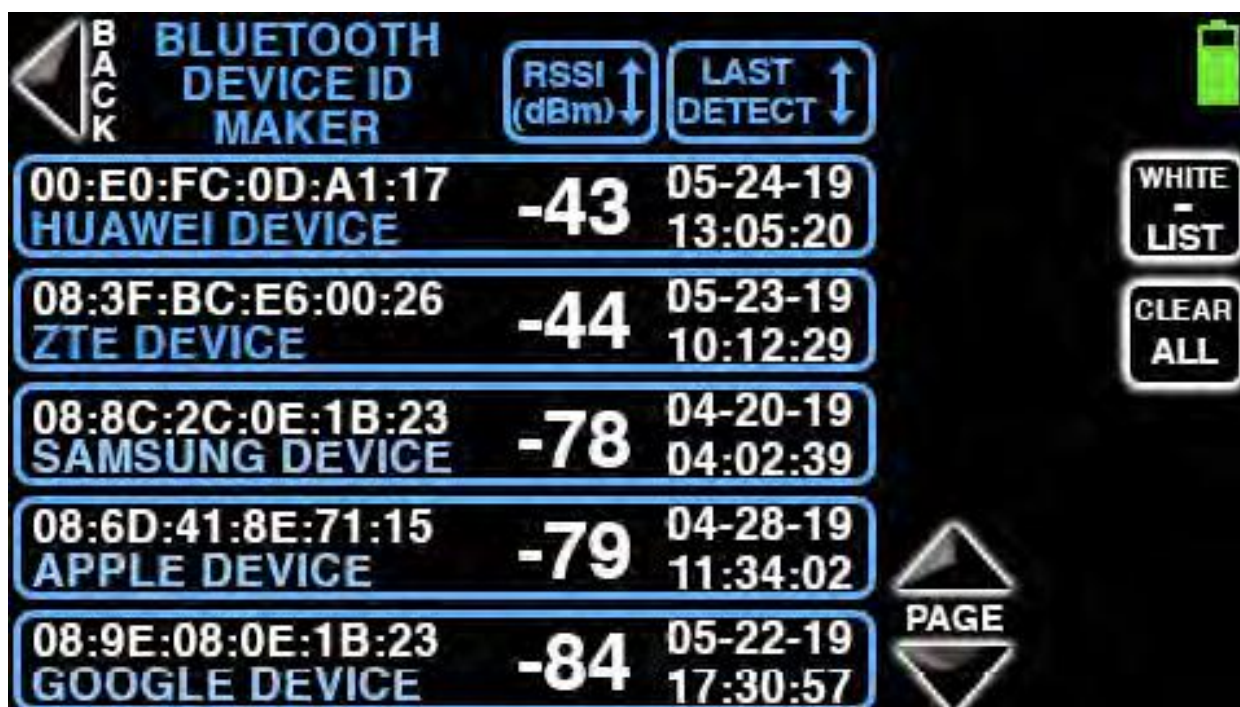
Press this button to add devices into the whitelist of known, friendly devices. So long as this button blinks you may add devices one by one. Press this button again when you are finished adding to the whitelist.



Navigate to whitelist of known devices where you may delete devices from that list.



Set threshold for all demodulated devices in this list. Raising this threshold should decrease the amount of alerts triggered in this particular list. Lowering this threshold should increase the amount of alerts triggered in this particular list.



Whitelist Measurement Screen

This screen only displays devices that are currently whitelisted. From this list, whitelisted devices can be viewed, sorted and removed similar to the previous screen. The whitelist screen shown above only displays Bluetooth devices, but the same whitelisting features apply to all types of demodulated devices.



Sort through all devices detected based upon their RSSI (Received Signal Strength Indicator) in dBm. Touch button to toggle between highest and lowest signal strength.



Sort through all devices detected based upon their latest timestamp



Each device detected includes MAC address, device name, RSSI

in dBm and time stamp of last detection. Device names that appear in red have broken the threshold set by the user.



Scroll between multiple pages of devices detected.



Remove whitelisted devices one by one from this whitelist and place them back into the Demodulated Device measurement list.



Remove all whitelisted devices at once from this whitelist and place them back into the Demodulated Device measurement list.

Guard-Dog Hardware



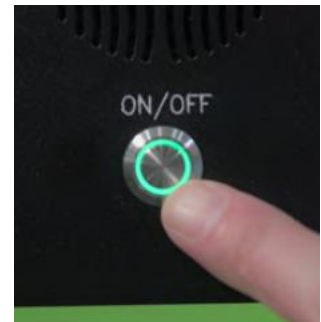
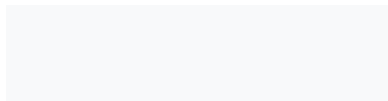
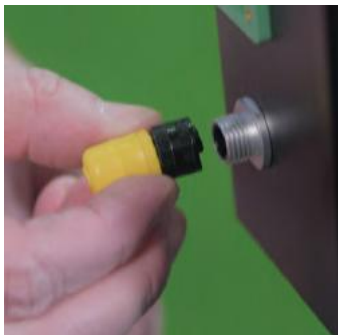
Guard-Dog ships with everything you need to start securing your facility from wireless threats including a power supply, 3 x omni-directional antennas, wall mounting hardware and 2 x keys.

Mounting Your Guard-Dog

The Secu ultra slim flat mounts are incredibly easy to install, and feature a low-profile, sliding plate design that places the **Guard-Dog** very close to the wall for a clean look, while also providing a unique combination of simplicity and security.



Charging the Guard-Dog



Use the included power transformer to both power and charge **Guard-Dog's** internal backup battery. After securely connecting and tightening the connector, press the power button to turn on your unit. Be sure to provide AC power to your unit for several hours to fully charge the internal backup battery. Once charged, the backup battery allows **Guard-Dog** to be disconnected from AC power and moved around without interruption of wireless detection. If your unit is powered while you plug in the provided charger, the power button will blink green to indicate that the unit is being charged.



Guard-Dog includes a provision to securely lock all settings with a physical key to prevent tampering. Settings such as thresholds, alerts and even power may not be changed while the **Guard-Dog** is locked. In addition, **Guard-Dog's** touch screen requires a six digit PIN code in order to make any changes using the touchscreen even while the unit is physically unlocked.



Guard-Dog includes dry contacts allowing users to connect external alarms and recording devices upon wireless detection by **Guard-Dog**.

Consult this manual further or contact Bundpol Security Systems for answers to questions.

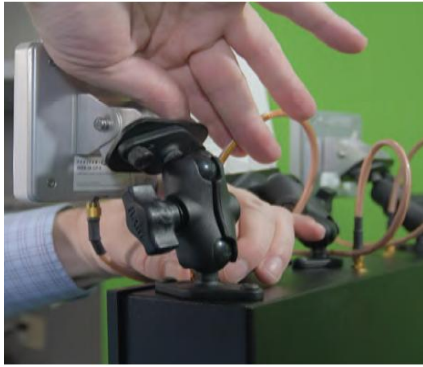
Firmware Updates



Guard-Dog can be updated via its dual USB port which contains two different modes for update.

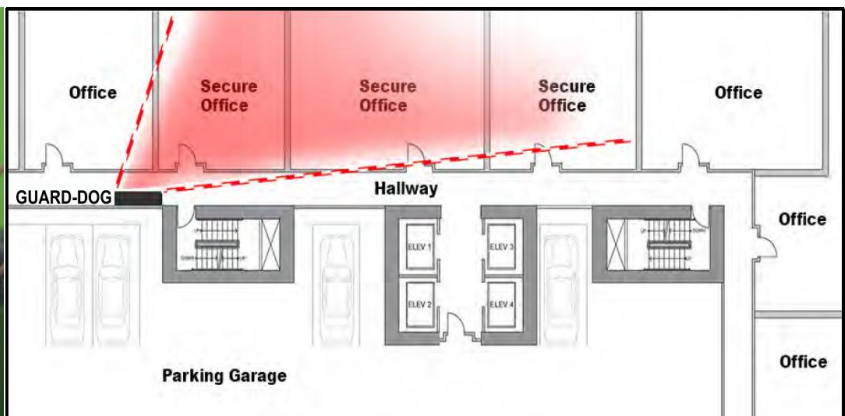
Mode 1: Pins 1 and 2 need to be shorted on the green dry contact connector allowing main 32-bit processor to receive a firmware update as shown.

Mode 2: With NO shorting as a default, the USB port can receive the 16-bit processor firmware update for the alarm board. This would only be necessary if there is a voice audio file that needs to be uploaded to unit.

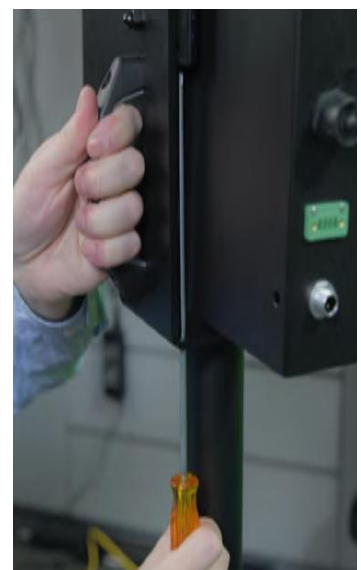


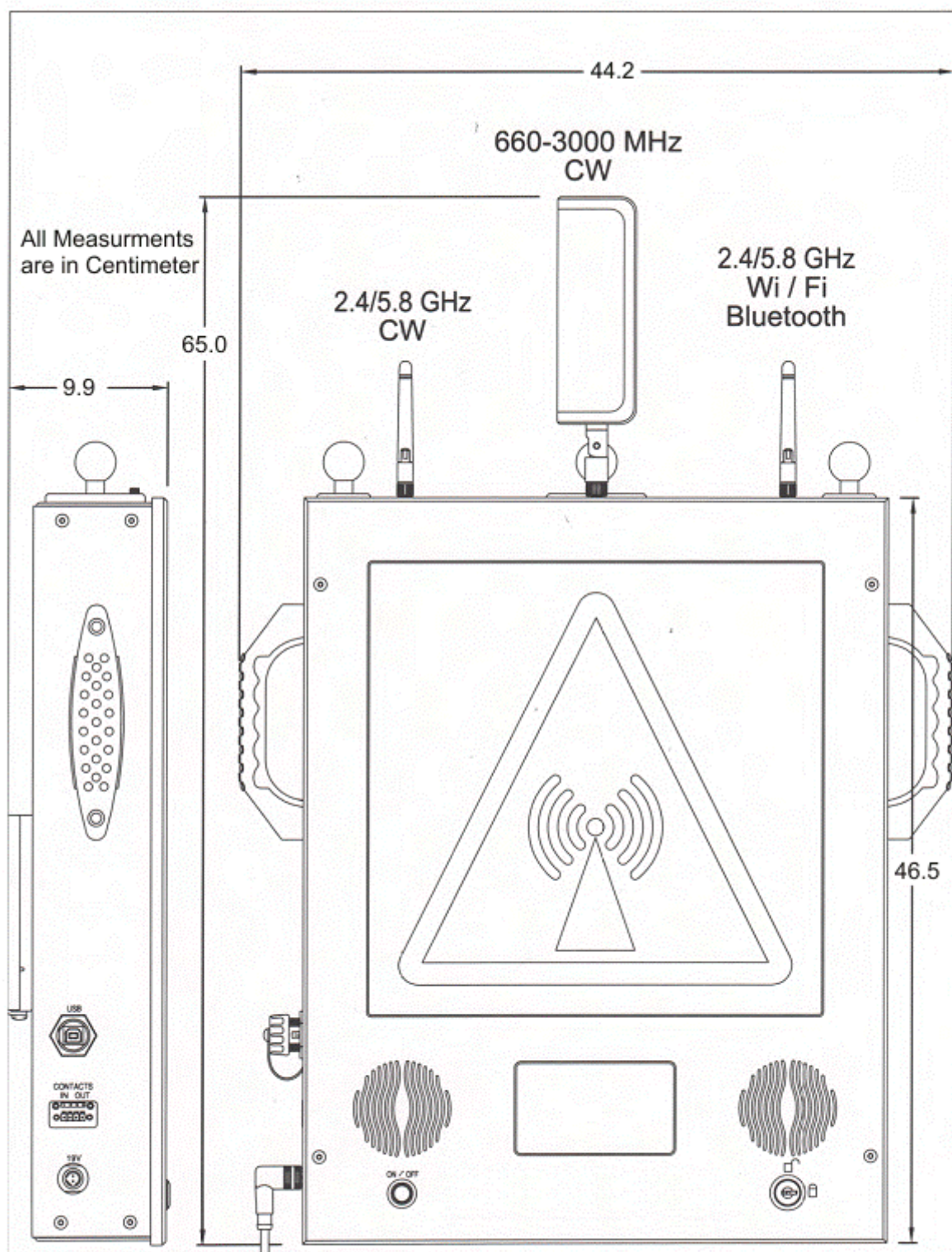
Guard-Dog supports an optional direction finding antenna kit including 2 dual band directional antennas to cover both 2.4 GHz and 5 GHz, 1 wideband directional antenna covering 700 MHz to 2.7 GHz, mounting brackets and cables. Simply unscrew the SMA mounted omni-directional antennas that are included with your unit and replace them with the directional antennas. Be sure

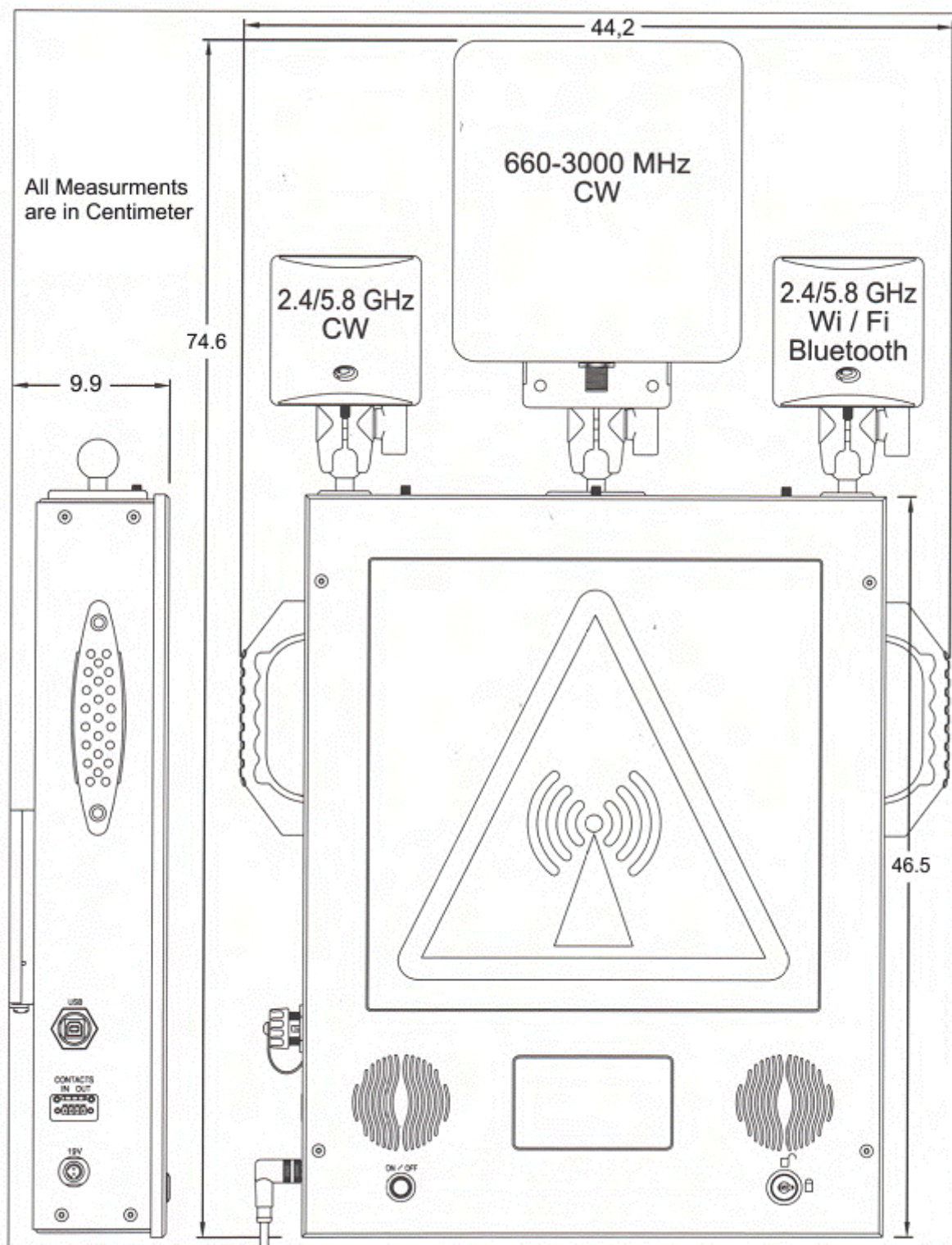
to connect the larger wide band antenna to the center SMA connector and smaller directional antennas on either side of the larger one. All of these antennas cover the frequency range of any common wireless threat, but the directional antennas allow much more flexibility in your unit's placement and coverage. For example, you may have to experiment a little if you wish to only detect wireless activity in a narrow corridor and secure rooms but exclude a nearby area in the opposite direction where wireless devices are more commonly used and not prohibited.



Guard-Dog supports an optional portable stanchion allowing the unit to be easily moved and placed into temporary security setups without access to AC power for instance. Simply slide the back of the unit onto the mounting plate included with your optional stanchion pole. Use a long screwdriver to fully secure the unit to the stanchion mount.







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

Customer Support

Bundpol Security Systems

Milanstrasse 4

D – 13505 Berlin

Germany

Phone: +49 30 405 845 06

Email: info@bundpol.de