LEDJ

TPix Strip & Controller
User Manual

Order code:
TPix Strip - LEDJ471
TPix Strip Controller - LEDJ475

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.

TPix Strip & Controller

The TPix series are a range of 25mm pitch, pixel mappable fixtures controllable by DMX, Art-Net or Kling-Net. The on-board network switch allows for the Art-Net or Kling-Net to be fully daisy chained for swift rigging. A host of built in macros can be triggered from the menu system or via DMX for simple operation, or for full pixel control, the Art-Net or Kling-Net protocols may be used. All feature robust aluminium chassis, complete with sliding hardware for rigging and panel to panel alignment. All fixtures have a wide 120° viewing angle and feature a milky, frost effect front screen. A clear front screen is also included to further expand the versatility of this series.
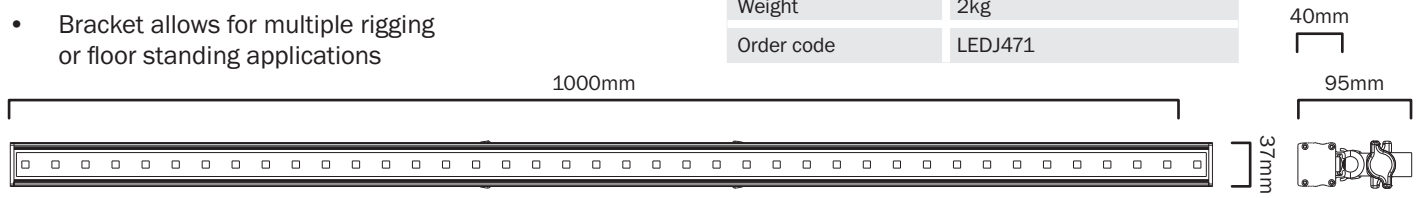
TPix Strip

- 40 tri-colour SMD 5050 LEDs (RGB)
- Viewing angle: 120°
- Illuminance: 1174 Nits - clear front screen
- Illuminance: 828 Nits - frosted front screen
- Refresh rate: 400Hz
- Pixels: 40 x 1
- Pixel pitch: 25mm
- TPix Strip requires the TPix Strip Controller for operation (Order code: LEDJ475)
- Bracket allows for multiple rigging or floor standing applications

- RJ45 input/output (power/data)
- Convection cooled

Specifications	TPix Strip
Power consumption	16W
Dimensions	37 x 1000 x 95mm
Weight	2kg
Order code	LEDJ471

1000mm

40mm

95mm

37mm

TPix Strip Controller

- DMX channels: 8
- Art-Net channels: 120
- 4 push button menu with LCD display
- 5-Pin XLR input/output
- 3-Pin XLR input/output
- Ethercon input/output (Art-Net/Kling-Net)
- Four RJ45 sockets for outputs to TPix Strip

Specifications	TPix Strip Controller
Power consumption	300W
Power supply	100~240V, 50/60Hz
Fuse	T10A 250V
Dimensions	62 x 340 x 208mm
Weight	2.2kg
Order code	LEDJ475

304mm

340mm

208mm

62mm
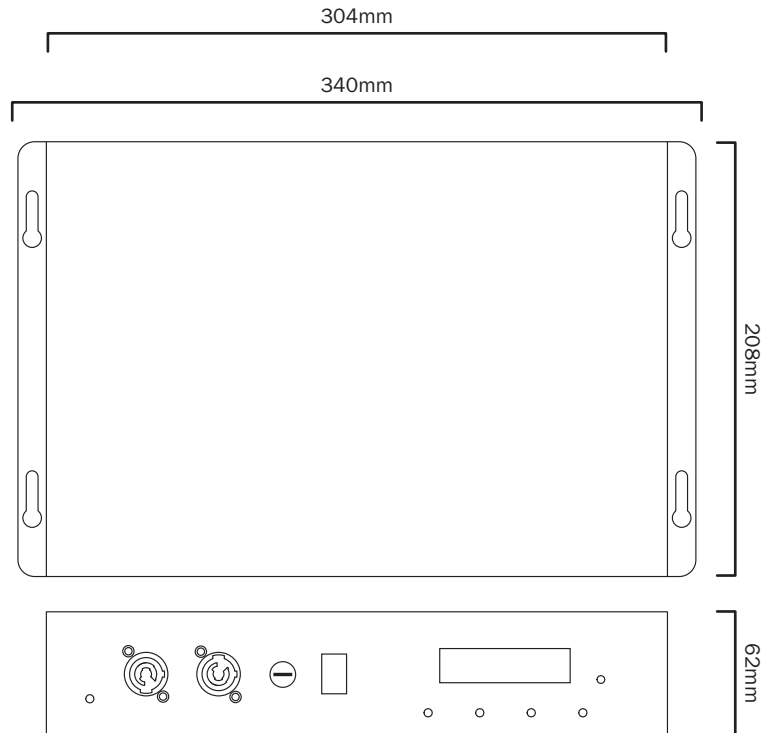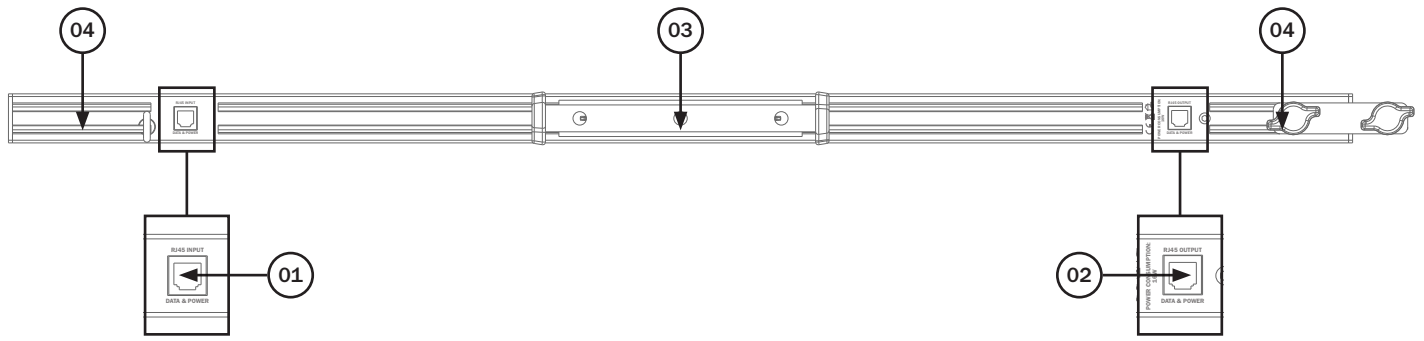
TPix Strip

01 - RJ45 Data/Power input
02 - RJ45 Data/Power output

03 - Hanging bracket
04 - Panel to panel alignment brackets

In the box: **1 x fixture,
1 x clear front screen,
1 x frosted front screen,
1 x RJ45 signal cable
& 1 x user manual**

TPix Strip Controller

POWER CONSUMPTION: 300W

FUSE:
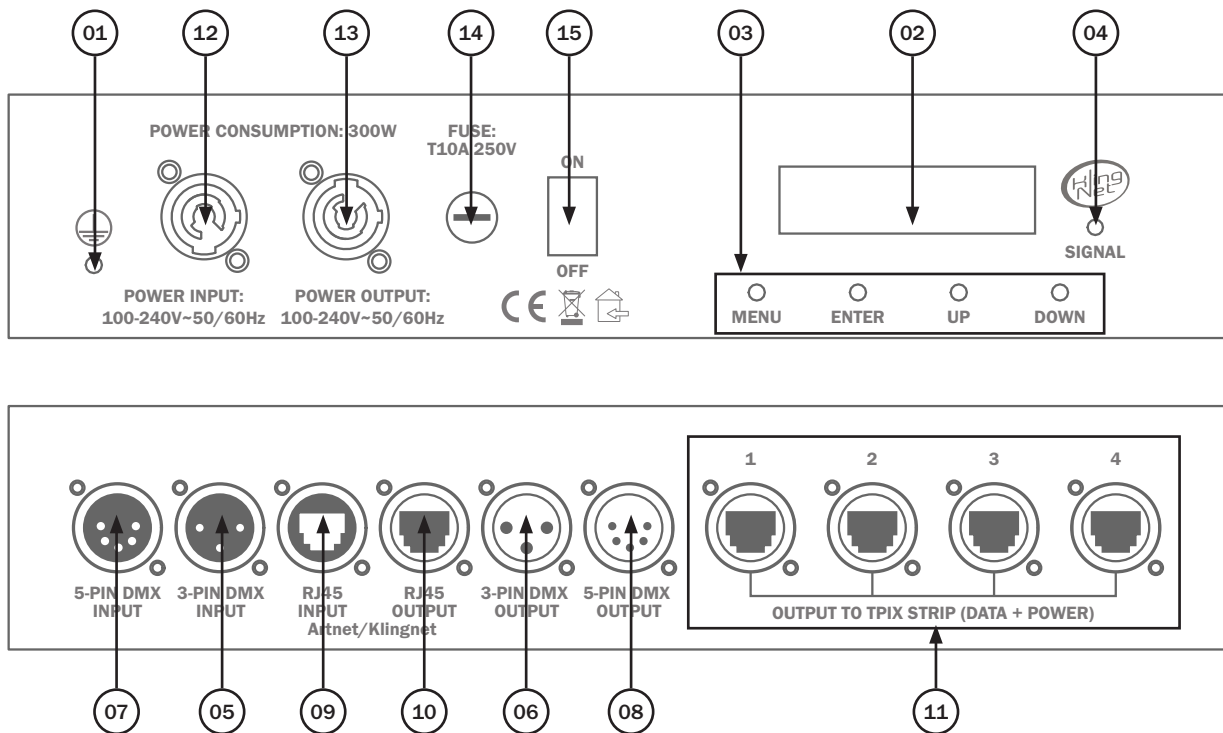T10A 250V

ON

OFF

SIGNAL

MENU   ENTER   UP   DOWN

POWER INPUT:
100-240V~50/60Hz

POWER OUTPUT:
100-240V~50/60Hz

5-PIN DMX
INPUT

3-PIN DMX
INPUT

RJ45
INPUT
Artnet/Klingnet

RJ45
OUTPUT

3-PIN DMX
OUTPUT

5-PIN DMX
OUTPUT

1   2   3   4

OUTPUT TO TPIX STRIP (DATA + POWER)

01 - Earth point
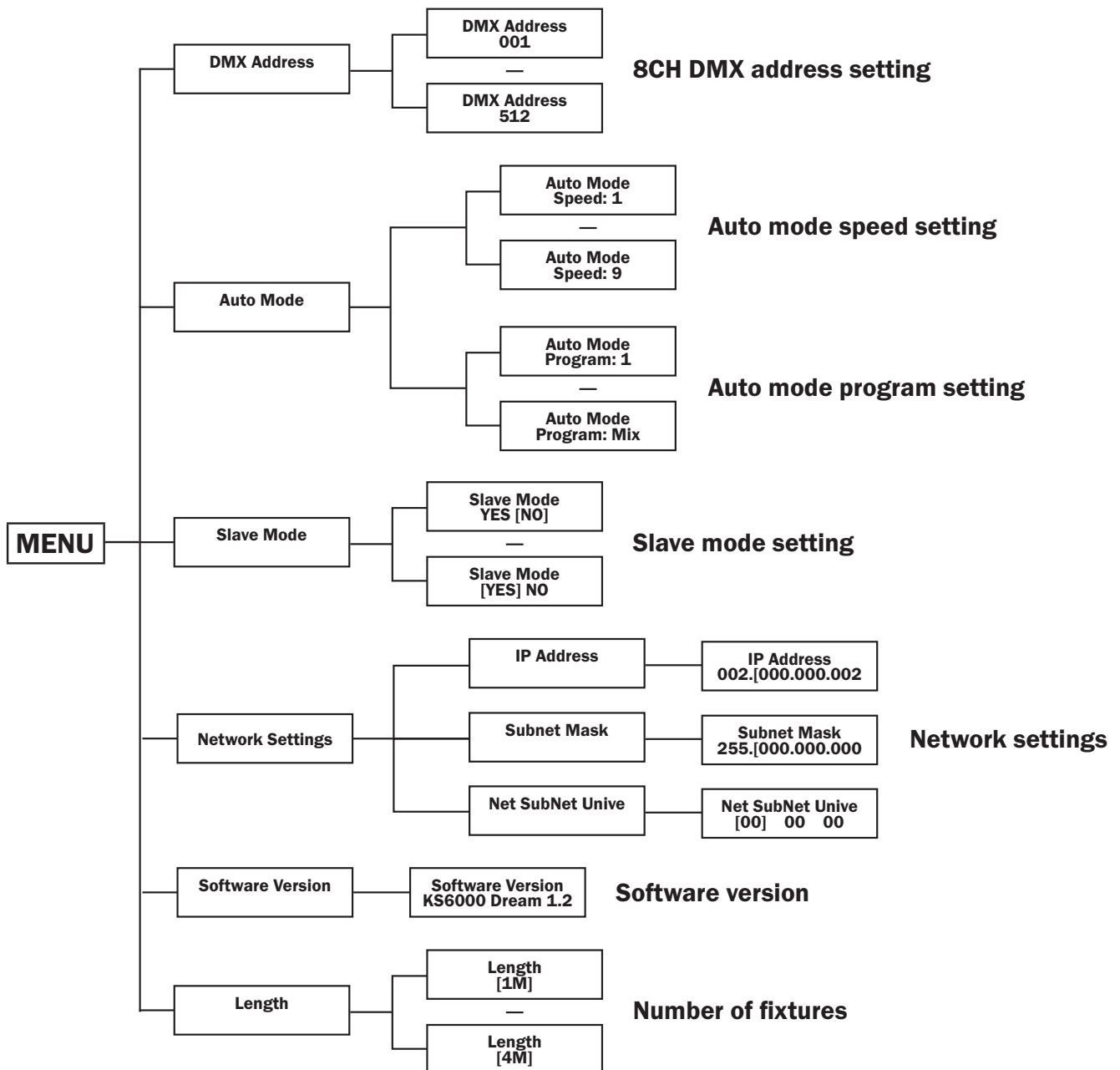02 - LCD display
03 - Function buttons
04 - Signal LED
05 - 3-Pin DMX input
06 - 3-Pin DMX output

07 - 5-Pin DMX input
08 - 5-Pin DMX output
09 - RJ45 ArtNet/
     KlingNet input
10 - RJ45 ArtNet/
     KlingNet output

11 - Outputs to TPix Strip
12 - PowerCON input
13 - PowerCON output
14 - Fuse T3.15A 250V
15 - On/off switch

In the box: **1 x fixture,
1 x PowerCON cable
& 1 x user manual**

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```
                        ┌─────────────────┐
                        │  DMX Address    │
                        │     001         │
┌─────────────┐         ├─────────────────┤      8CH DMX address setting
│ DMX Address │─────────│       —         │
└─────────────┘         ├─────────────────┤
                        │  DMX Address    │
                        │     512         │
                        └─────────────────┘

                        ┌─────────────────┐
                        │  Auto Mode      │
                        │   Speed: 1      │
                        ├─────────────────┤      Auto mode speed setting
                        │       —         │
                        ├─────────────────┤
                        │  Auto Mode      │
┌─────────────┐         │   Speed: 9      │
│  Auto Mode  │─────────└─────────────────┘
└─────────────┘         ┌─────────────────┐
                        │  Auto Mode      │
                        │   Program: 1    │
                        ├─────────────────┤      Auto mode program setting
                        │       —         │
                        ├─────────────────┤
                        │  Auto Mode      │
                        │  Program: Mix   │
                        └─────────────────┘

                        ┌─────────────────┐
                        │  Slave Mode     │
┌──────┐  ┌─────────────┐│   YES [NO]     │
│ MENU │──│ Slave Mode  │├─────────────────┤    Slave mode setting
└──────┘  └─────────────┘│       —         │
                        ├─────────────────┤
                        │  Slave Mode     │
                        │   [YES] NO      │
                        └─────────────────┘
```

DMX Address
- DMX Address 001
- —
- DMX Address 512

8CH DMX address setting

Auto Mode
- Auto Mode Speed: 1
- —
- Auto Mode Speed: 9

Auto mode speed setting

- Auto Mode Program: 1
- —
- Auto Mode Program: Mix

Auto mode program setting

MENU

Slave Mode
- Slave Mode YES [NO]
- —
- Slave Mode [YES] NO

Slave mode setting

Network Settings
- IP Address → IP Address 002.[000.000.002
- Subnet Mask → Subnet Mask 255.[000.000.000
- Net SubNet Unive → Net SubNet Unive [00] 00   00

Network settings

Software Version
- Software Version KS6000 Dream 1.2

Software version

Length
- Length [1M]
- —
- Length [4M]

Number of fixtures

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> **IMPORTANT! PLEASE NOTE:** The LCD display for this fixture has a timer that turns the display back-light off after 20 seconds of inactivity. To illuminate the display again press one of the 4 buttons.

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 on the rear of the unit to show "**DMX Address**" on the LCD 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.

8 channel mode:

Channel	Value	Function
1	000-255	Master dimmer (0-100%)
2	000-255	Strobe (slow-fast)
3	000-255	Red dimmer (0-100%)
4	000-255	Green dimmer (0-100%)
5	000-255	Blue dimmer (0-100%)
6 (CH1 & CH2 must be set to 000)	000-015	No function
	016-031	Program 1
	032-047	Program 2
	048-063	Program 3
	064-079	Program 4
	080-095	Program 5
	096-111	Program 6
	112-127	Program 7
	128-143	Program 8
	144-159	Program 9
	160-175	Program 10
	176-191	Program 11
	192-207	Program 12
	208-223	Program 13

Channel	Value	Function
6 cont.	224-239	Program 14
	240-255	Program 15
7 (CH1 & CH2 must be set to 000)	000-015	No function
	016-031	Program 16
	032-047	Program 17
	048-063	Program 18
	064-079	Program 19
	080-095	Program 20
	096-111	Program 21
	112-127	Program 22
	128-143	Program 23
	144-159	Program 24
	160-175	Program 25
	176-191	Program 26
	192-207	Program 27
	208-223	Program 28
	224-239	Program 29
	240-255	Program Mix
8	000-255	Speed (slow-fast)

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<u>ArtNet/KlingNet mode:</u>

Please note: For full pixel control, ArtNet/KlingNet must be used.
DMX can only be used for the 8 channel mode.

<u>120 channel mode:</u>

Channel	Value	Function
1	000-255	LED 1 Red dimmer (0-100%)
2	000-255	LED 1 Green dimmer (0-100%)
3	000-255	LED 1 Blue dimmer (0-100%)
4	000-255	LED 2 Red dimmer (0-100%)
5	000-255	LED 2 Green dimmer (0-100%)
6	000-255	LED 2 Blue dimmer (0-100%)
7	000-255	LED 3 Red dimmer (0-100%)
8	000-255	LED 3 Green dimmer (0-100%)
9	000-255	LED 3 Blue dimmer (0-100%)
· · · · ·	· · · · · ·	· ·
118	000-255	LED 40 Red dimmer (0-100%)
119	000-255	LED 40 Green dimmer (0-100%)
120	000-255	LED 40 Blue dimmer (0-100%)

<u>Auto mode:</u>

To access the Auto mode, press the "**MENU**" button and use the "**UP**" and "**DOWN**" buttons on the rear of the unit to show "**Auto Mode**" on the LCD display. Now press the "**ENTER**" button and use the "**UP**" and "**DOWN**" buttons to select either "**Speed**" or "**Program**".

When selecting "**Speed**" press the "**ENTER**" button and use the "**UP**" and "**DOWN**" buttons to select between "**Speed: 1**" ~ "**Speed: 9**".

When selecting "**Program**" press the "**ENTER**" button and use the "**UP**" and "**DOWN**" buttons to select between "**Program: 1**" ~ "**Program: 29**" or "**Program: Mix**".

Press the "**ENTER**" button to confirm the setting.

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

<u>Master/slave mode:</u>

To set the master unit, press the "**MENU**" button and use the "**UP**" and "**DOWN**" buttons on the rear of the unit to select one of the Auto Programs.

To set the other units in slave mode, press the "**MENU**" button and use the "**UP**" and "**DOWN**" buttons on the rear of the unit to show "**Slave Mode**" on the LCD display. Now press the "**ENTER**" button and use the "**UP**" and "**DOWN**" buttons to set slave mode on/off "**Slave Mode [YES]**" or "**Slave Mode [NO]**". Press the "**ENTER**" button to confirm the setting.

IP Address setting:

To access the IP address setting, press the **"MENU"** button and use the **"UP"** and **"DOWN"** buttons on the rear of the unit to show **"Network Settings"** on the LCD display. Now press the **"ENTER"** button and use the **"UP"** and **"DOWN"** buttons to select **"IP Address"**. Press the **"ENTER"** button and use the **"UP"** and **"DOWN"** buttons to select the part of the IP address you would like to change indicated by a **"["**. Press the **"ENTER"** button and use the **"UP"** and **"DOWN"** buttons to adjust the selected part of the IP address you have chosen. Press the **"ENTER"** button to confirm the setting.

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

Subnet Mask setting :

To access the Subnet Mask setting, press the **"MENU"** button and use the **"UP"** and **"DOWN"** buttons on the rear of the unit to show **"Network Settings"** on the LCD display. Now press the **"ENTER"** button and use the **"UP"** and **"DOWN"** buttons to select **"Subnet Mask"**. Press the **"ENTER"** button and use the **"UP"** and **"DOWN"** buttons to select the part of the Subnet mask you would like to change indicated by a **"["**. Press the **"ENTER"** button and use the **"UP"** and **"DOWN"** buttons to adjust the selected part of the Subnet mask you have chosen. Press the **"ENTER"** button to confirm the setting.

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

Net SubNet Universe setting:

To access the Net SubNet Universe setting, press the **"MENU"** button and use the **"UP"** and **"DOWN"** buttons on the rear of the unit to show **"Network Settings"** on the LCD display. Now press the **"ENTER"** button and use the **"UP"** and **"DOWN"** buttons to select **"Net SubNet Universe"**. Press the **"ENTER"** button and use the **"UP"** and **"DOWN"** buttons to select the part of the Net SubNet Universe you would like to change indicated by a **"[ ]"**. Press the **"ENTER"** button and use the **"UP"** and **"DOWN"** buttons to adjust the selected part of the Net SubNet Universe you have chosen.
Press the **"ENTER"** button to confirm the setting.

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

Software version:

To access the fixtures software version, press the **"MENU"** button and use the **"UP"** and **"DOWN"** buttons on the rear of the unit to show **"Software Version"** on the LCD display. Now press the **"ENTER"** button and **"Software Version KS6000 Dream 1.2"** will be displayed.

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

Number of fixtures:

To access the number of fixtures per output setting, press the **"MENU"** button and use the **"UP"** and **"DOWN"** buttons on the rear of the unit to show **"Length"** on the LCD display. Now press the **"ENTER"** button and use the **"UP"** and **"DOWN"** buttons to select between **"Length [1M]"** (**1 TPix Strip**) ~ **"Length [4M]"** (**4 TPix Strips**). To exit out of any of the above options, press the **"MENU"** button.
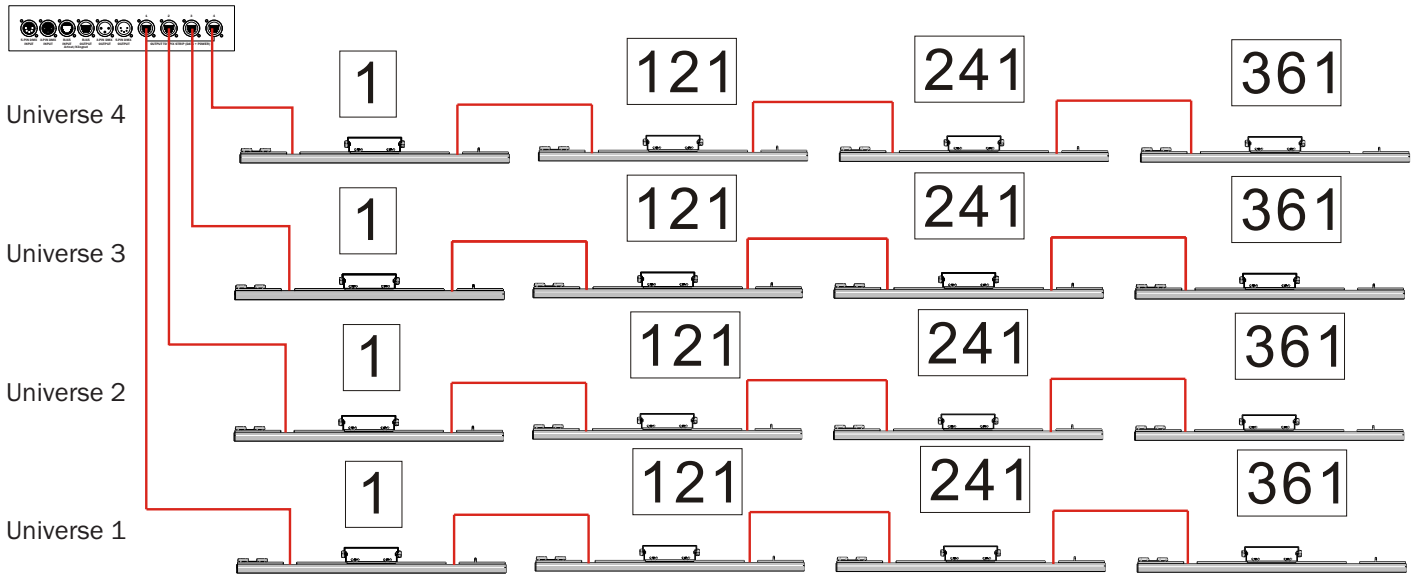
KlingNet Settings:

01) Install a KlingNet based software on your PC (Windows or Mac).

02) Connect the TPix Strip to the TPix Strip Controller via the RJ45 outputs.

03) Connect the TPix Strip Controller to a power supply via the PowerCON input.

04) Make sure the PC has a fixed IP Address. No further network settings need to be adjusted.

05) Connect the TPix Strip Controller to your computer via a CAT-5/CAT-6 cable (see page 10). Once the fixtures have been connected the will be automatically recognised by the KlingNet based software.

06) Map the devices using the "drag and drop" method, placing the fixtures in the "on-screen" interface on the right position. This will take a few minutes and once done the system is fully set up.

Please note: When creating large setups, it is recommended to use a 16-bit, high speed ethernet switch to transmit the KlingNet data signal.

ArtNet Settings:

01) Install an ArtNet based software on your PC (Windows or Mac).

02) Connect the TPix Strip to the TPix Strip Controller via the RJ45 outputs.

03) Connect the TPix Strip Controller to a power supply via the PowerCON input.

04) Connect the TPix Strip Controller to your software/controller via a CAT-5/CAT-6 cable (see page 10).

05) Set the IP address of the software/controller to 2.x.x.x or 10.x.x.x, depending on the ArtNet settings.

06) Set the Subnet mask to 255.0.0.0 on both the TPix Strip Controller and the software/controller. Make sure that all fixtures in the network have a unique IP address.

Universe 4 1 121 241 361

Universe 3 1 121 241 361

Universe 2 1 121 241 361

Universe 1 1 121 241 361

Please note: You must always go from the TPix Controller RJ45 output into a TPix Strip input and then from a TPix Strip RJ45 output to TPix Strip RJ45 input to link TPix Strips.
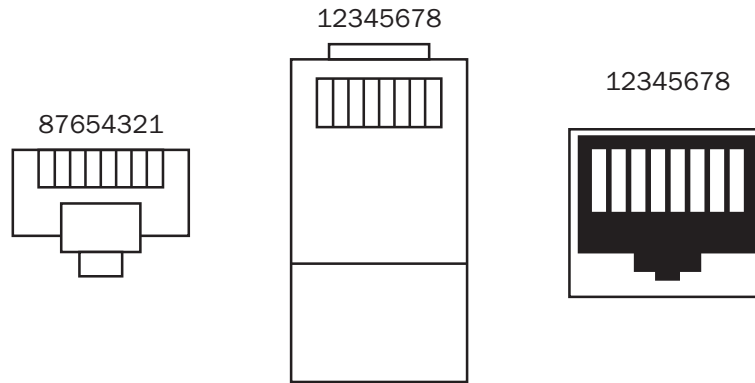
Correct

Incorrect

LEDJ
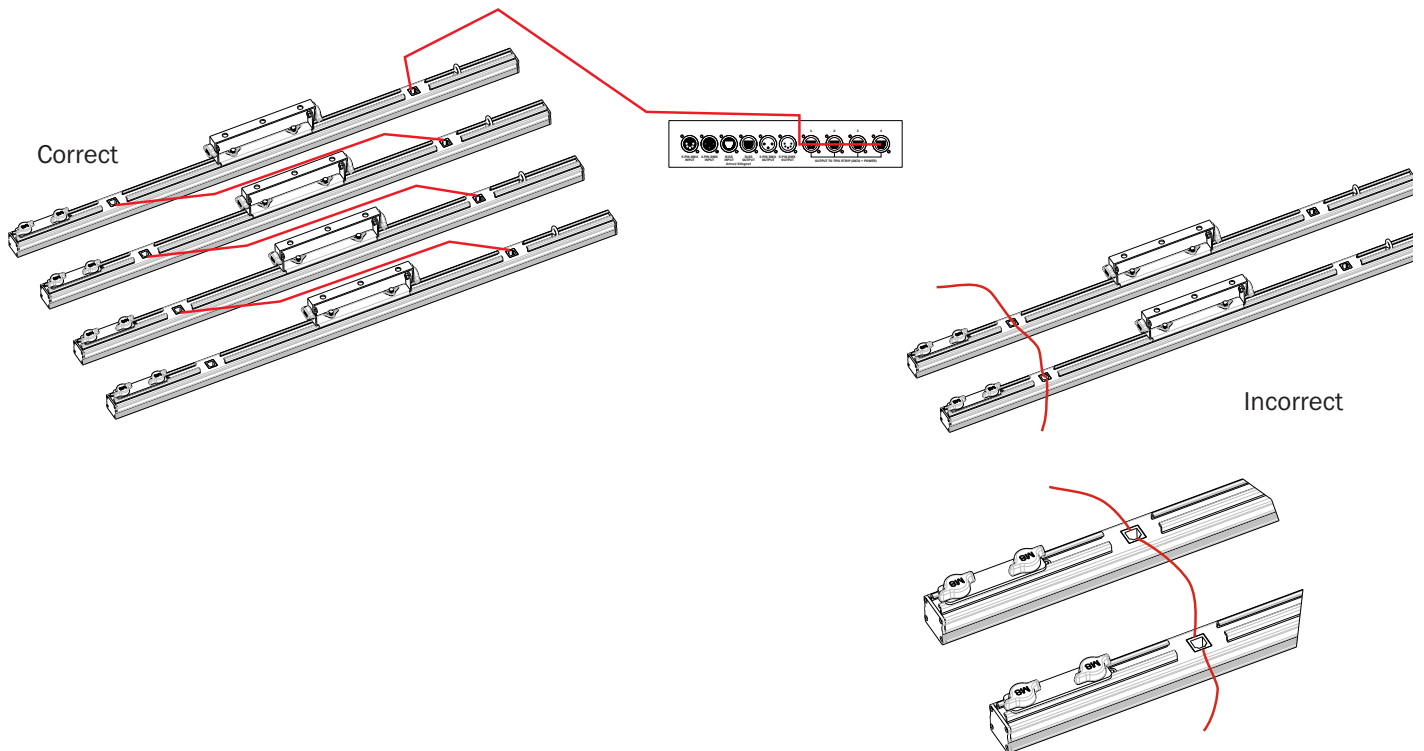
Making a data cable:

A standard ETHERNET cable can be used to replace the data cable required to transmit the data.

Please follow the instructions below in order to create extra cables:

Take a standard net cable (CAT-5/CAT-5E/CAT-6) and connect it to an RJ45 connector as shown below.

Colour Standard EIA/TIA T568A   Ethernet Patch Cable

	RJ45	Pin#		Pin#	RJ45		
TX +	Green/White Tracer	1		1	Green/White Tracer		PR 3
TX −	Green	2		2	Green		PR 3
RX +	Orange/White Tracer	3		3	Orange/White Tracer		PR 2
	Blue	4		4	Blue		PR 1
	Blue/White Tracer	5		5	Blue/White Tracer		PR 1
RX −	Orange	6		6	Orange		PR 2
	Brown/White Tracer	7		7	Brown/White Tracer		PR 4
	Brown	8		8	Brown		PR 4

Setting the DMX address:

The DMX mode enables the use of a universal DMX controller. 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.

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 and your DMX controller require a standard 3-pin XLR connector for data input/output, see image below.

Further DMX cables can be purchased from all good sound and lighting suppliers or Pro Light Concepts dealers.
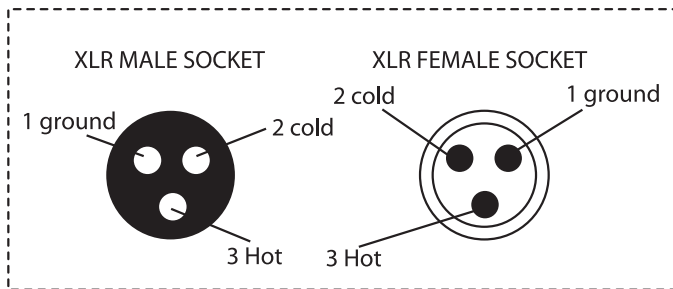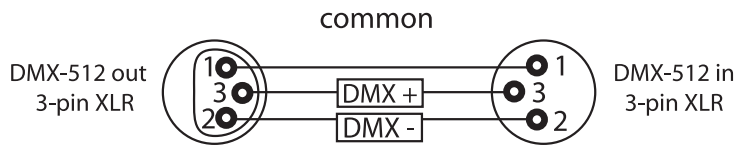
Please quote:

CABL10 – 2m
CABL11 – 5m
CABL12 – 10m

Note: DMX cable must be daisy chained and cannot be split.

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.

common

DMX-512 out
3-pin XLR

DMX +
DMX -

DMX-512 in
3-pin XLR

XLR MALE SOCKET

1 ground
2 cold
3 Hot

XLR FEMALE SOCKET

2 cold
3 Hot
1 ground

XLR Pin Configuration
Pin 1 = Ground
Pin 2 = Negative
Pin 3 = Postive

Special note:

Line termination:

When longer runs of cable are used, you may need to use a terminator on the last unit to avoid erratic behaviour.
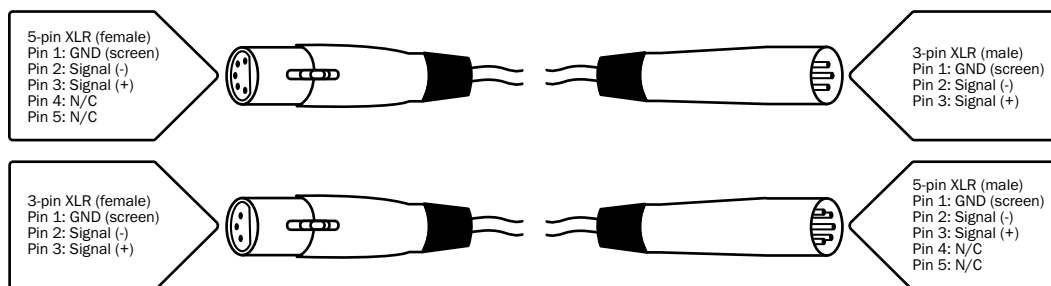
Using a cable terminator will decrease the possibilities of erratic behaviour.
(3-pin - Order ref: CABL90, 5-pin - Order ref: CABL89)

Termination reduces signal transmission problems and interference. It is always advisable to connect a DMX terminal, (resistance 120 Ohm 1/4 W) 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.

5-pin XLR (female)
Pin 1: GND (screen)
Pin 2: Signal (-)
Pin 3: Signal (+)
Pin 4: N/C
Pin 5: N/C

3-pin XLR (male)
Pin 1: GND (screen)
Pin 2: Signal (-)
Pin 3: Signal (+)

3-pin XLR (female)
Pin 1: GND (screen)
Pin 2: Signal (-)
Pin 3: Signal (+)

5-pin XLR (male)
Pin 1: GND (screen)
Pin 2: Signal (-)
Pin 3: Signal (+)
Pin 4: N/C
Pin 5: N/C

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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 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.

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