

Smart RF box **eLAN-RF-003**



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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 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-MARF / iHC-MIRF:
 - 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
 - light 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-MARF (Android) / iHC-MIRF (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.

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.

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.
- Install the application in your smartphone:
 - for mobile telephone with OS Android: download the current version at **Google Play** (under the name **iHC-MARF**).
https://play.google.com/store/apps/details?id=cz.elkoep.ihc_marf&hl=en
 - for mobile telephones with IOS: download the current version under the name **iHC-MIRF** in the **app store**.
<https://itunes.apple.com/cz/app/inels-home-control-rf-for/id704493937?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.

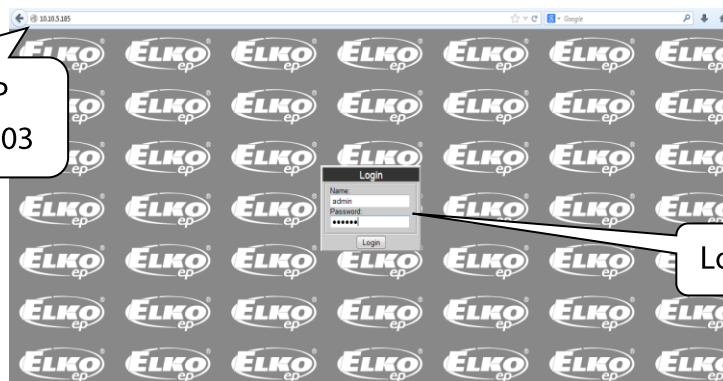
3. Logging in to the web interface eLAN-RF-003

- 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

Assigned or set IP
address eLAN-RF-003



Login data

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**.

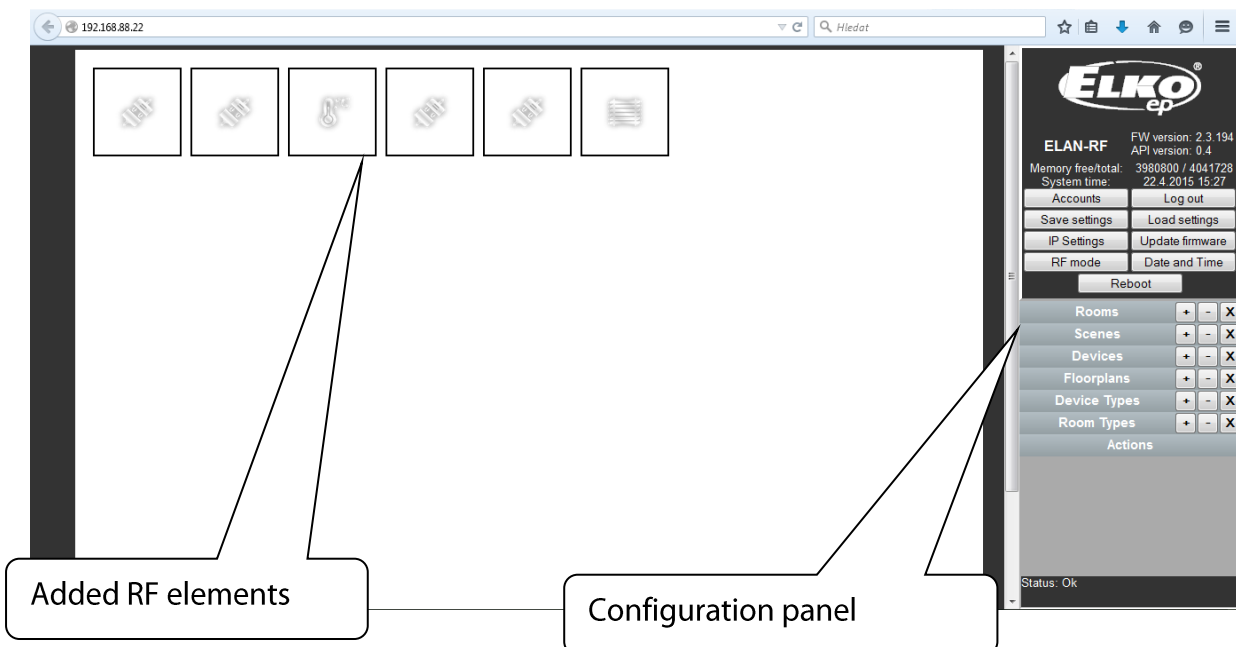
Note: Perform RESET of the eLAN-RF-003 unit by a long press of the button on the device front panel until the yellow LED starts flashing. Reset ends after the LED shuts off. The IP address and login data return to factory settings.

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

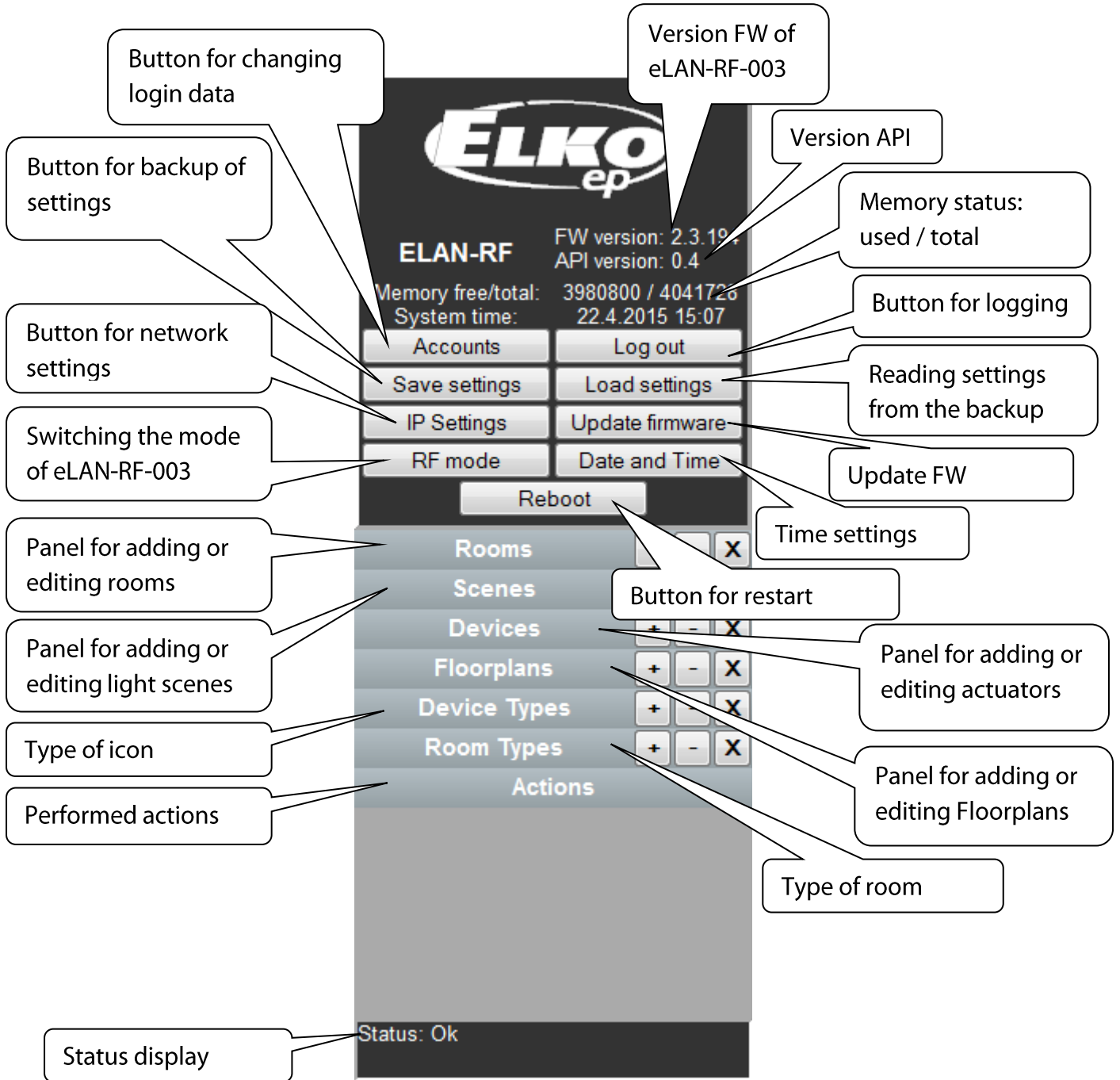
4. Settings

After logging in, you will see a large window used to display assigned RF-elements (actuators).

On the right you will see a configuration panel with all functions of the web server eLAN-RF-003.

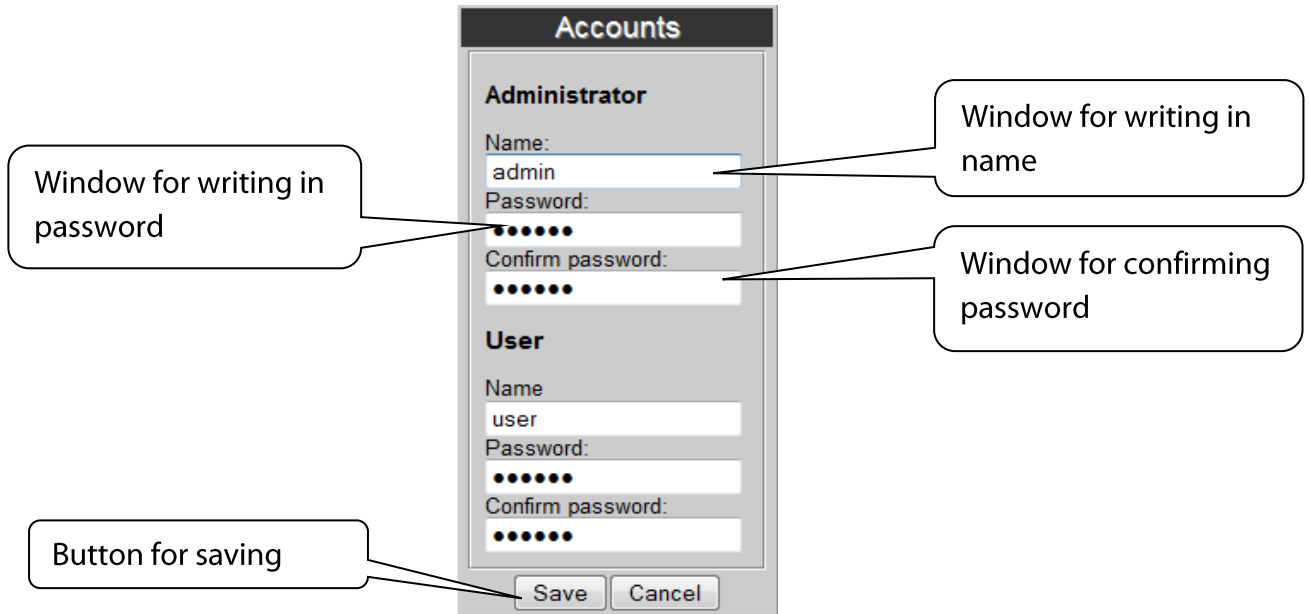


Configuration panel

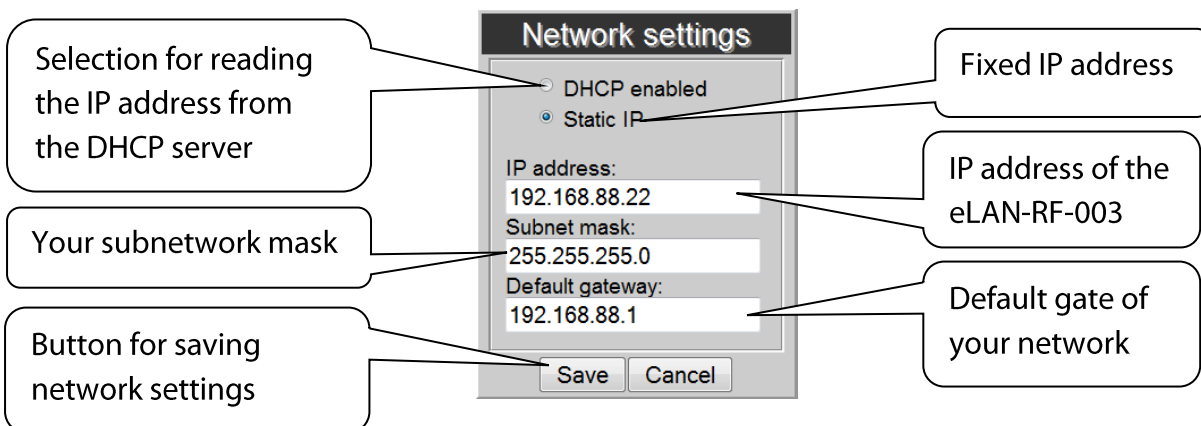


Description of functions

- By pressing the button **Accounts**, you will display a window for changing login data.



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



Note: If you change the 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.

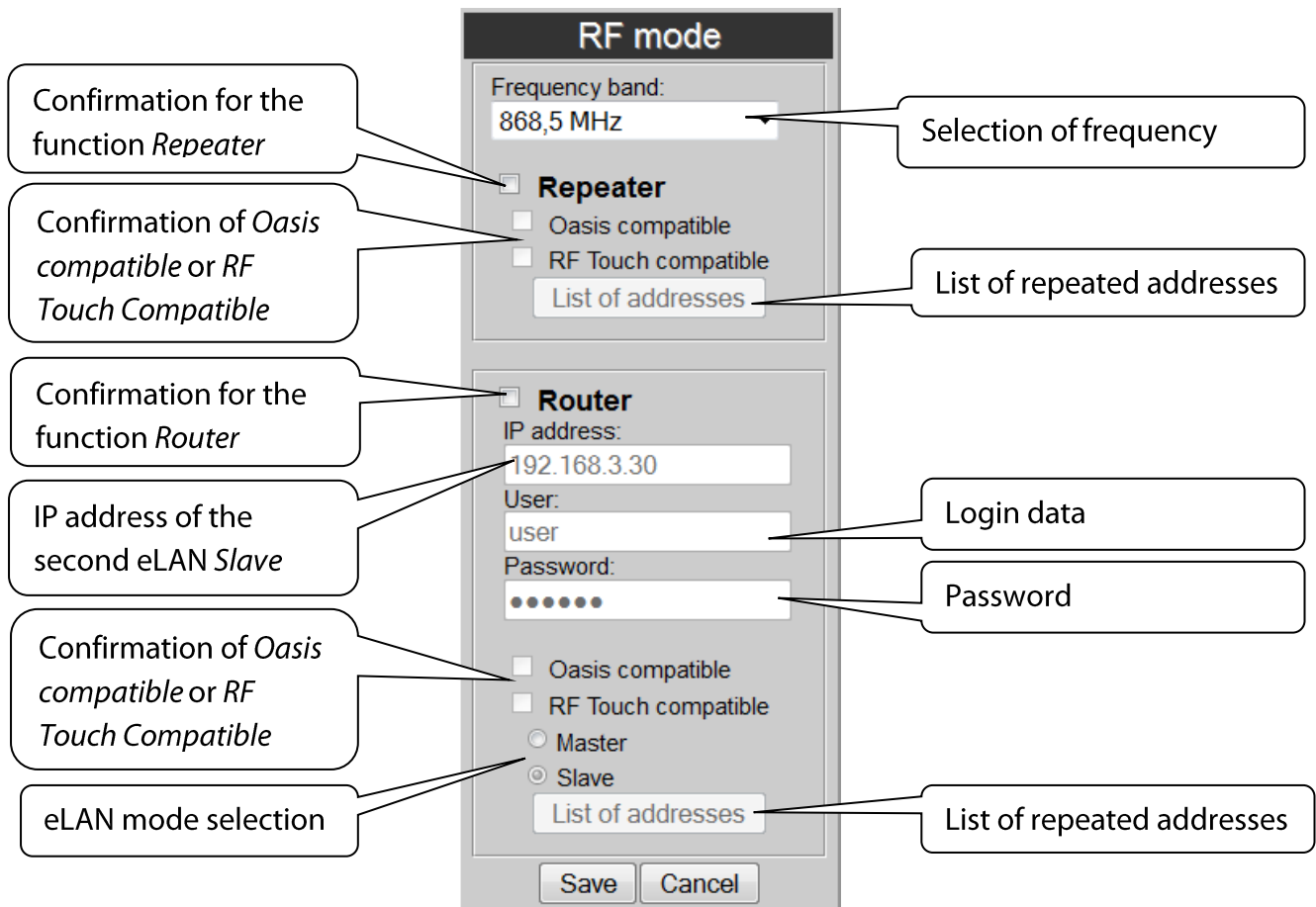
When updating the eLAN-RF-003, proceed according to the following instructions:

1. Download the latest firmware version from the website
<http://www.elkoep.com/download/software/>.

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.

- 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, RF Pilot, 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...

RF addresses				
1:0	2:0	3:0	4:0	5:0
6:0	7:0	8:0	9:0	10:0
11:0	12:0	13:0	14:0	15:0
16:0	17:0	18:0	19:0	20:0

Save Cancel

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.

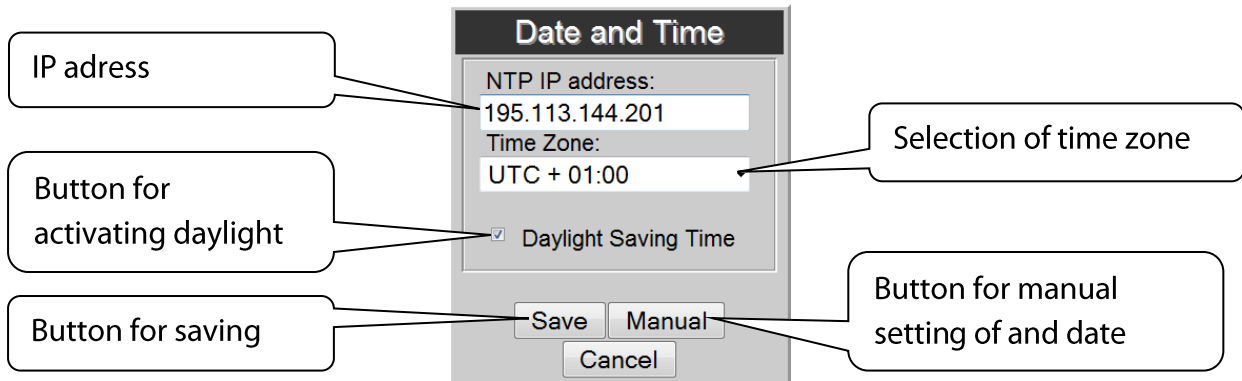
After setting the function **Router**, eLAN restarts.

- 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.

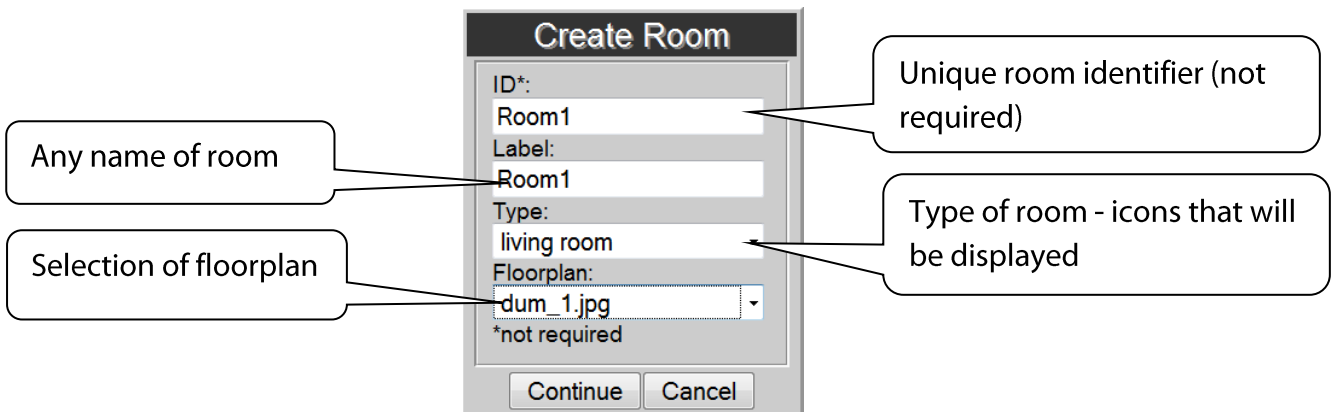
If you do not have the eLAN-RF-Wi-003 connected to an Internet network:

set the current date and time manually using the button **Manual**. In the event of a power outage, this information is deleted from the eLAN memory.



- Button **Reboot** – to restart the device eLAN-RF-Wi-003.
- Panel **Rooms** displays created rooms. By pressing the button (+), you can add a new room, by pressing (-) you can delete any selected room and by pressing (x) you can remove all added rooms.

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



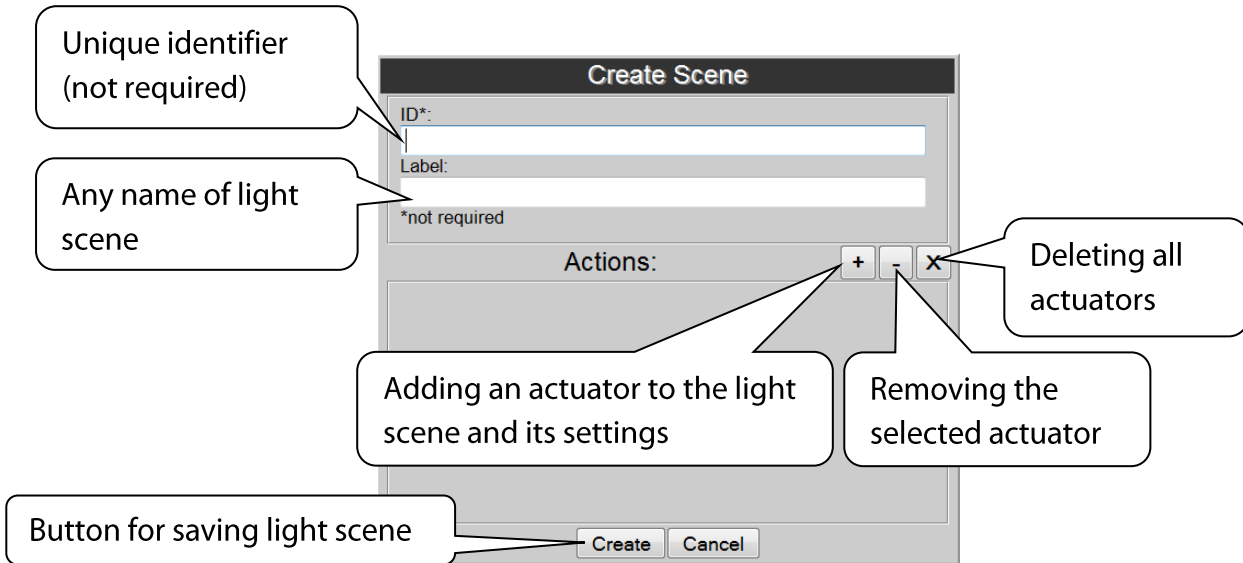
1. **ID*** of the room "optional data", if you do not enter it - a number is automatically generated. Here you can only use the characters [0-9A-Za-z_-].
2. **Label** gives an arbitrary name to the room (you can use diacritical marks, gaps and others...)
3. **Type** – here you select the type of room or type of icon that you will then display after entering the floorplan on the desktop.
4. **Floorplan** – here select the floorplan (image) that you added before in the tab **Floorplans**.

- Panel **Scenes** – Here any light scenes are created based on user requirements.

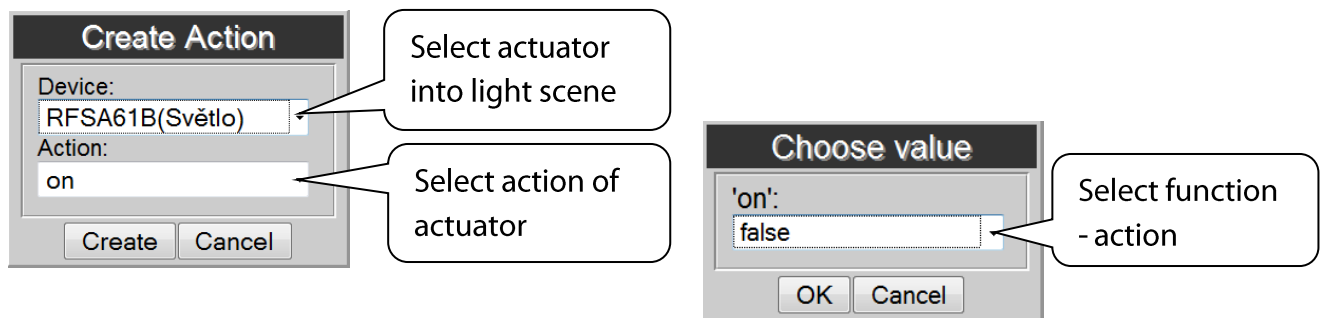
It is possible to create light scenes only after you add rooms and actuators.

Button (+) - add a new scene:

1. **ID*** - name of room (not required).
2. **Label** - enter any name of the light scene (you can use diacritical marks and spaces in between...).
3. **Actions** - (+) – add an RF element, (-) delete the selected element, (x) – delete all RF elements.



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.

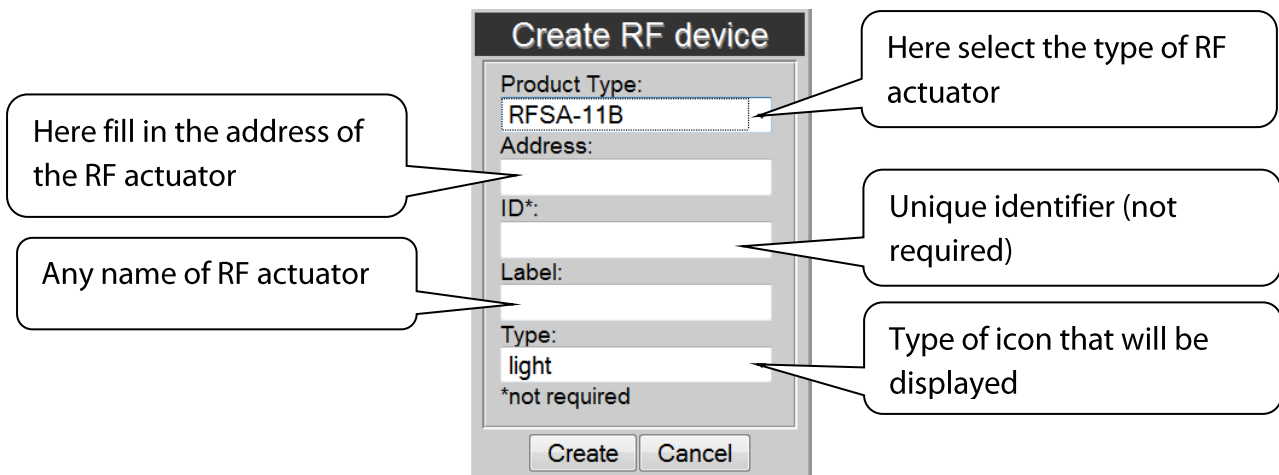
- The panel **Devices** is used for adding RF actuators to the eLAN-RF-003.



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. Window ID* - name of element (not required).
4. Label - any naming of the element, e.g. "Kitchen light".
5. 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.



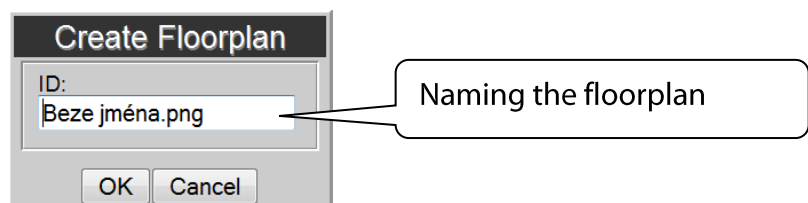
Button (–) - deleting the selected element.

Button (X) - remove all elements

- Panel **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.

Find out the memory status in the top of the configuration panel.

- The panel **Device Types** - do not adjust or delete anything - only for the needs of R&D.
- The panel **Room Types** - do not adjust or delete anything - only for the needs of R&D.
- The panel **Action** - displays options for control of the currently highlighted RF actuator on the floorplan.

Adding RF actuators to the floorplan

Click on the room in the **Rooms** panel into which you want to add the required RF actuator, and a floorplan will then appear on the desktop (not necessary however - a white space may remain as the floorplan), double-click anywhere on the desktop, and the addition of RF actors will be activated by a red boundary, and the **Devices** panel will open. Then double-click on individual RF actuators to add the RF actuators that you require on the floorplan. You have the option of removing the actuator by right-clicking the mouse. If you do not use any of your added floorplans, you cannot move the icons; if you have an assigned floorplan in the room, you can move the icons anywhere using the mouse and distribute them on the floorplan. Once you add everything, the same as at the start, double-click anywhere on the desktop (floorplan) to save all you've done.

RF control actuators

And now after clicking on one of the icons, you can control the RF actuators. You can do this either by double-clicking directly on them, or after a single click on them the offer **Action** appears in the lower right corner, in which you double-click to start the required action of the given RF actuator.

Starting up scenes

Startup is performed in a similar manner, where after clicking on the panel Scenes, you select the required scene and then double click on it.