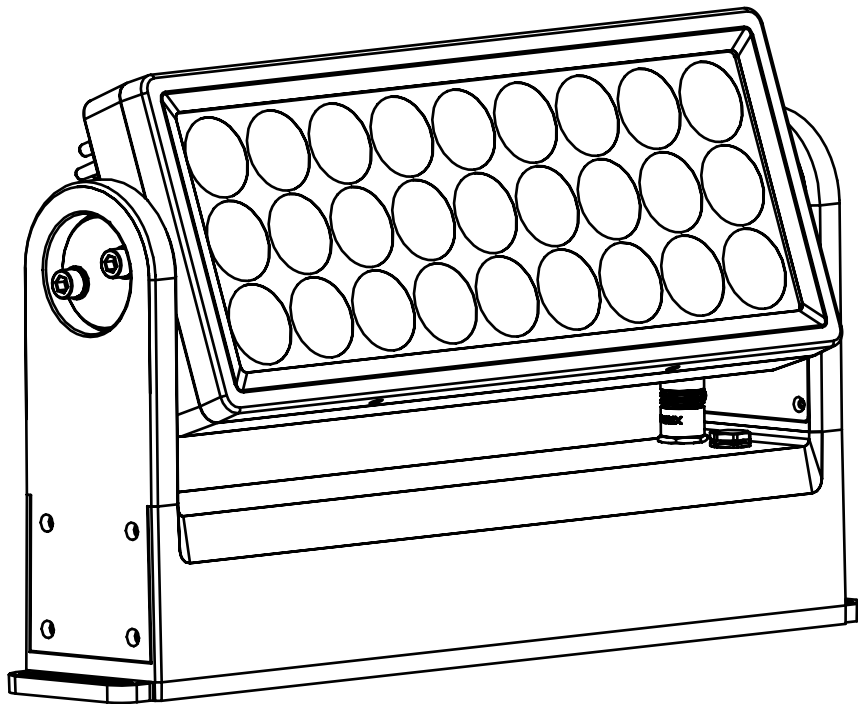


User Manual

Colour Ranger 27 LEDWSH272





WARNING! Before carrying out any operations with the unit, carefully read this instruction manual and keep it for future reference. It contains important information about the installation, usage and maintenance of the unit.



SAFETY

General instruction

- The products referred to in this manual conform to the European Community Directives and are therefore marked with CE.
- The unit is supplied with hazardous network voltage (230V~). Leave servicing to skilled personnel only. Never make any modifications on the unit not described in this manual, otherwise you will risk an electric shock.
- Connection must be made to power supply system fitted with efficient earthing (Class I appliance according to standard EN60598-1). It is recommended to protect the supply lines of the units from indirect contact and/or shorting to earth by using appropriately sized residual current devices.
- The connection to the main network of electric distribution must be carried out by a qualified electrical installer. Check that the main frequency and voltage correspond to those for which the unit is designed as given on the electrical data table.
- This unit is not for home use, only professional applications.
- Never use the fixture under the following conditions:
 - in places subject to vibrations or bumps.
 - in places with a temperature of over 40°C.
- Make certain that no inflammable liquids, water or metal objects enter the fixture.
- Do not dismantle or modify the fixture.
- All work must always be carried out by qualified technical personnel. Contact the nearest sales point for an inspection.
- If the unit is to be put out of operation definitively, take it to a local recycling plant for disposal which is not harmful to the environment.



Warnings and installation precautions

- If this device will be operated in any way different to the one described in this manual, it may suffer damage and warranty will be voided. Furthermore, any operation may lead to dangers like short circuit, burns, electric shock, etc.
- Before starting any maintenance work or cleaning of the fixture, unplug the unit from the main supply.
- Always additionally secure the fixture with the correctly rated safety cable. When carrying out any work, always comply with local regulations (particularly regarding safety) currently in force in the country and state that the fixture's being used.
- Install the fixture in a well-ventilated place.
- Keep any inflammable materials at a safe distance from the fixture.
- Shields, lenses or ultraviolet screens shall be changed if they have become damaged to such an extent that their effectiveness is impaired.
- The lamp (LED) shall be changed if it has become damaged or thermally deformed.
- Never look directly at the light source. Please note that fast changes in lighting or flashing light may trigger epileptic seizures for photosensitive persons or persons with epilepsy.
- Do not touch the product's housing when operating because it may be very hot.

INTRODUCTION

The COLOUR RANGER Q27A is a compact RGBW IP65-rated wash light with an advanced thermal (fan less) design.

FEATURES

- 27 x 10W RGBW LEDs deliver 12K lumens of perfectly blended colour
- 3 zone independent control of horizontal sections
- Selectable LED modulation for flicker-free output from 600Hz ~ 25kHz
- Ultra-linear dimming technology for flawless colour mixing
- Robust die-cast body and tempered glass front panel
- Virtual colour wheel and white presets from 2800 ~ 10,000K
- Four selectable dimmer curve modes
- Available optics: 25° (standard), 15° or 45° (optional)
- RDM, DMX and W-DMX wireless control

SPECIFICATIONS

Light Source:	27 x 10W RGBW LEDs
Beam Angle:	25°
Field Angle:	41°
Output (lumens):	12000lm
Colour Mixing:	RGBW
Strobe:	0-30 Hz
Dimming:	4 dimming curve modes
Control:	RDM, DMX and W-DMX
DMX Channels:	4/6/10/12
Power linking:	Up to 9 units@ 230V / up to 5 units @ 120V
Mains:	100 - 240 VAC, 50/60 Hz
Consumption:	268W/230V
Power connections:	IP65 In/Out
Data connections:	IP65 DMX In/Out
Housing:	Die-cast aluminium, tempered glass
Tilt angle:	+/- 90° (manual)
Finish:	Grey
IP rating:	IP65
Cooling:	Passive (fanless)
Dimensions:	454 x 83 x 268.5 mm
Weight:	9KG

- 1.2 - MAINTENANCE

MAINTENANCE AND CLEANING THE UNIT

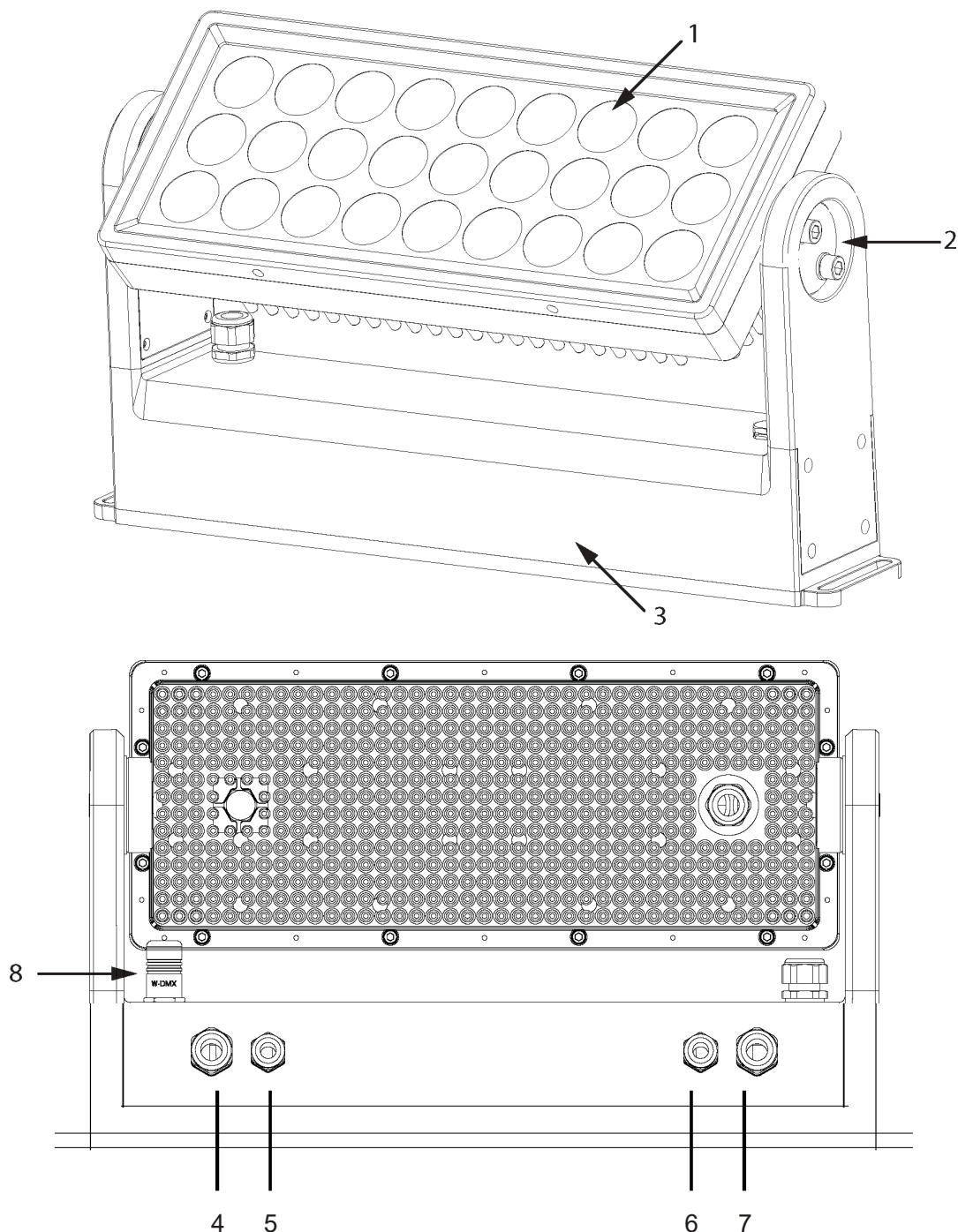
- Make sure there is no persons under the fixture when installing.
- Switch off the unit, unplug the main cable and wait until the unit has cooled down.
- All screws used for installing the device and any of its parts should be tightly fastened and should not be corroded.
- Housings, fixations and installation spots (ceiling, trusses, suspensions) should be totally free from any deformation.
- The main cables must be in impeccable condition and should be replaced immediately even when a small defect is detected.
- It is recommended to clean the front at regular intervals, from impurities caused by dust, smoke, or other particles to ensure that the light performs at maximum brightness. For cleaning, disconnect the main plug from the socket. Use a soft, clean cloth moistened with a mild detergent. Then carefully wipe the fixture dry. For cleaning other housing parts use only a soft, clean cloth. Never use a liquid, it might penetrate the unit and cause damage to it.

TROUBLESHOOTING

Problems	Possible causes	Checks and remedies
Fixture does not light up	<ul style="list-style-type: none">• No mains supply• Dimmer fader set to 0• All colour faders set to 0• Faulty LED• Faulty LED board	<ul style="list-style-type: none">• Check the power supply voltage• Increase the value of the dimmer channels• Increase the value of the colour channels• Replace the LED board• Replace the LED board
General low light intensity	<ul style="list-style-type: none">• Dirty lens assembly• Misaligned lens assembly	<ul style="list-style-type: none">• Clean the fixture regularly• Install lens assembly properly
Fixture does not power up	<ul style="list-style-type: none">• No power• Loose or damaged power cord• Faulty internal power supply	<ul style="list-style-type: none">• Check for power on power outlet• Check power cord• Replace internal power supply
Fixture does not respond to DMX	<ul style="list-style-type: none">• Wrong DMX addressing• Damaged DMX cables• Bouncing signals	<ul style="list-style-type: none">• Check control panel and unit addressing• Check DMX cables• Install terminator as suggested

Contact Show Technology in case of a technical problem and if troubleshooting from the above table can't resolve the issue.

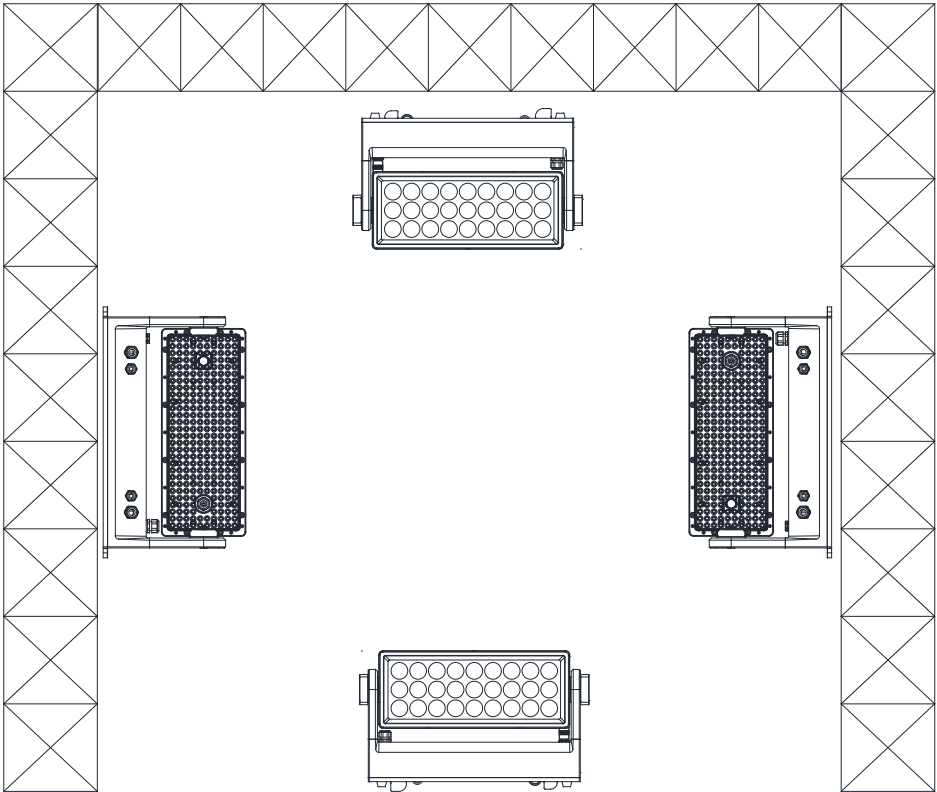
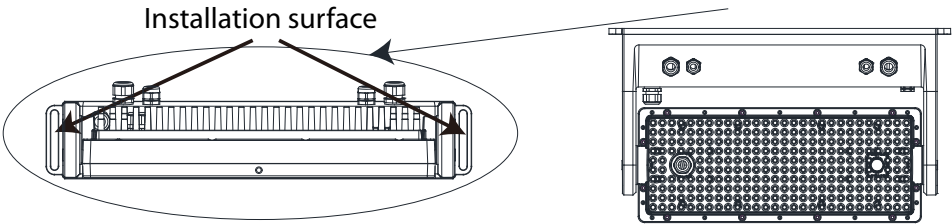
1.3 OPERATING ELEMENTS AND CONNECTIONS



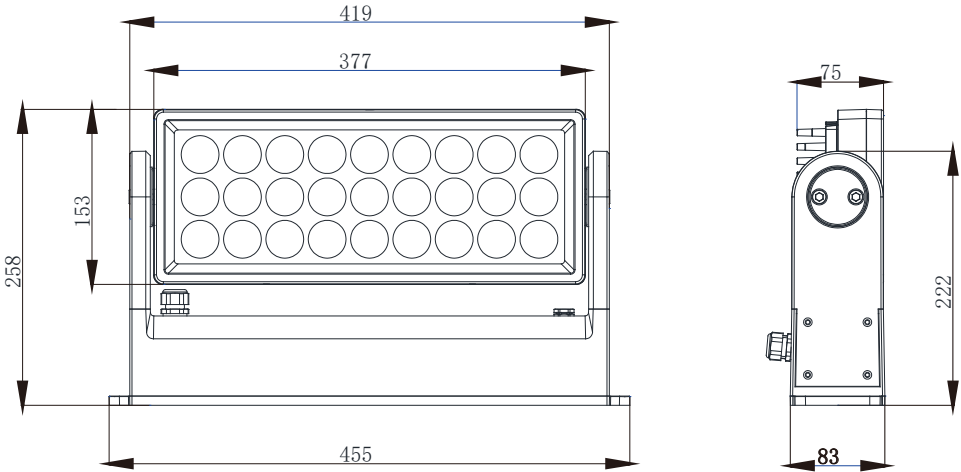
1. LED panel
2. KNOB for tilt movement
3. POWER SUPPLY CASING SET
4. POWER IN: for connection to a socket (100-240V~/50-60Hz) via the supplied mains cable
5. DMX IN
6. DMX OUT
7. POWER OUT: connect to supply power to the next unit.
8. ANTENNA for W-DMX

- 2 - INSTALLATION

2.1 MOUNTING



2.2 DIMENSIONS



- 3 - FUNCTIONS AND SETTINGS

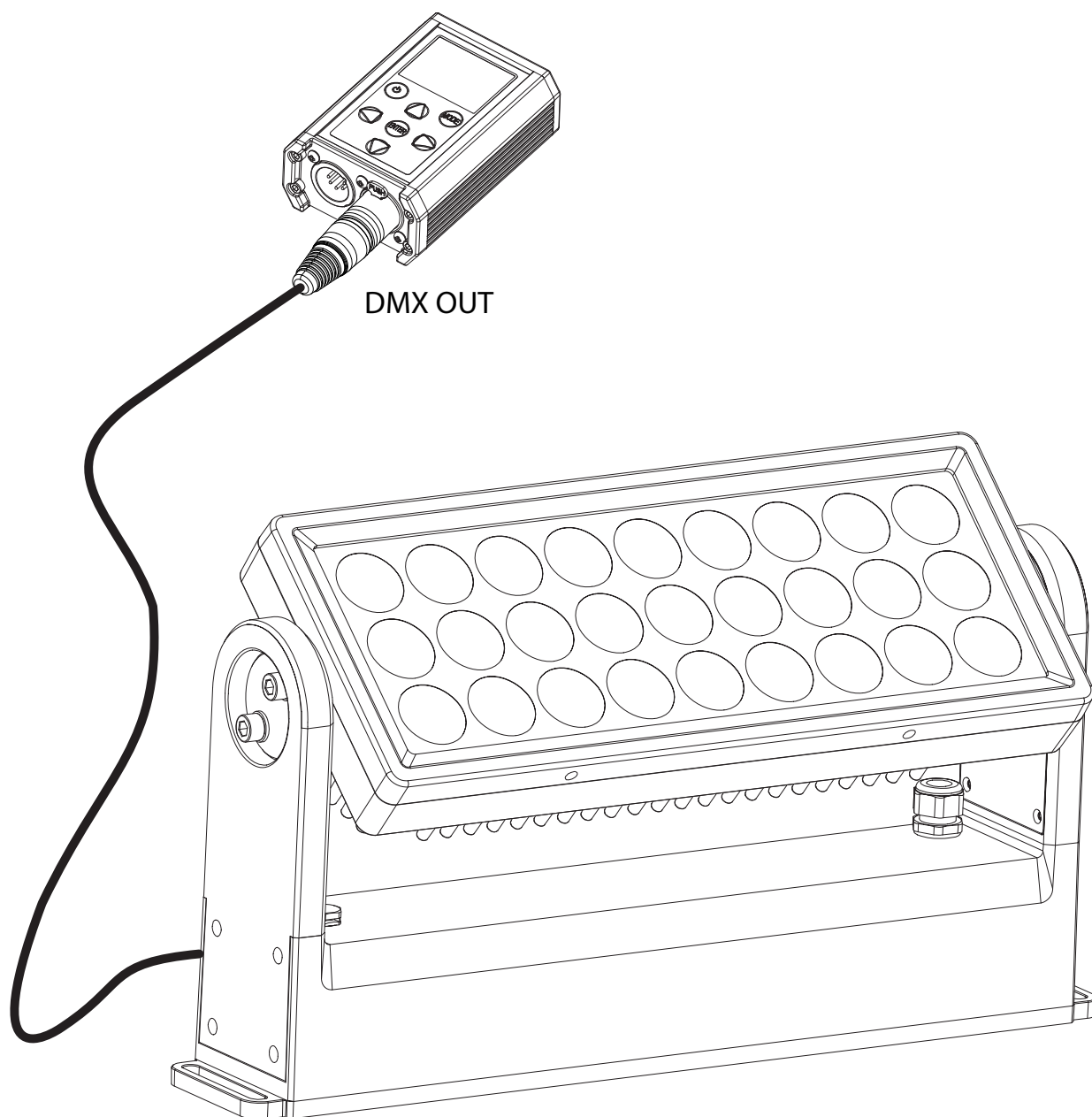
3.1 OPERATION

Connect the supplied main cable to a socket (100-240V~/50-60Hz). Shortly after that the Colour Ranger is ready for operation. To switch off, disconnect the mains plug from the socket.

3.2 BASIC

To control the Colour Ranger Q27A connect the device to a RDM Xpress Kit

RDM Xpress Kit is a powerful RDM-DMX tool that automatically detects connected RDM devices, allowing direct and fast monitoring and control. Information on the status of the connected fixture can be read from the RDM Xpress Kit display.



3.3 RDM MODE

To use the Colour Ranger Q27A proceed as follows:

Connect the Colour Ranger Q27A to a RDM Xpress Kit.

Turn on the RDM Xpress Kit using the dedicated button.

With the RDM Xpress Kit select **RDM** to show the following info about:

- Model;
- Manufacturer;
- Function;
- Temperature;
- Factory Default;
- Software Version;
- UID.

3.4 MENU STRUCTURE

RDM Function				
1	Dmx Address	1		Default: 1
2	Dmx Mode	4CH		Default: 10CH
		6CH		
		10CH		
		12CH		
3	Dimmer Mode	Off		Default: Off
		Dimmer1		
		Dimmer2		
		Dimmer3		
4	Led Frequency	600Hz		Default: 1200Hz
		1200Hz		
		2000Hz		
		4000Hz		
		6000Hz		
		25kHz		
5	Specific PIDS	8200 (Red)		White Balance
		8201 (Green)		
		8202 (Blue)		
		8203 (White)		
		8026 (Clear Device Hours)		
		8212 (W-DMX On/Off)	0:Off 1:On	0:Off
		8215 (Receive Reset No/Yes)	0:No 1:Yes	0:No

3.5 LINKING

Multiple units can be connected so that all secondary units have the same lighting effect as the main unit (Master).

1. Connect the DMX OUT of the main unit to the DMX IN of the first secondary unit using a 5 pole XLR cable.
2. Connect the DMX OUT of the first secondary unit with the DMX IN of the second secondary unit, etc.

3.6 DMX ADDRESSING CONFIGURATION

To enter the DMX mode proceed as follows:

- Press the ENTER button to access the main menu.
- Press the UP/DOWN button to scroll through the menu, select the **Start Addrees**, then press the ENTER button to access.
- Use the arrow buttons to set the desired value (**001-512**). Press the ENTER button to confirm.
- Press the MENU button repeatedly to exit the menu and to save the changes made.

3.7 DMX MODE CONFIGURATION

Colour Ranger Q27A has 4 DMX channel configurations.

- In the main menu of the RDM Xpress Kit select **RDM**.
- Press the ENTER button to access the main menu.
- Press the UP/DOWN button to scroll through the menu, select the **Pers. Mode**, then press the ENTER button to enter the next menu.
- Use the UP/DOWN button to select the desired DMX channel configuration (4CH, 6CH, 10CH, 12CH), then press the ENTER button to confirm the selection.
- Press the MENU button repeatedly to exit the menu and to save the changes made.

3.8 DMX ADDRESSING

For operation via a lighting console with DMX512 protocol, simply connect the Colour Ranger Q27 to the controller.

If for example, the address 33 is provided on the control unit to control the function of the first DMX channel, the start address 33 must be set on the Colour Ranger Q27. The other panel functions will be automatically assigned to the following addresses.

Relation between DMX and Address

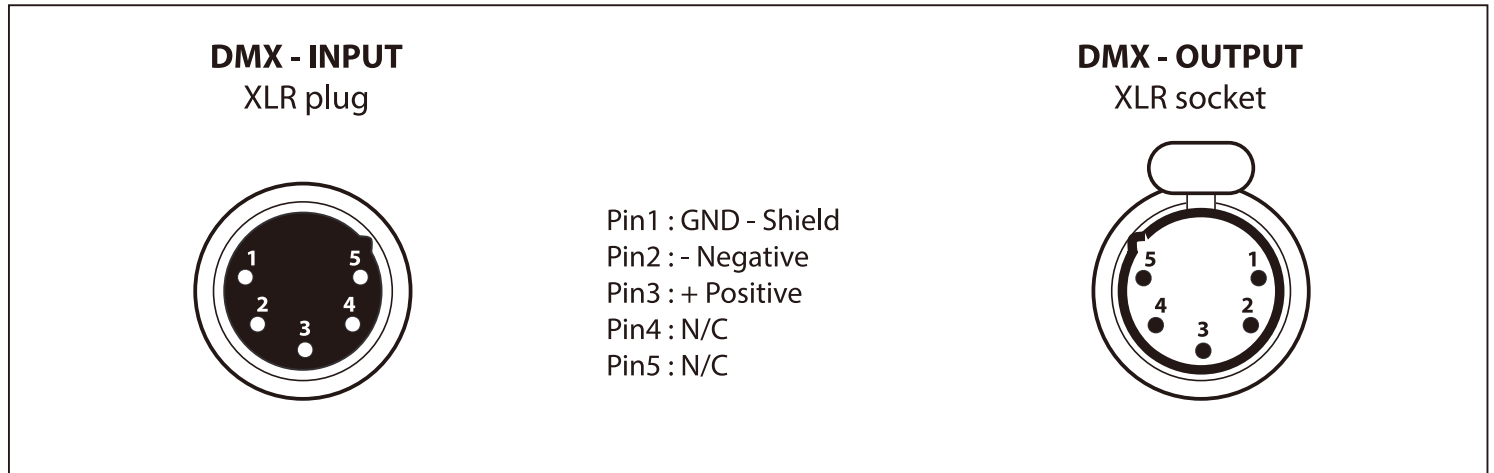
MODE	ALLOCATION	START ADDRESS 1ST FIXTURE	START ADDRESS 2ND FIXTURE	START ADDRESS 3RD FIXTURE	START ADDRESS 4TH FIXTURE
4CH	001-004	001	005	009	013
6CH	001-006	001	007	013	019
10CH	001-010	001	011	021	031
12CH	001-012	001	013	025	037

Follow above method for subsequent fixtures, calculating starting addressed as indicated.

3.9 CONNECTION OF THE OMX LINE

DMX connection employs standard XLR connectors. Use shielded pair-twisted cables with 120Ω impedance and low capacity.

The following diagram shows the connection mode:



ATTENTION

The screened parts of the cable (sleeve) must never be connected to the system's earth, as this would cause faults.

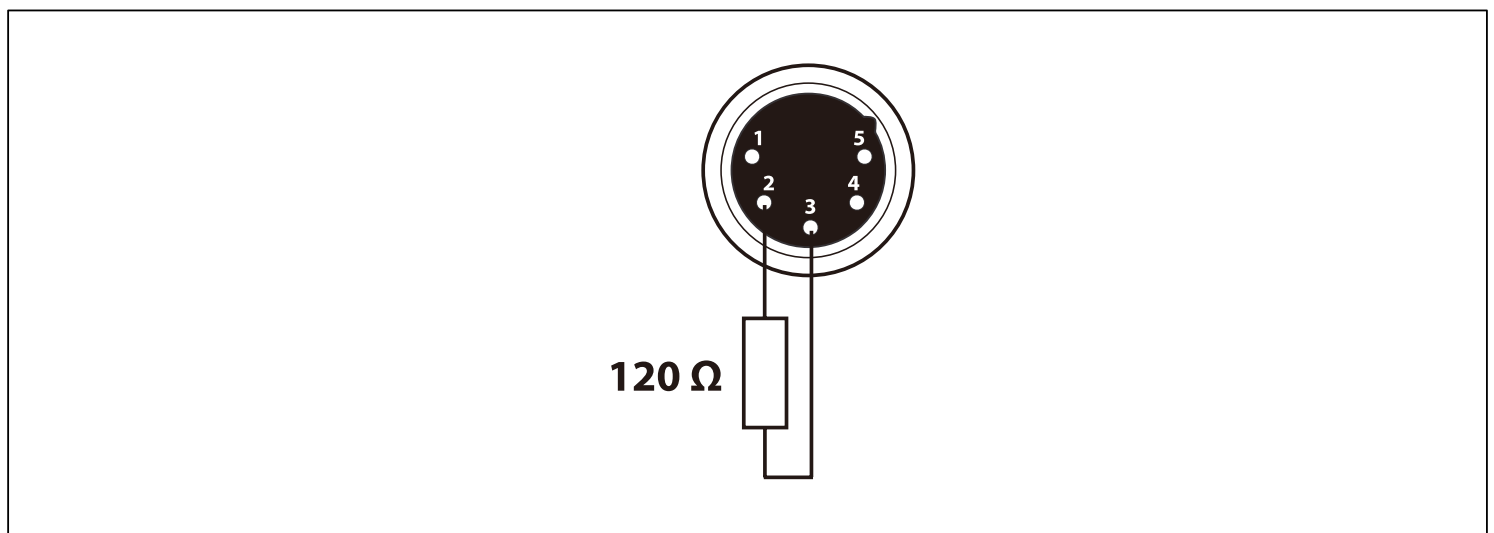
The use of balanced microphone cable is not recommended because it cannot transmit control DMX data reliably.

- Connect the controller DMX input to the DMX output of the first unit.
- Connect the DMX output to the DMX input of the following unit. Connect again the output to the input of the following unit until all the units are connected in chain.
- When the signal cable has to run long distances, it is recommended to insert a DMX termination on the last unit.

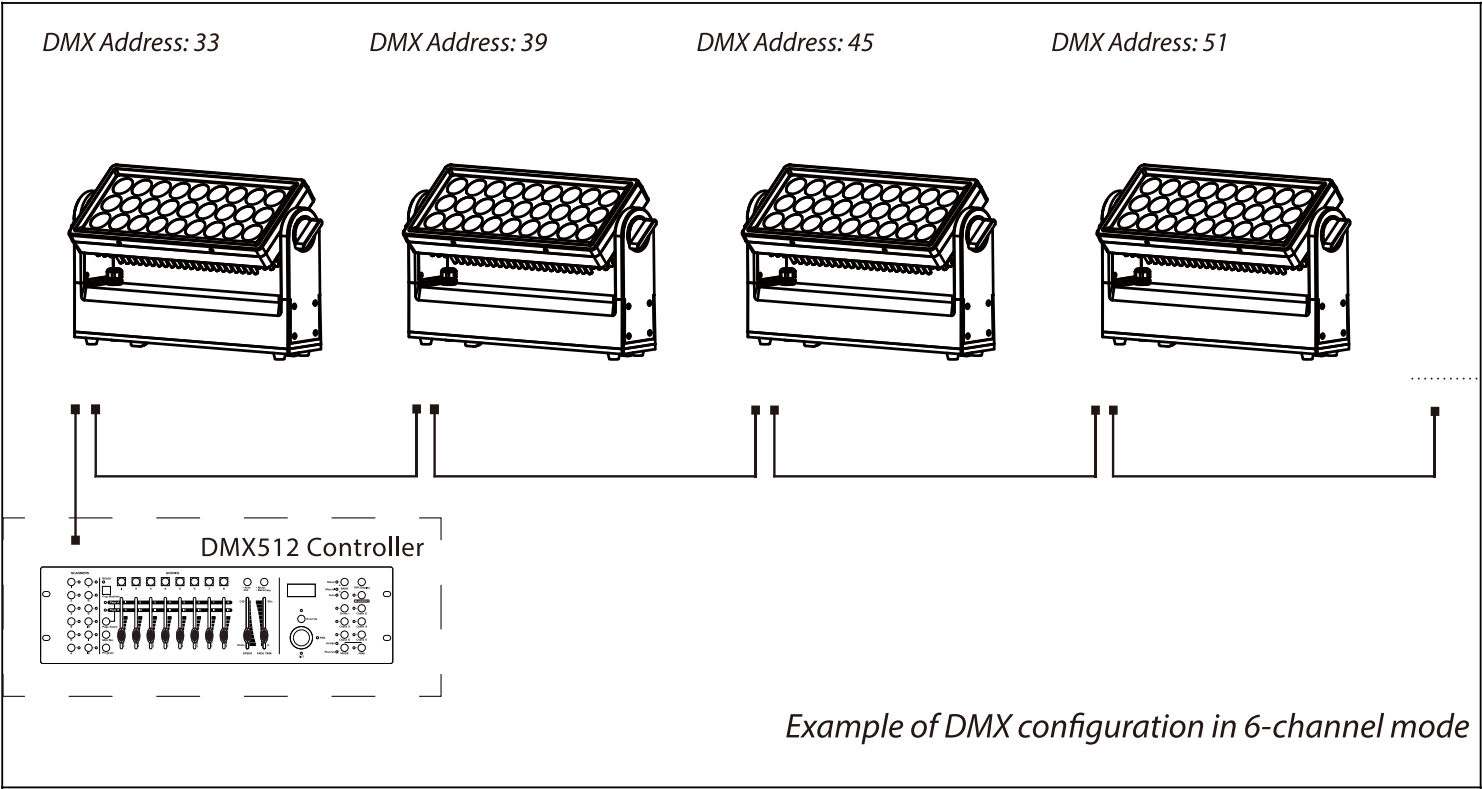
3.10 CONSTRUCTION OF THE DMX TERMINATION

The termination avoids the risk of DMX 512 signals being reflected back along the cable when it reaches the end of the line: under certain conditions and with certain cable lengths, this could cause cancellation of the original signals.

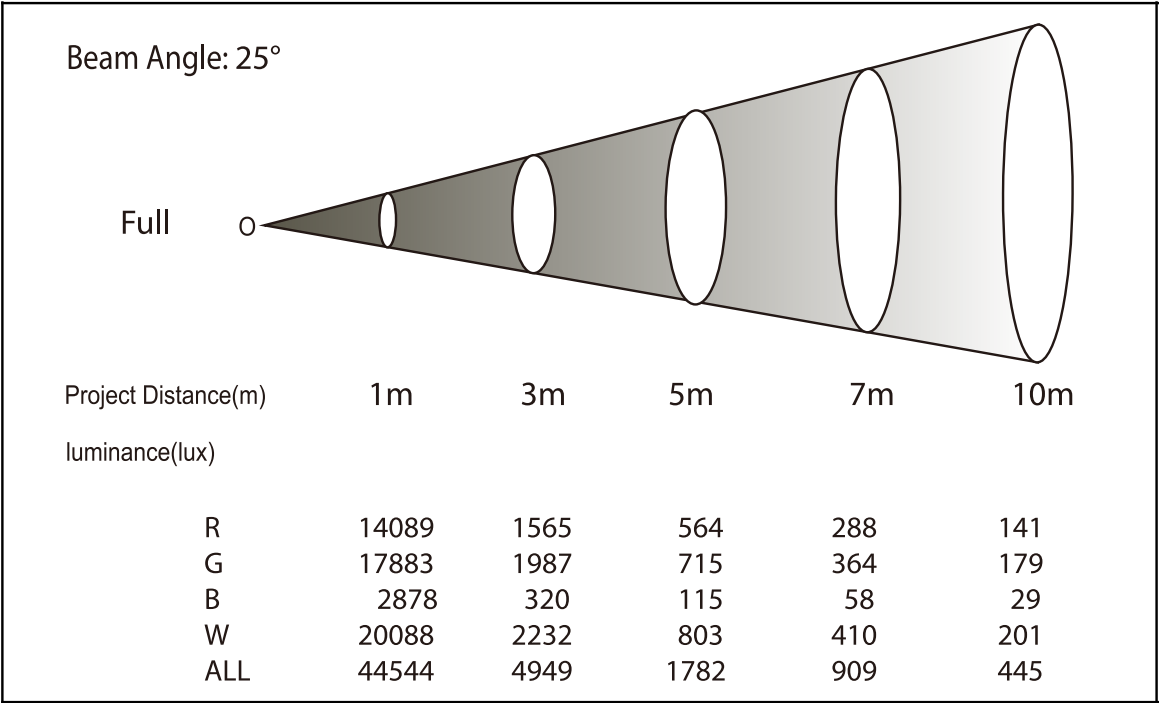
The termination is prepared by soldering a 120Ω 1/4 W resistor between pins 2 and 3 of the 5-pin male XLR connector, as shown in figure.



3.11 DMX LINKING EXAMPLE



3.12 PHOTOMETRICS



DMX Chart

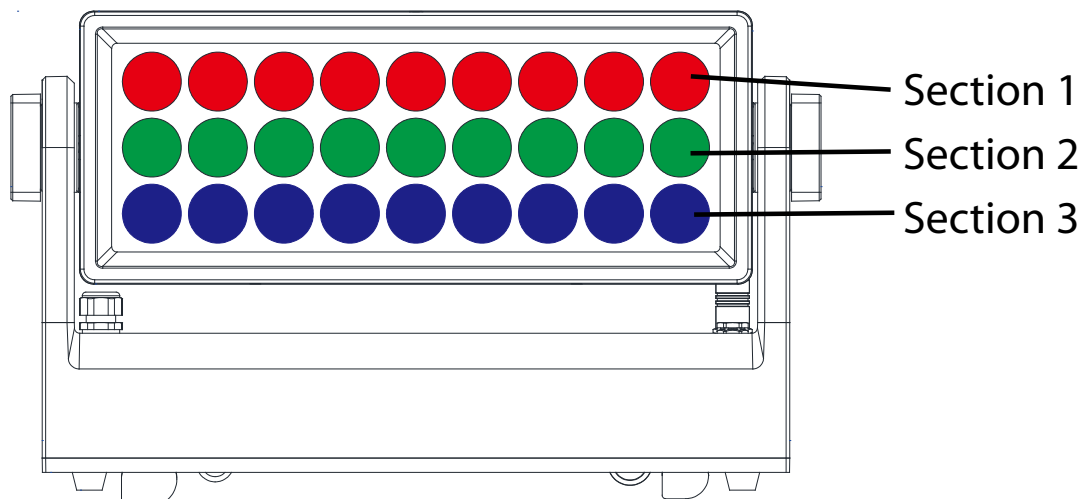
DMX Channel(-)

4CH	Function	Value	Percent/Setting	Remark
1	Red	000-255	0-100%	
2	Green	000-255	0-100%	
3	Blue	000-255	0-100%	
4	White	000-255	0-100%	

6CH	Function	Value	Percent/Setting	Remark
1	Dimmer	000-255	0-100%	
2	Red	000-255	0-100%	
3	Green	000-255	0-100%	
4	Blue	000-255	0-100%	
5	White	000-255	0-100%	
6	Strobe	000-010 011-255	NO Function Strobe Slow to Fast	

12CH	Function	Value	Percent/Setting	Remark
1	Red 1	000-255	0~100%	
2	Green 1	000-255	0~100%	
3	Blue 1	000-255	0~100%	
4	White 1	000-255	0~100%	
5	Red2	000-255	0~100%	
6	Green 2	000-255	0~100%	
7	Blue 2	000-255	0~100%	
8	White 2	000-255	0~100%	
9	Red3	000-255	0~100%	
10	Green 3	000-255	0~100%	
11	Blue 3	000-255	0~100%	
12	White 3	000-255	0~100%	

3 Independently Controllable Segments



3.13 DMX Chart

10CH	Function	Value	Percent/Setting	
1	Dimmer	000-255	0~100%	
2	Red	000-255	0~100%	
3	Green	000-255	0~100%	
4	Blue	000-255	0~100%	
5	White	000-255	0~100%	
6	Strobe	000-010 011-255	No function Strobe slow to fast	
7	Colour Macro	000~010 011~030 031~050 051~070 071~090 091~110 111~130 131~150 151~170 171~200 201~205 206~210 211~215 216~220 221~225 226~230 231~235 236~240 241~245 246~250 251~255	No Function R 100%, G 0~100%, BO% R 100%~0%, G 100%, BO% RO%, G 100%, B 0~100% RO%, G 100%~0% B 100% R 0%~100% GO% B 100% R 100% GO% B 100%~0% R 100% G 0%~100% B 0%~100% R 100%~0% G 100%~0% B 100% R 100% G 100% B 100% W100% Colour1 Colour2 Colour3 Colour4 Colour5 Colour6 Colour7 Colour8 Colour9 Colour10 Colour11	
8	Effects	000-010 011-037 038-064 065-091 092-118 119-145 146-172 173-199 200-226 227-255	No Function Effect 1 Effect 2 Effect 3 Effect4 Effect5 (Effects1- 4) Effect 6 Effect 7 Effect 8 Effect 9 (Effects6- 8)	
9	Effects speed	000-255	Effects speed slow to fast	
10	Dimmer Speed Mode	000-051 052-101 102-152 153-203 204-255	Preset dimmer speed from display menu Dimmer speed mode off Dimmer speed mode1 (fast speed) Dimmer speed mode2 (middle speed) Dimmer speed mode3 (slow speed)	

3.14 DMX MODE

4-channel mode: Basic RGBW dimming

6-channel mode: Basic RGBW dimming+ master dimmer+ strobe

10-channel mode: Offers colour and effect macros+ dimmer curve selection

12-channel mode: Allows for RGBW control of 3 independent horizontal rows