

# HDL<sup>®</sup>

The Product Design Manual

## Building and Home Automation Control System

IR/RF Remote controller

**HDL-MTIRW**



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## 1. Overview

HDL-MTIRW, IR/RF Remote Controller, support IR and RF emitting, and IR learning. RF emitting should work with receiver, after setting up the control targets in the HDL-Bus pro tool software, you can control any devices by the Remote Controller.

### 1.1 Features

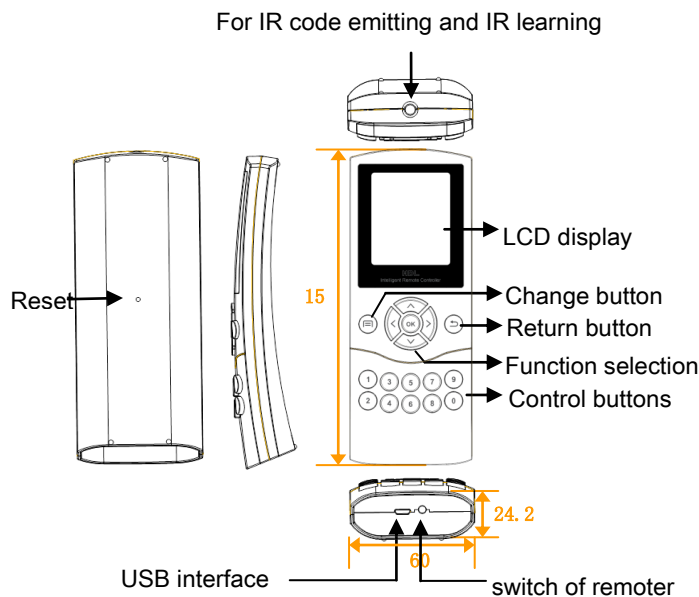
- ◆ Support all HDL panels via IR
- ◆ The Remote Controller has built-in HDL self-defined IR codes, can control HDL panels directly, no need to learn IR codes
- ◆ It can learn 48 IR codes, control up to 48 targets
- ◆ Icon can be changed via PC-based tool software
- ◆ Support key tone
- ◆ LCD display, menu-type operation, easy to use
- ◆ Support multiple pages, can hide/display page
- ◆ Support upgrading by USB interface

### 1.2 Performance parameter

- ◆ Frequency of IR: 38KHz
- ◆ Frequency of RF: 433.1580MHz, 433.157714MHz
- ◆ IR sending distance:5m
- ◆ RF sending distance:100m
- ◆ Battery : Lithium
- ◆ USB interface: Firmware upgrade and battery charging
- ◆ Charge power supply:300mA/DC5V ( USB interface )
- ◆ Working current: 45mA  
Standby current: 1mA
- ◆ Dimension:154.2×60×24.2 ( mm )
- ◆ IP Protection : IP20
- ◆ CE approved
- ◆ Working Temperature: 0°C ~ +45°C
- ◆ Working Relative Humidity: 40% - 90%
- ◆ Storage Temperature: -40°C- +55°C

- ◆ Storage Relative Humidity: 10% - 93%

### 1.3 Layout



#### Functions:

- IR emitting and IR learning: IR code emitting and learn other remoter's IR code.
- Reset: Can restart the Remoter Controller.
- USB interface: battery charging and update firmware for Remoter Controller.
- Switch: control the remote controller's state. The LCD will darken when there is no operation more than 10s; The LCD will enter into standby state when there is no operation more than 13s. In the off state, Press any button also can start the Remoter Controller.
- Change button, change between home page and panel page.
- Return button, return to the previous step.
- Control button: those No.1 to No.8 buttons can control corresponding buttons in HDL panel. NO.9 and.0 are invalid.
- $\wedge \vee$ : up and down to change parameters, and can select HDL panel when you control, there are 6 kinds of panel can be selected.
- $\langle \rangle$ : set parameters, and select page when you control, some panel has many pages, each panel has different pages and different buttons, you can select by those two buttons.
- OK: confirm button, after you set parameters, you should press OK to confirm.

## 2. Parameters setting



Fig. 1 Home page

- BL Level: can set the brightness of the LCD, the range is 0 to 10.
- Sound EN: can enable/disable the button voice.
- Language: can select Chinese or English language of the remoter.
- Page Disp: hide or display page, display all by default.
- IR Learn: can set any button of IR control panel.
- RF Addr: can set the RF address of the remoter. The address must the same with RF receiver. The address range is 1 to 65534, you can choose any one.
- Upgrade: connect USB to PC, then upgrade firmware, you must reset the remoter after upgrade firmware.
- The 4 directional buttons can select functions and parameters.

### 2.1 Hide or display page

Now hide the 2nd page of DLP panel, setting as follow:

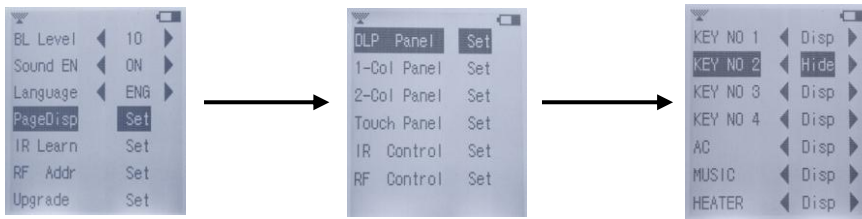


Fig. 2 Hide the DLP panel page

After that, you can't find the page on the Remote Controller, so you can't control the DLP panel's second page via Remote Controller.

### 2.2 IR code learning

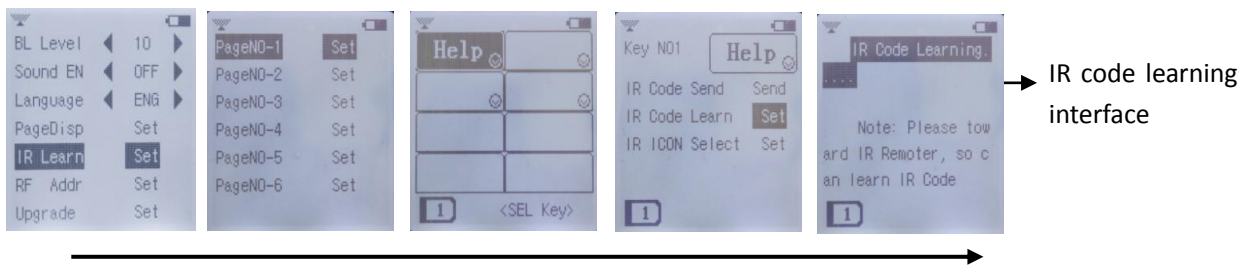


Fig.3 IR code learning

Step:

1. Enter the IR code learning interface, see Fig.3
2. Put the IR receiver of the remote controller face at the IR emitter of the 3<sup>rd</sup> party remote controller within 1-2cm
3. Press the button of the learned remote controller to start learning IR code, If the learning is successful, will display “Learn OK, Key enter try code. If failed will display “Learn interfere, try again” .
4. Test Code: check if learned successfully, Press test code to back previous menu

### 2.3 RF address setting

Each RF Remote Controller has an address, the address range is 1~65534.

You can set up to four "receiving address" in each RF receiver, correspondingly, so the RF receiver can receive control commands from maximum four matched RF Remote Controllers.

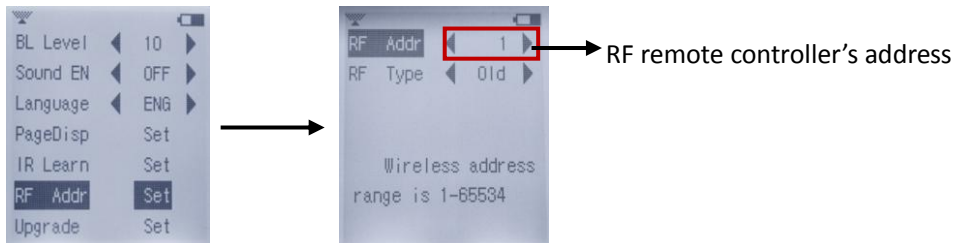


Fig. 4 RF remote controller's address setting

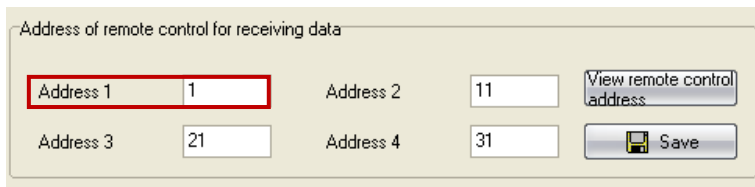


Fig. 5 RF receiver's address setting

### 2.4 Firmware Upgrade

To upgrade the Remoter Controller, you need to connect it to PC via USB. Double click to open Mobile devices "CRP DISABLD" in "my computer", then use the new ".Bin" file to replace the existing "firmware.bin". after that, reset the Remote controller to make your upgrading effective.

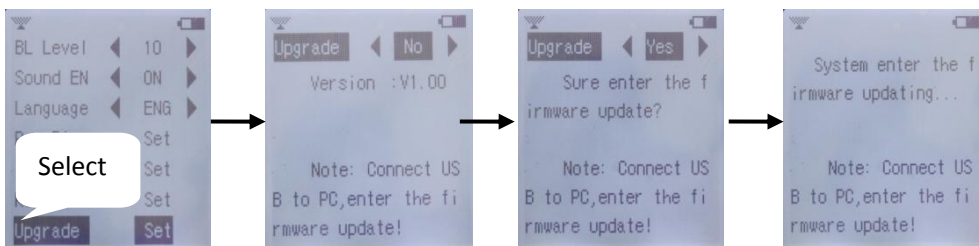


Fig. 6 Upgrade firmware

### 2.5 Universal code

The Remote Controller has built-in HDL defined IR codes, which can be used to control all HDL panels, no need to learn IR code.

“DLP panel” page can't control other panel except DLP panel.

we can use the "1 Col panel" page to control 1 Col panel, 2 Col panel, touch panels and even LCD panels, and those IR codes we call it Universal codes

## 2.6 Icon changed

To change the Icon showed on the Remote Controller, please use HDL Easy Engineering Editor (Icon “Remote Controller” on the menu bar).

## 3. How to use Remote Controller

### 3.1 DLP panel control



Fig. 7 DLP panel interface

DLP panel control

- 1) Press the button  $\wedge$  or  $\vee$  to select the DLP panel.
- 2) Press the button  $\leftarrow$  or  $\rightarrow$ , can change DLP panel's page.



- 3) Remote controller's buttons, those No.1 to No.8 buttons of Rmote controller can control corresponding buttons in panels
- 4) If the button's mode is sing on/off, the target is single channel lighting or scene, long press the button increase or decrease the brightness



Fig. 8 HVAC interface

Air-condition control:

- Button 1/2: HVAC ON/OFF
- Button 3/4: reduce/increase temperature
- Button 5/6: change fan speed
- Button 7/8: change mode



Fig. 9 Z-audio interface

Music control:

- Button 1/2: set sound source on/stop
- Button 3/4: select previous/next play list
- Button 5/6: select previous/ next song
- Button 7/8: reduce/increase sound



Fig. 10 Floor heating interface

Floor heating control:

- Button1/2: switch floor heating
- Button3/4: set temperature
- Button5/6: display indoor or outdoor's temperature
- Button7/8: change mode, Normal, Day, Night, Away, Time

### 3.2 1Col, 2 Col, and touch panel control

1 Col, panel contains: 1/2/3/4/6 button switch

2 Col panel contains: 2/4/6/8 button switch

Touch panel contains: 1/2/3/4 button switch

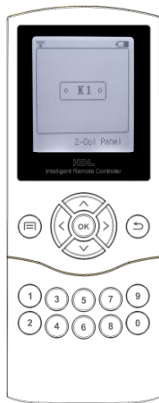


Fig. 11 2Col panel interface

**1 Col /2 Col /Touch panel's control:**

- 1) Press the button  $\wedge$  or  $\vee$  to select the page of HDL panel (1 Col, 2 Col or Touch panel).
- 2) Press the button  $\leftarrow$  or  $\rightarrow$ , can change the panel with different button number



- 3) press No.1 to No.8 buttons can control HDL panel

- 4) At last, you can press the button  $\wedge$  or  $\vee$  control other panels.

### 3.3 IR control panel

Before use Learn Panel, you must ensure that the Remote Controller has learned the IR codes.



Fig. 12 learn panel interface

How to use learn panel:

- 1) Press the button  $\wedge$  or  $\vee$  to select the page of learn panel.
- 2) Press the button  $\leftarrow$  or  $\rightarrow$ , can change the page of learn panel, the default is 6 pages and each page has 8 control buttons.
- 3) press No.1 to No.8 buttons can control the other devices (you must learn the device's IR code. eg. TV,DVD and so on)
- 4) At last, you can press the button  $\wedge$  or  $\vee$  to control other panels.



### 3.4 RF control panel

Before use RF panel, you must insure that wireless receiver 's receiving address matched RF Remote Controller's.



Fig. 13 RF panel interface

How to use RF panel:

- 1) Select the page of RF panel.
- 2) Press the button < or > , can change the page of RF panel, the default is 6 pages and each page has 8 control buttons.



- 3) press No.1 to No.8 buttons can control the HDL RF receiver, and then can control the objects.
- 4) At last, you can press the button ^ or v to select other panels.