



IR Emitter

HDL-M/IRAC.1

HDL-M/IRAC.1 supports 4 channel infrared interfaces, totally can store up to 650 IR codes. First part 150 IR codes are used for universal control, such as TV, DVD which has infrared receiving devices. The other 500 IR codes are used for AC control, compatible with any brand of AC device, the control modes are ON/OFF control, Temperature control, Cooling/Heating, Fan speed control, Swing control etc.



- Working mode: Single mode, Repeat mode, Sequence mode , Air-condition control , Current detection.
- By using the HDL IR Learner to learn the IR codes from the normal remote, and download into IR Emitter by HDL KNX Assistant software, then it can control the IR device, such as TV, DVD, AC, Amplifier etc.
- Built-in current sensor, to assure the status of device is ON or OFF.

1.Enable "Single mode page"

1.1.8 M/IRAC.1 > Functions

Notes	=> IR code functions page: ===== =====
General	Enable:"Single mode page" <input type="radio"/> Disabled <input checked="" type="radio"/> Enabled
Functions	Enable:"Repeat mode page" <input checked="" type="radio"/> Disabled <input type="radio"/> Enabled
Single mode	Enable:"Sequence mode page" <input checked="" type="radio"/> Disabled <input type="radio"/> Enabled
	Enable:"Air-condition control page" <input checked="" type="radio"/> Disabled <input type="radio"/> Enabled
	Enable:"Current detection settings" <input checked="" type="radio"/> Disabled <input type="radio"/> Enabled

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2. Enable: "universal IR code 1...20 "

1.1.8 M/IRAC.1 > Single mode

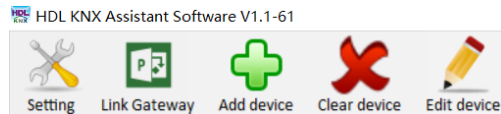
Notes	=>Single mode functions page: ===== =====
General	Enable:"universal IR code 1..20" <input type="radio"/> Disabled <input checked="" type="radio"/> Enabled
Functions	Enable:"universal IR code 21..40" <input checked="" type="radio"/> Disabled <input type="radio"/> Enabled
Single mode	Enable:"universal IR code 41..60" <input checked="" type="radio"/> Disabled <input type="radio"/> Enabled

3.Enable the code that we want to use.

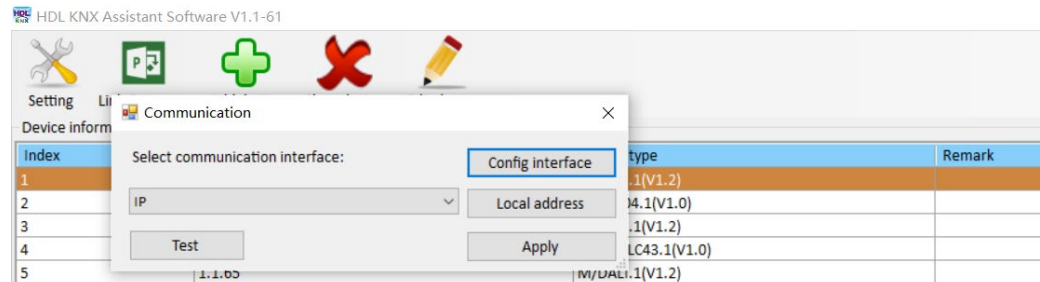
1.1.8 M/IRAC.1 > ->Universal IR code 1..20

Notes	Enable universal IR code 1 <input type="radio"/> Disabled <input checked="" type="radio"/> Enabled
General	->Remark <input type="text" value="IR Code 1"/>
Functions	->Select emitting channel <input type="text" value="A"/>
Single mode	->Emitting when receive the value <input type="text" value="'1'"/>
->Universal IR code 1..20	->Status <input type="text" value="No"/>
	Enable universal IR code 2 <input checked="" type="radio"/> Disabled <input type="radio"/> Enabled

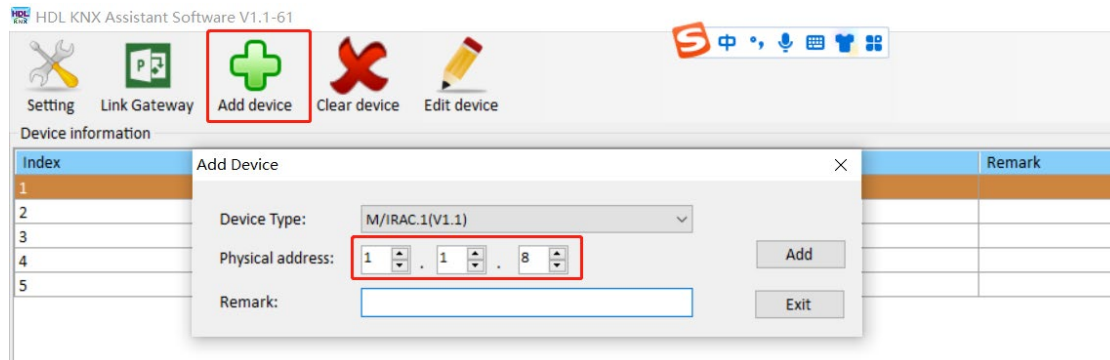
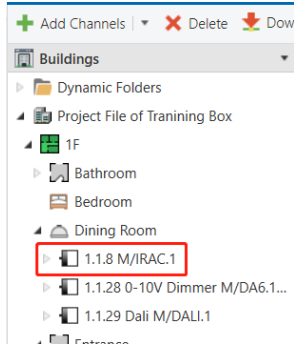
1. Please go to KNX Assistant Software



2. Select Communication mode in Setting



3. Add IR Emitter and enter its physical address



4. After adding the IR Emitter, double click to enter setting.

HDL KNX Assistant Software V1.1-61

Setting Link Gateway Add device Clear device Edit device

Index	Physical address	Device type	Remark
1	1.0.5	M/DALI.1[V1.2]	
2	1.1.1	M/DLP04.1[V1.0]	
3	1.1.19	M/DALI.1[V1.2]	
4	1.1.2	M/MPTLC43.1[V1.0]	
5	1.1.65	M/DALI.1[V1.2]	
6	1.1.8	M/RAC.1[V1.1]	

Double Click

Add IR code

Find IR learner

IR learner: HDL-IR-Learner Refresh

Infrared learner Infrared tried code Exchange codes from HDL BUS

Input learn status Read Test IR

IR code Type: Universal

Universal IR Code No.(1-150):

Remark:

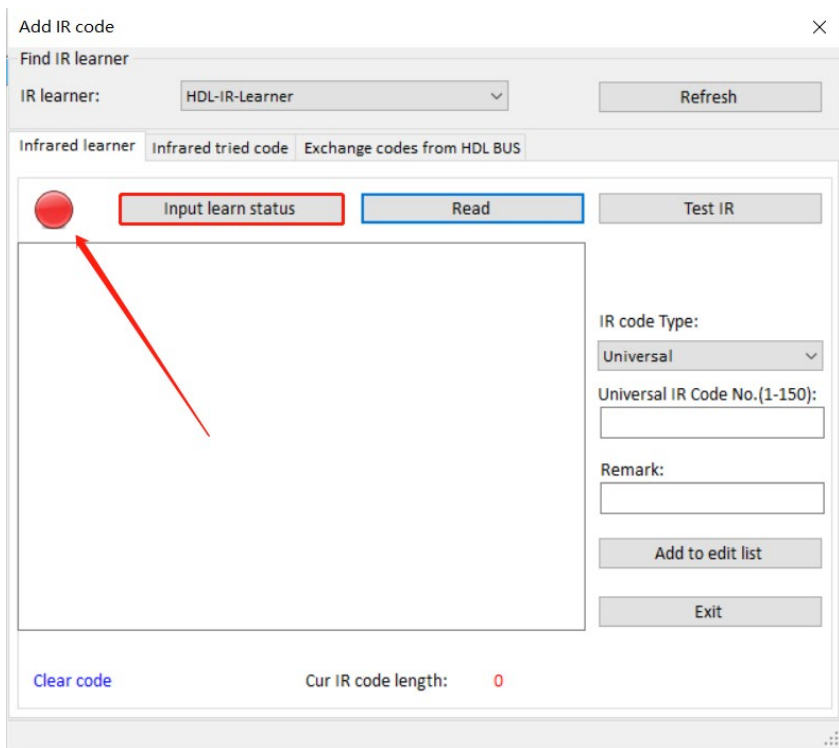
Add to edit list

Exit

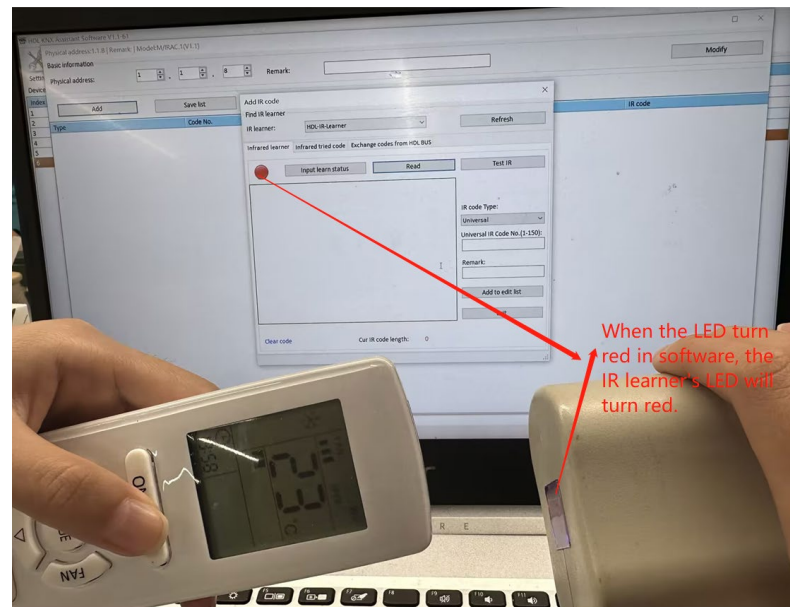
Clear code Cur IR code length: 0

5. Click “Add”, the code learning page will pop up.

6. Click “Input learn status”, the black LED will turn red.



7. Then you can learn the code by using remote controller to send code to the IR Learner.



8. After learn the code, please click “Read”

HDL KNX Assistant Software V1.1-61

Physical address: 1.1.8 | Remark: | Model: M/IRAC.1(V1.1)

Basic information

Physical address: 1 . 1 . 8 Remark:

Settings

Device

Index

Type	Code No.	IR code
1		
2		
3		
4		
5		
6		

Add IR code

Find IR learner

IR learner: HDL-IR-Learner

Infrared learner Infrared tried code Exchange codes from HDL BUS

```

00 6E 0F 09 02 75 3E 3F 08 03 00 00 00
00 00 08 00 01 01 02 02 02 01 02 02 01 01
02 01 02 02 01 01 02 01 02 02 02 02 02 01
01 02 01 02 02 02 02 02 02 02 02 02 02
02 02 02 02 01 02 02 01 02 02 02 02 01
02 02 02 03 04 04 04 05 06 07 A4 01 D4 00
34 00 9C 00 34 00 34 00 17 00 51 00 13 00
BD 00 0D 00 5B 00 03 00 65 00 F7 A1 22 5E
    
```

IR code Type: Universal

Universal IR Code No.(1-150):

Remark:

9. Select “Universal type”; set the code number, and give it a remark.

Add IR code

Find IR learner

IR learner: HDL-IR-Learner Refresh

Infrared learner Infrared tried code Exchange codes from HDL BUS

Input learn status Read Test IR

```
00 6E 0F 09 02 75 3E 3F 3F 08 03 00 00 00
00 00 08 00 01 01 02 02 02 01 02 02 01 01
02 01 02 02 01 01 02 01 02 02 02 02 02 01
01 02 01 02 02 02 02 02 02 02 02 02 02 02
02 02 02 02 01 02 02 01 02 02 02 02 02 01
02 02 02 03 04 04 04 05 06 07 A4 01 D4 00
34 00 9C 00 34 00 34 00 17 00 51 00 13 00
BD 00 0D 00 5B 00 03 00 65 00 F7 A1 22 5E
```

IR code Type:
Universal

Universal IR Code No.(1-150):
1

Remark:
AC ON

Add to edit list

Exit

10. Click “Add to edit list”

Physical address:1.1.8 | Remark: | Model:M/IRAC.1(V1.1)

Basic information

Physical address: 1 . 1 . 8 Remark:

Type	Code No.	IR code
Universal	Universal IR Code 1	00 6E 0F 09 02 75 3E 3F 3F 08 03 00 00 00 00

Add IR code

Find IR learner

IR learner: HDL-IR-Learner

Infrared learner

```

00 6E 0F 09 02 75 3E 3F 3F 08 03 00 00 00
00 00 08 00 01 01 02 02 02 01 02 02 01 01
02 01 02 02 01 01 02 01 02 02 02 02 02 01
01 02 01 02 02 02 02 02 02 02 02 02 02 02
02 02 02 02 01 02 02 01 02 02 02 02 02 01
02 02 02 03 04 04 04 05 06 07 A4 01 14 00
34 00 9C 00 34 00 34 00 17 00 51 00 13 00
BD 00 0D 00 5B 00 03 00 65 00 F7 A1 22 5E
    
```

IR code Type: Universal

Universal IR Code No.(1-150): 1

Remark: AC ON

11. Follow the same way to learn the code controlling AC OFF.

Physical address:1.1.8 | Remark: | Model:M/IRAC.1(V1.1)

Basic information

Physical address: 1 . 1 . 8 Remark:

Type	Code No.	Remark	IR code
Universal	Universal IR Code 1	AC ON	00 6E 0F 09 02 75 3E 3F 3F 08 03 00 00 00 00 00
Universal	Universal IR Code 2	AC OFF	00 A1 0F 08 02 74 00 72 72 08 FF FF 00 00 00 FF

12. Click “Download all” to download the codes.

Physical address:1.1.8 | Remark: | Model:M/IRAC.1(V1.1)

Basic information

Physical address: 1 . 1 . 8 Remark:

Type	Code No.	Remark	IR code
Universal	Universal IR Code 1	AC ON	00 6E 0F 09 02 75 3E 3F 3F 08 03 00 00 00 00 00
Universal	Universal IR Code 2	AC OFF	00 A1 0F 08 02 74 00 72 72 08 FF FF 00 00 00 FF

13. Create group address for IR 1 and IR 2 .

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U
11	Single mode	IR 1 (1-emitting)	IR ON	9/0/1	1 bit	C	-	W	-	U
12	Single mode	IR 2 (1-emitting)	IR OFF	9/0/2	1 bit	C	-	W	-	U

14. Link the the group address of Rocker A of a panel

1.1.7 DLP Panel M/DLP04.1 > Rocker A

General1

General2

Functions

Rocker A

Rocker B

Rocker C

Rocker D

Rocker A work mode

Independent button mode

Combined button mode

Rocker A : left button operation mode

-> Reaction on left short button

Switch controller

ON

Invalid

No Yes

Long button time after

1s

LED status source

Local

--LED status

ON/OFF status

Rocker A : right button operation mode

-> Reaction on right short button

Switch controller

ON

Invalid

-> Reaction on right long button

Invalid

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U
40	Rocker A left short	Switching	IR ON	9/0/1	1 bit	C	-	W	T	U
41	Rocker A left long	Switching			1 bit	C	-	W	T	U
45	Rocker A right short	Switching	IR OFF	9/0/2	1 bit	C	-	W	T	U
46	Rocker A right long	Switching			1 bit	C	-	W	T	U

1.Enable “Air-condition control page”

1.1.8 M/IRAC.1 > Functions

Notes	=>IR code functions page: ===== =====
General	Enable:"Single mode page" <input type="radio"/> Disabled <input checked="" type="radio"/> Enabled
Functions	Enable:"Repeat mode page" <input checked="" type="radio"/> Disabled <input type="radio"/> Enabled
Single mode	Enable:"Sequence mode page" <input checked="" type="radio"/> Disabled <input type="radio"/> Enabled
->Universal IR code 1..20	Enable:"Air-condition control page" <input type="radio"/> Disabled <input checked="" type="radio"/> Enabled
Air-condition control	Enable:"Current detection settings" <input checked="" type="radio"/> Disabled <input type="radio"/> Enabled

2. Go to “Air condition control” page, and set AC IR code 802 for off , AC IR code 801 for on. And, enable other functions like automatic, Cooling and heating.

1.1.8 M/IRAC.1 > Air-condition control

Notes	=>Settings zone: =====	
General	Select emitting channel	A
Functions	Select an AC IR code for OFF	AC IR code 802
Single mode	Enable IR code for ON(if is independent)	<input type="radio"/> Disabled <input checked="" type="radio"/> Enabled
->Universal IR code 1.20	->Select an AC IR code for ON	AC IR code 801
Air-condition control	Check current when ON/OFF	<input checked="" type="radio"/> Disabled <input type="radio"/> Enabled
->Auto-Auto-No swing	Select swing control	<input checked="" type="radio"/> combination <input type="radio"/> independence
->Auto-Auto-Swing	AC status recovery	<input checked="" type="radio"/> No <input type="radio"/> Yes
->Auto-Low-No swing	AC status response	<input checked="" type="radio"/> No <input type="radio"/> Yes
->Auto-Low-Swing	=>Air-condition control functions page: =====	
->Auto-Medium-No swing	Enable:*Automatic	<input type="radio"/> Disabled <input checked="" type="radio"/> Enabled
->Auto-Medium-Swing	Enable:*Cooling	<input type="radio"/> Disabled <input checked="" type="radio"/> Enabled
->Auto-High-No swing	Enable:*Heating	<input type="radio"/> Disabled <input checked="" type="radio"/> Enabled
->Auto-High-Swing	Enable:*Dehumidification	<input type="radio"/> Disabled <input checked="" type="radio"/> Enabled
->Cool-Auto-No swing	Enable:*Fan	<input checked="" type="radio"/> Disabled <input type="radio"/> Enabled

3. Similarly, we also need to use KNX's assistant software to learn the corresponding infrared code, but this time, due to the use of air conditioning control , we need to add the infrared code in AC format in the IR code type.

Physical address: 1.1.8 | Remark: | Model: M/IRAC.1 (V1.1)

Basic information

Physical address: 1 . 1 . 8 Remark:

Type	Code No.	IR code
AC	AC IR Code 1	00 6E 0F 09 02 75 3E 3F 3F 08 03 00 00 00 00 00
AC	AC IR Code 2	00 A1 0F 08 02 74 00 72 72 08 FF FF 00 00 00 FF

Add IR code

Find IR learner

IR learner:

Infrared learner: infrared tried code Exchange codes from HDL BUS

IR code Type:

AC IR Code NO.(1-810):

Remark:

Clear code Cur IR code length: 0

4.AC IR code 801 and AC IR code 802 are for air conditioning control on and off, respectively. After this, Click “Download all”to download all of them.

Physical address:1.1.8 | Remark: | Model:M/IRAC.1(V1.1)

Basic information

Physical address: 1 . 1 . 8 Remark:

Type	Code No.	Remark	IR code
AC	AC IR Code 801	AC ON	00 6E 0F 09 02 75 3E 3F 08 03 00 00 00 00 00
AC	AC IR Code 802	AC OFF	00 A1 0F 08 02 74 00 72 72 08 FF FF 00 00 00 FF

5. Create a address for the AC

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U
11	Single mode	IR 1 (1-emitting)	IR ON	9/0/1	1 bit	C	-	W	-	U
12	Single mode	IR 2 (1-emitting)	IR OFF	9/0/2	1 bit	C	-	W	-	U
361	AC switch	Switch(1-ON,0-OFF)	AC ON/OFF	9/0/3	1 bit	C	-	W	-	U
362	AC Temperature	Setpoint temperature(16..35)			2 bytes	C	-	W	-	U

6. Enable “Air-condition page” in DLP panel

1.1.7 DLP Panel M/DLP04.1 > Functions

General1	=>Functions page:	----- -----
General2	Enable: "Rock A..D page"	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
Functions	Enable: "Rock E..H page"	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
Rocker A	Enable: "Rock I..L page"	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
Rocker B	Enable: "FCU page"	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
Rocker C	Enable: "Floor Heating page"	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
Rocker D	Enable: "Air-condition page"	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
[Air-condition]		

7.Link group address with the panel.

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U
40	Rocker A left short	Switching	IR ON	9/0/1	1 bit	C	-	W	T	U
41	Rocker A left long	Switching			1 bit	C	-	W	T	U
45	Rocker A right short	Switching	IR OFF	9/0/2	1 bit	C	-	W	T	U
46	Rocker A right long	Switching			1 bit	C	-	W	T	U
50	Rocker B left	Percentage			1 byte	C	-	W	T	U
55	Rocker B right	Percentage			1 byte	C	-	W	T	U
60	Rocker C short	Call scene			1 byte	C	-	W	T	U
70	Rocker D left short	Sequence			1 bit	C	-	W	T	U
71	Rocker D left long	Sequence			1 bit	C	-	W	T	U
75	Rocker D right short	Sequence			1 bit	C	-	W	T	U
76	Rocker D right long	Sequence			1 bit	C	-	W	T	U
222	Air-condition	Switch ON/OFF	AC ON/OFF	9/0/3	1 bit	C	-	W	T	U
224	Air-condition Temperature	Setpoint temperature			2 bytes	C	-	W	T	U
225	Air-condition Fan	ON CMD for automatic			1 bit	C	-	W	T	U
226	Air-condition Fan	ON CMD for low speed			1 bit	C	-	W	T	U
227	Air-condition Fan	ON CMD for medium speed			1 bit	C	-	W	T	U
228	Air-condition Fan	ON CMD for high speed			1 bit	C	-	W	T	U
230	Air-condition Mode	ON CMD for automatic			1 bit	C	-	W	T	U
231	Air-condition Mode	ON CMD for cooling			1 bit	C	-	W	T	U
232	Air-condition Mode	ON CMD for heating			1 bit	C	-	W	T	U
233	Air-condition Mode	ON CMD for dehumidification			1 bit	C	-	W	T	U
234	Air-condition Mode	ON CMD for fan			1 bit	C	-	W	T	U