



## **IMC01 One Machine System**

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**Version: V4.0**

**Shenzhen Archillumini Lighting Technologies Co., Ltd.**

Revised Date:2022/12/02

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## Overview

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### I. Features

1. IMC01 Standard USITT DMX512/1990 General Protocol and Extended Protocol;
2. IMC01 Supports TTL Serial Return to Zero Protocol;
3. Controller Signal Output ADRI/PO Terminal Can Achieve DMX512 Channel Automatic Addressing, Support DMX512AP-N / NB, UCS512, MY7221, WS2821 and Other Driver Chips;
4. IMC01 Support Address Line Differential Signal, Can Be Used for Long Distance;
5. The System Supports Automatic, Timing, Holiday Preset Effect Playback;
6. Independent Brightness Control of 3 Primary Colors, Easy to Adjust White Balance;
7. Support R, RB, RGB, RGBW, RGBWY, and Multi-Color Mixing Control;
8. Support 32-65536 Grayscale 16Bit, Support 262144 Grayscale, Restore image Details;
9. Accurate Gamma Correction Algorithm, in Line With Human Visual Sense;
10. Support Opening and Closing the Function of Writing DMX Addresses and Parameters;
11. Support 120Hz Frame Rate to Ensure High-definition Display and 3D Requirements;
12. Support Buttons and External Remote Control, Program Selection, Brightness Adjustment, White Balance Adjustment, Playback Speed Adjustment, etc;
13. LCD Display Module Displays Controller Parameters and Status in Time;
14. SD Card Storage, Can Support 64G, Can Preset 99 Program Files;
15. 8-Port Output, Single Channel 512 Channels, Expansion Needs to Be Tested by Itself;
16. Support Device Port Anti-interference and Leakage Design;

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17. Support Overcurrent and Overvoltage Protection, Can run for a Long Time;
  18. Support Severe Working Environment -40°C-80°C, Normal Operation Without Failure.
  19. Built-in Animation Test Program;
  20. Supports Offline and Online Firmware Upgrades.

## **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 10and so on;

## **III. Expansibility**

1. Can Play Video and Picture File Content in Various Formats;
2. All Current Windows Systems and Multiple Languages Can be Installed;
3. Leave The Interface for Compatibility With International Common Protocols
4. Expandable and Compatible With Third-Party Software and Devices;

5. The Controller Can be Automatically Addressed and Set, Support MR, UCS, SM, TM, HI, HM, GS, Customized DMX Chip, etc.

## Specifications and Parameters

### I. Controller Appearance

IMC01 Front View:



IMC01 Rear View:



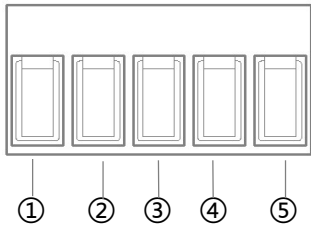
- ① Power Switch    ② Key Control Panel    ③ LCD Display    ④ Power Lights  
 ⑤ Signal Lights    ⑥ SD Card Slot    ⑦⑧ Self-adapting Network Interface  
 ⑨ DMX OutPut Port    ⑩ Power Interface

### II. OutPut Port Definition

IMC01 Controller Uses 8-Port 5Pin Terminal Interface OutPut Signals.

5Pin Terminals Sort Sequentially From Left to Right, As Shown Below:

	①	②	③	④	⑤
DMX	GND	Data+	Data-	Addressing-	Addressing+



Signal	GND	A	B	ADRI/PO-	ADRI/PO+
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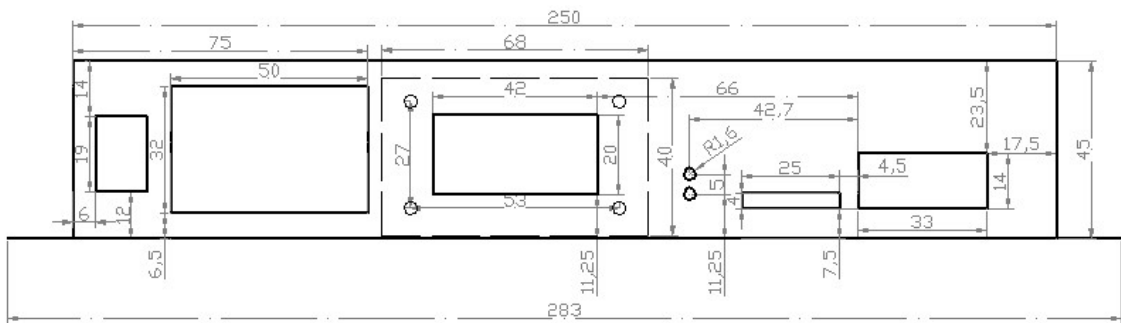
Note: The Signal Terminal ④⑤ is a Differential Signal. When The Differential OutPut of The Addressing Line is Not Used, Only Connect ⑤ (Addressing +).

### III. Controller Panel Buttons

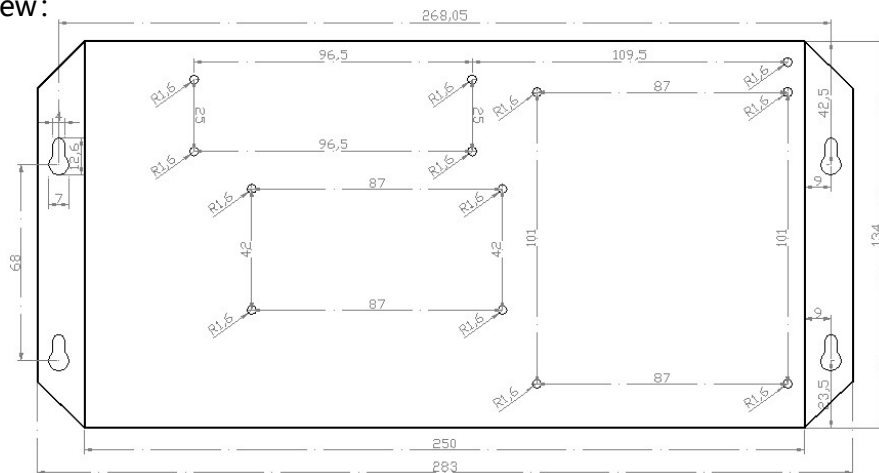


### IV. Controller Three View Size Chart

IMC01 Front View:



IMC01 Top View:



IMC01 Rear View:



Remark: Above Three Views The Size Unit is mm.

## V. Basic Parameter Table

Product Name	One Machine System
Product Model	IMC01
Rated Voltage	AC 100V ~ 240V±15%Vac50/60Hz
Rated Power	≤15W
Protocol	RJ45X2PCS, Standard UDP/TCP Protocol
Network Rate	100MB/1000MB Adaptive
OutPut	8-Port OutPut (DMX512 and Extended Protocol, TTL Protocol)
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	AC Power x1/ Warranty Card x1/ Foam Carton x1/ Screwdriver x1

## Key Definition



	Play Switch		Time/Number 0
	Addressing Key		Left Button
	Menu		Right Button
	Test		Plus
	Exit Setting		Minus
	OK		Number key

## Display Description

### I. LCD Main interface After IMC01 is Turned on

<b>NO CARD</b>	← Status: <u>SD Card Not Detected</u>
<b>NO File</b>	← Status: <u>Invalid File or SD Card Format Error</u>
<b>SD 01/08 LoopPlay</b>	← The Number of Programs and The Current Play Number ← Status: <u>Loop Play Status</u>
<b>SD 01/08 TFixPlay</b>	← The Number of Programs and The Current Play Number ← Status: <u>Temporary Play Status</u>

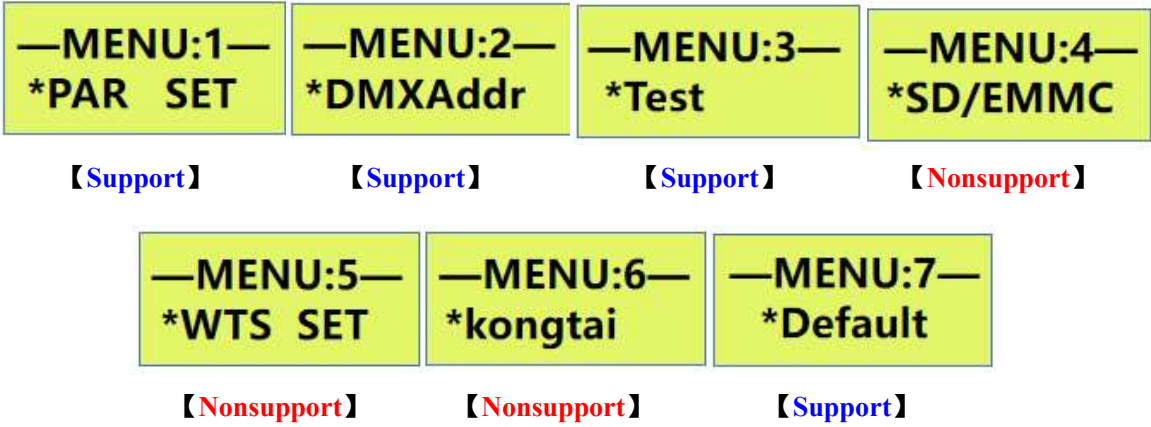


← The Number of Programs and The Current Play Number  
 ← Status: Timing Play Status

**II. IMC01 Remote Control Settings**

IMC01 Press Enter the MENU, and Press Select in This interface, as

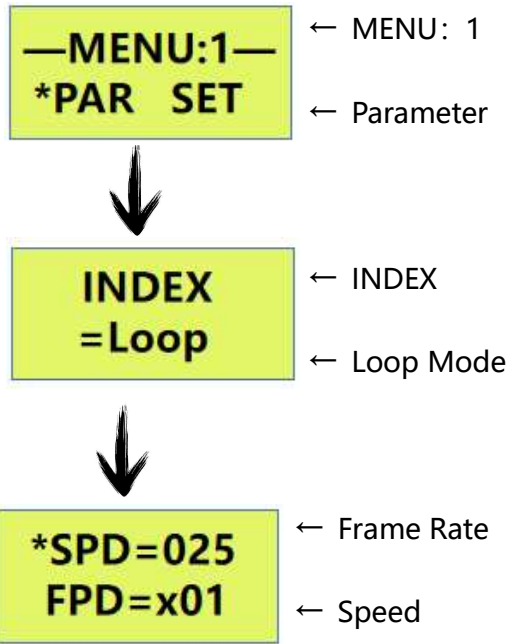
Shown in The Figure Below:



**MENU:1** \_\_\_\_\_

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

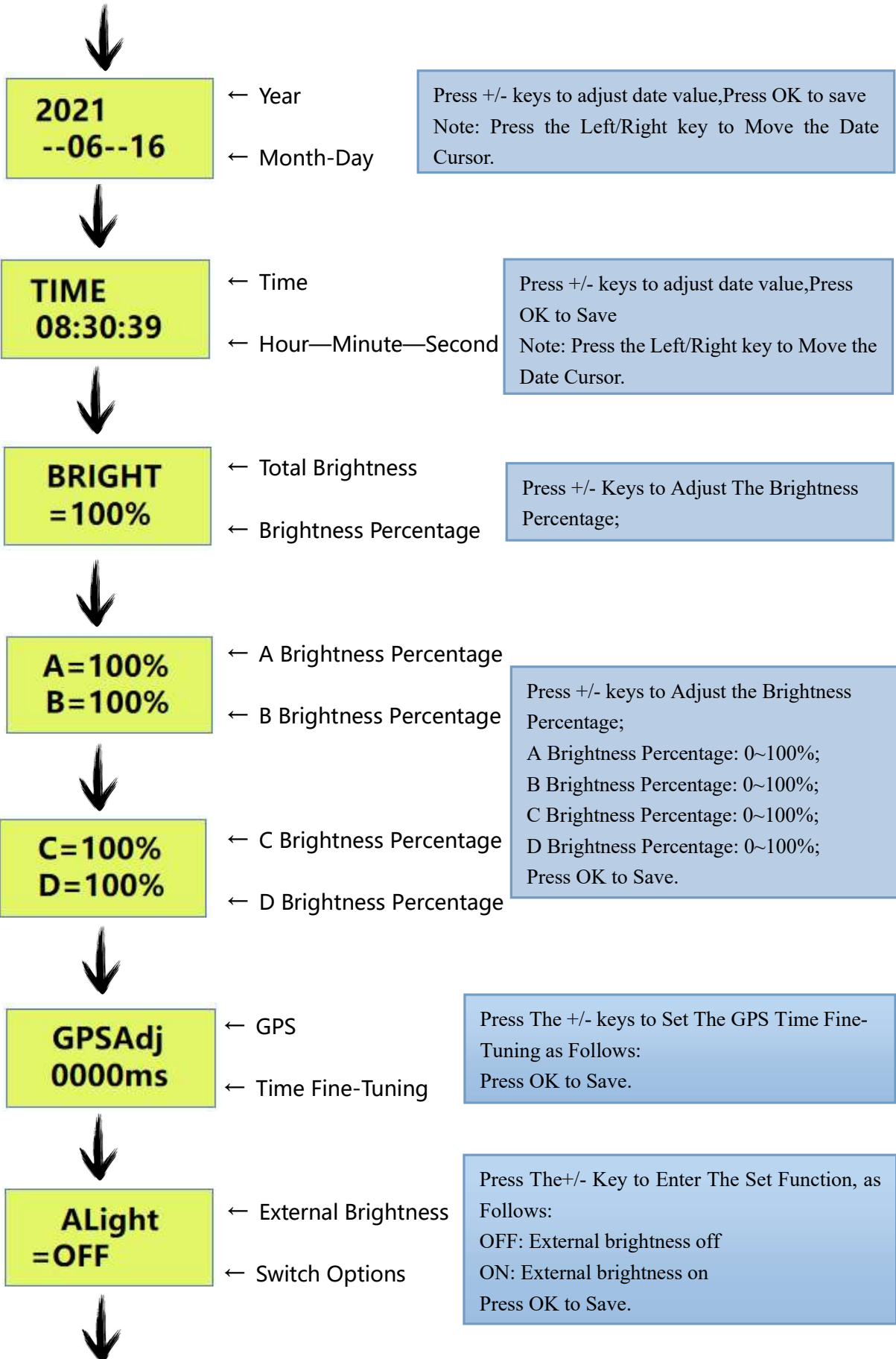
as Shown in The Figure Below:

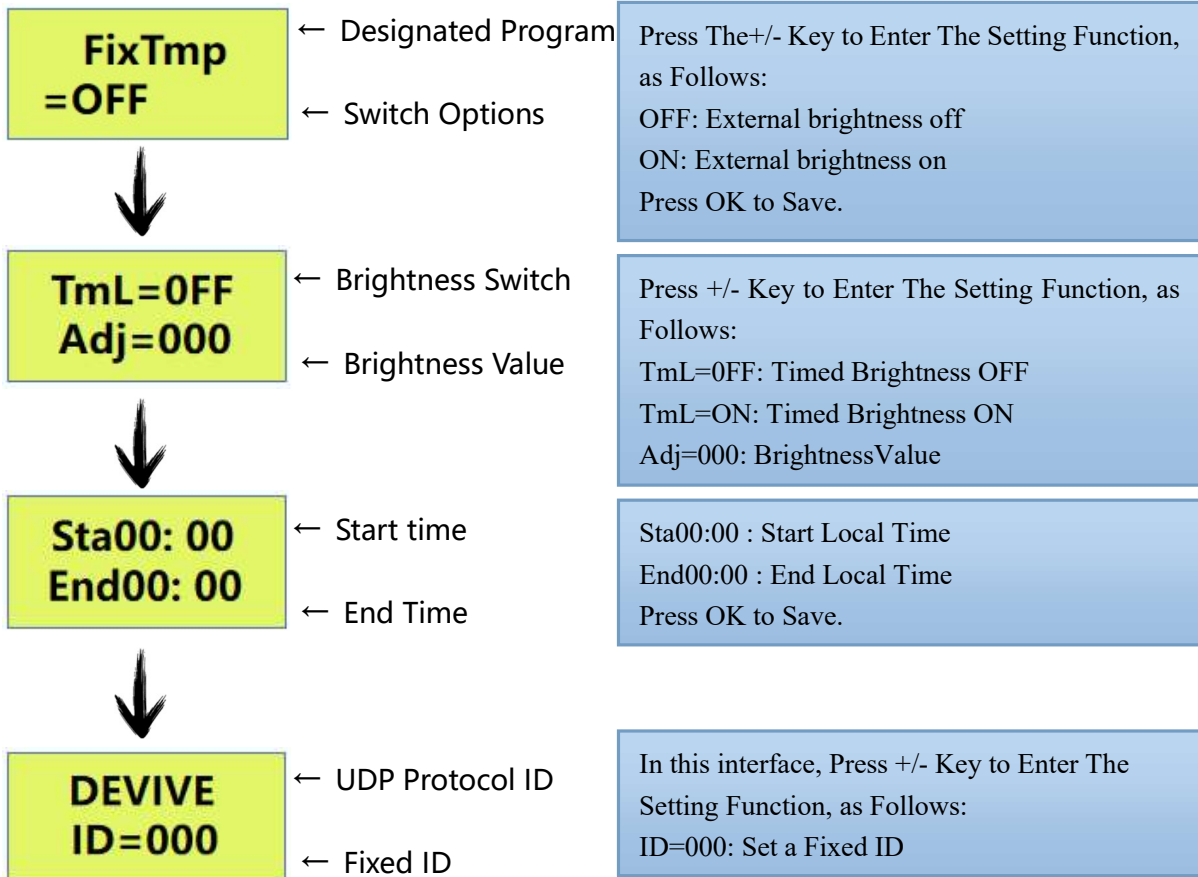


Press +/- Key to Adjust Mode; Press OK Key to Save Schema Definition:  
 1. Loop Mode  
 2. Wait Mode  
 3. 01~99 fix a Certain Program

Press +/- key to Adjust Mode; Press OK Key to SaveNote: Press Left/Right key to switch Frame Rate and Speed.



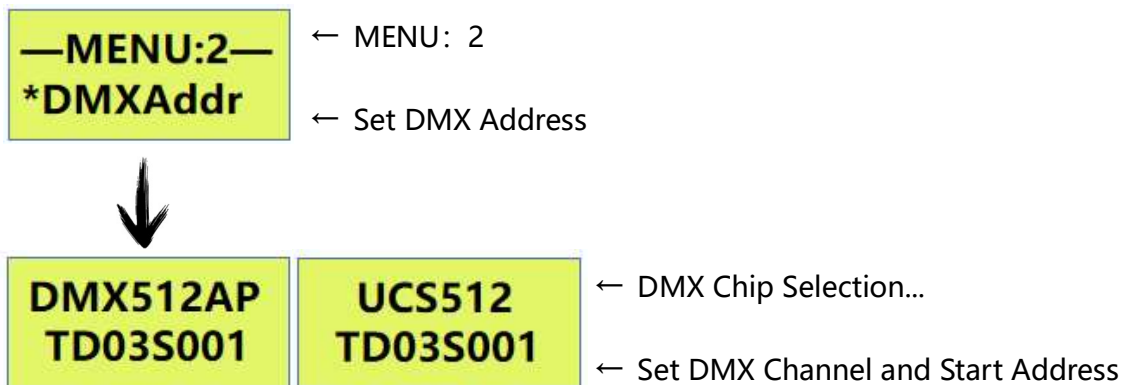




**MENU:2**

Press **OK** to Enter enter Set DMX Address, Then Press **MENU** to Switch Menus,



as Shown in The Figure Below:



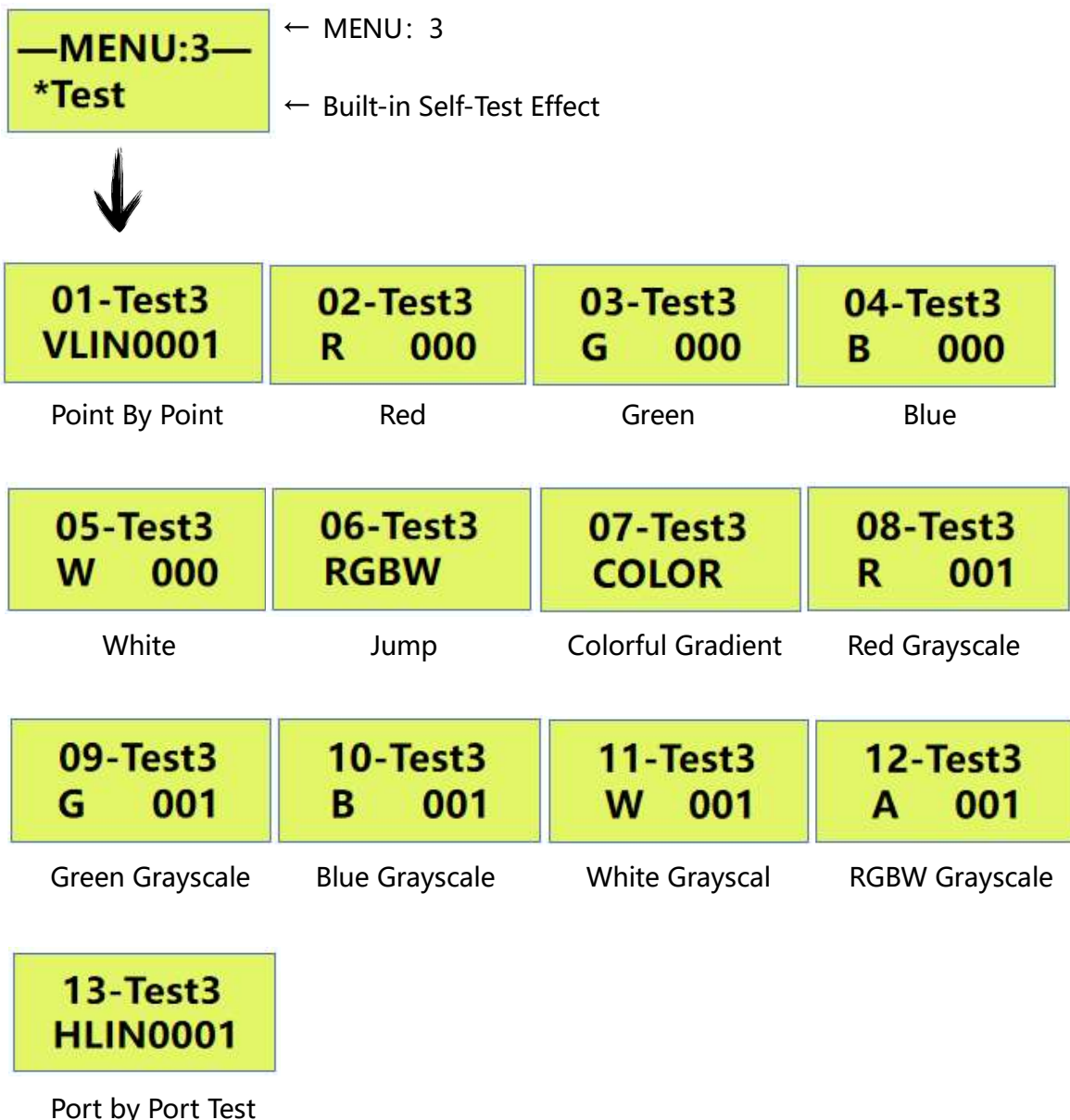
Press **MENU** in Turn to Switch to Select DMX512AP/UCS512/MR-DMX05/TM512/SM16512/UCS512C and Other Driver Chip Models, Press the Plus/Minus Key to Set the Number of Channels or Initial Channels of its Unit Lamps, Press **OK** to Edit Address Write.

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: IMC01 Press  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.

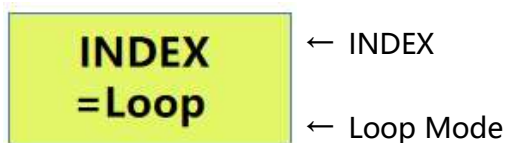
## MENU:7




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



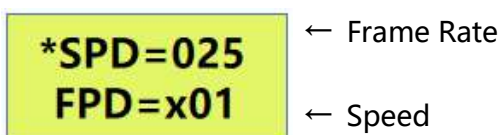
## III. System Button Settings

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:







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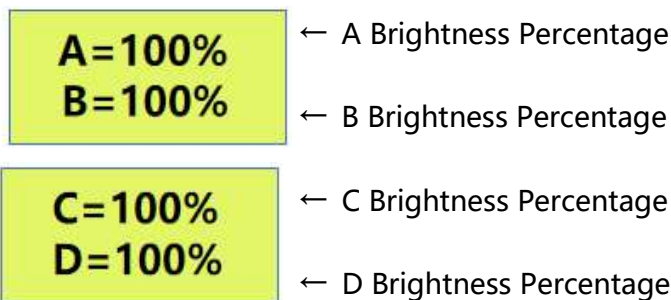
In This interface, You Can Press   to Set The Playback Speed, and Press  to Save and Exit The Setting.




Press  Again to Enter The Lighting Brightness Setting interface, as Shown in The Following Figure.

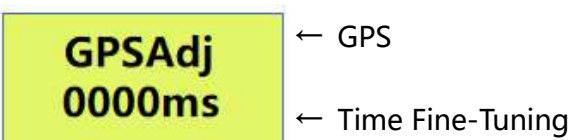





In This interface, You Can Press   to Set The Brightness, and Press  to Save and Exit The Settings.

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

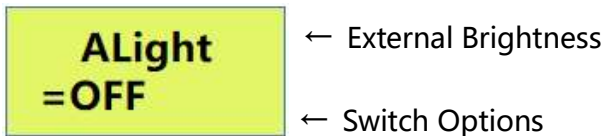





In This interface, You Can Press   to Set The Brightness, and Press  to Save and Exit The Settings.




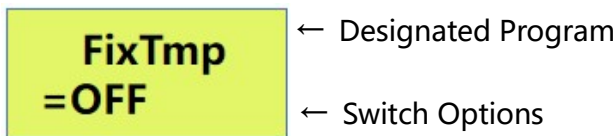
In This interface, You Can Press   to Fine-Tune The GPS Sync Time Settings, and Press  to Save and Exit The Settings.




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.




Press  Again to Enter The Specified Program Switch Setting interface, as Shown Below:



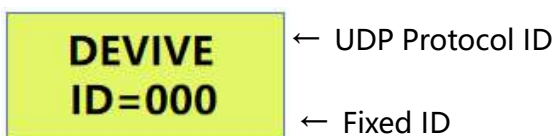
In This interface, You Can Press   to Set The Specified Program Switch, and Press to  Save and Exit The Settings.

Press  Again 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.

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



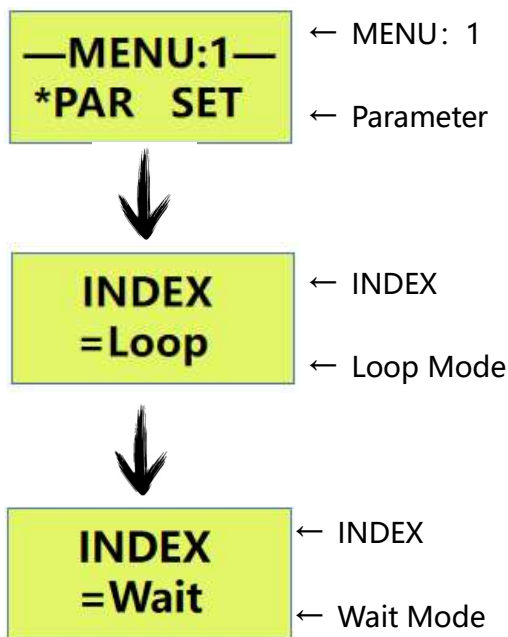
In This interface, You Can Press   to Adjust The ID Value Settings, and Press  to Save and Exit The Settings.


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## II. How to Set WAIT Mode

The IMC01 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 IMC01, Press , 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.

## III. The Remote Operation of Playing





### 1. Close Master Controller Playing

When IMC01 Playing Press  Switch Master Controller Play . LCD Display Screen Shows : "PLAY OFF" , The Lamps Become Black.




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## 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 IMC01 Master Controller Playing interface Press  Current Master Time Can be Displayed on The LCD Display.

# IV. The Remote Operation of Playing


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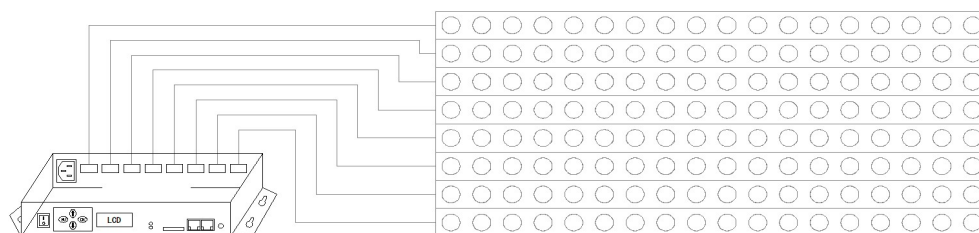
## 5. Check The Master Controller Current Time

In The IMC01 Master Controller Playing interface Press  Current Master Time Can be Displayed on The LCD Display.

# Install and Use

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1. IMC01 is Connected to The Sub-Controller, as Shown in The Following Figure:

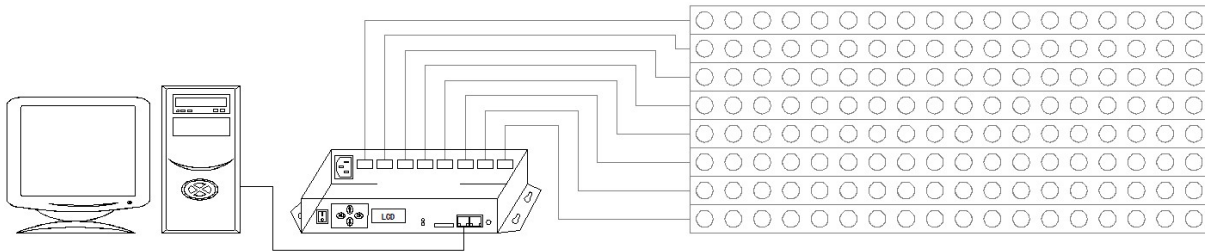


2. Connected With PC and Controller ( Online Signal Priority, If No Online Signal it Can



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Automatic Switch to Offline Signal ) as Follows :



## Attentions

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### 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. IMC01 Controller SD Card Application Notes

IMC01 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

IMC01 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

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Effective Grounding of The Metal Outer BOX.