

# TUBELED™

*Controller*

## Operation Manual

**WWW.BEGLEC.COM**

Copyright © 2004 by BEGLEC cva.

Reproduction or publication of the content in any manner, without express permission of the publisher, is prohibited.

*Version: 1.1*



# OPERATION MANUAL

Thank you for buying this JB Systems product. To take full advantage of all possibilities, please read these operating instructions very carefully.

The JB Systems TUBELED™ system contains the following components:

- The 1m long TUBELED™ tubes: to be connected to the controller.
- The TUBELED™ controller: controls the connected led tubes.
- Signal extension cables: 5m or 10m.
- Power extension cables: 5m, 10m or 20m.

**This manual only explains the functions of the controller.**

## FEATURES

- Dedicated controller used to control the TUBELED™ led tubes (not included)
- Controls up to 4000 tubes, no extra power boosters needed.
- 38 preprogrammed patterns
- Auto mode scans all patterns automatically
- Pattern selection by DMX512:
  - Channel1: choose patterns
  - Channel2: speed control
  - Channel3: interval time
  - Channel4: strobe/flash rate
- RGB color mixing, controlled by DMX512 (make your own colors):
  - Channel1: not used (set to zero)
  - Channel2: dimming red color
  - Channel3: dimming green color
  - Channel4: dimming blue color
- Adjustable strobe function
- Adjustable speed and interval time for most patterns
- Nice plastic enclosure can be fixed on the wall
- Auto save function: saves the last working mode for all patterns individually.
- Perfect for use in: retail stores, commercial displays, architectural lighting, indoor and outdoor decoration, clubs, pubs, mobile DJs, trussing, ...

## BEFORE USE

### Check the contents:

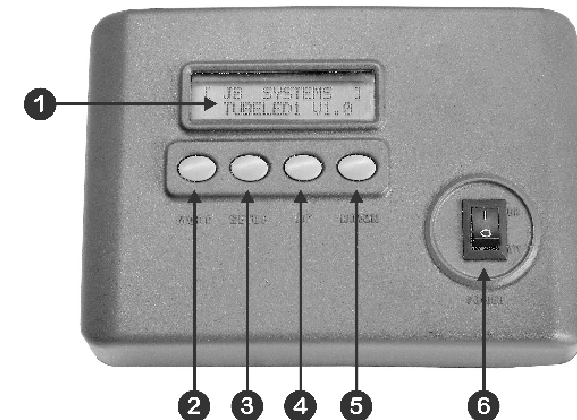
Check if the carton contains the following items:

1. TUBELED™ controller
2. Mains DC Adapter 12V 500mA
3. Operating instructions

### Some important instructions:

- To protect the environment, please try to recycle the packing material as much as possible.
- Keep this booklet in a safe place for future consultation. If you sell this product, be sure to add this user manual.
- To prevent fire or shock hazard, do not expose this appliance to rain or moisture.
- Install the unit always indoor!
- Don't place metal objects or spill liquid inside the unit. Electric shock or malfunction may result. If a foreign object enters the unit, immediately disconnect the mains power.
- Prevent use in dusty environments and clean the unit regularly.
- The electrical installation should be carried out by qualified personal.
- We strongly suggest NOT opening the cover, there are no user serviceable parts inside.
- In the event of serious operating problems, stop using the controller and contact your dealer immediately.

## CONTROLS (FRONT)



1. **LCD DISPLAY:** shows you all necessary information about working mode, parameters etc.
2. **MODE BUTTON:** used to choose the desired working mode and patterns. The display shows another function every time you push the button. Keep the button pressed if you want to browse faster through all possible modes. (see further for the possible options to choose from)
3. **SETUP BUTTON:** used to set the parameters of the selected mode or pattern. Almost every pattern can have its own parameters. These parameters are saved for every pattern individually.
  - **Interval:** this is the waiting time between two steps in a chase pattern.

With the UP/DOWN buttons you can select a value between 000 and 100. (000 = short interval time \* 100 = longer interval time)

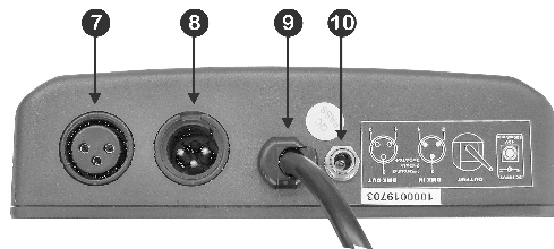
Press SETUP again to confirm the selected parameter.

- **Speed:** this is the speed of the chase pattern. With the UP/DOWN buttons you can select a value between 000 and 100. (000 = low speed \* 100 = high speed) Press SETUP again to confirm the selected parameter.
- **Flash:** here you can select the strobe or flash rate of the TUBELED™. With the UP/DOWN buttons you can select a value between 000 and 100. (000 = no strobe function \* 100 = high flash rate) Press SETUP again to confirm the selected parameter.
- **Tube:** used to set the number of TUBELED™ tubes connected to the controller. You only need to setup the number of tubes once. Most of the patterns won't work properly when the number of connected tubes doesn't correspond to the selected number on the controller.

*Remark: The setup function is not available on all patterns or working modes.*

4. **UP BUTTON:** used to choose a higher value for the selected parameter.
5. **DOWN BUTTON:** used to choose a lower value for the selected parameter.
6. **POWER ON/OFF:** Used to switch the controller on and off. The last working mode is saved when the controller is switched off.

## CONNECTIONS (REAR)



7. **DMX INPUT:** The TUBELED™ controller only receives DMX signals so it must be connected as any other light effect in the DMX line. The 3pin male XLR-connector receives instructions from any universal DMX-controller. In the next chapter we explain how to set up the DMX addresses.
8. **DMX OUTPUT:** The 3pin female XLR-connector is used to connect the controller with the next unit in the DMX chain.
9. **TUBELED SIGNAL CABLE:** connect this cable to the first led tube in the chain. Extra 5m or 10m signal cable extensions are optionally available.
10. **DC POWER INPUT:** Used to connect the supplied 12V / 500mA DC adapter to the controller.

## INSTALLATION STEPS:

To be sure that the TUBELED™ system works properly you must follow the steps below every time you change the number of tubes connected to the controller:

- **INSTALL ALL TUBES:** Refer to the installation manual included with each TUBELED™ for proper installation.
- **INSTALL THE CONTROLLER:**
  - Put the controller in a suitable place. Eventually you can fix the controller to the wall.
  - Connect the supplied DC adapter to the controller
  - Connect the signal output to the signal input of first led tube.
- **TEST CONNECTIONS:** we will test the connection between the controller and the led tubes.
  - Switch the controller on
  - Use the MODE button to select "test mode"
  - Press the SETUP button. (display shows "Connection OK if tubes are red") As the display states: if all led tubes are "red", the connections are OK.
- **SET THE NUMBER OF TUBELEDS:** To be able to produce nice programs, the controller needs to know how many tubeleds are connected.
  - Go to any of the "non static" patterns.
  - Press the setup button until the display shows "Tubes : 0000"
  - Use the up and down buttons to set the exact number of connected tubes.
  - Press the setup button again to confirm.

*Remark: If the number of connected tubes doesn't match the number set on the controller, the system will not work properly. Some tubes will even not work at all!*

- **PROPER ADDRESSING:** automatically sets the addresses of the connected tubes. Perform this action always when you connect a different number of tubes:
  - Use the MODE button to select "address mode"
  - Press the SETUP button. During the initializing process the display shows "initializing addr. Waiting..." When the initializing is done, the display shows "OK! Address is done"

At this point the setup is finished if you use the TUBELED™ system in standalone mode. Look further on how to use the DMX capabilities.

- **DMX512 ADDRESSING:** Before using the DMX capabilities you have to set the starting address:
  - Use the MODE button to select "DMX512 Mode"
  - Press the SETUP button. The display shows the current DMX starting address.
  - With the UP/DOWN buttons you can select the desired DMX starting address. (starting addresses up to 255 can be selected)
  - Press the SETUP button again to confirm the selected starting address.
- **FACTORY SETTINGS:** As explained before you can set and save different parameters for all patterns. You can set all parameters back to the factory settings.
 

**Attention:** Note that all your previous settings will be lost:

  - Use the MODE button to select "Factory settings" on the display.
  - Press the SETUP button to load the factory settings. The display shows "OK! Setting is done"

## STANDALONE MODE:

This is the simplest way to operate the TUBELED™ system.  
Use the MODE button to select the desired mode or patterns from the list below:

Number	PATTERN / MODE
1	BLACKOUT
2	STATIC RED
3	STATIC GREEN
4	STATIC YELLOW
5	STATIC BLUE
6	STATIC PURPLE
7	STATIC CYAN
8	STATIC WHITE
9	FAST CHANGE
10	SLOW FLOW 1
11	FAST FLOW 1
12	FAST FLOW 2
13	BLACK RUN 1
14	ROLL CHASE
15	ROLL COLOR
16	COLOR 1/4
17	COLOR1 1/4
18	COLOR 1/2
19	COLOR FLASH
20	B & W FLOW
21	R & G FLOW
22	G & B FLOW
23	R & B FLOW
24	R & G CHASE 1
25	R & G CHASE 2
26	R & B CHASE 1
27	R & B CHASE 2
28	R & W CHASE 1
29	R & W CHASE 2
30	B & G CHASE 1
31	B & G CHASE 2
32	W & G CHASE 1
33	W & G CHASE 2
34	RAINBOW CHASE 1
35	RAINBOW CHASE 2
36	RAINBOW CHASE 3
37	RAINBOW CHASE 4
38	RAINBOW CHASE 8
39	AUTO MODE
40	TEST MODE
41	ADDRESS MODE
42	Factory settings load
43	DMX512 MODE

Use the SETUP and UP/DOWN buttons to change the values of the pattern parameters. Refer to the "CONTROLS (front)" section to read more about how to use these buttons.

## DMX-512 MODE:

Before using the DMX capabilities you have to set the start address. See "installation steps". There are two different ways to control the controller by DMX:

### MODE1 – DMX PATTERN SELECTION:

**Mode1 is active when the DMX value of channel1 is not zero!**

- **Channel1** is used select one of the preprogrammed patterns:

DMX Value	Pattern
1~5	BLACKOUT
6~11	STATIC RED
12~17	STATIC GREEN
18~23	STATIC YELLOW
24~29	STATIC BLUE
30~35	STATIC PURPLE
36~41	STATIC CYAN
42~47	STATIC WHITE
48~53	FAST CHANGE
54~59	SLOW FLOW1
60~65	FAST FLOW1
66~71	FAST FLOW2
72~77	BLACK RUNT
78~83	ROLL CHASE
84~89	ROLL COLOR
90~95	COLOR 1/4
96~101	COLOR1 1/4
102~107	COLOR1 1/2
108~113	COLOR FLASH
114~119	B & W FLOW
120~125	R & G FLOW
126~131	G & B FLOW
132~137	R & B FLOW
138~143	R & G CHASE 1
144~149	R & G CHASE 2
150~155	R & B CHASE 1
156~161	R & B CHASE 2
162~167	R & W CHASE 1
168~173	R & W CHASE 2
174~179	B & G CHASE 1
180~185	B & G CHASE 2
186~191	W & G CHASE 1
192~197	W & G CHASE 2
198~203	RAINBOW CHASE 1
204~209	RAINBOW CHASE 2
210~215	RAINBOW CHASE 3
216~221	RAINBOW CHASE 4
222~255	RAINBOW CHASE 8

- **Channel2** is used to control the pattern speed:

DMX value = 000 → Speed = 0

DMX value = 255 → Speed = maximum

- **Channel3** is used to control the interval time:  
DMX value = 000 → Interval time = 0  
DMX value = 255 → Interval time = maximum
- **Channel4** is used to control the flash (strobe) rate:  
DMX value = 000 → Interval time = 0  
DMX value = 255 → Interval time = maximum

*Remark: note that channels 2 and 3 (speed and interval) have no effect on the blackout and static colors (DMX value for channel1 is between 1 and 47).*

### **MODE2 – RGB COLOR MIXING:**

**Mode2 is active when the DMX value of channel1 is zero!**

- **Channel1** is not used and must be set to zero.
- **Channel2** is used to dim the RED colored leds inside the tubes:  
DMX value = 000 → no red light output  
DMX value = 255 → maximum red light output
- **Channel3** is used to dim the GREEN colored leds inside the tubes:  
DMX value = 000 → no green light output  
DMX value = 255 → maximum green light output
- **Channel4** is used to dim the BLUE colored leds inside the tubes:  
DMX value = 000 → no blue light output  
DMX value = 255 → maximum blue light output

## **SPECIFICATIONS**

<b>Mains Input:</b>	DC Adapter 230V/50Hz → 12Vdc / 500mA
<b>Preprogrammed patterns:</b>	38
<b>Max. number of tubes:</b>	up to 4000pcs.
<b>DMX connections:</b>	3pin XLR male / female
<b>DMX addressing:</b>	000 to 255
<b>Power consumption:</b>	<1.5Watt
<b>Size:</b>	180 x 125 x 49mm
<b>Weight:</b>	360 gram