TECHNICAL MANUAL

ATLANTE2K - ATLANTEMULTI2K

Bi-directional remote controls for wireless intrusion detection systems managed by NG-TRX control units

ATLANTE2K and ATLANTEMULTI2K are two-way remote controls compatible with the NG-TRX system.

They can send commands to control units based on the NG-TRX technology (VIDOMO2K, VICOMPACT2K and PREGIO/PROXIMA control units equipped with GATEWAY2K) and signal the reception and the execution of commands thanks to its backlit buttons and internal buzzer.

The remote control features 6 buttons for arming, disarming, partial day arming, partial night arming and for the activation of two outputs—for example to control gates or outdoor lights.

Communication to the control unit takes place over a bi-directional proprietary encrypted protocol over 3 different channels, using rolling codes and the anti-grabbing function.

The remote controls can be programmed using BrowserOne.

The multi-system model ATLANTEMULTI2K has the same features as ATLANTE2K and it can also be acquired to several control units at the same time, in order to control different intrusion detection systems.

The ATLANTE2K model is IMQ-Security Systems certified.

Model	Compatible units	FW version
ATLANTE2K	Villeggio series	8.2.0 or higher
	Pregio series (with GATEWAY2K)	2.3.0 or higher
	Proxima series (with GATEWAY2K)	1.0.2 or higher
ATLANTEMULTI2K	Villeggio series	8.4.1 or higher
	Pregio series (with GATEWAY2K)	2.6 or higher
	Proxima series (with GATEWAY2K)	1.0.2 or higher

Instructions recipient : Ⓤ User | Ⓘ Installer

1. TECHNICAL DATA Ⓘ

Model	ATLANTE2K	ATLANTEMULTI2K
Power supply	3 V from a CR2032-type button battery	
Minimum operating voltage	2.1 V	
Power consumption	20 mA peak; 1,5 µA idle	
Open field range*	Nominal: up to 400 m; max: 800 m	
Maximum transmitted power	25 mW	
Frequency	868.120 MHz, 868.820 MHz and 869.525 MHz for LPD devices	
Autonomy	> 1 year (average)	
Operating temperature	-5 / +55 °C, 93% R.H.	
Compliance	EN 50131-5-3, EN50131-3 grade 2, environmental class II	
Dimensions, weight	W 37 x H 80 x D 16 mm, 25 g	
Buttons	ON, OFF, two programmable partializations, two dedicated buttons for output control.	
Indications	Two-colour front LED, flashing for transmission; LED backlit buttons for reception signalling	
Signalling	Internal buzzer	
Encoding	Rolling code, 2^{35} combinations	
Colour	Black	White
Encryption key	Unique	Shared
Suitable for multi-system configuration	No	Yes
Maximum number of supported control units	1	No limits

IMQ certified	Yes	No
Parts supplied	1 × CR2032 battery, technical manual, key chain.	

* **Note:** the range may be subject to limitations dependent on environmental conditions; the range refers to the receipt of the 99% of the transmitted packets, with the devices in free air at 1.5 m above the ground, respectively without and with orienting the antenna in a favourable direction. Enabling the "tx boost" option (if available) can cause a range increase between 10 and 30% but also affects battery life.

2. CODE LEARNING Ⓘ

– Enter the programming menu by typing the maintenance code in the control unit keypad and then OK.

– Use the arrow buttons to reach the **Learn Proxi R.C.** menu. Press OK.

– Use the arrow to browse the users or type the number of the user you want to associate the remote control to. Press OK.

– Press 1 to memorize the remote control in the control unit.

– Press and hold 1 and 2 buttons on the remote control for at least 10 s. Wait for the remote control to double beep before releasing the buttons.

– If the operation is successful, the control unit internal buzzer beeps twice.

– If the operation is not successful, the device emits a long beep sound: start again.

– Exit from programming. Save the settings by pressing OK when required.

– Use BrowserOne with the proper module for the used control unit to program the remote control buttons (see next chapter).

– Write the configuration to the control unit. The new settings will become operative at the first transmission.

– Check the proper functioning of the remote control.

3. REMOTE CONTROL SOFTWARE CONFIGURATION 🅸

ATLANTE2K can be programmed using:
- BrowserOne 3.4.7 or higher
- the latest version of the module available for the control unit in use

ATLANTEMULTI2K can be programmed using:
- BrowserOne 3.7.4 or higher
- the latest version of the module available for the control unit in use

Perform the following operations:
– Connect BrowserOne to the control unit.
– Read the control unit configuration.
– In the *Users* page, find the user with a learned remote control code. Program the options and the other user details

3.1. "General" tab

This pane shows information about the learning status of the remote control.
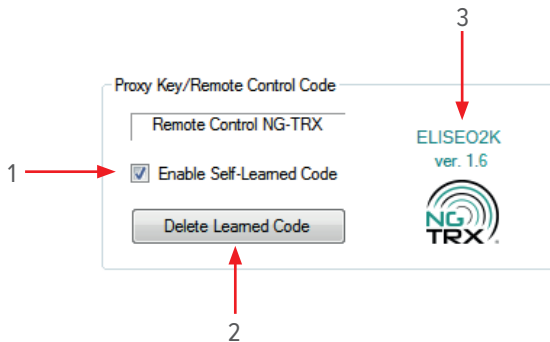
1. Disable the remote control code without deleting it
2. Delete the current code
3. Model and firmware version

3.2. "Radio devices NG-TRX" tab

▼ **Buzzer activation**
Choose whether the device buzzer activates for every event, only for alarm/reset or never activates.

▼ **Tx Boost**
Flag to increase the transmission power (only use if the max range settable through the ***NG-TRX remote range*** slider described below is not enough; do not move the slider from "MAX" if the Tx Boost is active) **WARNING: battery life can be significantly affected.**

3.3. General NG-TRX options

To set the general options for all NG-TRX devices
– go to the ***System Options*** page
– click on **Options NG-TRX** tab

▼ **Receiving multichannel**
If ON, the control unit receives on all its three channels at once; if OFF, the control unit receives on one single channel (default/ preferential) at a time. We suggest keeping this option OFF if you are aware that noise is present in any specific channel.

▼ **Default channel**
The control unit receives over this channel when no interference is present (default: Channel 1). In case disturbances are present, the control unit will define a **preferential** channel (possibly different from the default one) according to the detected disturbance level, and it will receive on this one.

▼ **Enable two-factor authentication for Remote Controls (anti-grabbing)**
Flag to further enhance protection against code cloning attempts: two transmissions will be sent for each single command, to perform a double authentication. **Warning:** activating this option slows down the response of the remote control and increases the battery consumption

▼ **Delay low battery signalling**
If this option is active, the remote control makes more thorough checks before sending a low battery signal.

▼ **Enable detection RF interference**
Flag to activate the detection of interferences in the three channels and the generation of a log event when those interference happen. The interference detection on the preferred channel involves the passage to another channel if such an interference already happened and was logged within the last 48 hours. This option is required by the EN50131-1 standard
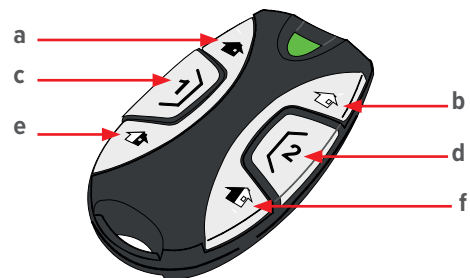
▼ **RF interference as tamper**
Flag this checkbox to have RF interference events generate a tampering event, with the consequent management

▼ **Remote range NG-TRX**
Set the NG-TRX remote control range. Default: max range. Decrease it in order to avoid accidental activations. **Note**: do not reduce the range when the TX Boost is active.

4. OPERATION 🆄 🅸

a. **Total arming** button
b. **Total disarming** button
c. **Output 1 control** button: can be set to quickly arm/disarm sectors or to control an output
d. **Output 2 control** button: can be set to quickly arm/disarm sectors or to control an output.
e. **Partial arming 1** button: it arms all proposed sectors by default. Otherwise, it can be programmed to perform quick partial arming/disarming.
f. **Partial arming 2** button: it arms allowed sectors except the proposed ones by default. Otherwise, it can be programmed to perform quick partial arming/disarming.

4.1. Indications

The remote control features:
- 6 backlit buttons (yellow LEDs);
- 1 bi-coloured (green/red) central LED for signalling its operating status.

The buttons provide the following information:
- *Button pressure / transmission sending*: green LED turns on.
- *Command received / executed succesfully*: yellow LED turns on, buzzer beeps three times.
- *Command cannot be executed*: red LED turns on, buzzer beeps once.
- *No confirmation from control unit*: red LED turns on after 10 s,

buzzer beeps once.
- *Low battery without feedback from control unit*: red LED blinks twice, buzzer beeps twice.
- *Low battery with feedback from control unit*: yellow LED blinks 3 times, 3 slow beeps.
- *Battery OK:* yellow LED ON for a while, 3 fast beeps.

Note: the remote control signals the operations of arming already armed sectors and disarming already disarmed sectors (yellow LED turns on).

4.2. Panic function

The panic function can be activated by pressing the "Partial arming 1" and "Partial arming 2" buttons at the same time. The panic function cannot be activated by output control buttons.

4.3. Sending commands at short intervals

If you send a new command before the previous one has been reported, the previous one will not be displayed: you will only be able to discern the result of the last command sent.

4.4. Arming/disarming of the sectors belonging to areas associated to the user

You can use buttons **c** and **d**, provided they are not being used to command outputs 1 and 2, to arm/disarm sectors belonging to areas associated to the user: open BrowserOne on the *Users* page, *Remote control action (buttons 1 and 2)* to choose which sectors. Otherwise (e.g. if the central buttons are being used for controlling outputs 1 and 2), you can use buttons **e** and **f** to quick arm/disarm sectors belonging to areas associated to the user: open BrowserOne on the *Users* page, *Remote control action (buttons partial)* to choose which sectors..

⚠ *If this option is not used, buttons **e** and **f** are used for arming all proposed sectors and all sectors except the proposed ones.*

4.5. Wireless signal test using a remote control

In order to assess the wireless signal strength at a certain point (which is useful to evaluate the positioning of other NG-TRX devices), use a remote control v1.6 or higher as explained here:
– Enter the programming menu by typing the maintenance code in the control unit keypad and then OK.
– Use the arrow buttons to reach the **Monitor RF** menu. Press OK.

⚠ *in Monitor RF mode the "remote range NG-TRX" cursor is ignored. The range limitation is shown as a dotted line on the control unit display, as shown in the image below..*

CONTROL UNIT DISPLAY

RECEIVED SIGNAL STRENGTH

REMOTE CONTROL RANGE LIMIT NDICATION
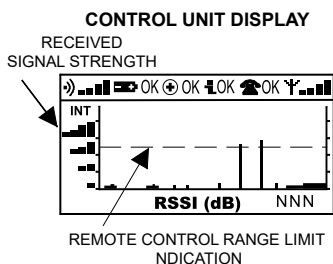
– Press the **a** button on the remote control to start the test. The bi-coloured LED will glow green to indicate that the test has started.
– During the test, the remote control will play around one beep per second as long as the communication with the control unit is successful.
– The number of backlit buttons marks the signal strength:

Backlit buttons	Signal strength	Corresponding number of displayed bars
a, b, c, d	Best	4
a, b, c	Good	3
a, b	Average	2
a	Faint	1

Wherever the signal is not sufficient for a reliable communication, all buttons will be unlit and the red LED will blink.
– The test mode ends after 5 minutes or by pressing the b button. At that moment, the remote control plays 3 beeps and all buttons light up for 2 seconds.

The remote control signals a failed communication with the control unit by turning the red LED on and by playing an acoustic error signal.
By entering the "Monitor RF" menu, remote control buttons still keep their original meaning except for the total arming button that sends the test sequence.

⚠ *Position the remote control in the point where you intend to install the detector, turning it around in order to see if any antenna orientation causes an insufficient signal.*

5. MULTI-SYSTEM FUNCTION

The ATLANTEMULTI2K remote control can be acquired to several control units at the same time, making it possible to control different systems with the same remote control.
Acquire the remote control to each control unit separately following the procedure described in "2. CODE LEARNING" on page 1.

Remarks on multi-system operation

- For proper operation, it is required that the systems are situated at a distance of at least 1 km from one another. If this is not the case, the remote control may receive unexpected responses from several control units at the same time: this triggers an error signalling (red LED turns on, buzzer beeps once).
- **All** the control units you want to control with the multi-system remote control must be equipped with firmware version compatible with this function: Villeggio 8.4.1 or higher, Pregio 2.6 or higher.
- It is still possible to acquire ATLANTEMULTI2K to control units whose firmware version is not compatible with multi-system operation; but the remote control will only control the last unit to which it was acquired (same operation as ATLANTE2K).

6. BATTERY REPLACEMENT

The remote control indicates the condition of low battery as reported in "4.1. Indications" on page 2.
Perform these operations:
– Unscrew the closing screw to open the remote control case. A CR2032 type battery is required.
– Insert the new battery with the positive pole facing outwards.

⚠ *While replacing the battery, do not touch the battery poles with your fingers, for this can reduce the battery life; instead, place a piece of insulating material, such as a piece of*

cardboard or of transparent plastic from the blister pack that contains the new batteries, between the battery and your fingers. Do not use spring tweezers in order to avoid short-circuiting the battery terminals.

CAUTION! This device contains button cells.
Do not ingest the battery. Chemical burn hazard.
In case of ingestion, button cells might cause severe internal burn within just 2 hours and could result in death.
Keep new and used batteries away from children's reach.
If the battery slot does not firmly close, suspend product use and keep it away from children's reach.
In case of suspected ingestion or insertion in other body cavities, seek medical attention immediately.

7. EU DECLARATION OF CONFORMITY

CE

Hereby, EL.MO. S.p.A. declares that the radio equipment ATLANTE2K - ATLANTEMULTI2K is in compliance with Directive 2014/53/EU.
The full text of the EU declaration of conformity is available at the following Internet address: elmospa.com—registration is quick and easy.

GENERAL WARNINGS [U] [I]

This device has been designed, built and tested with the utmost care and attention, adopting test and inspection procedures in accordance with current legislation. Full compliance of the working specifications is only achieved in the event the device is used solely for its intended purpose, namely:

Bi-directional remote controls for wireless intrusion detection systems managed by NG-TRX control units

The device is not intended for any use other than the above and hence its correct functioning in such cases cannot be assured. Consequently, any use of the manual in your possession for any purpose other than those for which it was compiled - namely for the purpose of explaining the product's technical features and operating procedures - is strictly prohibited.
Production processes are closely monitored in order to prevent faults and malfunctions. However, the componentry adopted is subject to an extremely modest percentage of faults, which is nonetheless the case with any electronic or mechanical product.
Given the intended use of this item (protection of property and people), we invite you to adapt the level of protection offered by the system to suit the actual situation of risk (allowing for the possibility of impaired system operation due to faults or other problems), while reminding you that there are specific standards for the design and production of systems intended for this kind of application.
We hereby advise you (the system's operator) to see that the system receives regular routine maintenance, at least in accordance with the provisions of current legislation, and also check on as regular a basis as the risk involved requires that the system in question is operating properly, with particular reference to the control unit, sensors, sounders, dialler(s) and any other device connected. You must inform the installer know how well the system seems to be operating, based on the results of periodic checks, without delay.
Work involved in the design, installation and maintenance of

systems incorporating this product should be performed only by personnel with suitable skills and knowledge required to work safely so as to prevent any accidents. It is vital that systems be installed in accordance with current legislation. The internal parts of certain equipment are connected to the power grid and therefore there is a risk of electrocution when maintenance work is performed inside without first disconnecting the primary and emergency power supplies. Certain products include batteries, rechargeable or otherwise, as an emergency backup power supply. If connected incorrectly, they may cause damage to the product or property, and may endanger the operator (explosion and fire).

WARNINGS FOR THE INSTALLER [I]

Comply strictly with current standards governing the installation of electrical systems and security systems, and with the manufacturer's directions given in the manuals supplied with the products.
Provide the user with full information on using the system installed and on its limitations, pointing out that there are different levels of security performance that will need to suit the user's requirements within the constraints of the specific applicable standards. See that the user looks through the warnings given herein.

WARNINGS FOR THE USER

Check the system's operation thoroughly at regular intervals, making sure the equipment can be armed and disarmed properly.
Make sure the system receives proper routine maintenance, employing the services of specialist personnel who meet the requirements prescribed by current regulations.
Ask your installer to check that the system suits changing operating conditions (e.g. changes in the extent of the areas to be protected, change in access methods, etc...)

FUNDAMENTAL SAFETY RULES [U]

The use of the device is forbidden for children and unassisted disabled individuals.
Do not touch the device when bare footed, or with wet body parts.
Do not directly spray or throw water on the device.
Do not pull, remove or twist the electric cables protruding from the devices even if the same is disconnected from the power source.

DISPOSAL WARNINGS [U] [I]

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In accordance with Directive 2012/19/EU on waste electrical and electronic equipment (WEEE), please be advised that the EEE was placed on the market after 13 August 2005 and must be disposed of separately from normal household waste.