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Installation Instructions for

PIT-LED RGB

RED GREEN BLUE WHITE FULL COLOUR FULL DMX CONTROL

Fully controllable LED lighting for pin illumination on Pinspotter and Pinsetter machines

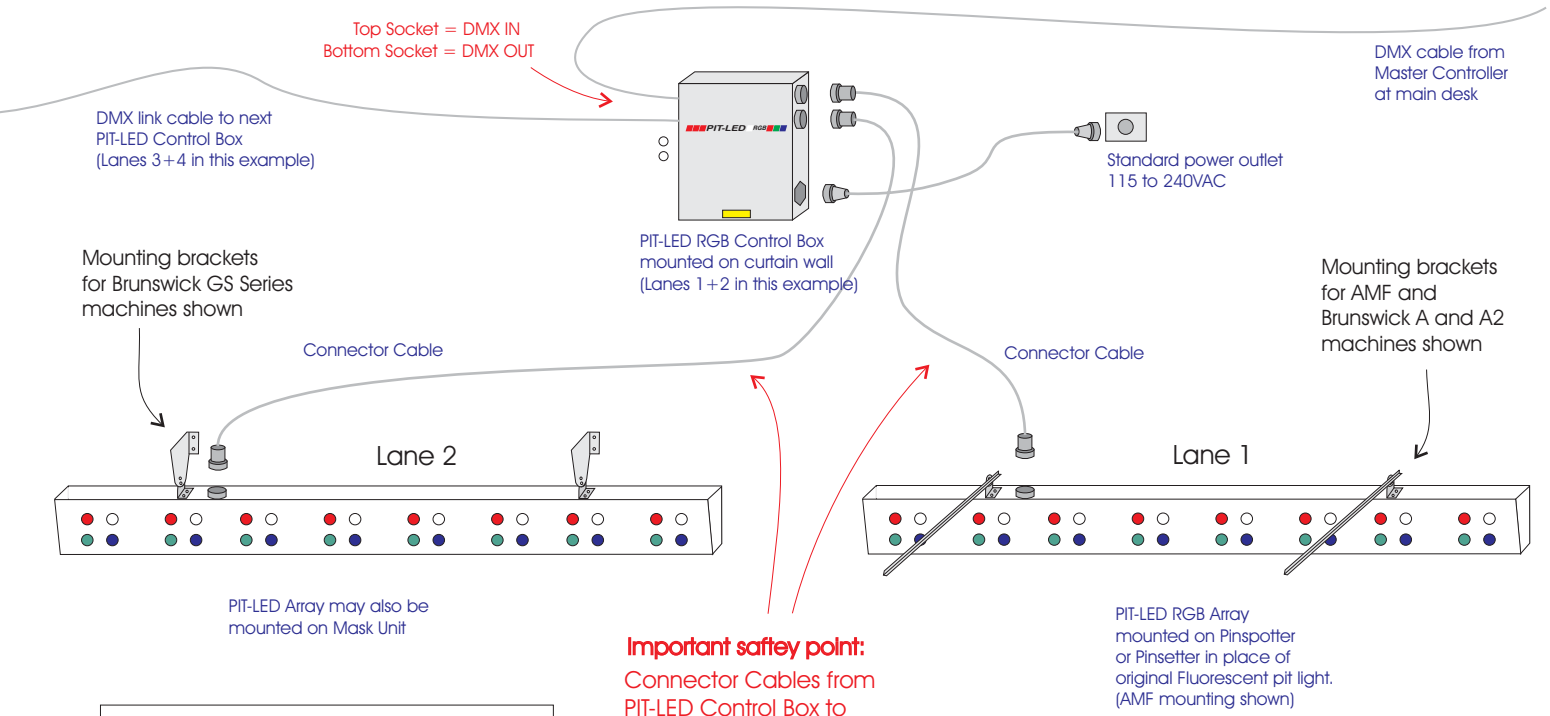
WHITE, RED, GREEN and BLUE LEDs on each lane can be individually controlled by DMX512 to give any colour of the rainbow.

Colour effects can be isolated to one lane, a block or the entire house.

Colour effects can be static or dynamic (colour changing). When using a PC based DMX Master Controller, an almost endless number of pre-programmed effects can be initiated by the click of a mouse.

Each lane pair requires one PIT-LED set, which consists of one control box and two LED arrays (plus cables).

The DMX Master Controller (there are many types available) is normally located at the main control desk. This connects to the first PIT-LED control box (normally lanes 1+2) by a DMX cable. The remainder of the PIT-LED control boxes (for lanes 3+4, 5+6 etc) are connected in a "daisy-chain" style to each other as shown in the diagrams.



Important saftey point:
Connector Cables from PIT-LED Control Box to Arrays carry only 20VDC maximum

These components are supplied in the standard PIT-LED RGB kit:

1 x PIT-LED RGB Control Box
2 x PIT-LED RGB Array
2 x sets of mounting brackets and hardware
2 x PIT-LED Connector Cable
1 x IEC Power Cable
1 x DMX Cable 4m

Other components required:

DMX Master Controller, such as
DMX Control Desk (many types available)
or
USB-DMX Controller (for PC) and
DMX Software for PC

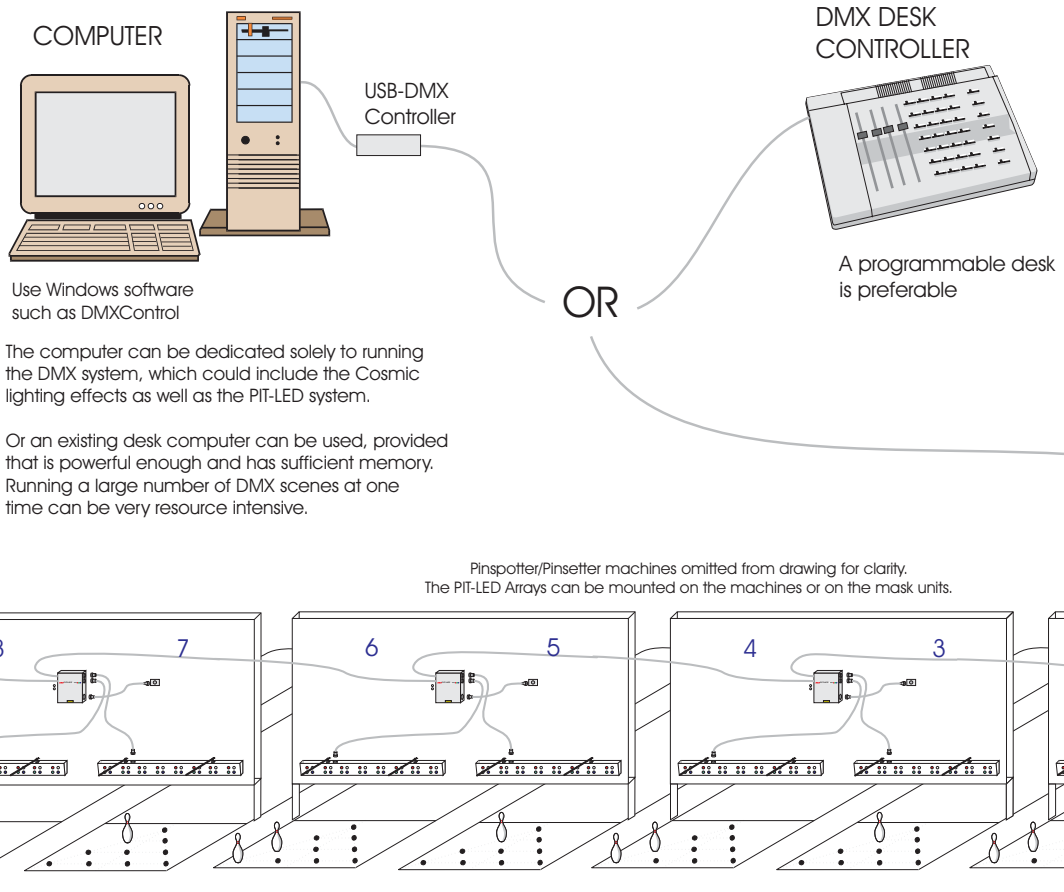
The PIT-LED system is completely independent of the Pinspotter or Pinsetter machine and scoring system.
This makes it compatable with all machines and systems.

manufactured by Cybernetic Solutions Pty Ltd
www.cybernetic.com.au

86 Barry Street
Reservoir
Victoria 3073
Australia

Phone 61 3 9460 2559
Fax 61 3 9460 7071

Schematic Diagram of PIT-LED system installed in a bowling centre



INSTALLATION STEPS:

1. Check the voltage selector switch on the under side of the PIT-LED Control Box and ensure it shows the correct voltage for your area - 115 or 230V. Move the slider switch if necessary to select the correct voltage.

2. Attach PIT-LED Control Box securely to curtain wall. Take care to position the Control Box so that the power supply cable and Connector Cables will easily reach their destinations as shown in the diagrams.

3. Remove existing fluorescent pit or pindeck light fixtures.

4. Mount PIT-LED Arrays onto Pinspotter or Pinsetter (or in some circumstances it may be preferred to mount the PIT-LED Arrays onto the back of the mask units) using the supplied adjustable brackets. Tighten all bolts except the two on each bracket that allow tilt adjustment. Leave these bolts finger tight to allow for later adjustment.

5. Install Connector Cables - one end to Control Box and the other end to the PIT-LED Array. These cables are directional and will only connect one way. Take great care that the cables are secure at both ends and that they are routed in such a manner that they will not be fouled by moving machine parts or any other thing.

6. Connect the female end of the 3 pin DMX cable from the DMX Master Controller (either a PC or desk controller) to the DMX IN socket on the upper left side of the PIT-LED Control Box.

7. Remove the front cover of the PIT-LED Control Box and set the DMX channel DIP switches according to the explanationand allocation tables on page 3. Replace and secure the front cover.

7. Plug the power cable into the bottom right side of the Control Box and also plug it into the wall socket.

8. Plug the power cable into the socket on the bottom right side of the Control Box and also plug it into the wall socket.

9. Re-check all connections, cable routing and voltage selector switch. If all is well, turn on the switch at the power outlet.

10. The PIT-LED will do nothing until a command is issued from the DMX Master Controller.

11. Using the DMX Master Controller, call up a scene or directly access the particular DMX channels to test each PIT-LED Array. A section of the DMX chart can be found on page 3.

12. When the PIT-LED Array is illuminated, adjust the tilt of the Array to get the best lighting effect and then tighten the two screws on each bracket that were left finger tight from step 4.

13. Repeat steps 1 to 12 for each PIT-LED set to be installed.

14. Connect a 3 pin DMX cable from the DMX-OUT (female) socket on the first PIT-LED Control Box to the DMX-IN (male) socket on the second PIT-LED Control Box.

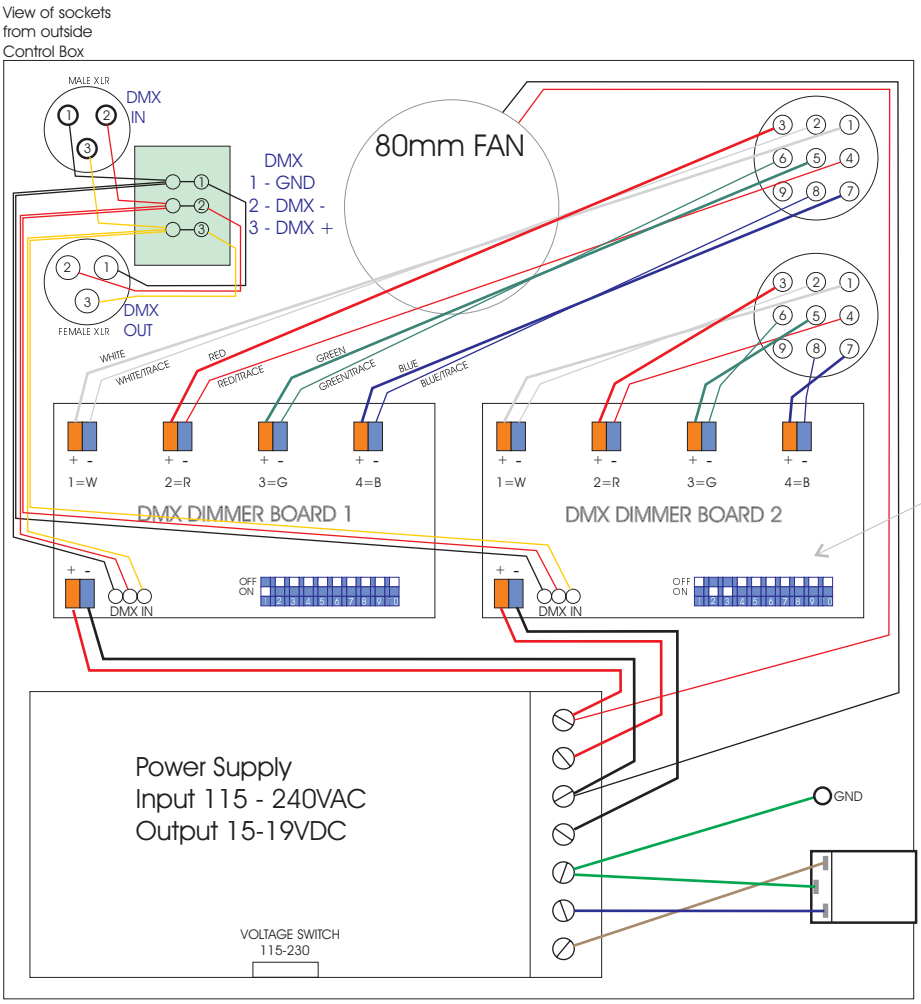
15. Repeat the procedure in step 13 for all of the PIT-LEDControl Boxes until the last Control Box is reached. Plug the supplied DMX terminator into the DMX OUT socket of the last Control Box.

16. Further non PIT-LED DMX devices may be plugged into the DMX OUT socket in a continuation of the DMX daisy-chain. In this case, the DMX terminator should be plugged into the DMX OUT scocket of the final device in the line.

PIT-LED RGB Control Box

DMX IN
Link cable from previous PIT-LED Control Box
or
Link Cable from DMX Master Controller if this unit is the first in line

DMX OUT
Link cable to DMX IN of next PIT-LED Control Box



Output Cable to LED Array ODD Lane

Output Cable to LED Array EVEN Lane

DIP Switches
DMX Dimmer board 1 is set to #1
(first of its 5 channels is 1)
DMX Dimmer Board 2 is set to #6
(first of its 5 channels is 6)l
This means that this Control Box is set for Lanes 1 and 2

115 to 240VAC

DMX512

Each PIT-LED RGB Control Box is assigned 10 DMX channels, 5 for each of the two internal DMX Dimmer Boards.

On each of the dimmer boards,

1st channel is WHITE
2nd channel is RED
3rd channel is GREEN
4th channel is BLUE
5th channel is SPARE

Setting the DIP switches on the DMX Dimmer boards

In the diagram above, the DIP switches are set for lanes 1 and 2.

The DIP switches are binary and DOWN is ON:
Switch 1 = 1
Switch 2 = 2
Switch 3 = 4
Switch 4 = 8
Switch 5 = 16
Switch 6 = 32
Switch 7 = 64
Switch 8 = 128
Switch 9 = 256
Switch 10 is not used for addressing

IMPORTANT
Switch to appropriate input voltage

DIP Switch settings

		SET START CHANNEL	SWITCH ON
Lanes 1+2			
DMX Dimmer Board 1	=	1	1
DMX Dimmer Board 2	=	6	2+3
Lanes 3+4			
DMX Dimmer Board 1	=	11	1+2+4
DMX Dimmer Board 2	=	16	5
Lanes 5+6			
DMX Dimmer Board 1	=	21	1+3+5
DMX Dimmer Board 2	=	26	2+4+5
Lanes 7+8			
DMX Dimmer Board 1	=	31	1+2+3+4+5+6
DMX Dimmer Board 2	=	36	3+6
Lanes 9+10			
DMX Dimmer Board 1	=	41	1+4+6
DMX Dimmer Board 2	=	46	2+3+4+6
Lanes 11+12			
DMX Dimmer Board 1	=	51	1+2+5+6
DMX Dimmer Board 2	=	56	4+5+6

etc

DMX Channel assignments:

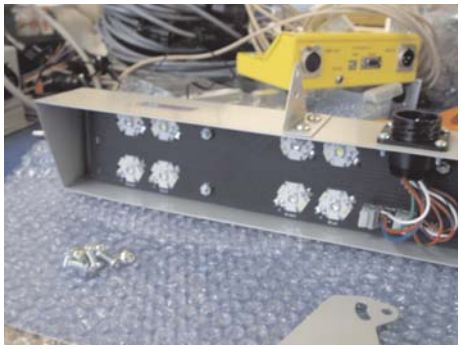
Control Box 1
Odd lane WHITE = 1
Odd lane RED = 2
Odd lane GREEN = 3
Odd lane Blue = 4
Odd lane SPARE = 5
DIMMER BOARD 1

Even lane WHITE = 6
Even lane RED = 7
Even lane GREEN = 8
Even lane BLUE = 9
Even lane SPARE = 10
DIMMER BOARD 2

Control Box 2
Odd lane WHITE = 11
Odd lane RED = 12
Odd lane GREEN = 13
Odd lane BLUE = 14
Odd lane SPARE = 15
DIMMER BOARD 1

Even lane WHITE = 16
Even lane RED = 17
Even lane GREEN = 18
Even lane BLUE = 19
Even lane SPARE = 20
DIMMER BOARD 2

Control Box 3
Odd lane WHITE = 21
Odd lane RED = 22
etc


Mounting brackets for Brunswick GS Series machines