

CONFIDENTIAL



PureBeacon 3.0

User Guide V1.2



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Revision History

Version	Name	Title	Change	Date
1.0	Ronit Pinchuck	Technical Writer	Initial Release	June 2, 2024
1.1	Ronit Pinchuck	Technical Writer	Align with Release Notes v1.0.0.34.40	November 12, 2024
1.2	Ronit Pinchuck	Technical Writer	Insert Section 13: FCC/IC Statements	December 8, 2024

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1. PureBeacon Overview

The PureBeacon home unit is an optional accessory which enables indoor surveillance of Offenders when GPS is either not available or when the PureOne/PureTrack devices have low GPS signal reception. The PureBeacon communicates with the PureOne/PureTrack device to indicate that the Offender is currently in a pre-defined zone.

The PureBeacon is AC powered and contains an internal battery backup capable of providing approximately 75 hours of operation.

It incorporates a quick charging station for the PureOne's portable charger (type C charging connection) and contains an LED interface and physical Button Press for multiple added functionalities.

When the PureBeacon is detected by the GNSS tracking device it is paired with, it causes the tracking device to automatically switch from "Away" mode to "Home" mode. While in "Home" mode, the tracking device reduces its positioning checks, which have become less necessary since the Offender is at home, thereby extending its battery life.

The PureBeacon device is FCC/CE certified, IP54 compliant (case) and uses the latest 2.4 GHz BLE (Bluetooth Low Energy) 5.1 protocol for communication.

It has multiple tamper detection abilities and is equipped with both GPS and LBS location capabilities.

The device comes in two variations, "Basic" and "Smart". "Basic" currently does not include software support for communicating with the PureMonitor over Cellular or WiFi.

1.1. Getting to know the PureBeacon:

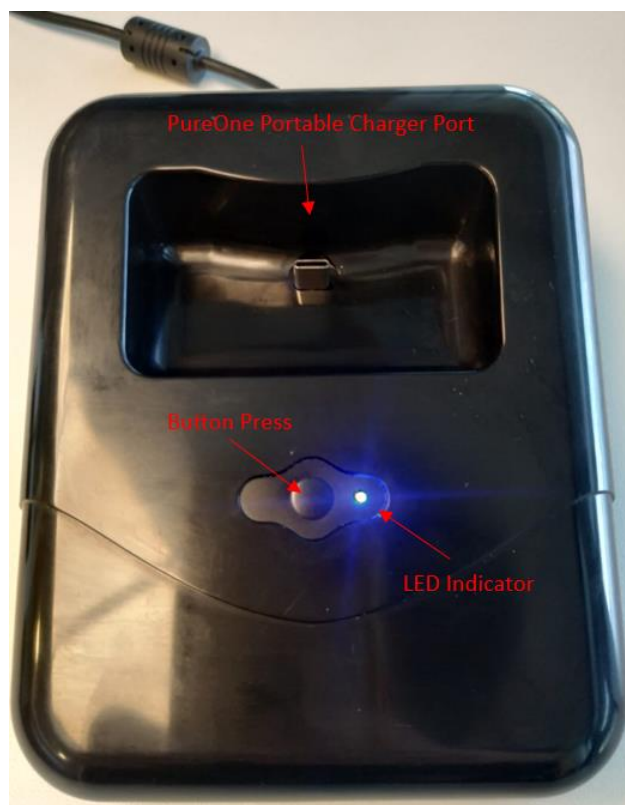


Figure 1 – PureBeacon Device – Front View

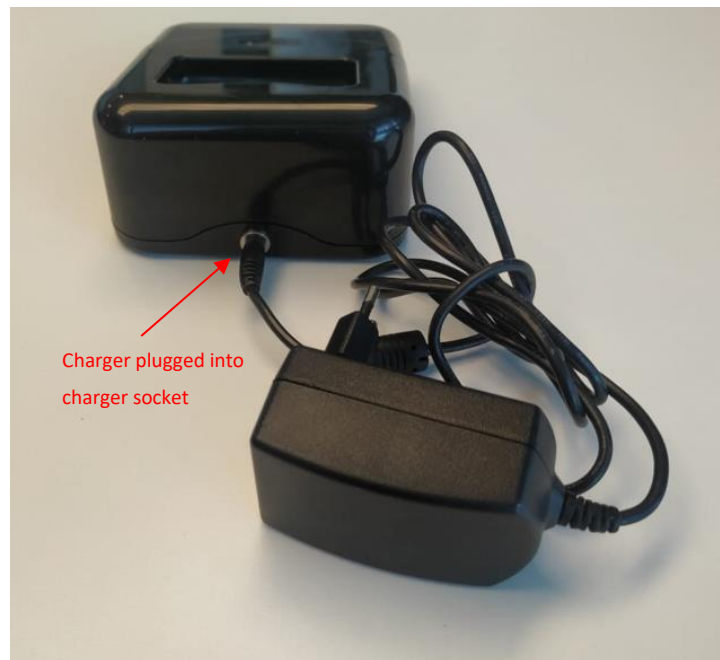


Figure 2 – PureBeacon Device – Rear View

[NOTE]: PureBeacon device is to be used only with the LPS Charger provided with the device.

2. PureBeacon Allocation

A PureBeacon can only be allocated to an Offender who already has a GPS tracking device (PureOne/PureTrack) assigned to them. Allocation can be done via the PureMonitor as indicated below.

- > An allocated PureBeacon is added to the Offender's Equipment list in the PureMonitor.
- > Each PureBeacon must be associated with an address that indicates the location where it was installed. By default, the Offender's home address is set as the PureBeacon's address. To change the address, click on the PureBeacon's **Settings** button:
- > Change the **Zone Name**, **Country** and **Address** as desired and click **Save**.

Figure 3 – PureBeacon Allocation in the PureMonitor

3. PureBeacon Installation

The PureBeacon is designed to allow quick and secure installation at the Offender's home, with a minimum of tedious operations. Correct installation ensures proper geolocation of the Offender and consists of finding the optimal location in the Offender's premises and plugging it into the electricity.

For PureOne devices:

Once the device is allocated to the offender and activated on PureMonitor, a PureBeacon related event will be generated on PureMonitor with Event Source "PureOne (zone: HomeBeacon)", ensuring the installation was successfully completed.

For PureTrack devices:

Once allocated and physically installed, the field agent does not need to call their monitoring center to activate the PureBeacon. This is performed from the PureTrack device as part of the PureTrack Enrollment Wizard installation process. The procedure takes up to thirty (30) seconds for a field agent.

3.1. Preparation

- To prevent interference, always keep all electrical devices away from the PureBeacon. This includes microwaves, computers, televisions, radios, stereos, and consoles.
- Remove free standing mirrors that may interfere with signals to the PureBeacon.
- Keep the PureBeacon away from water, chemicals, food, drink, or food preparation areas.

3.2. Installation

1. Position the unit on a flat and stable surface, near an electrical socket, preferably in the center of your home.
2. Check that the unit is positioned between 1.6 to 5.9 ft (0.5 and 1.8 meters) off the floor.
3. Plug the device into the socket using the provided LPS Charger.
[NOTE]: PureBeacon device is to be used only with the LPS Charger provided with the device.
4. Once the unit is installed, it should not be moved, shaken, or tilted.

4. LED User Interface

The PureBeacon is equipped with a single multi-colored (red, blue, green, and yellow) LED interface designed to provide vital device information.

Successful connection to power is confirmed via three consecutive blue blinks.

4.1. Period Device Status

Periodic device status indications are configurable and set to LED "Off" by default.

- LED "OFF" by default – manual status checked can be performed by a single short press on the button. A blue blink will be displayed indicating the device is functioning properly.
- LED "ON" – when configured to this mode, the light will blink blue every 15 seconds indicating the device is functioning properly. When the backup battery levels are

Low/Empty, a red blink every 15 seconds will be displayed (only for rare cases of prolonged power outage and backup battery nearly drained).

4.2. Diagnostic Mode

This mode enables users to perform diagnostic checks and assess device status, ensuring optimal performance once deployed.

This mode is activated by a 3 second button press.

Immediate feedback is displayed via the LED indicators:

1. **Green = everything is functioning properly:**
 - a. Device is successfully connected to power.
 - b. Case tamper values are considered okay.
 - c. BLE module is working properly.
2. **Yellow = potential issues:**
 - a. Device is disconnected from power, OR
 - b. Device is in “Low Battery”.
3. **Red = warns of critical issues:**
 - a. Device is disconnected from power AND has a low battery.
 - b. Case tamper values are considered not okay.
 - c. BLE module is not working properly.

Once the test concludes, the PureBeacon will automatically return to its normal operational state.

4.3. Reboot Functionality

To initiate a device reboot, press the button for a long press of 10 seconds.

Manual reboot function is limited to once every four hours.

The reboot functionality is enabled by default.

4.4. Summary of Button Presses & LED Indications

The device’s “Button Press” function supports the following:

- 1 short press – 1 blue blink (indicates the device is “alive”) in LED “Off” mode.
- 3 short presses – indicates battery life of backup battery:
 - Low/Empty - 1 red blink
 - Full/Low - 1 yellow blink
 - Full - 1 green blink
- 1 press of 3 seconds – initiates Diagnostic Mode.
- 1 long press of 10 seconds – initiates Device Reboot.

5. Battery

- The PureBeacon contains an internal battery with a backup of up to 3.5 days (75 hours) if disconnected from electricity.
- One can view battery backup levels by initiating 3 short consecutive button presses:
 - Full – 1 green LED blink
 - Full/Low – 1 yellow LED blink
 - Low/Empty – 1 red LED blink
- A “Low Battery” event is generated when there are approximately 8 hours of battery life remaining.
- When battery levels are Low/Empty, the red LED will blink every 15 seconds.

6. Tamper Alarms

The following tamper alarms are supported:

- Case Tamper
- Power Tamper Alert*
- Low Battery Alert (by default, approx. 2 weeks before depletion and can be configured otherwise if needed.)
- Motion Alert

***Note** – If power is disconnected and re-connected quickly, under 4 seconds, a disconnected from power tamper event will not be generated.

7. PureOne Charging

The PureBeacon can be used to rapidly charge the PureOne’s portable charger.

The portable charger is equipped with 3 LEDs that visually convey the portable charger battery status as follows:

Low Battery – 1st LED blinking, rest are off.

Medium Battery – 1st LED static, 2nd LED blinking, 3rd LED is off.

High Battery – 1st and 2nd LEDs are static, 3rd LED is blinking.

Full Battery – all 3 LEDs are static.

It takes approximately 90 minutes to completely charge the PureOne’s portable charger.



8. Range Test Functionality Using the PureOne

The BLE signal strength of the PureBeacon can now be accurately assessed by the PureOne.

Initiating a Range Test in PureOne can be done via Offender Profile – Start Range Test.

To indicate a successful entry to the Range Test Mode the PureOne device will initiate 3 short beeps and from this point the LED of PureOne will indicate the reception strength in the following ways:

1. Static green - “high” reception
2. Static yellow - “medium” reception

3. Static blue - “low” reception
4. Static red - no reception at all is detected. (Alongside vibrate and beep lightly.

To exist the Range Test mode a single button press is needed.

9. PureBeacon/PureOne Advanced Settings

The PureBeacon relevant PureOne Advanced Settings are:

9.1. “GPS Sampling Interval” Configurations Category

The following GPS Sampling Interval parameters can be configured from the PureOne Advanced Settings Screen on PureMonitor:

- > **Normal Interval** - GNSS (GPS) location sampling interval in normal conditions i.e., while there are no open violation events, and the device is outside of the range of the PureBeacon.
- > **Interval in PureBeacon Range** - GNSS (GPS) location sampling “Home Interval” interval, used when the device is in the range of its PureBeacon.

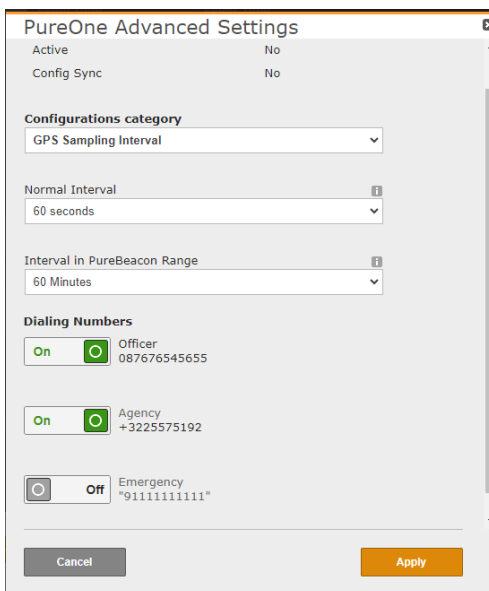


Figure 4 - “GPS Sampling Interval” Configurations Category

10. PureBeacon/PureTrack Advanced Settings

The PureBeacon relevant PureTrack Advanced Settings are:

10.1. "GNSS (GPS) Locations Interval" Configurations Category

- > **Interval in beacon range** – Interval of GPS sampling when the PureBeacon is in range of the PureTrack. Sampling rate is configurable in seconds/minutes. (The value will be kept when device is allocated to another Offender). Configuration selection may affect battery life and accuracy of location reporting.

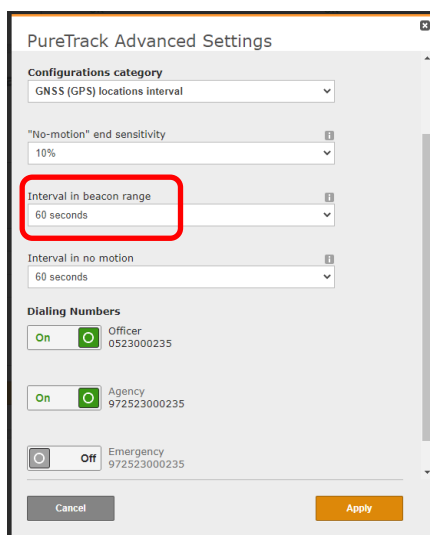
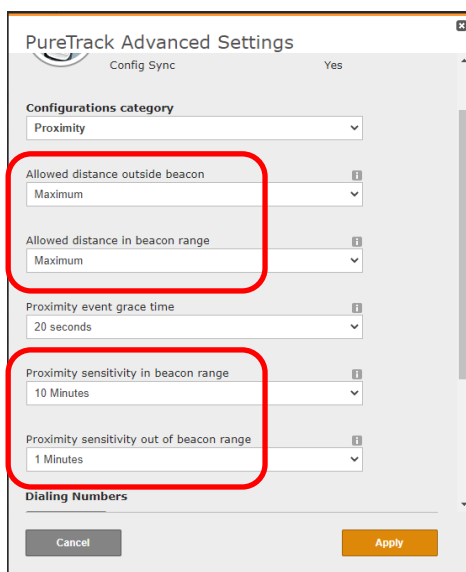


Figure 5 - "GNSS (GPS) Locations Interval" Configurations Category

10.2. "Proximity" Configurations Category

The following "**Proximity**" parameters can be configured from the PureTrack Advanced Settings Screen.

- > **Allowed distance outside beacon** - Allowed distance between PureTag and PureTrack while PureTrack is outdoors (out of Offender's PureBeacon range). The distance is defined by tag reception level. The value will be reset when device is allocated to another Offender.
- > **Allowed distance in beacon range** - Allowed distance between PureTag and PureTrack while PureTrack is indoors (in Offender's PureBeacon range). The distance is defined by tag reception level. The value will be reset when device is allocated to another Offender.
- > **Proximity sensitivity in beacon range** - Number of minutes before a proximity from PureTag event will be generated while PureTrack is indoors in range of Offender's PureBeacon. Once PureTag reception is lost, a PureTrack will wait for the defined period to verify that the tag is out of range. The value will be kept when device is allocated to another Offender.
- > **Proximity sensitivity out of beacon range** - Number of seconds before a proximity from PureTag event will be generated while PureTrack is outdoors (out of range of Offenders PureBeacon). Once PureTag reception is lost, a PureTrack will wait for the defined period to verify that the tag is out of range. The value will be kept when device is allocated to another Offender.



The screenshot shows the 'PureTrack Advanced Settings' window with the 'Config Sync' toggle set to 'Yes'. The 'Configurations category' is set to 'Proximity'. Two red boxes highlight specific settings: the first box encloses 'Allowed distance outside beacon' (set to 'Maximum') and 'Allowed distance in beacon range' (set to 'Maximum'); the second box encloses 'Proximity sensitivity in beacon range' (set to '10 Minutes') and 'Proximity sensitivity out of beacon range' (set to '1 Minutes'). At the bottom, there are 'Cancel' and 'Apply' buttons.

Figure 6 - “Proximity” Configurations Category

11. PureTrack/PureBeacon Associated Devices Verification

If a PureBeacon is allocated to an Offender as part of a GPS monitoring program, during the Offender Enrollment Wizard on the PureTrack device, the PureTrack will perform an **Associated Devices Verification**.

This step verifies that the signals of the associated devices (PureTag and PureBeacon) have been picked up and that the devices are functioning properly. The PureTrack screen displays the device in green once it has successfully established secure communication with the PureBeacon.

At the end of the program, once the monitoring is finished, the device is deactivated and must be detached from the surface where it was installed.

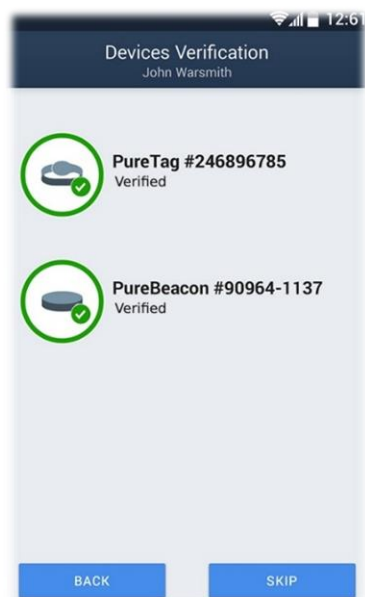


Figure 7 PureBeacon Associated Device Verification on PureTrack

12. PureBeacon Events

The below is a list of PureBeacon related events.

PUREBEACON EVENTS		
Event ID	Event Name	Description
1016	PureBeacon Case Tamper	An opening of the PureBeacon's case was detected.
1017	PureBeacon Case Tamper Closed	The PureBeacon's case was closed after being open.
1018	PureBeacon Power Tamper	The PureBeacon was disconnected from power.
1019	PureBeacon Power Tamper Closed	The PureBeacon was re-connected to power.
1047	Beacon Motion Tamper	Motion above the allowed threshold has been detected from the PureBeacon.
1048	Beacon Motion Tamper Closed	The PureBeacon is back to a static state.
1062	Beacon Low Battery Alert	PureBeacon backup battery low battery alert.
1063	Beacon Low Battery Alert Closed	PureBeacon backup battery low battery alert closed.
1007	Entered Inclusion Zone	Offender has entered an Inclusion Zone - Used by PureTrack for Enter Beacon event.
1008	Exited Inclusion Zone	Offender has exited an Inclusion Zone while schedule permitted - Used by PureTrack for Left Beacon events.
1022	Exited inclusion after violation	Offender has exited the Inclusion-zone after a violation event has been created.
1027	Exited Exclusion Zone after violation	Offender exited the Exclusion Zone after a violation event had been created.
1032	Present in Inclusion zone	Indicating Offender is present in zone. When used with PureOne, the Event Source column in PureMonitor will have "{zone: HomeBeacon}" added.
1033	Present in Exclusion zone	Indicating Offender is present in zone. When used with PureOne, the Event Source column in PureMonitor will have "{zone: HomeBeacon}" added.
1052	Beacon Encryption Error	Encryption key provided by the system doesn't match the device.
1053	Beacon Encryption Recovered	Sent when the correct encryption key between the device and the beacon is restored. CRC is correct.
1069	Beacon Fraud Tamper	A fraudulent Beacon message has been detected by the device. This indicates that someone may be trying to replicate the Beacon's messages.
1070	Beacon Fraud Tamper Closed	The Beacon messages being received comply with the security protocols and packet structure.
5000	Beacon Disconnected from Power	Indicates the PureBeacon has been disconnected from power.
5001	Beacon Connected to Power	Indicates the PureBeacon has been connected to power.
5002	Beacon Button Pressed	Indicates that the PureBeacon button has been pressed.

13. FCC/IC Statements

13.1. FCC Statements

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

WARNING – RF EXPOSURE COMPLIANCE: This equipment should be installed and operated with a minimum distance 20cm between the radiator and your body.

13.2. Industry Canada Statements

- This Class B digital apparatus complies with Canadian ICES-003.
- Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference.

(2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- 1) L'appareil ne doit pas produire de brouillage;
- 2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

AVERTISSEMENT – CONFORMITÉ AUX NORMES D'EXPOSITION AUX RF : Cet équipement doit être installé et utilisé à une distance minimale de 20 cm entre le radiateur et votre corps.