Archillumi

DC02 Touch DMX Addresser

Version: V1.3

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Overview

1. DC02 Device Can Set The Number of Loaded Channels, Baud Rate, Playback Speed, Color Number and Other Parameters;

2. Support a Variety of DMX512 Chip Address,Support MR, UCS, SM, TM, HI, HM, GS, Custom DMX Chip, etc.;

3. You Can Specify The Starting Channel, The on-Load Channel of a Single Chip, and The Lamp Number, and Verify the Address Through Automatic/Manual Test Mode

4. The Device Has a Variety of Built-in Test Animation Effects, Such as a Variety of Color Gradient, Automatic/Manual Running pPoint, Overall Gradient and Other Effects;

5. Support Total Brightness Adjustment, Single Channel Brightness Adjustment;

6. With an SD Card Slot, Support SD Card to Store Animation Data, and Can Specify a Play Scene, Playback Speed Can be Adjusted;

7. Can Simulate DMX512 Console, for DMX512 Channel 1-512 Channel Arbitrary Send Channel Data, Can be Used as a Simple DMX512 Console;

8. Support Standard RDM Protocol, Can Search RDM Lamps, Static dDetection, Write DXM512 aAddress by UID and Other Functions;

9. Support Parameter Setting, Current Output Adjustment, Brightness Adjustment and Firmware Upgrade for MR Series Chips;

10. With The Function of Color Palette, You Can Select a Certain Color Value in The Color Palette to Control, and Support a Variety of Four-Color Modes;

11. With 1-Port DMX512 Signal Output, its Address Signal Compatible Support Differential Signal Mode;

12. Support Standard Type-C port and DC6-24V in-line Power Supply;

13. Support Multi-Language Switching Mode.

Specifications and Parameters
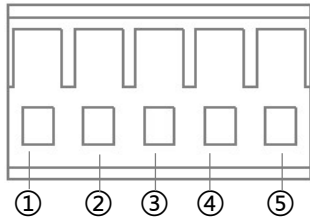
I. Controller Appearance
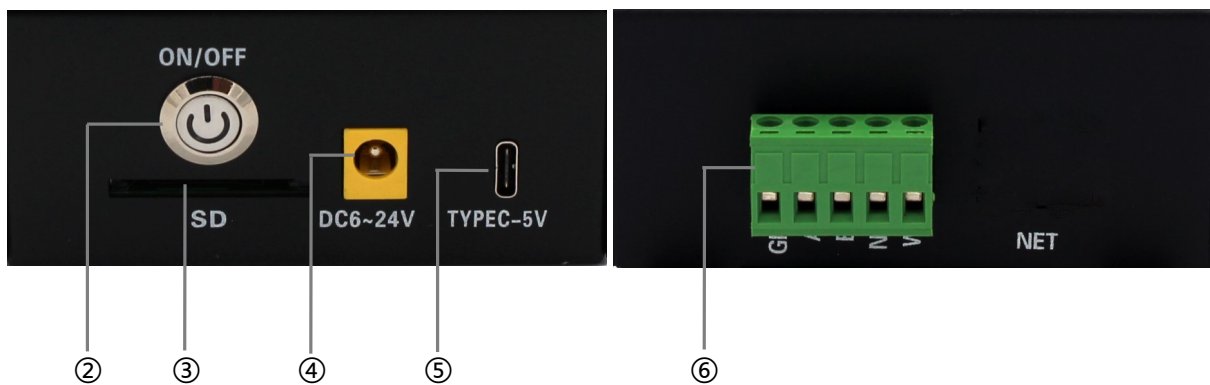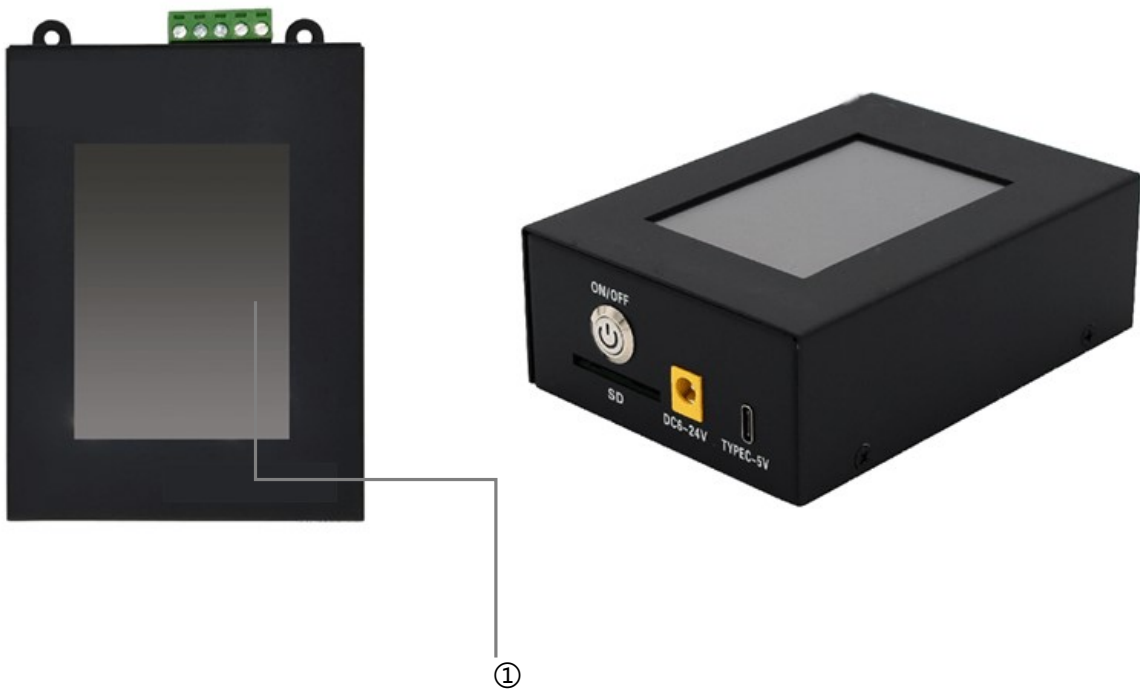
① Touch Screen   ② Power Switch   ③ SD Card   ④ DC6~24V

⑤ Type-C Interface   ⑥ DMX512 Signal Output

II. OutPut Port Definition
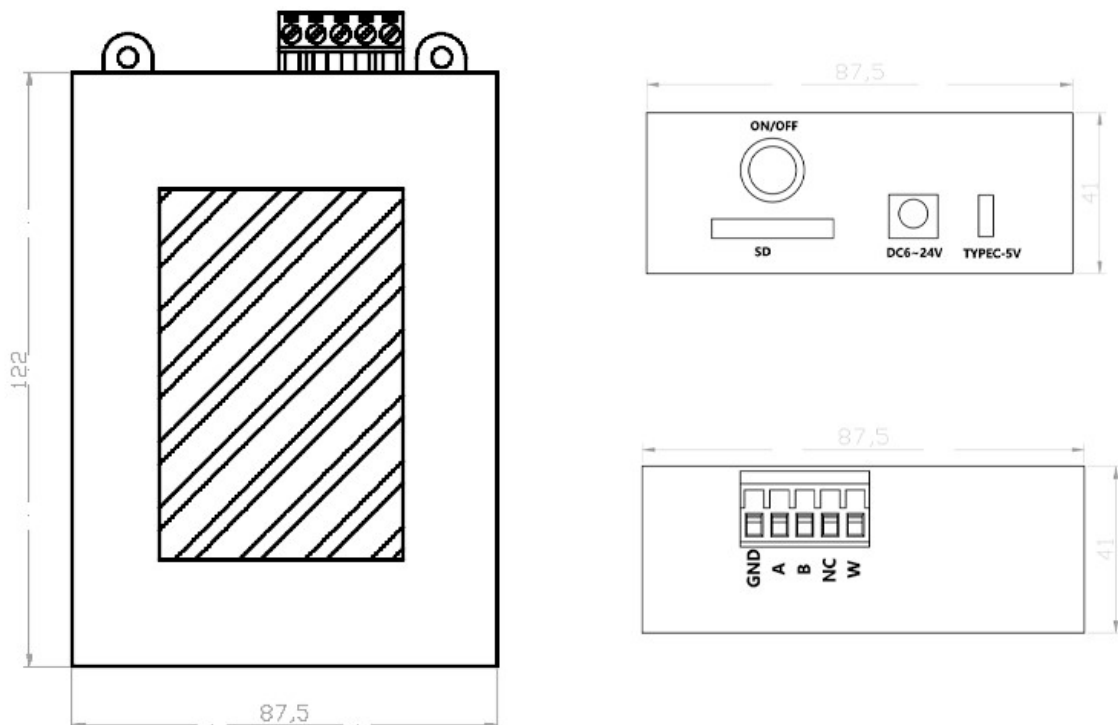
5Pin Terminals Sort Sequentially From Left to Right， As Shown Below：

		①	②	③	④	⑤
DMX	GND	Data+	Data-	NC	Addressing+
Signal	GND	A	B	NC	ADRI/PO+

III. Controller Three View Size Chart

DC02 Front View：

DC02 Two Side View：
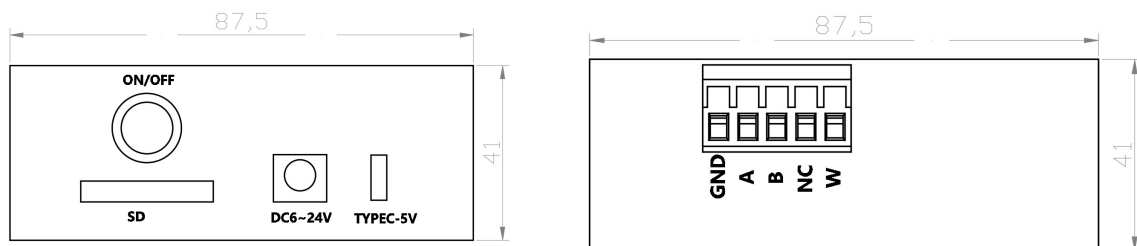
Remark：Above Three Views The Size Unit is mm.

IV. Basic Parameter Table

Product Name	Touch DMX Addresser
Product Model	DC02
A Storage Medium	High-Speed SD Card (Standard)
Rated Power	About 5W
Touch Screen	3.5 "Resistive Touch LCD Screen
OutPut	DMX512/DMX512-A/RDM
Relative Humidity	About 95% (Non-Condensing)
Temperature	-40℃～80℃;
Length	122mm
Width	87.4mm
Height	41mm
Power Supply Mode	Type-C Power Supply and DC Power Supply
Power Supply Input	DC 6.0~24V，Max 2.0A
Shell Material	Iron (Dusting Process)
Accessories	SD Card x1//DC Headx1/Warranty Card x1/Foam Paper Box x1/Screwdriver x1

Touch Screen interface and Functions

I. Boot Screen

Press The Power Supply Switch on The Right Side of The Bottom of The Handheld

Addresser to Complete The Startup Operation. The Following information is Displayed;

1. Device Power Display;

2. Introduction of Equipment Functions;

3. Anti-error Touch Unlock Button and Language Switch;

4. Display Version ;

5. Device Firmware Version.
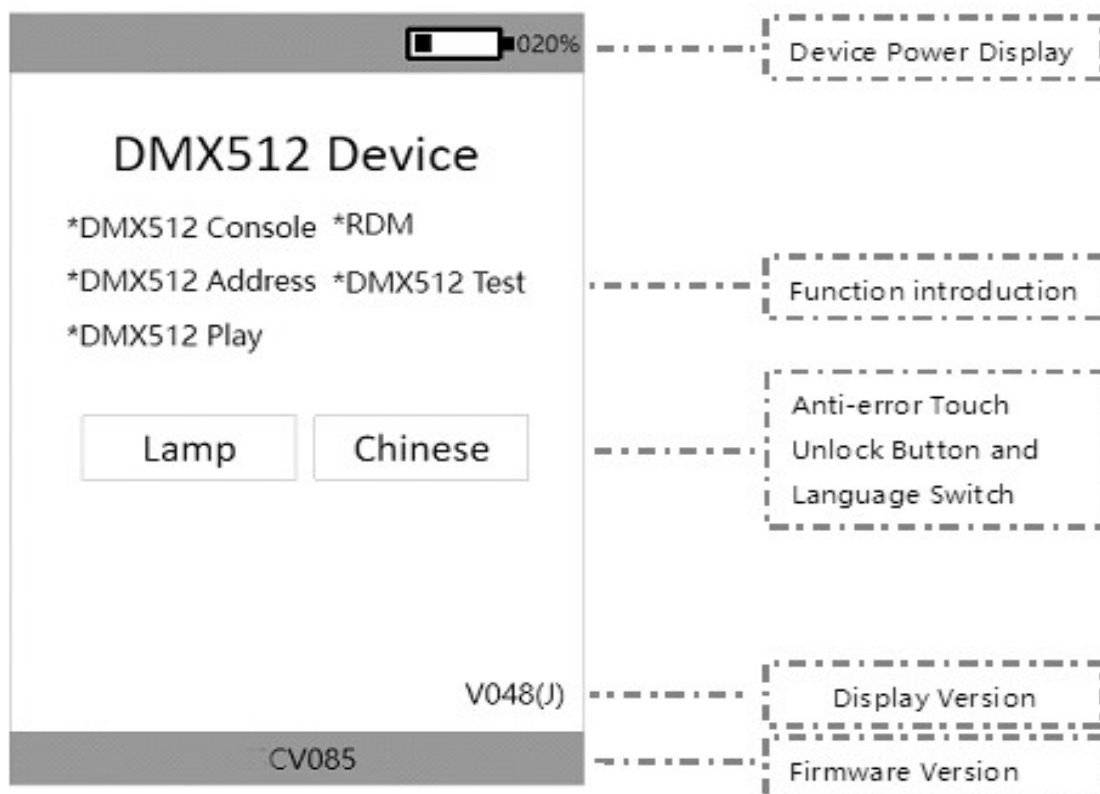
Note: To Switch The Language Interface, Click The Button and Then Click The Device Unlock

Button to Take Effect.

II. Screen Unlock

Click The Device Unlock Button to Enter the Main Operation interface of the Handheld

Device, as Shown Below:

DMX Address	MR-DMX SET
UCS SET	SM SET
TM SET	HI SET
HM SET	GS SET

Chip Parameters

XT2185 SET	Device SET
Test	Play
DMX Console	RDM
Color Test	Return

Each function module

III. Function Module Description

I. Write The Address

Click "Write Address" in The Main Operation interface, You Can Enter The interface of

Writing Address, as Follows:

Type	<	DMX	>
Chip	<	DMX05	>
LampNo	–	0001	+
Channel	–	003	+
Addr	–	0001	+
Number	0512	NomalAddr	>

Auto-LINE:001

Write	MANU+	MANU+-
OPTION	AUTO Test	Return

Type: DMX is Selected by Default. Press the Two Buttons of "<" or ">" to Switch to Select The Corresponding Chip Type. Currently, The Supported Types include DMX,

Chip：

　　DMX Support Chip：DMX05、DMX05_JDQ、DMX02、SL_DMX01、QED512P、LX5123、LX5124、WX512、WX512 Start、WX512 Stop；

　　UCS Support Chip：UCS512A、UCS512B、UCS512C、UCS512C4、UCS512CN、UCS512D、UCS512E、UCS512F、UCS512G6、UCS512H4、UCS512KH、UCS512KL。

　　SM Support Chip：DMX512AP、SM16512、SM16511、SM16522、SM17511、SM17512、SM17522、SM17500、SM17500_A、SM18522P、SM18522PH、SM18512P、SM19522PG、SM19522PHG；

　　TM Support Chip：：TM512、TM512AC、TM512AL、TM512AD、TM512AB、TM512AE；

　　HI Support Chip：：HI512A0、HI512A0Zi、HI512A4、HI512A6、HI512D、HI512E；

　　HM Support Chip：：HM512G、HM512GH、HM512GF、HM612R；

　　GS Support Chip：：GS8512、GS8513、GS8515、GS8516；

LampNo：Lamp Number, Default Value is 1；

Channel：Number of Lamp Channels: The Number of Output Channels Provided by a Single Decoding Chip in The Lamp. The Default Value is 3. Click The Blue Block, Enter Through The Keyboard, and Then Click Enter to Complete The Value Setting；

Addr：The Starting Address Will be More Numbered and Channel Automatically Displayed；

Write Addr：Write Address Button, Select Parameters and Click This Button to Address；

AUTO Test： Automatic Test Button, Click to Automatically Run Point Test；

MANUTest- / MANUTest+：Click The Two Buttons to Perform The Manual Run Point Test；

Operation Status:: Address State, Automatic Running Point, Manual Running Point, etc.;

OPTION:

      SM16512 Only, Special Functions of SM16512 Chip Are as Follows:

PoweronLGT: There are Four Options: OFF / 50% WHITE/ 100% WHITE/ 50% BLUE;

ChannelSel: Support 3/4 Channel.

      SL-DMX01 Only, Special Functions of SL-DMX01 Chip Are as Follows:

Mode: OFF/08CH Mode /40CH Mode /36CH Mode /32CH Mode /01CH Mode /03CH

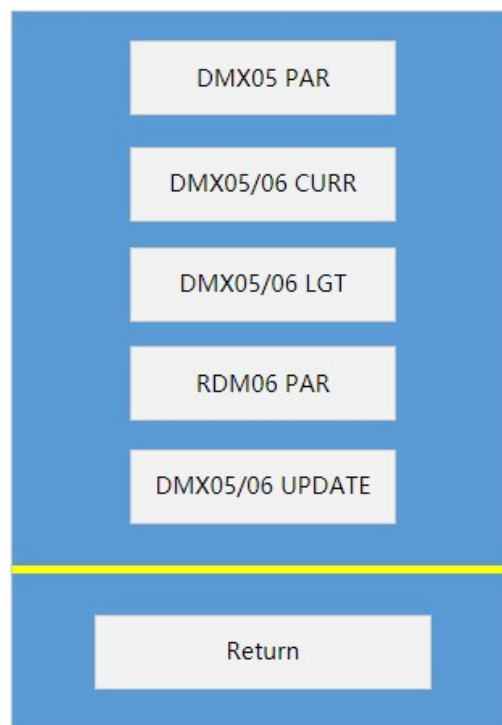Mode /04CH1 Mode /04CH2 Mode /05CH Mode /07CH Mode, Switch Using Buttons.

      GS Only, Special Functions of GS Chip Are as Follows:

ChannelSel: Support 3/4 Channel;

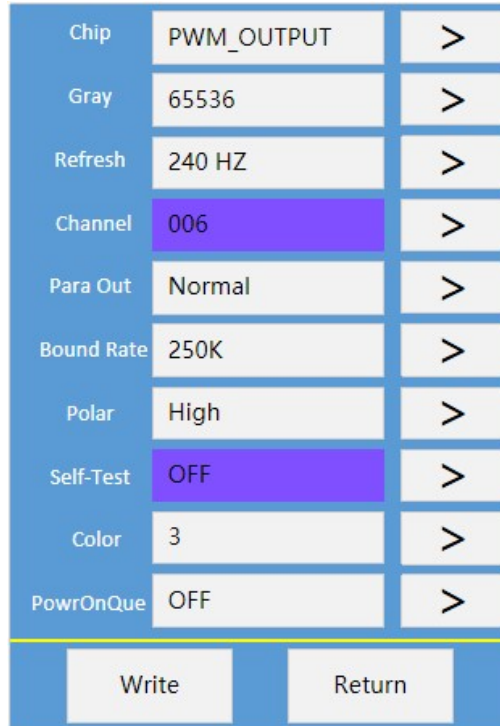Address: Set This Parameter Based on The Number of Chip Channels;

2、MR-DMX SET

      Click "MR-DMX Chip Settings" on The Main interface to Enter The interface as Follows:

2.1 DMX05 PAR

Click "DMX05 Parameters" to Enter The interface of Writing DMX05, as Follows:

Chip	PWM_OUTPUT	>
Gray	65536	>
Refresh	240 HZ	>
Channel	006	>
Para Out	Normal	>
Bound Rate	250K	>
Polar	High	>
Self-Test	OFF	>
Color	3	>
PowrOnQue	OFF	>

Write	Return

Parameters Are Described as Follows::

DMX05 Chip Parameter Table

Parameter	pecific Parameter Values	Note
Type Chip	PWM_OUTPUT UCS、SM、TM、MY、MBI Reference Chip Decoding	
Gray Scale Level	16Bit 32-65536 Level	
Rate of Refresh	PWM：60Hz-3840Hz	
DMX Channels	PWM：1-6 Channels SPI Decoding：100 Channels	
Parallel	Normal/Two Parallel/three Parallel//four Parallel	

| Serial Baud Rate	250KAuto:250K-1M
Polarity of output	High/Low
Chip Self Test	OFF/R→G→B/A Light on/ B Light on/ C Light on/ D Light on/ All Light on/7 Color/Fix Color/Last Frame/
Number of Colors	1/2/3/4
Power-on Queue	OFF/ON

2.2 DMX05/06 CURR

Click "DMX05/06 Current" to Enter The interface of DMX05/06 Current Gain Function, as Follows:
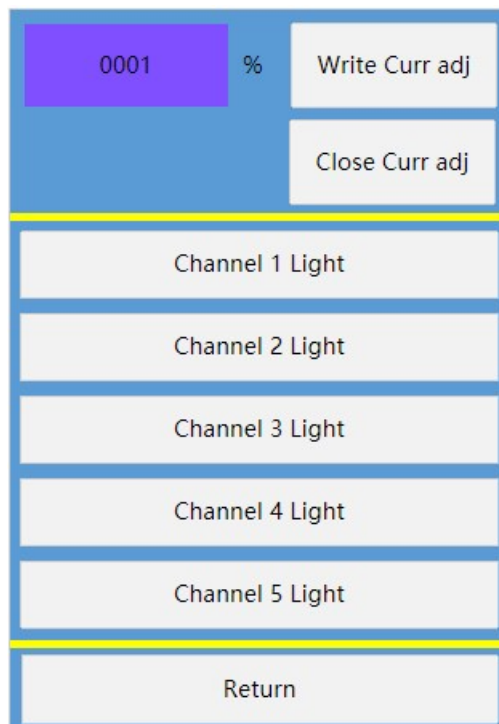
Click The Blue block to Modify The Percentage Value of Current Gain. Click Write.
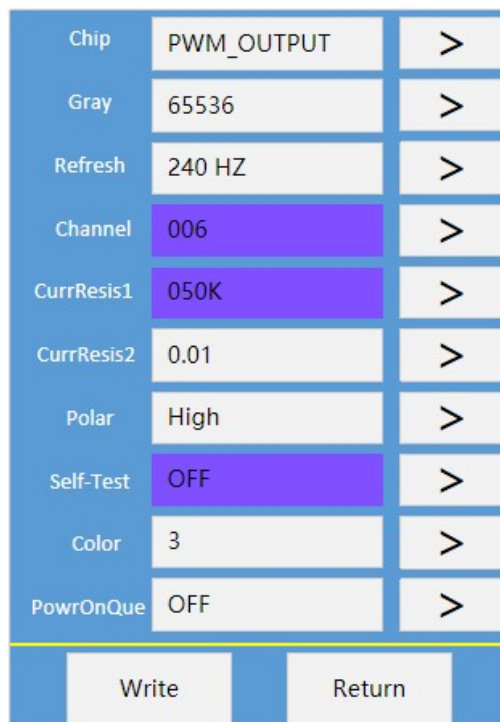
2.3 DMX05/06 LGT

Click "DMX05/06 Brightness" to Enter The Brightness Setting of DMX05/06 Chip, as Follows:
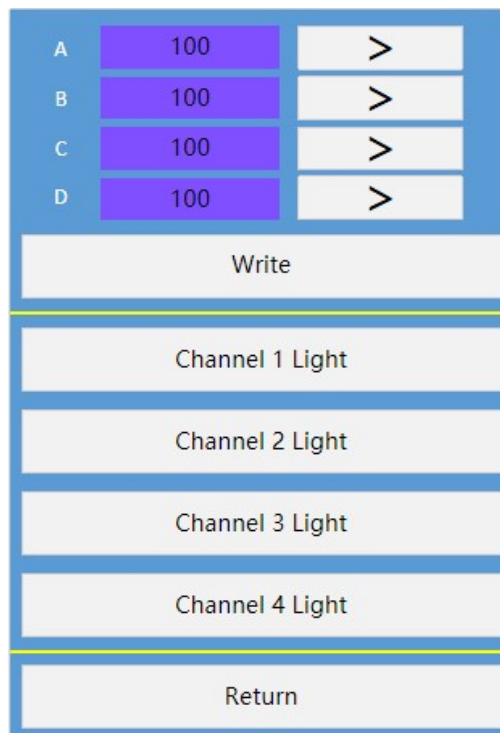
Long Press The Blue Block, Enter The Channel Brightness Value, or increase it One by One Through The Button, Click Write to Complete The Setting.

2.4 RDM06 PAR

Click "RDM06 Parameters" to Enter The interface of RDM06 Parameters as Follows:

Parameters Are Described as Follows：

RDM06 Chip Parameter Table

Parameter	pecific Parameter Values	Note
Parameter	PWM_OUTPUT	
	UCS、SM、TM、MY、MBI Reference Chip Decoding	
Type Chip	16Bit 32-65536 Level	
Gray Scale Level	PWM：60Hz-3840Hz	
Rate of Refresh	PWM：1-6 Channels	
	SPI Decoding：100 Channels	
Resistance	050K	RDM item
Resistance of Current	0.01/0.05	RDM item
Serial Baud Rate	High/Low	
Polarity of output	OFF/R→G→B/A Light on/ B Light on/ C Light on/ D Light on/ All Light on/7 Color/Fix Color/Last Frame	
Chip Self Test	1/2/3/4	
Number of Colors	OFF/ON	

2.5 DMX05/06 UPDATE

Click "DMX05/06 Firmware Upgrade" To Enter The interface of Chip Firmware Upgrade,
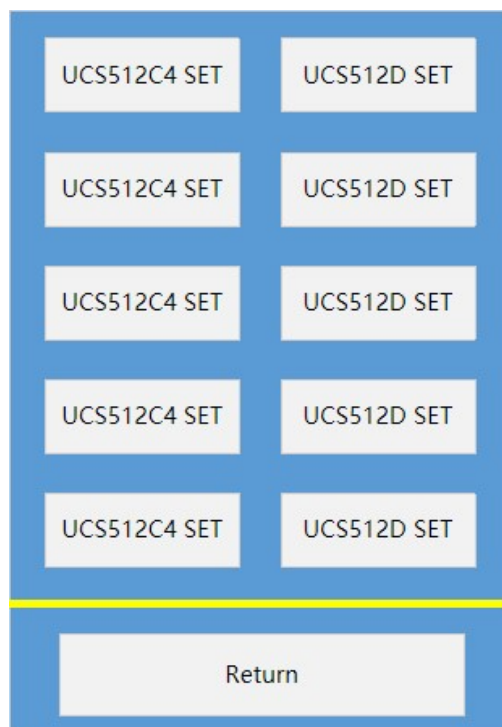
as Follows:
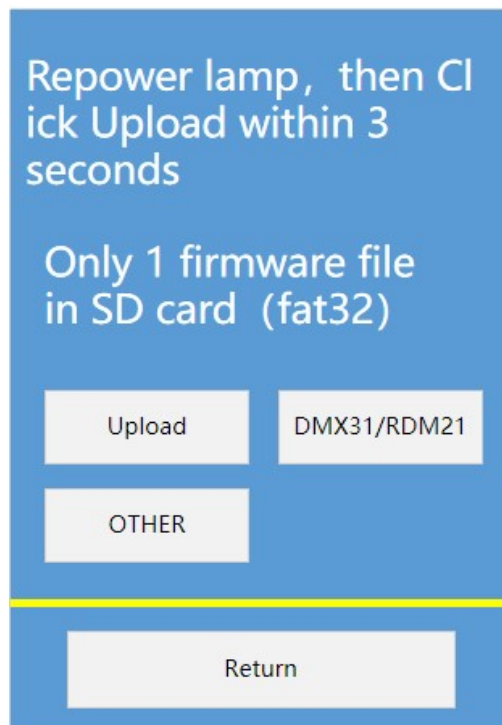
Points to Note:

DMX05/06 Chip Firmware Upgrade, Click Upgrade Within 3 Seconds After Power-on.

3、UCS SET(Continuous Update)

Click "UCS Chip Settings" on The Main interface to Enter The interface as Follows:

3.1 UCS512C4 SET

Click "UCS512C4 Chip Settings" To Enter The Setting interface as Follows:

Field Selection: 1/2/4;
Self-check Color
R/G/B/W:
Customizable Values:
0~255;

3.2 UCS512D SET

Click "UCS512D Chip Settings" To Enter The Setting interface as Follows:

Field Selection: 1/2/4;
No Signal State: 2
Options
1, The Last Frame
2. Power on the Lamp
Customizable Values:
0~255;

Current Setting
R/G/B/W:
UCS512D Current
Adjustment,
Value Range: 1-64;

3.3 UCS512E SET

Click "UCS512E Chip Settings" To Enter The Setting interface as Follows:

Forwarding: 1/2/3/4;

No Signal State: 2 Options
1, The Last Frame
2. Power on the Lamp
Customizable Values: 0~255;

Self-channel Settings:

Number of Channels

Current Setting R/G/B/W:
UCS512E Current Adjustment,
Value Range: 1-64;

3.4 UCS512F SET

Click "UCS512F Chip Settings" To Enter The Setting interface as Follows:

No Signal State: 2 Options
1, The Last Frame
2. Power on the Lamp
Customizable Values: 0~255;

Automatic Code writing: 0 OFF 1 On

Current Setting R/G/B/W:
UCS512F Current Adjustment,
Value Range: 1-64;

3.5 UCS512G6 SET

3.5.1 Click "UCS512G6 Chip Settings" To Enter The Setting interface as Follows:

Forwarding:
1/2/3/4/5/6;
Automatic Write: Enable and Disable
Grayscale Smoothing: On and off
A Anti-jamming: On and OFF

Other parameters: Chip Parameters

Current Setting
R/G/B/W:
UCS512G6 Current Adjustment,
Value Range: 1-64;
PWM Settings:
Value Range: 1-128;

3.5.2 Click "Other Parameters" To Enter The interface for Setting this Function, as

Follows:
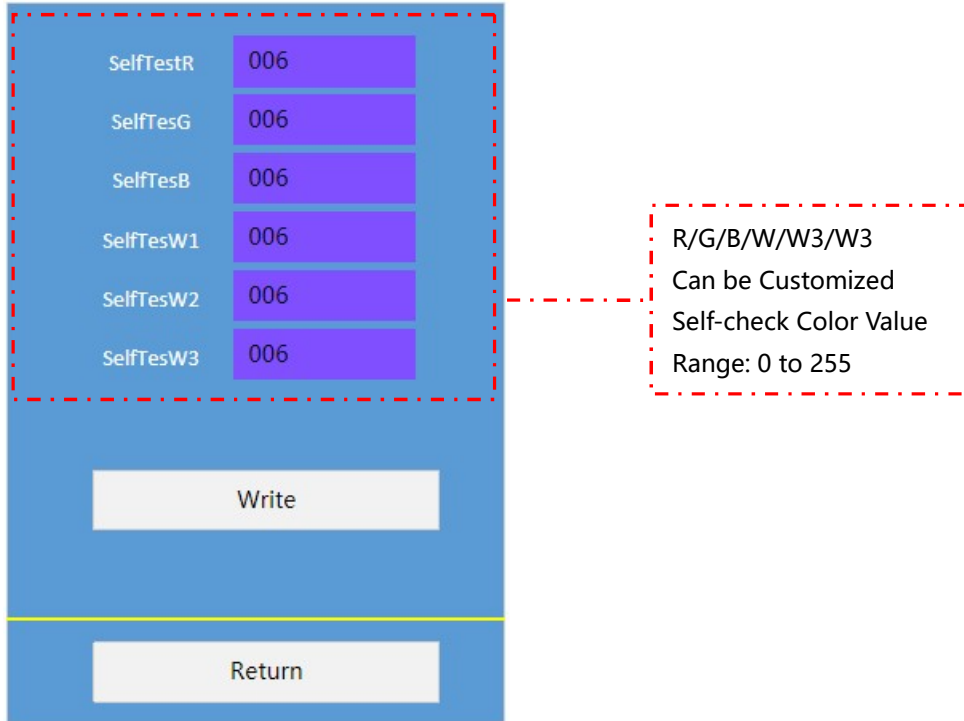
No Signal State: 2 Options
1, The Last Frame
2. Power on the Lamp
Customizable Values: 0~255;
Refresh Rate: 250/4K/8K/16K optionalAddress Detection: Enable and Disable
Effect: On and OFF
Time: Built-in Effect Time

3.5.2.1Click "Other Parameters" To Enter The interface for Setting This Function,

as Follows:

SelfTestR 006
SelfTesG 006
SelfTesB 006
SelfTesW1 006
SelfTesW2 006
SelfTesW3 006

R/G/B/W/W3/W3
Can be Customized
Self-check Color Value
Range: 0 to 255

Write

Return

3.5.3 Click "Current Setting" To Enter The interface For Setting This Function, as

Follows:

Curr-R 64
Curr-G 646
Curr-B 64
Curr-W1 64
Curr-W2 64
Curr-W3 64

Current Setting
R/G/B/W1/W2/W3:
UCS512G6 Current
Adjustment,
Value Range: 1-64;

Write

Return
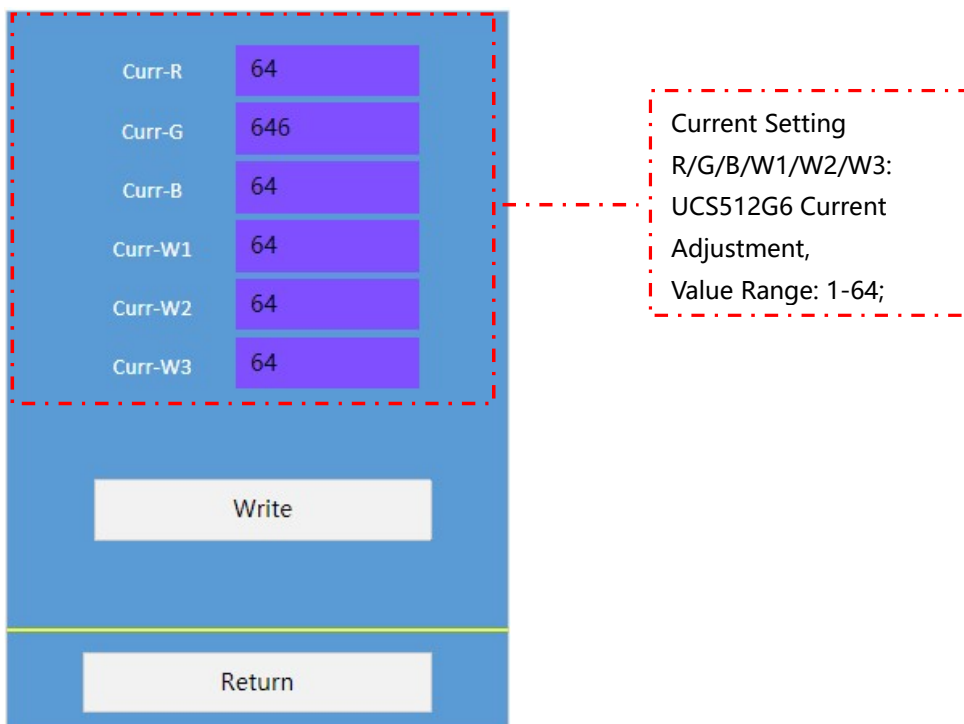
3.5.4 Click "PWM Maximum" To Enter The interface for Setting This Function, as

Follows:

PWM-R 006
PWM-G 006
PWM-B 006
PWM-W1 006
PWM-W2 006
PWM-W3 006

PWM Settings:
Value Range: 1-128;

Write

Return
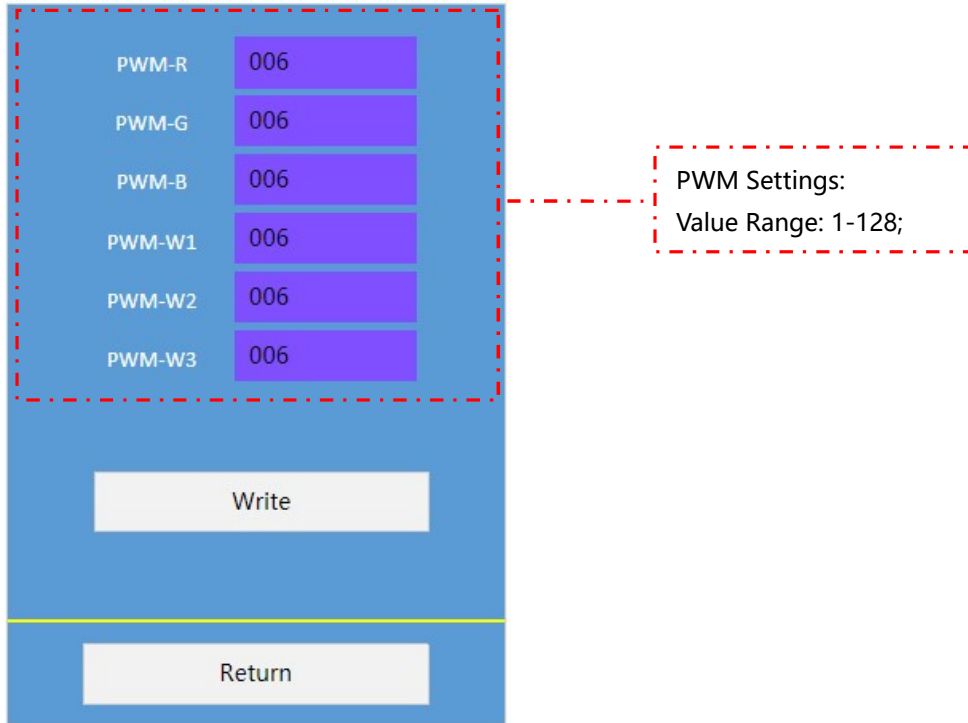
4、SM SET(Continuous Update)

Click "SM Chip Settings" on The Main interface to Enter The interface as Follows:

SM17511/2 SET

SM17522 SET

SM17500 SET

SM18512/18522 SET

SM19522PG/PHG SET

Return
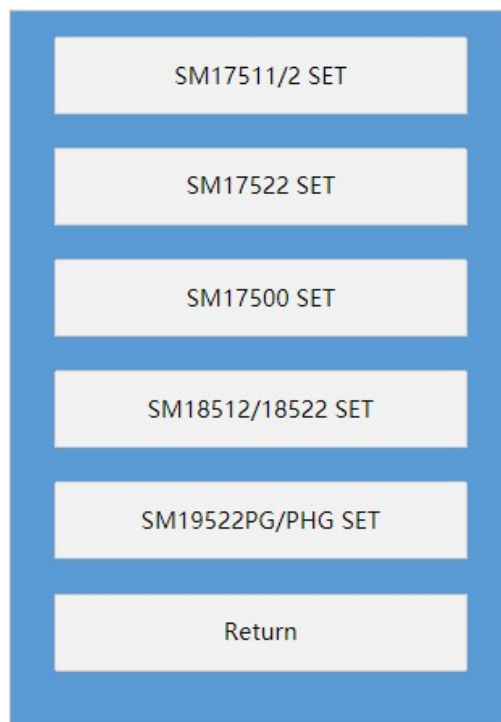
4.1 SM17511/2 SET

Click "SM1751/2 Chip Settings" To Enter The Setting interface as Follows：

Auto-Addr	OFF	>
Local Channel	4	>
No-Signal	SelfTest	>
Self-Test R	128	
Self-Test G	128	
Self-Test B	128	
Self-Test W	128	
Current R	16	
Current G	16	
Current B	16	Writ
Current W	16	

Return

Automatic Address Encoding: Enable and Disable
Channel：1/2/3/4
No Signal State: 2 Options
1, The Last Frame
2. Power on the Lamp
Customizable Values: 0~255;
Current Setting
R/G/B/W SM17512/2
Current Adjustment,
Value Range: 1-16;

4.2 SM17522 SET

Click "SM17522 Chip Settings" To Enter The Setting interface as Follows：

Auto-ADDR	OFF	>
Local Channel	4	>
No-Signal	LastPic	>
Self-Test R	128	
Self-Test G	128	
Self-Test B	128	Write
Self-Test W	128	
Auto-Addr Add	000	
Current R	32	Write
Current G	32	
Current B	32	
Current W	32	Return

Automatic Address Encoding: Enable and Disable
Channel：1/2/3/4
No Signal State: 2 Options
1, The Last Frame
2. Power on the Lamp
Customizable Values: 0~255;
Self-channel Settings:
Number of Channels；
Current Setting
R/G/B/W SM17522
Current Adjustment,
Value Range: 1-32;

4.3 SM17500 SET

Click "SM17500 Chip Settings" To Enter The Setting interface as Follows：

Chip SEL：Other/SM16813
Color: Divided into 3/4
No Signal State: 2
Options
1, The Last Frame
2. Power on the Lamp
Customizable Values:
0~255;
Protocal： ZERO/DMX512
Current Gain Selection:
Chip Channel Current
Gain, Number
Value Range: 0/16/32/64;

5、Device SET

Parameter Setting Functions, including Load Channel, Clock, FPS，etc.Are as Follows：：

Chanels：

The Number of Loaded

Channels Can be Modified

to a Maximum of 3072

Channels.

Clock： Maximum 1000Kb

FPS：Default:25Hz，Which

is Adjustable

Note: Restore The Factory Settings, Restore The Device Parameters To The Factory State.

6、Test

Click The Test Button to Enter The Test Module as Follows:
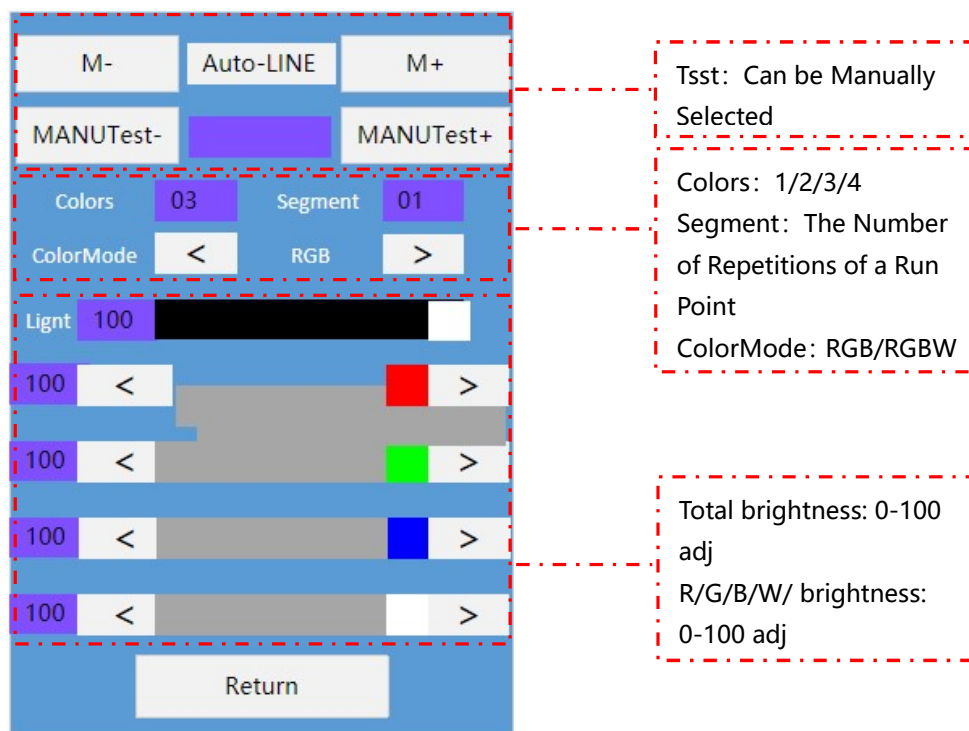
M-	Auto-LINE	M+		Tsst：Can be Manually Selected
MANUTest-		MANUTest+		
Colors 03	Segment 01			Colors：1/2/3/4 Segment：The Number of Repetitions of a Run Point ColorMode：RGB/RGBW
ColorMode <	RGB >			
Lignt 100				
100 <	RED >			
100 <	GREEN >			Total brightness: 0-100 adj R/G/B/W/ brightness: 0-100 adj
100 <	BLUE >			
100 <	>			
Return				

Test Effect in Automatic/Manual Mode

Code	M- | M+	Code	Manual - | Manual +
Auto-LINE	Run Some	Manu-LINE	Manual Running Point
Auto-RED	Gradient Red	Manu -RED	Manual Red Gradient
Auto-GREEN	Gradient Green	Manu-GREEN	Manual Green Gradient
Auto-BLUE	Gradient Blue	Manu-BLUE	Manual Blue Gradient
Auto-WHITE	Gradient White	Manu-WHITE	Manual White Gradient
Auto-CHING	Gradient Cyan	Manu-CHING	Manual Cyan Gradient
Auto-YELLOW	Gradient Yellow	Manu-YELLOW	Manual Yellow Gradient

Auto-PURPLE	Gradient Purple	Manu-PURPLE	Manual Purple Gradient
R→G→B→W→	RGBW Jump	——	——
R~G~B~W~	Multi Color Gradient	——	——
7Color mode0	Seven Color Gradient	——	——
7Color mode1	Colorful Flowing Water	——	——
7Color mode2	Colorful Tail	——	——
RGBW	Specify a Color Value	——	——

Note 1-1: The Part with -- in The Above Table Represents: Manual Mode is Not Supported in This Test Mode;

Note 1-2: RGBW Mode is The Specified Color Value Mode. When You Drag The Color Value of The Four Channels R/G/B/W in the interface, The Test mMode Will Automatically Switch to RGBW Mode;

Colors : Refers to The Number of Colors in The Animation Playing Mode. The Value Range is 1/2/3/4.

ColorMode: Support Color Selection, Such as R, RG, RGB, RGBW, Color Channel order Can be Freely Selected

7、Play

　　Click "Play" on The Main interface to Enter The interface for Playing Offline Files in SD, as Follows:

Number of Programs: Number of Programs on SD Cards

Total Frame Count: The Total Frame Count of The Offline File

Current Play: Plays the Current Clip andThe Playing Progress

Select: Click to switch programs

Speed: Range 0.5-16

8、DMX Console

Click "DMX Console" on the Main interface to Enter The interface That Simulates

DMX512 Console, as Follows::

Green indicates activation

DMX Channel Number

DMX Channel Value

DMX Value Sending Area, Color Block Can be Dragged, Button Can increase or Decrease

8、RDM

Click "RDM" on the main operation interface to enter the interface for detecting and

addressing RDM lamps, as follows:

NodeNum：DC02 The Number of Equipment Carried and a Particular Equipment in The

Format of 00X/00Y;

UID：Is The ID Code Given by The RDM Lamps at The Factory. This Code is The RDM

Equipment Code and Has Uniqueness;

Addr：DMX512 Channel Address of The RDM Device;

Footprint：The Number of Channels of The RDM Device;

Label：Device Labels　　　　**Manufacturer**：Equipment Manufacturer information;

Status：Online and Offline Status of The Device **Sensors**：RDM Devices Probe Number;

SenVal：The Value Detected by The Probe, Temperature, Voltage, Current;

Search：Addressers Search RDM Devices;

Search+：After Searching for RDM Devices, Add RDM Devices and use incremental Search;

Check Sen：Non-Real-Time inspection of RDM Lamps;

PreNode|NextNode：Select The RDM Device by Pressing The up and Down Buttons. The

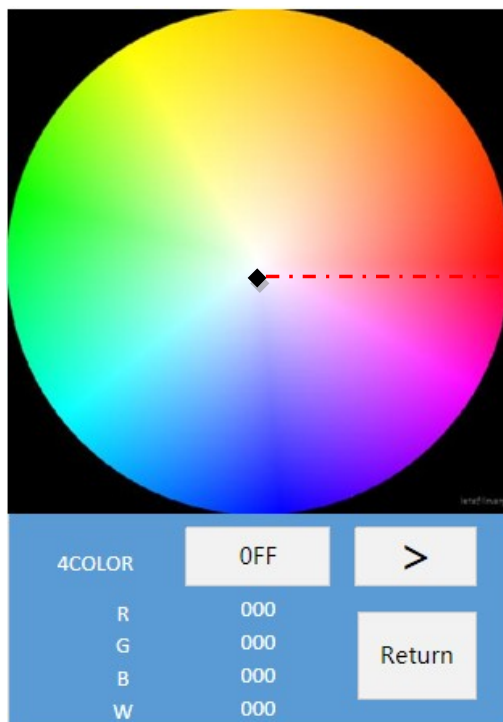Number of Devices is Displayed in The Number of Devices;`

Identify：Light the Selected RDM Lamps;

Address：The DMX512 Channel Address of The Selected RDM Device is Specified by UID.

9、Color Test

Click "Color Drive Take Color" in The Main Operation interface to Enter The interface of

Writing Color Drive Take Color, as Follows：

Can Click in The Color Tray, Pick a Point, Can Parse Out The Color Value of its Point, and Sent to The Lamp Through The Addresser. The Four-Color Mode is Divided into:
1、(R+G+B)/3
2、Max（R,G,B）
3、Max（R,G,B）

Frequently Asked Questions

1、In DC02 application, according to DMX512 standard protocol, the load channel and clock frequency should be set to what?

According to the standard protocol of DMX512, its standard value is as follows:

Number of loaded channels =512 channels;

Clock frequency (baud rate) =250K=0.25M

2、What is the type of USB power supply interface of DC02?

The power supply interface of the DC02 handheld addresser is Type-C.

Although the current output of mobile phone charging bank is generally up to 2.1A, the actual current output of mobile phone charging is non-constant current output, so the actual current will not exceed 0.5A when using DC02.

3、Can the DC02 handheld addresser be used as an offline master in engineering applications?

The DC02 handheld addresser can read the offline effect file in the SD card and output the DMX512 signal to drive the LED lamp.