CityGrow Systems

Mini ZigBee IR Transmitter

MODEL: CG102IR2
Mini ZigBee IR Transmitter
Power Supply: DC 6V, 200mA
IEEE 802.15.4 product

CG102IR2 for IR control
CG102IR2-AC for A/C control
Installation guide

Ratings

Operation Voltage	DC6V, 300mA
IR transmission	By IR head

Accessories

IR head

CG101AD
mini power supply

Before getting started

⚠ **WARNING!** The product must be installed by a qualified electrician in accordance with all applicable regulations and building codes. Improper wiring can result in personal injury or damage to control units or other equipment. Always turn off circuit breaker or remove main fuse from power line before doing any work. To avoid overheating and possible damage to equipment.

⚠ **WARNING!** Do not operate control units with any lamps removed or burned out; replace any burned out lamps immediately; use only transformers that incorporate thermal protection or fused primary windings. ! The product is designed for residential and commercial use, for indoor use only.

⚠ **WARNING!** Install in accordance with all national and local electrical codes.

⚠ **IMPORTANT!** Citygrow® is not liable for any damage incurred with the misuse of this product.

⚠ **IMPORTANT!** Pre-setup can only be done by a professional worker or manufacturer agent.

IR code learning

Before installing the CG102IR2, it is advised to learn the IR codes from the original remote of your appliances to the CG102IR2 by a laptop PC.

Step 1: Remove the front cover of CG102IR2, you will see the IR learning head on a PCB.

IR Learning receiver head

5 pin port

No use
Reset
6V+
COM
CT+
IR+
CT-
IR -
CT Sense
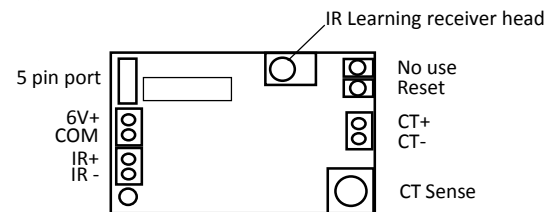
Step 2: Install "IR Master PC software" into Window PC.(Window XP or later version.). Then, connect CG101UTC +CG101UT5 cable (Not included), from PC to CG102IR2 5pin port. Please note you do not need to connect AC power adaptor to CG102IR, since the USB will power up the CG102IR. Then, run IR Master PC software.

PC installed with IR Master PC software

CG102IR2

CG101UTC + CG101UT5 cable

50mm
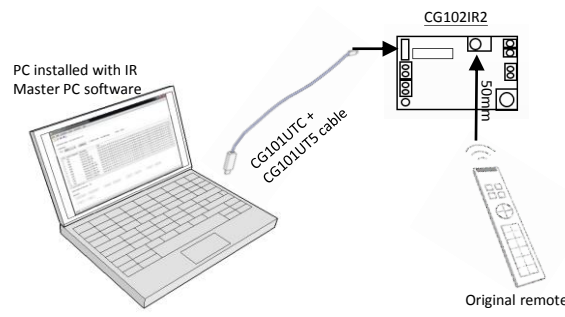
Original remote

IR Learning Diagram

Step 3: Inside the PC user interface, select "connect" and so PC is connected to CG102IR2.

Step 4: Place the original IR remote in front of the CG102IR2 IR learning head, the best distance is 50mm from the IR learning head.

Step 5: Press the button you intend to learn from the original IR remote "once".

Step 6: The IR Master PC software will show "Success", then you may input the description of this button for future use.

Step 7: When you finish learning all the IR codes, maximum 60 codes, you should save the file and give a file name for it.

Step 8: Referring to the manual of HomeNET Planner PC software, you will be guided to import the saved IR file into HomeNET Planner for your programming of the panels or iPad/iPhone/Android mobile device control.

Installation

STEP 1: **IMPORTANT!** Turn off main power at the main switch board.

STEP 2: Connect the main power cable from the wall box to the Live and Neutral wires of the CG101AD Mini Power Supply (purchase separately).
Make sure the Live is connected to the Brown wire (Live) and Neutral is connected to Blue wire (neutral) of CG101AD.

Live (Brown)
AC input 100 to 240V
Neutral (Blue)
CG101AD Mini power supply
DC6V output
"+" Red
"-" Bl;ack
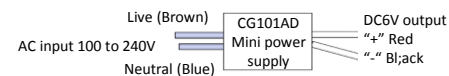
STEP 3: Make sure the DC output from CG101AD, red wire (positive) and black wire (negative) is correctly connected to the "6V+ and Com" of the CG102IR2 PCB connector.

STEP 4: Connect the IR head to the CG102IR2 PCB IR+ and IR-. Then, install CG102IR2 by closing the cabinet of it

STEP 5: Route the IR head cable to the IR receiver window of the appliance IR window.

For CG102IR2-AC air-conditioner control

Citygrow's CG100HTH-IR is a wall mount type thermostat. It sends wireless ZigBee control signals to CG102IR-AC to emit IR signal to control the air-conditioner.

Please follow the steps below to setup the product.

Step 1. Apply network information to the devices

Step 1.1 Add the CG100HTH-IR and CG102IR-AC to the project of the HomeNET Planner Software.(refer to HomeNET Planner Software manual).

Step 1.2 Set the network information of CG100HTH-IR and CG102IR2-AC by using the "Set" button on the "Device List" of HomeNET Planner.

Step 2. Binding the control between CG100HTH-IR and CG102IR2-AC

Step 2.1 Interconnect the CG100HTH-IR and the CG102IR2-AC by using CG101UT5.

Step 2.2 Power up the CG102IR2-AC by using the included AC power adaptor.

Step 2.3 Hold down one of the buttons on CG100HTH-IR.
Keep holding the button of CG100HTH-IR, then press and release the reset button of the CG100HTH-IR.

When the binding process is success, "ok" will be shown on the LED display of the CG100HTH-IR.

If the binding process is fail, please repeat step 2.1 to 2.3 for retry.

Step 3. Learning IR signal of air-conditioner to the CG102IR2-AC

Step 3.1 Download the "CG102IR Planner" software from http://citygrowsys.com/Software.php?Keywords=CG102IR%20Planner, and install the software to a computer (Microsoft Windows XP/Vista/7). Then, connect the CG102IR2-AC to the computer with CG101UTC, CG101UT5. Run the CG102IR2 Planner software and create a new project.
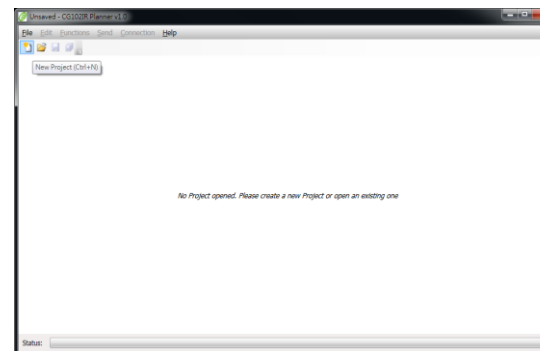
Step 3.2 Select the correct Port of the CG101UTC (you may check the port number from the "Device Manager" of Windows) and press "Connect" button.

Step 3.3 Learn all the IR signal from your existing remote controller of the air-conditioner to the CG102IR2-AC according to following Table 1 IR Signal learning table.

IRSI	Function		IRSI	Function
0	OFF		25	22°C FAN HIGH
1	DRY		26	23°C FAN LOW
2	FAN LOW		27	23°C FAN MID
3	FAN MID		28	23°C FAN HIGH
4	FAN HIGH		29	24°C FAN LOW
5	16°C FAN LOW		30	24°C FAN MID
6	16°C FAN MID		31	24°C FAN HIGH
7	16°C FAN HIGH		32	25°C FAN LOW
8	17°C FAN LOW		33	25°C FAN MID
9	17°C FAN MID		34	25°C FAN HIGH
10	17°C FAN HIGH		35	26°C FAN LOW
11	18°C FAN LOW		36	26°C FAN MID
12	18°C FAN MID		37	26°C FAN HIGH
13	18°C FAN HIGH		38	27°C FAN LOW
14	19°C FAN LOW		39	27°C FAN MID
15	19°C FAN MID		40	27°C FAN HIGH
16	19°C FAN HIGH		41	28°C FAN LOW
17	20°C FAN LOW		42	28°C FAN MID
18	20°C FAN MID		43	28°C FAN HIGH
19	20°C FAN HIGH		44	29°C FAN LOW
20	21°C FAN LOW		45	29°C FAN MID
21	21°C FAN MID		46	29°C FAN HIGH
22	21°C FAN HIGH		47	30°C FAN LOW
23	22°C FAN LOW		48	30°C FAN MID
24	22°C FAN MID		49	30°C FAN HIGH

See user manual for learning example

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