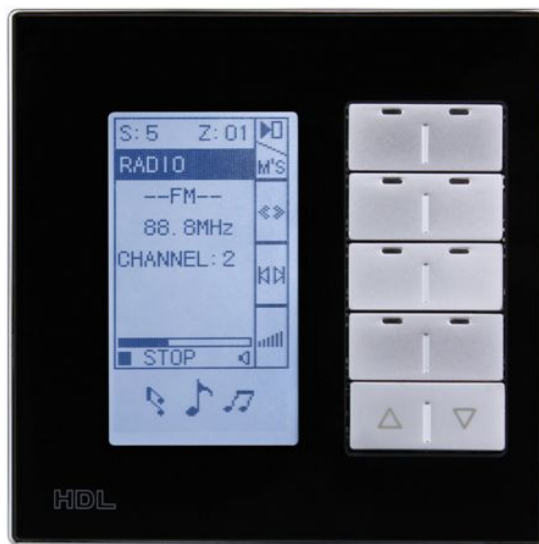




User Manual

Wireless DLP Panel



HDL-MPL8-RF.18

buspro

www.hdlautomation.com

INDEX

1. Overview.....	1
1.1 General Information.....	1
1.2 Functionalities Description.....	1
1.3 Device Description.....	2
2. Safety Instructions.....	2
3. Technical Data.....	2
4. Installation.....	3
5. Software Configuration.....	4
5.1 Basic Information.....	4
5.1.1 Wireless Setting via Mesh Gateway.....	4
5.1.2 Indicator Intensity.....	6
5.2 Key Assignment.....	6
5.2.1 Remark.....	7
5.2.2 Mode.....	7
5.2.3 Function.....	9
5.2.4 Combination Way.....	10
5.2.5 Pic Upload.....	11
5.2.6 Mutual Exclusion.....	11
5.2.7 Double Key Merge.....	12
5.2.8 Key Status Setting.....	12
5.2.9 IR and Other Functions.....	13
5.2.10 Test the Switch.....	14
5.3 AC Function Page.....	14
5.4 Floor Heating Page.....	14
5.5 Music Page.....	14
5.6 Basic Setting.....	15
5.6.1 Page Displays.....	15
5.6.2 Backlit Display and Other Settings.....	15
6. Channel Setting.....	16
7. Dimmer Setting.....	18
8. DLP Setting Page.....	18
9. Online Upgrade.....	20
9.1 Automatic Upgrade.....	20
9.2 Manual Upgrade.....	21
10. Note.....	23

1. Overview

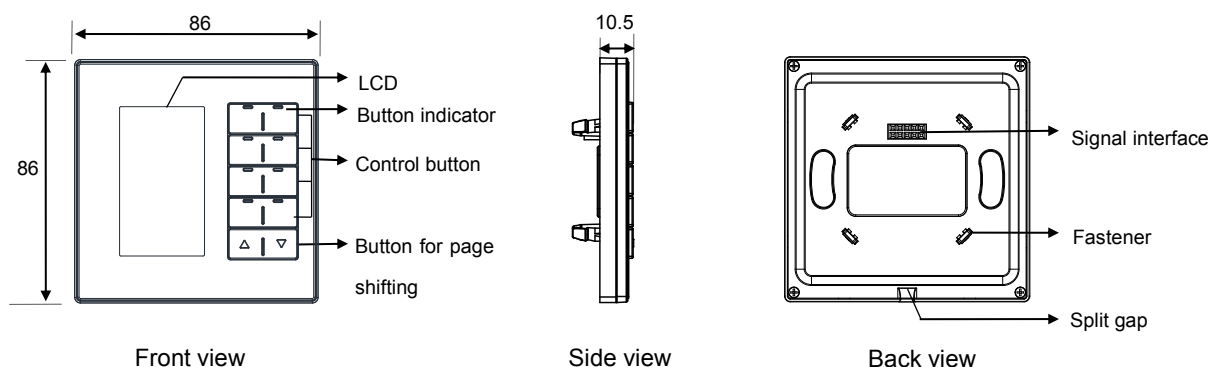
1.1 General Information

Wireless DLP HDL-MPL8-RF.18 is a new generation of wall-mounted switch with new design. It has 8 control buttons and the left & right side of the button can be programmed separately. 2 buttons are used for the page switching. Each button can be displayed with an icon in the LCD screen, which is customized for end user.

1.2 Functionalities Description

- The wireless power interface provides the working voltage, a DLP panel can control 4 wireless power interface at the same time.
- It uses wireless communication, and it must work in conjunction with mesh gateway.
- Built-in temperature sensor and IR receiver.
- Indicator intensity is adjustable.
- Specified pages for AC, floor heating, music, etc.
- Icon for key buttons can be customized by users.
- The panel can set combination way of the key and double key merge.
- It has mutual exclusion
- Multi key modes: Invalid, Single on-off, Single on, Single off, Combination on/off, Combination on, Combination off, Dbclick/single switch, Dbclick/combination switch, Momentary, Clock, Short/Long press, Short Press/Long jog.
- Multi key control modes: Scene, Sequence, Timer switch, Universal switch, Single channel lighting control, Broadcast scene, Broadcast channel, Curtain switch, GPRS control, Panel control, Security module, Z-audio control, Universal control, Link page, DALI area dimmer, RGB control, IR control, Logic light adjust, Logic scene.
- Support online upgrade.

1.3 Device Description



2. Safety Instructions

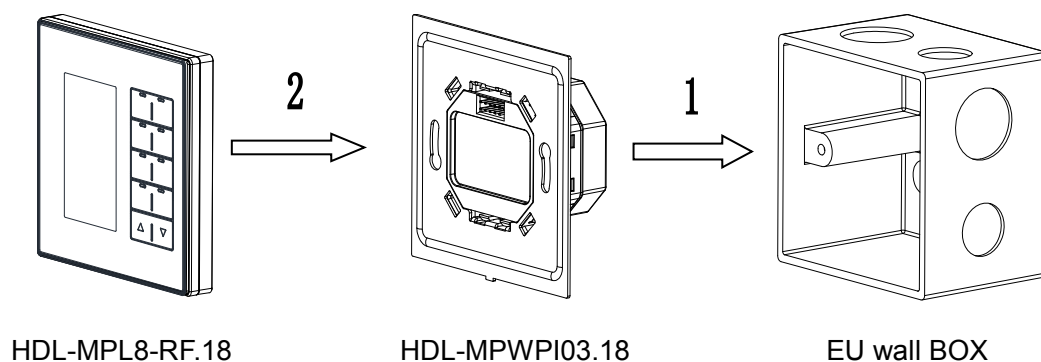
- The screw down strength should not exceed 0.1Nm
- Mounting position: Indoor.
- Never let liquids get into the module, it will damage this device.

3. Technical Data

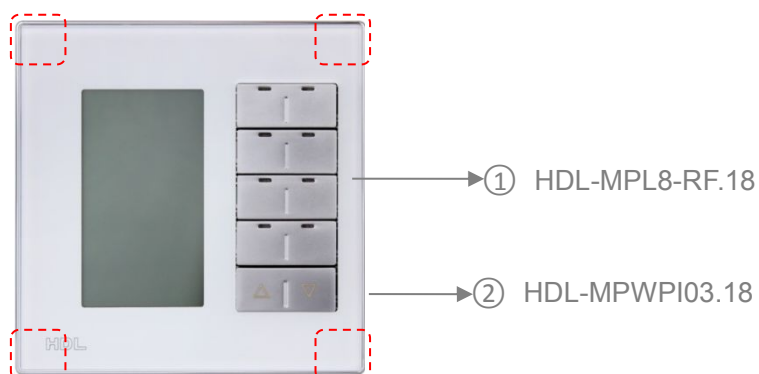
Electric Parameters	
Working voltage	DC5V (from wireless power interface)
Power consumption	55mA/DC5V
Wireless transmit power	+10dbm
Wireless receive sensitivity	-90dbm
Indoor communication distance	30m(barrier free)
RSSI receive signal intensity	>-80dbm
Factory frequency	Band, PSK (Suggestion: your setting should not be same as the factory setting)

Environmental Conditions	
Working temperature	-5°C~45°C
Working relative humidity	Up to 90%
Storage temperature	-20°C~+60°C
Storage relative humidity	Up to 93%
Approved	
CE	
RoHS	
Production Information	
LCD resolution	240x80
Dimensions	86×86×10.5 (mm)
Weight	108.5(g)
Housing material	Glass/Aluminum, ABS, PC
Installation	Wireless power interface, EU wall box
Protection degree	IP20

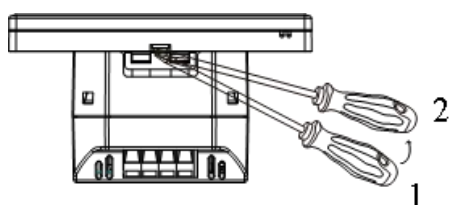
4. Installation



Installation: Holding the edge of panel, insert to the power interface module vertically. Do not push the panel too hard, press in the recommended areas, see the below picture.



Separation: Use a screwdriver with 2.5mm insert to split gap, pry up, from position 1 to position 2, the wiring hole will open. Then separate the panel and power interface.



Separate panel and power interface

Wall box: For convenience of the wiring installation, the wall box should be a little deeper than the power interface.

5. Software Configuration

5.1 Basic Information

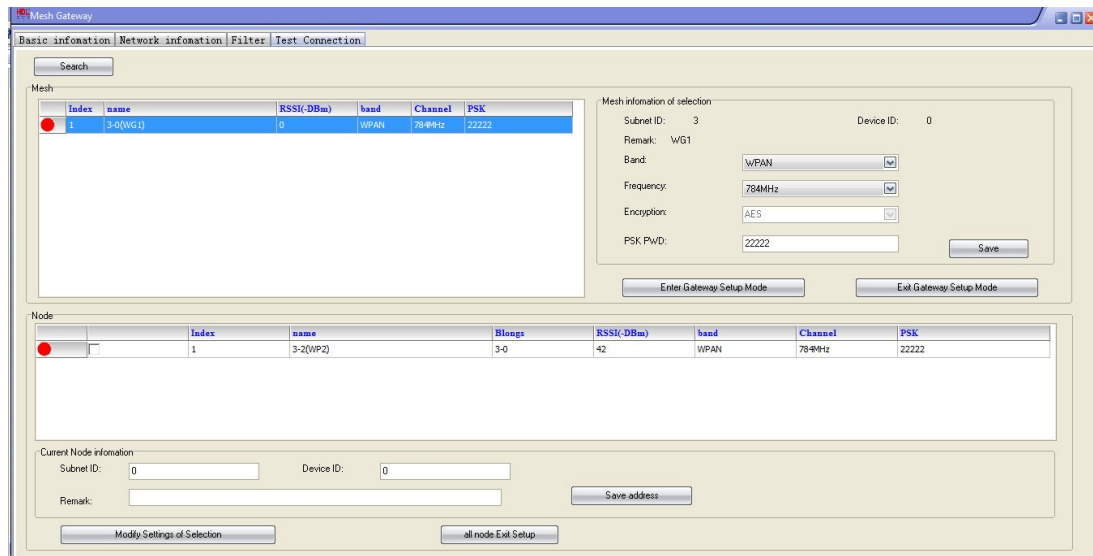
5.1.1 Wireless Setting via Mesh Gateway

Before user can configure the wireless DLP normally, need to set the wireless parameters for it via mesh gateway, below is the setting steps:

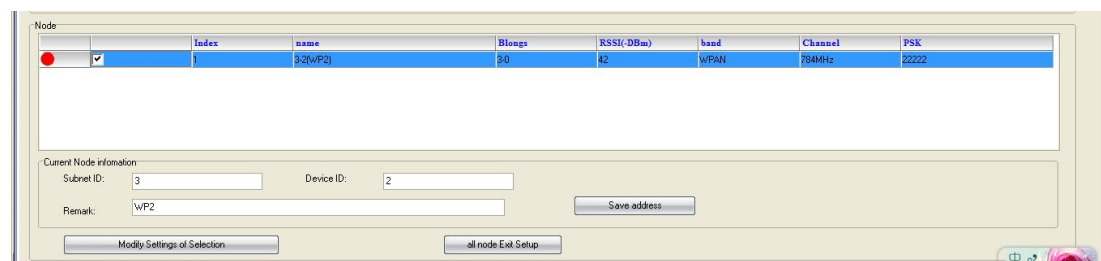
1- Press the 'PROG' button 3 times continuously, the RED LED will flash quickly that means the gateway enters the wireless setup mode.

2- Long press the DLP's first and eighth buttons at the same time to enter the setting page, select 'WIRELESS', then it will enter the wireless setup mode.

3- Click the 'Search' button, this gateway and panel will be shown.



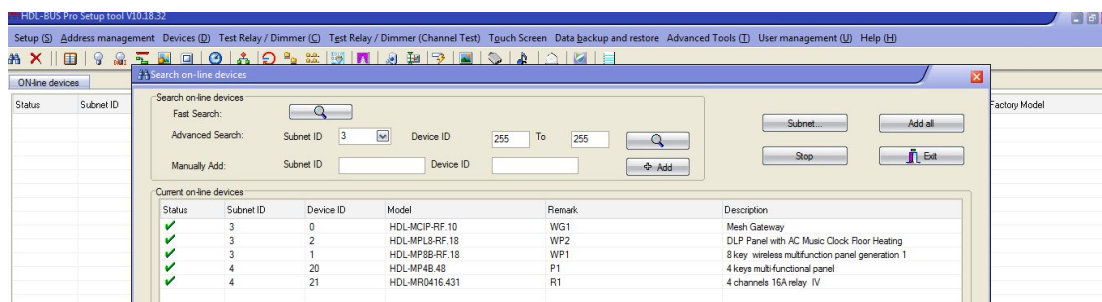
4- Select the node, you will be able to change its ID and remark it. (the Subnet ID must be same as the gateway's).



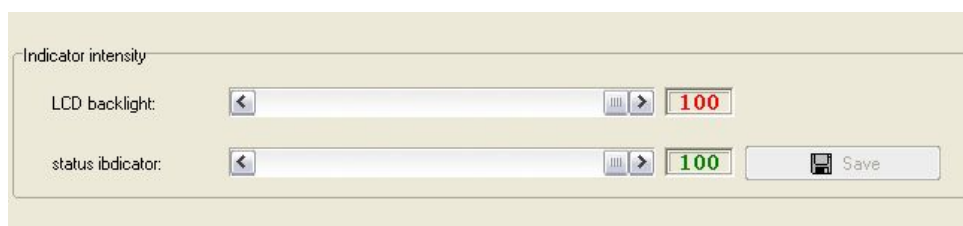
5- Click 'Modify Settings of Selection', and it will show 'configure successful', then all its wireless parameters will follow the gateway's (Band, Frequency and PSK).

6- Click 'all Node Exit Setup', then the gateway and the panel will exit the wireless setup mode.

7- Go to the HDL BUS setup tool's main interface to search and add the wireless DLP, then can start to configure it via the gateway.



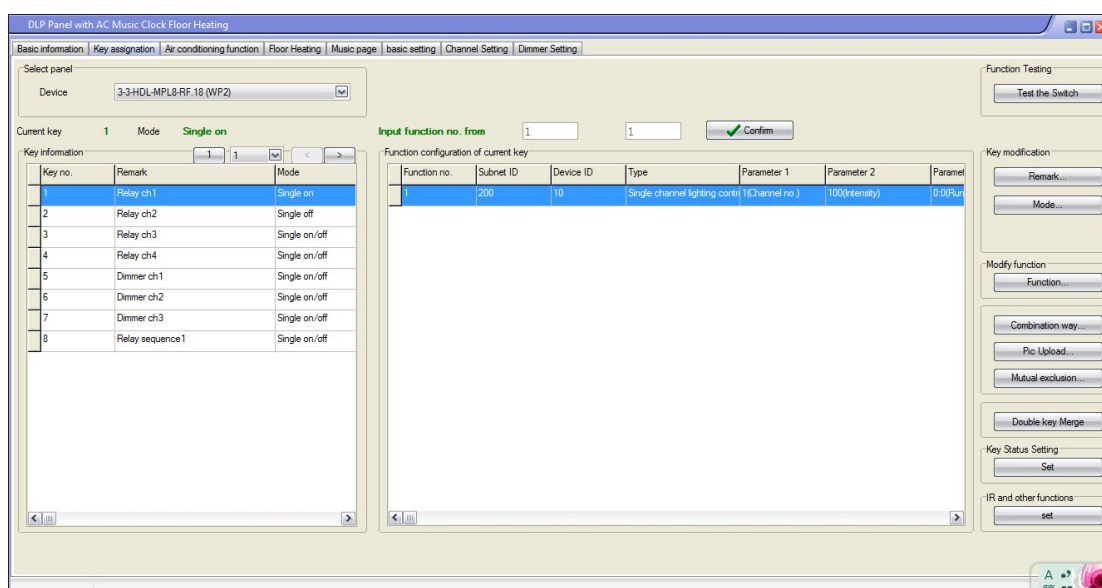
5.1.2 Indicator Intensity



The brightness of both LED indicators and LCD backlight can be adjusted, the backlight intensity can be adjusted on DLP panel setting page also.

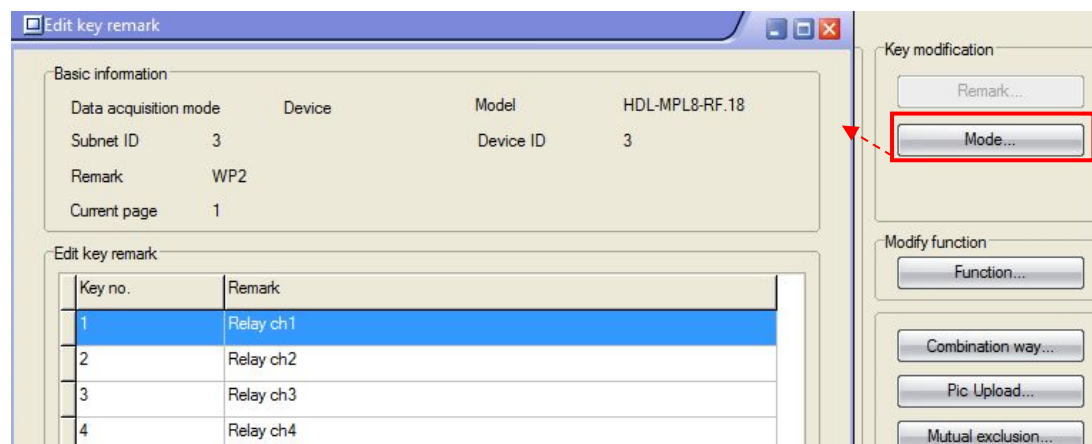
5.2 Key Assignment

The DLP has 7 pages. The first 4 pages are normal pages, page 5 is AC page, page 6 is music page and page 7 is floor heating page. The setting interface for page 1 to 4 in HDL-BUS Pro Setup Tool is shown in below screen shot.

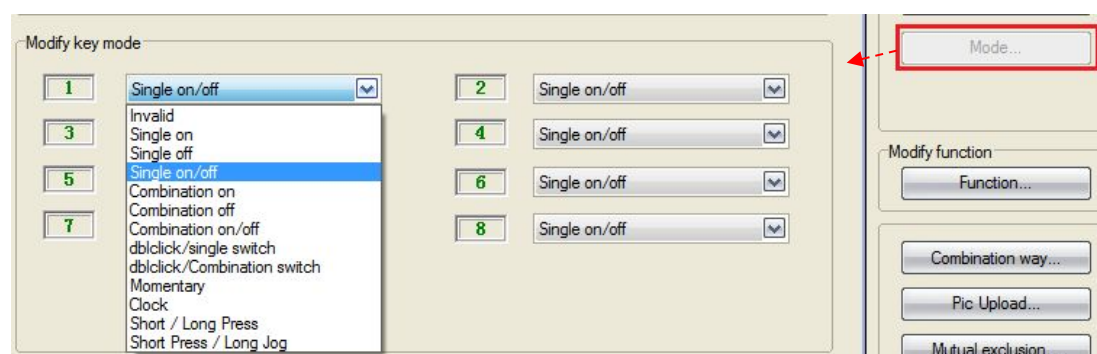


5.2.1 Remark

Do the remark for each key for easy management.



5.2.2 Mode



Key mode:

Single on

Assign the Switch can turn on one target only (one channel, one scene, one sequence, etc.)

Single off

Assign the Switch can turn off one target only (one channel, one scene, one sequence, etc.)

Single on/off

Assign the Switch can turn on/off one target only (one channel, one scene, one sequence, etc.)

Combination on

Assign the Switch can turn on multiple targets (channels, scenes, sequence, etc.)

Combination off

Assign the Switch can turn off multiple targets (channels, scenes, sequence, etc.)

Combination on/off

Assign the Switch can turn on/off multiple targets (channels, scenes, sequence, etc.)

Dblick/single switch

Double click can control up to 49 targets, single click only control 1 target

Dblick/combination switch

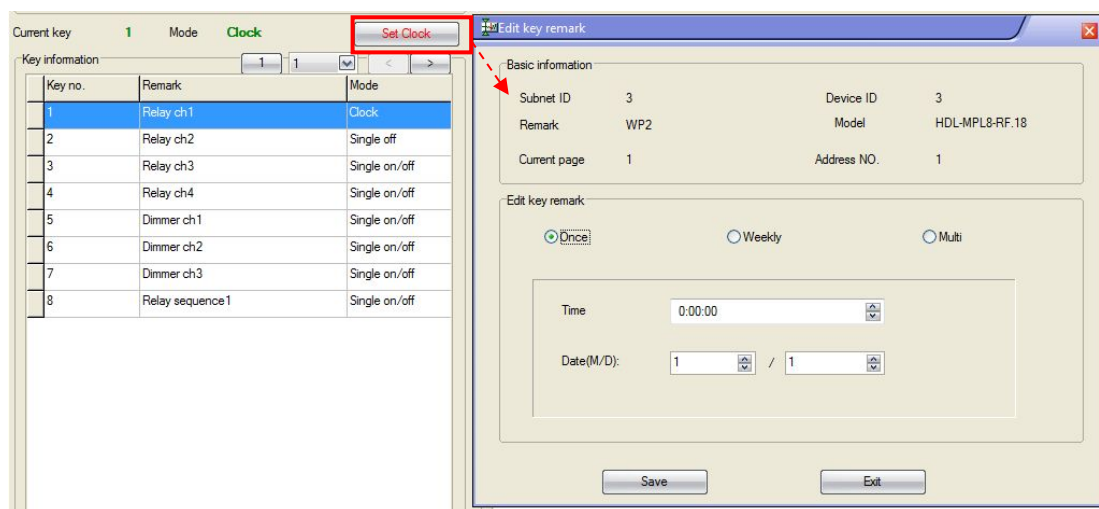
Both double click and combination switch can control up to 49 targets

Momentary

Press to turn on target, release to turn off target.

Clock

Set time to trigger target automatically (double click the panel key to enable/disable the clock function)



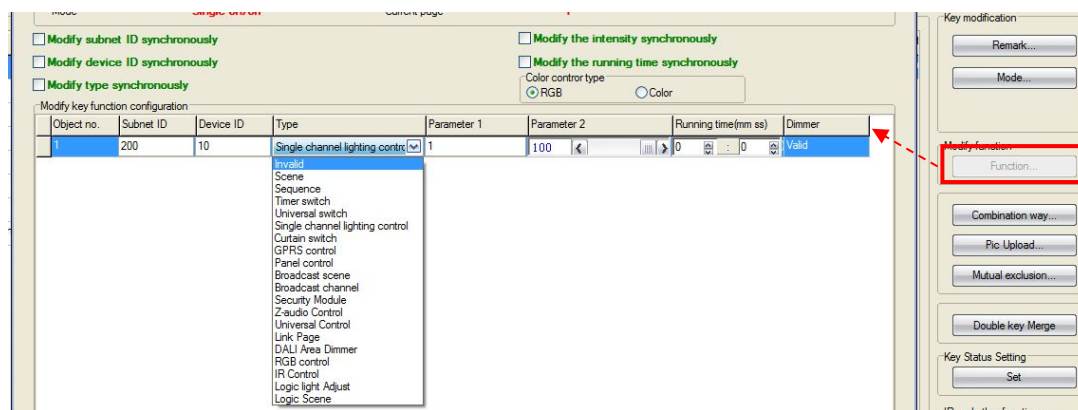
Short /long press

Both short press and long press can control up to 49 targets

Short /long Jog

Both short press and long Jog (long press to turn on, release to turn off) can control up to 49 targets

5.2.3 Function



Key type:

Scene

Turn on/off one scene

Sequence

Turn on/off one sequence

Timer switch:

Old command, abandoned

Single channel lighting control

Turn on/off one channel

Curtain switch

Control the curtain module (stop/open/close)

GPRS control

Send message out via SMS module

Panel control

Shield button/page, control AC and floor heating module, etc.

Broadcast scene

Turn on/off all areas' same scene No. in one Dimmer, Relay or DMX controller module.

Broadcast channel

Turn on/off all channels in one Dimmer, Relay or DMX controller module.

Security module

Control security module to arm/disarm, etc.

Z-audio control

Control Z-Audio module to play music

Universal control

Can be used to do some basic settings for the device from panel, like changing the logic input conditions of, e.g., 12in1 Sensor, rather than using HDL-BUS Pro Setup Tool, this feature makes the system more flexible for end-user. For more info, please refer to universal control command_12in1.xls, download from:

<ftp://59.41.255.150/HDL-BUS/HDL-BUS%20Products/Sensors/SB-CMS-12in1/>

Link page

When such a button is pressed, the DLP panel can jump to the designated page.

DALI Area dimmer

Control a group of DALI ballasts, including dimming, via SB-DN-DALI64 module.

RGB control

For HDL-MLED0605.432, 48DMX and 512DMX module (not ready to use)

IR control

For HDL Matrix device (not ready to use)

Logic light Adjust

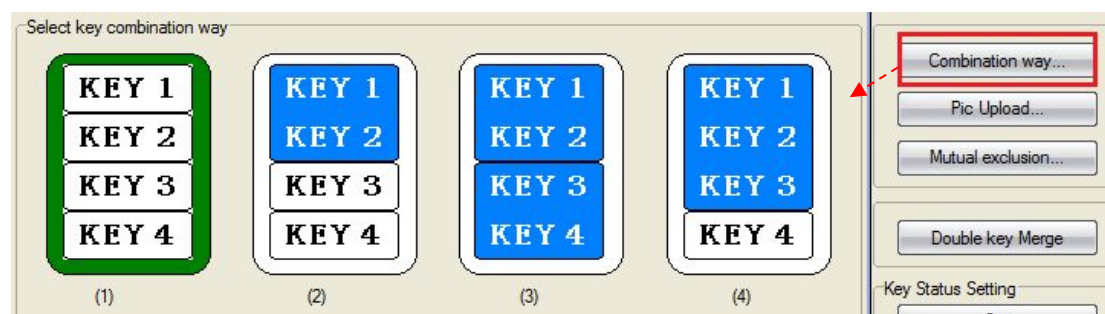
For HDL-MLED0605.432, 48DMX and 512DMX module

Logic Scene

For HDL-MLED0605.432, 48DMX and 512DMX module

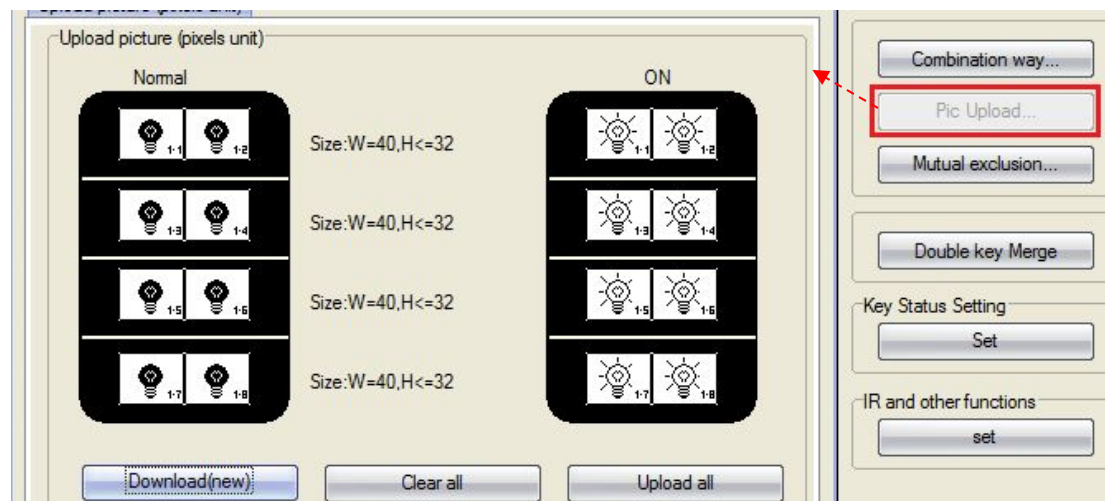
5.2.4 Combination Way

All keys in the combination mode will only perform the function of the top button



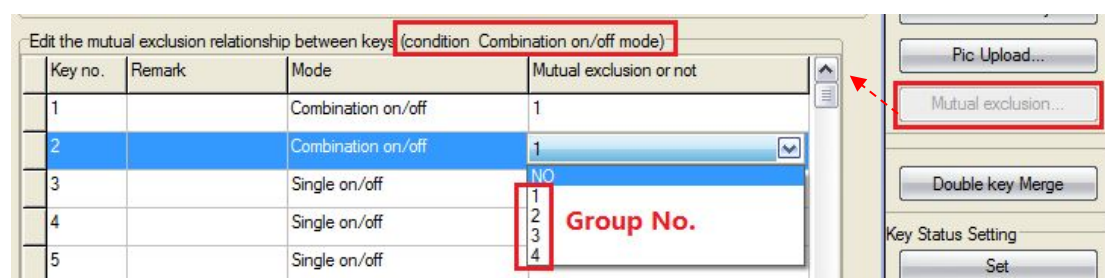
5.2.5 Pic Upload

Double click can change the pictures for each key, one is for normal state (OFF state), the other one is for on state



5.2.6 Mutual Exclusion

The key combination mode such as combination on, combination on/off can be set to mutual exclusion. After setting mutual exclusion, only the last controlled key can indicate its status (on), other keys' status in mutual exclusion group will be off.



The mutual exclusion is originally designed to solve the problem described below,

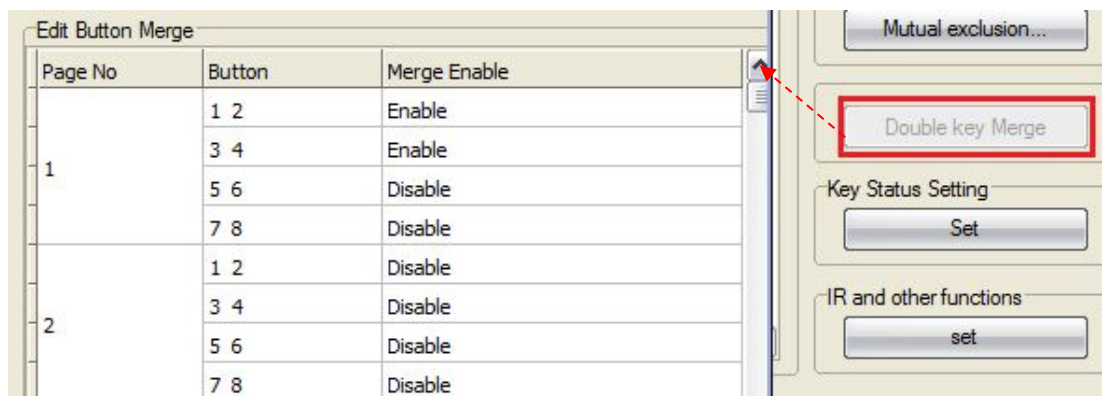
Key1 control (combination on) channel1 and 2 of dimmer go to 30%

Key2 control (combination on) channel1 and 2 of dimmer go to 60%

Key3 control (combination on) channel1 and 2 of dimmer go to 90%

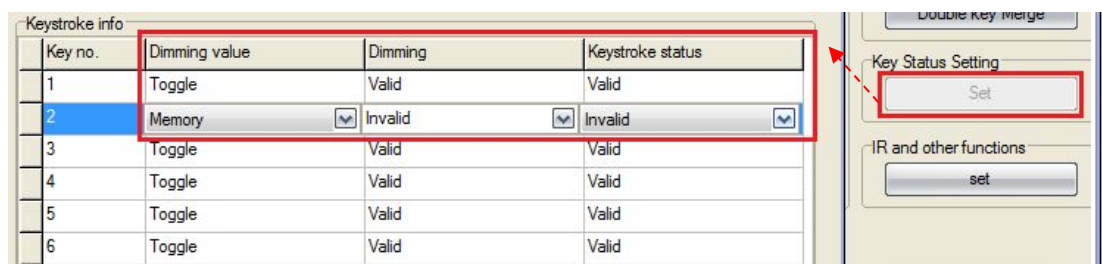
Press the key 1, and then key 2, and then key 3, now all LED indicators of the three keys are on, the level of two channels is 90%. If we set mutual exclusion for these three keys, then the LED indicator of the last pressed key will be on, all other indicators are off.

5.2.7 Double Key Merge



e.g., if we merge key 1 and key 2, these two keys will act as one key, the right key (key 2) is same as the left key (key 1).

5.2.8 Key Status Setting



Dimming value

Toggle- when turn on light, the brightness will go to 100%

Memory- save the brightness, when turn on light, the brightness will go to last brightness before turn off

Dimming:

Valid- enable dimming when long pressed

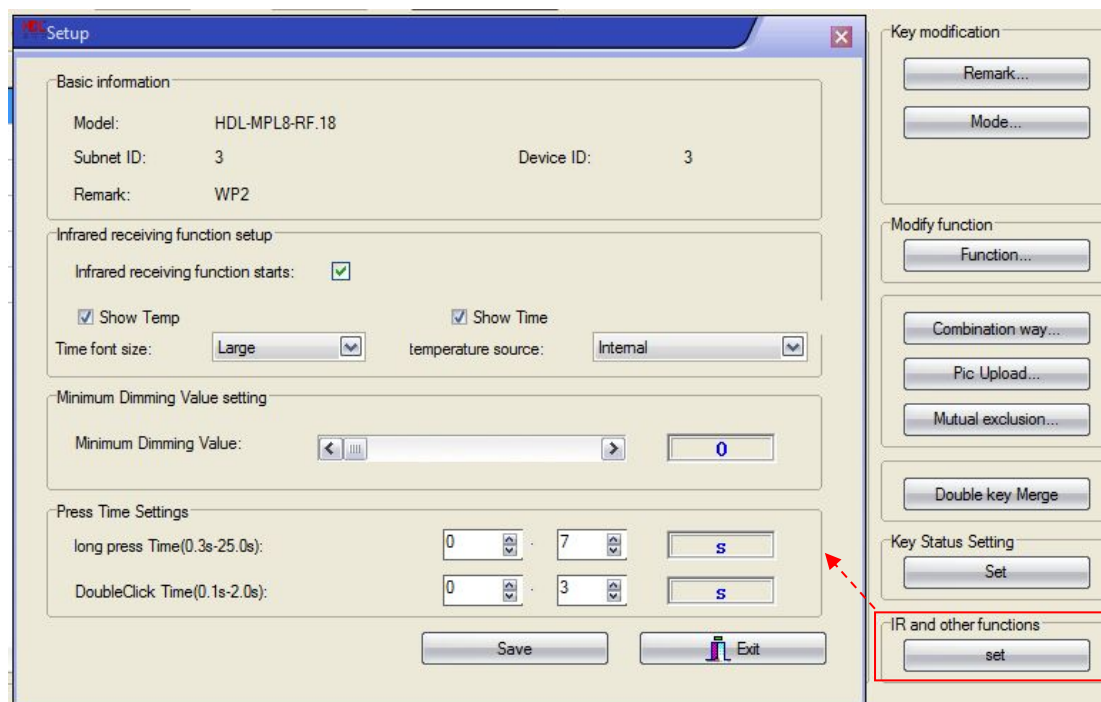
Invalid- Disable dimming, just on/off

Keystroke status:

Valid - Enable the LED indicator of the key

Invalid - Disable the LED indicator of the key

5.2.9 IR and Other Functions



Infrared receiving function status

Enable/disable the IR receiving function (accept HDL remote controller only)

Show Temp

Enable/disable the DLP to display the temperature at the bottom of the LCD display.

Temperature source

Internal, Outdoor and Internal & Outdoor can be selected

Show Time

Enable/disable the DLP to show the time at the bottom of the LCD display, the time is broadcasted by SB-DN-Logic960.

Time font size

Large or Small size can be selected.

Minimum dimming value

Set the dimming lower limit.

The Lower limit is useful if you would like to skip the low level segment and dim from a certain level, say 40%. You want to skip it because maybe lower than 40% is impractical for you or maybe the load quality is not so good and trembles when at low level segment.

Long press time

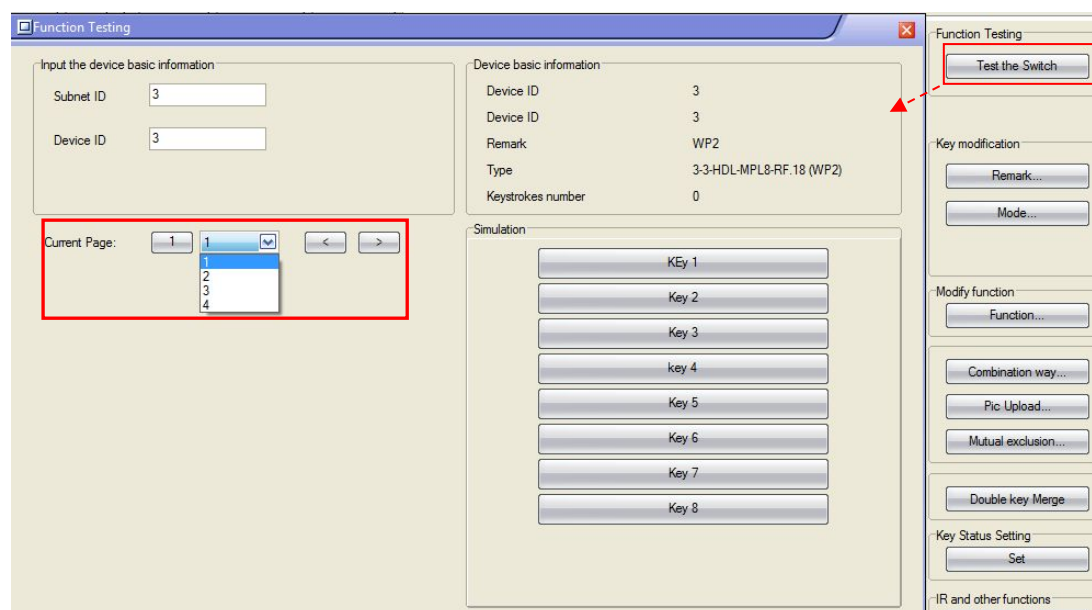
Set time for long-press, define the long press by end-user.

Double click time

Set time for double-click, define the double click by end-user.

5.2.10 Test the Switch

Test the key function in the software, rather than press the physical button.



5.3 AC Function Page

Please refer to 'UM_SB-DN-HVAC(MAC01.331).pdf'

5.4 Floor Heating Page

Please refer to 'UM_SB-DN-FH06.pdf'.

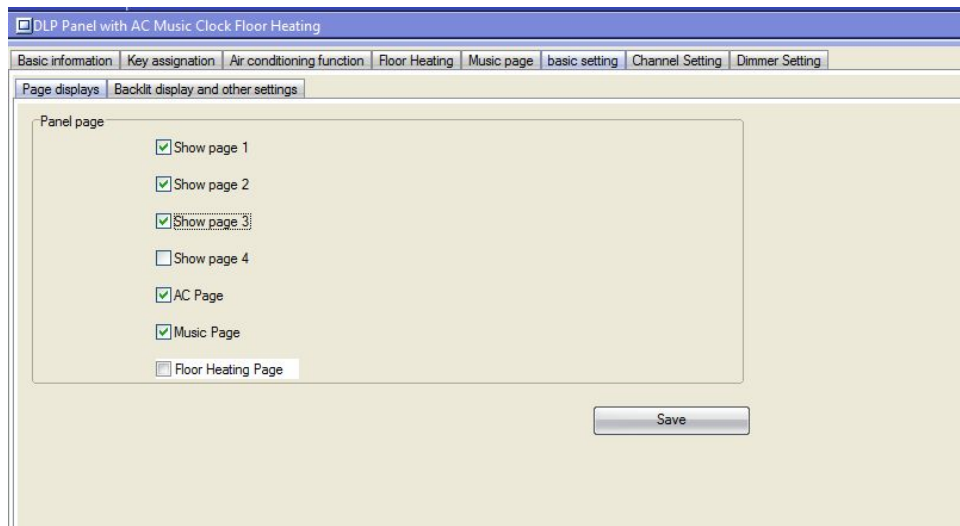
5.5 Music Page

Please refer to 'UM_SB-Z-AUDIO(Digital Background Music Player).pdf'

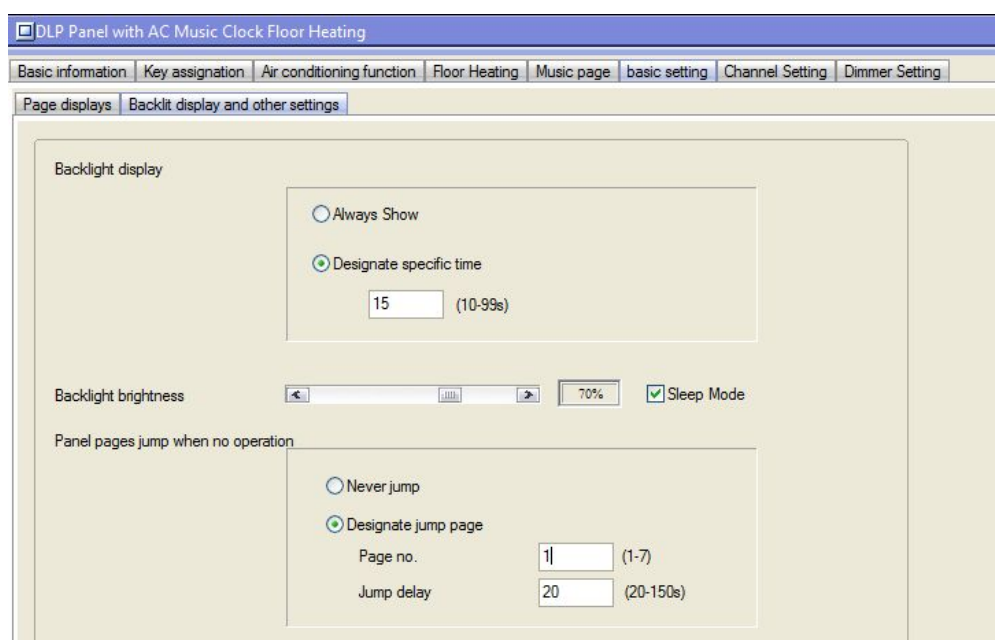
5.6 Basic Setting

5.6.1 Page Displays

Page display: the selected pages will be displayed on the panel.



5.6.2 Backlit Display and Other Settings



Backlight display:

- Always show: the backlight will be on always
- Designate specific time : the backlight will dim down after no operation in the designated time

- Backlight brightness: set the backlight brightness, the backlight will dim down to this brightness after no operation in the designated time

Sleep mode:

In power save mode, if select “sleep mode”, the first time to press the button, only lighten the backlight, the second time to press the button will send out command; if unselect “sleep mode”, it will lighten the backlight and send out the command at the first time.

Panel pages jump when on operation:

- Never jump: never jump after no operation in the designated time.
- Designate jump page: jump to the specific page after no operation in the designated time

6. Channel Setting

Each power interface has 3 output channels, up to 4 power interfaces can be connected in parallel, then there are 12 channels in total. The panel will assign the dimmer address 1-4 for the connected power interfaces by default. User can control the outputs by ‘On/Off’ option to check the power interface’s address.

If connected 1 power interface, 3 channels will be shown; if connected 4 power interfaces, 12 channels will be shown.

DLP Panel with AC Music Clock Floor Heating

Basic information | Key assignment | Air conditioning function | Floor Heating | Music page | basic setting | Channel Setting | Dimmer Setting

Select device

Device: 3-3-HDL-MPL8-RF.18 (WP2)

Channel information

Chn no.	Remark	Load type	Lower limit	Max level	Test level	On/Off
1	ch1	Incandescent Lam	20	60	80	
2	ch2	Electronic Low-Vol	30	50	100	
3	ch3	Neon/Cold Cathod	0	100	100	

DLP Panel with AC Music Clock Floor Heating

Basic information | Key assignment | Air conditioning function | Floor Heating | Music page | basic setting | Channel Setting | Dimmer Setting

Select device

Device: 3-3-HDL-MPL8-RF.18 (WP2)

Channel information

Chn no.	Remark	Load type	Lower limit	Max level	Test Level	On/Off
1	ch1	Incandescent <input checked="" type="checkbox"/>	20	80	100	<input type="checkbox"/>
2	ch2	Electronic Low-Vol	20	30	100	
3	ch3	Neon/Cold Cathod	5	50	100	
4	ch4	Fluorescent Lamp	0	100	100	
5		Undefined	0	100	100	
6		Undefined	0	100	100	
7		Undefined	0	100	100	
8		Undefined	0	100	100	
9		Undefined	0	100	100	
10		Undefined	0	100	100	
11		Undefined	0	100	100	
12		Undefined	0	100	100	

Remark

Remark the channel for the easy management.

Load Type

Select the corresponding load type for each channel according to the real situation; it is just like a remark, would not affect the behavior of lamps. Default selection – Undefined.

Lower Limit

If setup the lower limit for the channel, when dimming to this value, the output is 0.

The Lower limit is useful if you unfortunately have some lamps which produce unstable (trembling) light when dimming in low segment. You can bypass the unstable segment by setting a suitable Lower limit.

Max Level

The max output brightness of a channel.

For channel1, if the connected load is bulb, the max value cannot exceed 80%; if the connected load is LED, the max value must be small (less than 80%, user needs to test the proper value themselves), otherwise power interface cannot supply enough power, then lead to dimming flicker, more serious, the power interface will automatically restart.

If the connected load is LED, and its power is less than 30W, must connect the constant current module in parallel, the max value can up to 80%.

Test Level, On/Off

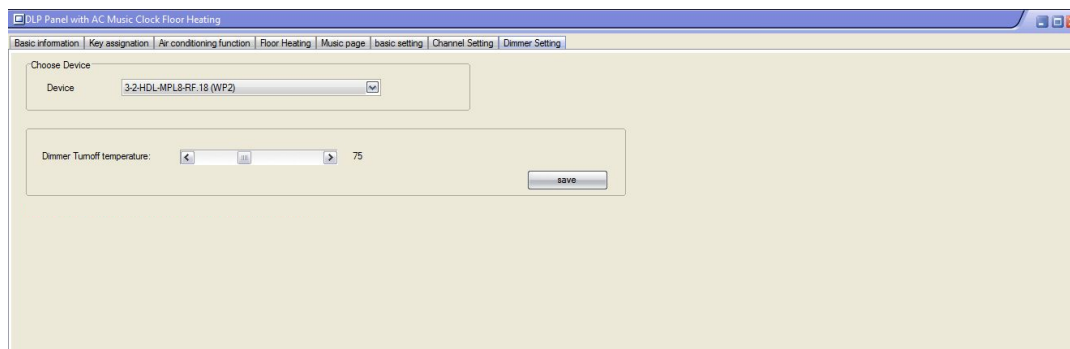
Input the test level, check the 'On/Off' box to turn on the channel, un-check to turn off it.

It's used to test the loads after installation.

7. Dimmer Setting

Dimmer Turnoff Temperature

Set the temperature for protection, when the panel's detected temperature reaches to the setting temperature, it will turn off the connected loads automatically. When the detected temperature is lower than the setting temperature, it will restore the loads' status again.



8. DLP Setting Page

Long press the first button and the eighth buttons to enter into the setting page.



SYSTEM

Inside this item, long press the key1 or key2, you can modify the ID of the DLP (Subnet ID and Device ID), other functions in this item are straightforward to set.

OTHER SET

Enable or disable the easy programming function.

PASSWORD

You can set password for each page, when user forgets his/her 4-digit password, he/she can use the almighty password to unlock the page - 8465.

IR SELECT

Please refer to the doc – “08- SB-HHR-D.ppt”.

Download it from: <ftp://59.41.255.150/HDL-BUS/HDL-BUS%20Training%20Course/Training%20Course/>

DATE TIME

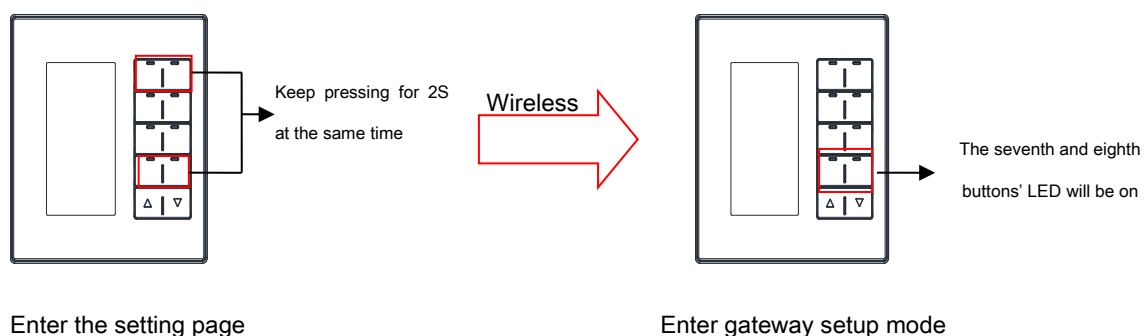
In this item, you can specify the ID of SB-DN-Logic960 and the correct time and then long-press the key1 (or key2), “OK!” will then be shown, the clock in SB-DN-Logic960 is now corrected. (SB-DN-Logic960 has a real time clock).

LAUGUAGE

Choose language – Chinese or English.

WIRELESS

When select ‘WIRELESS’, the seventh and eighth buttons’ LED will on and the panel will enter the wireless setup mode.



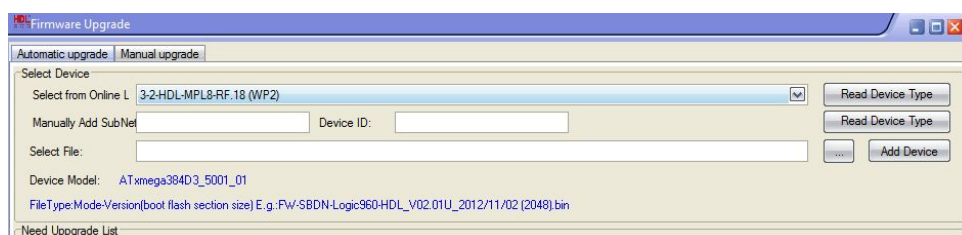
9. Online Upgrade

For the online upgrade, there are two ways, automatic upgrade and manual upgrade.

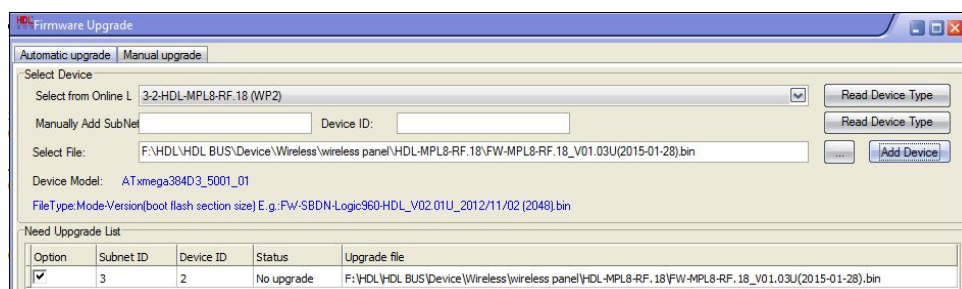
9.1 Automatic Upgrade

Upgrade steps:

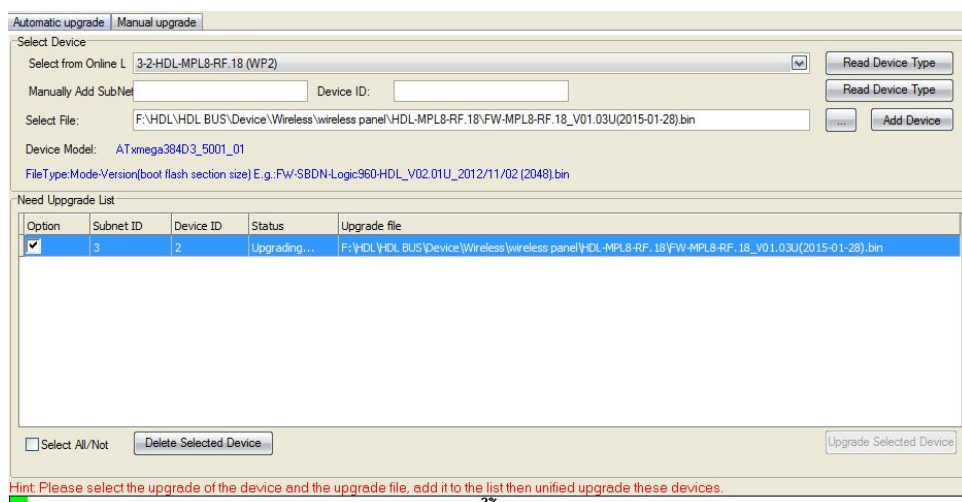
1- Select the online wireless DLP that you want to upgrade, click “Read Device Type” to check its chip type.



2- Select .bin firmware, click “Add Device”, then it will be shown in the upgrade list.



3- Click “Upgrade Selected Device” to start the upgrade.



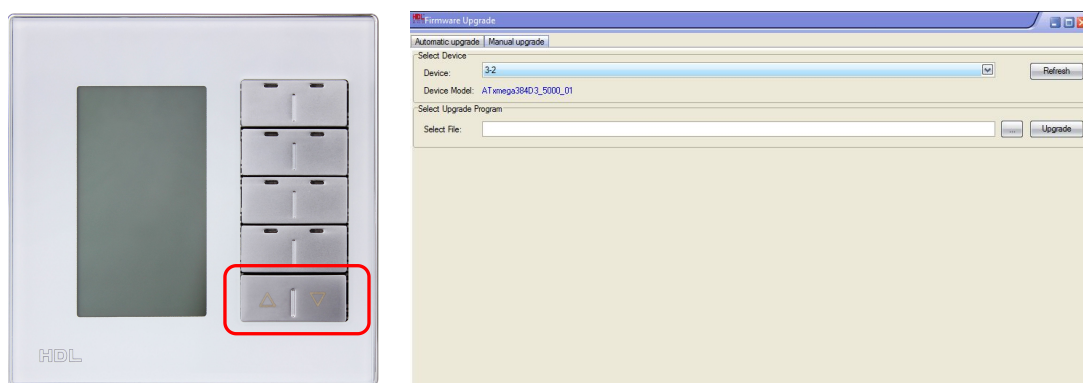
4- Upgrade finished.

9.2 Manual Upgrade

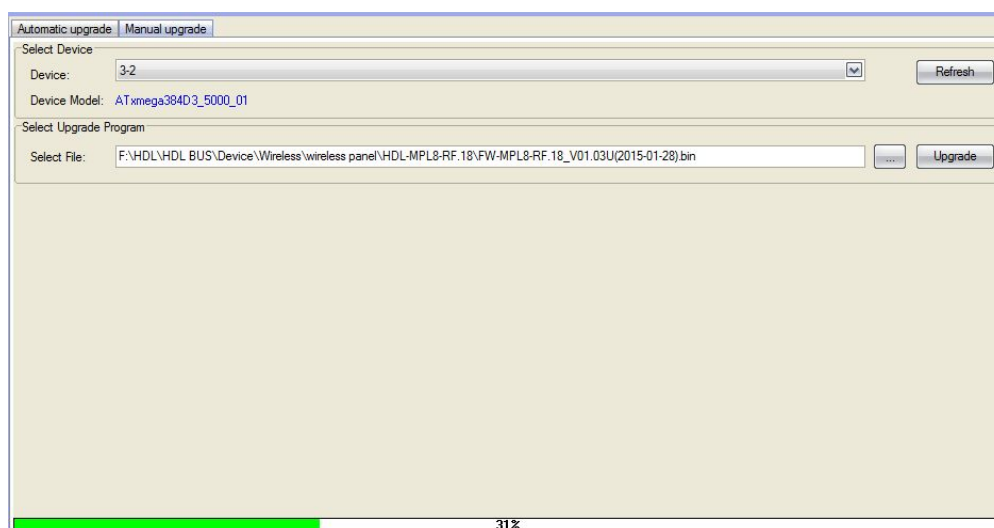
For manual upgrade, the DLP will enter the wireless setup mode, then the mesh gateway needs to enter the wireless setup mode also.

Upgrade steps:

- 1- Press the 'PROG' button of wireless gateway 3 times continuously to enter the wireless setup mode.
- 2- Power off the DLP, then keep pressing the programming button (the two bottom buttons) when power on it, it will enter the wireless setup mode, and you will be able to read its ID in the "Device" line.



- 3- Select .bin firmware , click "Upgrade".



- 4- Upgrade finished.
- 5- Press the 'PROG' button of wireless gateway 3 times continuously to exit the wireless setup mode.

Document updates:

Version	Data	Description
V1.0	2015.02.10	Create new document

10. Note