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雅江光電
YAJIANG APPLIED TECHNOLOGIES
创意源于追求
Own Idea Of Lighting

TERRA 12Q
USER MANUAL

arctik®
ARCHITECTURAL TECHNOLOGY
TERRA 12Q
AP781
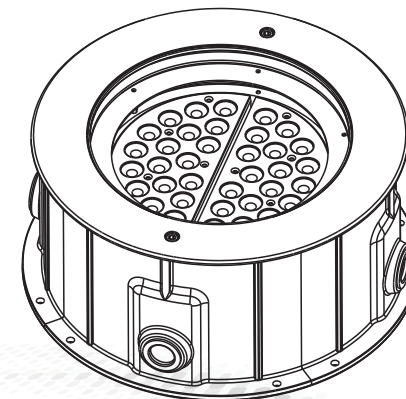
MODEL:AP781XCET

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arctik
ARCHITECTURAL TECHNOLOGY

TERRA 12Q
AP781

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arctik® TERRA 12Q AP781

ARCHITECTURAL TECHNOLOGY

5 APPENDIX

5.1   TROUBLE SHOOTING

LED MODULE

SITUATION	CAUSE	ACTION
Can not receive DMX signal	1) DMX signal cable error 2) Signal connection error 3) The input signal IC damaged 4) DMX address error	1) Check all signal cables 2) Check all signal connections 3) Check the input signal IC 4) Check DMX address
Color mixing uneven,with splash	1) LED not joining well 2) Lens not installing well	1) Check LEDS joining 2) Check lens installing
Partial color （ partial red,partial green or partial blue ）	1) The current of one color LEDs is too strong or too weak 2) LEDs brightness not enough	1) Check drive current of each color in Main PCB 2) Check LED quality
LEDs of the same color are not lit	1) LED or Main PCB damaged	1) Replace damaged LED or Main PCB

1 PRODUCT (GENERAL)

1.1   PRODUCT INTRODUCTION

This product is designed for outdoor architectural applications. It can be operated both as a single unit and in multiple units for large applications.

1.2   PRODUCT FEATURES

LED FIXTURE

* RGB dimmer 0-100%
* Color macro
* RGB calibration
* Strobe
* Dimmer speed control
* Static Function
* DMX512 control
* Compatible with the PiX Controller
* Lightweight aluminum casing
* IP67, Ik10 protection rating
*Support RDM model control

1.3   TECHNICAL SPECIFICATIONS

LED MODULE

LED MODULE:	
Voltage	100V-240V~,50/60Hz
Rated Power	46W
IP	IP67 PROTECTION RATING
LED/Unit	4in1 RGBWX12PCS
Output/LED	1W
Environment Temperature	-20℃~40℃
Cooling	Direct air convection
Dimensions	Φ320 x146mm
Weight	8Kg

320mm   146mm
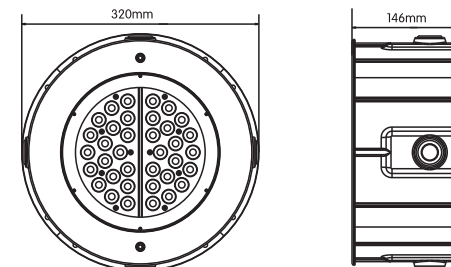
1.4 SAFETY WARNING

IMPORTANT

【ALWAYS READ THE USER MANUAL BEFORE OPERATION. 】
【PLEASE CONFIRM THAT THE POWER SUPPLY STATED ON THE PRODUCT IS THE
 SAME AS THE MAINS POWER SUPPLY IN YOUR AREA.】

● This product must be installed by a qualified professional.
● Always operate the equipment as described in the user manual.
● A minimum distance of 0.5m must be maintained between the equipment and
   combustible surface.
● The product must always be placed in a well ventilated area.
● Always make sure that the equipment is installed securely.
● DO NOT stand close to the equipment and stare directly into the LED light source.
● Always disconnect the power supply before attempting maintenance.
● Always make sure that the supporting structure is solid and can support the combined
   weight of the products.
● The earth wire must always be connected to the ground.
● Do not touch the power cables if your hands are wet.


ATTENTION

⚠ ATTENTION ⚠

● This product left the place of manufacture in perfect condition. In order to maintain this
   condition and for safe operation, the user must always follow the instructions and safety
   warnings described in this user manual.
● Avoid shaking or strong impacts to any part of the equipment.
● Make sure that all parts of the equipment are kept clean and free of dust.
● Always make sure that the power connections are connected correct and secure.
● If there is any malfunction of the equipment, contact your distributor immediately.
● When transferring the product, it is advisable to use the original packaging in which the
   product left the factory.
● 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.

⚡ Caution, risk of electric shock
The light source contained in this luminaire shall only be replaced
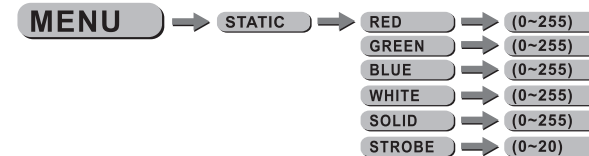by the manufacturer or his service agent or a similar qualified person.

4.8 DIMMER

MENU ➡ DIMMER ➡ OFF / DIM1 / DIM2 / DIM3 / DIM4
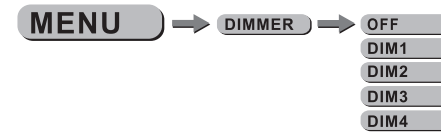
【*DIMMER*】

● Enter the 【*DIMMER*】 to select the dimmer work mode, press 【*Enter*】
● When Dimmer is set to 【*OFF*】 , the Dimmer is linear,
● When selecting 【*DIM1*】 , 【*DIM2*】 , 【*DIM3*】 or 【*DIM4*】 ,the Dimmer is
   nonlinear
● These 4 dimming modes have different soft and smooth dimming effects from fast to
   slow

4.9 STATIC

MENU ➡ STATIC ➡ RED ➡ (0~255) / GREEN ➡ (0~255) / BLUE ➡ (0~255) / WHITE ➡ (0~255) / SOLID ➡ (0~255) / STROBE ➡ (0~20)

【*STATIC*】

● Enter the 【*STATIC*】 mode to create the programs
● Combine 【*RED*】 , 【*GREEN*】 , 【*BLUE*】 and 【*WHITE*】 to create an infinite range
   of colors
● Set the value of the 【*STROBE*】 【*0-20Hz*】
● The static setting will be valid when the fixture is powered again

4.10 SETTINGS

MENU ➡ SETTINGS ➡ COLOR ➡ OFF / RGBTOW / UC ; RESET ➡ NO / YES

【*COLOR*】

● When 【*RGB TO W*】 is set to 【*YES*】 , the color is perfect white
   as the actual RGB values are adjusted to make white. When it is set to 【*OFF*】 ,
   the RGB values are not adjusted and the output is most powerful. The
   【*RGB TO W*】 ' s parameter can be adjusted in 【*CALIB*】 .
   【*UC*】 Function can compatible with the older version 【*RGB*】 to make color
   consistency.

【*RESET*】

● Enter the 【*RESET*】 , pass 【*YES*】 to reset all setting to the original factory setting

4.5   DMX ADDRESS

MENU ➡ **DMX** ➡ **(1~512)**

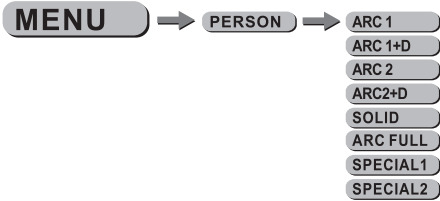**【DMX】**

- Enter the **【DMX】** mode to set the DMX address, press **【Enter】**
- On successful setting, the fixtures will display Green and turn off after ten seconds
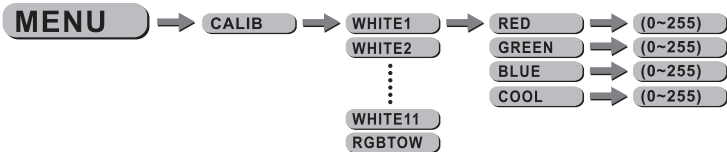- If an error occurs when setting, the fixtures will display Red or no response

4.6   PERSONALITY

MENU ➡ **PERSON** ➡ **ARC 1** / **ARC 1+D** / **ARC 2** / **ARC2+D** / **SOLID** / **ARC FULL** / **SPECIAL1** / **SPECIAL2**

【PERSON】

- Enter **【PERSON】** and select **【ARC 1】** / **【ARC1+D】** / **【ARC2】** / **【ARC2+D】** / **【SOLID】** / **【ARC FULL】** / **【SPECIAL1】** / **【SPECIAL2】** mode, press **【Enter】**
- When selecting **【ARC 1】** / **【ARC1+D】** / **【ARC 2】** / **【ARC2+D】** / **【SOLID】** / **【ARC FULL】** / **【SPECIAL1】** / **【SPECIAL2】** , the fixture is under the DMX work mode.

4.7   CALIBRATION

MENU ➡ **CALIB** ➡ **WHITE1** / **WHITE2** / ⋮ / **WHITE11** / **RGBTOW** ➡ **RED** (0~255) / **GREEN** (0~255) / **BLUE** (0~255) / **COOL** (0~255)

【CALIB】

- Enter the **【CALIB】** to select white colors of different color temperature
- There are 11 pre-programed white colors plus RGB and can be edited by using **【Red】** , **【Gren】** , or **【Blue】** ,or **【Cool】** press **【Enter】** to set the values
- While working under **【ARC FULL】** , **【WHITE1-11】** means the different color temperature white 1 to white 9 of CH5
- Select **【RGB TO W】** to set the ratio of **【Red】** , **【Green】** , and **【Blue】** on DMX channels, achieving different white colors

2 INSTALLATION

2.1   MOUNTING

- Embed the outer casing first before installing the fixture.
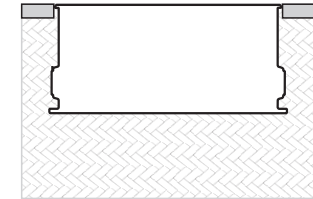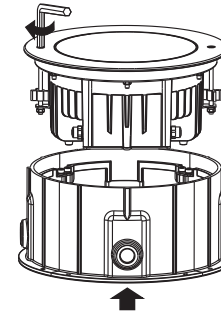
OK

NOTE: The stainless steel cover should not exceed the ground..

NOTE: When installing the collar, ensure that one of the cable outlets is perpendicular to the target illumination surface.
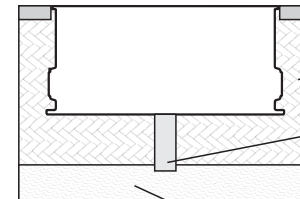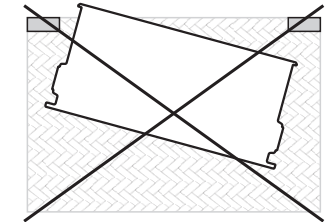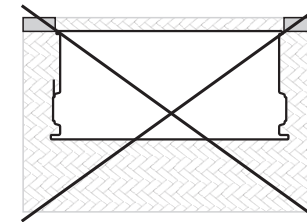
Concrete

Drainpipe

Hardpan
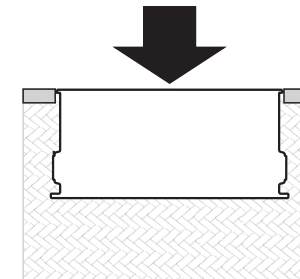
3000kg

The fittings have been designed and tested to withstand a static load of 3000kg(based on the outer casing) for installation exclusively in pedestrian or bicycle areas.

2.2 WIRING DIAGRAMS

● Unscrew the junction box and remove the cover. Fetch the terminal for cable connection.

● Put the cable(Φ6~8mm) throught the junction box .

● The power cable should strict follow to 18AWG standard, with UL、CE approval and Anti-UV, SJTW function; while the signal cable should use 4-pin shield cable, with the cable size #24 and outer diameter Φ6.5.
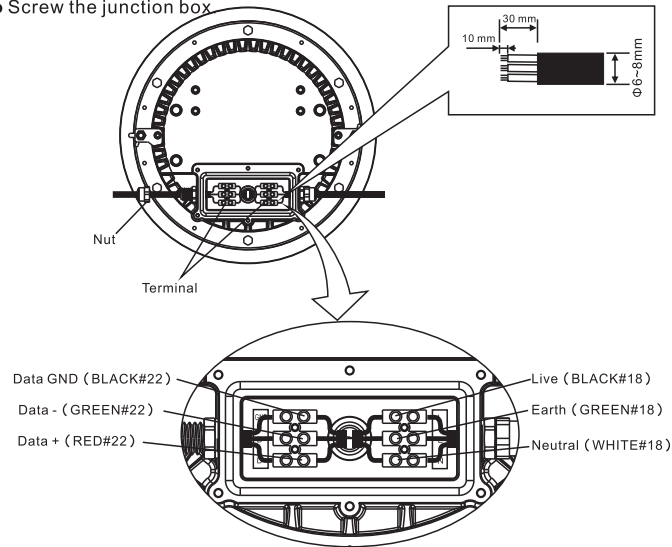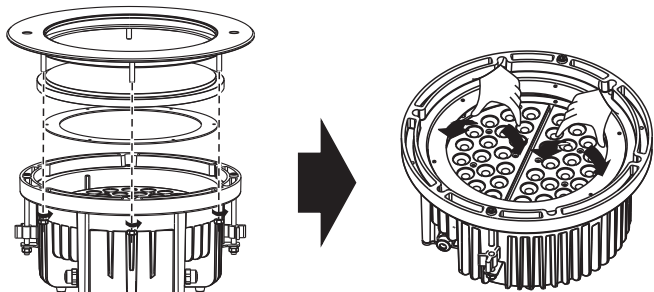
● Tighten the terminal with the cable according to the instruction.

● Screw the junction box

30 mm
10 mm
Φ6~8mm

Nut

Terminal

Data GND（BLACK#22） Live（BLACK#18）
Data -（GREEN#22） Earth（GREEN#18）
Data +（RED#22） Neutral（WHITE#18）

2.3 ADJUST THE BEAM ANGLE

NOTE: The bolts that secure the frame to the body must be fully tightened in a uniform manner, alternating between diametrically opposed bolts. To facilitate the extraction of the glass without damaging the seal fitted onto the frame, unscrew all the nuts except for two adjacent ones and wait a few seconds; then unscrew the remaining nuts and remove the glass.

4.3 BASIC

【 **POWER**】Power on

【 **MENU** 】Scroll through the main menu or exit from the current sub-menu (press and hold to turn off power)

【 **ENTER** 】Enter the currently selected menu or confirm the current function value

【 **DOWN** 】Scroll 'DOWN' through the menu list or decrease the value of the current function

【 **UP** 】Scroll 'UP' through the menu list or increase the value of the current function

POWER
UP
MENU
ENTER
DOWN

4.4 MENU

MENU ➡ DMX ➡ (1~512)

PERSON ➡ ARC 1
ARC 1+D
ARC 2
ARC2+D
SOLID
ARC FULL
SPECIAL1
SPECIAL2

CALIB ➡ WHITE1 ➡ RED ➡ (0~255)
WHITE2 ➡ GREN ➡ (0~255)
⋮ BLUE ➡ (0~255)
COOL ➡ (0~255)
WHITE11
RGBTOW

DIMMER ➡ OFF
DIM1
DIM2
DIM3
DIM4

STATIC ➡ RED ➡ (0~255)
GREN ➡ (0~255)
BLUE ➡ (0~255)
WHITE ➡ (0~255)
SOLID ➡ (0~255)
STROBE ➡ (0~20)

SETTINGS ➡ COLOR ➡ OFF
RGBTOW
UC

RESET ➡ NO
YES
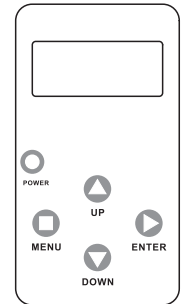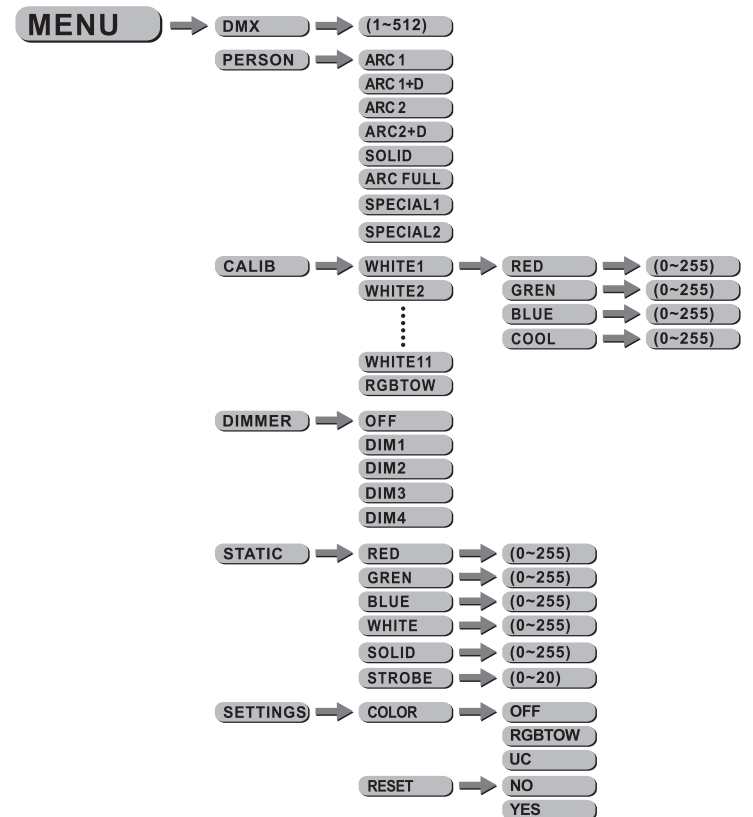
4 USING THE DMX CODER

4.1 TECHNICAL SPECIFICATIONS

LED MODULE:

Battery	2 x 1.5V DC
Dimensions	110 x 70 x 28mm
Weight	0.2Kg

4.2 SETTING PARAMETERS
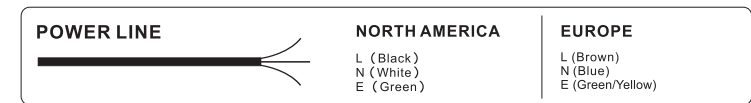
● Connect the DMX Coder to the units in series
● Set corresponding DMX address, Personality, Calibration and Dimmer of fixtures through the DMX Coder
● A maximum of 20 units in series can be set by the DMX Coder at the same time
● All connected units will be set with the same information

Power

DMX-OUTPUT

1 - GND
2 - Data（-）
3 - Data（+）

1 .GND （Black）
2. Data- （Green）
3. Data+ （Red）
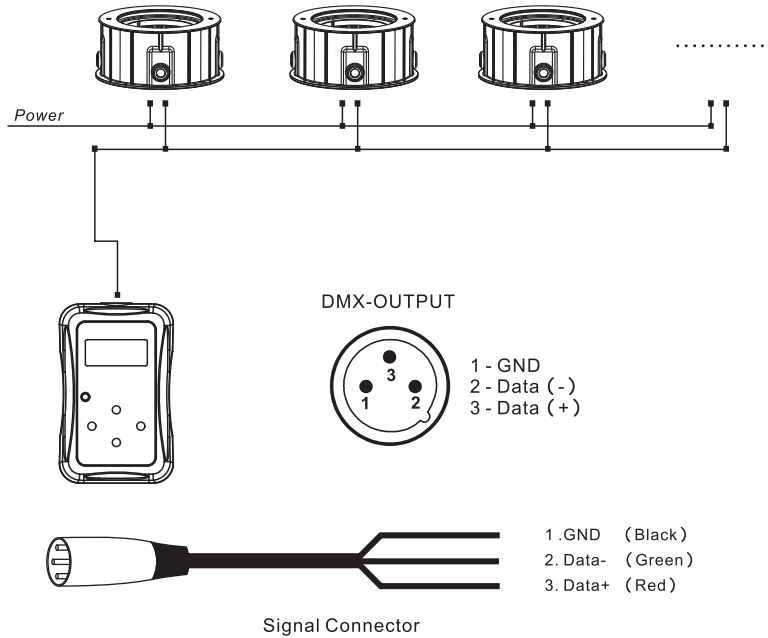
Signal Connector

Note: The DMX Coder will automatically power off after extended periods of being idle (1 minute)

2.4 POWER CONNECTIONS

The input wires of this product must tri-core ,as folowing :

L（Black）
N（White）
E（Green）

POWER

Junction box

L（Black）
N（White）
E（Green）

Junction box

POWER LINE	NORTH AMERICA	EUROPE
	L（Black）	L (Brown)
	N（White）	N (Blue)
	E（Green）	E (Green/Yellow)
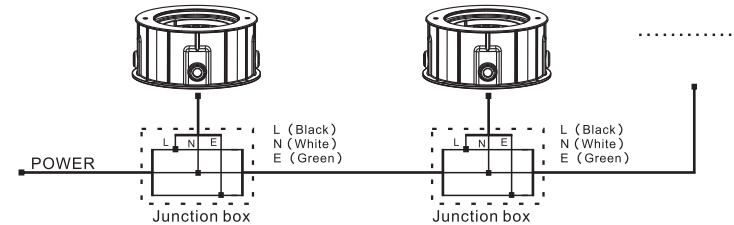
2.5 SIGNAL CONNECTIONS

It is advised for greater stability that if over 20 units to be connected, or the total signal cable length is over 60 meters, a DMX signal amplifier should be used.

Pins and Functions：

Signal IN

Pin1 Pin2 Pin3

Junction box

Pin1 Pin2 Pin3

Junction box

Signal out

Pins	Functions
Pin1（black）	Gnd/0
Pin2（green）	Data input（-）
Pin3（red）	Data input（+）
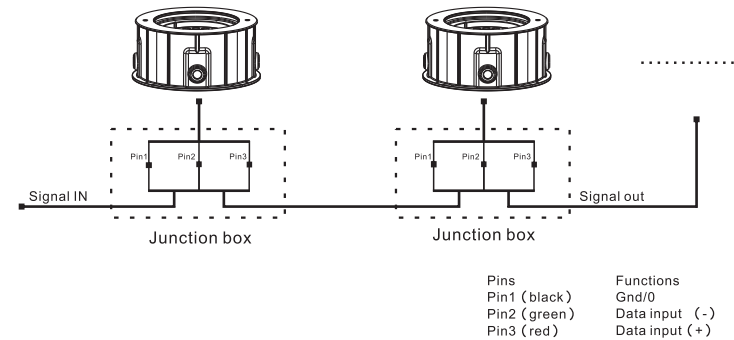
2.6 SETTING UP WITH A DMX512 CONTROLLER

● Connect the units in series,using standard DMX cable or IP 67 cable provided
● Set DMX address using a DMX coder
● Each DMX Address may be used as many times as required
● Any DMX address in the range from 001 to 512 may be used
● Connect the DMX512 controller to the units

EXAMPLE (ARC FULL)

DMX Addr.1   DMX Addr.8   DMX Addr.15

Power

DMX512 CONTROLLER

The figure above shows a simple DMX512 layout with the starting address of the first unit set at 1, with the second set at 8 and so on…

2.7 SETTING UP WITH THE PiX CONTROLLER

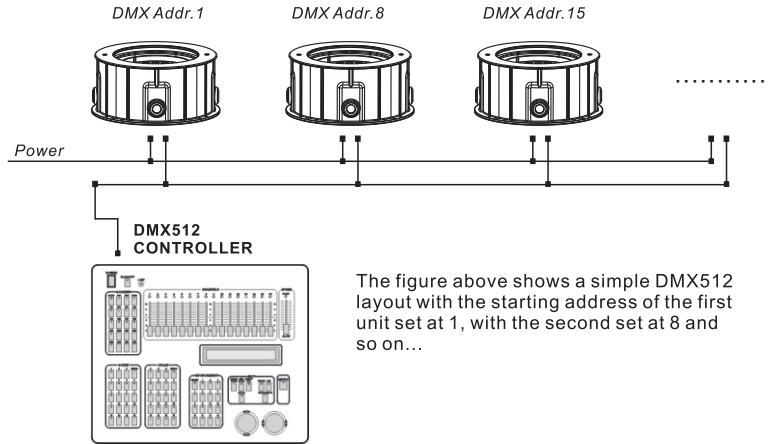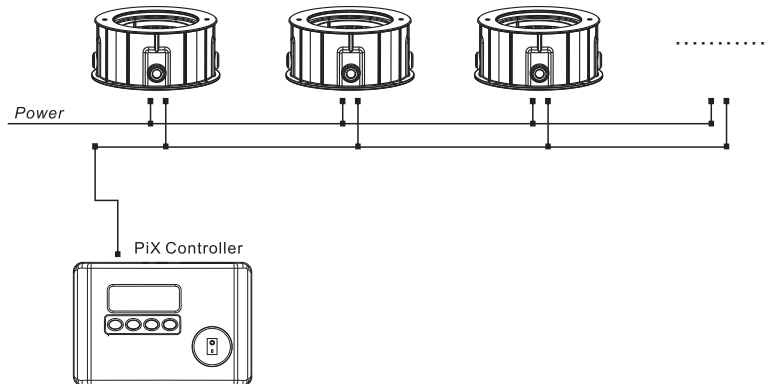● The fixture can also be controlled by the PiX Controller, set the fixture as 【REMOTE】 via the DMX coder before using the PiX controller

Note: For details, please refer to the user manual of the PiX controller

Power

PiX Controller

CHANNEL	VALUE	FUNCTION
6	0 ⇔ 10	NO FUNCTION
	11 ⇔ 30	RED100%/GREEN UP/BLUE0%
	31 ⇔ 50	RED DOWN/GREEN100%/BLUE0%
	51 ⇔ 70	RED0%/GREEN 100%/BLUE UP
	71 ⇔ 90	RED0%/GREEN DOWN/BLUE 100%
	91 ⇔ 110	RED UP/GREEN 0%/BLUE 100%
	111 ⇔ 130	RED100%/GREEN 0%/BLUE DOWN
	131 ⇔ 150	RED100%/GREEN UP/BLUE UP
	151 ⇔ 170	RED DOWN/GREEN DOWN/BLUE 100%
	171 ⇔ 200	RED100%/GREEN 100%/BLUE 100%/WHITE 100%
	201 ⇔ 205	WHITE1：3200K
	206 ⇔ 210	WHITE2：3400K
	211 ⇔ 215	WHITE3：4200K
	216 ⇔ 220	WHITE4：4900K
	221 ⇔ 225	WHITE5：5600K
	226 ⇔ 230	WHITE6：5900K
	231 ⇔ 235	WHITE7：6500K
	236 ⇔ 240	WHITE8：7200K
	241 ⇔ 245	WHITE9：8000K
	246 ⇔ 250	WHITE10：8500K
	251 ⇔ 255	WHITE11：10000K
7	0 ⇔ 9	NO FUNCTION
	10 ⇔ 255	FROM SLOW TO FAST
8	0 ⇔ 9	DIMMING SPEED Return to DIMMER
	10 ⇔ 29	OFF (Dimmer speed off)
	30 ⇔ 69	DIM1 (Speed 1, the fastest)
	70 ⇔ 129	DIM2 (Speed 2)
	130 ⇔ 189	DIM3 (Speed 3)
	190 ⇔ 255	DIM4 (Speed 4 ,the slowest)

SPECIAL1

CHANNEL	VALUE	FUNCTION
1	0⟺255	MASTER DIMMER
2	0⟺9	NO FUNCTION
	10⟺255	FROM SLOW TO FAST
3	0⟺255	MODULE1 RED
4	0⟺255	MODULE1 GREEN
5	0⟺255	MODULE1 BLUE
6	0⟺255	MODULE1 WHITE
7	0⟺255	MODULE2 RED
8	0⟺255	MODULE2 GREEN
9	0⟺255	MODULE2 BLUE
10	0⟺255	MODULE2 WHITE
11	0⟺9	DIMMING SPEED Return to DIMMER
	10⟺29	OFF (Dimmer speed off)
	30⟺69	DIM1 (Speed 1, the fastest)
	70⟺129	DIM2 (Speed 2)
	130⟺189	DIM3 (Speed 3)
	190⟺255	DIM4 (Speed 4 ,the slowest)

SPECIAL2

CHANNEL	VALUE	FUNCTION
1	0⟺255	MASTER DIMMER
2	0⟺255	RED
3	0⟺255	GREEN
4	0⟺255	BLUE
5	0⟺255	WHITE

3 CONTROL WITH A DMX512 CONTROLLER

3.1 CHANNEL ASSIGNMENT

● Note: This product has eight DMX512 channel configurations: 【ARC 1】, 【ARC 1+D】, 【ARC 2】, 【ARC 2+D】, 【SOLID】, 【ARC FULL】, 【SPECIAL1】, 【SPECIAL2】.

ARC 1

CHANNEL	VALUE	FUNCTION
1	0⟺255	RED
2	0⟺255	GREEN
3	0⟺255	BLUE

ARC 1+D

CHANNEL	VALUE	FUNCTION
1	0⟺255	MASTER DIMMER
2	0⟺255	RED
3	0⟺255	GREEN
4	0⟺255	BLUE

ARC 2

CHANNEL	VALUE	FUNCTION
1	0⟺255	RED
2	0⟺255	GREEN
3	0⟺255	BLUE
4	0⟺255	WHITE

ARC 2+D

CHANNEL	VALUE	FUNCTION
1	0⟺255	MASTER DIMMER
2	0⟺255	RED
3	0⟺255	GREEN
4	0⟺255	BLUE
5	0⟺255	WHITE

SOLID

CHANNEL	VALUE	FUNCTION
1	0⟺255	CONTRACT ALL LED

ARC FULL

CHANNEL	VALUE	FUNCTION
1	0⟺255	MASTER DIMMER
2	0⟺255	RED
3	0⟺255	GREEN
4	0⟺255	BLUE
5	0⟺10	NO FUNCTION
	11⟺30	RED 100%/GREEN UP/BLUE 0%

CHANNEL	VALUE	FUNCTION
5	31⟺50	RED DOWN/GREEN 100%/BLUE 0%
	51⟺70	RED 0%/GREEN100%/BLUE UP
	71⟺90	RED 0%/GREENDOWN/BLUE 100%
	91⟺110	RED UP/GREEN 0%/BLUE 100%
	111⟺130	RED 100%/GREEN 0%/BLUE DOWN
	131⟺150	RED 100%/GREEN UP/BLUE UP
	151⟺170	RED DOWN/GREEN DOWN/BLUE 100%
	171⟺200	RED100%/GREEN100%/BLUE100%
	201⟺205	WHITE 1: 3200K
	206⟺210	WHITE 2: 3400K
	211⟺215	WHITE 3: 4200K
	216⟺220	WHITE 4: 4900K
	221⟺225	WHITE 5: 5600K
	226⟺230	WHITE 6: 5900K
	231⟺235	WHITE 7: 6500K
	236⟺240	WHITE 8: 7200K
	241⟺245	WHITE 9: 8000K
	246⟺250	WHITE 10: 8500K
	251⟺255	WHITE 11: 10000K
6	0⟺9	NO FUNCTION
	10⟺255	FROM SLOW TO FAST
7	0⟺9	DIMMING SPEED Return to DIMMER
	10⟺29	OFF (Dimmer speed off)
	30⟺69	DIM1 (Speed 1, the fastest)
	70⟺129	DIM2 (Speed 2)
	130⟺189	DIM3 (Speed 3)
	190⟺255	DIM4 (Speed 4 ,the slowest)