

NUBI 4.0 – PLUG & PLAY

Model: **NB40PP**
Power supply: 3,6V lithium battery
PIR: YES

Thank you for purchasing NUBI 4.0, the wireless, intelligent and Plug & Play security smoke screen device. It can be used with any anti-theft system, coupling the device to an internal siren.

WE RECOMMEND THAT YOU READ THE ENTIRE MANUAL BEFORE PROCEEDING TO PRODUCT INSTALLATION.

1. OVERVIEW

The device is powered by a 3.6V AA size lithium battery supplied with the product, such as SAFT LS14500 or similar. This battery provides the necessary energy to the device for a period of 10 years. The ignition of the smoke cartridge is ensured even when the battery is very low (2.2V). When the battery is about to run out, the device will beep every hour.

NUBI 4.0 efficiently protects volumes up to 100 m³. The smoke generated by NUBI 4.0 is based on incense and does not produce toxic atmosphere as tested according to the TLV-STEL directive EU 2017/164 and ACGIH. After use the room must be ventilated before staying there.

The device is completely wireless, it can be installed only with two dowels. In the same room where NUBI 4.0 is installed, an internal siren is required. Programming operations are not necessary on the burglar alarm control panel. The sound of the siren is digitized during the pairing operation to be performed during installation. Thanks to digital learning, sounds other than the specific coupled siren will not produce any effect, even the sound of the same siren model, but installed in a different room, will not activate NUBI 4.0.

While the coupled siren sounds, NUBI 4.0 switches to the "active state" and as soon as it detects movement with its infrared sensor it triggers the emission of smoke. It is possible to extend the "active state" of NUBI 4.0 for 5 minutes even after the siren has stopped sounding (see chapter 6: select the operating mode).

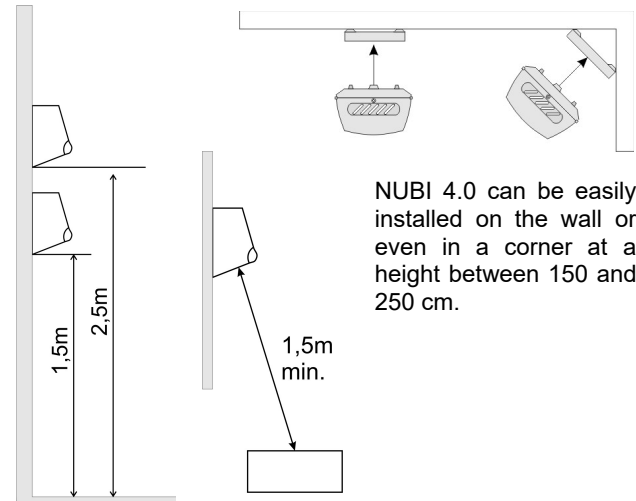
For the first 20 minutes after performing the siren coupling operation, or inserting the power supply battery, it is possible to perform the functional test of NUBI 4.0 without causing smoke emission.

The smoke cartridge works only once, the smoke emission, when triggered, can no longer be interrupted.

The replacement of the smoke cartridge is very simple, the conductors of each cartridge end with the activation card which will be easily plugged into the appropriate connector on the motherboard.

NUBI 4.0 is a family of products, in addition to the Plug & Play version, other models are available to be connected to the alarm control panel through the inputs and outputs. They are available with 12V power supply or battery, with or without built-in infrared sensor. For more information, visit www.smarteksr.it.

2. INSTALLATION



NUBI 4.0 can be easily installed on the wall or even in a corner at a height between 150 and 250 cm.

WARNING

Do not insert any obstacle at a distance of less than 1.5 meters from the smoke outlet hole.

The best performance is achieved when the jet of smoke coming out from NUBI 4.0 directly hits the floor, in this way the smoke will cool and spread better.

NUBI 4.0 Plug & Play must be installed in the same room where an internal alarm system siren is located.

Do not place NUBI 4.0 in particularly noisy places, as well as near strong sound sources, such as television or speakers. Strong and continuous sound sources will reduce battery life.

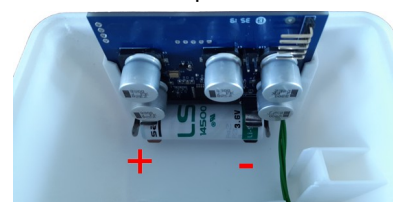
The distance between NUBI 4.0 and the siren should be approximately between 0.5 and 2 m, but this parameter strongly depends on each siren. In principle it is better to keep the siren close to NUBI 4.0 to obtain better noise immunity, but if it is too close it could be reached by an excessive sound level or influenced by sound reflection phenomena.

To obtain maximum immunity to anomalies due to ambient sound reflections, it is recommended to install the siren and NUBI 4.0 at a height greater than 2 meters.

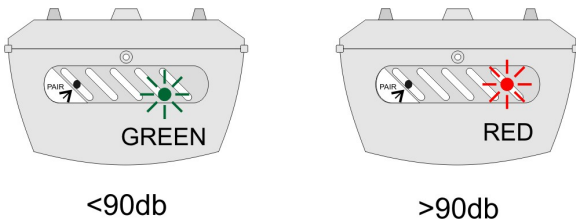
Before definitively fixing NUBI 4.0 to the wall, proceed to carry out the sound tests described in chapter 3 and 4 below.

3. TEST OF SOUND THRESHOLD

Open the box, insert the battery into the motherboard without connecting the smoke cartridge, then close the container. The green LED reports a sound level lower than the 90Db threshold, the red one reports a higher level that causes the device to wake up.



Perform the sound tests with the closed box, so as to simulate the real working condition.



For longer battery life, ambient noise should not frequently turn on the red LED, while it is essential that the sound of the siren do it.

The LEDs are offset from the slots to allow the best frontal observation.

4. TEST OF THE SIREN

This test controls if the sound level of the siren is suitable to be digitized. Pressing the "PAIR" button alternates the "sound threshold test" (blue LED off) and the "siren test" (blue LED on).

1. Sound the siren
2. Hold the appliance in the installation position.
3. Press the "PAIR" button (blue LED ON).
4. Wait about 2 seconds
5. Observe the red and green LEDs:

#	Red	Green	Result
1	SF	OFF	Sound too weak
2	SF	ON	Sound OK, but too weak
3	OFF	ON	Sound OK
4	FF	ON	Sound OK, but strong
5	FF	OFF	Sound too strong

SF = Slow flashing, FF = Fast flashing

Table 1: siren test result

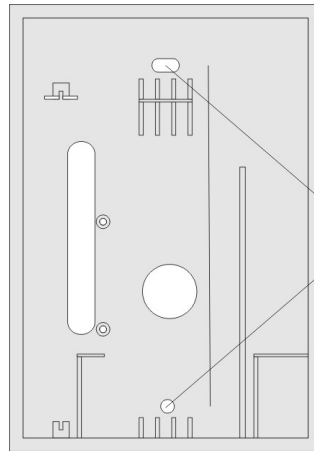
Condition 3 is the ideal one, in conditions 2 or 4 the appliance works, but if it is possible to improve the positioning. In conditions 1 or 5 the positioning must necessarily be modified.

To replicate the test in another position:

- Reach the new location
- Press the "PAIR" button twice to reset the previous test (blue LED OFF, blue LED ON)
- Wait 2 seconds and see the new result.

Once the sound tests have been performed, open the device and remove the battery.

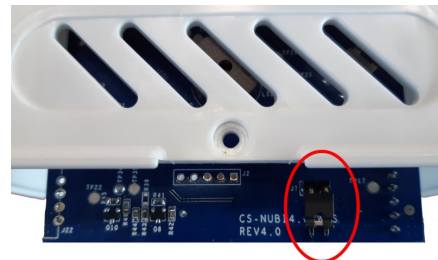
5. FIXING THE DEVICE



After opening the top cover, fix the lower part of the box on the wall using the holes (A).

6. SELECT OPERATING MODE

Use the appropriate JUMPER to select whether to delay the return of NUBI 4.0 to the "sleep mode" when the sound of the siren ceases.



MODE1 => Jumper opened => no delay

NUBI 4.0 will return to "sleep mode" at the end of the siren sound, regardless of its duration.

MODE 2 => Jumper closed => 5' delay

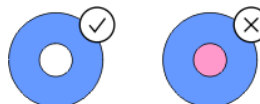
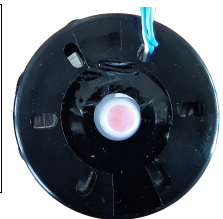
When the duration of the sound of the siren does not exceed the time recorded in the pairing phase, NUBI 4.0 will return to the "sleep mode" when the sound stops, as in mode 1. Otherwise, if the duration of the sound of the siren exceeds that recorded in the phase of pairing, NUBI 4.0 will remain active and will return to "sleep mode" 5 minutes after the sound of the siren stops.

MODE 2 allows you to discriminate between two situations: an alarm caused by a user mistake, which disarm the system within a reasonable time or a real alarm that will last longer. During the 5 minutes after the end of the siren sound, NUBI 4.0 will emit a short acoustic signal every 8 seconds to indicate that it is still active, a useful signal especially for the system owner.

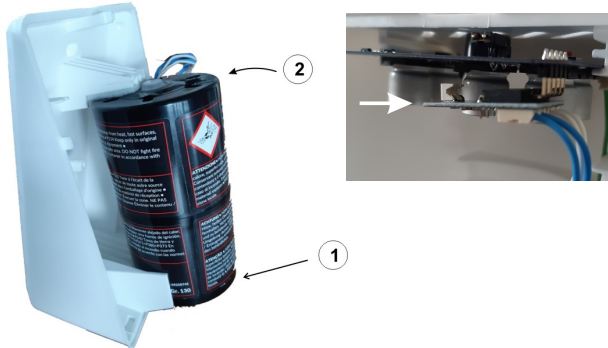
7. INSTALL THE SMOKE CARTRIDGE

WARNING

Before mounting the smoke canister, check the color of the shock indicator. Do not mount the smoke canister if the indicator is stained red.



- 1) Insert the smoke cartridge into its housing.
- 2) Insert the smoke cartridge connector into the appropriate one on the motherboard.



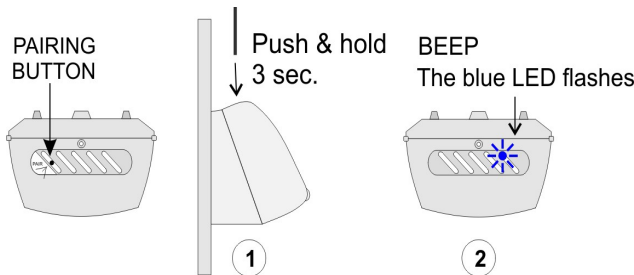
WARNING

Remove the battery from the motherboard before connecting the smoke cartridge and wait at least 10 seconds.

Finally close the box.

8. SIREN PAIRING

Perform this operation when both NUBI 4.0 and the siren are fixed in the final position. Changing the installation location after pairing will result in the failure of the siren recognition. Press and hold the pairing button for 3 seconds, until the blue LED flashes and a beep is emitted. NUBI 4.0 is now in pairing state.



When the red and green LEDs flash, wait a few seconds for them to switch off before pressing the "PAIR" button.

Battery test: As soon as you enter pairing state, the green LED will light up for 5 seconds if the battery is charged, or the red LED if it is exhausted.

Walk test: After the battery test, NUBI 4.0 will beep every time the integrated infrared sensor detects movement, allowing the detector's range to be tested. The test ends as soon as the siren sound recording starts or exited prematurely from the pairing state.

Exit pairing state: You can cancel the pairing state before start recording the sound with a short press of the "PAIR" button. In this case, any previously stored siren pairing will not be erased from the memory. It may be useful to exit prematurely from pairing state when you want to perform only the walk test.

Pairing the siren: Sound the siren for at least 20 seconds or for a longer time at will, especially if you have selected MODE 2 for operation.

Avoid to stay close the device during registration, this could alter its quality. Look at the result of digitization on the LEDs, after turning off the siren.

The result of the recording is the one already shown in *Table 1*. When the sound of the siren stops, the LEDs will remain lit for a minute to allow control. To switch them off prematurely simply press the "PAIR" button briefly. The best result is that the blue and green LEDs are on and the red LED is off.

9. PAIRING CHECK

The right siren pairing can be checked in the following ways:

With the NBCT test cartridge accessory:



The NBCT test cartridge simulates the behavior of the smoke cartridge, but instead of dispensing the smoke it emits a series of beeps

and lights up its LEDs. NUBI 4.0 Plug & Play with the test cartridge is immediately operational and ignores the 20 minute test time described below.

With the smoke cartridge supplied, but without causing the emission of smoke:

For 20 minutes after pairing the siren, or after inserting the battery, NUBI 4.0 enters a special "test mode". Regardless of how the operating mode 1 or 2 is set, the behavior is always the following:

- When the siren sounds nothing happens, even passing in front of the infrared sensor.
- If the siren sounds for a shorter time than the one learned during the pairing phase, when the sound stops NUBI 4.0 emits a series of beeps and renew again 20 minutes to carry out a new test.
- If the siren sounds longer than the one learned during the pairing phase, when the sound stops NUBI 4.0 emits a beep every 8 seconds and remains active. When the infrared sensor detects movement, NUBI 4.0 emits a series of beeps and renew again 20 minutes to carry out a new test. If no movement is detected for 5 minutes, NUBI 4.0 returns to the "sleep mode", still renewing the 20-minute timer to perform a new test.

After 20 minutes from the last event that renew the timer (power supply, coupling with the siren or a test performed), NUBI 4.0 enters into standard operating mode.

10. OPERATING MODE

NUBI 4.0 is normally in "*sleep mode*". When it recognizes the sound of the paired siren it goes into the "*active state*", ready to trigger the emission of smoke as soon as the infrared sensor detects movement. When the sound of the siren ends, NUBI 4.0 will return to "*sleep mode*" immediately or after 5 minutes, depending on the selected operating mode 1 or 2 and the duration of the siren sound. When it switches from "*active state*" to "*sleep mode*" it always emits a series of 8 beeps. When NUBI 4.0 remains in the "*active state*" and the sound of the siren has ceased, it emits a beep every 8 seconds.

11. SMOKE CANISTER REPLACEMENT

Only use original spare parts, remove the empty cartridge and install the new one, as described in chapter 7.

12. MAINTENANCE

We recommend replacing the smoke cartridge every 4 years, using only the original spare part.

If the installation place of the siren or NUBI 4.0 is changed, carry out a new coupling.

If obstacles are inserted between the siren and NUBI 4.0, such as bookcases or cabinets, proceed with a new pairing.

In the case of using self-powered wireless sirens, always keep the siren batteries in good condition so that they do not produce a distorted sound.

13. WARRANTY

SMARTEK s.r.l. It guarantees its products against all manufacturing defects for a period of 30 months from the production date shown on the label.

14. RECOMMENDATIONS

Before leaving, ventilate the rooms thoroughly after the smoke has been delivered.

15. ADVANCED DIAGNOSTICS

Below we describe the behavior of the LEDs when an advanced diagnostic operation is required:

PAIRING STATE:

The blue LED flashes. As soon as you enter in pairing state, the battery test is performed for 5 seconds: Green LED ON = battery charged, red LED ON = battery to be replaced. After the initial 5 seconds, when it receives sound > 90db, in the first 5 seconds the blue LED will flash very quickly, if the sound stops the LED will return to flashing normally. If the sound persists for more than 5 seconds, the blue LED lights up steadily indicating that the recording phase has begun. When the blue LED is ON steady and the green LED flashes the digitization of the siren sound is finished, it is continuing to memorize the playing time. At the end of the sound the blue LED is ON and the result on the green and red LEDs as described in table 1.

OPERATING MODE:

During the "*test mode*" (first 20 minutes), the red and green LEDs flash alternately to indicate that NUBI 4.0 is analyzing a sound > 90db to recognize the siren.

The green LED flashes: NUBI 4.0 has recognized the siren sound and it is in "*active state*".

16. TECHNICAL SPECIFICATIONS

Power supply	3,6V lithium battery AA
Autonomy	10 Years (*)
Size	12cm x 17cm x 14cm
Saturable volume	100m ³
Weight	760g
Smoke average delivery time	25sec
Operating temperature	From -20°C to +70°C
Maximum relative humidity	90%

(*) In a quiet environment