

# PIT-LED RGB

RED GREEN BLUE WHITE FULL COLOUR FULL DMX CONTROL

Version 3.0

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

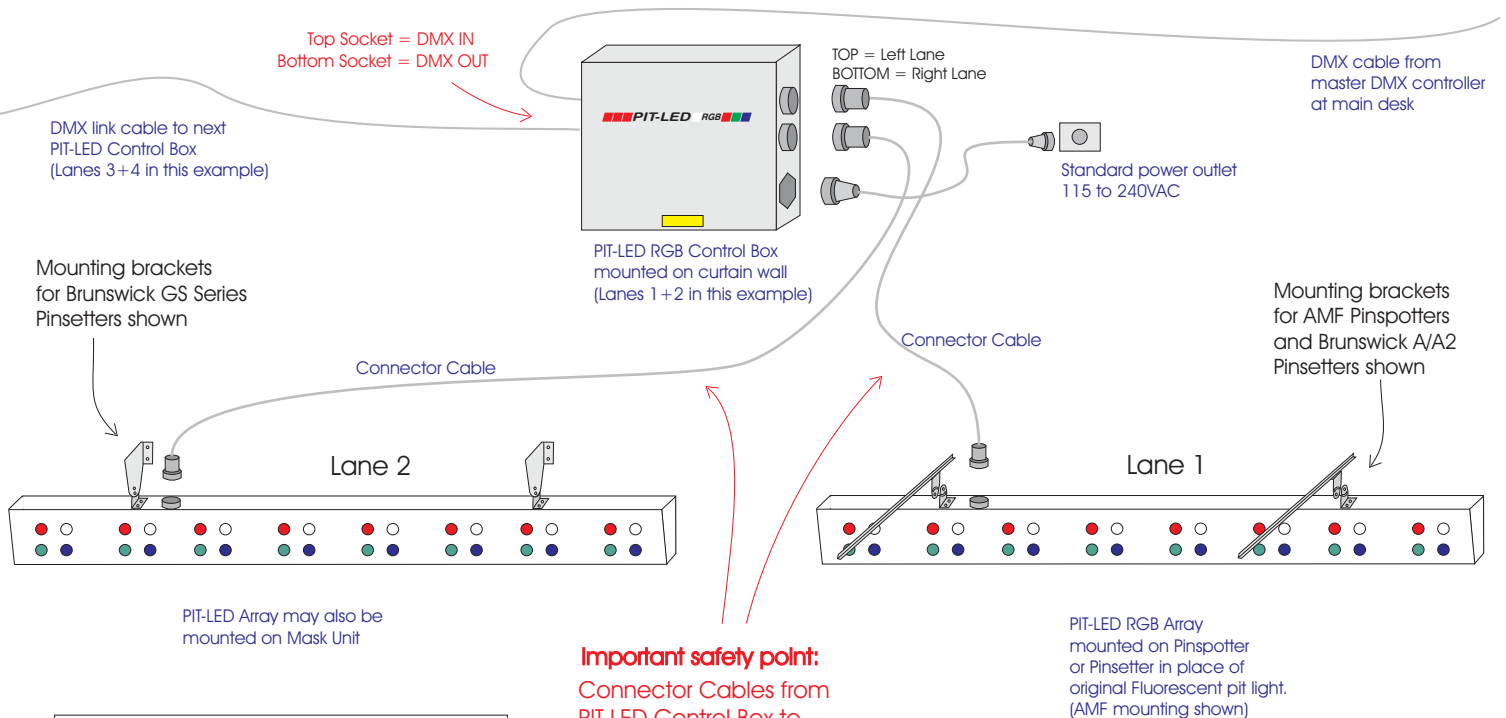
WHITE, RED, GREEN and BLUE LEDs on each lane can be individually controlled by DMX512. Millions of possible colours can be achieved to illuminate the bowling pins.

Colour effects can be individualised to each lane, a block of lanes 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 master DMX 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 safety point:**  
 Connector Cables from PIT-LED Control Box to Arrays carry only 30VDC 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
  - 1 x set of mounting brackets and hardware
  - 2 x PIT-LED Connector Cable
  - 1 x IEC Power Cable
  - 1 x DMX Cable 4m
- Other components required:
- Master DMX 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 compatible with all machines and systems.

manufactured by

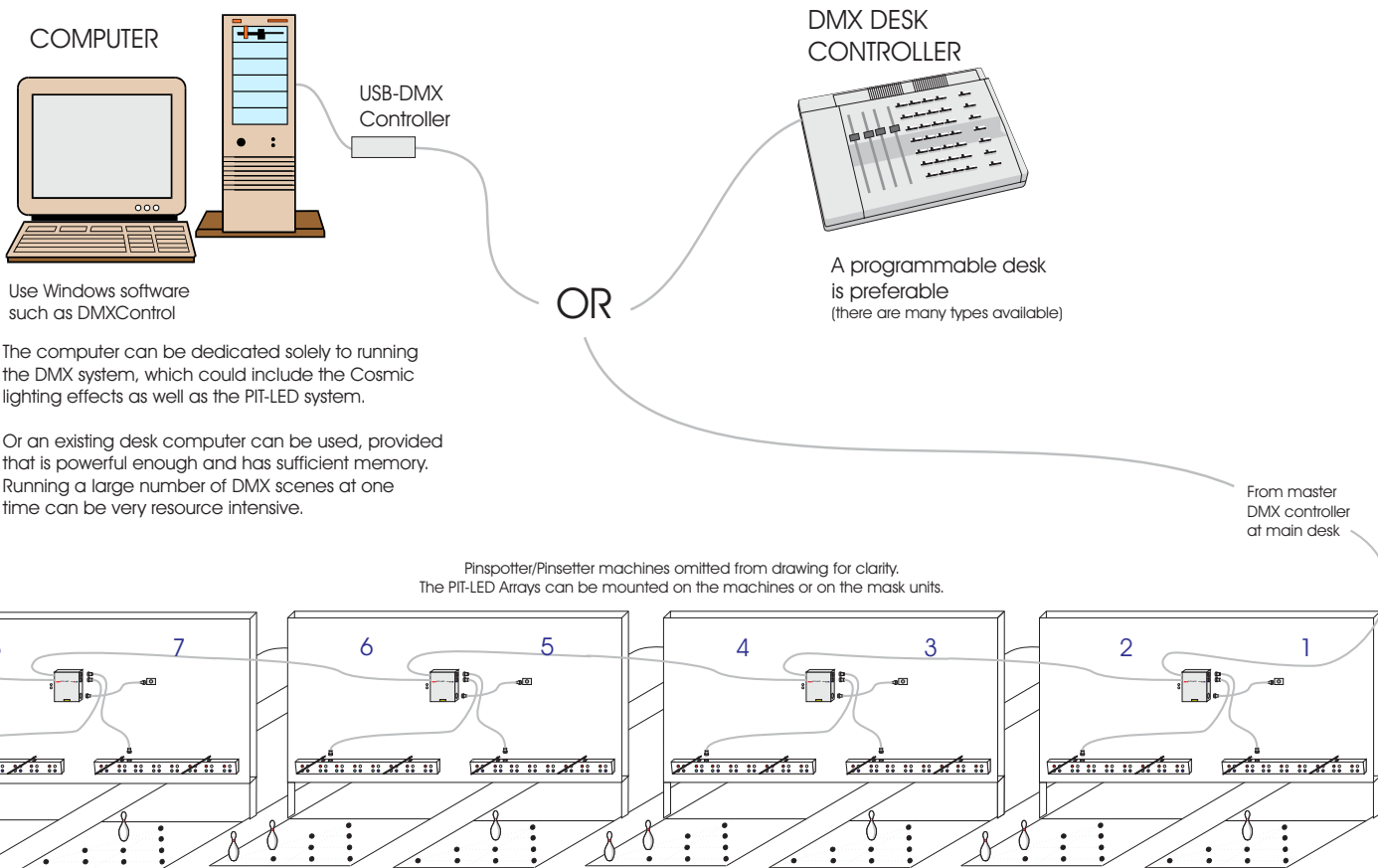


86 Barry Street  
 Reservoir  
 Victoria 3073  
 Australia

Phone 61 3 9460 2559  
 Fax 61 3 9460 7071



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



**INSTALLATION STEPS:**

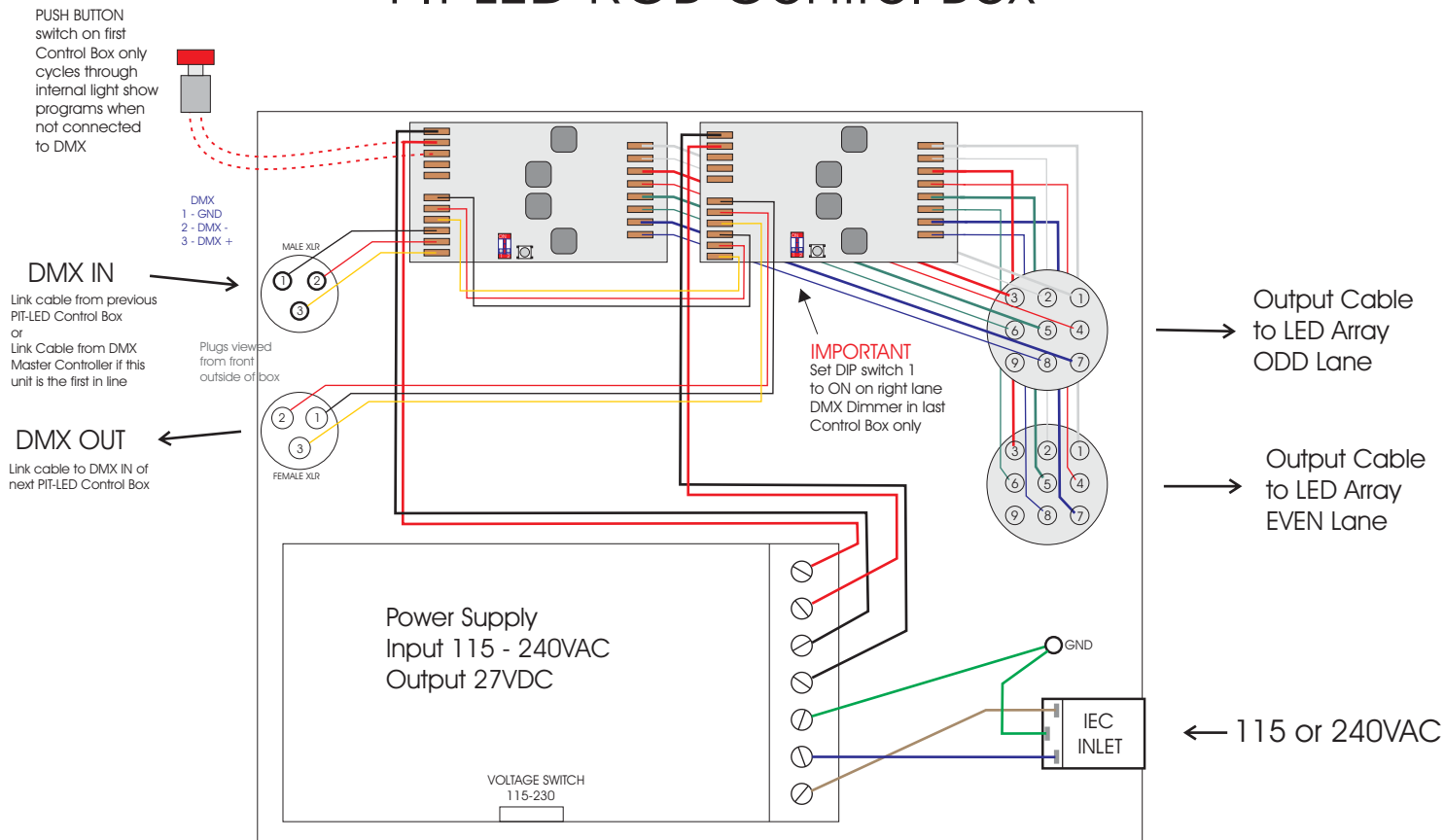
1. Check the voltage selector switch on the under side of the PIT-LED Control Box and ensure it shows the correct voltage for your area - 115 or 230V. Move the slider switch if necessary to select the correct voltage.
2. Attach PIT-LED Control Box securely to curtain wall. Take care to position the Control 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. Plug the power cable into the IEC socket on the bottom right side of the Control Box and also plug it into the wall socket.
7. Re-check all connections, cable routing and voltage selector switch. If all is well, turn on the switch at the power outlet.
8. The PIT-LED will default to WHITE until it detects a valid DMX signal. The internal light show programs can be accessed via the small push button switch on the DMX Dimmer boards inside each Control Box.

9. 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.
10. Repeat steps 1 to 9 for each PIT-LED set to be installed.
11. 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.
12. Repeat the procedure in step 11 for all of the PIT-LED Control Boxes until the last Control Box is reached, creating a DMX daisy chain.
13. IMPORTANT The right side DMX Dimmer in last Control Box in the line must have its DIP Switch #1 set to ON as per diagram on page 3. This terminates the end of the daisy chain.
14. Connect the female end of the 3 pin DMX cable from the master DMX controller (either a PC or desk controller) to the DMX IN socket on the upper left side of the first PIT-LED Control Box.
15. DO NOT connect any other DMX devices into the PIT-LED DMX universe.
16. Using the master DMX controller, call up a scene or directly access the particular DMX channels (see page 3) to test each PIT-LED Array.

NOTE: The PIT-LED system will run stand-alone without a DMX controller. The internal electronics will default to WHITE in the absence of a DMX signal. A simple Normally Open push button switch connected to the first Control Box as shown in the diagram on page 3 will allow you to cycle through the internal light show programs without the need for an external DMX source.



# PIT-LED RGB Control Box



**IMPORTANT**  
Switch to appropriate input voltage

Each PIT-LED RGB Control Box is assigned 8 DMX channels, 4 for each of the two internal DMX Dimmers.

On each of the Dimmers,  
1st channel is RED  
2nd channel is GREEN  
3rd channel is BLUE  
4th channel is WHITE

The DMX channels are set automatically (The first LED Dimmer in the daisy chain acts as Master) as follows:

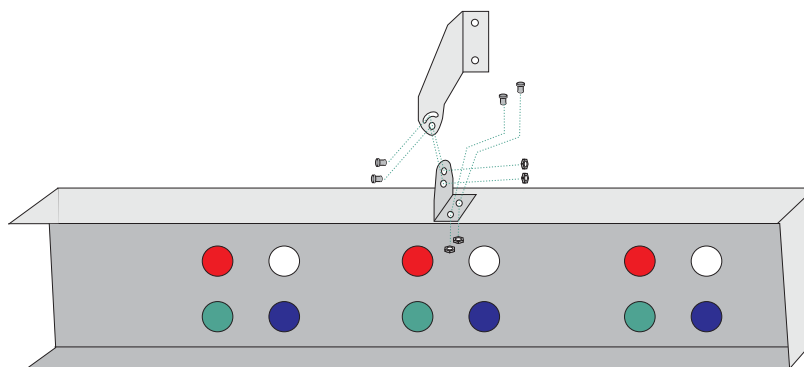
Channel 1 Lane 1 RED  
Channel 2 Lane 1 GREEN  
Channel 3 Lane 1 BLUE  
Channel 4 Lane 1 WHITE

Channel 5 Lane 2 RED  
Channel 6 Lane 2 GREEN  
Channel 7 Lane 2 BLUE  
Channel 8 Lane 2 WHITE

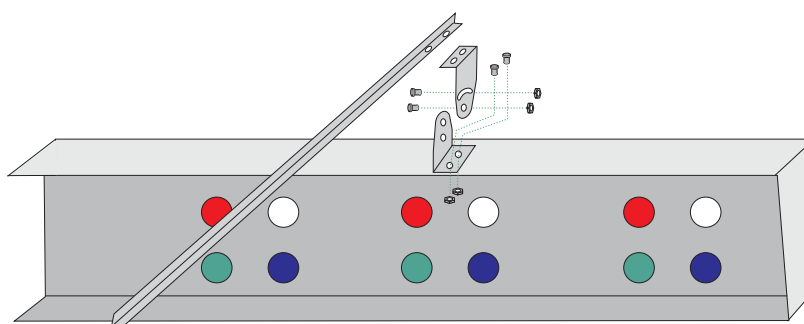
Channel 9 Lane 3 RED  
Channel 10 Lane 3 GREEN  
Channel 11 Lane 3 BLUE  
Channel 12 Lane 3 WHITE

Channel 13 Lane 4 RED  
Channel 14 Lane 4 GREEN  
Channel 15 Lane 4 BLUE  
Channel 16 Lane 4 WHITE

etc up to maximum of 512 channels



Mounting on Brunswick GS Pinsetter



Mounting on AMF Pinspotter & Brunswick A/A2 Pinsetter