

The R240 Wi-Fi bridge does not operate as a standalone device. It requires at least one LED controller that is directly connected to the LED strips. The bridge communicates with the controller, enabling full control of the lighting. The application allows control of up to 24 zones, and multiple controllers can be connected within a single zone.

Once devices are connected, the lighting can be controlled simultaneously via the web interface dedicated to the bridge (the bridge transmits commands to the controller) as well as via a remote that operates the controller connected directly to the LED strips. Any changes made using the remote control are reflected in the application in real time.

The Wi-Fi R240 bridge can be controlled on any device equipped with a web browser, such as a phone, tablet, or personal computer.

Methods of launching the control panel in a web browser.

The control panel can be run on any device with a web browser.

For this purpose, we can use two operating modes:

- Elegant network only
- Join my WiFi network

To use the "Elegant network only" mode, follow the instructions in [Step 1] and [Step 3].

If you want to use the "Join my WiFi network" mode, follow the instructions in [Step 1], [Step 2] and then [Step 3].

Elegant network only [Step 1]

NOTE: When connecting using a mobile phone, mobile data transmission should be disabled. Otherwise, the phone may attempt to route the connection through the cellular network instead of the local Wi-Fi network.

This direct mode is the default mode when the R240 Wi-Fi Bridge is first started. Go to the Wi-Fi settings on your device (computer, telephone, TV, etc.) and choose "Elegant LED - XXXX network" (where XXXX represents the last four digits of the device's serial number). Enter the password: the full serial number printed on the sticker on the controller. After successful connection, enter <http://192.168.4.1> in a web browser to open the lighting control panel. If you want to stay in this mode, skip Step 2 and start pairing the LED controllers. However, this mode disables Internet access, so connecting the device to a Wi-Fi network with Internet access is recommended [Step 2].

Join my WiFi network [Step 2]

To select this mode, go to the network settings [Fig. 1 (4)] and change the operating mode to "Join my Wi-Fi network" [Fig. 2 (43)]. Then, select your network, enter the password to your network, and click "Save changes". The application will apply the new settings and bridge will connect to your network. In the case of Mac OS, IOS, Windows 11 and newer in the web browser, enter <http://elegantXXXX.local> where XXXX is the last 4 digits of the serial number of the device.

If you are using a web browser on Android version earlier than 12, Windows versions earlier than 11, or a Smart TV, check the IP address of the bridge before switching to your Wi-Fi network. You can find the device's IP address in the Settings window [Fig. 3, 4, 5 (7)], under the General section [Fig. 10 (38)]. It is also available in your router's configuration interface, in the list of connected devices (refer to your router manufacturer's instructions). Switch to your Wi-Fi network with Internet access and enter the device IP address in your web browser to open the lighting control panel.

After completing [Step 1] and [Step 2] the R240 Wi-Fi bridge can be accessed from two networks at different IP addresses. By default, it is available at 192.168.4.1 via the Elegant Wi-Fi network. After the bridge connects to your home Wi-Fi network, it becomes accessible at the IP address assigned by the router or at <http://elegantXXXX.local>, depending on the device.

NOTE: Using the control panel on a daily basis is easier if you save its address. To do this, tap the browser menu (three-dot icon) and select "Add to Home screen".

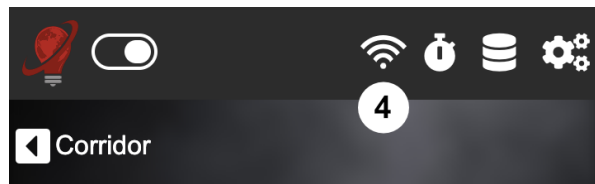


Fig. 1

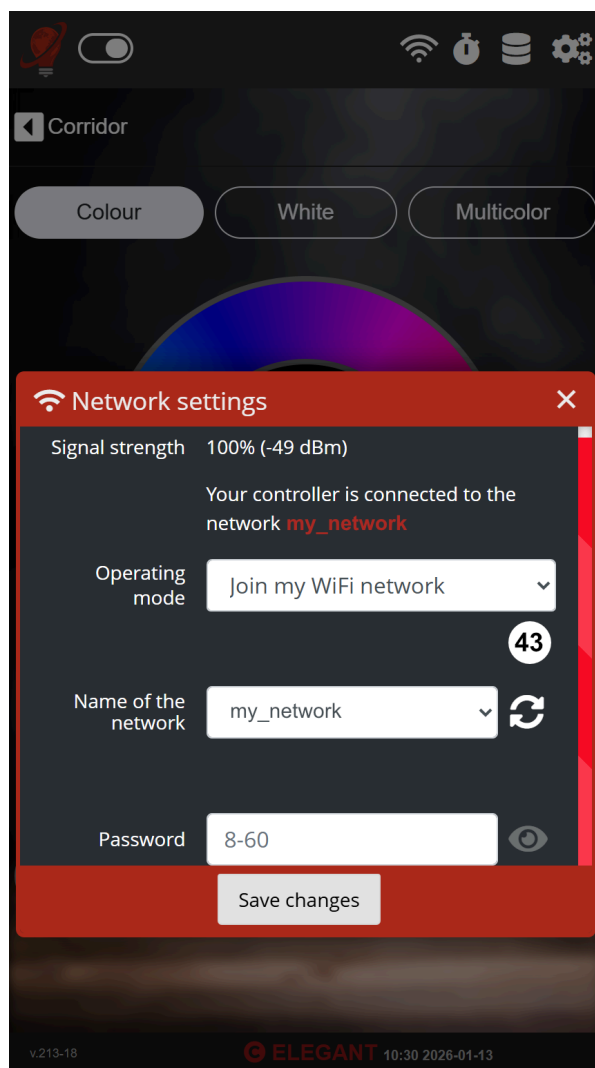


Fig. 2

Methods of launching the application in a web browser

The application can be run on any device with a web browser (Smartphone, PC, Smart TV, etc.). To do this, enter the address from the table below in the browser bar.

Elegant network only	
System/Device	Adress
Android	http://192.168.4.1
Mac OS	http://192.168.4.1
IOS (iPhone)	http://192.168.4.1
PC Windows	http://192.168.4.1
Smart TV	http://192.168.4.1

Join my WiFi network	
System/Device	Adress
Android older than 12	Enter the device address. After connecting to Elegant WiFi network, the address is displayed in the Settings window [Fig 10 (38)]. Note this address,then switch back to your home WiFi network to access the device.
Android 12 and newer	http://elegantXXXX.local where XXXX are the last 4 digits of the serial number of the device
Mac OS	http://elegantXXXX.local where XXXX are the last 4 digits of the serial number of the device
IOS (iPhone)	http://elegantXXXX.local where XXXX are the last 4 digits of the serial number of the device
PC Windows older than 11	Enter the device address. After connecting to Elegant WiFi network, the address is displayed in the Settings window [Fig 10 (38)]. Note this address,then switch back to your home WiFi network to access the device.
PC Windows 11 and newer	http://elegantXXXX.local where XXXX are the last 4 digits of the serial number of the device
Smart TV	Enter the device address. After connecting to Elegant WiFi network, the address is displayed in the Settings window [Fig 10 (38)]. Note this address,then switch back to your home WiFi network to access the device.

Pairing (coding) of LED controllers [Step 3]

Before operating the lighting system, the controllers must be paired as described below.

- The WiFi-R240 Bridge with a specific zone must be assigned to each controller. Multiple controllers can be connected within a single zone. To do this:
1. Power down the controller
 2. In the application, next to the zone name, press the edit zone button [Fig. 3,5 (10)].
 3. Connect the digital LEDs to the controller
 4. Power on the controller and within 2 seconds of turning it on, press the button "Start pairing the controller" [Fig. Pairing 1 (50)] on the screen.
 5. The LEDs connected to the controller should flash - this confirms the pairing.

- NOTE:** If the drivers were not new, some other devices may be paired with them. To be sure, it is worth removing all devices from the controller's memory before the target pairing. Follow steps below:
1. Power down the controller
 2. In the application, on the home screen. press the "Settings" button [Fig. 3 (7)] and in the "Pairing" tab [Fig. 10 (41)] press the "Remove the controller" button [Fig. 11 (44)]
 3. Connect the digital LEDs to the controller
 4. Turn on the controller's power supply and within 2 seconds of turning it on, press the "Start" button [Fig. 12 (47)].
 5. The LEDs connected to the controller should flash - this confirms the deletion



Fig. Pairing 1

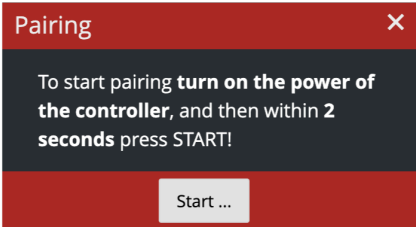


Fig. Pairing 2

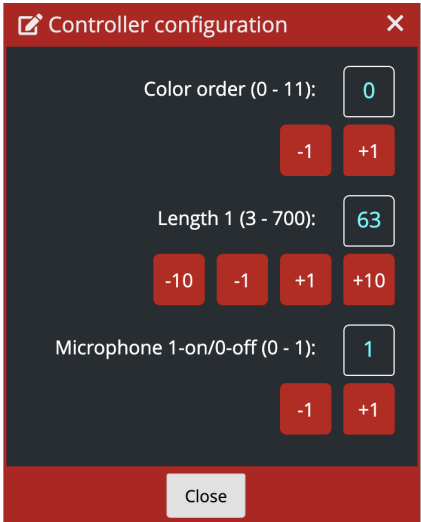


Fig. Pairing 3



Fig. 3



Fig.4



Fig.5

Main menu

From the main menu [Fig.3, Fig.4, Fig.5] you can access network settings (4), time programs (5), saved programs (memory) (6) and advanced settings (7). You can also turn on/off all lighting (2) and control lighting zones (9).

Zones

The zone is the conventional part of the lighting, defined during the installation of the system. The user interface adapts to the screen size of the device. On large displays e.g. computers, tablets in landscape mode [Fig. 3], two sections are visible simultaneously: the zones list and the control panel. On small devices e.g. smartphones [Fig. 4,5], only one section is displayed at a time, and navigation between sections is done using the arrow button at the top of the screen [Fig. 4, 5, 6, 7 (3)]. On the Zones screen, you can select one or more lighting zones to control by tapping the zone name [Fig. 3, 5 (11)]. Selecting more than one zone will result in all selected zones getting settings from the zone with the lowest of the selected numbers. The symbol [Fig. 3,5 (8)] next to the Zones button allows to control all zones at once. This button selects all zones or removes the entire selection.

At each zone there is a slider [Fig. 3,5 (9)] responsible for turning on/off the lighting in each zone, a zone editing button (pencil icon) [Fig. 3,5 (10)] and a button that allows you to edit multiple zones at the same time [Fig. 3,5 (11)].

After pressing the pencil icon button [Fig. 3,5 (10)], a "Pairing" menu will appear [Fig. Pairing 1] where you can give the zone a name and pair it with the controller.

Clicking the zone name will deselect all other zones and select only this one, whereas clicking the checkbox allows you to add the zone to the already selected ones without deselecting the others. When you activate a zone, a management window for that zone will appear. It contains three tabs: Colour [Fig. 3,4 (12)], White [Fig. 3,4 (13)], and Multicolor [Fig. 3,4 (14)]. In the desktop version, this window is displayed directly next to the zone list, while in the mobile version you switch between the zone list and the configuration window using the arrow button [Fig. 4, 5, 6, 7 (3)].



Fig. 6

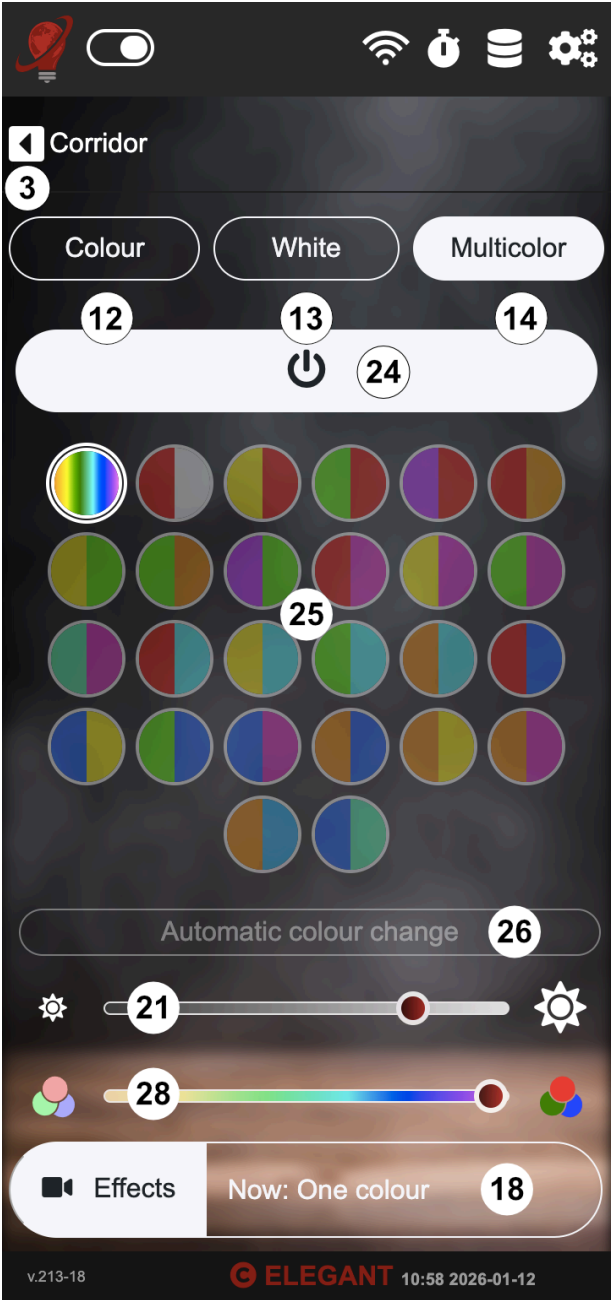


Fig. 7

Color [Fig. 3,4]

The created effect will consists of one color. The zone switch (9) can be used to switch on and off the lighting in a given zone.
Use the color wheel (15) to select the color in which the lighting effects are to be created. Some effects (e.g. rainbow) do not respond to the color wheel.
The brightness slider (16) adjusts the brightness. The saturation slider (17) adjusts the color saturation.
Use the effects button (18) to turn on effects in the controller. After pressing this button, a list of available effects will open. Some effects are static, others are animated. The speed of the animation can be changed with the slider with the images of "turtle" and "rabbit" which will be shown to us when we select the animated effect. If you select more than one effect, a slider will appear where you can set the time after which one effect will change to another.
Sound-responsive effects have a note icon next to their name.

White [Fig. 6]

The effect you create will consists of only white. By clicking on the bulb (20) you can turn off and on the lighting in a given zone.
The brightness slider (21) adjusts the brightness.
Use the temperature slider (22) to change the temperature of the white color.

Multicolor [Fig. 7]

The effects you create consist of two or more colors.
The lighting on/off button (24) turns the lighting on or off in the selected zone.
Colored "flags" (25) are used to select a set of colors when creating multicolored effects. Selecting two color flags creates an effect consisting of two colors.
The rainbow flag creates effects that use all colors simultaneously.
The automatic color change option (26) has a special function - it automatically changes colors every 15 seconds.
The brightness slider (27) adjusts the light intensity.
Use the saturation slider (28) to adjust the color saturation.

Effects [Fig. 3,4,6,7, Effect (18)]

Use the effects button (18) to turn on effects in the controller. After pressing this button, a list of available effects will open [Fig. Effect]. Some effects are static, while others are animated. The animation speed can be adjusted using the sliders with the turtle and rabbit icons [Fig. Effect (27)], which appear when an animated effect is selected. If more than one effect is selected, a slider [Fig. Effect (23)] appears, allowing you to set the time after which one effect changes to another. Sound-responsive effects are marked with a note icon next to their name. You can select all effects using slider (29).

NOTE: Not all effects work in multicolor mode.

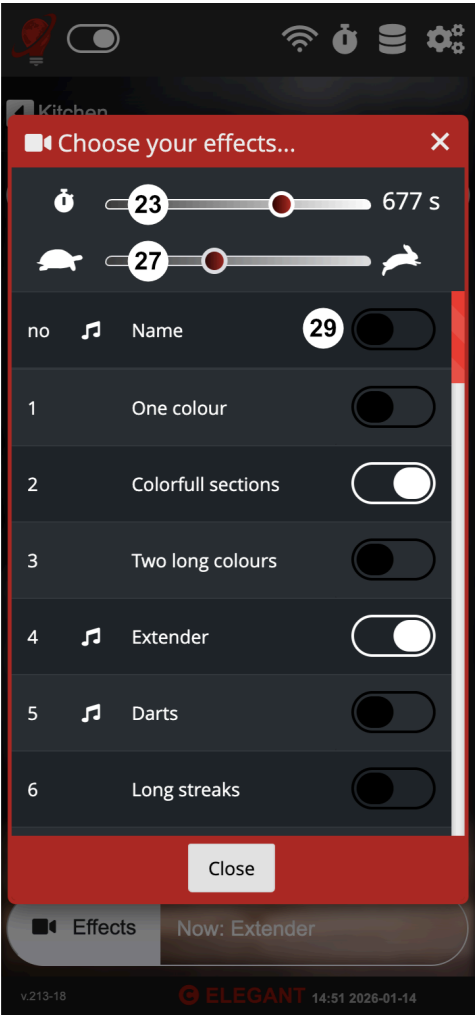


Fig. Effect

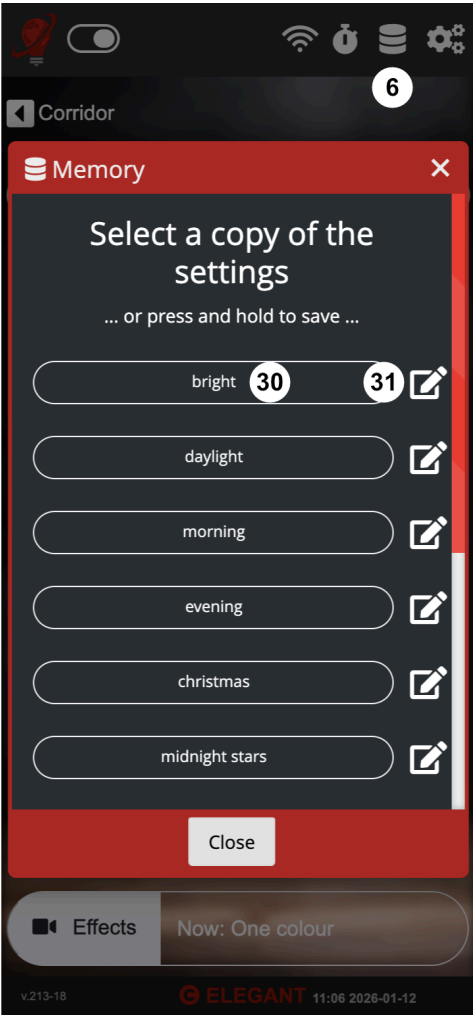


Fig. 8

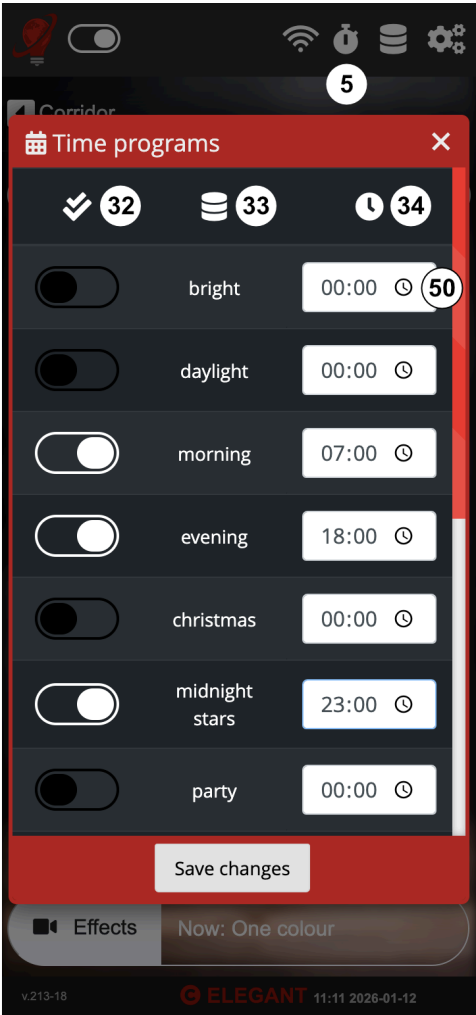


Fig. 9

Memory [Fig. 8]

To call up the memory screen, touch the memory icon (6) on the main screen. The memory screen allows you to store preferred lighting configurations and recall them later with a single touch. Up to 12 lighting presets can be saved.

To store a preset, first configure all lighting zones as required (set the lighting exactly as it should be recalled). Next, open the memory screen and press and hold the selected memory field (30). After approximately three seconds, a confirmation message appears indicating that the settings have been saved.

Once saved, the lighting configuration can be recalled at any time by briefly pressing the corresponding memory button. The "Edit memory" button (31) allows you to enter names for the memory. Names will be displayed instead of memory numbers. To assign a name to any memory, touch the pencil icon, enter the name and confirm by pressing the "Save changes" button.

Time programs [Fig. 9]

To go to time programs, click on the clock icon (5) in the main menu. There is a list of 12 items on the time programs screen. These items correspond to the previously memorized settings (by using the memory function). It works on the principle that you can set which memory is to be recalled at a specific time. The memory activation switch (32), the memory name (33) and the memory activation time (34) are shown in the list.

To set the time of recalling a given memory, press the clock icon (50) and then select the desired time from the list. The device will automatically recall memories according to the schedule you set. For example, memory preset "morning" is set to 07:00, preset "evening" to 18:00, and preset "midnight stars" to 23:00. As a result, the lighting will operate according to memory preset "morning" from 07:00 to 18:00, switch to memory preset "evening" from 18:00 to 23:00, and then load memory preset "midnight stars" from 23:00 to 07:00.

Settings [Fig. 10]

To call the settings screen, click the button with the gear icon [Fig 3,4,5 (7)].

In the "General" tab you will find the serial number of the controller (36), the MAC address (37) and Wi-Fi IP address (38). We can also change the language (39) and theme (40) of the application.

Pairing [Fig. 11]

In this section we can decode the selected controller for a given zone or pair remotes. You can pair a remote control with the bridge, allowing you to control individual zones. However, if you pair the remote directly with the controller, bypassing the bridge, changes will not be visible in the bridge.

To start the pairing process, tap Pair Remote (45). A dialog window will appear; press Start to initiate pairing. Within 2 seconds, press button "1" for the first zone on the remote control. If the pairing is successful, a green status bar will appear at the top of the screen.

To remove paired remotes from the bridge, press the "Remove remotes" button (46) located in the same "Pairing" tab. Then follow the on-screen instructions. This process will delete all remotes assigned to the bridge.

Advanced settings [Fig. 12, Fig. 13]

In this tab we can configure the controllers connected to our LED strip. Change the order of colors (48) and enable/disable the microphone (49) (if the controller has such an option). To do this, follow the instructions on the screen. After completing these steps, disconnect the controller from the power supply and turn it on again.

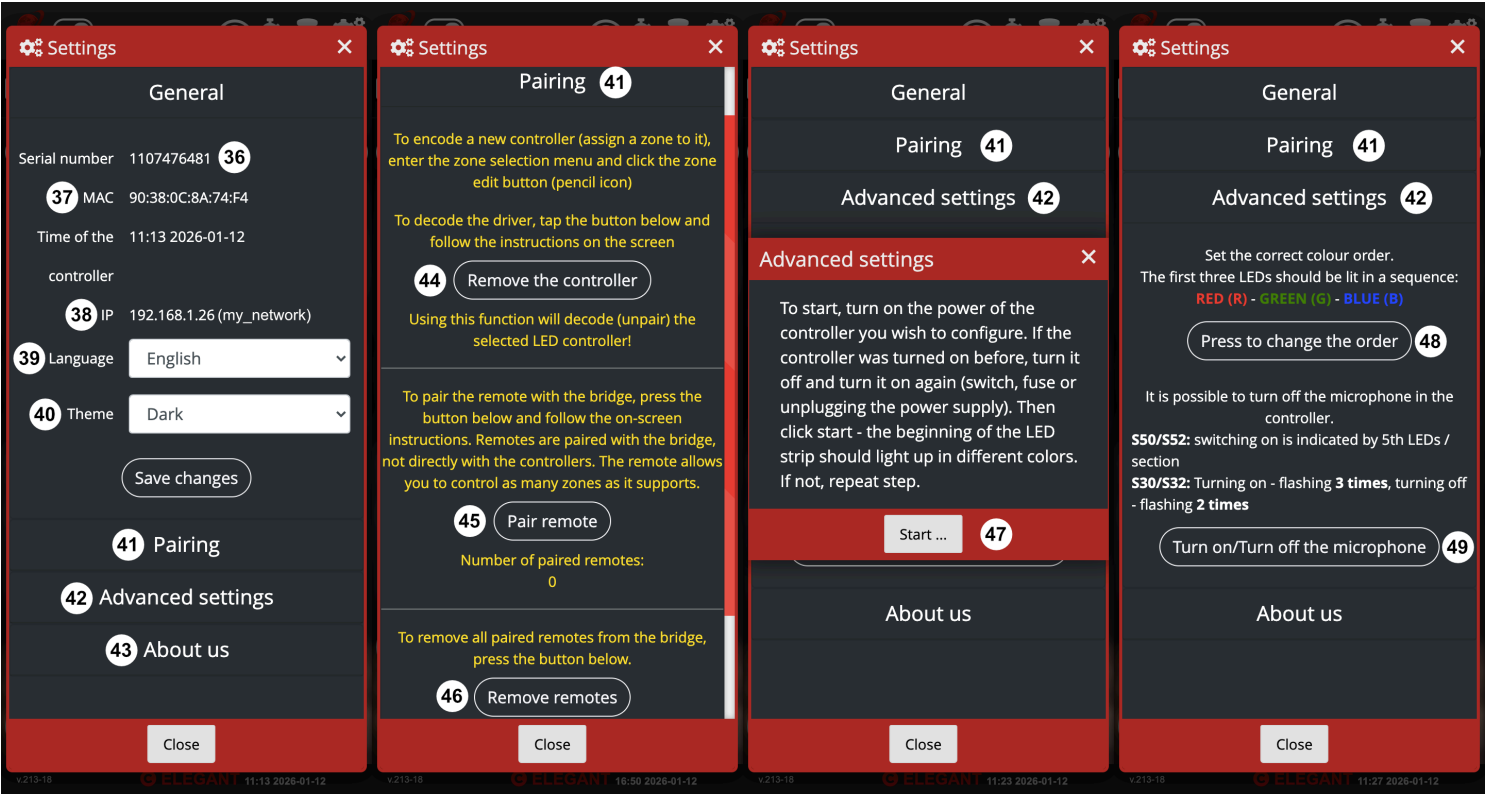


Fig. 10 Fig. 11 Fig. 12 Fig. 13

Information Regarding GET and POST Requests

The controller supports both GET and POST methods.

To send GET parameters, you can use either `http://[controller IP address]/api` or `http://[controller IP address]/dummy.htm`

Example: `http://192.168.1.21/dummy.htm?zone=1&brightness=50`

To send parameters using the POST method, simply use the controller's IP address with the /api endpoint, e.g., `http://192.168.1.21/api`
POST parameters should be sent as a JSON array.

List of controller parameters available via the website and through the GET and POST methods:

Parameter	Values	Description
mastertoggle	1	Main lighting switch toggle
masteronoff	0..1	Switching the main lighting on or off
loadpreset	1..12	Loading settings from the specified memory location
savepreset	1..12	Saving settings to the specified memory location

List of controller zone parameters available via web interface and GET/POST methods:

Parameter	Values	Description
zone	1..24	Zone number (required)
poweron	0..1	Turns the zone lighting on or off
toggle	1	Toggle the zone lighting on or off
brightness	0..127	Sets the brightness level
scene	0..127	Selects the effect number that will be displayed by the controllers.
scenes[4]	0..2 ³² -1	A value containing four bit fields that define the active effects. Each effect is represented by a single bit. Multiple effects can be enabled at the same time. Please note that effect numbers start from 1.
rolleffect	1..n	Selects the roll effect if it is available
colormode	1..5	Defines the color mode. 1: Single color, 2: White, 3: Two colors, 4: Multiple colors, 5: Auto
color1	0x000000..0xFFFFFF / 0..255,0..255,0..255	Specifies the RGB value of the first color for the two color mode.
color2	0x000000..0xFFFFFF / 0..255,0..255,0..255	Specifies the RGB value of the second color for the two color mode.
speed	0..5	Sets the animation speed of effects. For some static effects, it adjusts the density of colored areas.
hue	0..255	Selects the color for single color effects or a color set for multi color effects.
saturation	0..127	Sets color saturation. 0 = minimum, 127 = maximum saturation.
whitemode	0..1	Setting to 1 enables white color mode.
whitetemp	0..127	White color temperature: 0 = warm white, 127 = cool white.

Saving and loading settings via GET method

The GET parameter used to save settings is `savepreset=x`, where x is a number from 1 to 12. To load saved settings via GET, use the parameter `loadpreset=x`, where x is also a number from 1 to 12.

Saving and loading settings via POST method

POST parameters should be sent as a JSON array to the controller's IP address with the /api endpoint, e.g. `http://192.168.1.21/api`

To save settings, use the parameter "savepreset": x, where x is a number from 1 to 12.

To load settings, use "loadpreset": x, where x is a number from 1 to 12.

Example JSON array – saving settings: { "savepreset":5 }

Example JSON array – loading settings: { "loadpreset":5 }

POST Request Examples

Example JSON array - zone parameters:

```
{
  "zone":1,
  "poweron":1,
  "brightness":100,
  "speed":3,
  "colormode":3,
  "color1":"0xFF0000",
  "color2":"0xFFFFFF",
  "scenes":[32,0,0,0]
}
```

GET Request Examples

http://192.168.1.21/api?zone=1&poweron=1&brightness=100&speed=3

http://192.168.1.21/api?zone=1&scene=5&colormode=0

http://192.168.1.21/dummy.htm?zone=1&scenes[0]=32&colormode=3&color1=0xFF0000&color2=0xFFFFFF

http://192.168.1.21/dummy.htm?zone=1&scenes[0]=32&colormode=3&color1=255,0,0&color2=255,255,255

http://192.168.1.21/dummy.htm?zone=1&colormode=1&hue=50

(where 192.168.1.21 is a sample controller IP address)

You can include any number of parameters in a single GET request, but the total URL length must not exceed 1000 characters. GET requests can be sent to both /api and /dummy.htm. The only difference is in the response: /dummy.htm returns OK or FAIL, while /api returns a JSON response with additional information in case of an error.

Required Operating Conditions:

- Ambient temperature: +1°C to +40°C
- Relative humidity: 30% to 75%
- The device may only be installed by a qualified person with the appropriate certifications.

Required Storage Conditions:

- Only in enclosed spaces where the atmosphere is free of vapors and corrosive substances.
- Ambient temperature: -30°C to +40°C, air humidity: 30% to 90% (non-condensing).

Device Disposal:

The device must not be discarded in regular waste bins. Unneeded or used products should be delivered to specialized recycling centers operated by municipal authorities.