

# Four channel learnable infrared transmitter module

IRU06101

Product specification for Easylink

## 1. General

The 4 channel learnable infrared transmitter module is an Easyplus busmodule which can sent learned infrared codes. The module is used to control TV's, audio amplifiers, hifi equipment, airco's,....

The module has an infrared detector on board to learn codes from remote controls. Every code is stored inside the module and can be triggered by the Easyplus home automation system. Up to 100 double codes (first code and alternating code) can be stored .

An infrared code can exist out of two codes, the first code and the alternating code, which are stored into two banks. If the infrared code has two parts, the first time the code is triggered, the code from bank 1 is sent. The second time the code is triggered, the alternating code is sent. For example the on/off code of a TV from Philips (RC5 code) has an alternating code.

Channel 4 of the module can be changed into a Bang an Olufsen channel. The frequentie of a B&O code is very different from other standard infrared systems. Therefore a different electronical circuit of the module has to be enabled by replacing two jumpers (see next pages).

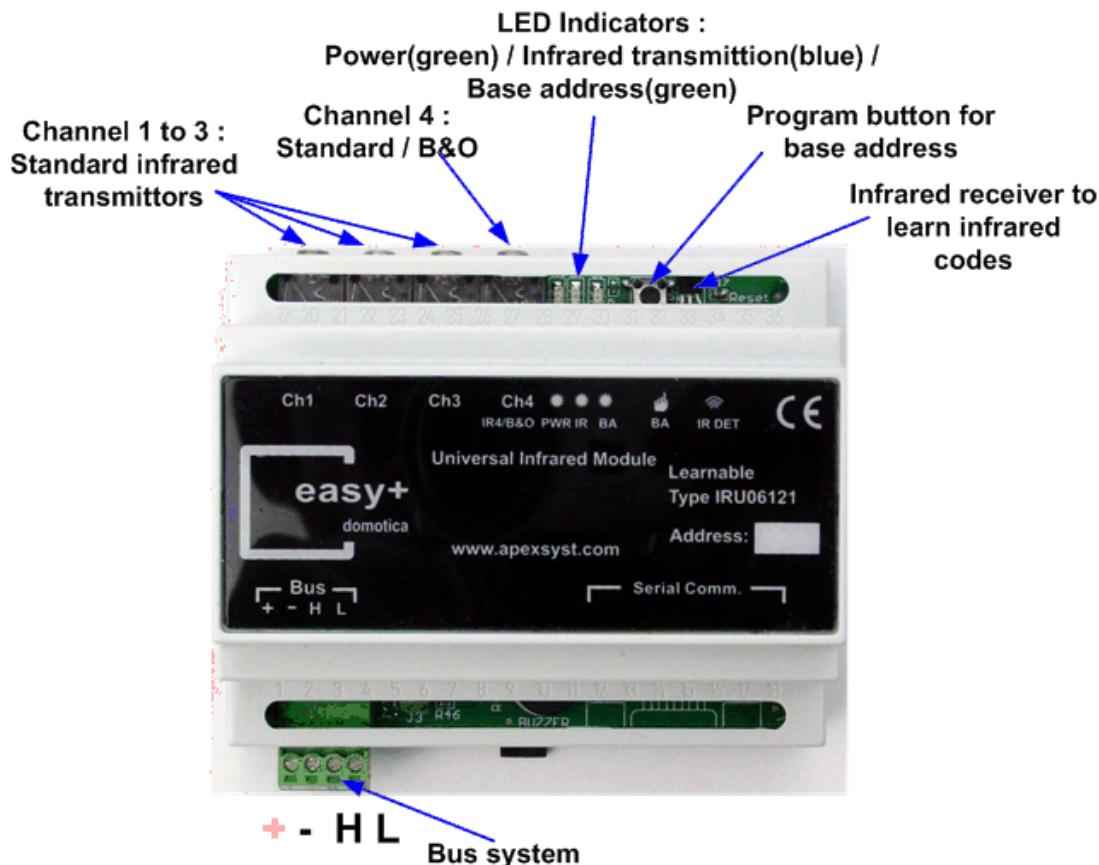
A set of 3 leds indicates the status of the module. There is a powered (green), a transmitter led (blue) and a basic adres programming led (green) indication.

The module contains a programmable base address which makes it possible to use several modules in the same installation.



## 2. Installation & connections

Before applying power to the module, you should check if all connections are correct, connecting 24V to the bus inputs will damage the module and is not covered under warranty.



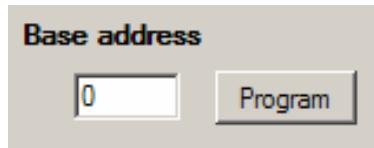
Connect the bus to the module and the infrared transmittors. Then place the infrared transmitters close to the TV, tuner,.... which has to be controlled.

### 3. Module software configuration

The module's base addresses need to be programmed and all the infrared codes need to be learned. The default address of the module is 0.

#### Programming the basic address

The base address for the module can be programmed by pressing the button “base address PROGRAM” in the Easylink software. Then Press the program button on the module itself (see picture above). The module accepts the address and indicates this by briefly flashing the green LED BA on the module and it sends also a message to the Easylink software program. Now the address of the module is linked.



#### Learning the infrared codes

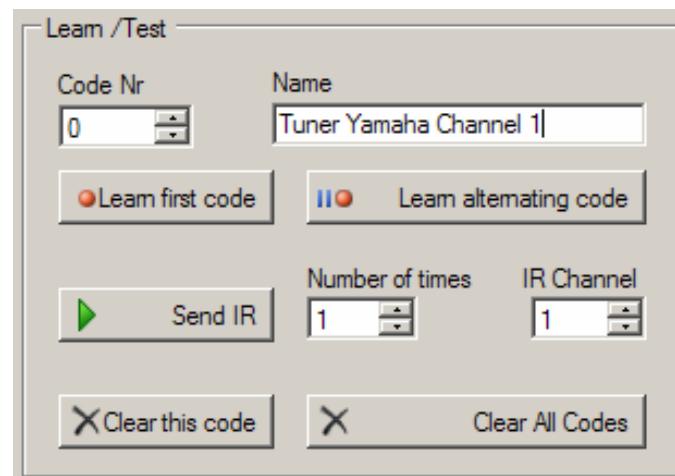
- Choose the code number and give it an understandable clear name. For example : Tuner Yamaha Channel 1.
- Press the “Learn first code” button in the Easylink software.
- The module begins to produce a sharp continuous sound.
- Now take the remote control, point it to the receiver of the module and press the button you want to learn until the module stops the sound. Now the infrared code is learned.

Note : if the sound doesn't stop or changes into a few short beeps, the learning of the code has failed. Check out if the remote control works (for example batteries low) and try again.

For infrared codes which have an alternating part :

- Choose the code number and give it an understandable clear name. For example : Tuner Yamaha Channel 1.
- Press the “Learn first code” button in the Easylink software.
- The module begins to produce a sharp continuous sound.
- Now take the remote control , point it to the receiver of the module and press the button you want to learn until the module stops the sound.
- Press the “Learn alternating code” button in the Easylink software.
- The module begins to produce a sharp continuous sound again.
- Now take the remote control , point it to the receiver of the module and press the button you want to learn again until the module stops the sound.

Note : it is important that you don't press the button on the remote control in between the learning process. Only press one time at each step.



Testing infrared codes

- a. Select the code you want to test, by selecting the Code Nr.
- b. Select the channel of the module where you want to sent the code to.
- c. Choose the number of times you want to sent the code.
- d. Press the button “Send IR”.

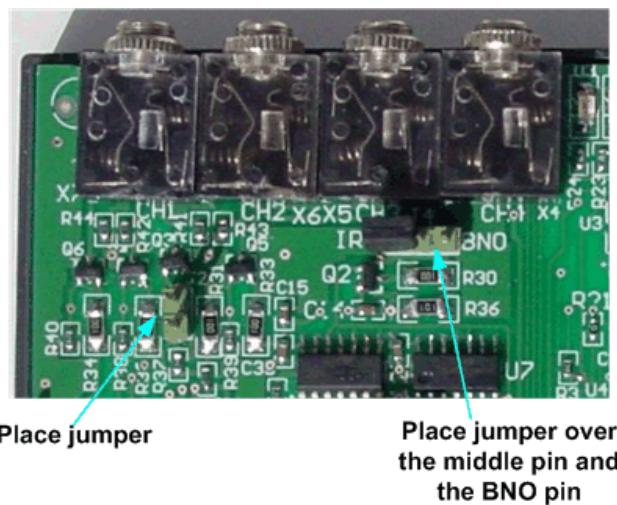
Clearing the infrared codes

- a. Select the code you want to delete by selecting the Code Nr.
- b. Press the “Clear this code” button

Note : you can clear all codes at once with the “Clear All Codes” button.

#### 4. Bang And Olufsen hardware configuration

To configure the B&O module we have to open the module and place two jumpers into position jumper IR-BNO must be placed into the position of BNO and jumper J2 needs to be placed (see figure below).



\*\*\* Remark : this function will be activated from aug. 2008

#### 5. Module hardware configuration

A jumper can be placed to terminate the bus when the module is at the far end of the system bus.

**Important note :** The bus only may be terminated at 2 points in the system.

#### 6. Ordering information

##### Main module

IRU06101      Four channel learnable infrared transmitter module

##### Optional accessories

IME07001      Single infrared flasher

IME07002      Double infrared flasher

**7. Technical specification**

Supply voltage	12..24V
Current consumption	24mA @ 24V (LED's OFF)
Infared codes	100 codes (2 banks : first code/alternating code)
Channels	4 channels (channel 4 can be set as B&O channel)
Infrared LED output current	100 mA pulsed
Dimension (h w d)	86 * 105 * 59 mm
Max wire diameter	0.75mm <sup>2</sup>
Operating temperature	0..45°C
Netto weight	130 gr.

\*\*\* Important remark : the information of this datasheet is only fit for the Easylink masterboards.

1. General .....	1
2. Installation & connections.....	1
3. Module software configuration .....	2
4. Bang And Olufsen hardware configuration .....	3
5. Module hardware configuration .....	3
6. Ordering information.....	3
7. Technical specification.....	4