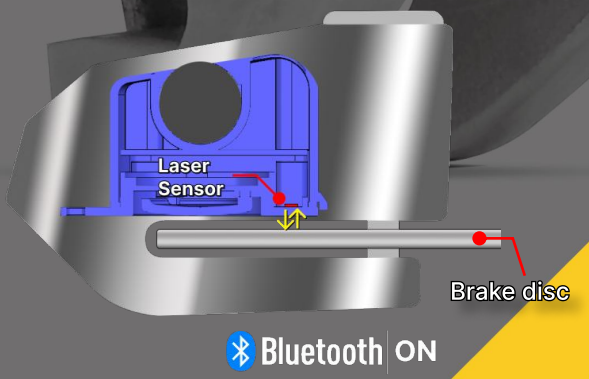
CRANNS®

Quick Start Guide

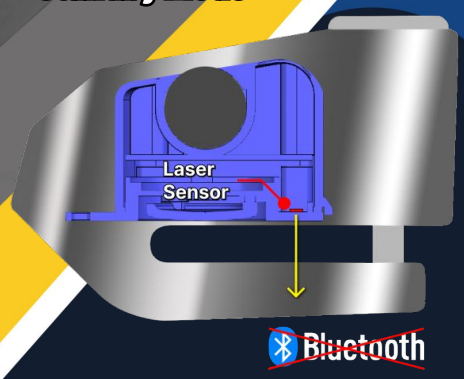
Cranns Disc Lock Alarm operates independently as a disc lock and an alarm system. The lock operation is not affected if the alarm system is electrically damaged, and likewise, the alarm operation is not affected if the disc lock is broken.

The Cranns alarm system relies on **vibration** and **laser detection sensors** to switch modes. It converts into different alarm modes based on the vibration generated during locking and the number of times and duration the laser detection sensor is obstructed when inserting the lock into the brake disc.

Alarm Mode

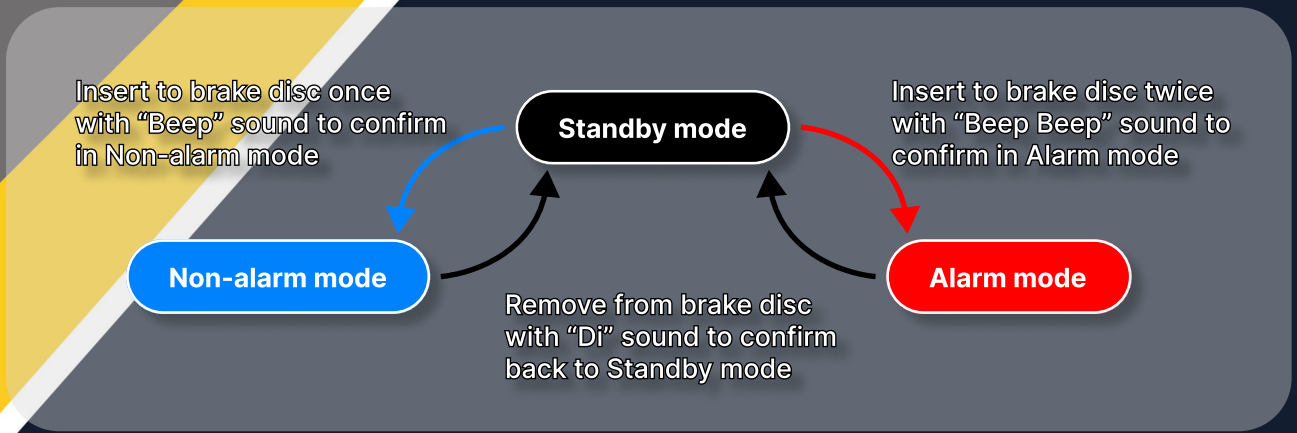


Standby Mode



The Cranns alarm system has three modes:

1. Standby Mode (No Bluetooth signal)
2. Non-Alarm Mode (No Bluetooth signal)
3. Alarm Mode (Bluetooth signal broadcast)



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Cranns alarm system come with 3 modes.

1) Standby Mode

- Standby mode is when the disc lock and the brake disc are separated. When vibration occurs, such as when inserting the lock into the brake disc or inserting the key to unlock it, the vibration sensor wakes up the laser detection sensor to check for any obstruction within a 6.5mm range in front of the sensor. If no brake disc obstruction is detected for 5 seconds, the system emits a "Di" sound to confirm the transition to Standby mode.
- In Standby mode, no Bluetooth signal is emitted to reduce battery consumption. The mobile app cannot be connected without the Bluetooth signal.
- Standby mode is similar to the neutral state on a motorcycle; it allows you to choose the desired mode.

Return to the Standby mode

2) Non-Alarm Mode

- Non-alarm mode is when the disc lock is engaged with the brake disc. To activate Non-alarm mode, first, insert the disc lock into the brake disc while in Standby mode to generate vibration. The vibration sensor wakes up the laser detection sensor to check for any obstruction within a 6.5mm range in front of the sensor. If the brake disc obstructs the laser detection sensor for a continuous 5 seconds, the system recognizes it as entering Non-alarm mode and emits a "Beep" sound to confirm the mode transition.
- In Non-alarm mode, no Bluetooth signal is emitted to reduce battery consumption. The mobile app cannot be connected without the Bluetooth signal.
- To exit Non-alarm mode, insert the key and unlock the lock cylinder, separating the disc lock from the brake disc. Since unlocking the lock cylinder generates vibration and the separation time exceeds 5 seconds (the laser detection sensor does not detect brake disc obstruction), the system recognizes it as entering the Standby mode. It emits a "Di" sound to indicate the transition to Standby mode.
- If the disc lock and the brake disc are separated within 5 seconds (the disc lock is reattached to the brake disc within 5 seconds), and the laser detection sensor still detects brake disc obstruction, the system recognizes it as remaining in Non-alarm mode and emits a "Beep" sound to confirm staying in Non-alarm mode.
- To switch from Non-alarm mode to Alarm mode, the system needs to return to Standby mode first and then follow the Alarm mode procedure.

Non alarm mode

Switch from Non-alarm mode to Standby mode and then Alarm mode

3) Alarm mode

- Alarm mode is when the disc lock is engaged with the brake disc. To activate Alarm mode, insert the disc lock into the brake disc twice rapidly while in Standby mode. The vibration generated by the first insertion of the brake disc activates the vibration sensor, which wakes up the laser detection sensor to check for any obstruction within a 6.5mm range in front of the sensor. The system recognizes the consecutive short-time obstruction and removal of the brake disc (two insertions and removals occurring within 3 seconds) and emits a "Beep Beep" sound to confirm the pre-alarm mode procedure. After the "Beep Beep" sound, a 10-second pre-alarm period allows the user to secure the disc lock. After 10 seconds, a long "Beep" sound signals the official entry into the alarm procedure. Any vibration or movement during this time will trigger the 120 dB alarm.
- In Alarm mode, the system emits a Bluetooth signal, allowing the user to pair the mobile app, adjust alarm volume and sensitivity, and view trigger records and related information.
- Note that Bluetooth signal is only active during Alarm mode. It does not respond in other modes. Understanding the alarm system mode is crucial for product usage.
- To exit Alarm mode, insert the key and unlock the lock cylinder, separating the disc lock from the brake disc. Since unlocking the lock cylinder generates vibration and the separation time exceeds 5 seconds (the laser detection sensor does not detect brake disc obstruction), the system recognizes it as entering the Standby mode. It emits a "Di" sound to indicate the transition to Standby mode.
- If the disc lock and the brake disc are separated within 5 seconds (the disc lock is reattached to the brake disc within 5 seconds), and the laser detection sensor still detects brake disc obstruction, the system recognizes it as remaining in Alarm mode and emits a "Beep Beep"sound to confirm staying in Alarm mode.

Alarm mode

Switch from Alarm mode to Standby mode and then Non alarm mode

First App connection
(please download “Cranns” app from IOS, Andriod or from our website)

1. Insert the disc lock into the brake disc twice to activate Bluetooth
2. Access to Cranns’s Mobile App and press “Tap to link” to search the lock/ alarm system.
3. Put the mobile closer to the lock to get the first connection signal more quickly (only the first time connect)
4. Press “Add” Button.
5. Create you password and Name your device (password will be clear once the battery remove from the alarm, and the Name of the device on stay with this device, If you have 2 mobile. The 2nd mobile can name other name).

First App Connection

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App setting Demo

- Volume: Control the alarm volume and pre-alarm/notification volume.
- Sensitivity: Control the movement and shock/vibration level sensitivity.
- Timing: Control the alarm and pre-alarm timing.
- Alarm On/Off: Show the alarm status (on or off) which is linked to Bluetooth broadcasting.

App demo

App Demo – Trigger record

This record shows the number of times your alarm has been activated while your bike was parked, allowing you to assess the safety of the parking location. Based on this information, you can make an informed decision to either choose a different parking spot or enhance the security measures by adding additional devices to protect your bike.

Trigger record

Accumulated

- Accumulated time since the last battery was installed has triggered the alarm. This record will reset once the battery is removed from the alarm module.

Alarm mode ON

- The number of times triggered has accumulated since the Alarm mode was turned on. This record will reset once the disc lock is removed from brake disc.

Alarm module firmware update via mobile

The Cranns alarm module offers the convenience of firmware updates through a mobile phone, enabling users to enjoy upcoming new features and enhanced functionality. Our product utilizes OTA (Over The Air) technology, allowing customers to seamlessly access and enjoy future updates. The latest firmware can be easily downloaded from our website, ensuring a hassle-free experience for our users.

Firmware update

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Low battery notification:

After a certain period of use, the product's battery will run out soon. If you hear the sound "Di Di Di Di Di," it means the battery is running out. Please change the battery as soon as possible.

Mobile & Alarm module disconnection notification:

Since the alarm unit is powered by a 1,000 mAh Lithium battery, maximizing battery life is our top priority. There are two major factors that consume battery power:

1) the alarm going off and
2) app connection.

Therefore, when the app runs in the background or the mobile screen turns into the screen saver mode, the mobile and alarm module will automatically disconnect. If you hear the sound "DiDi.....Di," it means the app and alarm module have disconnected. You need to relaunch the app and reconnect them.

Low Battery

App Disconnection

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