# EUR1220

# Relay Switch Controller

## Summary

Thanks for using the EUR1220 relay switch controller. The product adopts advanced microcomputer control technology, analysis widely used DMX-512 (1990) /RDM,DALI standard protocol, and EU-BUS protocol developed by EUCHIPS, output 12 relay switch signal. The maximum carrying current of each relay switch is 20A,the total 12 channel is 240A.In addition, the device can be connected into the Dynalite system by the Dynalite gateway (Note: the Dynalite trademark holder is PHILPS, the relevant right is owned by the holder of the trademark, the same below)
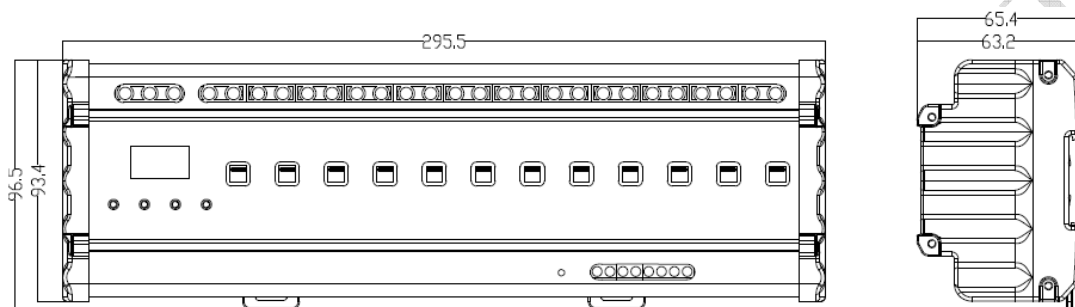
## Product Features

- Meets DMX512(1990)/RDM,DALI IEC62386 protocol and EU-BUS protocol developed by EUCHIPS
- Output 12 channel relay switch signal
- Built-in LCD, the user can operate more conveniently
- Set fades time of each channel separately, range of 0.1-60.9s
- Standard 35 mm din rail, convenient installation
- Relay switch channel can be turned on or off manually
- Can save up to 8 events
- Suitable for intelligent lighting control - Home Furnishing, office buildings, schools, stadiums, outdoor architecture etc.

# Technical Parameters

| Item | Parameters |
|---|---|
| Input voltage | 100-240VAC 50/60Hz |
| Input control signal | DMX512(1990)/RDM，DALI IEC62386,EU-BUS signal |
| Max carrying current | 20A*12ch |
| Dimension | 295.5*93.4*63.2mm(L*W*H),standard 35mm din rail |
| Pack size | 230*104*72mm(L*W*H) |
| G.W. | 1100g |
| Operational temperature | -20-40℃ |

# Dimension(mm)



# Function Show of The Product



Figure 1

| | |
|---|---|
| 1 | AC input port |
| 2 | 12 relay switch output ports |
| 3 | LED display |
| 4 | Function button |
| 5 | Switch(it is effective under EU-BUS mode), Press 1 time: the device report its own serial number information; Press 3 times continuously: all the channels have output; Press for 4s or more: the device is reset and restarted |
| 6 | DMX 512/RDM input port and 12 V output port |
| 7 | Input signal of dry contact, used for detecting external signals, and triggering device to response |
| 8 | DALI signal input&output port |
| 9 | Manual switch |

# LCD Function

After a successful connection, the main menu will be seen,including control mode, output mode, time event, system settings and system information,see figure 2 and figure 3. Press the button "Enter" to enter the sub menu,press "BACK" to return to the upper menu, press "Up" or "Down" button to move the cursor up or down.
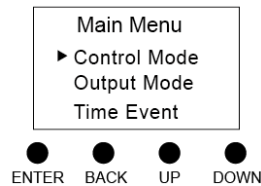
Main Menu
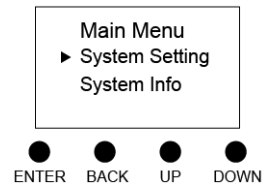▶ Control Mode
Output Mode
Time Event

ENTER  BACK  UP  DOWN

Figure 2

Main Menu
▶ System Setting
System Info

ENTER  BACK  UP  DOWN

Figure 3

| Button | Function |
|--------|----------|
| ENTER | Confirm key,confirm the selected state,enter the option to set the state |
| BACK | Return key, return to the upper menu,exit the option to set the state |
| UP | Move up the cursor; change the status of the option; when setting DMX Address, Threshold, Fade Time, long press "UP", the value will increase rapidly |
| DOWN | Move down the cursor; change the status of the option; when setting DMX Address, Threshold, Fade Time, long press "DOWN", the value will decrease rapidly |

# Control Mode

## 1. EU-BUS Mode

In the current mode, the output signal is controlled by EU-BUS command, the upper computer can scan the device, and assign the address, read the parameters, and the device can operate according to the instruction of the upper computer.
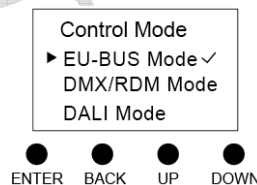
Control Mode
▶ EU-BUS Mode ✓
DMX/RDM Mode
DALI Mode

ENTER  BACK  UP  DOWN

Figure 4

## 2. DMX Mode

In the current mode, the output signal is controlled by DMX/RDM.

When using DMX512(1990) protocol, press" ENTER"，then set DMX address for each channel . The value can be set from 1 to 511. The addresses of each channel are independent of each other, and can be the same or different. To set the same address for all channels, you can control the group.

When using RDM(2009), the upper computer can scan the device, and assign the address, read the parameters.
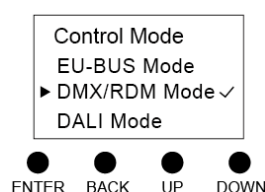
Control Mode
EU-BUS Mode
▶ DMX/RDM Mode ✓
DALI Mode

ENTER  BACK  UP  DOWN

Figure 5

DMX/RDM Mode
DMX Addr
▶ 1 : 1    2 : 7
3 : 2    4 : 4
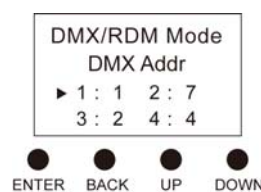
ENTER  BACK  UP  DOWN

Figure 6

## 3. DALI Mode

The output signal is controlled by the DALI command in this mode. The address of the DALI mode is defined by the system itself or modified by the host computer. Press "ENTER" to read the short address of 12 channels, The addresses of 12 channels are independent of each other.
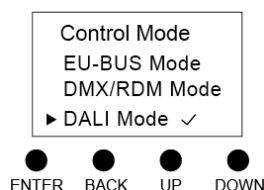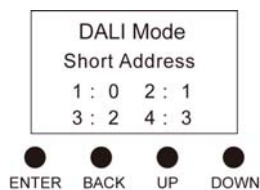
```
Control Mode
EU-BUS Mode
DMX/RDM Mode
▶ DALI Mode ✓

ENTER   BACK   UP   DOWN
```
Figure 7

```
DALI Mode
Short Address
1 : 0    2 : 1
3 : 2    4 : 3

ENTER   BACK   UP   DOWN
```
Figure8

## 3.Manual Mode

In the current mode, you can manually turn on or off the relay switch signal.

```
Control Mode
▶ Manual Mode

ENTER   BACK   UP   DOWN
```
Figure 9
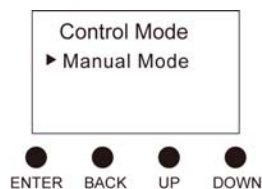
```
Manual Mode
Relay Channels
1 : OFF  2 : OFF
▶ 3 : OFF  4 : ON

ENTER   BACK   UP   DOWN
```
Figure 10

# Output Mode

## 1. Fade Time (note1)

In the current mode, set fade time of each channel.The range is 0 -60.9s.

```
Output Mode
▶ Fade Time
Threshold

ENTER   BACK   UP   DOWN
```
Figure 11
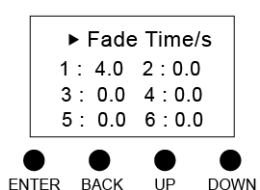
```
▶ Fade Time/s
1 : 4.0  2 : 0.0
3 : 0.0  4 : 0.0
5 : 0.0  6 : 0.0

ENTER   BACK   UP   DOWN
```
Figure 12

## 2. Threshold (note2)

You can set the switch threshold for each relay switch channel. When the received brightness value is more than or equal to the threshold value, open the output, or else shut down the output. The setting range of brightness threshold value is 0-100%, corresponding to the brightness level of 0-255.
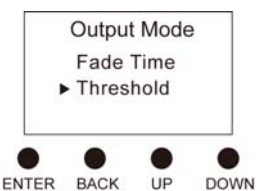
```
Output Mode
Fade Time
▶ Threshold

ENTER   BACK   UP   DOWN
```
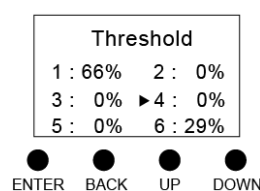Figure 13

```
Threshold
1 : 66%   2 :  0%
3 :  0%  ▶4 :  0%
5 :  0%   6 : 29%

ENTER   BACK   UP   DOWN
```
Figure 14

# Time Event

## 1. All Event

Set all the events are valid or invalid.

```
Main Menu
Control Mode
Output Mode
▶ Time Event
```
ENTER  BACK  UP  DOWN

Figure 15

```
Event Edit
▶ All Event:ON
Create Event
Delete Event
```
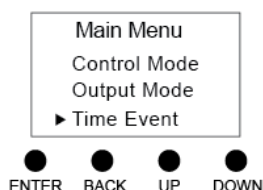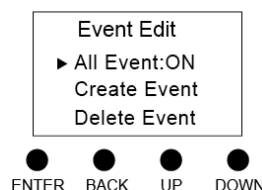ENTER  BACK  UP  DOWN

Figure 16

## 2. Create Event

Press "ENTER" to create event mode, you can set if this event is valid,and the task of the event ,the trigger time.

### 2.1 Event

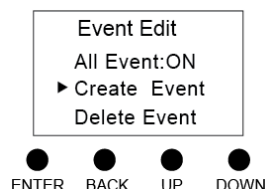Set whether this event is valid. Only All Event and Event are valid, the event will be triggered.

```
Event Edit
All Event:ON
▶ Create Event
Delete Event
```
ENTER  BACK  UP  DOWN

Figure 17

```
Event 2
▶ Event:Enable
Task:CH OFF
Event Channel
```
ENTER  BACK  UP  DOWN
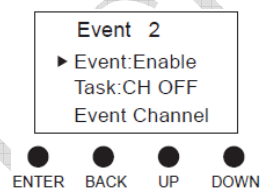
Figure 18

### 2.2 Task

Set tasks that will be triggered, turn on or off the relay switch signal .

```
Event 2
Event:Enable
▶ Task:CH ON
Event Channel
```
ENTER  BACK  UP  DOWN
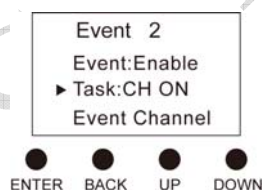
Figure 19

### 2.3 Event Channel

Select the channel to trigger, you can choose one or more channels.

```
Event 2
Event:Enable
Task:CH ON
▶ Event Channel
```
ENTER  BACK  UP  DOWN

Figure 20

```
Channel Select
1✓  2✓  3   4
5   6   7   8
9   10  11  12
```
ENTER  BACK  UP  DOWN
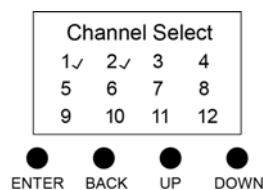
Figure 21

### 2.4 Event Time

Set the time to trigger events, including the month, day, week, hour, minute, second.

```
Event 4
▶ Event Time
```
ENTER  BACK  UP  DOWN

Figure 22

```
Event Time
Time:11:33:18
▶ Weeks
Months
```
ENTER  BACK  UP  DOWN

Figure 23

```
Event Time
Months
▶ Dates
Time:11:33:18
```
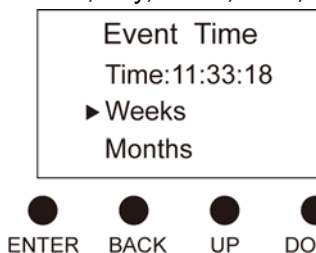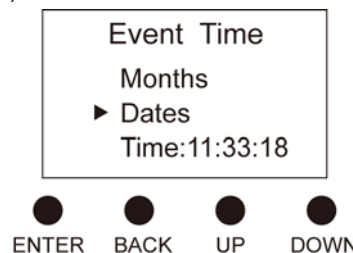ENTER  BACK  UP  DOWN
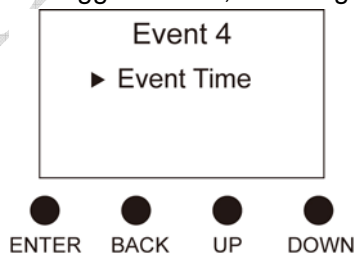
Figure24

When the event is created, the system automatically names and saves the event, followed by 1,2,3,....... System can

save up to 8 events.

## 3. Delete Event

Press "ENTER" to the delete event mode, you can cancel the event that has been set up.
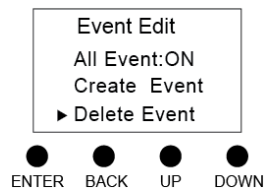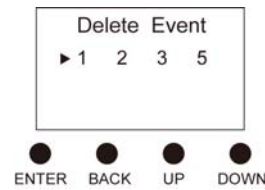


Figure 25



Figure 26

## 4. Event Manage

Press "ENTER" to enter the event management mode, you can view and modify the event which has been set up.
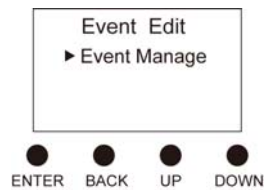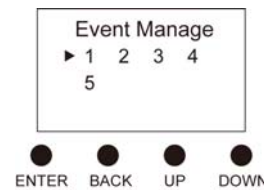


Figure 27



Figure 28

# System Setting

After entering the system settings, you can set the current time of the system, the backlight and restore the factory settings.
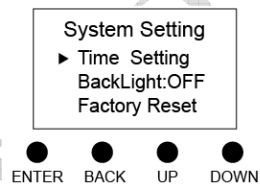
## 1. Time Setting

You can set the current time of the system.



Figure 29



Figure 30

## 2. Backlight

When the backlight is set to "ON",the display unattended operation over 30s, LCD will enter the clock mode, showing the current date and time. After 60s, the system will automatically enter the sleep mode, press any key to end the sleep mode, enter the setting state. When the backlight is set to "OFF", the display will remain the current setting state.
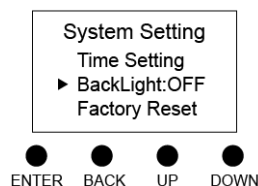


Figure 31

## 3. Factory Reset

Press "ENTER" to choose whether to reset factory settings.
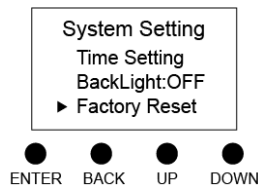


Figure 32                    Figure 33
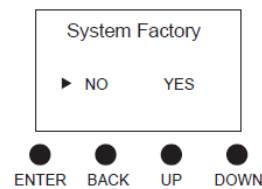
# System Info

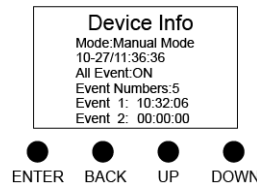In this mode, the current system information can be displayed, as follows:



Figure 34

Line 2          control mode

Line 3          current date and time

Line 4          All Event state

Line 5          events number

Others          event name, event status or time

# Manual switch

12 channel relay switch signal output, each channel corresponds to a button, you can open or close the relay switch channel output manually.

# Wiring Diagram
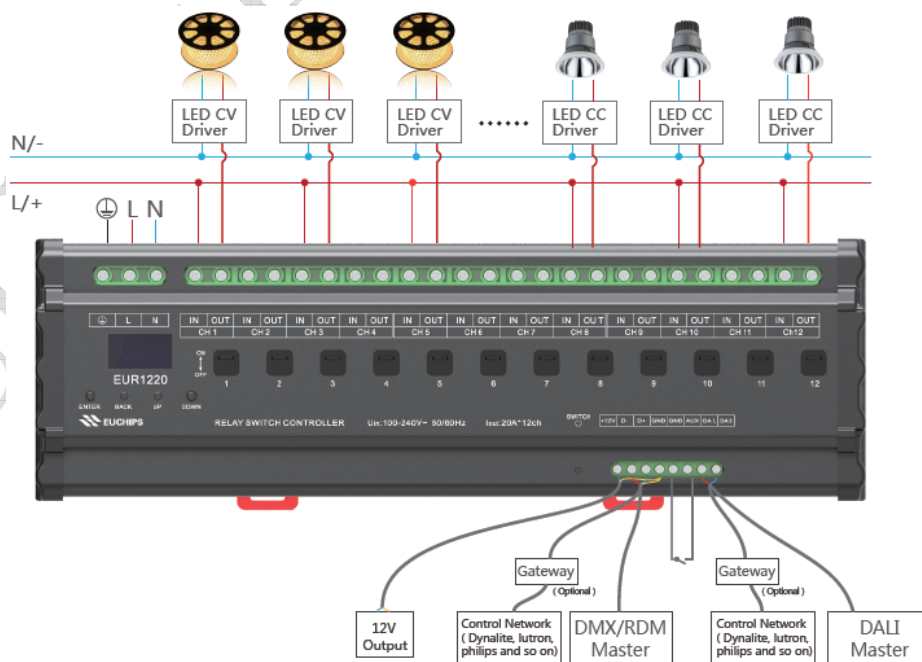


Figure 35

Note 1:Fade Time settings are valid only in DMX/RDM mode.

Note 2:Threshold settings are valid only in DMX/RDM and DALI mode.

# Event Case

The following example details the event settings. For example, the relay switch channel 1, 2,4 open the output at 8:00pm on August 5th and from Monday to Friday. The setting method is as follows：
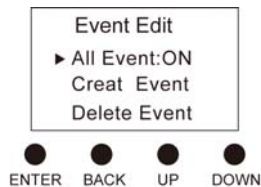
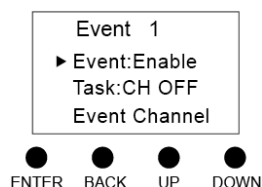1. Set All Event to ON by pressing "ENTER"
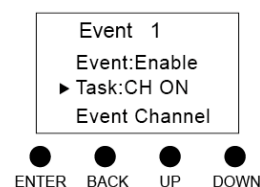


Figure 36



Figure 37



Figure 38

2. Enter the Create Event, set Event to Enable by pressing "ENTER"
3. Press "DOWN" to enter Task, set Task to CH ON by pressing "ENTER"
4. Press "DOWN" to enter Event Channel ,select the event channel, then, press "BACK" button to return
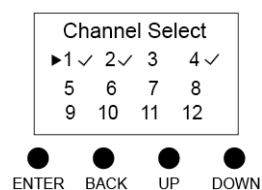


Figure 39

5. Enter the Event Time, set the trigger time, then, press "BACK" button to return
   ◆ Hour,minute,second:20:00:00
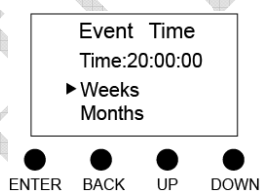


Figure 40

   ◆ Weeks :from Monday to Friday



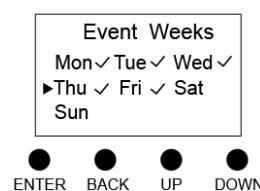Figure 41



Figure 42

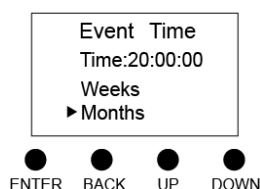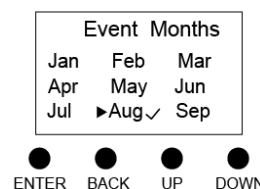   ◆ Months: August



Figure 43



Figure 44

   ◆ Dates:5th

Event Time
▶ Dates

ENTER   BACK   UP   DOWN

Figure 45

Event Dates
All
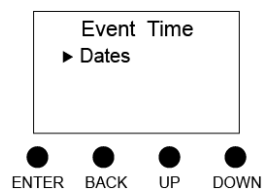01    02    03    04
▶ 05✓ 06    07    08
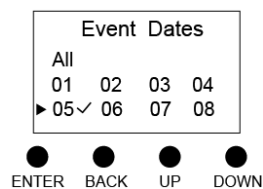
ENTER   BACK   UP   DOWN

Figure 46

6.  After setting up, the system automatically saves and names Event1
7.  Enter the Event Manage to check or modify the event settings