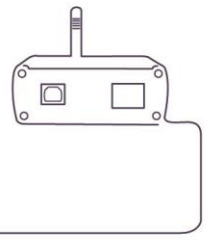


# INSTALLATION MANUAL

for Smart RF box eLAN-RF-003



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***Before you begin***

*The instruction manual provides information on installing and operating the device. The instruction manual is always a part of the supply. Only perform installation after becoming thoroughly familiar with this User Guide and device functions. Problem-free function of the device also depends on the way it was shipped, stored and handled. If you notice any signs of damage, deformation, malfunction or a missing part, do not install this product and return it to the point of sale. At the end of its service life, the product and its parts must be treated as electronic waste. Before starting the installation, make sure that all wires and connected parts are not under voltage. When assembling and performing maintenance, you must uphold safety regulations, standards, directives and special provisions for working with electrical equipment.*

## 1. Introduction

Congratulations on purchasing the Smart RF box eLAN-RF-003 control unit, an element of the RF Control wireless system.

- The smart RF box Enables you to control your electrical installation by smartphone, tablet, Samsung smart-watch Gear S2 or SMART TV.
  - It transmits and receives commands of up to 40 units, and it processes set programs for automatic control, (you can gradually expand installation from 1 unit iNELS RF Control).
  - Thanks to bi-directional communication, it visualizes the current status of individual units.
  - The smart RF box eLAN-RF-003 is connected by network cable LAN to the home network (router) and communicates with your smart phone.
  - The intuitive application environment offers central control from one place.
  - Function of application iHC-MAIRF / iHC-MIIRF / iHC-WTRF:
    - control of hot water or electric underfloor heating
    - measuring temperature by wireless sensors
    - switching appliances (garage door, blinds, fan, sprinklers, sockets, etc.)
    - dimming lights (LED, energy-saving, halogen or classic lamps)
    - time switching (delayed switching off of light when leaving room)
    - video camera integration
    - scenes (make multiple commands at once with a single press).
  - If you don't have a fixed IP address, the Smart RF box will obtain it from DHCP server automatically.
  - Power is supplied to the Smart RF box via adapter 10-27V DC (included in the supply) or PoE by power source (router) 24V DC.
  - By connecting two Smart RF boxes by LAN cable, you avoid the problem of lack of signal range.
  - Option of setting via web interface or directly in the application iHC-MAIRF (Android) / iHC-MIIRF (iPhone).
  - The package includes an internal antenna AN-I, in case the Smart RF box is located in a metal switchboard, you can use the external antenna AN-E for better signal reception.\*
  - Range up to 100 m (in open space), if the signal is insufficient between the Smart RF box and unit, use the signal repeater RFRP-20.
  - Communication frequency with bidirectional protocol iNELS RF Control.
- \* Max Tightening Torque for antenna connector is 0.56 Nm.

Attention:

The minimum distance between the controller (system unit) and the actuator must not be less than one centimeter.

Setting options:

- max. number of actuator - 40
- max. number of temperature zones - 16
- max. number of time schedules - 16
- max. number of central sources - 10
- max. number of heating and cooling devices in a heating zone - 10
- max. number of intervals in a time schedule – 8

## 2. Installing the eLAN-RF-003, IP address


- Connect the eLAN-RF-003 to the power source, connect it to your local network via Ethernet cable. Your local network (router) assigns the eLAN-RF-003 its IP address. Dynamic IP address assignment (DHCP) is enabled by default.

### List of usable ports:

Port	Protocol	Description
8080	TCP	Connection Server - access to web-interface
8081	TCP	Connection Server - access to update server web-interface
9000	TCP	Connection Server - access to web-interface of LMS Audio zone and Audio player GUI
9001	TCP	Connection Server - access to daemon supervisor web-interface overview (daemon maintenance and logging)
8090	TCP	iMM Client - access to web-interface client part
61695	TCP	LARA - access to web-interface / remote control for third-party devices and applications
62000	TCP	LARA - access to port related to DLNA server. It is based on UPnP to stream audio content.
80	TCP	eLANRS485-232 - access to web-interface
8000	TCP	iHC applications - access to encrypted communication between applications and Connection Server / iMM server
9999	UDP	iHC applications - access to communication between applications and central unit CU3
61682	UDP	iHC applications - access to communication between applications and central unit CU2
9999	UDP	iHC applications - access to communication between applications and RFPM-2M
80	TCP	eLAN RF - access to web-interface
8001	TCP	iHC applications - access to unencrypted communication between applications and Connection Server / iMM server

More detailed description of the port use:

[https://en.wikipedia.org/wiki/List\\_of\\_TCP\\_and\\_UDP\\_port\\_numbers](https://en.wikipedia.org/wiki/List_of_TCP_and_UDP_port_numbers)

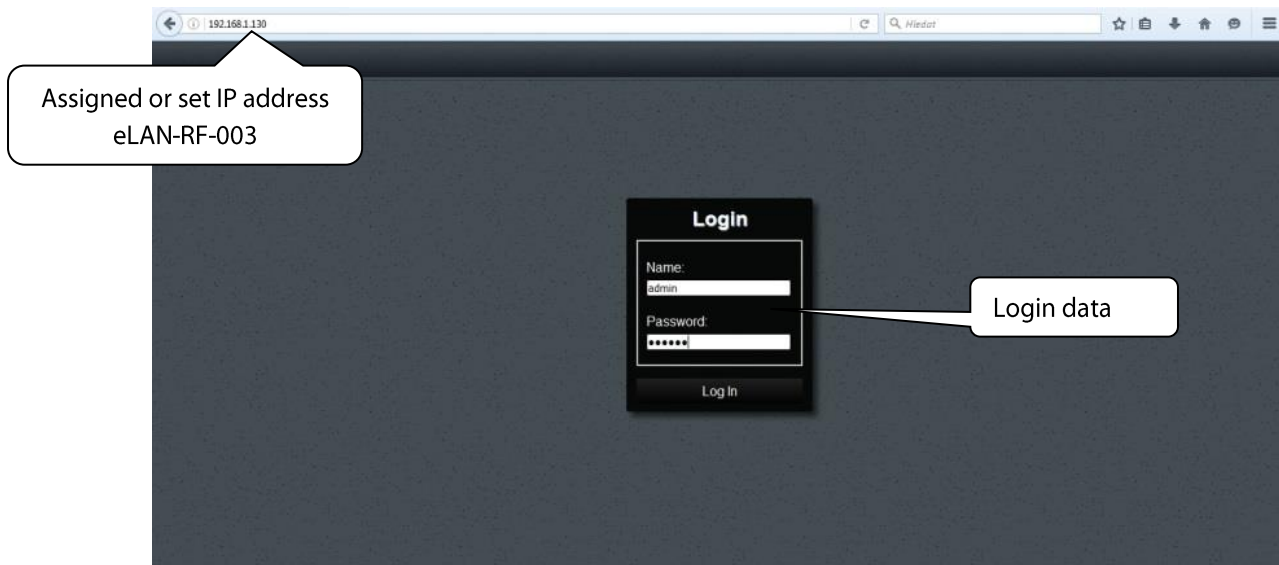
- Install the application in your smartphone:
  - for mobile telephone with OS Android: download the current version at **Google Play** (under the name iHC-**MAIRF**).  
[https://play.google.com/store/apps/details?id=cz.elkoep.ihc\\_marf\\_us&hl=en](https://play.google.com/store/apps/details?id=cz.elkoep.ihc_marf_us&hl=en)
  - for mobile telephones with IOS: download the current version under the name **iHC-MIIRF** in the **app store**.  
<https://itunes.apple.com/cz/app/inels-home-control-rf-for-iphone/id1189384684?mt=8>
- In the installed application, in the **Settings** menu, select **eLAN Settings**. Press the icon  - **search**. Discovered eLAN-RF-003 units appear that are found in your network to which you are currently connected by phone (home network) as well as their IP addresses. Here you will find the IP address assigned to the given eLAN-RF-003.

### 3. Logging in to the web interface eLAN-RF-003

- Run the web browser.
- In the Internet browser in the panel **Address** add the IP address of your eLAN-RF-003.
- After confirming the entered IP address, the web server's login page will come up.
- The factory settings for signing in as administrator are:

**Name: admin**

**Password: elkoep**



It is possible to log into the eLAN-RF-003 web interface either as:

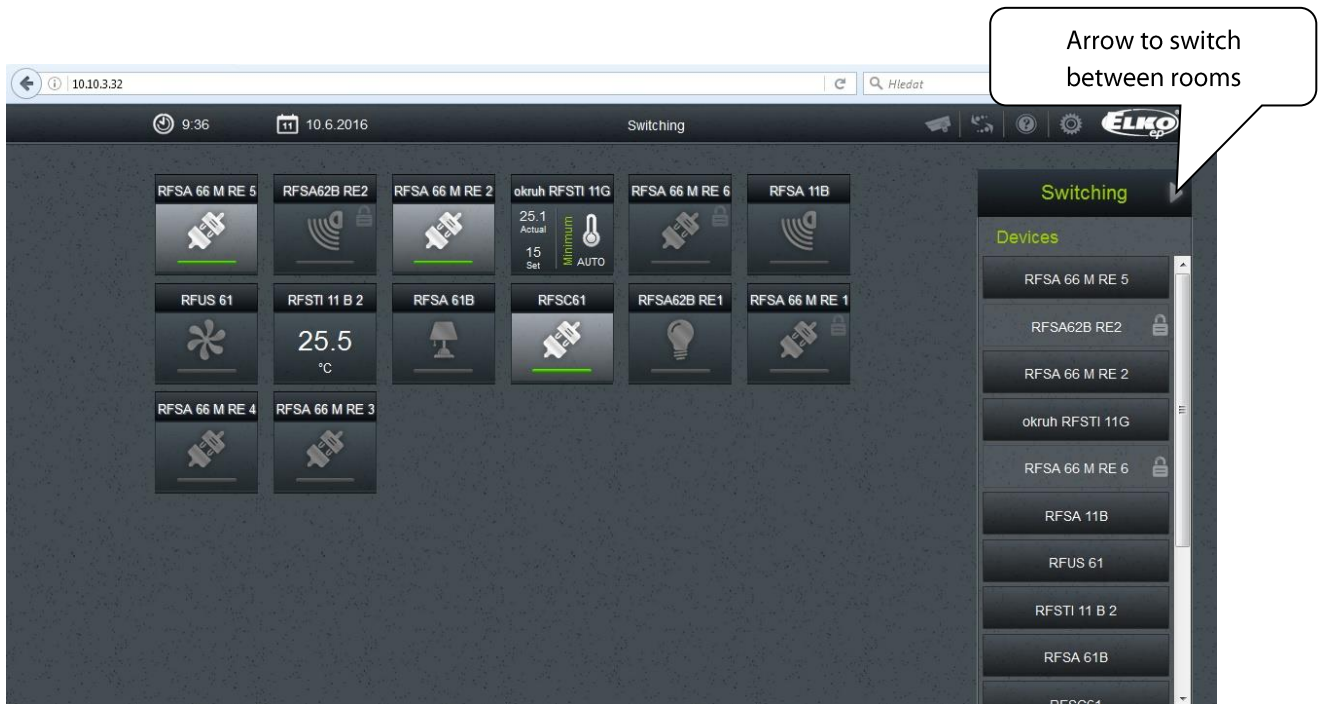
- **administrator** (admin) with full access to controls and settings
  - **user** (user) has the option of controlling the device
- Both users log into the same dialog field (Login, Password), but each uses his/her own name and password
  - Confirm the log in by pressing: **Login**.

*Note:* Perform RESET of the eLAN-RF-003 unit by a long press of the button on the device front panel until the yellow LED starts flashing. Reset ends after the LED shuts off. The IP address and login data return to factory settings and obtaining an IP address automatically (DHCP) is selected.

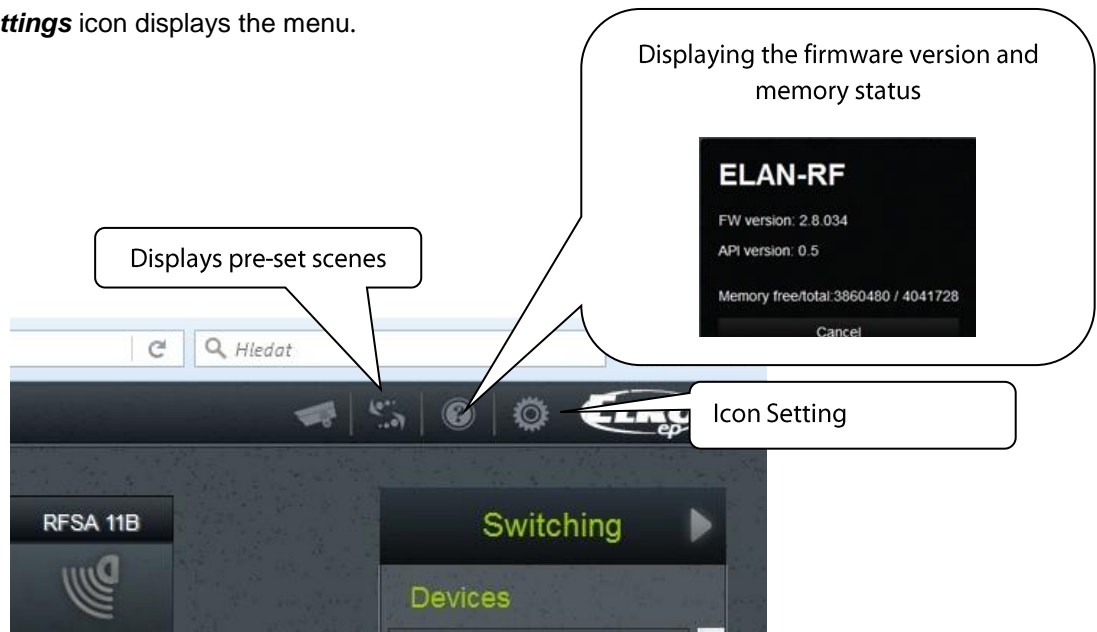
The factory setting of the password for logging in as admin and user is: elkoep

## 4. Settings

After logging in your browser opens a window where you can see the devices associated to the room. If you set multiple rooms, you can switch between them by arrows, located in the upper right corner.



Clicking on the **Settings** icon displays the menu.

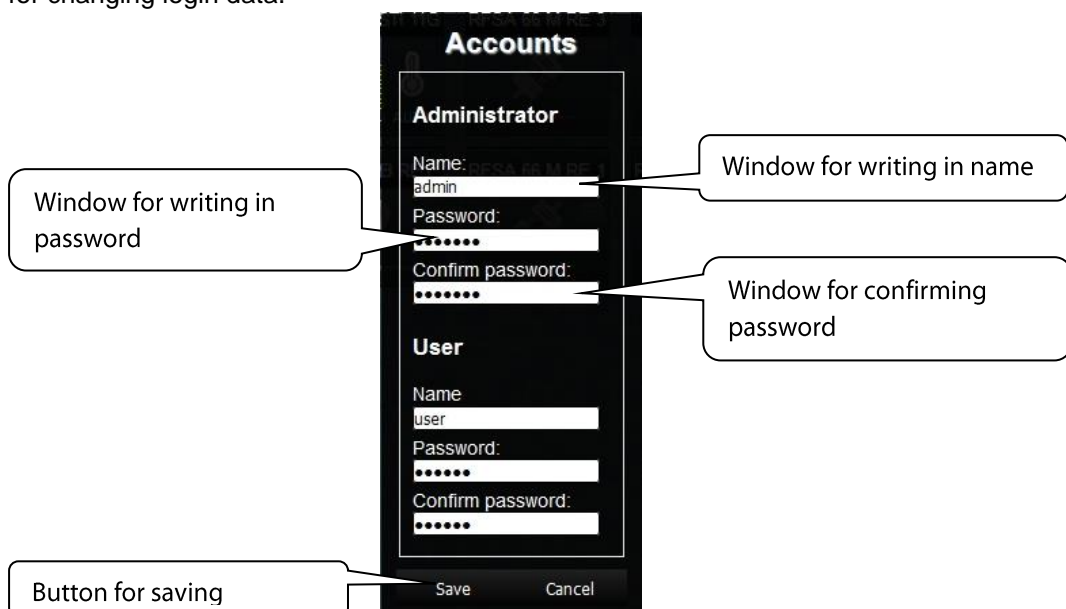


## Description of functions

By clicking on the **Setting elan** the basic menu settings are displayed.



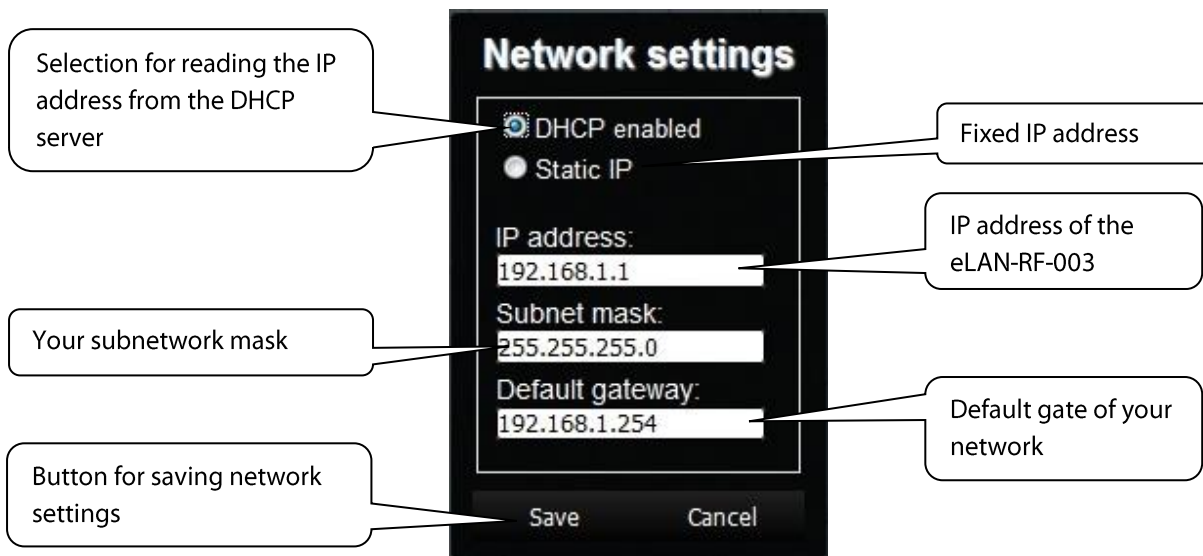
- By pressing **Log out**, you will log out of the web interface eLAN-RF-003.
- By pressing the button **Accounts**, you will display a window for changing login data.



- By pressing the button **Load settings**, you can restore your stored settings, which you have already stored in your PC (the file has the extension .bin).



- By pressing the button **Save settings**, you can save the current settings of your eLAN-RF-003 including network settings.
- The button **IP Settings** is to configure network settings that you can change any time based on your network.



In case you set the static IP address, you have to find it by using the application (see detailed manual for applications).

*Note:* If you change the IP address (setup a static IP address), to log into the eLAN-RF-003 you must use the new IP address. If the new IP address that you entered is not in the same subnetwork, the connection will not work if settings are not changed in the connected device (PC, IMM Client) to the same subnetwork.

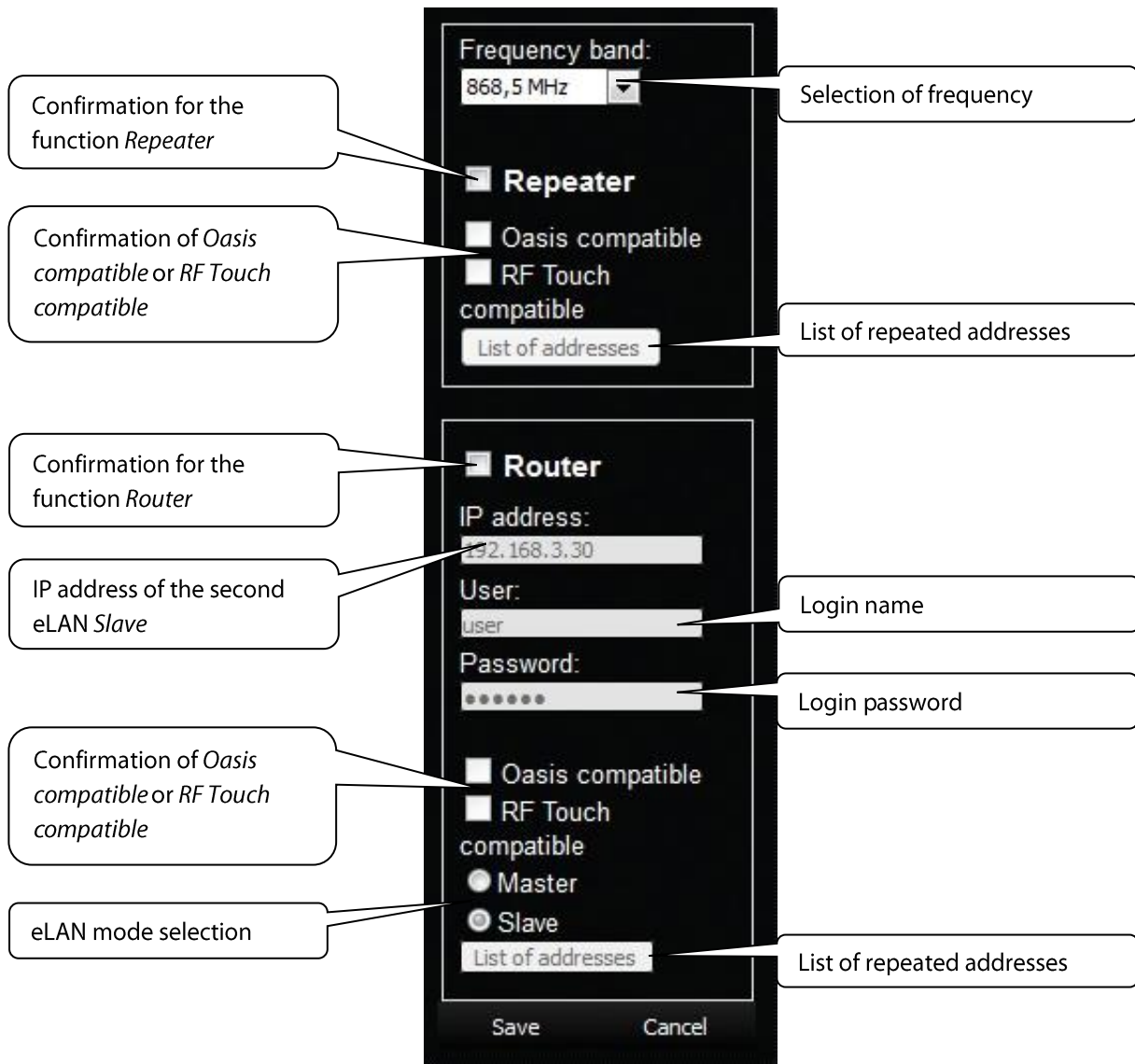
- The button **Update firmware** is used to update the firmware in your eLAN-RF-003.

When updating the eLAN-RF-003, proceed according to the following instructions:

1. Download the latest firmware version from the website <http://www.elkoep.com/products/inels-rf-control-wireless-control/system-units/smart-rf-box-elan-rf-003-8488/>
2. Click on the button **Update firmware**, select the downloaded file (the update file must always include the extension \*.bin), and click on it. After confirming by pressing **OK**, the update of your firmware in your eLAN-RF-003 automatically starts.

*Note:* do not turn off device or use the Reset button when updating the firmware. the eLAN-RF-003 restarts after updating. After the firmware update, all settings will remain preserved. This means that the set IP, login data, visualization panel will remain the same as with the FW version prior to the update. Perform the FW update if you are connected to the application in the local network. Using a public address, the upgrade may not always succeed (this also applies to VPN connections).

- The button **RF mode** is used to switch the mode of your eLAN-RF-003.



**Repeater**

The Repeater function is an independent function of eLAN-RF-003 and is used to increase range between RF controllers (system elements) and RF elements.

Use: an eLAN-RF-003 device configured for a repeater can only be connected to the supply voltage, and it will then function just the same as the RFRP-20. This means if it receives a command from the RF controller or RF detector, it resends it to a designated RF element and vice-versa.

- **Oasis compatible**  
Enables the repeater function to serve unidirectionally communicating units (RF Key, RFWB, RFIM, detectors, etc.).
- **RF Touch compatible**  
Enables the repeater function to serve bidirectionally communicating units (RF Touch, etc.).
- **List of addresses**  
Repeated address settings - write into the list of addresses those elements with which you want the eLAN RF. If you set the eLANs to the Router mode, the same addresses must be set for both eLANs...

After setting the function **Repeater**, eLAN restarts.

**Router**

The **Router** function is used to extend the distance and control of RF elements by connecting two eLANs into the LAN network.

- The first eLAN (so-called **Master**) must be set during configuration in the **Router** function, it receives all RF commands of controllers via an RF signal. It assess the limitations and permissions of addresses.
- The second eLAN (so-called **Slave**) assess all commands from the eLAN **Master** determined for sending by RF signal. It sends valid messages by RF signal to controlled elements. If a response comes from an element, it sends it to the eLAN **Master**.

It is necessary to enter into the settings the LAN parameters of the second eLAN - **Slave** (IP address, login data).

The second eLAN **Slave** can be configured in two ways.

- Active function **Repeater** – this receives commands via the Ethernet network and via the RF network.  
Example: eLAN **Slave** catches the RF signal of the RF controller, saves it as Repeater (signal repeater), and sends the RF signal further along.
- Active function **Router** – eLAN is in its basic setting. eLAN only receives commands from the Ethernet network, and ignores all RF signals.

- **Oasis compatible** - the same as with the **Repeater** function.
- **RF Touch compatible** - the same as with the **Repeater** function.
- **list of addresses** - the same as with the **Repeater** function. The same addresses must be set for both eLANs.

After setting the function **Router**, eLAN restarts.

- **Service** button

Here are some sections.

The **eCloud** section is used to connect eLAN to a cloud account.

Use the application to create a cloud account.

After clicking on the **eCloud** icon, a window will appear where you enter your email address and password as login details for the cloud account. Then highlight **Enable cloud connection** and save with the **Save** button.

eLAN will connect to your cloud account.

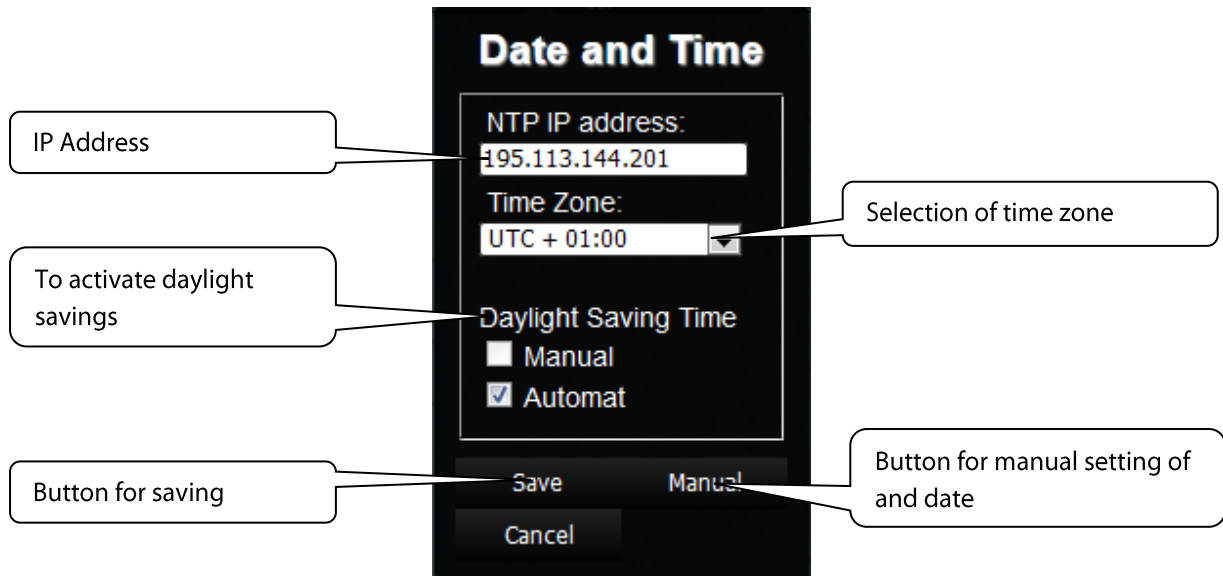
- Button **Date & Time**

Here the IP address of the NTP server is set by default, which determines for the eLAN the precise time via the Internet. You can also set the time zone in which the eLAN is located. By selecting *Daylight Saving Time*, you can manually set the daylight saving time.

Time of eLAN-RF-003 is automatically set from NTP server.

If your eLAN-RF-003 is not connected to internet network, then time is always set to 12:00 AM, the current day is set manually with button **Manual**.

During power failure, time information is erased from eLAN memory.

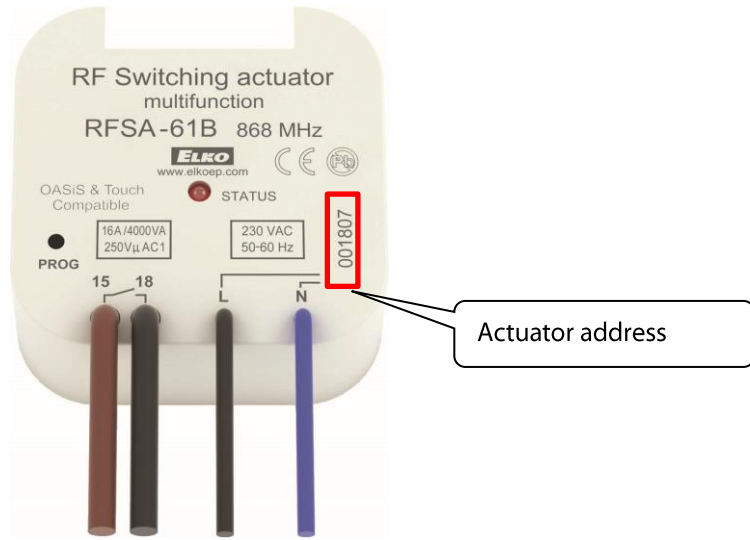


- Button **Reboot** – to restart the device eLAN-RF-003.

Button **Devices** is used for adding RF actuators to the eLAN-RF-003.

Button (+) - add a new RF element:

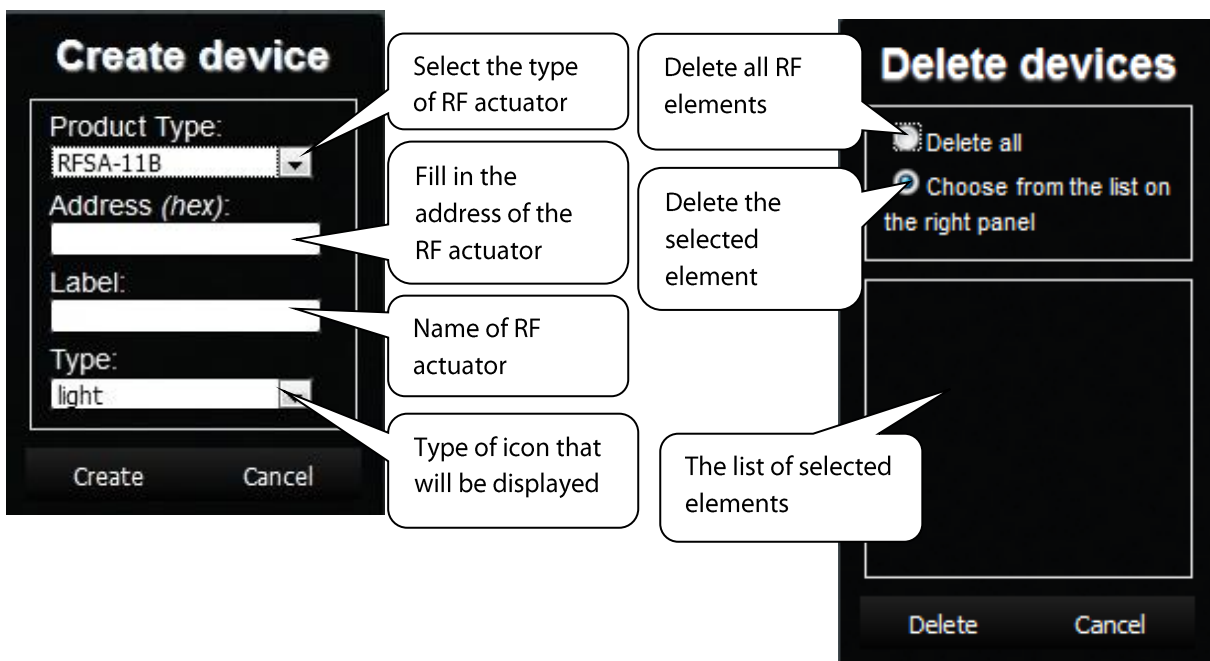
1. Product Type – select RF element
2. Address – enter the address of the RF element that is listed right on the box of the added RF element (six-character code).



3. Label - any naming of the element, e.g. "Kitchen light".
4. Type - select the type of icon (e.g. light), which will be displayed on the floorplan.

**Create** you will store the RF actuator in the eLAN-RF-003.

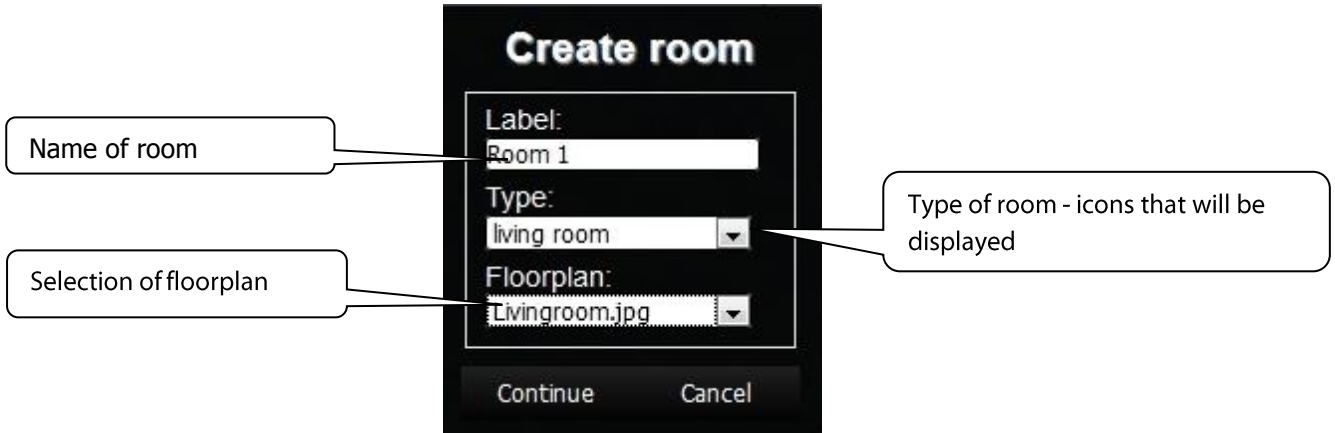
Button  - remove all elements.




Button **Rooms** displays created rooms.

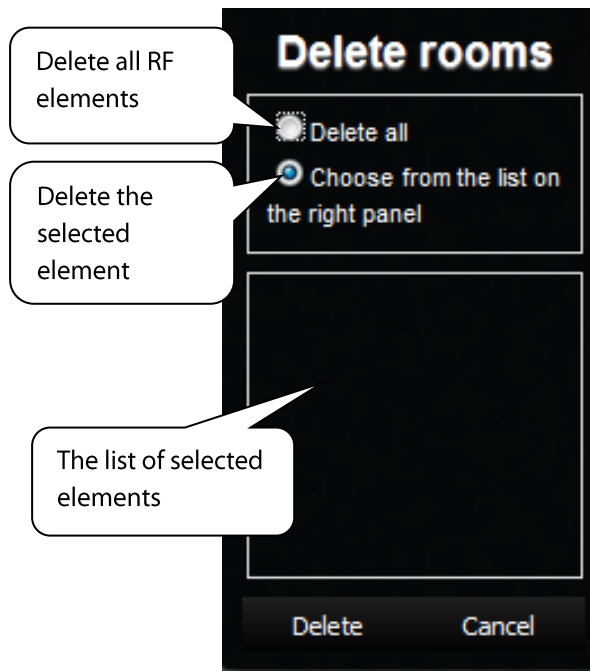
By pressing the button (+).

If you click on the button (+), a table is displayed in which you fill in:



1. **Label** gives an arbitrary name to the room (you can use diacritical marks, gaps and others...)
2. **Type** – here you select the type of room or type of icon that you will then display after entering the floorplan on the desktop.
3. **Floorplan** – here select the floorplan (image) that you added before in the tab **Floorplans**.

By pressing  you can remove all added rooms.

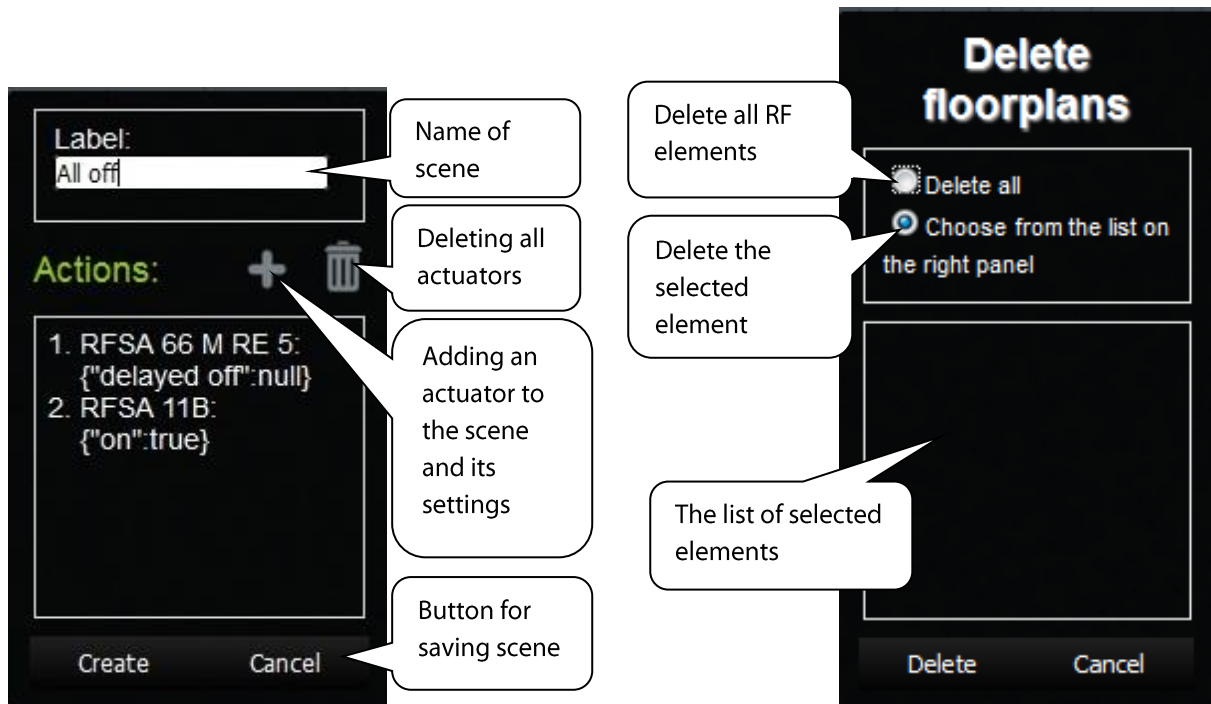


Button **Scenes** – Here any scenes are created based on user requirements.

It is possible to create scenes only after you add rooms and actuators.

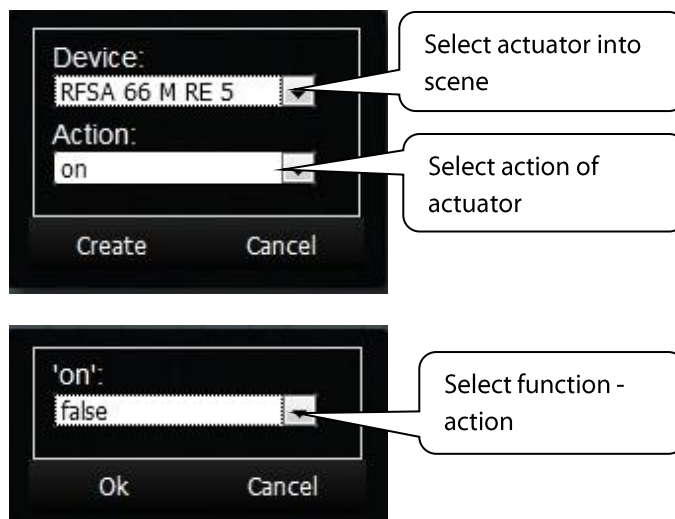
Button (+) - add a new scene:

1. **Label** - enter any name of the scene (you can use diacritical marks and spaces in between...).



2. **Actions** - (+) – add an RF element.

When adding an actuator, its function-action is set switching, dimming, etc.).



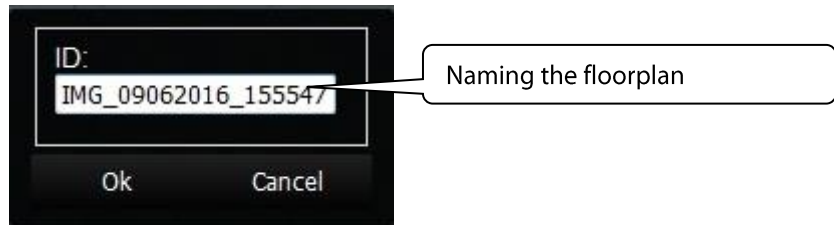
If for an actuator, you select the function **ON**, you must still confirm this function by its precise status in the table Choose value, e.g. **true** – for switching on or **false** – switching off.

After adding all actuators and their required functions, click on Create, thereby saving the entire scene.

Button **Floorplans** here you can add floorplans (images, layouts...).

Button (+) - add a new floorplan:

1. Select the required image for the floorplan (stored in your PC).
2. ID – enter the name of the floorplan. Confirm by pressing **OK**.



The number of floorplans is limited by the memory size of the eLAN-RF-003.

Memory Status, see the  icon on the top toolbar

## Adding RF actuators to the floorplan

Click on **Rooms** in the room panel, where you want to add the required RF components. On the desktop menu the room appears (there any correction can be made).



Click the **Continue** button to display a list components associated with the eLAN. Click on individual elements to add to the room.

- If a floor plan is assigned to a room, you can move the components in the room freely.
- If a floor plan is not assigned to a room, the components are ranked next to each other and you cannot assign them to move over the area freely.

Save by clicking on the **Create** button.

Deleting components from the room is carried out using the Help application.





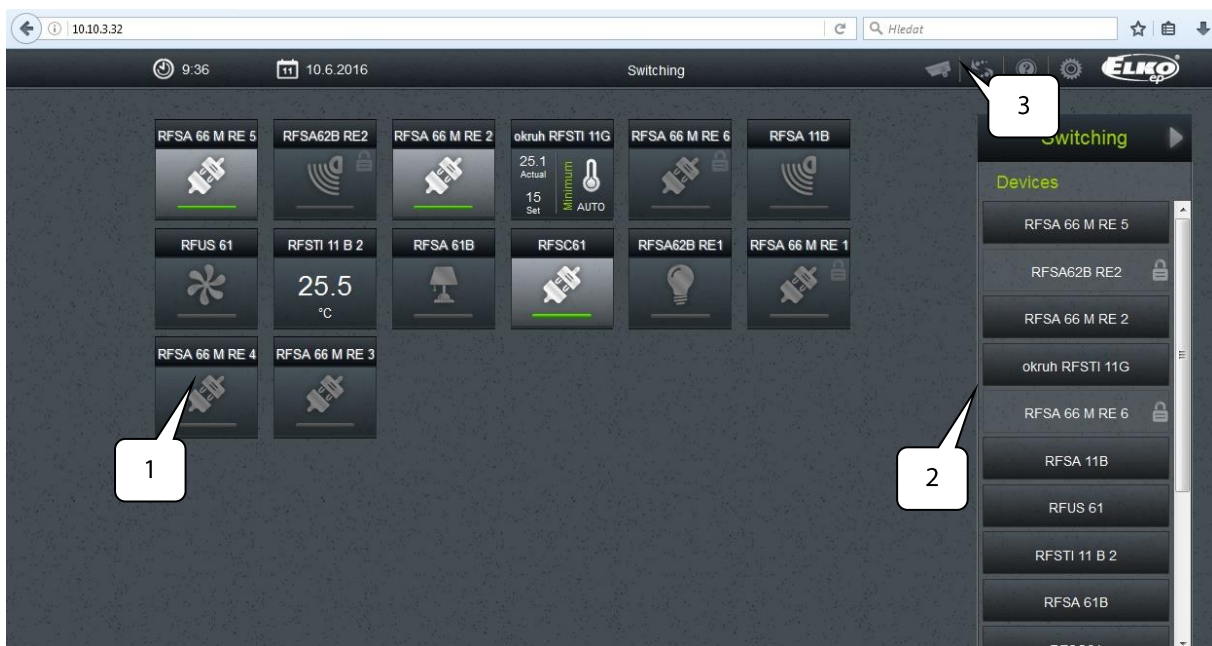
## RF control actuators

- Mobile phone help application
- Clicking on the component icon (1) to start the function settings (switch-off delay ...).
- Click on the name of the component (2) to display all its functions, where you can select which function is performed (delayed closing - including setup time, brightness adjustment ...).

Thermal components can only be controlled by the application on your phone; on the web interface only the information about the measured / set temperature is displayed.

## Starting up scenes

- Clicking on the icon **Scenes** (3) displays a list of pre-set scenes.
- Click on the scene you want to start setting the scene (turn off all-delay ...).



## **Error messages on the web interface**

**404** - Unavailability of eLAN over the network (disconnected from power supply, disconnected from Ethernet, other error)

**401** - Authorization error (key expiration or not initialized in time - measured in seconds)