Installation Guide

NookBox IR Detector
(P119042 / E6309678)

NookBox

Smart Home Security

NookBox IR Detector

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Our Digitalized Adaptive Signal Processor algorithm enables this Detector to pick up movements within an assigned area and signals the Control Panel to activate the alarm if an intruder crosses its path of detection.

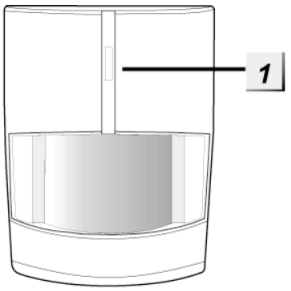
The detector consists of a two-part design made up of a cover and a base. The cover contains all the electronics and optics and the base provides a means of fixing. The base has knockouts to allow mounting on either a flat surface or in a corner situation with a triangular bracket for corner mounting.

Provision for a tamper switch that will be activated when the cover is detached from the base prevents unauthorized access and removal from the mounting surface. The Detector can also alert you to signal communication problems and low battery situations. The Detector is designed to give a typical detection range of 12 meters when mounted at 2 meters above ground.

Identifying the parts

1. Test Button/LED indicator

The test button is used for testing the radio performance and for learning purpose. The LED indicator is used to indicate the status of system.

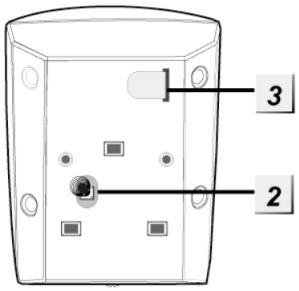


2. Tamper Switch

The Tamper switch protects the enclosure from being opened.

3. Battery Insulator

4. Corner mounting bracket

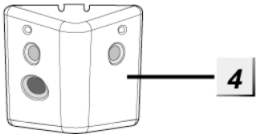


5. Supervision Enable/Disable Jumper Switch (JP2)

Jumper On
If the jumper is ON, IR-16's Supervision function is disabled. (Factory Default for 433AM & 868AM frequency models)

Jumper Off
If the jumper is OFF (if the jumper link is removed or "parked" on one pin), the Supervision function is enabled. (Factory Default for 868 WF frequency models)

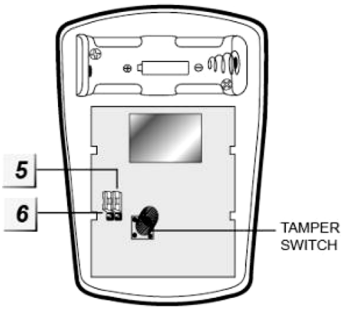
- 433FM / 868FM freqency models do not support JP2 Jumper Switch, Supervision is always enabled and cannot be disabled.



6. Sensitivity Increaser Jumper Switch (JP3)

Jumper On
If the jumper is ON, IR-16's detection sensitivity is high. (Factory Default for Pet-immune models)

Jumper Off
If the jumper is OFF (if the jumper link is removed or "parked" on one pin), the IR-16SL's detection sensitivity is in normal level. (Factory Default for Non Pet-immune models)



Sleep Timer

The Detector has a "**sleep time**" of approximately 1 minute to conserve power. After transmitting a detected movement, the Detector will not retransmit for 1 minute; any further movement detected during this sleep period will reset the 1-minute sleep timer. In this way continuous movement in front of a Detector will not unduly exhaust the battery.

Supervision Function

If enabled, when the Detector is in Normal operation mode it will conduct a Self-test Periodically by transmitting a supervisory signal once every 30 to 50 minutes
If the Control Panel fails to receive the Supervisory signals transmitted from a certain Detector for a preset time, an "Out-Of-Order" fault message will be generated.

Sensitivity Increaser Function

You can use the sensitivity increaser function to increase the IR's detection sensitivity. To increase detection sensitivity, please reconnect the Sensitivity Increaser Jumper Switch to ON position. To maintain the normal detection sensitivity, reconnect the Jumper to OFF position (factory default).

Test mode

The Detector can be put into Test mode by pressing the Test Button on the front cover. In Test mode, it will disable the sleep timer and will enable the LED indicator to flash every time a movement is detected. Each time press the Test Button, the Detector will transmit a test signal to the Control Panel for radio range test and enter the test mode for 3 mins. It will exit Test Mode automatically after 3 mins and returns to normal mode.

LED Indicator

In Normal operation mode, the LED Indicator will not light except in the following situations:

- When the Detector is in low battery condition, every time it transmits a detected movement, the LED will light up for about 2 seconds.
- When the cover is opened and the tamper switch is violated, the LED will light up for 2 sec. to indicate it is transmitting the "Tamper" signal.
- When the Tamper condition persists, every time it transmits a detected movement, the LED will light up.
- When if the Detector is in Test mode, the LED will light up every time a movement is detected.

Battery

The detector use one 3V 2/3A (CR123) Lithium battery as its power source.

When low battery voltage is detected, a low battery signal will be sent to the Control Panel along with regular signal transmissions for the Control Panel to display the status accordingly. The battery is installed in by the factory before shipment with an Insulator inserted.

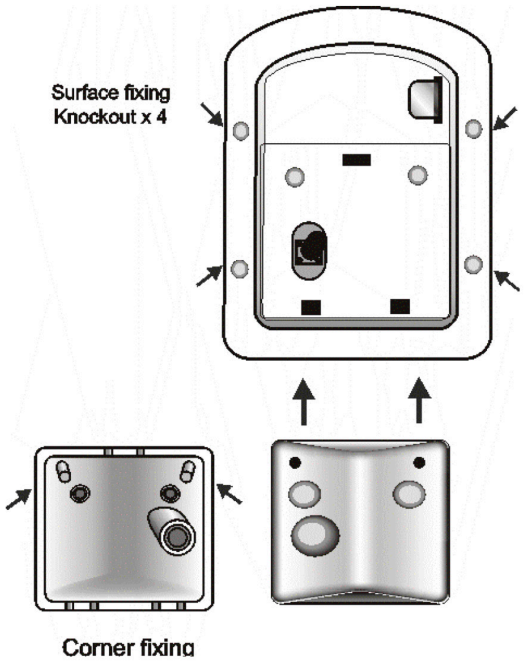
<NOTE>
When changing batteries, after removing the old batteries, press the Tamper Switch twice to fully discharge before inserting new batteries.

Getting Started

- Pull out the battery insulator to activate battery.
- The LED indicator will flash for 30 seconds. (The Detector is warming up). During the warm up period, the Detector will not be activated. It is recommended that you stay away from the detection area during this time. After the warm up period is over, the LED will turn off and the Detector will be ready for operation.
- Put the Control Panel into learning mode, refer to Control Panel manual for detail..
- Press the test button on the front cover.
- Refer to Control Panel manual to complete the learn-in process.
- After the Detector is learnt-in, put the Control Panel into “Walk Test” mode, hold the Detector in the desired location, and press the Test button
- to confirm this location is within signal range of the Control Panel, refer to Control Panel manual to complete Walk Test.
- When you are satisfied that the Detector work in the chosen location, you can proceed to mounting.

Mounting Method

- The Detector is designed to be mounted on either a flat surface or in a corner situation with fixing screws and plugs provided.
- The base has knockouts, where the plastic is thinner, for mounting purpose. Four knockouts are for surface fixing.
- For corner mounting, an optional triangular bracket is provided to add Back Tamper Protection. Mount the triangular bracket on the wall first with the two pointing sticks on top facing you. Fit the Detector onto the hooks of the triangular bracket or screw the Detector onto it.
    - Surface mounting:
        I. Remove the fixing screw and cover assembly using a Philips screwdriver.
        II. Break through the appropriate knockouts on the base.
        III. Using the holes as a template, drill holes in the surface.
        IV. Insert the wall plugs if fixing it into plaster or brick.
        V. Screw the base into the wall plugs using a Philips screwdriver.
        VI. Screw the cover back onto its base using a Philips screwdriver.
    - Corner mounting:
        I. Break through the two knockouts on the triangular bracket.
        II. Using the two holes as a template, drill holes in the surface of the corner.
        III. Insert the wall plugs.
        IV. Screw the triangular bracket into the wall plugs with the two pointing sticks on top facing you (use a Philips screwdriver).
        V. Fit the Detector onto the hooks of the triangular bracket.
        VI. If necessary, open the Detector by removing the fixing screw and cover assembly using a Philips screwdriver.
        VII. Break through the appropriate corner fixing knockouts.
        VIII. Using the corner fixing knockouts as a template, drill holes in the surface in the corner again.
        IX. Insert the wall plugs if fixing it into plaster or brick.
        X. Fit the Detector onto the hooks of the triangular bracket.
        XI. Screw the base into the wall plugs using a Philips screwdriver.
        XII. Screw the cover back onto its base using a Philips screwdriver.



Installation

- Decide on the location of the Detector and if it is to be corner or surface mounted.
- After the installation site is selected, follow the steps described above to mount the Detector.
- Press the Test Button to enter Test Mode. Walk around the protected area noting when the LED lights up and check that the detection coverage is adequate.
- When detection coverage is found to be satisfying, installation is now completed.

Installation Recommendations

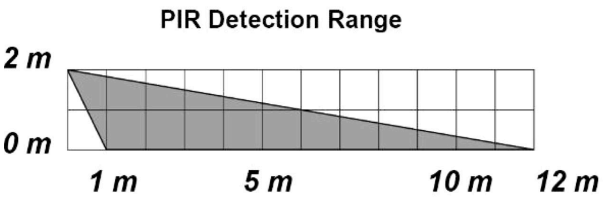
Non Pet-Immune Detector

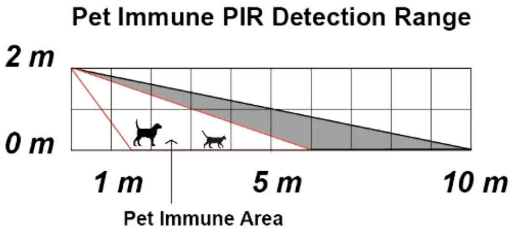
- The detection range is up to 12 meters if the Detector is mounted 2 meters above ground.

Pet-Immune Detector

- The Pet-Immune Detector supports pet immunity feature and will not detect pets of up to 25 kg within 7 meter range to minimize false alarm situation.

- If required, you can adjust the height of the Detector according to the size of your pet for optimal pet immune performance. Higher installation location will provide larger pet-immune space, but also increases the blind spot under the Detector.





To take full advantage of Detector, the following guidelines should be considered:

- It is recommended to install the Detector at the following locations
    - Mount the detector at 1.9M-2.0M height for best performance:

<IMPORTANT NOTE>

When deciding on the height of the Detector mounting site, remember to take the possible blind spot into consideration. The blind spot underneath the Detector enlarges proportionally to the height of the Detector mounting site.

Please note that performance is affected by external factors, such as height of detected object, desired detection range, installation area...etc. The suggested mounting height could be adjusted according to actual installation environment factors.

- Mount where the animals cannot come to the detection area by climbing on furniture or other objects.
- Don't aim the detector at stairways the animals can climb on.
- In a position such that an intruder would normally move across the Detector's field of view from side to side.
- In a corner to give the widest view.
- Where its field of view will not be obstructed e.g. by curtains, ornaments etc.
- Limitations
- Do not position a Detector to look directly at a door protected by a Door Contact, this could cause the Door Contact and Detector radio signals to be transmitted at the same instant when entering, canceling each other out.
- Do not install the Detector completely exposed to direct sunlight.
- Avoid installing the Detector in areas where devices may cause rapid change of temperature in the detection area, i.e. air conditioner, heaters, etc.
- Avoid large obstacles in the detection area.
- Not pointing directly at sources of heat e.g. fires or boilers, and not above radiators.
- Avoid moving objects in the detection area i.e. curtain, wall hanging etc.

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For more information visit:
www.getnookbox.com