
Programmable Effect Controller



User Manual

Introduction

Programmable Effects Controller is a DMX single-scene recorder designed specifically for simplified lighting control. Its core advantage is enabling offline autonomous control of DMX lighting devices without professional programming skills

It supports recording via protocols including DMX512, Art-Net and sACN. It can also be used as a 1-universe Art-Net expander, compatible with mainstream consoles such as Tiger Touch and MA2. It is often used to expand DMX output ports, greatly improving flexibility.

It supports simultaneous operation with a lighting console, merging and outputting data with the console via HTP (Highest Takes Precedence). It allows locking the channel range of the current button output: external signals cannot control the locked channel range, while other channels remain unaffected and can be forwarded normally.

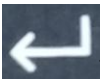
It can also work standalone: after disconnecting from the console, it still outputs DMX signals independently to drive lighting stably. Equipped with a 1.8-inch TFT LCD and user-friendly physical buttons, it supports fast network configuration and 10 groups of scene recording.

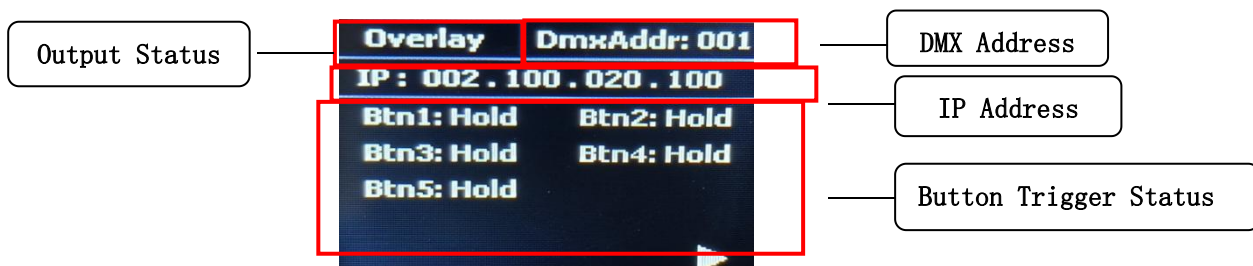
It supports AC 90V–240V power supply and has a built-in rechargeable battery providing 4–5 hours of continuous operation.

Product dimensions: 37.5*18.5*7.5CM

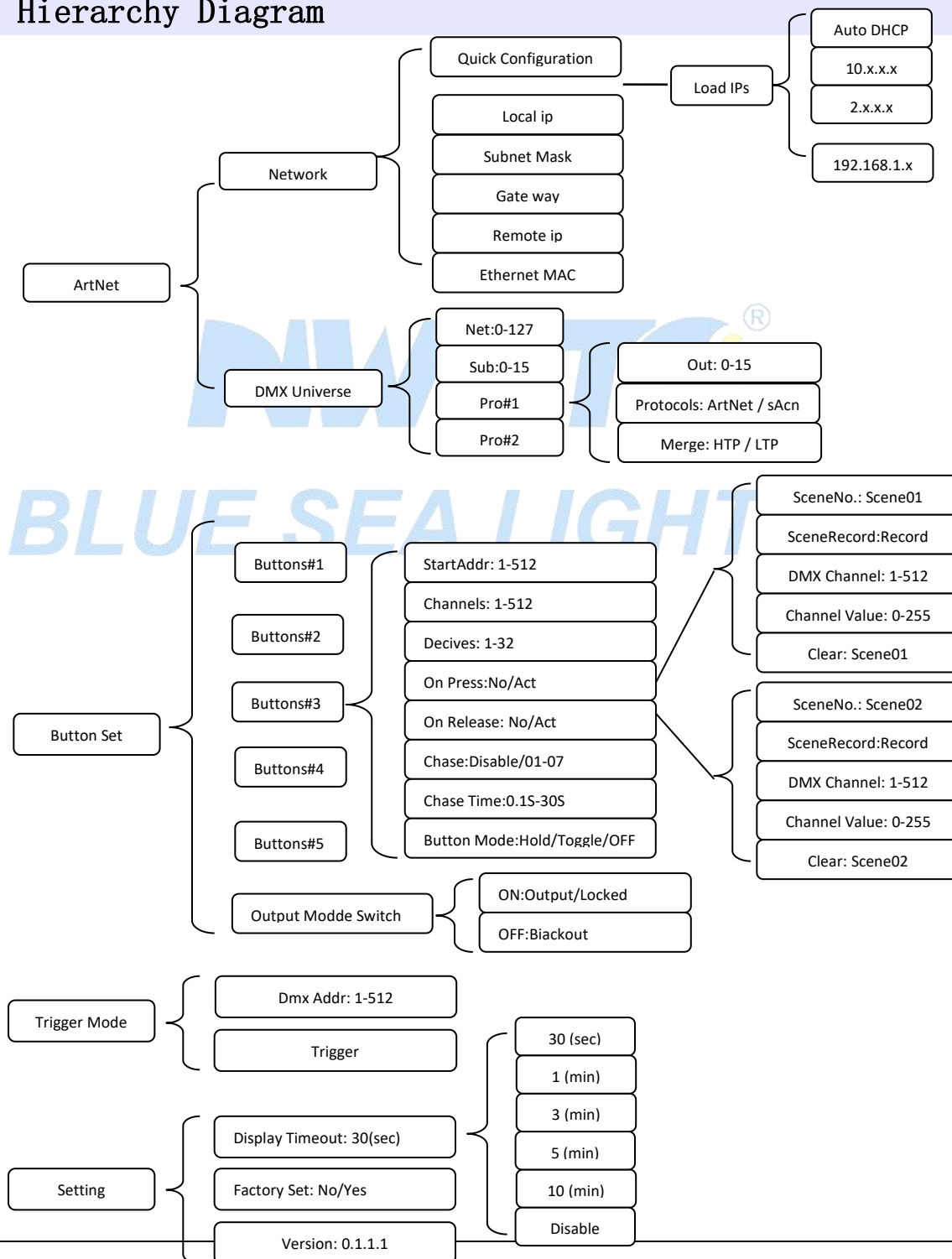
1、Menu

The menu system is operated by 4 buttons located below the display screen.

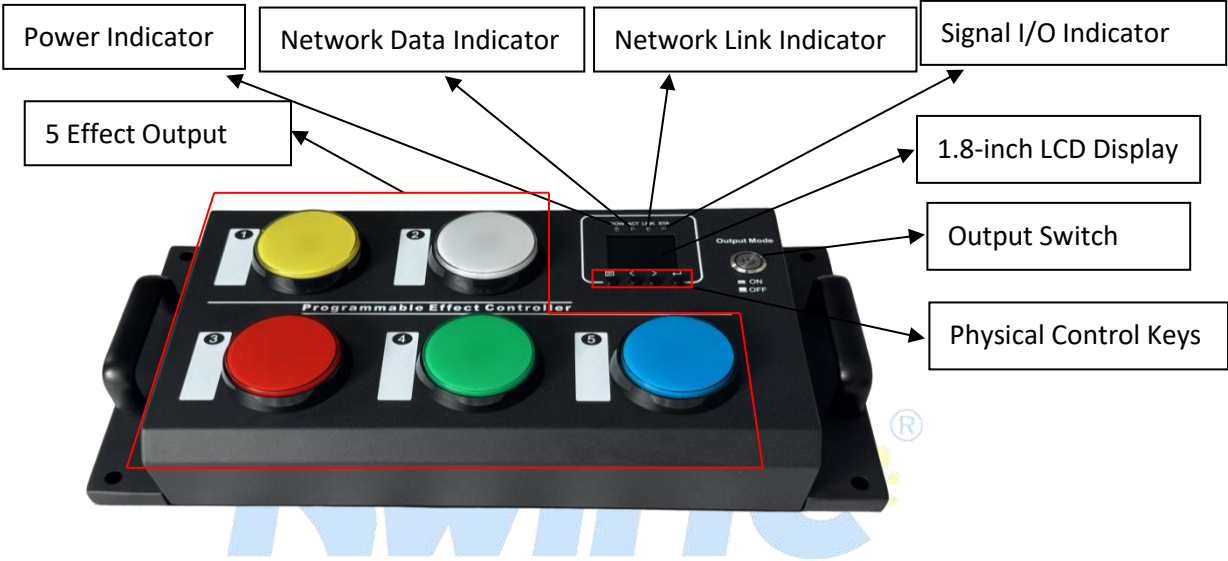
- (1)  Menu:
 - ①Access the menu ②Exit the menu ③Return to the previous step in certain situations
- (2)  Enter: Open the menu or confirm selection
- (3)  Left/Right arrows: Select menu items or adjust values
- (4) Displays DMX address and button status on the menu at power-on.



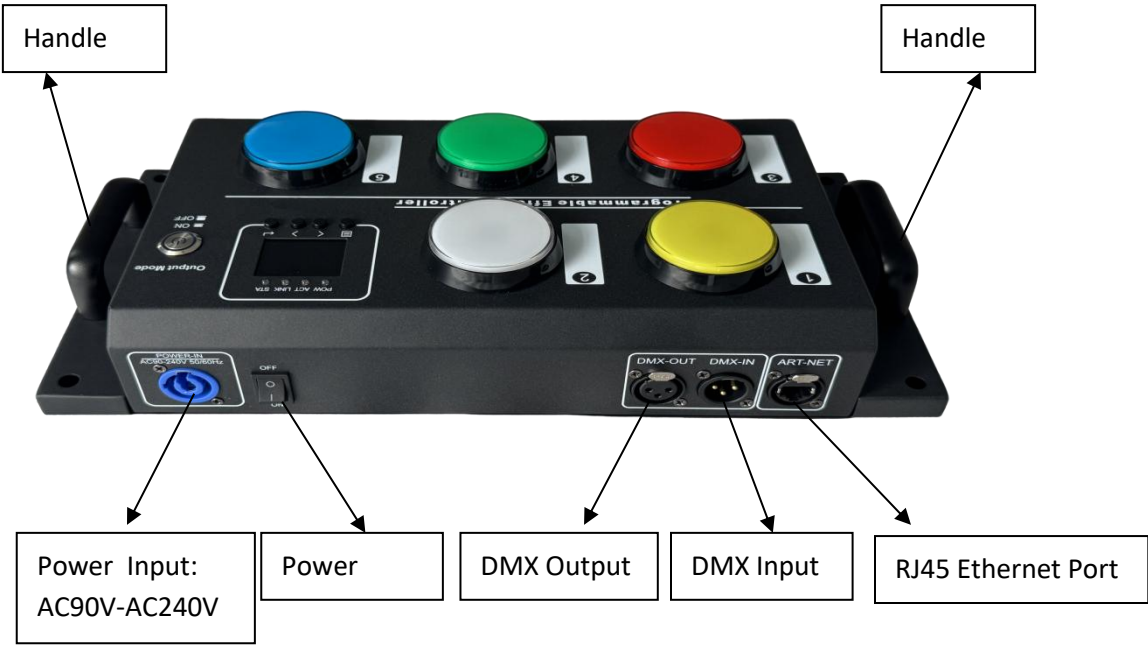
2、Menu Hierarchy Diagram



Panel Introduction

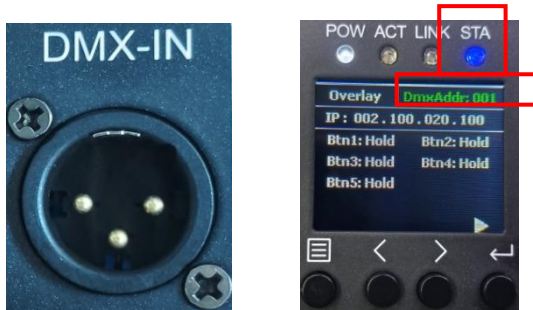


BLUE SEA LIGHTING



DMX Recording Operation

When a DMX signal is connected to the DMX-IN port, the DmxAddr option will turn green, and the STA indicator will light up (as shown in the picture).



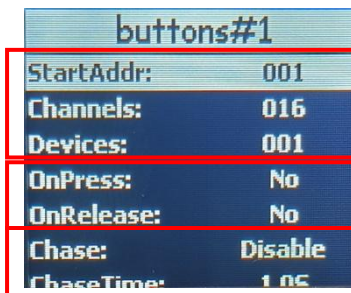
Press the “Enter” key to enter the main menu (as shown below).



Select the **Button Set** option and press the “Enter” key to enter the button setting menu.



Select the **Buttons #1** option and press the “Enter” key to enter the submenu.



Set the address, number of channels, and number of devices for recording or controlling equipment.

Enter the output content for when the record/manual edit button is pressed and released.

Set the chaser mode and time for the buttons.

(1) Start Addr

(2) Channels

(3) Devices

The starting address of the button is related to the number of channels and number of devices.

Example: To control 5 smoke machines, each smoke machine uses 2 channels, and the address starts from 001.

StartAddr: 001

Channels: 2

Devices: 5

Relationship between the three parameters: Maximum Start Addr = $512 - \text{Channels} \times \text{Devices}$

StartAddr Operation Method:

Select the **StartAddr** option and press the “**Enter**” key to enter modification mode. Use the **Left** “<” / **Right** “>” keys to select a value (1–512). Finally, long press the Enter key for 2 seconds to save the settings. The main menu font will flash, indicating that the settings have been saved successfully.

Channels Operation Method:

Select the **Channels** option and press the “**Enter**” key to enter modification mode. Use the **Left** “<” / **Right** “>” keys to select a value (1–512). Finally, long press the “**Enter**” key for 2 seconds to save the settings. The main menu font will flash, indicating that the settings have been saved successfully.

Devices Operation Method:

Select the **Devices** option and press the “**Enter**” key to enter modification mode. Use the **Left** “<” / **Right** “>” keys to select a value (1–512) to finish editing. Finally, long press the “**Enter**” key for 2 seconds to save the settings. The main menu font will flash, indicating that the settings have been saved successfully.

(4) On Press

buttons#1	
StartAddr:	001
Channels:	016
Devices:	001
OnPress:	Act
OnRelease:	No
Chase:	Disable
ChaseTime:	1.05

Items with no recorded content display: NO
Items with recorded content display: Act

Operation Method:

Select the **On Press** option and press the “**Enter**” key to enter the trigger content menu for button press (as shown below).

Select the “**Scene Record**” option and press the “**Enter**” key to enter recording mode. At this time, connect an external DMX signal, and push the pre-programmed single-step scene on the console. Long press the “**Enter**” key for 2 seconds to save the recording. The main menu font will flash, indicating that the settings have been saved successfully.

OnPress:	
SceneNo.:	Scene01
SceneRecord:	Record
DMX Channel:	001
Channel Value:	000
Clear	Scene 01

Long press the “Enter” key for 2 seconds to save the recording.

OnPress:	
SceneNo.:	Scene01
SceneRecord:	Save
DMX Channel:	001
Channel Value:	000
Clear	Scene 01

Can manually edit or modify the recorded values.

Select the option and long press the Enter key for 2 seconds to delete the recorded content.

(5) On Release

buttons#1	
StartAddr:	001
Channels:	016
Devices:	001
OnPress:	Act
OnRelease:	No
Chase:	Disable
ChaseTime:	1.05

Items with no recorded content: NO
Items with recorded content: Act

Operation Method:

Select the **On Release** option and press the “**Enter**” key to enter the trigger content menu for button release (as shown below).

Select the **Scene Record** option and press the “**Enter**” key to enter recording mode. At this time, connect an external DMX signal and push the pre-programmed single-step scene on the console. Long press the “**Enter**” key for 2 seconds to save the recording. The main menu font will flash, indicating that the settings have been saved successfully.

OnPress:	
SceneNo.:	Scene01
SceneRecord:	Record
DMX Channel:	001
Channel Value:	000
Clear	Scene 01

OnPress:	
SceneNo.:	Scene01
SceneRecord:	Save
DMX Channel:	001
Channel Value:	000
Clear	Scene 01

Long press the Enter key for 2 seconds to save the recording.

Can manually edit or modify the recorded values.

Select the option and long press the Enter key for 2 seconds to delete the recorded content.

(6) Chase

Note: The Chase effect is related to the number of devices.

The more devices, the better the chase effect.

Operation Method:

Select the **Chase** option and press the “**Enter**” key to enter modification mode. Use the Left “<” /

Right “>” keys to select the chase program. Finally, long press the “**Enter**” key for 2 seconds to save the settings. The main menu font will flash, indicating that the settings have been saved successfully.

(7) Chase Time

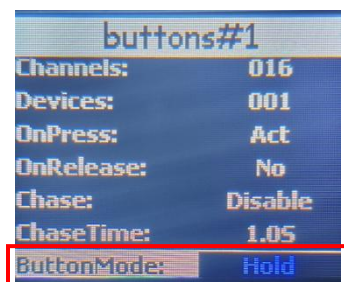
Note: The smaller the time value, the faster the speed.

Operation Method:

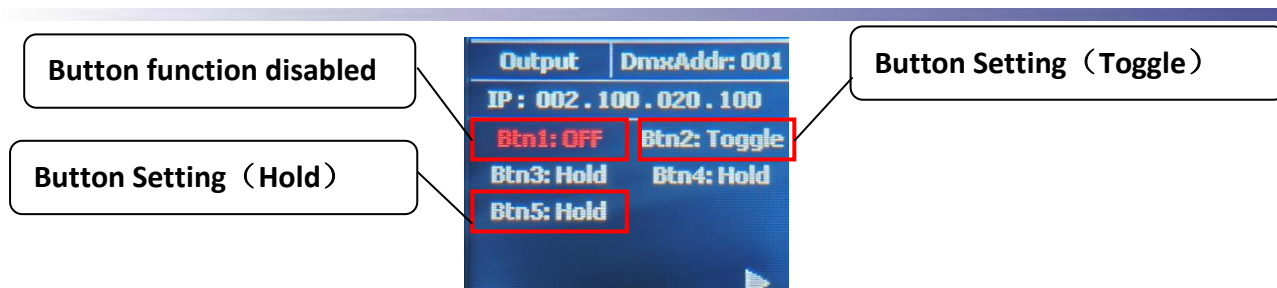
Select the **Chase Time** option and press the “**Enter**” key to enter modification mode. Use the **Left “<” / Right “>”** keys to adjust the chase time. Finally, long press the “**Enter**” key for 2 seconds to save the settings. The main menu font will flash, indicating that the settings have been saved successfully.

(8) Button Mode:

Button Mode	Button Trigger Mode	Suitable Scenarios
Hold	When the button is held pressed, the function is active. When the button is released, the function stops immediately.	Trigger Instant Effect
Toggle	Press once to turn ON, press again to turn OFF, and the state remains.	Suitable for switch operations: such as turning lights ON/OFF.
OFF	Button disabled, not activated.	In case of button failure



3 Button Modes



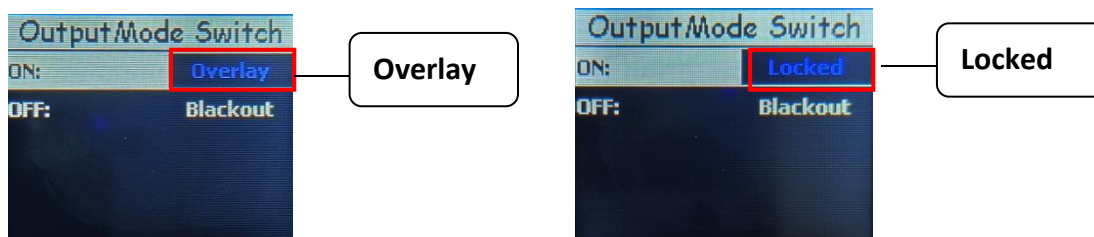
Operation Method:

Select the **Button Mode** option and press the “**Enter**” key to enter setup. Use the **Left** “<” / **Right** “>” keys to select **Hold** / **Toggle** / **OFF** to complete the setting. Finally, hold the “**Enter**” key for 2 seconds to save the settings. The main menu font flashes, indicating saving succeeded.

(9) Output Mode Switch



Select the **Output Mode Switch** option and press the “**Enter**” key to enter the submenu.



Operation Method:

Select the **ON** option and press the “**Enter**” key to enter. Use the **Left** “<” / **Right** “>” keys to select **Overlay** / **Locked** to complete the setting. Finally, hold the “**Enter**” key for 2 seconds to save

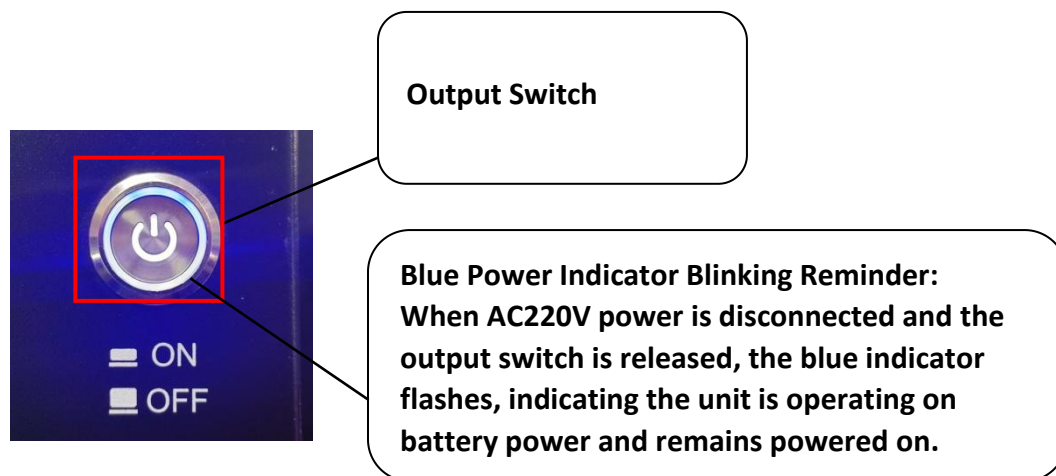
the settings. The main menu font flashes, indicating saving succeeded.

Description

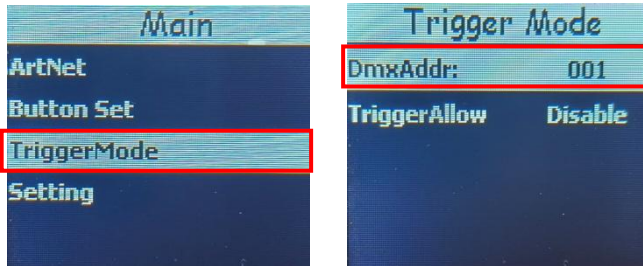
Set Output Switch Mode	ON (Press)	OFF (Release)
Overlay	Output button range channel DMX data / Relay & output external DMX / ArtNet / sACN data	All button range channels output blackout (button disabled). Relay and output DMX / ArtNet / sACN data outside the button range channels.
Locked	Lock the current output range channels of the button. External signals cannot control the current button range channels. Other channels outside the current button range are not affected and can be relayed and output.	All button range channels output full blackout (button non-controllable). Relay DMX / ArtNet / sACN data outside the button range channels.

Note : When using Locked, if any button has enabled “Chase” , the current output range channels of the button will overlay with external signals. For buttons without “Chase” enabled, the current output range channels are locked and cannot be controlled by external signals. Channels outside this range are not affected and can be relayed and output normally.

Blackout(Cannot be modified) —Output disabled: When the output switch button is in the released state: All button range channels output full blackout (button disabled). Relay DMX / ArtNet / sACN data outside the button range channels.



Trigger Mode



Operation Method:

Select the **Trigger Mode** option and press the “**Enter**” key to enter the setup menu.

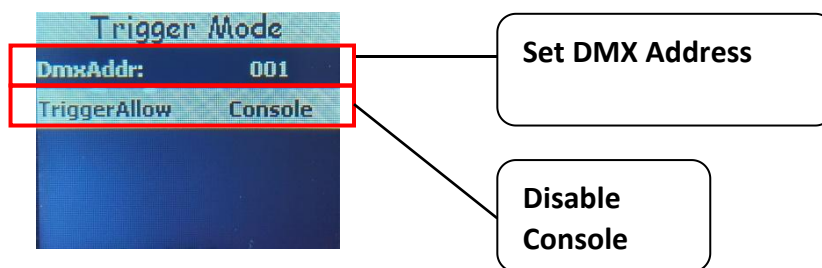
(1) Dmx Addr

Note: The device can be regarded as working in fixture mode here.

Operation Method:

Select the **Dmx Addr** option and press the “**Enter**” key to enter setup. Use the **Left “<” / Right “>”** keys to select a value (**1–512**) to complete the setting. Finally, hold the “**Enter**” key for 2 seconds to save the settings. The main menu font flashes, indicating saving succeeded.

(2) Trigger Allow



Operation Method:

Select the **Trigger Allow** option and press the “**Enter**” key to enter setup.

Use the **Left “<” / Right “>”** keys to select (**Disable / Console**) to complete the setting.

Finally, hold the “**Enter**” key for 2 seconds to save the settings.

The main menu font flashes, indicating saving succeeded.

DMX Channel Table (5CH)

Channel No.	Function	DMX Value Range		Function Description
		Min	Max	
1	Button 1	0	127	Off
		128	255	On
2	Button 2	0	127	Off
		128	255	On
3	Button 3	0	127	Off
		128	255	On
4	Button 4	0	127	Off
		128	255	On
5	Button 5	0	127	Off
		128	255	On

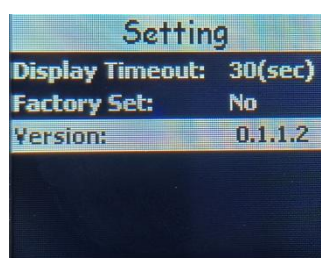


Setting

Operation Method:

Press the “**Enter**” key to enter the main menu (as shown below).

Select the Setting option and press the “**Enter**” key to enter the setup menu.



(1) Display Timeout

Screen Stay-On Time

Operation Method:

Select the **Display Timeout** option and press the “**Enter**” key to enter edit mode. Use the **Left “<”** / **Right “>”** keys to adjust the value. Finally, hold the “**Enter**” key for 2 seconds to save the settings. The main menu font flashes, indicating saving succeeded.

(2) Factory Set

Operation Method:

Select the **Factory Set** option and press the “**Enter**” key to enter edit mode. Use the **Left** “<” / **Right** “>” keys to select Yes. Finally, hold the “**Enter**” key for 2 seconds to confirm and save. The main menu font flashes, indicating restoration succeeded.

(3) Version

Note: Version number cannot be modified.

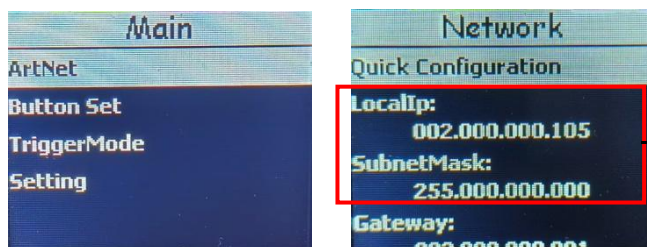
ArtNet Connection Settings

(1) Art Net

Press the “**Enter**” key to enter the main menu (as shown below).



Select the **ArtNet** option and press the “**Enter**” key to enter the network configuration submenu.



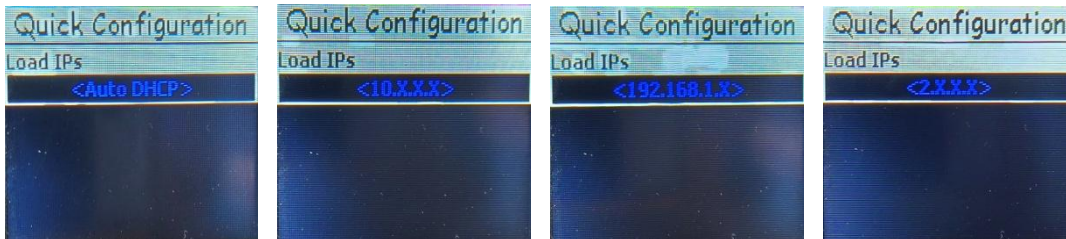
Only IP Address and Subnet Mask need to be set for general use.

Network Configuration

(1-1-1) Quick IP Configuration

Operation Method:

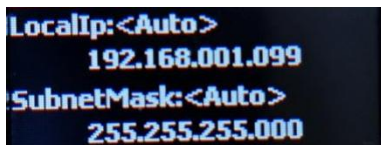
Select “**Quick Configuration**” and press the “**Enter**” key to enter the quick setup menu (as shown in Figure 1 below).



Press “**Enter**” again to enter quick configuration edit mode. Use the **Left** “**<**” / **Right** “**>**” keys to quickly select IP segments: 2.x.x.x, 10.x.x.x, 192.x.x.x (as shown below). Finally, hold the “**Enter**” key for 2 seconds to save the settings. The main menu font flashes, indicating saving succeeded.

(1-1-2) Local IP

Custom IP Setting



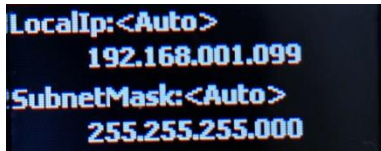
Operation Method:

Select the Local IP option and press the “**Enter**” key to enter edit mode. Use the “**Enter**” key + Left “**<**” or Right “**>**” keys to modify the value. Finally, hold the “**Enter**” key for 2 seconds to save the settings. The main menu font flashes, indicating saving succeeded.

Note: In the above operations: “**Enter**” key functions as Select/Save, Left “**<**” key as Value Increase, Right “**>**” key as Value Decrease.

(1-1-3) Subnet Mask

Custom Subnet Mask Setting



Operation Method:

Select the **Subnet Mask** option and press the “**Enter**” key to enter edit mode. Use the **Left “<”** or **Right “>”** keys to modify the value. Finally, hold the “**Enter**” key for 2 seconds to save the settings. The main menu font flashes, indicating saving succeeded.

(1-1-4) Gateway

Custom Gateway Settings(Generally not required, except for special applications)



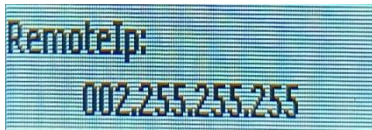
Operation Method:

Select the **Gateway** option and press the “**Enter**” key to enter edit mode. Use the “**Enter**” key + **Left “<”** or **Right “>”** keys to modify the value. Finally, hold the “**Enter**” key for 2 seconds to save the settings. The main menu font flashes, indicating saving succeeded.

Note: In the above operations: “Enter” key functions as Select/Save, Left “<” key as Value Increase, Right “>” key as Value Decrease.

(1-1-5) Remote IP

Custom Remote IP Settings(Generally not required, except for special applications)



Operation Method:

Select the **Remote IP** option and press the “**Enter**” key to enter edit mode. Use the “**Enter**” key + Left “<” or Right “>” keys to modify the value. Finally, hold the “**Enter**” key for 2 seconds to save the settings. The main menu font flashes, indicating saving succeeded.

Note: In the above operations: “**Enter**” key functions as Select/Save, Left “<” key as Value Increase, Right “>” key as Value Decrease.

(1-1-6) Ethernet MAC

Custom MAC Address Settings(Generally not required)



Operation Method:

Select the **Ethernet MAC** option and press the “**Enter**” key to enter edit mode. Use the “**Enter**” key + Left “<” or Right “>” keys to modify the value. Finally, hold the “**Enter**” key for 2 seconds to save the settings. The main menu font flashes, indicating saving succeeded.

Note: In the above operations: “**Enter**” key functions as Select/Save, Left “<” key as Value Increase, Right “>” key as Value Decrease.

DMX Universe



as shown in the figure

Operation Method:

Select the **DMX Universe** option and press the “**Enter**” key to view port information.

(1-2-1) Net: 0-127



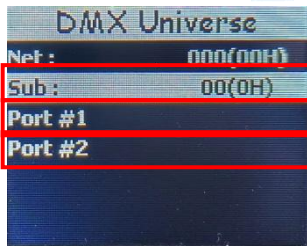
Note: When connected to a console, IP address settings are generally not required for normal use.

as shown in the figure

Operation Method:

Select the **Net: 000 (00H)** option and press the “**Enter**” key to enter edit mode. Use the **Left “<”** or **Right “>”** keys to modify the value. Finally, hold the “**Enter**” key for 2 seconds to save the settings. The main menu font flashes, indicating saving succeeded.

(1-2-2) Sub: 0-15



Note: When connected to a MA console, the subnet address is closely related to the patch line number.
For example: if patched to line 17, set the subnet address

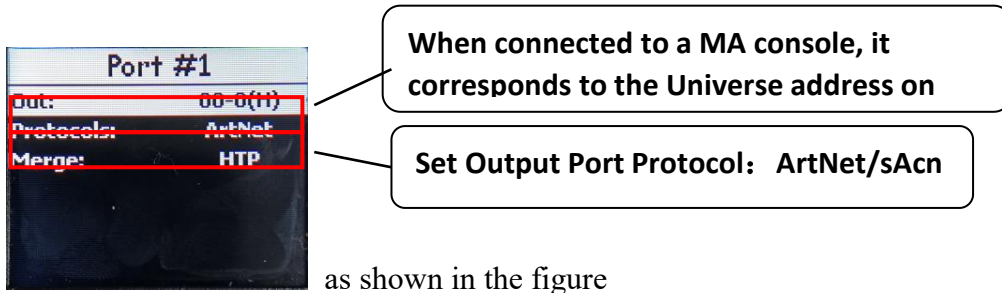
Port#1: Output

Port#2: Input

Operation Method:

Select the **Sub: 00 (0)** option and press the “**Enter**” key to enter edit mode. Use the **Left “<”** or **Right “>”** keys to modify the value. Finally, hold the “**Enter**” key for 2 seconds to save the settings. The main menu font flashes, indicating saving succeeded.

(1-2-3) Prot # 1-2



Operation Method:

Select **Port #1** and press the “**Enter**” key to view port information.

① OUT: 00

Operation Method:

Select the **Out: 00** option and press the “**Enter**” key to enter edit mode. Use the **Left “<”** or **Right “>”** keys to modify the value. Finally, hold the “**Enter**” key for 2 seconds to save the settings. The main menu font flashes, indicating saving succeeded.

② Protocols: ArtNet /sAcn

Operation Method:

Select the **Protocols: ArtNet /sAcn** option and press the “**Enter**” key to enter edit mode. Use the **Left “<”** or **Right “>”** keys to modify the value. Finally, hold the “**Enter**” key for 2 seconds to save the settings. The main menu font flashes, indicating saving succeeded.

③ Merge: HTP/LTP

Operation Method:

Select the **Merge: HTP/LTP** option and press the “**Enter**” key to enter edit mode. Use the **Left “<”** or **Right “>”** keys to modify the value. Finally, hold the “**Enter**” key for 2 seconds to save the settings. The main menu font flashes, indicating saving succeeded.

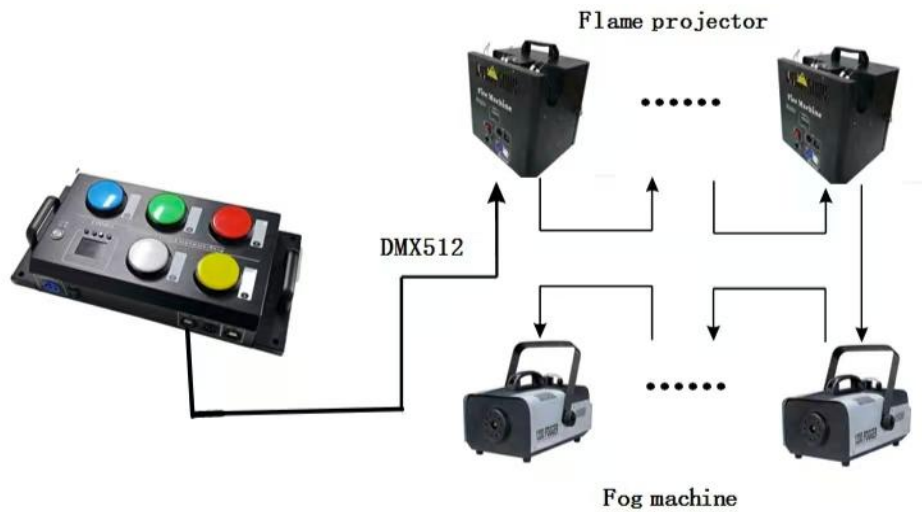
menu meaning:

Net:(0-7F)	Net Address (0–127 adjustable)
Sub :(0-F)	Subnet Address (0–15 adjustable)
Port#	Port Information Settings
Out:	Output Port Universe (0–15 adjustable)
In :	Input Port Universe (0–15 adjustable)
Protocols: ArtNet / sACN	
Merge:HTP / LTP	

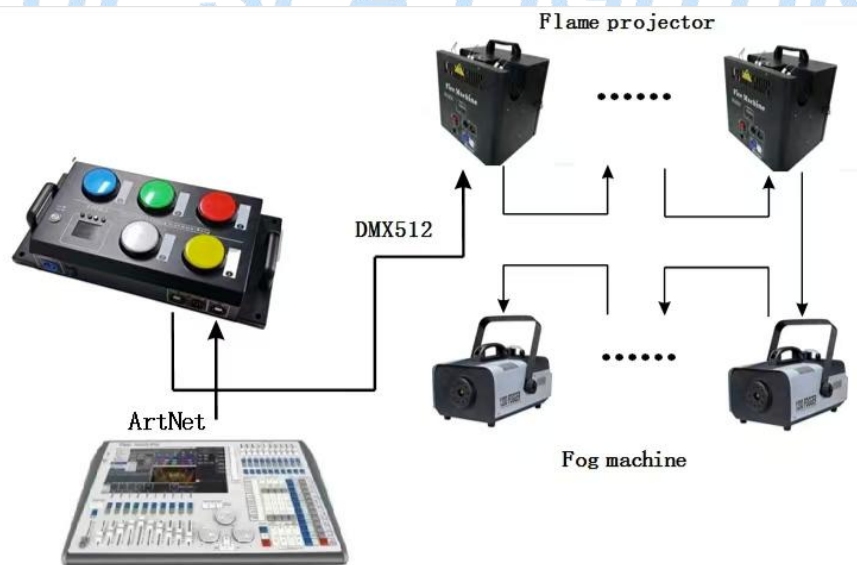
ArtNet Record Operation

- (1) Set parameters such as IP address, subnet mask, universe address correctly, then connect to the console (MA, Tiger Touch or other mainstream consoles).
- (2) Push the pre-programmed single-step scene on the console.
- (3) **Procedure for Triggering Program by Pressing Record Button:** Press the “Enter” key to enter the main menu. Select “Button Set”, then press “Enter”. Select “Button #1”, then press “Enter” to enter settings. Set parameters including “StartAddr” “Channels” and “Devices” (These three parameters should be set according to the actual channels of fixtures and number of controlled fixtures.) Select “On Press”, press “Enter”. Select “Scene Record”, press “Enter” to enter recording status. Long press “Enter” for 2 seconds to save the recording. The main menu text will flash, indicating saved successfully.
- (4) **Procedure triggered by releasing the record button:** Press the “Enter” key to enter the main menu. Select “Button Set”, then press “Enter”. Select “Button #1”, then press “Enter” to enter settings. Set parameters including “StartAddr” “Channels” and “Devices” (These three parameters should be set according to the actual channels of fixtures and number of controlled fixtures.) Select “On Press”, press “Enter”. Select “Scene Record”, press “Enter” to enter recording status. Long press “Enter” for 2 seconds to save the recording. The main menu text will flash, indicating saved successfully.

Stand-alone Control Diagram



External Console Online Control Diagram



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BLUE SEA LIGHTING

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