



MC02-GPS GPS Sync Master

Version:V2.0

GPS Satellite Synchronization System

Shenzhen Archillumini Lighting Technologies Co., Ltd.

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Overview

I. Features

1. MC02-GPS Supports a Maximum Load of 450,000 ChannelsIn;
2. MC02-GPS Support Unlimited Cascade Transmission, Unlimited Number;
3. Realize Wireless Synchronization of Multiple Devices Through GPS Signals
4. GPS Signal Global Coverage, Global NO Distance Limit;
5. The System Supports Automatic, Timing, Holiday Preset Effect Playback;
6. Support Buttons and External Remote Control, Program Selection, Brightness Adjustment, White Balance Adjustment, Playback Speed Adjustment, etc;
7. Support Switch Parallel Scheme: improve Stability;
8. Support a Variety of DMX512 Driver Chips Offline One-Key Write Address;
9. Support Offline Fix, Clear Device ID Number;
10. Support Switch Parallel Scheme: improve Stability;
11. Support Multi-Loop Ring Backup, One Controller is Broken or The Network Cable is Broken and The Display is Not Affected;
12. Support Real-Time Hot Backup of Multiple Master Controllers;
13. Independent Brightness Control of 3 Primary Colors, Easy to Adjust White Balance;
14. Support R, RB, RGB, RGBW, RGBWY, and Multi-Color Mixing Control;
15. Using Ethernet Interface and UDP Protocol, The Distance is 100 Meters;
16. SD Card Storage, Can Support 64G, Can Preset 99 Program Files;
17. Support Multiple Master Control Offline and Online Partition Management Function;
18. Support Multiple Devices LAN Remote Online Download and Update Programs;

19. Built-in Animation Test Program;
20. Supports Mixed use of Different Types of Lamps and Lamps of Different Protocols;
21. Equipment Network Port, Surge Protection: 1.5KV;
22. Support Severe Working Environment -40°C-80°C, Normal Operation Without Failure.
23. Supports Offline and Online Firmware Upgrades.
24. Dual Network Port Output Simultaneously, More Flexible Architecture;

II. Design Concept

1. 1000Mbps/ 100Mbps Optional, Adapt to Different Project Schemes;
2. Two-way Redundancy of The System Signal, Doubled Stability;
3. 4 Color Algorithm: Energy Saving and Environmental Protection, Pure Color;
4. Integrated Control, Online Priority, Automatic Switching Offline Effect Without Signal;
5. Self-developed Playback and Wiring Software, More Adaptable;
6. Use Complex Applications Such as Various Lighting Screens;
7. Use The Switch Parallel Scheme and Improve The Stability of The System;
8. Add Fiber Optic Modules, The System Can Transmit Fiber Optic Signals;
9. Add a Wireless Bridge for Wireless Signal Transmission;
10. With Internet Control Software, Support Internet Remote Control;
11. The System Supports Automatic, Timed and Holiday Preset Playing;
12. Support Mainstream 32Bit and 64Bit Systems: Win 7, Win 8 Win 10 and so on;

III. Expansibility

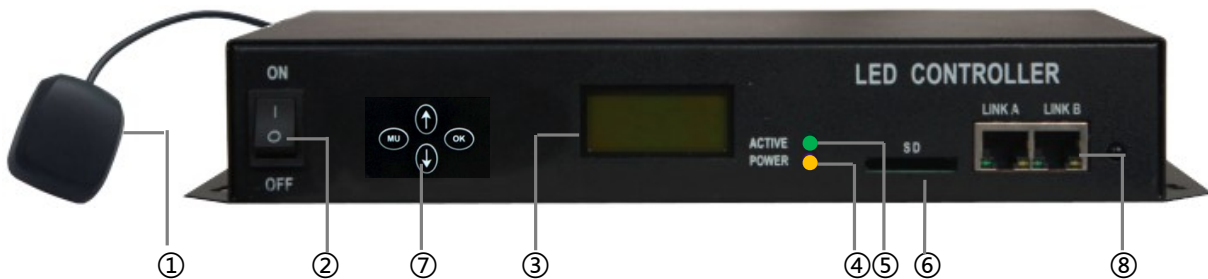
1. All Current Windows Systems and Multiple Languages Can be Installed;
2. Leave The Interface for Compatibility With International Common Protocols

3. It can be Combined With Controller Such as Converter in MR Control System
4. Expandable and Compatible With Third-Party Software and Devices;
5. The Master Controller Supports Off-Line Address Writing, Which Can Realize DMX512 Channel Automatic Addressing. Support MR-RDM06, MR-DMX05,MR-GX06,MY7221, WS2821, UCS512C, UCS512D, UCS512E, UCS512F, UCS512G, UCS512H, DMX512AP, SM16511, SM16512, SM16522, SM17511, SM17512, SM17522, SM17500, SM18522P, SM18522PH, SM18512P, SM19512PG, SM19512PGH, HI512A, HI512D, HI5 12E, HM512G, HM612RE, HM612RH, MR612R, HM512GF, HM512GH, TM512AC, TM512AL, TM512AD, TM512AB, TM512AE, GS8511, GS8512, GS8513, GS8515, GS 8516, etc.

Specifications and Parameters

I. Controller Appearance

MC02-GPS Front view:



MC02-GPS Rear view:



- ① Power Switch ② Key Control Panel ③ LCD Display ④ Power Lights ⑤ Signal Lights

⑥ SD Card Slot ⑦⑧ RJ45x2 ⑨ Antenna interface

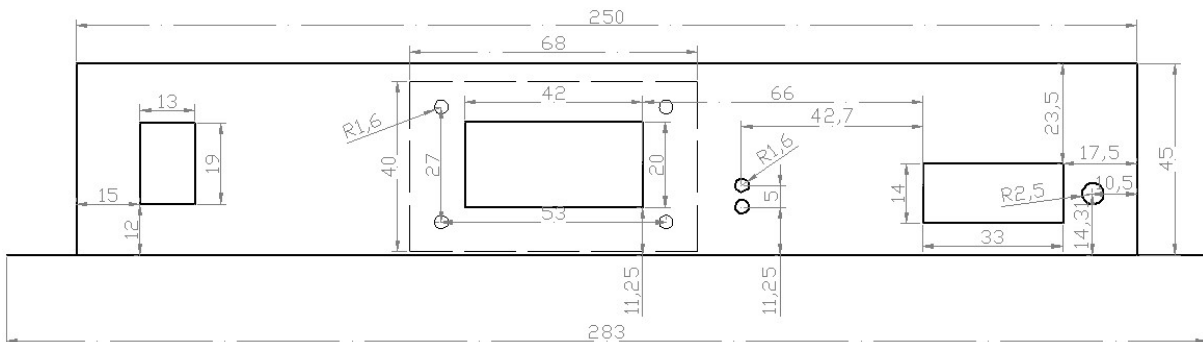
⑩ Power Interface

Appearance of the GPS Satellite Antenna:

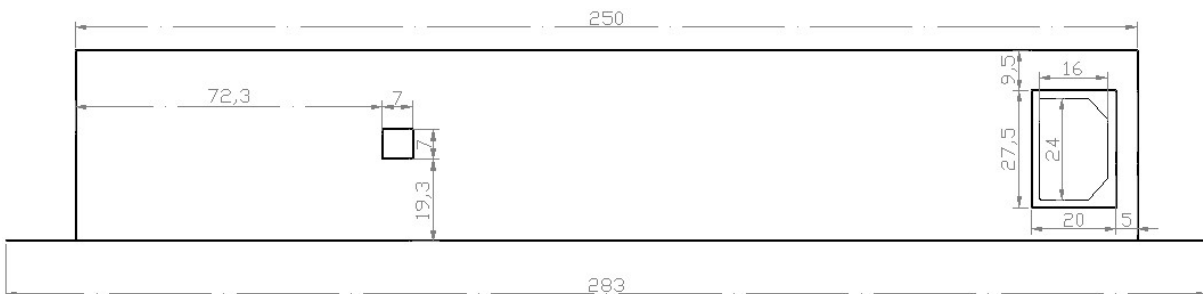


II. Controller Three View Size Chart

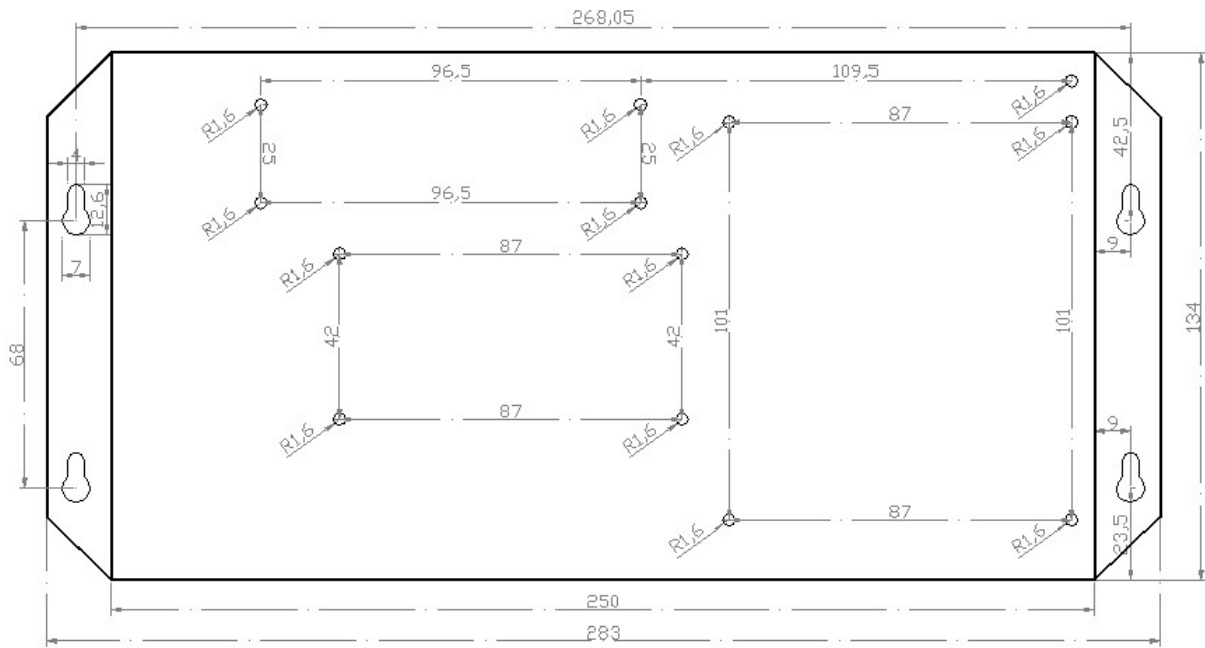
MC02-GPS Front View:



MC02-GPS Rear View: :



MC02-GPS Top View:



Remark: Above Three Views The Size Unit is mm.

III. Controller panel buttons

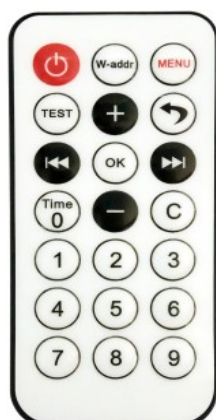












IV. Controller Basic Parameter Table:

Product Name	GPS Satellite Synchronous LED Control System
Product Model	MC02-GPS
Synchronously	GPS Satellite Synchronization, Global Synchronization
A Storage Medium	High-Speed SD Card (Standard)
Rated Voltage	AC 100V ~ 240V±15%Vac50/60Hz
Rated Power	About 15W
Protocol	RJ45X2PCS, Standard UDP/TCP Protocol

Network Rate	100MB/1000MB Adaptive
Relative Humidity	About 95% (Non-Condensing)
Temperature	-40°C ~ 80°C;
Length	283mm
Width	134mm
Height	45mm
Hole Spacing	268mm; 68 mm
Protection Class	IP20
Installation Method	Fixed Hole Installation Method (See Above Drawing)
Weight	1.48kg
Shell Material	Iron (dusting process)
Accessories	Power Cord x1/Warranty Card x1/Foam Paper Box x1/ Screwdriver x1/Card Reader x1/SD Card x1/GPS Antenna x1

Key Definition



-  Play Switch
-  Addressing Key
-  MENU
-  Exit Settings
-  OK
-  Time/Number 0
-  Left Button
-  Plus
-  Minus
-  Number key




Display Description

I. LCD Main interface After MC02-GPS is Turned on

SD 01/08 LoopPlay	← The Number of Programs and The Current Play Number ← Status: <u>Loop Play Status</u>
SD 01/08 TFixPlay	← The Number of Programs and The Current Play Number ← Status: <u>Temporary Play Status</u>
SD 01/08 TimePlay	← The Number of Programs and The Current Play Number ← Status: <u>Timing Play Status</u>
GPSRecOK 28%	← Status: <u>GPS Signal Received</u> ← Status: <u>Current GPS Signal Strength</u>



Note: If "GPSRecOK" is Displayed in the Playing State, it Means That There is Signal, and the Opposite Means that There is no Signal.

II. MC02-GPS Remote Control Settings

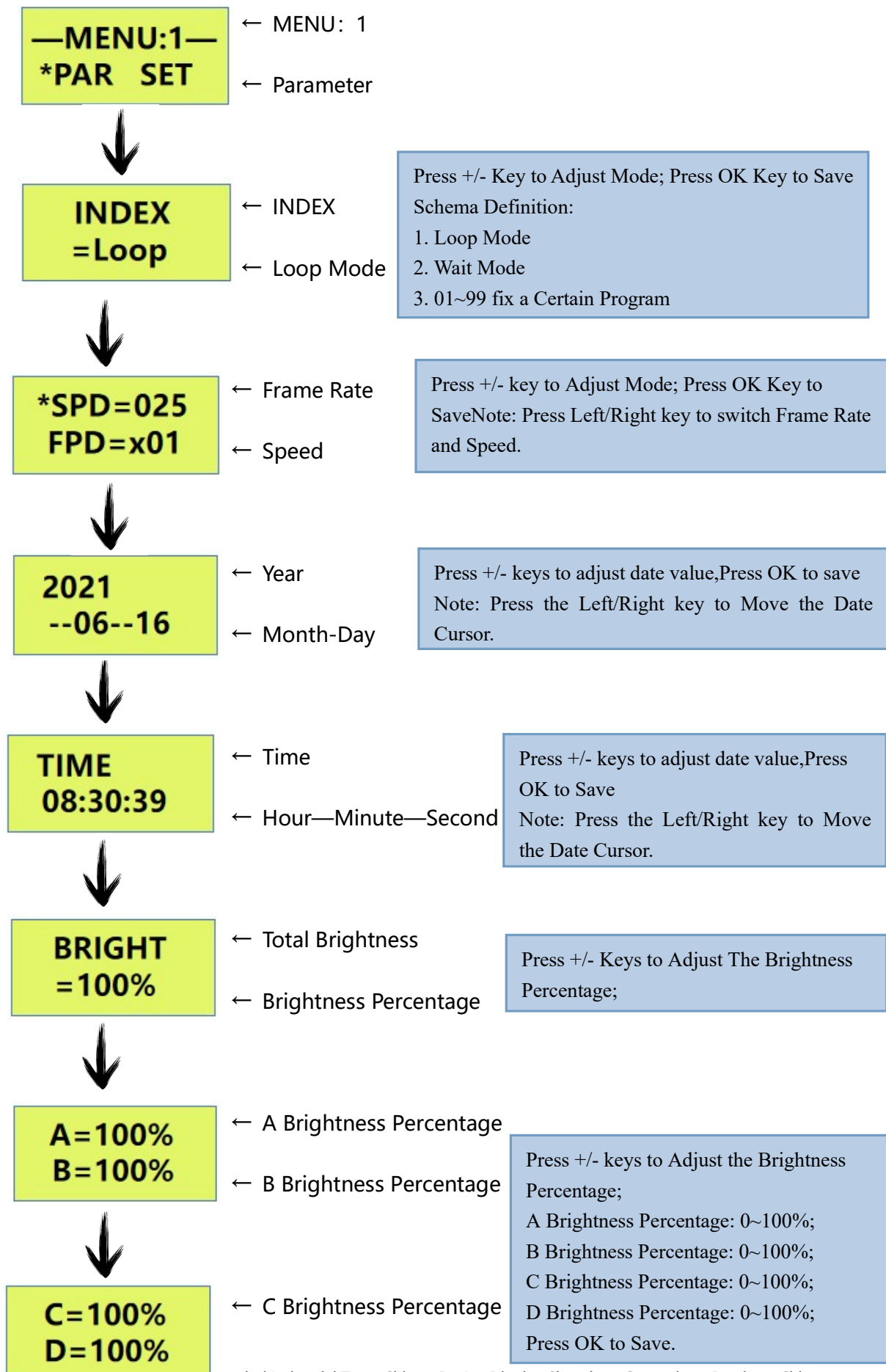
MC02-GPS Press  to Enter the MENU, and Press   to Select in This interface, as Shown in The Figure Below:

—MENU:1— *PAR SET	—MENU:2— *DMXAddr	—MENU:3— *Test	—MENU:4— *SD/EMMC
【Support】	【Support】	【Support】	【Nonsupport】
—MENU:5— *WTS SET	—MENU:6— *kongtai	—MENU:7— *Default	
【Nonsupport】	【Nonsupport】	【Support】	

MENU:1

Press  to Enter Clip Settings, Then Press  to Switch Menus,

as Shown in The Figure Below:



← D Brightness Percentage



Fix ID
001→002

← ID Number

← Fixed Range

Press +/- keys to Adjust the ID Number;
Press OK to Save.
Note: Press the Left/Right Key to Move the ID Number Selection Cursor.



Fix ID
Clear

← ID Number

← Clear Fix ID

Press OK to Clear The Fixed ID With One



REMOTE
MODE=OFF

← Remote Settings

← Switch

Press The +/- Keys to Adjust The Client as Follows:
MODE=OFF: Network port A/B ata is consistent
MODE1=ON: Monitor Mode
MODE2=ON: Bypass Mode



MASTER
ID=60000

← Master ID Setting

← ID Number

Press the +/- Keys to Set the Master ID Number as Follows
Press OK to Save.



GPSAdj
0000ms

← GPS

← Time Fine-Tuning

Press The +/- keys to Set The GPS Time Fine-Tuning as Follows:
Press OK to Save.



ALight
=OFF

← External Brightness

← Switch Options

Press The +/- Key to Enter The Set Function, as Follows:
OFF: External brightness off
ON: External brightness on
Press OK to Save.



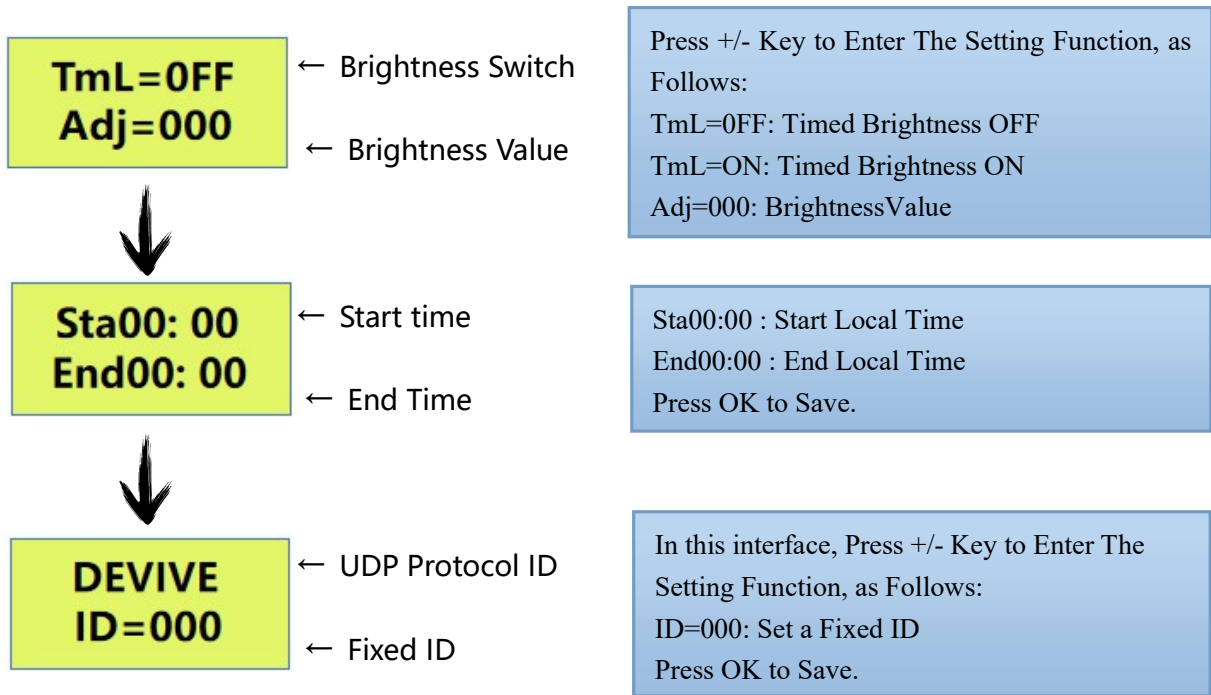
FixTmp
=OFF

← Designated Program

← Switch Options

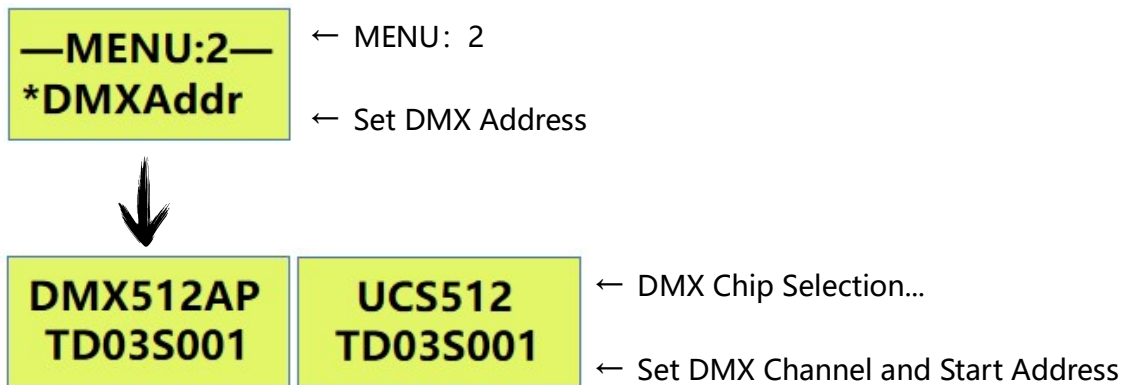
Press The +/- Key to Enter The Setting Function, as Follows:
OFF: External brightness off
ON: External brightness on
Press OK to Save.





MENU:2

Press **OK** to Enter enter Set DMX Address, Then Press **MENU** to Switch Menus, as Shown in The Figure Below:



Press **MENU** in Turn to Switch to Select DMX512AP/UCS512/MR-DMX05/TM512/SM16512/UCS512C and Other Driver Chip Models, Press the Plus/Minus Key to Set the Number of Channels or Initial Channels of its Unit Lamps, Press **OK** to Edit Address Write.

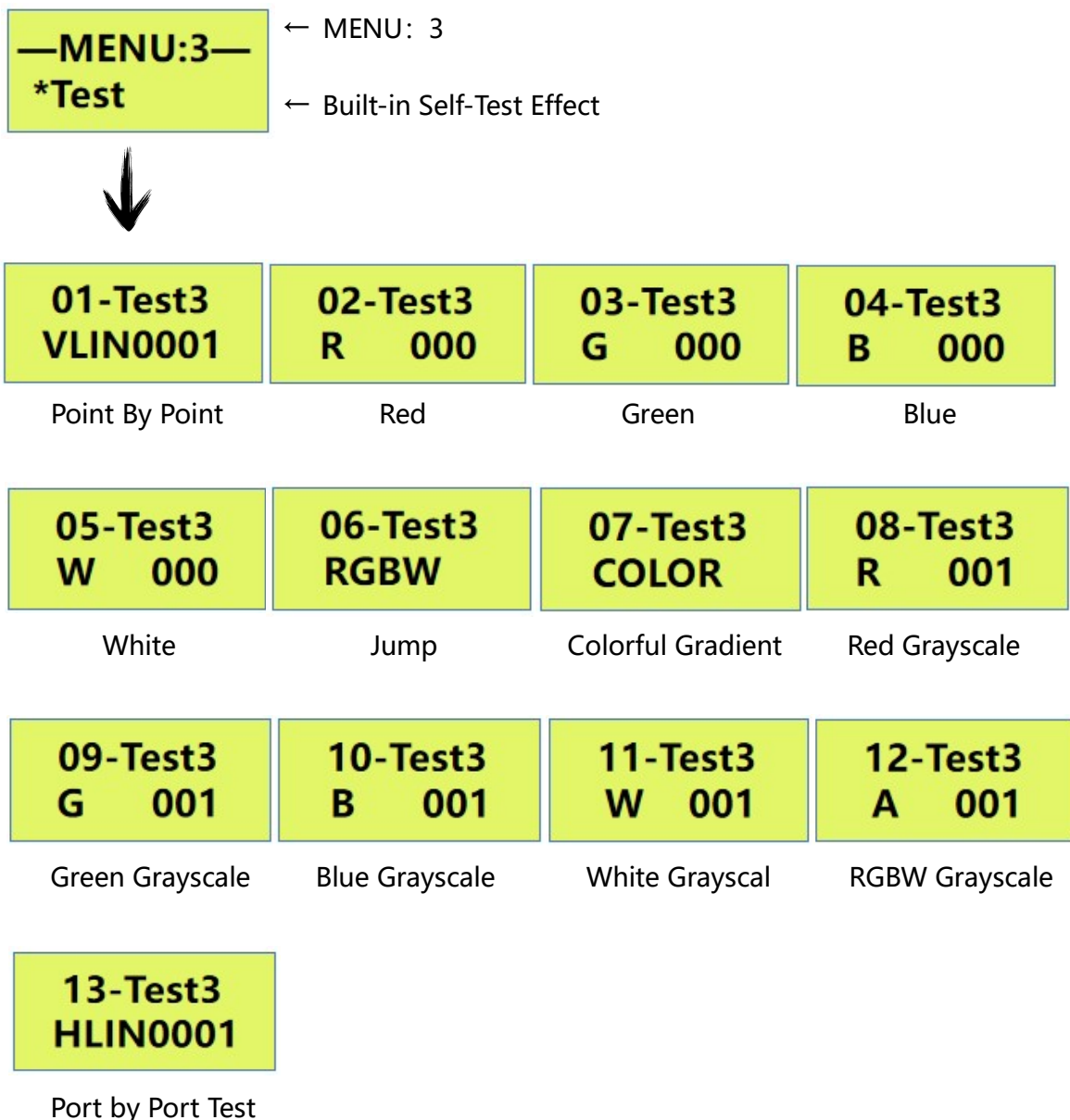
Note: In the Normal State of the Video Player, Long Press it to Directly Enter The Access interface of DMX512 Drive Chip, and Switch to Select DMX512AP / UCS512 / MR-DMX05 /


T M Drive Chip Model / T 512 / SM16512 / UCS512C, Set the Number of Channels or Starting Channels of its Unit Lamp, and Press the Address Writing.


MENU:3

Press  to Enter the Animation Test, Then Press  to Switch Menus,

as Shown in The Figure Below:



Note: MC02-GPS Press  to Enter The Self-Check interface;

In The TEST interface, Click  to Switch the Number of Colors:


In LINE Point-by-Point Test Mode, Click   to Switch to Manual Mode;

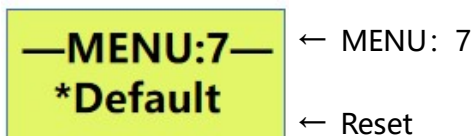
In HLIN Port by Port Test Mode, Click   to Switch to Manual Mode;

In The TEST Self-Check interface, Press  in Sequence to Switch Between Multiple Self-Check Modes;



In The TEST Self-Test interface, Press  in Sequence to Exit The Self-Test Mode.

MENU:7




Press  to Enter the Factory Reset, Press   in Turn to Switch The Settings Menu, as Shown Below:



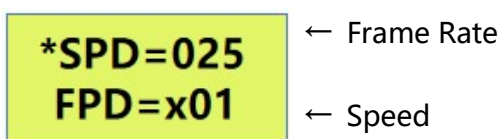
III. System Button Settings




MENU:1 interface, Press  to Enter The Segment Setting interface, Press  in Turn to Switch The Setting Menu,As Shown Below:



In This interface, You Can Press   to Adjust The Program Number and Cycle Mode, and Press  to Save and Exit The Settings.

Press  Again to Enter The Playback Speed Selection interface, as Shown Below:



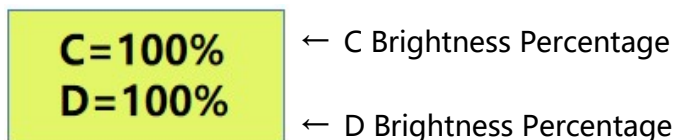
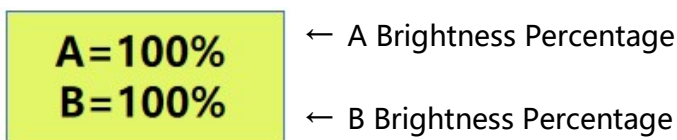
In This interface, You Can Press   to Set The Playback Speed, and Press  to Save and Exit The Setting.

Press **MU** again to Enter The Lighting Brightness Setting interface, as Shown in The Following Figure.



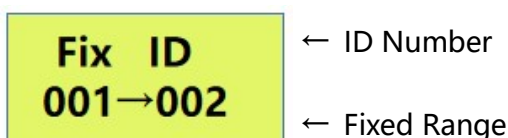
In This interface, You Can Press **↑** **↓** to Set The Brightness, and Press **OK** to Save and Exit The Settings.

Press **MU** Again to Enter The Setting interface for Brightness Adjustment of A, B, C, and D Channels, as Shown in The Following Figure:



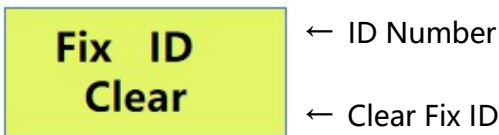
In This interface, You Can Press **↑** **↓** to Set The Brightness, and Press **OK** to Save and Exit The Settings.



Press **MU** Again to Modify The Sub-Control Fixed ID Number interface, as Shown Below:




In This interface, You Can Press **↑** **↓** to Fix All The Sub-Control ID Numbers Connected to The Main Control.




6. Press **MU** Again to Clear The Sub-Control Fixed ID Number interface, as Shown Below:



In This interface, You Can Press   to Clear all Sub-Control ID Numbers Connected to The Master.




7. Press  Again to Enter The Client Setting interface, as Shown Below:




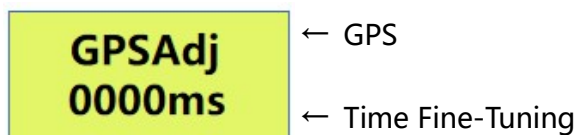
In This interface, You Can Press   to Set The Client, and Press  to Save and Exit The Settings.




8. Press  Again to Enter The Master ID Setting interface, as Shown Below:



In This interface, You Can Press   to Set The Master ID, and Press  to Save and Exit The Settings.

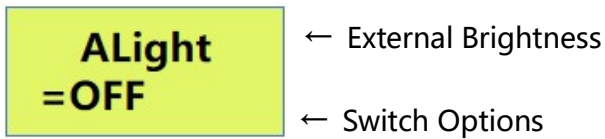
9. Press  Again to Enter The Wireless Synchronization Setting interface, as Shown Below:






In This interface, You Can Press   to Fine-Tune The GPS Sync Time Settings, and Press  to Save and Exit The Settings.

10. Press  Again to Enter The External Brightness Switch Setting interface, as Shown

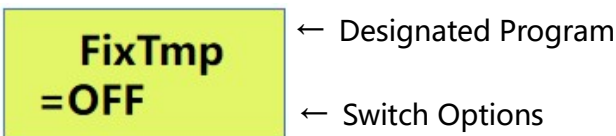
Below:







In This interface, You Can Press   to Set The External Brightness Switch, and Press  to Save and Exit The Setting.

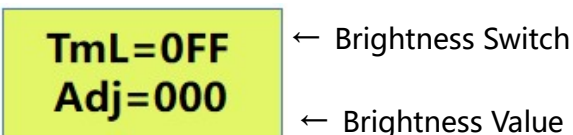
11. Press  Again to Enter The Specified Program Switch Setting interface, as Shown




Below:



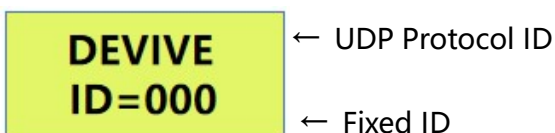
In This interface, You Can Press   to Set The Specified Program Switch, and Press to  Save and Exit The Settings.




12. Press  gain to Enter The Local Brightness, Brightness Value and Time Setting interface, as Shown Below:



In This interface, You Can Press   to Set The Timer Switch, Brightness, and Time, and Press  to Save and Exit The Settings.


13. Press  Again to Enter The UDP Protocol ID Setting interface, as Shown Below:

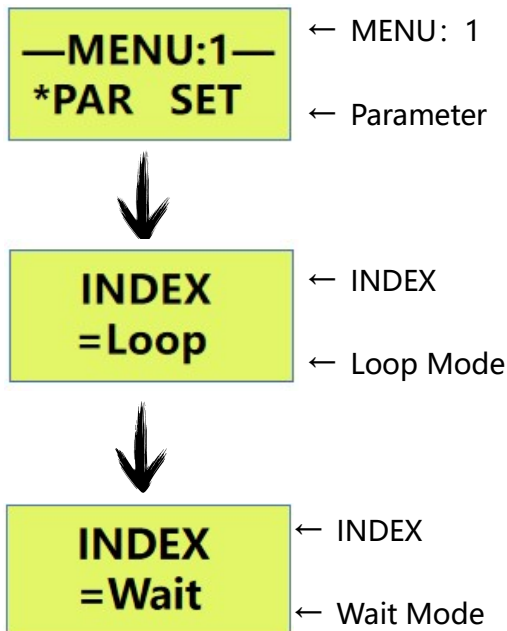



In This interface, You Can Press   to Adjust The ID Value Settings, and Press  to Save and Exit The Settings.

V. How to Set WAIT Mode

The MC02-GPS Offline Player Will Enter The Loop Playback of Multiple Clips or Play a Single Clip After Being Powered on. But it is Required That The MR-3F12 Offline Player Does Not Play any Clips After Power-On, and Selects The Playing Clips Through The Remote Control. Such a Playback Mode is The WAIT Mode.


In The Main interface of MC02-GPS, Press  to Enter The Menu Selection and Setting interface, in This interface, You Can Press   to Select Different Function Options; **MENU:1** interface, Press  to Enter The Clip Setting, and Press   to Switch The Setting Menu, as Shown in The Figure Below:







In This interface, Press  to Save and Exit The Settings.

VI. The Remote Operation of Playing


1. Close Master Controller Playing

When MC02-GPS Playing Press  Can Switch Master Controller Play . LCD Display Screen Shows : "PLAY OFF" , The Lamps Become Black.

2. Adjust The Program Fragment

When Some of The Fragment Paying , Can Pre:   or   Remote Controller Number Key to Adjust Playing Fragment .

3. Check The Master Controller Current Time

In The MC02-GPS Master Controller Playing interface Press  The Current Master Time Can be Displayed on The LCD Display.

Controller Installation Applications

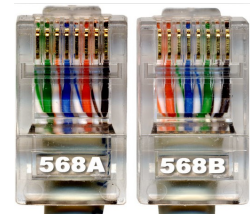
Please Refer to Figure -01 in the Appendix

Attentions

I、 Cat.5e Twisted Pair Application Notes

568B: orange-white/orange/green-white/ blue/blue-white/green/brown-white/brown

568A: green-white/green/orange-white/blue/blue-white/orange/brown-white/brown



Controller and Offline Master Controller and Switch These Three Devices Between Each Other Using a Crossover Cable is Better , One Head is 568B, The Other Head is 568A. Above Any Equipment and Computer Room With a Straight Line , That is Both 568B or 568A, Do Not Define The Order of The Straight Line.

II、 MC02-GPS Controller SD Card Application Notes

MC02-GPS SD Memory Card is Used on The Controller , Need to Use The FAT32 File System to Format and Then to Store The Corresponding Offline Files.

III、 Controller Connect to Ground Application Notes

MC02-GPS Controller Using Metal Case, Rated Supply Voltage is AC100V-240V ,
Therefore, It is Necessary to Ensure The Effective Grounding of The Controller Equipment
and The Effective Grounding of The Metal Outer BOX.

Appendix

Figure -01 MC02-GPS Satellite Synchronous Video Player Application Mode

