User Manual

irCUE

Version 01

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User Manual irCUE
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1. Introduction

1.1. Overview

The **irCUE** wireless hand-held remote control panel is a compact infrared transmitter with a distinctive black plastic / wood and stainless steel enclosure. Supplied in three versions of wood – mahogany, white birch and oak and two versions of plastic, the irCUE is designed to blend even with the most critical environments. Providing 33 dedicated buttons, the irCUE remote control is prepared to fit perfectly in your hand. It is the ideal solution for the control of audio, video and lightning in boardrooms, conference rooms and homes.

The irCUE Receiver 485 links IR wireless control panels to the CUEwire (RS-485). It is an infrared receiving unit designed for ceiling mounting (similar to halogen lamps mounting). Using multiple IR receivers within the unit, the irCUE Receiver 485 provides signal receiving in a horizontal level from all directions.

1.2. Models

Model	Product code	Description
irCUE	CS0324	Wireless IR remote hand-held control panel, 33 buttons
irCUE Receiver 485	CS0169	IR receiver with connection to CUEwire

1.3. Features

- 32 freely programmable buttons
- All programmable buttons can have two different functions changed by the Fn button
- Dedicated buttons for the most frequent functions
- One-way infra-red communication
- Plastic upper part of the front panel for customized engraved labels for 11 buttons
- Touch sensor for automatic switching of backlight
- Stainless-steel and wooden or plastic case
- Quick recharging by the supplied docking station
- Max. transmitting range 10 m / 30 ft
- Charging indication

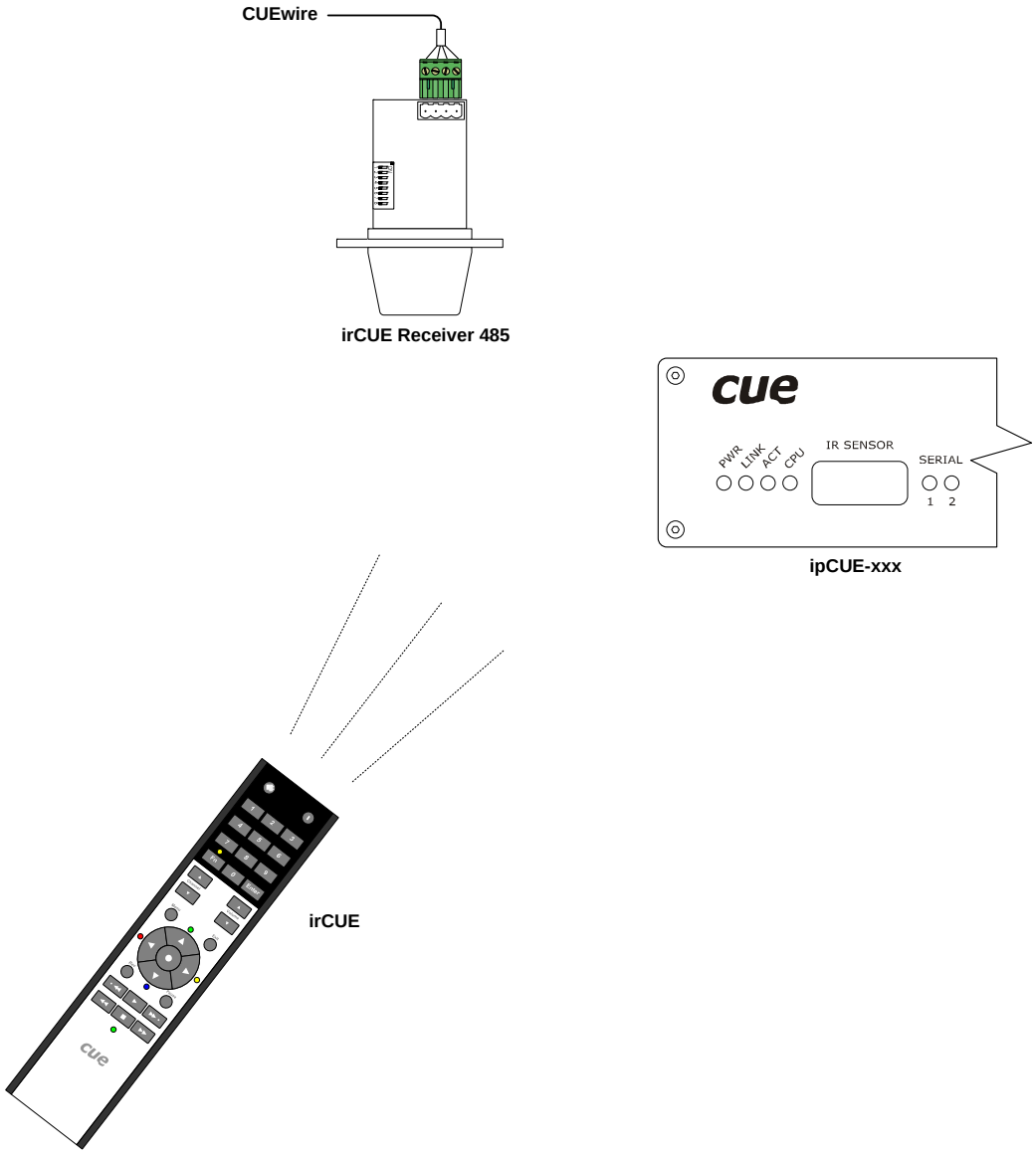
1.4. Programming

All panels are programmed using **Cue Director XPL** programming tool.

2. Using

The irCUE is connected to the rest of control system via IR communication. As IR receiver you can use IR receiver built-in controllers (ipCUE-alpha, beta, delta, epsilon) or external unit irCUE Receiver 485 or receivers built-in keypadCUE-8-L, keypadCUE-8-E.

The example of irCUE, ipCUE controller and irCUE Receiver 485 configuration is described in the picture below.



Notice: to enable the IR receiver on ipCUE controller, make the following two steps:

- Enable IR receiver in AdminWeb of controller. In the menu *Configuration – IR receiver* select "*IR receiver controlled by XPL application*" item.
- Place the command *IrReceiverEnable* to the Autoexec sequence of the controller program

3. Charging

The irCUE wireless remote control panel is powered from internal LiOn accumulator 2000 mAh.

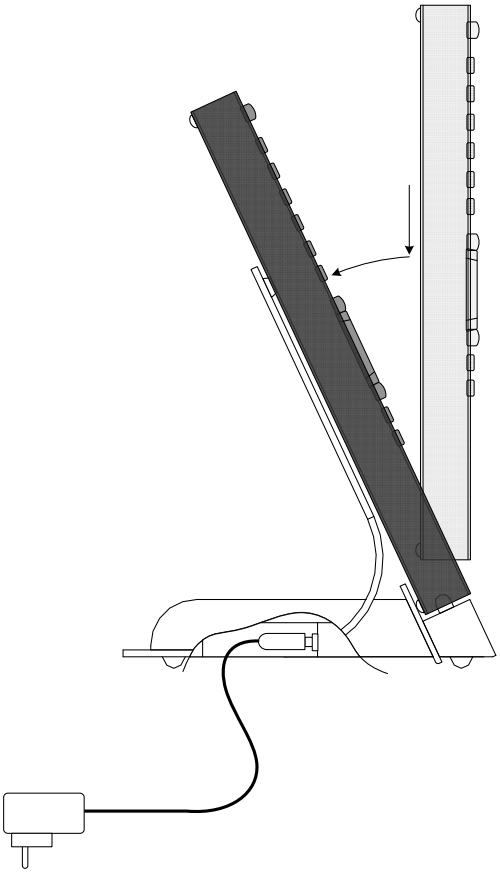
To charge the accumulators, use the delivered charging docking station with power supply adapter. Connect the output jack from power supply adapter to the connector placed on the bottom side of the docking station (see picture) and plug the adapter into power (110 – 230 V / 50-60 Hz). The charging time for a fully charged accumulator is about **4 hours**. Longer charging time is not dangerous because the protection against overcharging is built in.

It is recommended to connect the irCUE to the docking station at the end of every day. Place irCUE to the docking station also in case there is a lower range of the transmission or when the backlight brightness is reduced.

Charging is indicated by the LED charging indicator placed on the front panel (see picture on the next page).

- RED light – accumulator is charging
- GREEN LIGHT – accumulator is fully charged

If irCUE is not placed in the docking station and the charging indicator flashes RED every few seconds, it means that the accumulator is going to be discharged. In such case, place irCUE to the docking station.



4. The Front Panel

The front panels are equipped with

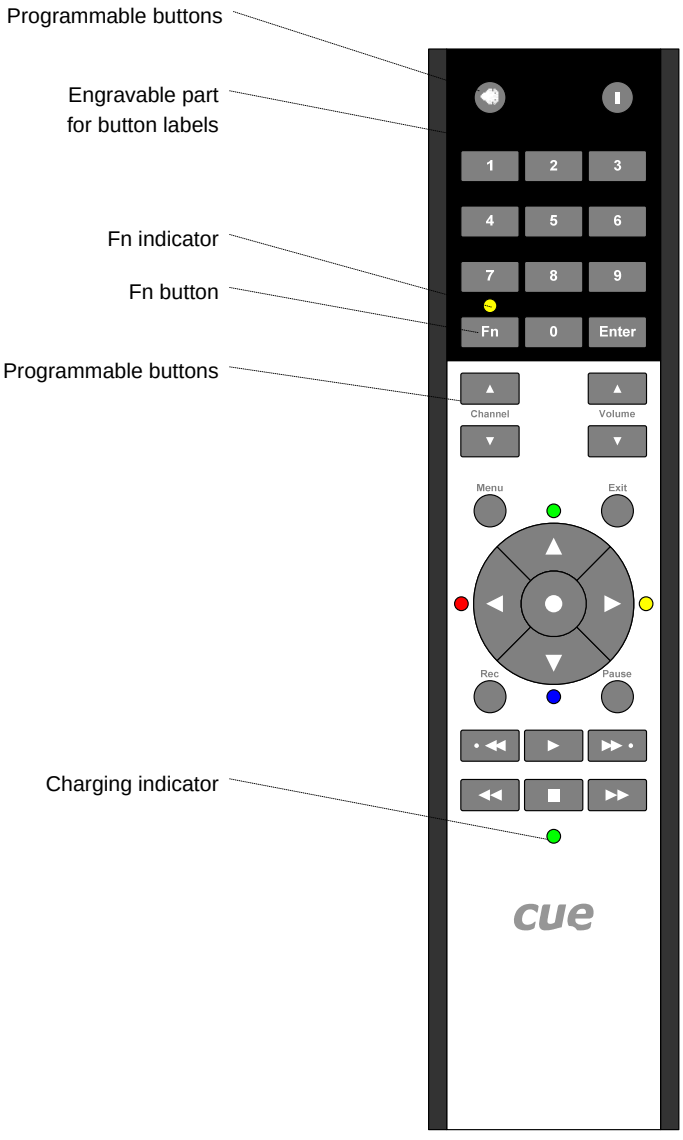
- 32 programmable buttons
- Plastic upper part of the front panel for customized engraved labels for 11 buttons
- Fn button and Fn Indicator
- Charging indicator

The **Programmable buttons** send IR codes to irCUE Receiver.

The **Fn button** changes first and second function of all programmable buttons.

The **Fn Indicator** lights when the second functions of programmable buttons are selected.

The **Charging indicator** indicates the charging and battery status.

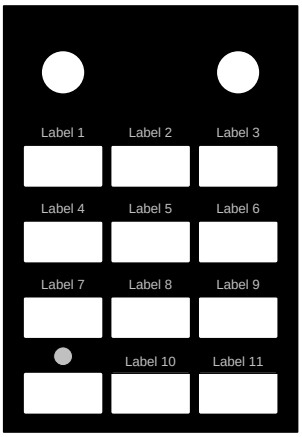


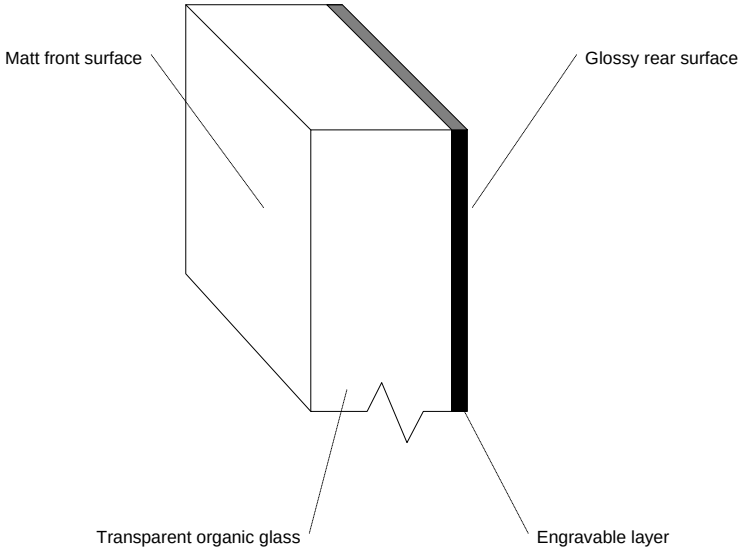
5. Button Labels

irCUE uses the separate plastic upper part of the front panel for customized engraved labels for 11 buttons.

Steps

1. Have the labels engraved on the rear surface of the plastic upper part of the front panel. Labels must be engraved specularly. Recommended fonts are Nimbus, Trebuchet, Verdana or Arial, size 6 points, bold.





2. Clean and degrease the rear glossy part of engraved front panel by denatured alcohol.

3. Remove the release liner from top part of irCUE.
4. Place the engraved front panel to the upper part of irCUE, Make sure, that the buttons can be pressed easily and then press the panel to stick together with the irCUE. Be as precise as possible, because it very difficult to remove the panel once it has been glued.

6. Addressing

The BUTTON_ID transmitted by the panel is the LINK number used in the programming for button identification. The value depends on the button position, on **Fn button** and on a panel ADDRESS too. Default panel ADDRESS is 0. BUTTON_ID is calculated according a formula.

If Fn is not activated: **BUTTON_ID= (64 * ADDRESS) + Button Code**

If Fn is activated: **BUTTON_ID= (64 * ADDRESS) + Button Code + 32**

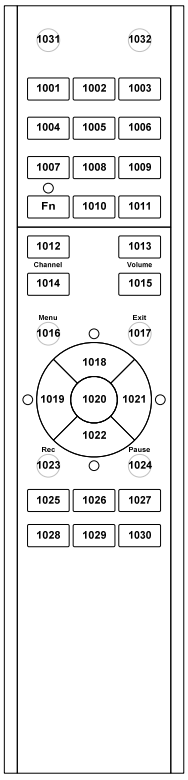
The Fn button changes the first and second function of each button. If Fn is not active, LED above Fn button is switched off and there is no modification of BUTTON_ID (the button has its first function). If Fn is active, the LED above Fn button is on and all buttons have their second functions (BUTTON_ID is shifted by 32).

Every press of the button changes Fn activity. If Fn is active, after 1 minute it is switched off automatically.

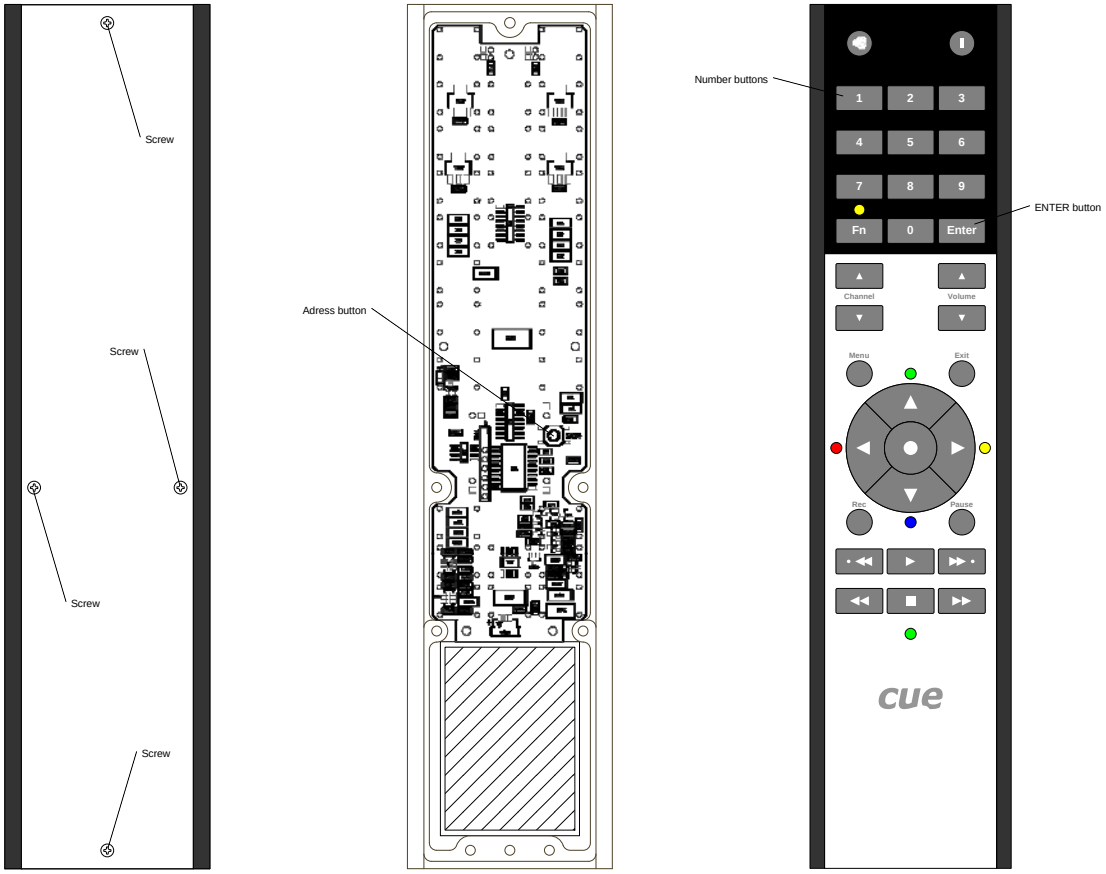
For example, button PLAY has the Button Code 1026. Panel ADDRESS is set to 0. If Fn is not activated, the pressing of the PLAY button will generate BUTTON_ID: 1026. If Fn is activated, the pressing of the PLAY button will generate BUTTON_ID: 1058.

For addressing with irCUE Receiver 485 see chapter **irCUE Receiver 485 / Addressing**.

The button codes are numbers from 1001 to 1032 and they are shown in the following picture.



The ADDRESS of the panel can be set in the range **0** to **47**. Default panel ADDRESS is 0, addresses 1 to 47 can be set up by the following procedure:



1. Undo four screws on the rear panel of irCUE and remove the rear cover plate.
2. Press the address button on the PCB. The backlight of irCUE is switched on now and Fn LED is flashing.
3. Type a 2-digit address using the number buttons on the front side of irCUE (for example for ADDRESS 0 press buttons 0 and 1) and then press ENTER.
4. If the address has been set correctly, all LEDs are switched off now.
5. If the address has not been set correctly, the color LED around navigation cross will start flashing. In this case address has not been modified. Start again from point 2.
6. Mount back the rear cover plate of irCUE.

In the table below there are BUTTON_ID ranges for all addresses.

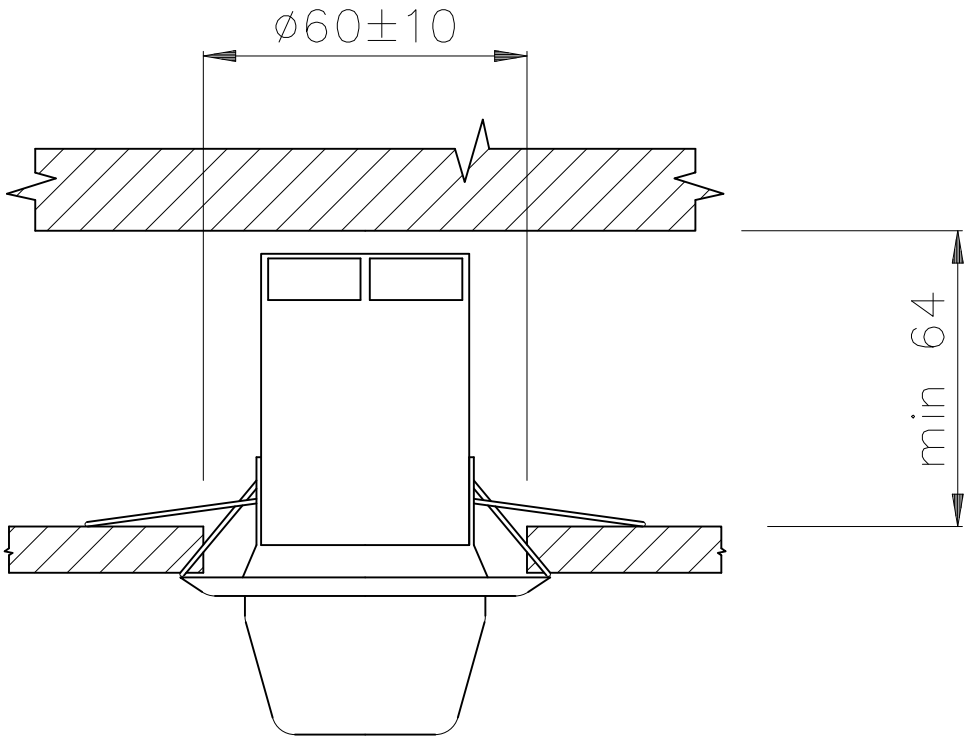
ADDRESS	BUTTON_ID range	
0	1001	1064
1	1065	1128
2	1129	1192
3	1193	1256
4	1257	1320
5	1321	1384
6	1385	1448
---	---	---
46	3945	4008
47	4009	4072

7. irCUE Receiver 485

7.1. Mounting

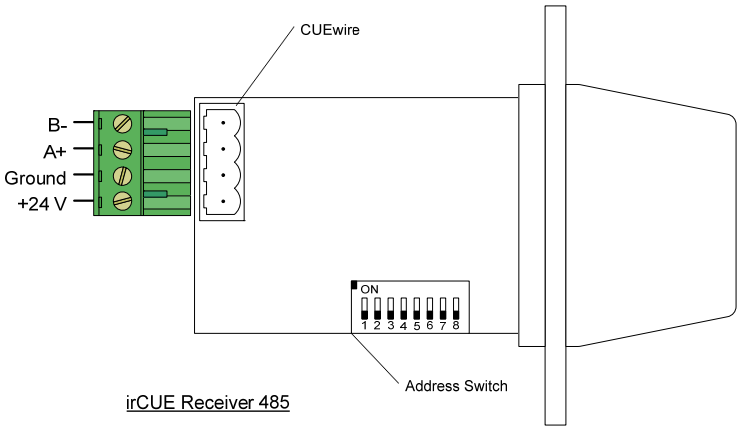
The ceiling near the center of the room is the best place to install it. The receiver can be mounted to the double ceiling as described in the picture below. **The hole diameter is 60 mm**. The minimum vertical space for the receiver is 64 mm.

All dimensions are in mm.

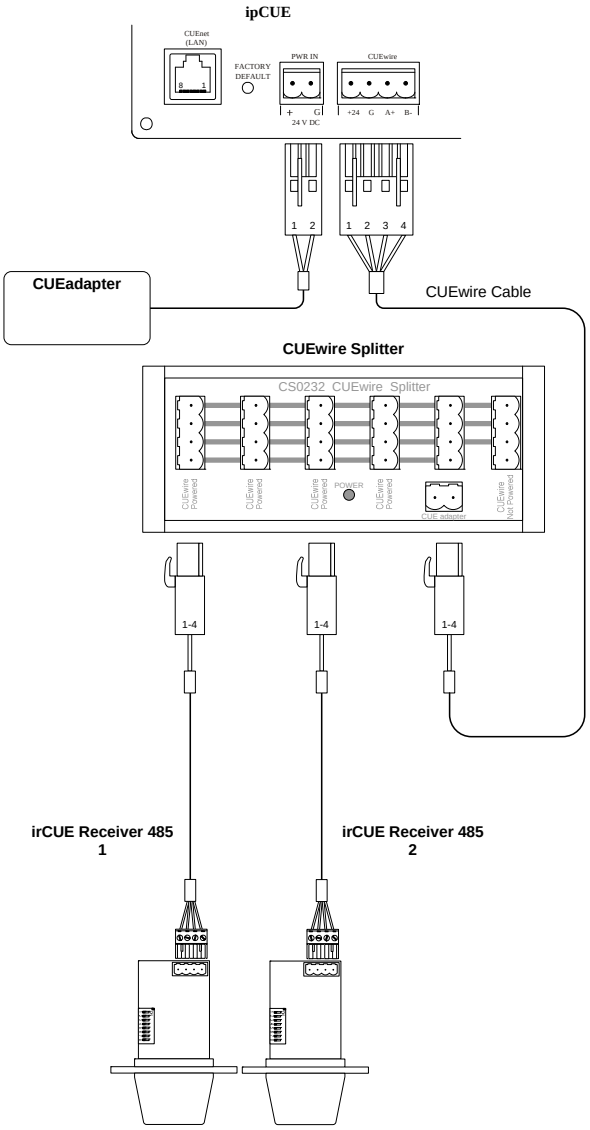


7.2. Connecting

Using terminals (Phoenix 4-pin, 5.08 mm), irCUE Receiver 485 can be connected to CUEwire.

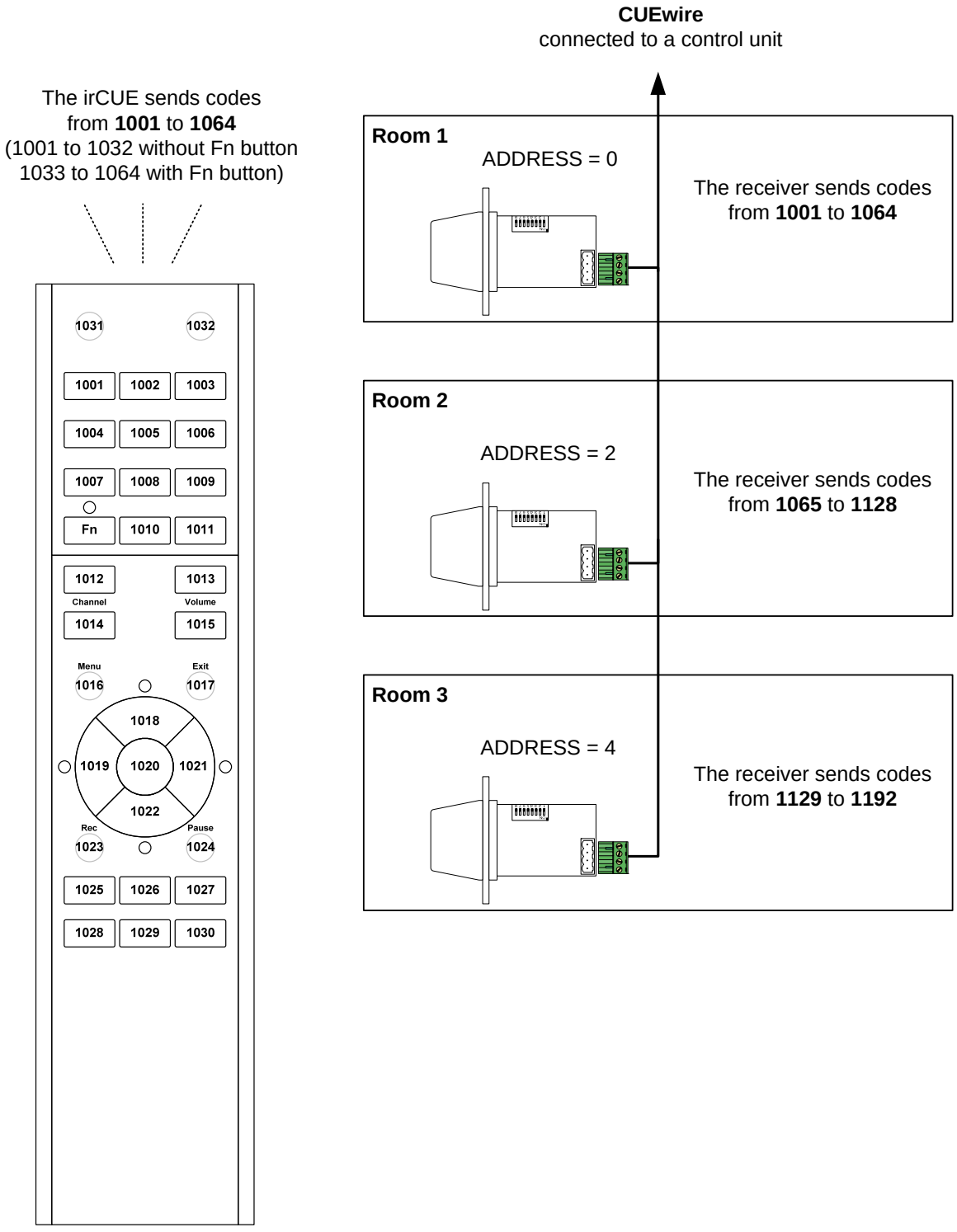


irCUE Receiver 485



7.3. Addressing

It is possible to add an offset to a BUTTON_ID sent by the panel using irCUE Receiver 485. It can be very helpful in multi-room installation - the same panel can be identified in each room. That means one panel can start different actions in different rooms - see example in the picture below.

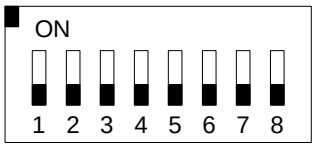


The address of the receiver can be set up by the Address Switch - see picture above. The BUTTON_ID sent by irCUE Receiver 485 to the control unit is a BUTTON_ID sent by IR wireless control panel with an added OFFSET value. Button ID and OFFSET values are calculated according to the formulas below.

BUTTON_ID (irCUE Receiver 485) **= Offset + BUTTON_ID** (IR wireless control panel)

Offset = 32 * ADDRESS

ADDRESS is binary coded by DIP switch in the range **0** to **255**.



SW1 – ADDRESS bit 0
SW2 – ADDRESS bit 1
SW3 – ADDRESS bit 2
SW 4 – ADDRESS bit 3
SW 5 – ADDRESS bit 4
SW 6 – ADDRESS bit 5
SW 7 – ADDRESS bit 6
SW 8 – ADDRESS bit 7

ADDRESS of irCUE Receiver 485	OFFSET	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8
0	**0**	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
1	**32**	**ON**	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2	**64**	OFF	**ON**	OFF	OFF	OFF	OFF	OFF	OFF
3	**96**	**ON**	**ON**	OFF	OFF	OFF	OFF	OFF	OFF
...									
255	**8 160**	**ON**	**ON**	**ON**	**ON**	**ON**	**ON**	**ON**	**ON**

8. Troubleshooting

1. The brightness of LEDs is visibly decreasing and the charging indicator flashes every few seconds
    - The accumulator is going to be discharged.
    - Charge the accumulator immediately.

2. When pressing the button, the LEDs go on and off immediately.
    - The accumulator is totally discharged.
    - When waking up from the sleep mode it tries to light on the LEDs.
    - Increased consumption causes a drop in voltage, which as a result resets the microprocessor.
    - Charge the accumulator immediately.

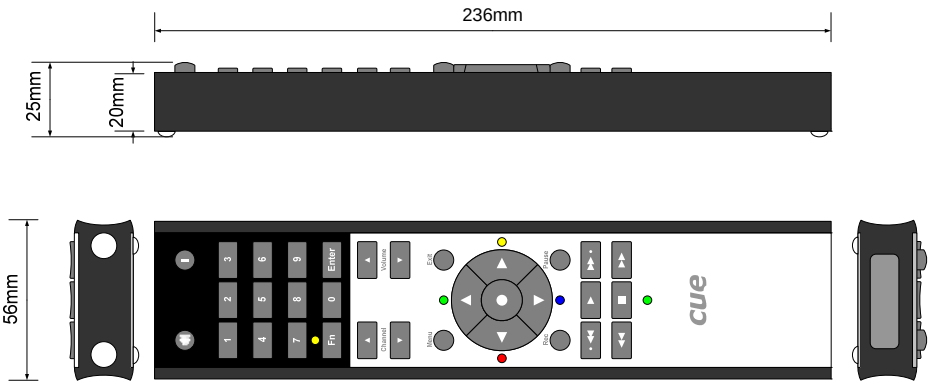
3. The IR operating range is short.
    - Check the accumulators in the panel and recharge them.
    - Change the position of the panel or receiver.

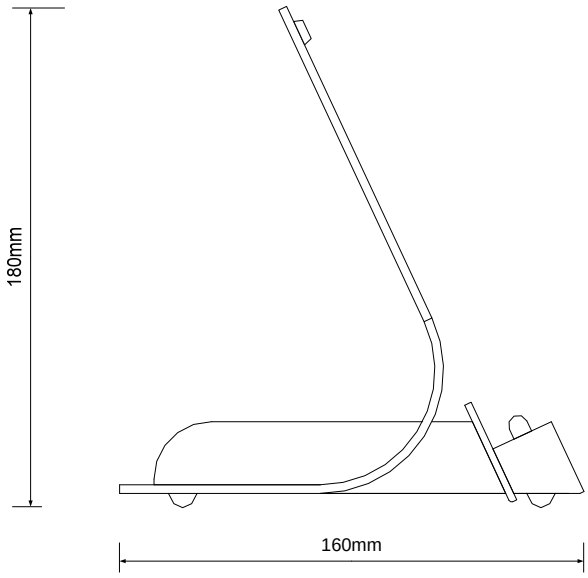
9. Specifications and Mechanical Drawings

9.1. irCUE

Buttons layout	32 freely programmable buttons + 1 Fn button
Backlight	Automatic switch on by touch sensor
Communication	IR
Max. transmitting range	10 m / 30 ft
Power supply	LiOn rechargeable battery pack 2000 mAh
Enclosure	Plastic or wood / stainless steel panel
Dimensions irCUE (WxHxD)	56 mm (2.2”) x 236 mm (9.3”) x 25 mm (1.0”)
Dimensions irCUE Docking Station	80 mm (3.1”) x 180 mm (7.1”) x 160 mm (6.3”)
Weight of irCUE	0.38 kg / 1 lb
Supplied accessories	Charger, output 12V / 30W, input 110 - 230 VAC, 50 / 60 Hz
	Docking Station

All dimensions are in **mm**.

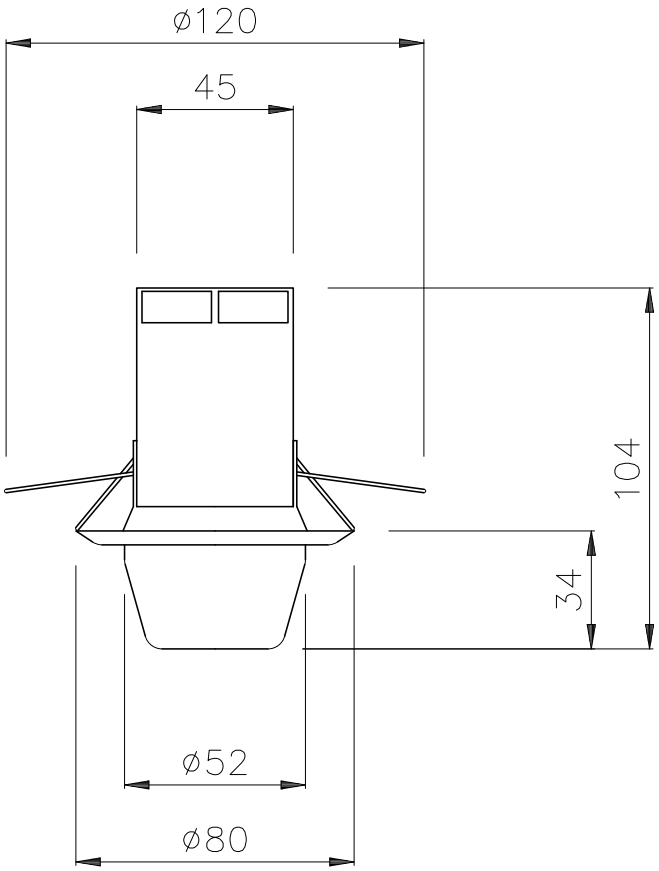




9.2. irCUE Receiver 485.....

Receiving.....Horizontal level 0 - 360 degrees
Vertical level .....60 degrees
System connection .....CUEwire (RS-485), screw terminals
Power supply.....24 VDC (+/- 20%), 1 W
Enclosure.....Metal, plastic cover
Dimensions.....Diameter 81 mm (3.2”), height 104 mm (4.1”)
Weight.....0.1 kg / 0.3 lb

All dimensions are in **mm**.



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