AbstractAVR

Ledbuddy controller

Introduction

The LedBuddy is a simple yet powerful wallpanel controller for LED lighting using the DMX512 control system. All programming and configuration is carried out using a PC application, connected to the LedBuddy panel by USB.

The LedBuddy is available in two versions, an 8-button version fitting into a single pattress box (standard single light switch) and a 16-button version which fits a double box (like a double socket).

The 8-button version can store 8 programs. The 16 button version can store 16 or 64 programs. Each program can be static or have up to 250 steps.

The LedBuddy controller outputs 512 channels of DMX.

Specification

Power supply 7-48V DC, approx 2 watts
Output DMX512, 512 channels

RJ45 connector wiring:
1-Data+
2-Data-
3-Ground
4-7-48V Supply
5-7-48V Supply
6-7-48V Supply
7-Ground
8-Ground

(7-48V Supply and ground may be connected to any or all of the 3 pins, which are linked on the connector)

Loss of power/power off

The LedBuddy will remember the selected program and will restart the same program after loss of power.

Operation with infrared remote

If the optional sensor module is connected to the terminal block, and infra-red remote control is enabled in the setup software, you can turn the lighting on and off (standby button), dim up and down (volume up/down button) and select programs 1-16. Programs 1-9 are selected using the number buttons on the remote. To select programs 10-16, press the "-/--" button then press two number buttons.

The sensor module must be suitably positioned in the room such that it can "see" the infrared commands. The remote handset is configured to use the RC5 protocol.

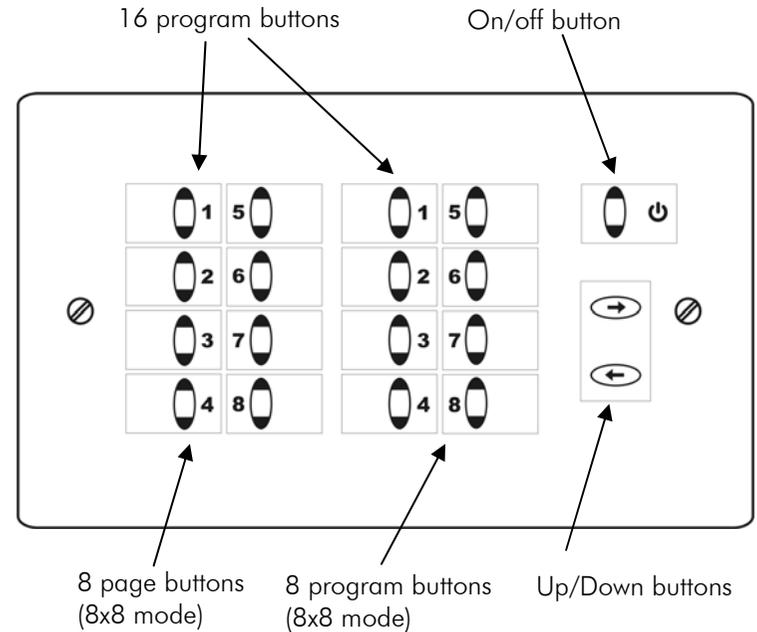## Passive infrared sensor (occupancy sensor)

If the optional sensor module is connected to the terminal block, the setup program can configure the Ledbuddy to turn on a program when it detects someone entering the room. The program will remain on for the time duration which has been set.

The blackout button does not have any effect on the PIR sensor program; even if the panel is set to blackout, the triggered program will run.

If the PIR configuration is set to "Manual Programs Disable PIR", then the PIR will not operate while a program is active which you have turned on using the buttons.
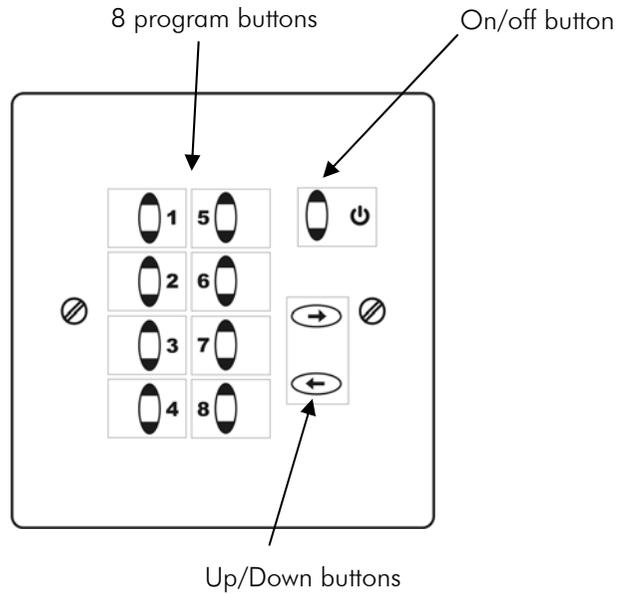
Features of the panel

(16 button panel)

16 program buttons   On/off button

8 page buttons (8x8 mode)   8 program buttons (8x8 mode)   Up/Down buttons

Features of the panel

(8 button panel)

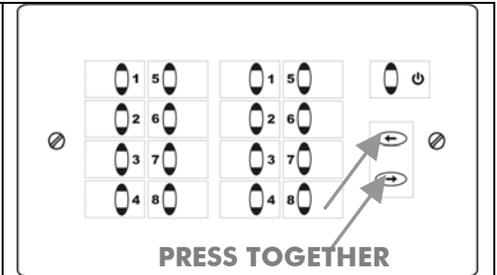8 program buttons   On/off button

Up/Down buttons

Modifying programs

These functions can be disabled by the configuration ("Allow user to change colour/speed" option).

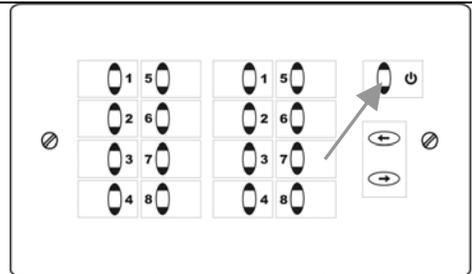| **Changing speed** You can change the speed of a stepping program by pressing the 2 arrow buttons together. The button lights will alternate. Press the top button to speed up and the bottom one to slow down. Speed changes are temporary and will be lost when another program is selected.	PRESS TOGETHER
Changing colour You can modify the colour of a static program. Hold down one of the up down buttons, then press and hold the button for the program. Keeping the program button held you can then press the up or down button to cycle through all available colours. Colour changes are temporary and will be lost when another program is selected.	HOLD PRESS
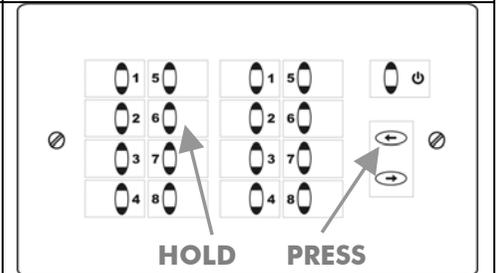
Swapping between programs

You can run several programs at the same time, provided that the programs are controlling different light fixtures. This means that for example you could have buttons 1-4 controlling cove lighting and 5-8 buttons independently controlling accent lighting. If you have program 1 turned on, and you press program 2, program 1 will automatically turn off, as it is controlling the same lights as program 2. If however you press program 5, program 1 will remain on as program 5 is controlling different lights to 1.

On/Off and dimming

These functions are the same for all configurations.

Switching on and off Press the standby button. The lighting will turn off if it was on, or will turn on if it was off. A fade in/fade out time may be configured for switching on/off.	
Dimming Use the arrow buttons to increase or decrease the brightness.	
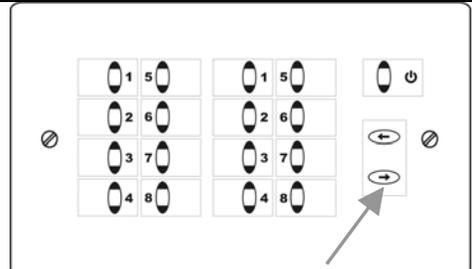
Installation of the LedBuddy panel

The LedBuddy panel will control any DMX512 lighting system. In some cases it will require a DC power adapter, if the DC power is not provided by the LED installation.

Using with AbstractAVR drivers

If using with an LUD36, LUD48, LUD12-4, LUD192 or MFD10 driver, the LedBuddy panel is connected directly to the first driver by an RJ45 cable. Ensure that the 48V power switch is enabled on the first driver.
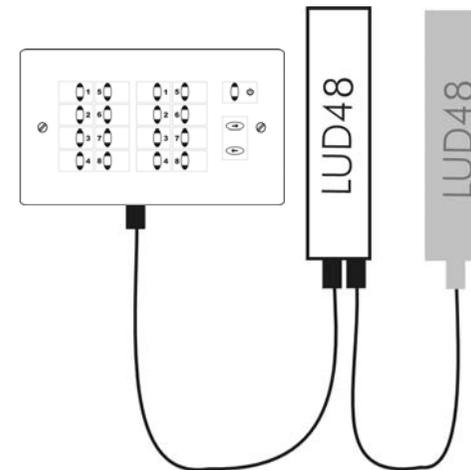
If using with an LMD4, LMD8 or LMD16 driver, the LedBuddy panel is connected directly to the first driver using a 4-pin RJ11 to 8-pin RJ45 cable. The LedBuddy is powered by 12V from the driver.

Using with other drivers

You will need to provide a DC power supply of 7-48V (approx 200mA at 12V). The RJ45 wiring is as follows:
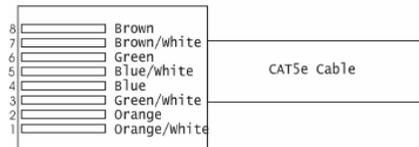
1: DMX +
2: DMX-
3: GND
4,5,6: Positive Supply voltage (only one needs to be connected)
7,8: GND (only 3, 7 or 8 needs to be connected)

Using in Slave Mode

For use in a 2-way switching situation (for example a large room with switch panels at each end), you can connect two LedBuddy panels to the DMX line. One contains the programs, the other is configured to act as a Slave and controls the master.

The two LedBuddy panels must be connected at the two ends of the DMX line. You cannot Y-split the DMX line as this will cause data corruption and unreliable operation.

Configuring LedBuddy using the PC software

The LedBuddy panel is configured using PC software, via a USB connection.
The USB connection is located on the rear of the panel; the panel must be removed from the wall to access it. When a USB connection is made to a PC, a removable drive should appear which contains the PC software – simply double click to run it.

Other connections to LedBuddy

The LedBuddy unit provides a 4-pin terminal block which has +5V, Ground and two general purpose inputs. A remote sensor unit (optional extra) may be connected to allow activation by PIR (occupancy sensor) and remote control using infra-red handset. A standard lightswitch may also be connected to give a remote on-off control. (NB: lightswitch must be isolated from the mains)

Selecting a program

8 button panel Press one of the 1-8 buttons to select a program. The selected button will light up.	
16 program mode Press one of the 1-16 buttons to select a program. The selected button will light up.	
8x8 program mode Press one of the left hand 1-8 buttons to select a program page, then one of the right 1-8 buttons to select a program on that page. The selected page and selected button will light up. If you change the page, the program button will flash to show that a program is active on another page.	

Note: If a button does not have a program allocated to it, it will not light up when pressed.