

LED-64

USER MANUAL



www.prolight.co.uk



CAUTION!

**Keep this device away from rain and moisture!
Unplug the mains cable before opening the casing.!**




**FOR YOUR OWN SAFETY, PLEASE READ THIS USER MANUAL CAREFULLY
BEFORE YOUR INITIAL START-UP!**

SAFETY INSTRUCTIONS


Every person involved with the installation, operation and maintenance of this equipment must:

- be qualified
- follow the instructions of this manual
- consider this manual to be part of the total product
- keep this manual for the entire life of the product
- pass this manual on to every further owner or user of the product
- download the latest version of the user manual from the internet



CAUTION! TAKE CARE USING THIS PRODUCT

**With high voltage you can suffer a dangerous
electric shock when touching wires!**



This equipment has left our premises in absolutely perfect condition. In order to maintain this condition and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes written in this user manual.

Important: *Damages caused by the disregard of this user manual are not subject to warranty. The dealer will not accept liability for any resulting defects or problems.*

If the device has been exposed to drastic temperature fluctuation (eg: after transportation), do not switch it on immediately. The arising condensation may damage your equipment. Leave the equipment switched off until it has reached room temperature.

Please make sure that there are no obvious transport damages. Should you notice any damage to the power connection cable or on the casing, do not connect the equipment and immediately consult your local dealer.

This equipment falls under protection-class 1. The power plug must only be plugged into a protection class 1 outlet. The voltage and frequency must be exactly the same as stated on the equipment. Incorrect voltages or power outlets can lead serious damage and electrical shock.

Always plug in the power plug last. The power plug must always be inserted without force. Make sure that the plug is tightly connected with the outlet.

Never let the power-cord come into contact with other cables! Handle the power-cord and all connections with the mains with particular caution! Never touch them with wet hands, as this could lead to electric shock.

Never modify, bend, strain mechanically, put pressure on, pull or heat up the power cord. Never operate next to sources of heat or cold. Disregard of this information can lead to power cord damage, fire or electric shock.

The cable insert or the female part in the equipment must never be strained. There must always be sufficient cable to the equipment, otherwise, the cable may be damaged which may lead to electric shock.

Make sure that the power-cord is never crimped or damaged by sharp edges. Check the equipment and the power-cord periodically.

If extension cables are used, make sure that the core diameter is sufficient for the required power consumption of the equipment. All warnings concerning the power cables are also valid for possible extension cables.

Always disconnect from the mains, when the equipment is not in use or before cleaning it. Only handle the power-cable by the plug. Never pull out the plug by tugging the power-cable, otherwise, the cable or plug can be damaged leading to an electric shock. If the power plug or the power switch is not accessible, the equipment must be disconnected via the mains.

If the power plug or the equipment is dusty, the device must be taken out of operation, disconnected and then be cleaned with a dry cloth. Dust can reduce the insulation which may lead to an electric shock. More severe dirt in and on the equipment should only be removed by a specialist.

There must never be any liquid allowed to enter the power outlets, extension cables or any holes in the housing of the equipment. In the event of any liquid entering the equipment, it must be disconnected immediately. This is also valid if the equipment was exposed to high humidity. Also if the equipment is still working, the equipment must be checked by a specialist.

There must never be any objects allowed to enter the equipment. This is especially valid for metal parts. If any metal parts like staples or coarse metal chips are allowed to enter the equipment, the equipment must be taken out of operation and disconnected immediately. Malfunction or short circuits caused by metal parts may cause injuries.

Keep away from children and amateurs!

Never leave the device running unattended.

Introduction

Features

CONTROL FEATURES

- 4-channel DMX-512 LED par can
- Blackout/Dimmer/Strobe
- Individual control of Red, Green and Blue leds

Features

- 183 LED's per surface
 - Red (60), Green (60), and Blue (63)
- Ultra bright LED's
- RGB colour mixing
- Built-in colour change programs
- Low power consumption
- Up to 100,000-hour LED life span
- Master/Slave mode

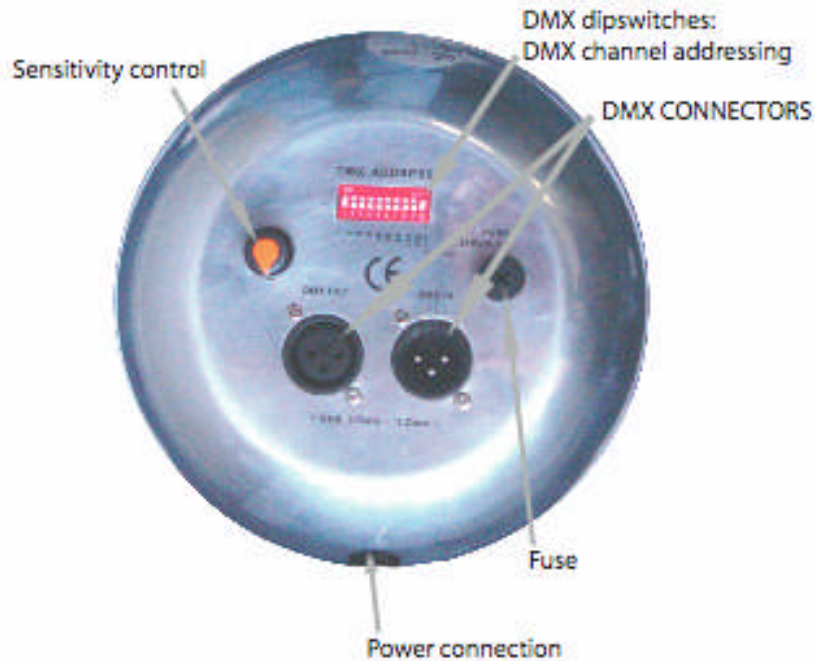
OPTIONS

- Programmable: Any universal DMX-512 controller

DMX Channel Summary

CHANNEL	INTENSITY CONTROL OF
1	RED
2	GREEN
3	BLUE
4	BLACKOUT/STROBE/DIMMER

Product Overview



Setup

Power

Warning!

Verify that the power requirement printed on your unit matches the line voltage applied. All fixtures must be connected to circuits with a suitable Earth Ground.

- To determine the power requirements for a particular fixture, see the label affixed to the back of the plate of the fixture or refer to the fixture's specifications chart.
- A fixture's listed current rating is its average current draw under normal conditions.
- All fixtures must be powered directly off a switched circuit and cannot be run off a rheostat (variable resistor) or dimmer circuit, even if the rheostat or dimmer channel is used solely for a 0% to 100% switch.
- Before applying power to a fixture, check that the source voltage matches the fixture's requirement
- All fixtures must be connected to circuits with a suitable Earth Ground.

Operating Instructions

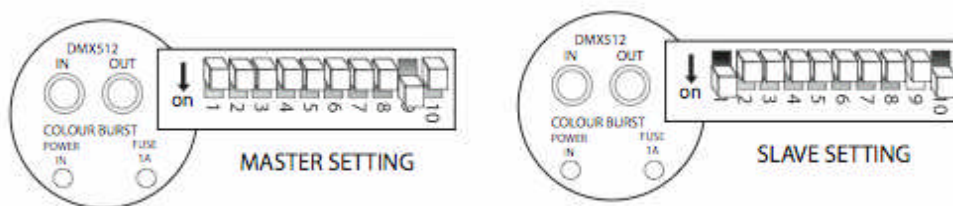
The LED-64 is a DMX-512 controllable, full RGB colour mixing Par Can made up of high efficiency and super bright LED's. There are three colour groups (red, blue and green) whose intensity can be controlled individually allowing the creation of an unlimited range of colours.

The LED-64 will operate in stand-alone, Master/Slave and via DMX-512 control utilizing 4 channels.

Master/Slave & Stand-Alone Mode

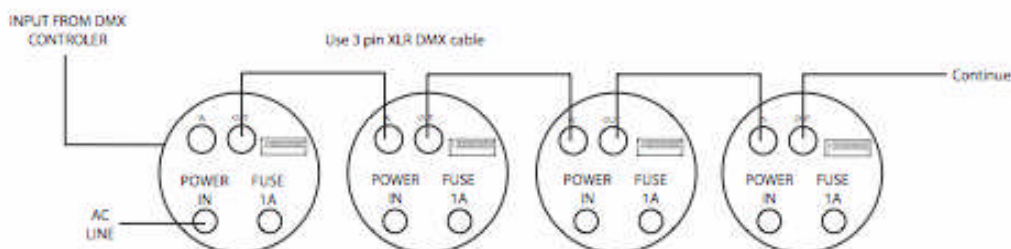
The Master/Slave mode will allow you to link up to as many units you want in a daisy chain fashion. In this mode, the first unit in the daisy chain will automatically command all other units following.

- 1) Connect all units in a daisy chain fashion as described in the section following
- 2) Master Unit: Set dipswitch No: 9 to on and all others to off.
- 3) Slaves: Set dipswitch No: 10 and 1 to the on position and all others to the off position.
- 4) You can also run the fixtures in a automatic stand-alone mode by simply setting all fixtures to run as master units.



Daisy Chain Connection

- 1) Connect the (male) 3 pin connector side of the DMX cable to the output (female) 3pin connector of the first fixture
- 2) Connect the end of the cable coming from the first fixture which will have a (female) 3pin connector to the input connector of the next fixture consisting of a (male) 3pin connector. Then proceed to connect from the output as stated above to the input of the following fixture and so on.



Manual Control Options

Static Mode

- With Dip Switch 1 only set to on you obtain static RED
 - With Dip Switch 2 only set to on you obtain static BLUE
 - With Dip Switch 3 only set to on you obtain static GREEN
- You can have any combination of switches 1,2,3 to obtain static col mix.

Flashing Mode

Once you have selected a static colour you can make it flash by using Dip Switches 4,5,6, 4 is slow flash, 4&5 is medium flash and 4,5 & 6 is fast flash.

For example if you wish to obtain a purple wash with a med speed flash you would put Dips 1 and 3 (red & blue) to on to obtain purple, and the Dips 4 & 5 to on to obtain a medium speed flash.

With all the Dip switches set to off this activates an internal slow colour mixing change and fade programme.

Blackout Mode

With only dipswitch 10 to on the LED-64 will blackout.

DMX Control Mode

Operating in a DMX control mode environment gives the user the greatest flexibility when it comes to customizing or creating a show. In this mode you will be able to control each individual trait of the fixture and each fixture independently. The Par uses 4 channels of control.

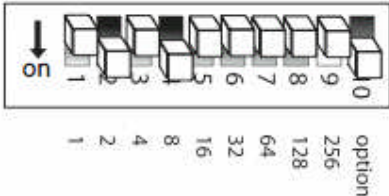
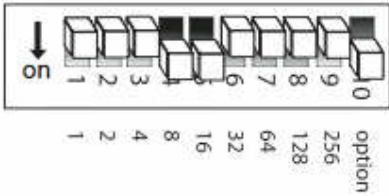
Enable the DMX control by setting dipswitch No: 10 to the ON position. Use dipswitches 1 – 9 to address each fixture accordingly.

Setting the DMX address

The DMX mode enables the use of a universal DMX controller device. Each fixture requires a “start address” from 1- 511. A fixture requiring one or more channels for control begins to read the data on the channel indicated by the start address. For example, a fixture that occupies or uses 7 channels of DMX and was addressed to start on DMX channel 100, would read data from channels: 100,101,102,103,104,105 and 106. Choose a start address so that the channels used do not overlap. E.g. the next unit in the chain starts at 107.

If this is your first time addressing a fixture using the DMX-512 control protocol then I suggest jumping to the Appendix Section and read the heading “DMX Primer”. It contains very useful information that will help you understand its use.

Set the start address using the group of dipswitches located usually on the bottom of the fixture. Each dipswitch has an associated value. Adding the value of each switch in the ON position will provide the start address. Determining which switches to toggle ON given a specific start address can be accomplished in the following manner. By subtracting the largest switch value possible from the selected start address until zero is achieved.

EXAMPLE STARTING ADDRESS																								
<p>Address 10</p> <p>Pin NO: 4 = 8 Pin NO: 2 = 2 Total = 10</p>																								
<p>Address 24</p> <p>Pin NO: 5 = 16 Pin NO: 4 = 8 Total = 24</p>																								
<p>Address 24</p> <p>DMX address using simple maths</p>	<p>233 - (128 = 105, Turn on dip No: 8 105 - (64) = 41, Turn on dip No:7 41 - (32) = 9, Turn on dip No: 6 9 - (8) = 1, Turn on dip No: 4 1 - (1) = 0, Turn on dip No:1</p> <p>You will most likely use the first available number which maybe Number 1. This number was selected for example purposes</p>	<table border="1"> <thead> <tr> <th>DIP SWITCH</th> <th>(DMX VALUE)</th> </tr> </thead> <tbody> <tr><td>1</td><td>1</td></tr> <tr><td>2</td><td>2</td></tr> <tr><td>3</td><td>4</td></tr> <tr><td>4</td><td>8</td></tr> <tr><td>5</td><td>16</td></tr> <tr><td>6</td><td>32</td></tr> <tr><td>7</td><td>64</td></tr> <tr><td>8</td><td>128</td></tr> <tr><td>9</td><td>256</td></tr> <tr><td>10</td><td></td></tr> </tbody> </table>	DIP SWITCH	(DMX VALUE)	1	1	2	2	3	4	4	8	5	16	6	32	7	64	8	128	9	256	10	
DIP SWITCH	(DMX VALUE)																							
1	1																							
2	2																							
3	4																							
4	8																							
5	16																							
6	32																							
7	64																							
8	128																							
9	256																							
10																								

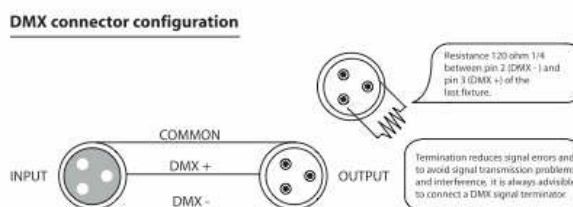
APPENDIX

DMX INTRODUCTION

There are 512 Channels in a DMX-512 connection. Channels may be assigned in any manner. A fixture capable of receiving DMX-512 will require one or a number of sequential channels. The user must assign a starting address on the fixture that indicates the first channel reserved in the controller. There are many different types of DMX controllable fixtures and they all may vary in the total number of channels required. Choosing a start address should be planned in advance. Channels should never overlap. If they do, this will result in erratic operation of the fixtures whose starting address is set incorrectly. You can however, control multiple fixtures of the same type using the same starting address as long as the intended result is that of unison movement or operation. In other words, the fixtures will be slaved together and all respond exactly the same.

DMX fixtures are designed to receive data through a serial Daisy chain. A daisy chain connection is where the DATA OUT of one fixture connects to the DATA IN of the next fixture. The order in which the fixtures are connected is not important and has no effect on how a controller communicates to each fixture. Use an order that provides for the easiest and most direct cabling. Connect fixtures using shielded two conductor twisted pair cable with three pin XLR male to female connectors. The shield connection is pin 1, while pin 2 is the Data Negative (S-) and pin 3 is Data Positive (S+). LEDJ carries 3-pin XLR-DMX compliant cables, DMX-10(33'), DMX-4.5 (15') and DMX-1.5 (5').

Fixture Linking



If you use a controller with a 5 pin DMX output connector, you will need to use a 5 pin to 3 pin adaptor..

3 Pin to 5 Pin Conversion Chart

Conductor	3 pin female (output)	5 pin male (input)
Ground/Shield	Pin 1	Pin 1
Data (-)	Pin 2	Pin 2
Data (+)	Pin 3	Pin 3
Do not use		Do not use
Do not use		Do not use

DMX Channel Values

DEFAULT	VALUE	FUNCTION
1	000 <> 255	RED 0 > 100%
2	000 <> 255	GREEN 0 > 100%
3	000 <> 255	BLUE 0 > 100%
4	000 001<>189 190<>250	Shutter/Strobe/Dimmer Blackout :000 Intensity : 001<>189 Strobe: 190<>250

Technical Specifications

Weight & Dimensions

- Length.....290mm
- Width.....230mm
- Height.....220mm
- Weight.....2.0kgs

Power

- AC input.....240V/50hz

Fuse

- Main.....20mm Glass 1A Fast Blow

Control & Programming

- Data input.....Locking 3-pin XLR male socket
- Data output.....Locking 3-pin XLR female socket
- Data pin configuration.....Pin 1 shield, pin1 (-), pin 3 (-)
- Protocols.....DMX-512 UTSITT
- DMX channels.....4