

Manual for iRemote

Available for the firmware version 3.0.5 and further

Control elements.

The device has three control buttons for navigation: “UP”, “DOWN”, “PLAY/STOP”.

“UP” and “DOWN” buttons navigate over the menu, shift images in single image mode. Besides, keeping the “DOWN” button pressed in play mode puts the device into performance preparation mode.

Operating conditions.

The device can be in the following conditions:

- Turned off;
- Being charged;
- Menu (sequences or single images);
- Battery level indication. Battery level should be considered as a relative one, for it depends on a displayed image and a battery condition;
- Preparation for performance;
- Play in performance mode.

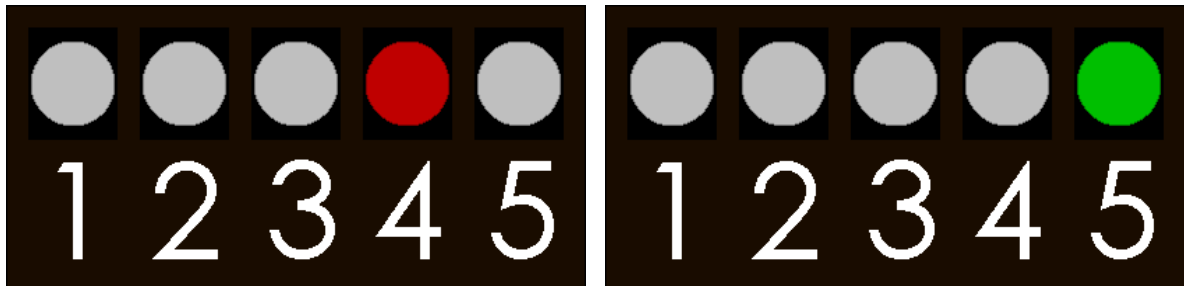
If the battery level is low, the device automatically shuts itself down to avoid deep discharge. Being in the following states: turned on but left alone, in the menu, in battery level indication, in timeline mode or single image mode – in these states the device shuts itself down after 1 hour. In performance mode and in performance preparation mode automatic shutdown doesn't occur.

Button operation.

Initially the device is turned off. To turn it on press and hold the “PLAY/STOP” button for half a second. The device goes into menu indication mode.

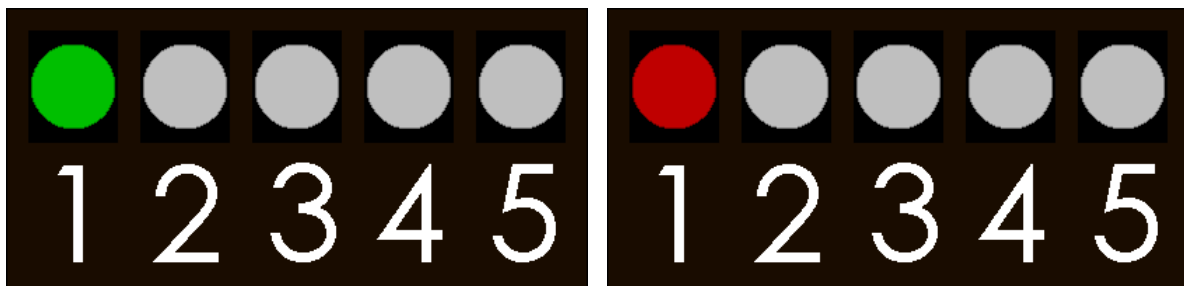
To turn it off press and hold “PLAY/STOP” button not less than for 1 second. After the device is turned off, the LEDs go out.

After the turned off device is plugged in to the charger or a PC, the battery indicator lights up. The red indicator shows the device is being charged, the green indicator shows the device is charged.



In the menu mode select a required sequence (timeline) or a single image.

Navigation over the menu is fulfilled by the “UP” and “DOWN” buttons, confirmation and launch of a selected mode is fulfilled by the “PLAY/STOP” button. Return to the menu is fulfilled by repeated pressing the “PLAY/STOP” button. If a single image is being played, you can switch from one to another by repeated pressing the “UP” and “DOWN” buttons, not returning back to the menu.



Depending on a selected mode, the first LED slowly changes its brightness, glowing green being in the menu, and glowing red when a sequence of a single image is on.

When end positions in the menu mode are reached, switching between timeline and single image modes occurs.

To display the battery level press and hold the middle button of the turned on device for half a second until the battery level scale appears. The current battery level is displayed as a red-to-green gradient.

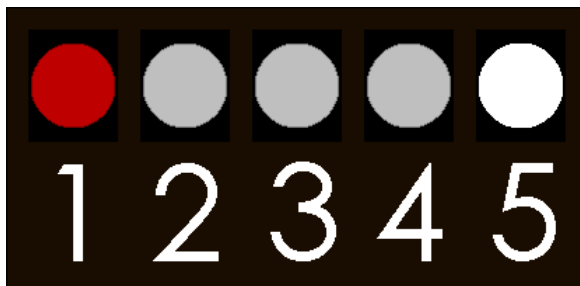


The device has protection from accidental touching the buttons during a performance. It allows to protect your performance program from any faults. For this you should select a required mode (a sequence or a single image), get it into play, and hold the “DOWN” button. In a second the device goes

into performance preparation mode. This mode is indicated by the white LED in the 5th position with the green LED in the 1st. In this mode the device launches all the rest devices in a selected mode after releasing any button of the device.



Performance mode is indicated by the white LED in the 5th position with the red LED in the 1st.



There are three ways to go out of this mode:

- holding the “DOWN” button, get back into performance preparation mode;
- holding the “PLAY/STOP” button, turn the device off;
- holding the “UP” button, get back to the menu.

Radio channel operation.

The devices equipped with the radio feature can be operated centrally by remote controls.

It allows to launch and stop different modes simultaneously for different devices.

On default, group work mode is on. In remote controls it's impossible to turn off radio, for it works only for transmitting.

There are several principal modes for radio operation in the device:

1. Radio is on, total control mode is not active.

In this state the device reacts only on commands to enter into performance preparation mode and to be launched in performance mode. All the other commands are ignored;

2. Radio is on, total control mode is active.

In this state the device totally follows airing commands. Total control over the device is possible solely in this state. It includes:

- navigating over the menu;
- play/stop sequences and single images;
- entrance into performance preparation mode and launching in performance mode;
- going out of performance mode into the menu;
- battery level check-up;
- total shutdown of the devices.

3. Radio is on, group work mode is active;

In this state the devices can be split on several groups (up to 32), thereby allowing each group to work independently. The device will react only to commands aired for the group which the device belongs to.

4. Radio is on, slave mode is active.

In this state the device accepts commands, but doesn't air any.

On iRemote radio and full control modes are always active.

Full control, group work, and slave modes can be activated simultaneously, thereby giving space for flexible settings of the devices and having complete access to all devices of the group, not interfering into the work of other devices.

Slave and full control modes are convenient to use in combination with the iRemote. It allows to get full control over devices, not letting them to interfere into the work of each other.

DMX support.

There is a modification of the iRemote with the support of DMX-512 protocol.

Operation over devices for this model from buttons is not available. Operation is fulfilled only through DMX.

Devices are supported when group work mode is active.

The device takes 64 DMX channels, two channels for each group.

The first channel sets a command code, the second one – its parameter.

Table of supported commands:

Code	Command	Parameter
0	Empty	Don't care.
1	Launch in safety mode	Number of mode.
2	Preparation to launch in safety mode	Number of mode.
3	Full shutdown of the device	Don't care.
4	Launch in normal mode	Number of mode.
6	Shifting over the menu, setting up a mode without launch	Number of mode. If zero it transmitted, the return to the menu occurs. Don't care.
7	Battery level indication	Don't care.
9	Preparation to shutdown	Don't care.
33..43 (13%..17%)	Preparation for launch with locked buttons	Number of mode.
58..68 (23%..27%)	Launch with locked buttons	Number of mode.

Codes of commands , which are not mentioned in the table, are reserved for future expansion, and reaction of devices on them is not defined.

iRemote doesn't react on repeated commands. To transmit the repeat you need a zero command. After this iRemote will react on a command once again.

The zero-code command is used to skip the groups that don't require any commands sent to them.

The parameter “number of mode” implies:

- 0 – the mode is not changed.
- 1..10 – succession from 1 to 10.
- 11..90 – single image from 1 to 80.

Comment: If a number of a mode not supported by the device is transmitted (more than 70 for Lite models and more than 90 for all other models), then the device doesn't change the mode, but executes the command with a current mode.

Commands with the codes from 3 to 9 are processed by devices on which full control mode is active.

Modes of iRemote operation with DMX.

For iRemote with DMX the adjustment for group work and command transmittal mode to all groups is not available. In this device the group work mode is always active and a definite command is sent to each group. It depends on data coming through DMX channel.

For simplification of interaction and autonomous work of the device the logic of its work is changed:

- With power supply through USB or with pressing “PLAY/STOP” button the device turns on.
- With connection of a source of power through USB the device is always turned on.

The device shuts itself down after 1 hour after:

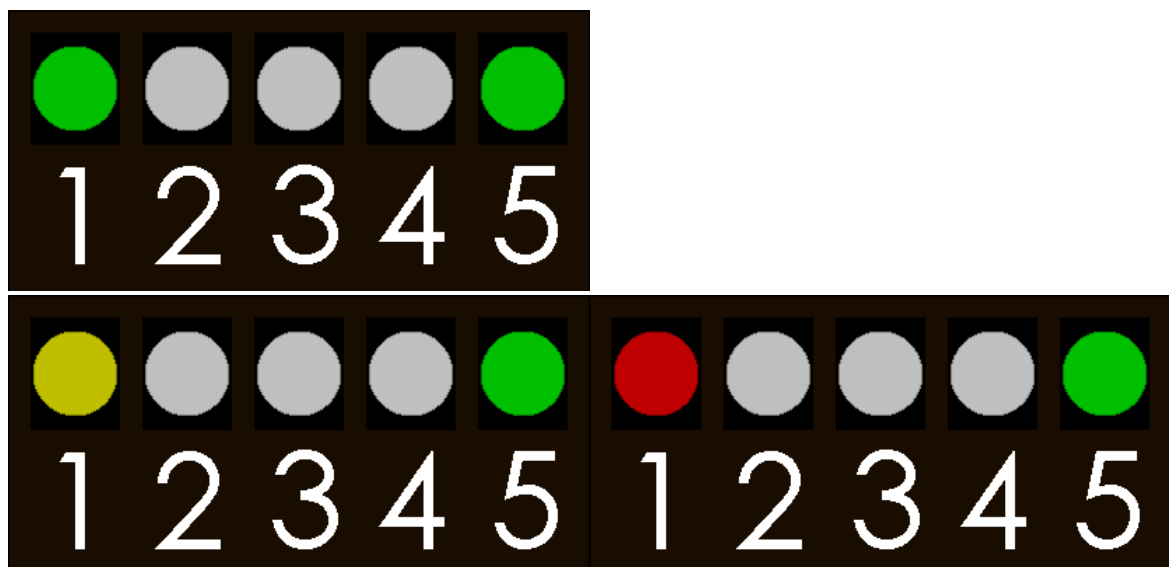
- any button is pressed;
- correct DMX data stop coming if there is no power going by USB.

Indication of iRemote with DMX

Indication is changed and is fulfilled by means of two LEDs.

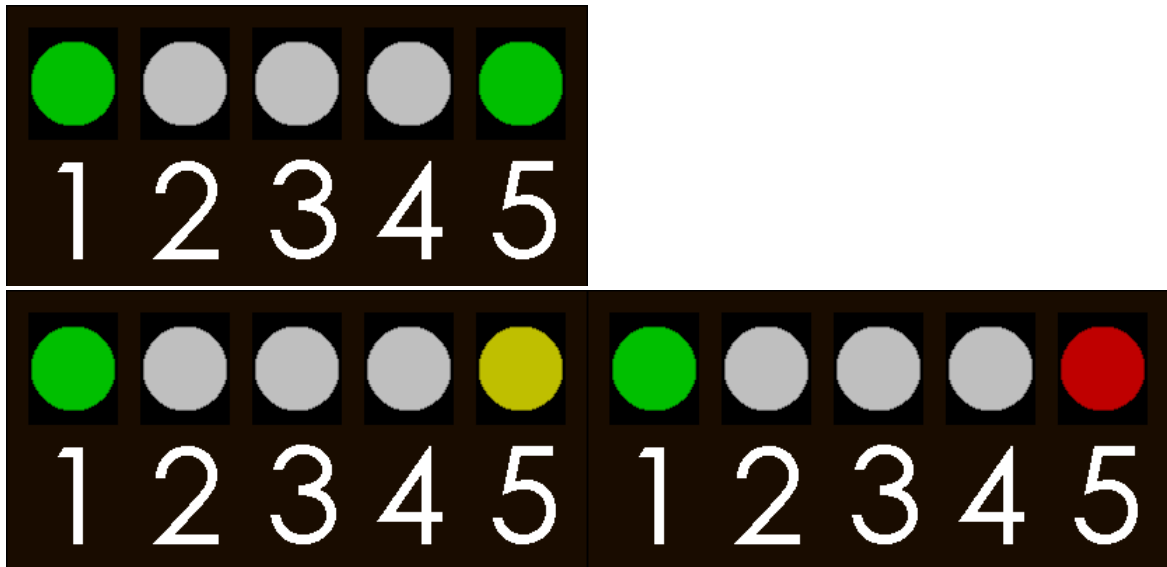
A slowly blinking LED on the first position shows status of the device:

- Green – everything is all right.
- Yellow – there was no correct DMX pack during the latest second.
- Red – there was no correct DMX pack for all period of the operation.



Constantly glowing LED on the 5th position shows battery level:

- Green – battery level is more than 60%;
- Yellow – battery level is 40-60%;
- Red – battery level is 10-40%;
- Blinking red – battery level is less than 10%.

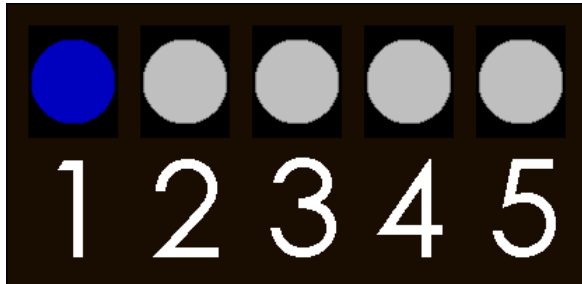


Settings of the device and status of the system.

Through the system menu some parameters can be adjusted, as well as the state of the device can be checked out.

You can adjust parameters of the radio, choose a group the device belongs to, and a DMX address.

To enter into the system menu press and hold “UP” and “DOWN” buttons for 1 second until indication changes:



Description of the points of the system menu can be found in the app. № 1.

Appendix 1. Description of the points of system menu:

System menu is arranged into basic menu and several submenus.

Navigation over the menu is fulfilled by:

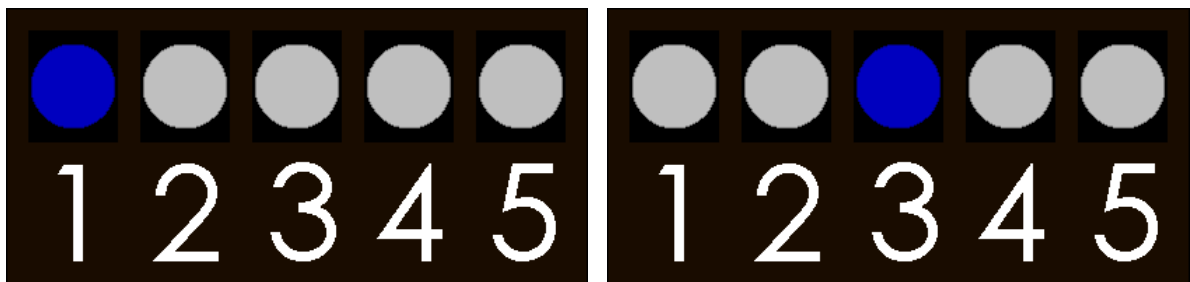
- “UP” and “DOWN” buttons shift the cursor to the left and to the right, correspondingly;
- Short (less than half a second) pressing the “START/PLAY” button enters into the menu and changes a parameter;
- Long (more than half a second) pressing the “START/PLAY” button goes out of the system menu.

Indications in the system menu.

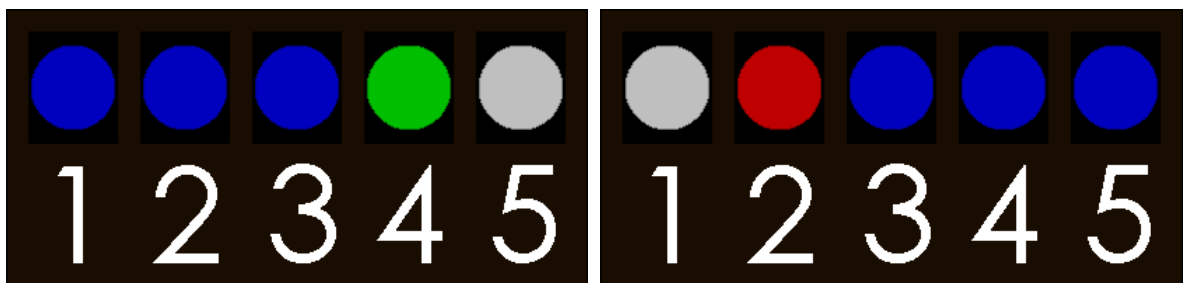
A single blue LED means that you are in the system menu and indicates the selection of the submenu. A red or green LED with a blue tail indicates an edited parameter in the submenu.

A red LED means that the parameter is inactive, a green one means that the parameter is active.

This is an example of navigation over the system menu. The blue cursor indicates the first and third submenu, correspondingly.



The left figure shows the 4th parameter, and it is active. The right figure shows 7th parameter, not active.



System menu points description.

1. Status and settings of radio;
2. Radio channel selection;
3. Group selection;

Submenu points description.

Submenu 1 – status and settings of the radio.

1. Availability of the radio.
2. Not used.
3. Not used.
4. Group work (not available for DMX version).
5. Sending of a command to all groups, not only to a selected one (not available for DMX version).
6. Not used.
7. Not used.

Submenu 2 – Radio channel selection;

In this submenu you can select a frequency which radio module works on.

The frequency is set in accordance with the table in the appendix 2.

Submenu 3 – Group selection (for usual remote) or DMX address selection (for DMX version).

In this submenu you should select a group which the device or an address of the device belongs to.

A selected group and DMX address are set in accordance with the table in the appendix 2.

Appendix 2. Reference tables.

A reference table to select the group.

Columns: menu point condition.

Lines: selected group.

	1	2	3	4	5
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
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22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					

Reference table to select a channel of the radio module:

Columns: menu point condition.

Lines: selected channel.

	1	2	3	4
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				

Note: 13th channel or farther ones are not available. If chosen, 13th channel will be set forcedly.

Set frequency can be calculated by the formula: $\text{Freq [MHz]} = 2400 + (\text{Val} - 1) * 10$

For example, if the first channel is selected ,the radio unit works on 2400Mhz. If 12th channel is selected – then 2510Mhz.

Lookup table for DMX address selection:

Columns: menu points state.

Lines: selected DMX address.

	1	2	3	4	5	6	7	8	9
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
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24									
25									
26									
27									
28									
29									
30									
31									
32									

[illegible]

iRemote	1	2	3	4	5	6	7	8	9
449									
450									
451									
452									
453									
454									
455									
456									
457									
458									
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471									
472									
473									
474									
475									
476									
477									
478									
479									
480									

iRemote	1	2	3	4	5	6	7	8	9
481									
482									
483									
484									
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486									
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489									
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509									
510									
511									
512									

Note: If a selected address is more than 448, the number of available groups for operating is reduced up to single group with the channel 511 selected. With 512 channel operating through DMX is not available.