

Introduction

This manual describes how to install and configure the U-PROX Extender wireless radio range extenders. Before using the device, you should carefully study this manual.

Technical support for all U-PROX products is provided by phone: +38(091)481-01-69 and/or by e-mail:

support@u-prox.systems.

Security Warnings

When installing and operating the device, it is necessary to comply with the “Rules for the technical operation of electrical devices by consumers” and the “Safety rules for the operation of electrical devices.” The appliance must be mounted with the power supply turned off. Fire safety rules must also be observed when performing work.

WARNING. DO NOT DISASSEMBLE THE DEVICE OR ITS POWER SUPPLY WHILE IT IS ENERGIZED OR USE THE POWER SUPPLY WITH A DAMAGED CABLE. WARNING. THE DEVICE HAS A BUILT-IN BATTERY. SUBSTITUTING AN INCORRECT TYPE OF BATTERY FOR THE DEVICE MAY RESULT IN FIRE OR EXPLOSION. DISPOSE OF USED BATTERIES IN ACCORDANCE WITH LOCAL LAWS AND REGULATIONS.

Applications for Customization

U-Prox Installer Mobile Application

This application is designed for setting up the U-PROX wireless security system. It is intended for both individual users and engineers of central monitoring stations. Using a mobile phone, the application allows you to perform full security system setup – including installation, testing, and calibration of wireless system elements; configuring security groups; connecting to monitoring stations; adding users; and granting them the right to control the security system from the U-PROX Home app.



Installer Web Portal

The U-PROX Installer WEB portal is designed to configure the U-PROX wireless security system. It is intended for both individual users and engineers of central monitoring stations of security organizations. Using a web browser, you can perform complete security system setup – install, test, and calibrate wireless system elements; configure security groups; connect to monitoring stations; add users; and grant them the right to control the security system from the U-PROX Home app.

<https://web-security.u-prox.systems/>

Description and Principle of Operation

U-PROX Extender is a radio range extender that significantly increases the radio communication range between the U-PROX security center and other security system devices. It supports the connection of wireless devices (detectors, keypads, key fobs, etc.) via a radio channel at a distance of up to 4800 m.

The device communicates with the U-PROX security center via a radio channel at distances of up to 4800 m.

U-PROX Extender is equipped with two transceivers operating at 868.0...868.6 MHz, with several redundant channels. It provides secure, encrypted (256-bit encryption key) two-way radio communication with detection of radio channel sabotage.

The radio range extender automatically detects which devices need to be relayed. Thanks to intelligent algorithms, the extenders and the security center automatically coordinate the most optimal data transmission route.

The device supports the relaying of images from motion detectors that have a built-in U-PROX PIR Cam.

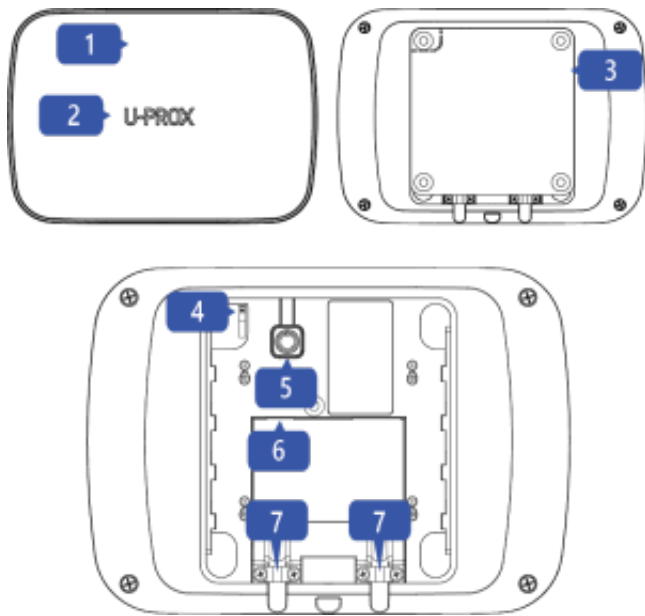
The radio repeater has a built-in 2500 mAh battery and can operate for up to 36 hours in the absence of main power.

It is installed indoors.

The device works only with the U-PROX security system; it cannot be connected to third-party systems.

Functional Elements of the Device





1. Device body
2. Light indication
3. Mounting plate
4. Tamper switch
5. On/off button
6. Connector for connecting the power supply
7. Cable clamps

The battery cannot be charged at temperatures below 10°C, make sure the power adapter is connected.

Power Supply

The device is powered by a 12V power supply and features a standard 5.5×2.5mm DC plug socket, which allows you to use other power supplies or connect an external uninterruptible power supply or battery.

In the absence of main power, the device enters power saving mode when operating from the built-in battery. In this mode, the constant status display is disabled; instead, the status is updated every 30 seconds.

Display in the Current Mode

The U-PROX indicator light on the front panel shows the current status of the device:

U-PROX

Lights up green – there is a connection with the security center.

U-PROX

Lights up red – no communication with the security center.

Indication During Operation Without Main Power Supply



Blinks green every 30 seconds – no main power; device in power saving mode; communication maintained.

Blinks red every 30 seconds – no main power; device in power saving mode; no communication detected.

Installation

Selecting the Installation Location

Carefully choose the location of the radio range extender. It must meet the following criteria:

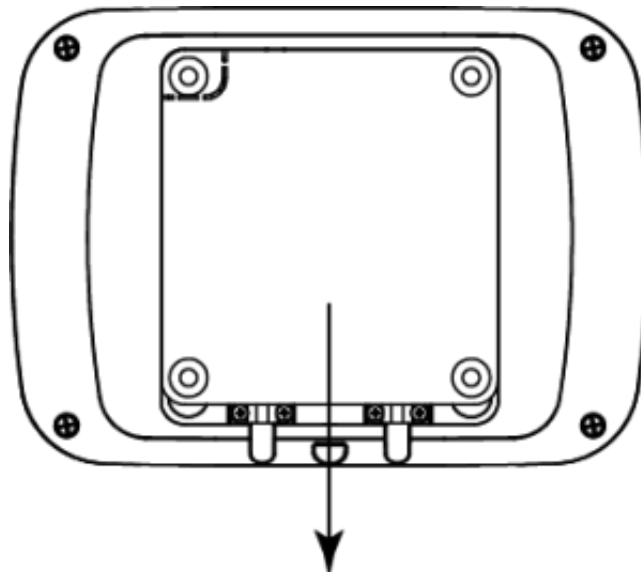
1.
 - a. Reliable communication with U-PROX wireless devices.
 - b. Reliable communication with the security center.
 - c. The device should be placed out of sight.

The device must not be placed:

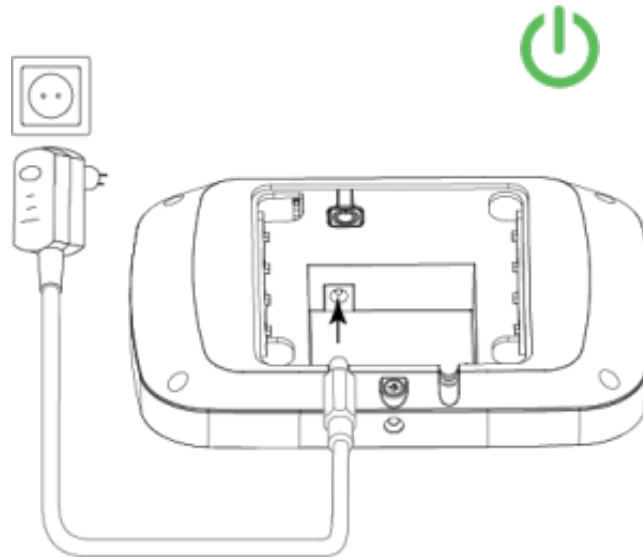
1.
 - a. Outdoors or in rooms with unacceptable humidity and temperature.
 - b. In areas with high levels of radio interference.
 - c. Near objects that can cause radio signal attenuation (metal, mirrors, etc.).

Mounting

1. Slide the mounting plate (3) down and disconnect it.

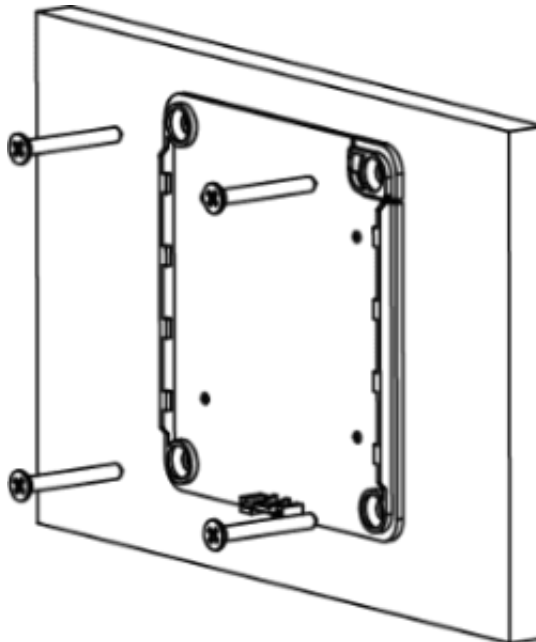


2. Connect the power supply to the device connector (6).

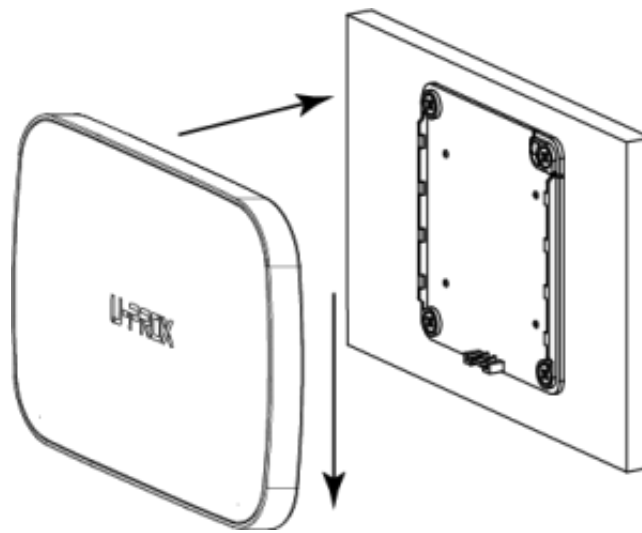


3. Secure the cables with the clamps (7).

4. Mount the plate (3) to the surface (e.g., wall) using the provided screws and dowels.



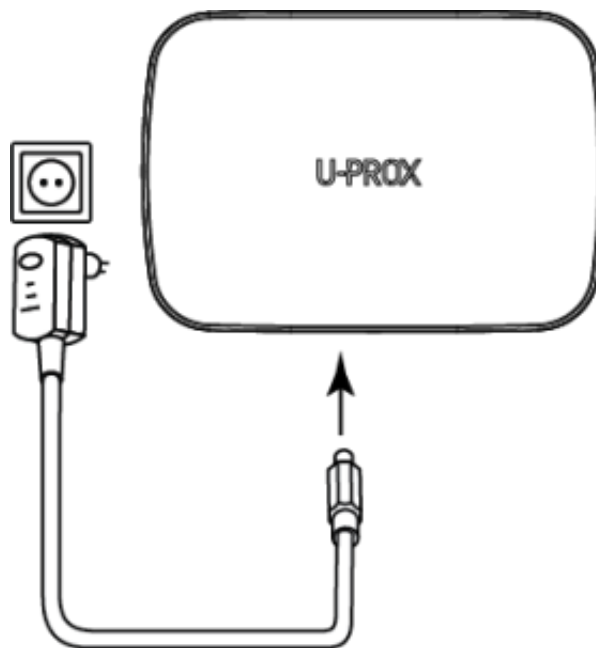
1.
 - a. Ensure that the power supply is connected and secured with the clamps (7).
 - b. Place the device on the mounting plate (3) and slide it down to engage and lock the tamper contact (4).



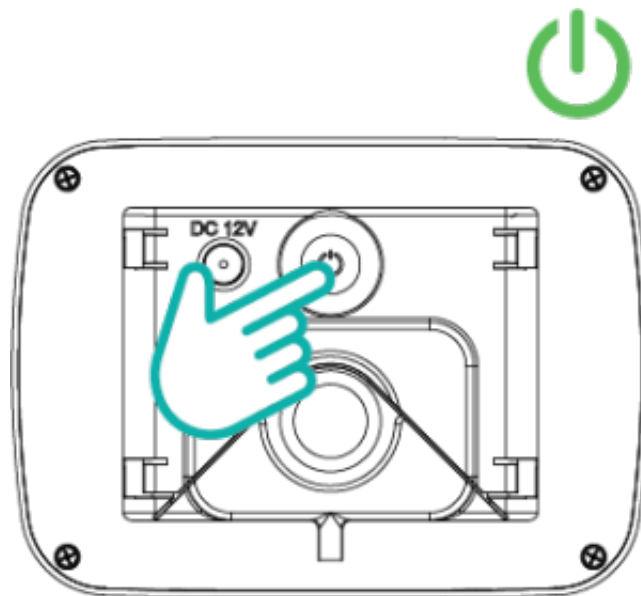
c. Secure the housing with the supplied screw.

Turning On and Off

To turn on the appliance, simply connect the power supply to the device and plug it into a power outlet.



To turn on the appliance without the main power supply connected, press the button (5). The indicator light (2) will turn on and the device will start booting up.



To turn off the appliance, disconnect the power supply, then press and hold the button (5) for 5 seconds until the sound and light indications go out.

Settings

1. Download and install the U-PROX Installer mobile application to configure the system.
2. Launch the U-PROX Installer application and log in, or log in via the U-PROX Installer WEB portal.

If necessary, register as a standalone installer or obtain access as a security company installer.

Adding a Device to the Security System (Registration)

Launch the U-PROX Installer application or open the WEB portal in a browser and log in.

Select the U-PROX MPX to which you want to add a radio range extender from the list of devices.

Press the (□) button ("Add radio device"). The security center will enter registration mode for detectors, keypads, etc. In this window, click on the device icons to view the activation instructions.

According to the instructions, turn on the radio range extender and bring it to the security center at a distance of about 1 meter.

Wait 15–20 seconds – the wireless device will be registered.

The application will open the radio range extender settings. Configure your device.

Basic Settings of the Radio Repeater

Select the device you want to configure from the device list.

“Name” – the name of the device.

“Light indication” – turns the device’s light indication on or off.

Special settings:

- a. “Disable tamper” – when enabled, the device will not respond to the opening of the case.
- b. “Disable alarm when communication is lost” – do not generate an alarm if communication with the device is lost.

Testing the Connection

Warning: Before performing this step, the device **MUST** be registered in the U-PROX security system.

Launch the U-PROX Installer application or log in via the U-PROX Installer WEB portal.

Select a security center from the list.

Select a device from the list.

Start the test mode and choose either the Normal signal test or the Grade II signal test.

Attention: Testing is performed at an average power level for conventional signal testing, and at reduced power (in accordance with EN 50131-1) for Grade II signal testing.

To start testing the device’s signal strength, wait for the next communication session with the device or break its tamper.

Move the device to the pre-selected installation location.

Using the data in the U-PROX Installer mobile application or WEB portal, select a location with an optimal signal strength of at least -95 dBm. You may also use the device’s light indication.

- LED flashes green (up to -87 dBm) – excellent signal strength, installation is possible.
- LED flashes yellow (up to $-88...-94$ dBm) – average signal strength, installation is possible.
- LED flashes red (up to $-95...-111$ dBm) – poor signal strength; move the device to another

location.

To exit the signal test mode, click the “End Test” button in the application.

Attention: The test will automatically complete 30 minutes after starting.

Remove a Device

Launch the U-PROX Installer application or log in via the U-PROX Installer WEB portal.

Select a security center from the list.

Select the device from the list, click the “Uninstall” button, and confirm its removal.

Wireless Device States

Viewing Radio Broadcast Routes

Launch the U-PROX Installer application or log in via the U-PROX Installer WEB portal.

Select a security center from the list. Go to the “Retransmission” section.

The screen displays the repeater’s structure. The radio range extender automatically determines which devices require relaying. Intelligent algorithms ensure that the extenders and the security center agree on the most optimal data transmission route.

Service

The device normally requires minimal maintenance. Use a dry, appliance-suitable cloth to periodically clean the device’s case from dust and contaminants.

Compliance with Standards

- RED (Radio Equipment Directive) Directive 2014/53/EU
- EU ROHS Directive 2011/65/EU, EN IEC 63000:2018
- EN 62311:2008
- EN 62368-1:2014
- EN 50130-4:2011/A1:2014
- EN 61000-6-3:2007/A1:2011
- ETSI EN 301 489-1 v2.2.3
- ETSI EN 301 489-3 v2.1.1
- ETSI EN 300 220-1 v3.1.1

- ETSI EN 300 220-2 v3.2.1
- EN 50131-1 Grade 2, Class II:
 - a. EN 50131-1:2006/A1:2009/A2:2017/A3:2020
 - b. EN 50131-3:2009
 - c. EN 50131-5-3:2017
 - d. EN 50131-6:2

Warranty Obligations

The warranty period for the U-PROX device (excluding batteries) is 2 years from the date of sale. If the device is not functioning properly, please contact support@u-prox.systems; many issues may be resolved remotely.

The Scope of Delivery

1. U-PROX Extender
2. 18650 battery (pre-installed)
3. Power supply
4. Quick start guide