

# **MR-318DW Integrated Controller Instructions**

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**V1.0**

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## Functions overview

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### I、 System Features

1. MR-318DW Supports standard DMX512/1990 USITT general protocol and extended DMX512 protocol ;
2. Controller signal output ADRI/PO terminal can achieve DMX512 channel automatic addressing , Support DMX512AP-N / NB, UCS512, MY7221, WS2821 and other driver chips ;
3. MR-318DW Controller addressing signal output compatible differential signals output , Improve the addressing signal transmission distance , in favor of the project application for long distance transmission and effective addressing ;
4. The system supports automatic, regular, preset programs play ;
5. Precise gamma correction algorithm. It better conforms to the visual photographic characteristics of the human body, and the display color is more sufficient and rich, so as to perfectly reflect the animation or video effects of the designer ;
6. Support 120-frame frequency at most, to guarantee demands for HD display and 3D display of the image ;
7. The controller is equipped with keys and External Remote Control; the episode selection, overall brightness adjustment, white balance adjustment and playback speed adjustment etc.
8. LCD display module, to timely display the controller parameters and state ;
9. 32-65536 grade gray control , can restore the true image color and detail ;
10. Support for four-color lighting : Energy saving and environmental protection , pure color ;

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11. SD card storage, support maximum 32G, preset maximum 255 program files ;
  12. Support remote online download and offline program update ;
  13. The built-in animation test program may help customer to debug and apply in project ;

## **II. Design concept**

- 1 . Four-color design: energy saving, environmental protection and pure color ;
- 2 . Synchronous with asynchronous integrated control: online priority; it will be shifted to offline effects when without online signal, achieve the video source backup ;
- 3 . Large self-development and design video editing, playback and layout design software: greater adaptability, more support languages, greater openness. It is applicable for various complicated applications of shaped screen, multi-screen, building screen, pixel light screen etc. ;
- 4 . Support mainstream 32, 64-bit operating system: Windows 2000, Windows XP, Windows 7, Windows 8 etc. ;
- 5 . Support DMX512AP-N, DMX512AP-NB, UCS512, MY7221, WS2821, SM512-12 IC and so on.

## **III、 Expansibility**

1. Can install all Windows operating systems and support languages of various countries ;
2. The player software is reserved with sufficient interfaces, so as to be compatible with other international general protocols, and support the personalized design demands of the customers ;

# Controller specification and basic parameters

## I. Controller Appearance

MR-318DW Front view :



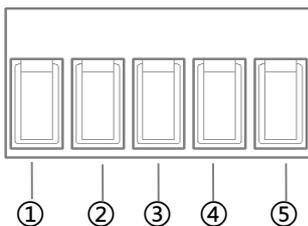
MR-318DW Rear view :



- ① power switch                      ② Button control panel                      ③ LCD display screen
- ④ power / communication indicator lamp      ⑤ work indicator lamp      ⑥ SD Slot
- ⑦⑧ self-adapting network interface      ⑨ signal output port                      ⑩ power interface

## II. Output port definition

MR-318DW controller uses 8pcs 5pin terminal interface output signals. 5Pin Terminals Sort sequentially from left to right , as shown below :



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

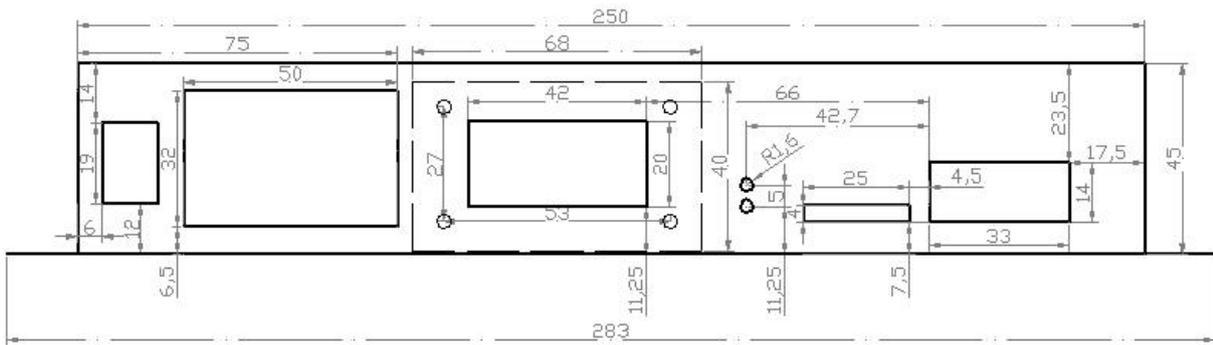
Remark : Signal terminal ④ ⑤ are differential signals , when not using the address line differential output , only connect ⑤ ( Addressing+ ) is ok.

### III. Controller Button control panel

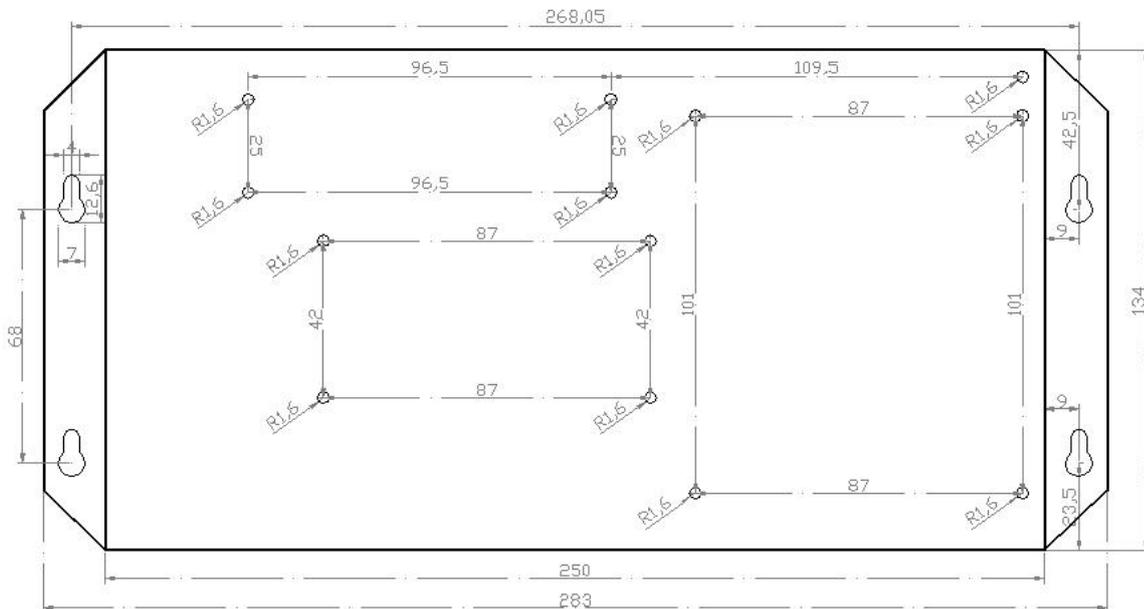


### IV. Controller three view size chart

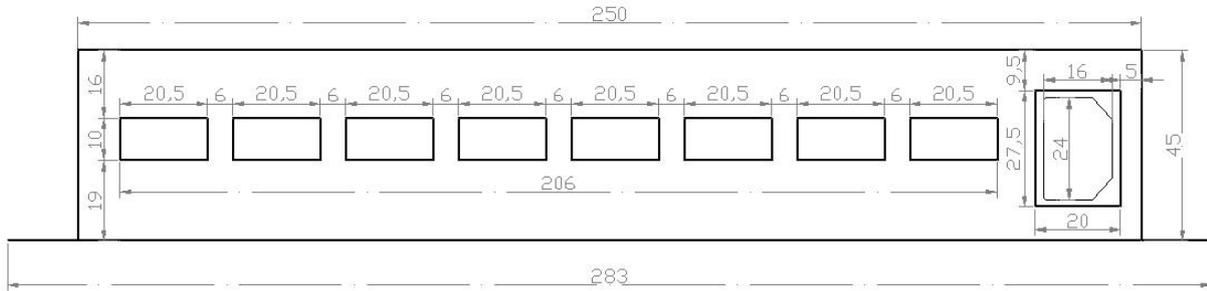
MR-318DW Front view



MR-318DW Top view



MR-318DW Rear view



Remark : Above three views the size unit is mm.

**V、 Controller basic parameters table :**

Input power supply	AC 100V ~ 240V
Maximum power	15W
Length	283mm
Width	134mm
Height	45mm
Spacing of fixing holes	268mm ; 68 mm
Standard accessories	Remote control×1 /SD card×1/AC power cord×1

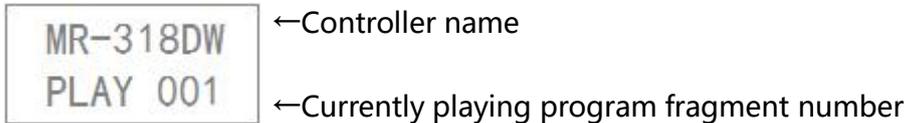
**Remote control button definition**



-  Set Menu
-  plus
-  Self Test
-  Minus
-  Confirm and save
-  Previous fragment
-  Exit Setup
-  Next fragment
-  Play and Pause
-  Numeric Key

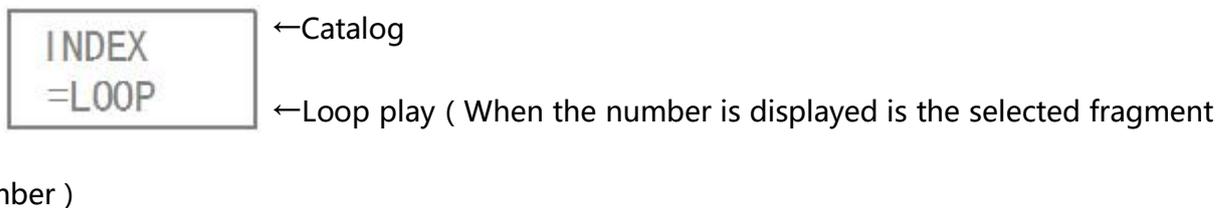
## Controller keys and display instructions

### I、MR-318DW LCD main screen after boot



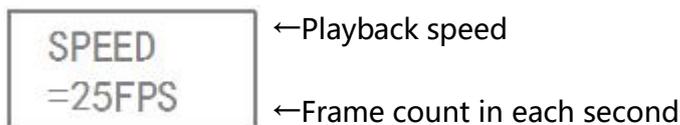
### II、MR-318DW Controller parameters setting

1、 In the MR-318DW main interface , press  to enter the fragment selection settings interface , as shown below :



In this interface , press   Adjustable loop mode , transferred to digital mode , can press   to adjust program serial number , press  again can save and exit settings , press  to exit without saving settings.

2、 Press  again to enter the playback speed selection interface , as shown below :



In the interface   to set playback speed , then press  to exit with saving , press  to exit without saving.

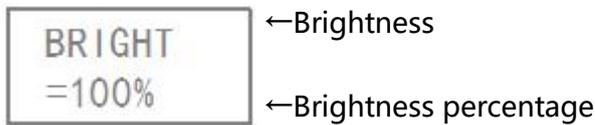
3、 Press  again to enter date and time setting interface. As figure below



In the interface,press   to adjust position , press   to adjust related value ;

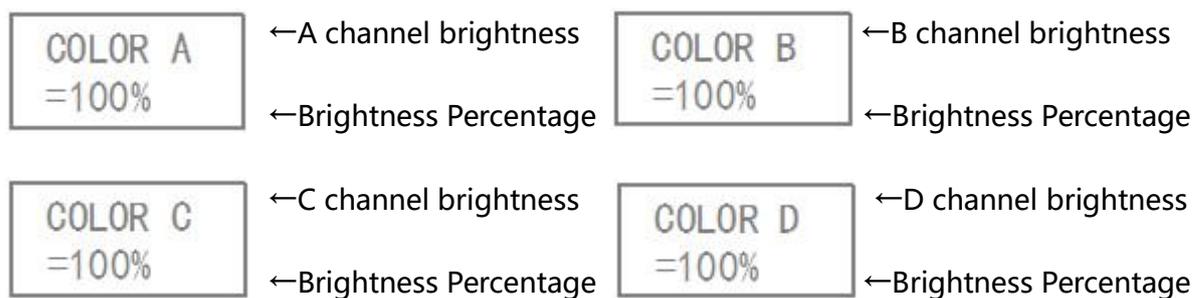
then press  to exit with saving , press  to exit without saving.

4. Press  again to enter brightness adjustment settings interface. As figure below :



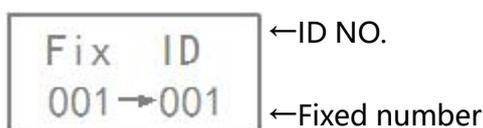
In the interface, press   to set brightness, press   to adjust channel position of A, B, C, D, press   again to set brightness of the four channels, then press  to exit with saving, press  to exit without saving.

5. press again In turn  to enter the A, B, C, D channel brightness adjustment settings interface , as shown below :



In the interface, press   to set brightness, then press  to exit with saving , press  to exit without saving.

6. Press  again can enter the sub-controller ID number fixed interface, as shown below :



In the interface can press   can adjust modified number positions , press   or Numeric keys to change number , the front number refers to the initial controller's number , the after number refers to the end of controller , after the number is amended, press  can fixed the sub-controller ID number.

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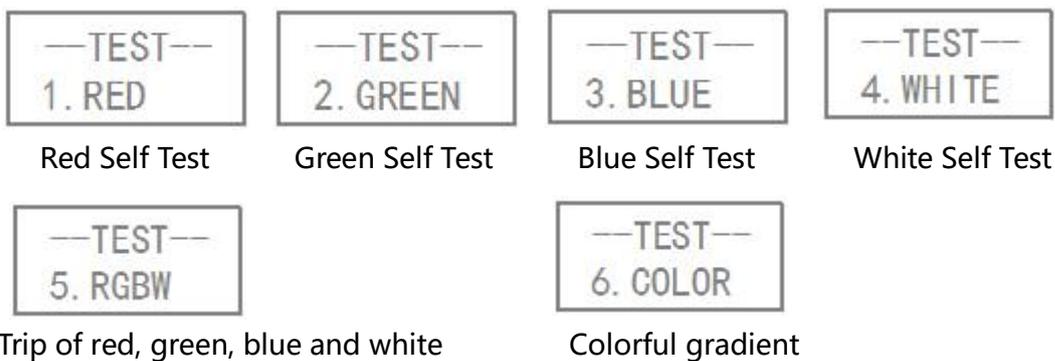
7、 Press  again can clear the fixed ID number interface of sub-controller , as shown below :



In the interface can press  it can clear all the sub-controller ID numbers connected to the master controller.

### III. MR-308D Self Test Setting

In MR-318DW main interface, press  to enter self test playing interface , as shown below :

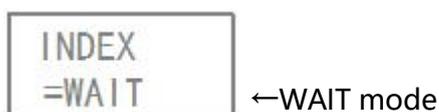


Note: during self test, press  to shift various self test modes.

### IV、 Methods for setting up WAIT play mode

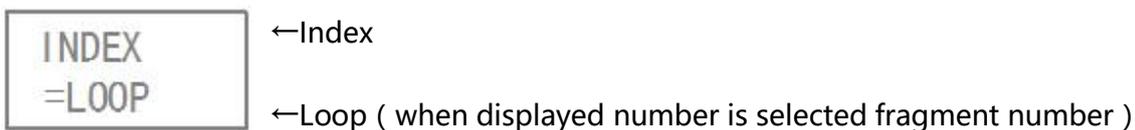
MR-318DW after power up can enter the multi segment loop playing or a single segment playing. But requires MR-318DW not play any segment after power up , select a segment to play by remote control. Such playback mode is WAIT mode.

MR-318DW after power up , Press the "Menu" button to enter the segment selection interface , repeatedly press  or  key until Select INDEX=WAIT , as shown below :



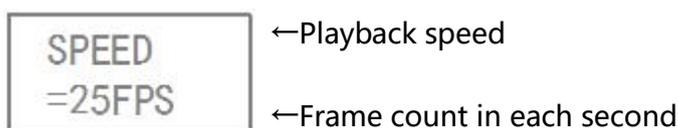
## V、Controller Key Setting Parameter

1、 In MR-318DW main interface , press **MU** to enter fragment selection setting interface. , as shown below :



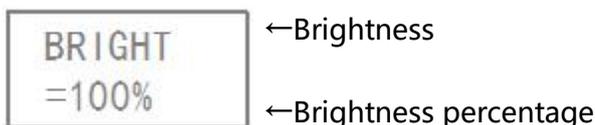
In the interface can press **↑** **↓** conduct program numbers and adjusting loop mode , press **OK** to save and exit setting.

2、 Press **MU** again to enter playback speed selection interface , as shown below :



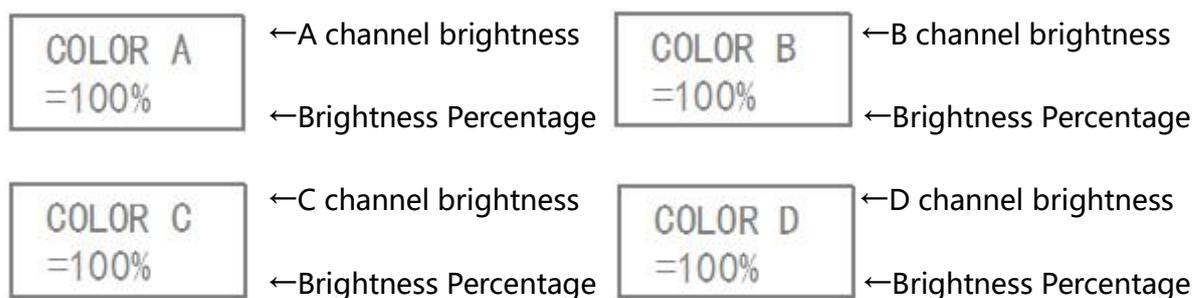
In the interface, press **↑** **↓** to set playback speed , press **OK** to save and exit setting.

3、 Press **MU** again to enter date and time setting interface , as shown below:



In the interface, press **↑** **↓** to set brightness , press **OK** to save and exit setting.

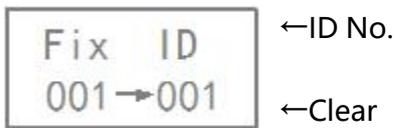
4、 Press **MU** again can enter A、 B、 C、 D Channel brightness adjustment settings interface , as shown below :



In the interface, press **↑** **↓** to set brightness , press **OK** to save and exit setting.

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5、 Press  again can clear sub-control fixed ID number interface, as shown below :



In the interface, press  can clear the fixed ID number interface of sub-controller.

## V、 Remote control operation during playing

1、 Turn off master controller playing

Press  button can Switchable master controller playing when MR-318DW is playing.

LCD screen display "NO PLAY" , Lamp turns black.

2、 Pause the master controller playing

In the MR-318DW player interface, press  button can pause the master controller playing , LCD screen display "PAUSE" , the lamp colors to stay in that frame before stopping playback color.

3、 Adjust program segment

when playing a segment , by pressing a button   or Remote control   Numeric keys to adjust the playback of fragment.

4、 Check master controller current time

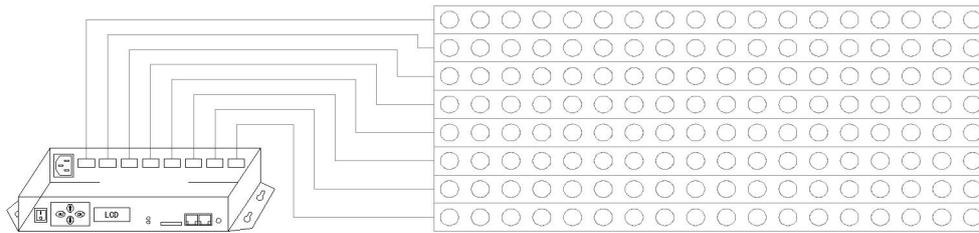
In the MR-318DW player interface, press  Can display the current master controller time on the LCD screen. Continue to press  then can return to play interface.

## Controller installation and Application

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### I、 Offline Mode

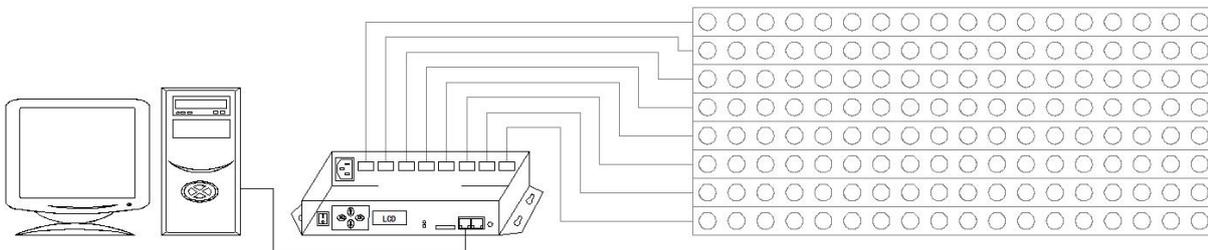
Offline mode directly load with lamps , as shown below :



MR-318DW

## II、 Online/Offline Integrated model

Connected to the computer ( Online signal priority. Automatic switching off line signal without online signal ), as shown below :



Computer ( optional )      MR-318DW

## Attention matters

### 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.

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## **II、 MR-318DW Controller SD Card Application Notes**

MR-318DW 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、 Wire and connecting method from lights to controller**

1. Controller output port to the lamp if the distance is too far , Recommended for the use of 485 dedicated lines or Cat.5e kind shielded cable connection , the best connection way is :

Orange-A ; Orange white-B ; Green-addressing+ ( ADRI/PO+) ; Green white-addressing- ( ADRI/PO-) ; Other connect to GND ( Ground )

2. At the end of each road signal that is between A and B to add a 120R terminal resistance.

3. Do not connect the two wires that are intertwined to receive the signal, such as orange and orange white connect to A+or B- at same time.

## **IV、 Controller connect to ground application notes**

MR-318DW 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.

And the output port of the controller is exposed to the metal contact surface , therefore, according to the requirements of safety regulations , to ensure safe use of the operator , signal output port GND signal must be effectively grounded.