EQUINOX

Fusion Orbit MKII

User Manual

Order code: EQLED018

WARNING

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

- Before your initial start-up, please make sure that there is no damage caused during transportation.
- Should there be any damage, consult your dealer and do not use the equipment.
- To maintain the equipment in good working condition and to ensure safe operation, it is necessary for the user to follow the safety instructions and warning notes written in this manual.
- Please note that damages caused by user modifications to this equipment are not subject to warranty.

| CAUTION! KEEP THIS EQUIPMENT AWAY FROM RAIN, MOISTURE AND LIQUIDS | CAUTION! TAKE CARE USING THIS EQUIPMENT! HIGH VOLTAGE-RISK OF ELECTRIC SHOCK!! |

IMPORTANT:

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual or any unauthorised modification to the equipment.

- Never let the power cable come into contact with other cables. Handle the power cable and all mains voltage connections with particular caution!
- Never remove warning or informative labels from the unit.
- Do not open the equipment and do not modify the unit.
- Do not connect this equipment to a dimmer pack.
- Do not switch the equipment on and off in short intervals, as this will reduce the system's life.
- Only use the equipment indoors.
- Do not expose to flammable sources, liquids or gases.
- Always disconnect the power from the mains when equipment is not in use or before cleaning! Only handle the power-cable by the plug. Never pull out the plug by pulling the power-cable.
- Make sure that the available mains supply voltage is between 100~240V AC, 50/60Hz.
- Make sure that the power cable is never crimped or damaged. Check the equipment and the power cable periodically.
- If the equipment is dropped or damaged, disconnect the mains power supply immediately and have a qualified engineer inspect the equipment before operating again.

- If the equipment has been exposed to drastic temperature fluctuation (e.g. after transportation), do not connect power or switch it on immediately. The arising condensation might damage the equipment. Leave the equipment switched off until it has reached room temperature.
- If your product fails to function correctly, stop use immediately. Pack the unit securely (preferably in the original packing material), and return it to your Pro Light dealer for service.
- Only use fuses of same type and rating.
- Repairs, servicing and power connection must only be carried out by a qualified technician. THIS UNIT CONTAINS NO USER SERVICEABLE PARTS.
- This lighting fixture is for professional use only - it is not designed for or suitable for household use. The product must be installed by a qualified technician in accordance with local territory regulations. The safety of the installation is the responsibility of the installer. The fixture presents risks of severe injury or death due to fire hazards, electric shock and falls.
- Warning! Risk Group 2 LED product according to EN 62471. Do not view the light output with optical instruments or any device that may concentrate the beam.
- WARRANTY: One year from date of purchase.

OPERATING DETERMINATIONS

If this equipment is operated in any other way, than those described in this manual, the product may suffer damage and the warranty becomes void. Incorrect operation may lead to danger e.g: short-circuit, burns and electric shocks etc.

Do not endanger your own safety and the safety of others!

Incorrect installation or use can cause serious damage to people and/or property.

Fusion Orbit MKII

Fusion Orbit is a compact, powerful moving head producing a tightly focused 4° aerial beam effect from the 60W RGBW quad-colour LED. It is surrounded by an RGB LED ring which changes colour and chases, producing mesmerising effects. With multiple built-in on-board functions this unit can either work in auto, sound active or DMX modes.

- 1 x 60W quad-colour LED (RGBW)
- 12 x tri-colour 5050 SMD LEDs (RGB)
- Beam angle: 4°
- 22,403 Lux @ 2m
- DMX channels: 2/7/16 or 37 selectable
- Auto, sound active and master/slave modes

- Pan: 540°, Tilt: 210°
- 0-100% dimming and variable strobe
- Supplied with quick release omega clamp
- 4 push button menu with LED display
- IEC power input
- 3-Pin XLR input/output
- Fan cooled

Specifications	
Power consumption	75W
Power supply	100~240V, 50/60Hz
Fuse	F2A 250W
Dimensions	238 x 172 x 146mm
Weight	2.5kg
Order code	EQLED018

4° - Lux

FULL ON	89600	22403	9960	5600	3580
R	18500	4626	2060	1160	741
G	32100	8030	3570	2010	1280
B	8240	2055	916	515	330
W	33000	8248	3670	2060	1320

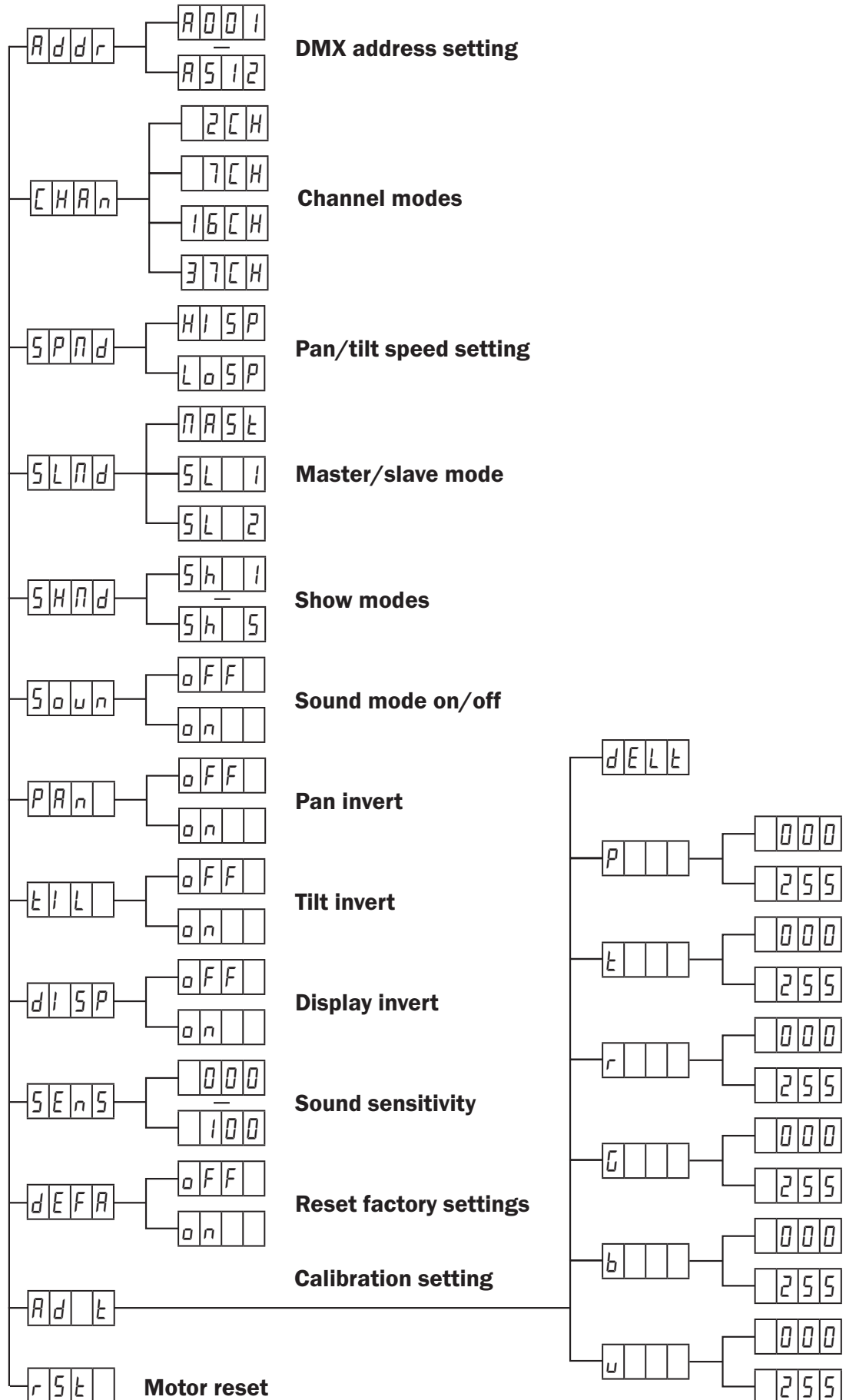0m 1m 2m 3m 4m 5m

172mm

146mm

238mm
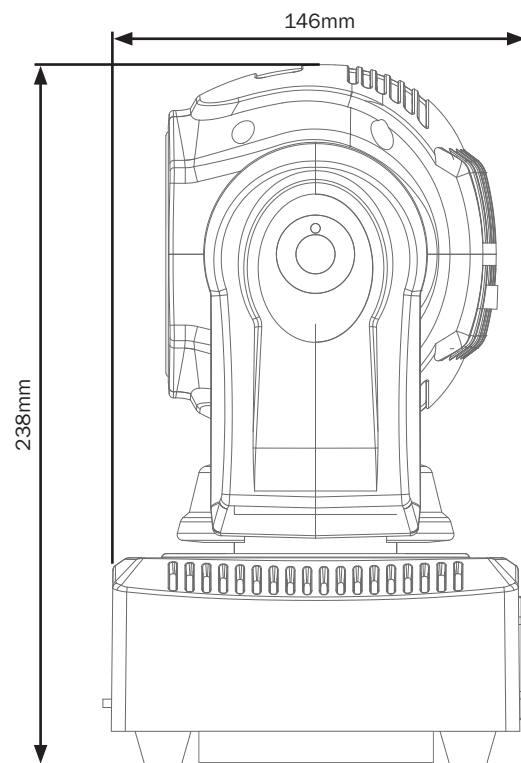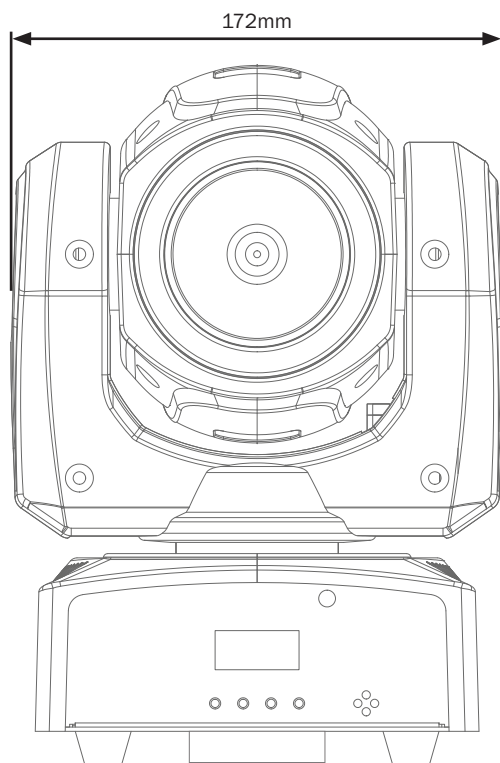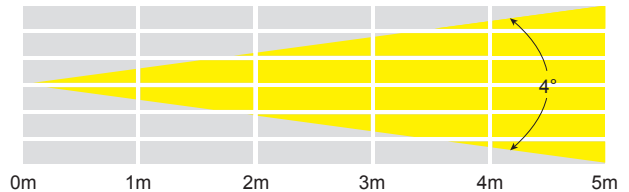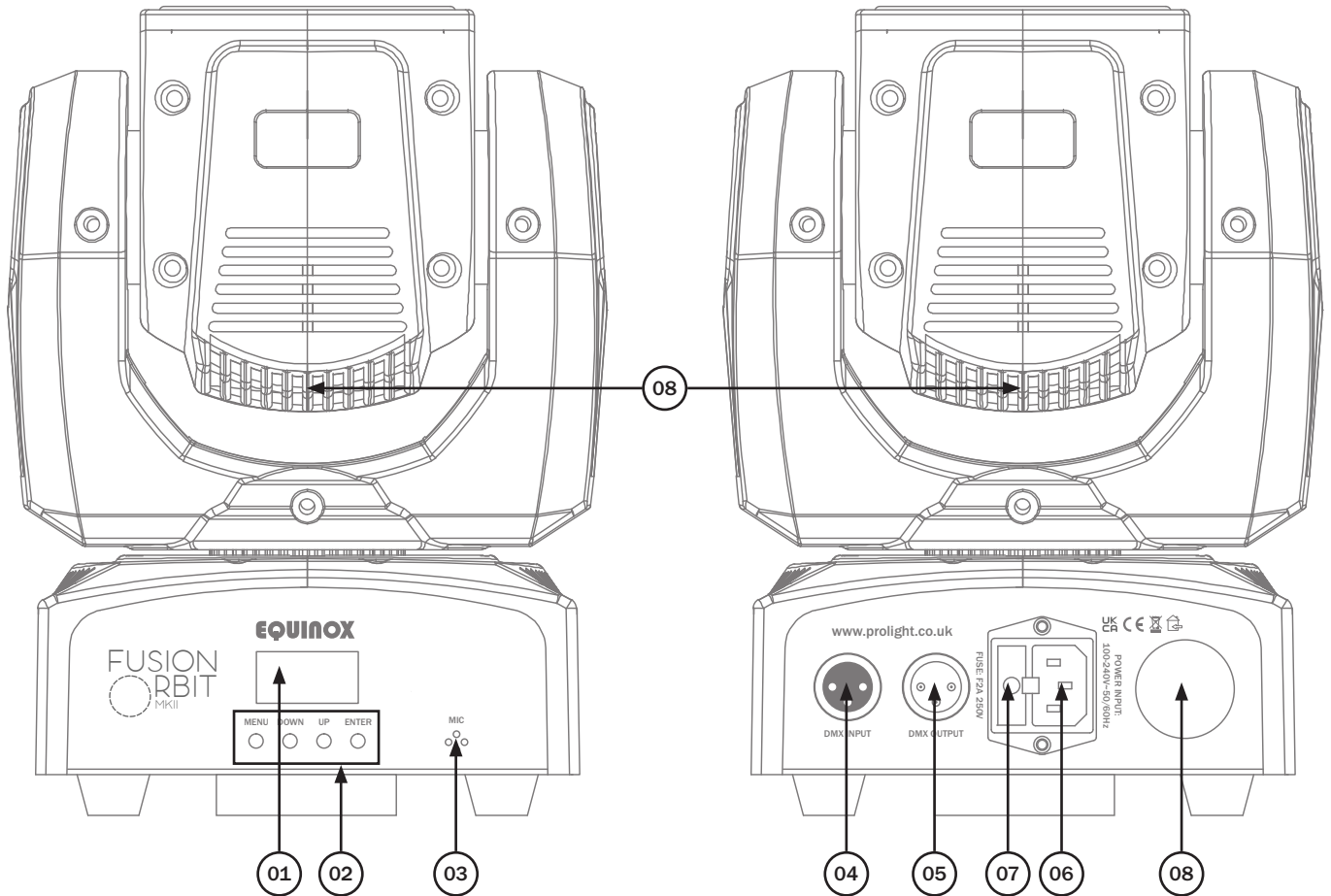
01 - LED display
02 - Function buttons
03 - Microphone

04 - 3-Pin DMX input
05 - 3-Pin DMX output
06 - IEC power input

07 - Fuse F2A 250V
08 - Fan cooling vents

In the box: **1 x fixture,
1 x omega clamp,
1 x power cable,
& 1 x user manual**

Addr	A001 — A512		DMX address setting
CHAn	2CH, 7CH, 16CH, 37CH		Channel modes
SPNd	HISP, LoSP		Pan/tilt speed setting
SLNd	NASt, SL 1, SL 2		Master/slave mode
SHNd	Sh 1 — Sh 5		Show modes
Soun	oFF, on		Sound mode on/off
PAn	oFF, on		Pan invert
tIL	oFF, on		Tilt invert
dISP	oFF, on		Display invert
SEnS	000 — 100		Sound sensitivity
dEFA	oFF, on		Reset factory settings
Ad t			Calibration setting
rSt			Motor reset

Calibration setting branch:

dELt	
P	000 — 255
t	000 — 255
r	000 — 255
G	000 — 255
b	000 — 255
u	000 — 255

DMX mode:

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

To access the DMX address mode, press the "**MENU**" button and use the "**UP**" and "**DOWN**" buttons to show *Addr* on the LED display. Now press the "**ENTER**" button and use the "**UP**" and "**DOWN**" buttons to set the required DMX address. Press the "**ENTER**" button to confirm the setting.
To exit out of any of the above options, press the "**MENU**" button.

DMX channel mode:

To access the DMX channel mode, press the "**MENU**" button and use the "**UP**" and "**DOWN**" buttons to show *CHAn* on the LED display. Now press the "**ENTER**" button and use the "**UP**" and "**DOWN**" buttons to choose one of the 2/7/16 or 37 DMX channel modes. Press the "**ENTER**" button to confirm the setting. To exit out of any of the above options, press the "**MENU**" button.

2 channel mode:

Channel	Value	Function
CH1	000-015	No function
	016-064	Show 1
	065-114	Show 2
	115-164	Show 3
	165-214	Show 4 (forward facing show)
	215-255	Show 5 (no strobe)
CH2	000-255	Sound sensitivity (low-high)

7 channel mode:

Channel	Value	Function
CH1	000-015	No function
	016-075	Pan/Tilt auto program 1
	076-135	Pan/Tilt auto program 2
	136-195	Pan/Tilt auto program 3
	196-255	Pan/Tilt auto program 4
CH2	000-255	Master dimmer (0-100%) - beam only
CH3	000	No function
	001-255	Colour macros - beam only
CH4	000-255	Master dimmer (0-100%) - ring only
CH5	000	No function
	001-255	Colour macros - ring only
CH6	000	No function
	001-255	Macro programs - ring only
CH7	000-255	Macro program speed (slow-fast)

16 channel mode:

Channel	Value	Function	
CH1	000-255	Pan 0-540°	
CH2	000-255	Tilt 0-210°	
CH3	000-255	Pan/tilt speed (slow-fast)	
CH4	000-255	Master dimmer (0-100%)	LED beam
CH5	000-009	No function	
	010-255	Strobe (slow-fast)	
CH6	000-255	Red dimmer (0-100%)	
CH7	000-255	Green dimmer (0-100%)	
CH8	000-255	Blue dimmer (0-100%)	
CH9	000-255	White dimmer (0-100%)	
CH10	000-255	Master dimmer (0-100%)	LED ring
CH11	000-009	No function	
	010-250	Strobe (slow-fast)	
CH12	000-255	Red dimmer (0-100%)	
CH13	000-255	Green dimmer (0-100%)	
CH14	000-255	Blue dimmer (0-100%)	
CH15	000-015	No function	
	016-064	Show 1	
	065-114	Show 2	
	115-164	Show 3	
	165-214	Show 4 (forward facing show)	
	215-255	Show 5 (no strobe)	
CH16	000-255	Sound sensitivity (low-high)	

37 channel mode:

Channel	Value	Function	
CH1	000-255	Pan 0-540°	
CH2	000-255	Pan fine	
CH3	000-255	Tilt 0-210°	
CH4	000-255	Tilt fine	
CH5	000-255	Pan/tilt speed (slow-fast)	
CH6	000-255	Master dimmer (0-100%)	LED beam
CH7	000-009	No function	
	010-255	Strobe (slow-fast)	
CH8	000	No function	
	001-255	Colour macros	
CH9	000-255	Red dimmer (0-100%)	
CH10	000-255	Green dimmer (0-100%)	
CH11	000-255	Blue dimmer (0-100%)	
CH12	000-255	White dimmer (0-100%)	
CH13	000-255	Master dimmer (0-100%)	LED ring
CH14	000-009	No function	
	010-250	Strobe (slow-fast)	
CH15	000	No function	
	001-255	Colour macros	
CH16	000	No function	
	001-255	Macro programs	
CH17	000-255	Macro program speed (slow-fast)	
CH18	000-255	Red dimmer 1 (0-100%)	
CH19	000-255	Green dimmer 1 (0-100%)	
CH20	000-255	Blue dimmer 1 (0-100%)	

Channel	Value	Function	
CH21	000-255	Red dimmer 2 (0-100%)	LED ring
CH22	000-255	Green dimmer 2 (0-100%)	
CH23	000-255	Blue dimmer 2 (0-100%)	
CH24	000-255	Red dimmer 3 (0-100%)	
CH25	000-255	Green dimmer 3 (0-100%)	
CH26	000-255	Blue dimmer 3 (0-100%)	
CH27	000-255	Red dimmer 4 (0-100%)	
CH28	000-255	Green dimmer 4 (0-100%)	
CH29	000-255	Blue dimmer 4 (0-100%)	
CH30	000-255	Red dimmer 5 (0-100%)	
CH31	000-255	Green dimmer 5 (0-100%)	
CH32	000-255	Blue dimmer 5 (0-100%)	
CH33	000-255	Red dimmer 6 (0-100%)	
CH34	000-255	Green dimmer 6 (0-100%)	
CH35	000-255	Blue dimmer 6 (0-100%)	
CH36	000-015	No function	
	016-064	Show 1	
	065-114	Show 2	
	115-164	Show 3	
	165-214	Show 4 (forward facing show)	
	215-255	Show 5 (no strobe)	
CH37	000-255	Sound sensitivity (low-high)	

Pan/tilt speed setting:

To access the pan/tilt speed setting, press the "**UP**" button on the front of the unit to show $5PNd$ on the LED display. Now press the "**ENTER**" button and use the "**UP**" and "**DOWN**" buttons to choose between $HI\ 5P$ (fast) or $Lo5P$ (slow). Press the "**ENTER**" button to confirm the setting.

To exit out of any of the above options, press the "**MENU**" button.

Master/slave mode:

To set the master unit, press the "**UP**" button on the front of the master unit to show $5LNd$ on the LED display. Now press the "**ENTER**" button and use the "**UP**" and "**DOWN**" buttons to choose $NA5t$. Press the "**ENTER**" button to confirm the setting. Then select your desired program (sound active or one of the show modes).

To set the other units in slave mode, press the "**UP**" button on the front of the unit to show $5LNd$ on the LED display. Now press the "**ENTER**" button and use the "**UP**" and "**DOWN**" buttons to choose either $5L\ \ 1$ or $5L\ \ 2$. Press the "**ENTER**" button to confirm the setting.

$5L\ \ 1$ – **the unit will copy the master**

$5L\ \ 2$ – **the unit will mirror the master**

To exit out of any of the above options, press the "**MENU**" button.

Please ensure that all slave units are set to the same DMX channel mode as the master unit.

Show mode:

To access the show modes, press the "**UP**" button on the front of the unit to show $5HNd$ on the LED display. Now press the "**ENTER**" button and use the "**UP**" and "**DOWN**" buttons to choose between $5h\ \ 1 \sim 5h\ \ 4$. Press the "**ENTER**" button to confirm the setting.

To exit out of any of the above options, press the "**MENU**" button.

$5h\ \ 1$ – **full show**
$5h\ \ 2$ – **beam only show**
$5h\ \ 3$ – **ring only show**
$5h\ \ 4$ – **forward facing show**
$5h\ \ 5$ – **full show (no strobe)**

Sound/sound sensitivity:

To turn the sound mode on or off, press the "**UP**" button on the front of the unit to show $5oun$ on the LED display. Now press the "**ENTER**" button and use the "**UP**" and "**DOWN**" buttons to choose between on or oFF. Press the "**ENTER**" button to confirm the setting.

To adjust the sound sensitivity, press the "**UP**" button on the front of the unit to show $5En5$ on the LED display. Now press the "**ENTER**" button and use the "**UP**" and "**DOWN**" buttons to choose between $000 \sim 100$. **Value: 000 - 100 (000 = low, 100 = high)**

To exit out of any of the above options, press the "**MENU**" button.

Pan invert setting:

To access the pan invert setting, press the "**UP**" button on the front of the unit to show PAn on the LED display. Now press the "**ENTER**" button and use the "**UP**" and "**DOWN**" buttons to choose between on or oFF. Press the "**ENTER**" button to confirm the setting.

To exit out of any of the above options, press the "**MENU**" button.

Tilt invert setting:

To access the tilt invert setting, press the "**UP**" button on the front of the unit to show tIL on the LED display. Now press the "**ENTER**" button and use the "**UP**" and "**DOWN**" buttons to choose between on or oFF. Press the "**ENTER**" button to confirm the setting.

To exit out of any of the above options, press the "**MENU**" button.

Display invert setting:

To access the display invert setting, press the "**UP**" button on the front of the unit to show $diSP$ on the LED display. Now press the "**ENTER**" button and use the "**UP**" and "**DOWN**" buttons to choose between on or oFF. Press the "**ENTER**" button to confirm the setting.

To exit out of any of the above options, press the "**MENU**" button.

Reset factory settings:

To reset the units factory settings, press the "**UP**" button on the front of the unit to show $dEFA$ on the LED display. Now press the "**ENTER**" button and use the "**UP**" and "**DOWN**" buttons to choose between on (reset) or oFF. Press the "**ENTER**" button to confirm the setting.

To exit out of any of the above options, press the "**MENU**" button.

Pan/Tilt/Colour calibration:

To access the pan/tilt/colour calibration setting, press the "**UP**" button on the front of the unit to show $Ad\ t$ on the LED display. Now press the "**ENTER**" button and use the "**UP**" and "**DOWN**" buttons to select $dELt$ (default home position), P (pan home position), t (tilt home position), r (red), G (green), b (blue), and u (white).
When on $dELt$, press the "**ENTER**" button and the units home positions will be reset to the factory default (000).

When on P, t, r, G, b or u, press the "**ENTER**" button and use the "**UP**" and "**DOWN**" buttons to adjust the value between $000 \sim 255$. Press the "**ENTER**" button to confirm the setting.

To exit out of any of the above options, press the "**MENU**" button.

Motor reset:

To reset the motors, press the "**UP**" button on the front of the unit to show rSt on the LED display. Press the "**ENTER**" button to perform the reset.

To exit out of any of the above options, press the "**MENU**" button.

Setting the DMX address:

The DMX mode enables the use of a universal DMX controller. Each fixture requires a "start address" from 1- 512. 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.

DMX 512:

DMX (Digital Multiplex) is a universal protocol used as a form of communication between intelligent fixtures and controllers. A DMX controller sends DMX data instructions form the controller to the fixture. DMX data is sent as serial data that travels from fixture to fixture via the DATA "IN" and DATA "OUT" XLR terminals located on all DMX fixtures (most controllers only have a data "out" terminal).

DMX linking:

DMX is a language allowing all makes and models of different manufactures to be linked together and operate from a single controller, as long as all fixtures and the controller are DMX compliant. To ensure proper DMX data transmission, when using several DMX fixtures try to use the shortest cable path possible. The order in which fixtures are connected in a DMX line does not influence the DMX addressing. For example; a fixture assigned to a DMX address of 1 may be placed anywhere in a DMX line, at the beginning, at the end, or anywhere in the middle. When a fixture is assigned a DMX address of 1, the DMX controller knows to send DATA assigned to address 1 to that unit, no matter where it is located in the DMX chain.

DATA cable (DMX cable) requirements (for DMX operation):

This fixture can be controlled via DMX-512 protocol. The DMX address is set on the back of the unit. Your unit requires either a standard 3-pin or 5-pin XLR connector for data input/output, see images below.
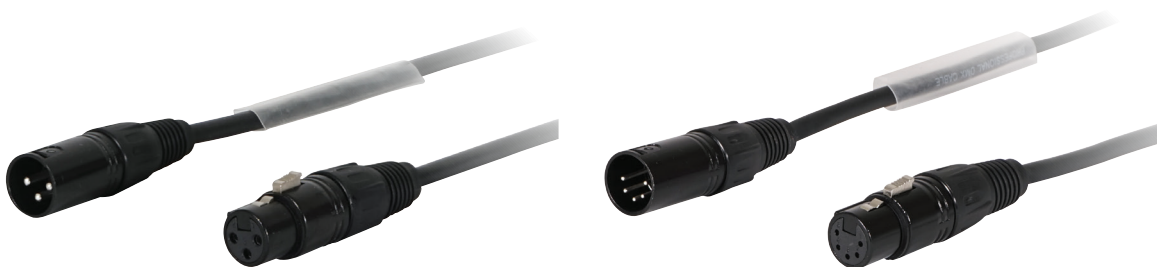
Further DMX cables can be purchased from all good sound and lighting suppliers or Prolight Concepts dealers.

Please quote:	3-Pin:	CABL10 – 2m	CABL11 – 5m	CABL12 – 10m
	5-Pin:	CABL185 – 2m	CABL187 – 5m	CABL188 – 10m

Also remember that DMX cable must be daisy chained and cannot be split.

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Notice:

Be sure to follow the diagrams below when making your own cables. Do not connect the cables shield conductor to the ground lug or allow the shield conductor to come in contact with the XLRs outer casing. Grounding the shield could cause a short circuit and erratic behaviour.

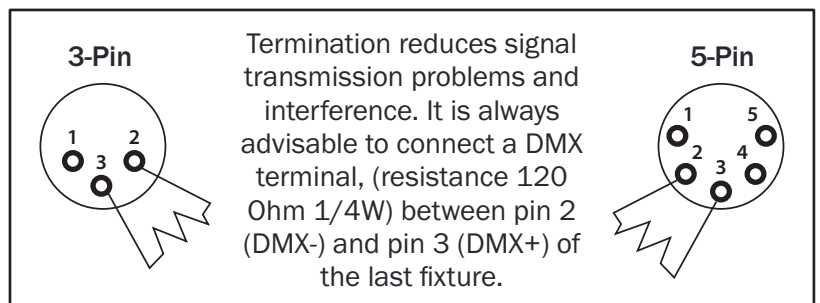| Pin Configuration	
3-Pin	**5-Pin**
Pin 1 - Ground	
Pin 2 - Negative	
Pin 3 - Positive	
–	Pin 4 - N/C
–	Pin 5 - N/C
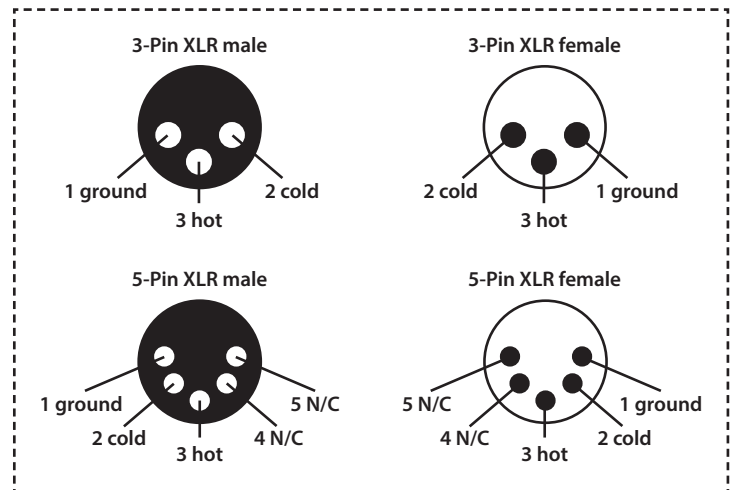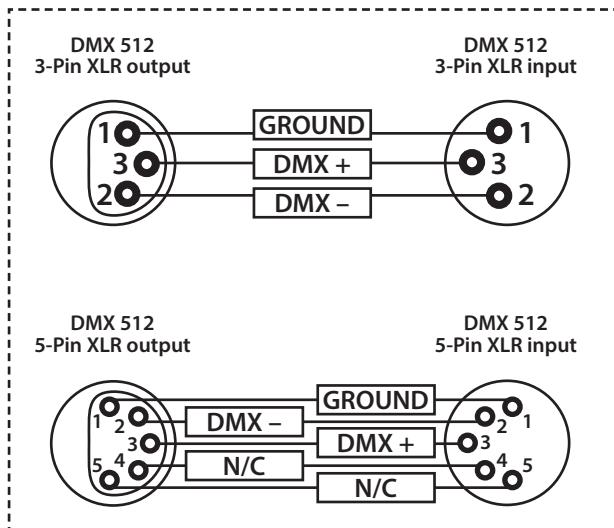
Line termination:

When longer runs of cable are used, you may need to use a terminator on the last unit to avoid erratic behaviour.

Using a cable terminator will decrease the possibilities of erratic behaviour.
(3-pin - Order ref: CABL90,
5-pin - Order ref: CABL89)

Termination reduces signal transmission problems and interference. It is always advisable to connect a DMX terminal, (resistance 120 Ohm 1/4W) between pin 2 (DMX-) and pin 3 (DMX+) of the last fixture.

5-pin XLR DMX connectors:

Some manufactures use 5-pin XLR connectors for data transmission in place of 3-pin. 5-pin XLR fixtures may be implemented in a 3-pin XLR DMX line. When inserting standard 5-pin XLR connectors in to a 3-pin line a cable adaptor must be used. The diagram below details the correct cable conversion.
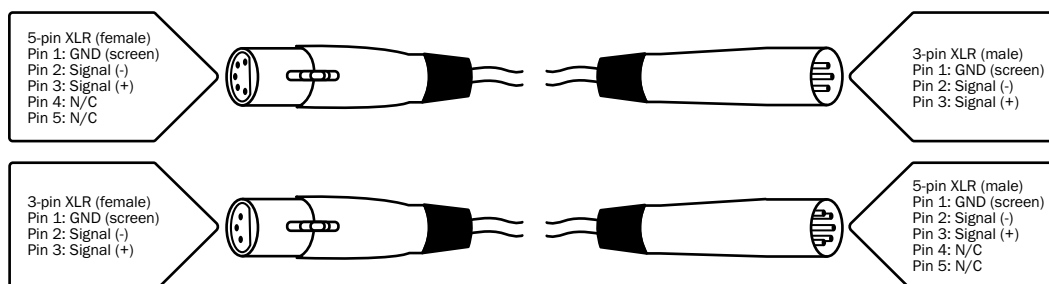
Correct Disposal of this Product (Waste Electrical & Electronic Equipment)

(Applicable in the European Union and other European countries with separate collection systems)

This marking shown on the product or its literature, indicates that it should not be disposed of with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.