

NUBI 4.0 – PLUG & PLAY

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 **self-powered** with a 3.6 V AA size lithium battery supplied with the product; in a not excessively noisy environment it lasts **up to 10 years**. When the battery is running low, the device will beep every 8 hours.

NUBI 4.0 drives a XAFER S25 smoke canister, which effectively protects volumes up to 100 m³. The smoke generated is suitable for indoor use, it is based on incense and **does not produce a toxic atmosphere** as tested according to the directive TLV-STEL EU 2017/164 and ACGIH. **After use, the room must be adequately ventilated before staying there.**

NUBI 4.0 Plug&Play works **completely wireless**, does not need any connections with the existing anti-theft system but it is alert when it hears the sound of the internal siren of the system.

The coupling operation with the siren, to be performed during installation, learns the sound in **digital** form. Sounds different from that of the specific coupled siren will not produce any effect, even the sound of the siren itself, but installed in a position other than the coupling one, will not activate NUBI 4.0.

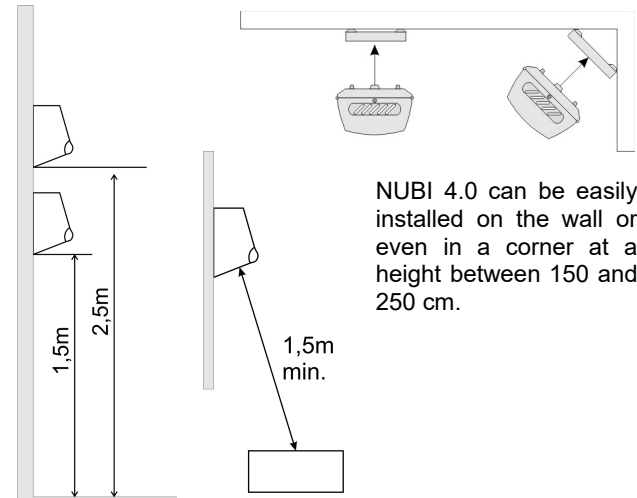
NUBI 4.0 is normally in "*sleep mode*" with the smoke supply inhibited. When NUBI 4.0 decodes a sound corresponding to that of the coupled siren, it switches to "*active state*" and as soon as it detects movement with its infrared sensor, it triggers the emission of smoke. It is possible to extend for 5 or 10 minutes the duration of the "*active state*" of NUBI 4.0 even after the siren has stopped sounding (see chapter 5. *CONFIGURATION*).

For the first 20 minutes after the siren coupling operation, or after inserting the power supply battery, **smoke emission is inhibited** to allow functional control of the device.

The smoke canister is disposable, the smoke emission, when activated, can no longer be interrupted.

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 unit via inputs and outputs. They are available with 12V or battery power supply, with or without built-in infrared sensor. For more information, visit the website www.smartteksrl.it.

2. POSITIONING



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 siren of the alarm system is located. Do not pair NUBI 4.0 with sirens located in other rooms that are separated with doors that can sometimes be open and sometimes closed.

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**.

NUBI 4.0 works when it is reached by a siren sound level ranging from 85 to 103 DB. Indicatively, the distance between NUBI 4.0 and the siren should be between 0.5 and 3m, but this parameter strongly depends on each siren. Being able to choose, it is always preferable to keep the siren as close as possible to NUBI 4.0.

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 drilling the wall to permanently fix NUBI 4.0, we recommend carrying out the sound test described in the chapter 14. *SOUND CHECK*.

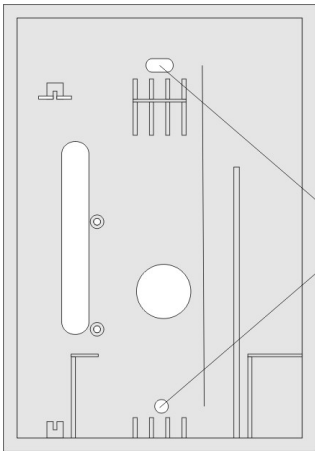
3. CONTENT

The package contains

- N. 1 NUBI 4.0 Plug & Play device in plastic container resistant to high temperatures, complete with electronic board and infrared sensor.
- N. 1 3.6V lithium battery in stylus format
- N. 1 permanent magnet for programming.

The smoke canister XAFER S25 is not included, but must be purchased separately.

4. INSTALLATION



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

A

5. CONFIGURATION

Through the DIP switch it is possible to configure the operating mode of NUBI 4.0 Plug&Play.

DIP	OFF	ON
1	Delay disabled	Delay enabled
2	5' delay	10' delay
3	Not used (must be OFF)	
4	Not used (must be OFF)	

After decoding the siren sound, NUBI 4.0 goes from "sleep mode" to "active state", ie ready to deliver as soon as it detects movement with its infrared sensor.

When the duration of the siren sound is shorter than that recorded during pairing, NUBI 4.0 will always return to "sleep mode" when the siren sound ceases.

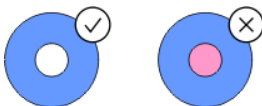
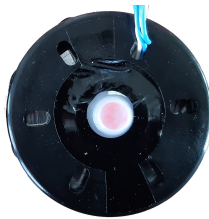
When the duration of the siren sound in alarm exceeds that recorded during the pairing phase, it is possible to delay the return to "sleep mode", keeping it in "active state" for another 5 or 10 minutes. To activate the delay, set DIP1 to ON and select the time with DIP2.

When NUBI 4.0 remains in "active state" due to the delay, it will emit a short acoustic signal every 8 seconds.

6. INSTALL THE SMOKE CANISTER

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) House the bottom first
 - 2) Rotate the cartridge by inserting the upper part into the holder.
- The side of the cartridge from which the leads come out must face upwards.



- 1) Insert the cartridge connector by sliding it upwards and making sure that all the PINS are inserted.
- 2) Configuration DIP switches.
- 3) Insert the infrared sensor cable into the appropriate connector.
- 4) Insert the power battery.

WARNING

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

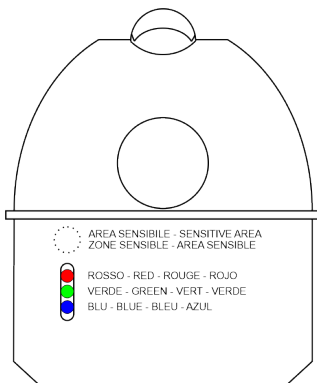
SOUND CHECK

To test the sound quality of the siren only, do not connect the smoke cartridge connector. (see chapter 14. SOUND CHECK)

7. SIREN PAIRING

Perform this operation only when NUBI 4.0 and the siren are installed in the final position, the connector of the smoke cartridge and the infrared sensor are connected to the mother board and the NUBI 4.0 container closed with the appropriate upper screw. Changing the installation location after pairing will result in failure of the siren sound recognition.

Move the programming magnet supplied with the product for 2 seconds to the "SENSITIVE AREA" shown in the following figure, until the blue LED flashes and an acoustic signal is emitted. NUBI 4.0 is now in pairing state.



If the red and green LEDs flash, wait a few seconds for them to turn off before approaching the magnet.

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.

Premature exit from the coupling state: The procedure can be interrupted by bringing the magnet closer to the "SENSITIVE AREA". In this case, any previously registered sound will not be erased from memory. It may be useful to exit prematurely to perform the "walk test" only.

Pair the siren: Simply sound the siren of the system for at least 15 seconds or for as long as you like if we have selected the delayed configuration (see chapter 5. CONFIGURATION).

During digitization, the BLUE LED will flash faster and faster until it becomes steady on. Digitization is completed with the lighting up of the green and/or red LEDs according to the following table:

#	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: result of the digitization of the sound

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

When the siren sound stops, the LEDs will stay on for one minute. To turn them off prematurely, bring the magnet closer to the "SENSITIVE AREA".

Exit due to time-out from pairing state: NUBI 4.0 automatically exits from pairing state if the siren sound is not digitized within 10 minutes.

8. FUNCTIONING CHECK

The correct operation and pairing of the siren can be verified in the following ways:

A) 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 capsule is immediately operational and escapes the smoke emission inhibition time of the first 20 minutes of operation, as better described in point B.

With the test capsule, the diagnostic LEDs are always active. During the siren sound decoding phase the green and red LEDs will flash alternately, when recognition is successful only the green LED lights up flashing.

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

For 20 minutes after coupling with the siren or after inserting the battery, NUBI 4.0 enters a special "safe mode" that allows you to perform function tests without causing the emission of smoke.

During this time, the diagnostic LEDs are active and it will be possible to view the siren sound decoding phase (green and red LED flashing alternately) and the recognition success (only the flashing green LED).

The operation will be identical to the "operating mode" but when the condition that would trigger the smoke capsule occurs, instead of emitting smoke the device flashes the three LEDs and emits a series of beeps for 10 seconds. In addition, the 20-minute timer is restarted in order to safely perform other tests.

After 20 minutes after the last event that regenerates the timer (power supply, coupling with the siren or correct recognition of the siren sound), NUBI 4.0 enters to the "operating mode".

9. OPERATING MODE

In "operating mode" NUBI 4.0 is normally in "sleep mode" with the emission of smoke inhibited. When it recognizes the sound of the siren, it switches to the "active state", ready to trigger the emission of smoke as soon as the infrared sensor detects a movement. When the siren sound ceases, NUBI 4.0 will return to the "sleep mode" immediately or after 5 or 10 minutes, depending on the configuration and duration of the siren sound with respect to the digitized sound (see chapter 5. CONFIGURATION).

When it goes from "active state" to "sleep mode" it always emits a series of beeps for 8 seconds. When NUBI 4.0 remains in the "active state" and the siren sound has stopped, it emits a beep every 8 seconds.

To save energy, in operating mode the diagnostic LEDs will always remain off, with the exception of the only flashing green LED which indicates the correct decoding of the siren sound.

10. SMOKE CANISTER REPLACEMENT

Use only original spare parts, remove the used cartridge and install the new one. Connect the new cartridge only after removing the battery. For more details see the chapter 6. INSTALL THE SMOKE CANISTER.

11. 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.

12. 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.

13. RECOMMENDATIONS

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

The smoke capsule should only be handled by adults.

14. SOUND CHECK

To carry out this test, do not connect the smoke canister connector to the mother plate and power the device with the battery. Carry out the test with the smoke capsule housed inside and the container closed, in order to simulate the real real operating condition.

After inserting the battery, the blue LED will light up, which can alternate flashing phases with phases in which it remains ON permanently. Hold the device in the desired installation position and sound the siren.

When the blue LED flashes it means that it is taking a measurement, when it stays on the measurement is complete, so we can check the result on the red and green LEDs. If the device is moved, the blue LED will start flashing again to make a new measurement. The meaning of the LEDs is that described in the Table 1 on the chapter 7. SIREN PAIRING.

After 10 minutes the LEDs will automatically turn off to save battery energy. To restart the test, simply bring the magnet closer to the "SENSITIVE AREA".

Instead, bringing the magnet closer when this test is still active, you will switch to the activation sound threshold test mode.

The green LED ON means silent environment, the red LED lights up when the "minimum threshold" is exceeded. For longer battery life, ambient noise should cause the red LED to turn ON as little as possible.

To return to the siren test, simply bring the magnet close to the "SENSITIVE AREA".

15. LED DIAGNOSTIC SUMMARY

PAIRING STATE:

The blue led flashes slowly.

In the first 5 seconds it carries out the battery test: green LED ON = battery charged, red LED ON = battery to be replaced.

After the initial 5 seconds, when it receives sound > 82DB, in the first 5 seconds the blue LED flashes faster, if the sound persists the blue LED flashes even faster (measurement phase), and then lights up steadily (digitization phase). Digitalization ends with the blue LED ON and the result on the green and red LEDs as described in Table 1 on chapter 7. SIREN PAIRING.

OPERATING MODE:

The green LED flashes: NUBI 4.0 has recognized the sound of the siren.

Only in "safe mode" (first 20 minutes) or with connected NCBT test capsule: the red and green LEDs flash alternately to indicate that NUBI 4.0 is analyzing a sound.

16. SPECIFICHE TECNICHE

Power supply	3,6V lithium battery AA
Autonomy	About 10 years ¹
Size	12cm x 17cm x 14cm
Saturable volume	100m ³
Weight without smoke canister	520g
Smoke average delivery time	25sec
Operating temperature	From -20°C to +70°C
Maximum relative humidity	90%

¹ In a quiet environment. The autonomy decreases in a noisy environment, for example if the device receives a noise higher than the minimum threshold of 82DB 50 times a day and every day, the autonomy would be reduced to 5 years.