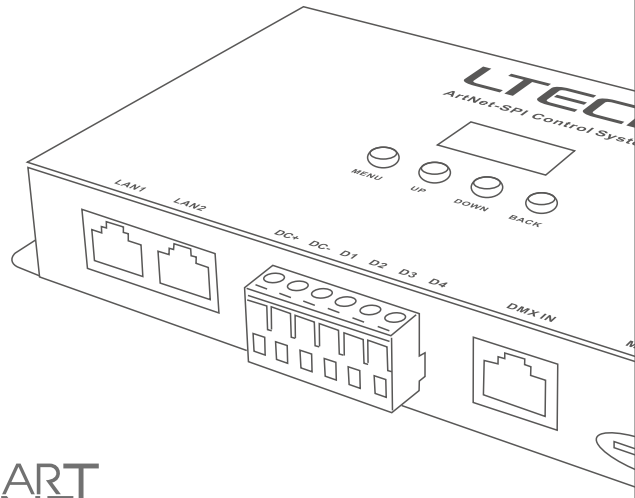
LTECH

# ArtNet-SPI Control System

Model: Artnet-SPI-4
Artnet-SPI-8




ART NET ETHERNET

Manual

# Product Introduction

- Ethernet Control System based on the ArtNet protocol.
- Convert the ArtNet network data package into SPI data.
- Adopting high-speed ARM processor, stable and reliable.
- With RJ45 network and DMX512 interface, support DMX management.
- With OLED screen and 4 keys, very easy for setting operation.
- Support firmware update function.
- Support recording function, support multiple device offline sync playback function.
- Support offline timing and loop playback.
- Supports serial/parallel connection of network cables.
- Supports static/dynamic IP settings.
- Compatible with the light software based on ArtNet protocol.
- Used in LED dot matrix and DMX512 stage lighting control.
- Offline synchronized playback does not need to specify the master and slave.
- Suitable for TV station recorded scene, stage performances, entertainment, building lighting and so on.

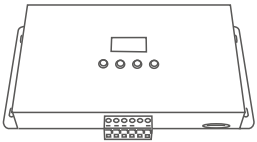
# Technical Specs

Artnet-SPI-4 / Artnet-SPI-8

| | | | |
|---|---|---|---|
| Input voltage : | 5~24Vdc | Screen: | OLED |
| Input signal: | Ethernet (ArtNet) | Isolation ethernet port: | Total isolation |
| Output signal: | SPI | Isolation power input: | Total isolation |
| SD card capability: | 8G | Working temperature: | -30℃~55℃ |
| DMX connection: | RJ45 | Dimension: | L170×W90×H25mm |
| Network connection: | RJ45 | Package size: | L192×W132×H50mm |
| Control: | Artnet-SPI-4: 680 pixels, 4 universe<br>Artnet-SPI-8: 1360 pixels, 8 universe | Weight (G.W): | 610g |

Compatible IC: TM1809/TM1804/TM1812/UCS1903/UCS1909/UCS1912/UCS2903/UCS2912/WS2811/WS2812/SK6812/TM1803/TLS3001/KL590/KL592D/WS2821/TM1829LS MBI6120/GW6205/GS8206(BGR)/SM16703/UCS2904/UCS8904B/SK6812(RGBW)

# Package Contents



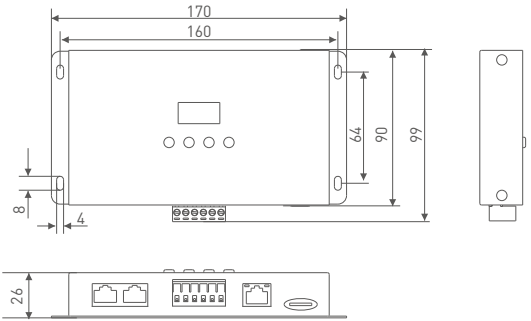
Control system 1pcs

SD card (8G) 1pcs

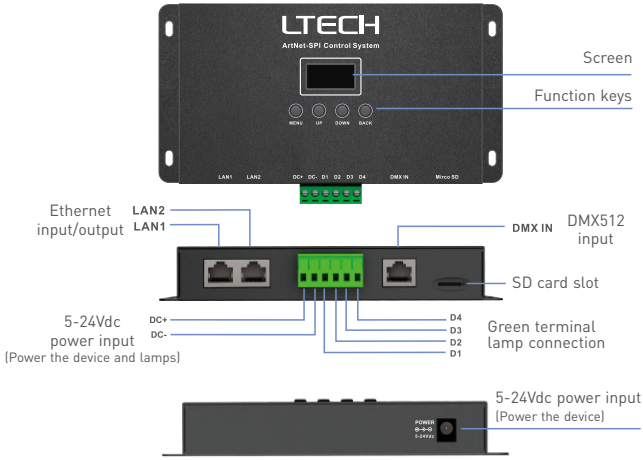
Manual 1pcs

## Product Size

Unit: mm



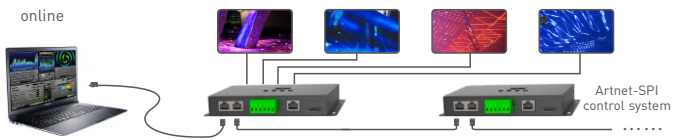

## Main Component Description



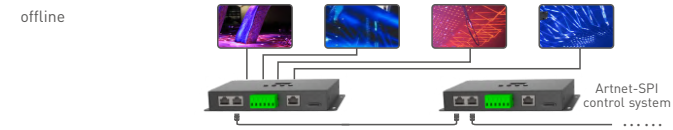
# Wiring Diagram

1. Connection in series

online



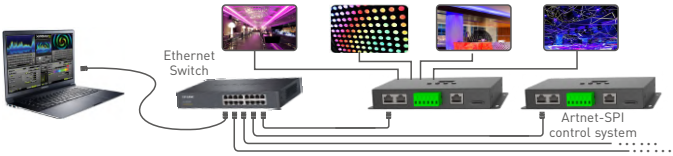

offline



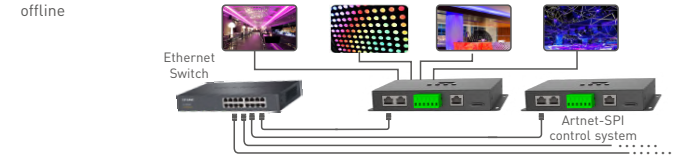

* Offline synchronized playback no need to specify the master and slave.

2. Connection in parallel

online




offline




* Offline synchronized playback no need to specify the master and slave.

* Parallel connection is recommended for large number of devices.

# Connect ArtNet Control System to Computer

This product is compatible with all the ArtNet software in the market, here take MADRIX as an example:

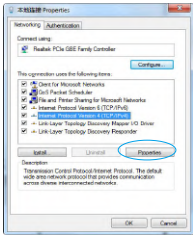
1. Install the Madrix 3 software in the computer, the icon on the desktop :

MADRIX 3

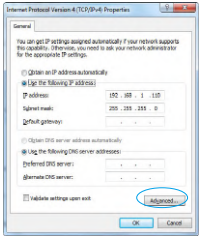
2. Use the equipped adapter to power ArtNet control system

3. Connect ArtNet control system to computer via the cable.

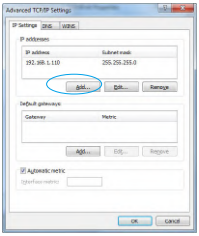
4. IP Setting: This control system is compatible with random network segment. According to the ArtNet protocol, 2.X.X.X or 10.X.X.X can be added in the computer ( X means arbitrary value), methods as below:



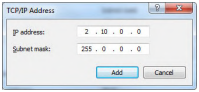
4.1 Open the Network, click "Properties" button of the TCP/IPv4 protocol.



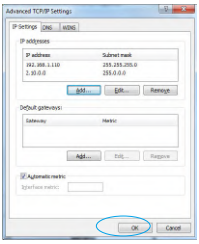
4.2 Click "Advanced".



4.3 Click "Add".



4.4 Add the IP address 2.X.X.X or 10.X.X.X (X could be arbitrary value).



4.5 Interface of adding successful, click "OK" and exit.

5. Open Madrix 3 software, choose"preferences">" device manager" from menu.

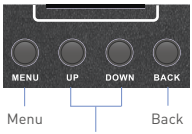
6. In "device manager" dialog, choose "ArtNet" tab, tick "enable" and click search . Artnet-SPI-4 / Artnet-SPI-8 will be searched.

7. Click the tab of "DMX devices", set port status to "ON" if connected successfully. Now, you can use computer to control lamps via Artnet-SPI-4 / Artnet-SPI-8.

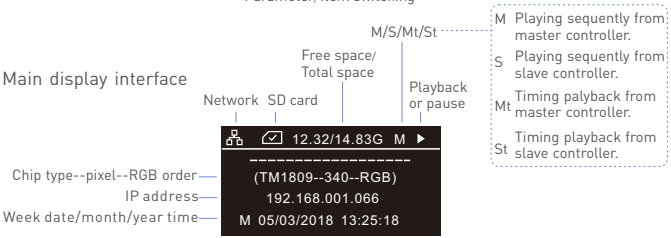
✻ MADRIX® is registered trademarks of Inoage GMbH Co., Inc. in Germany.

# LCD Screen Interface Diagram

## Key function

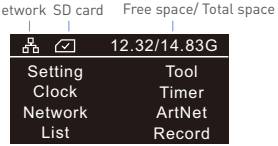



## Main display interface



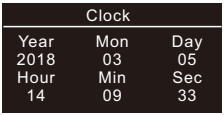

Press "MENU" key to enter main menu.
Press "BACK" to playback/pause.

## Main menu



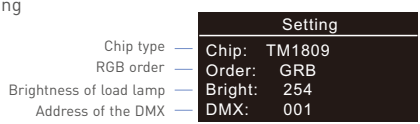

Press "UP" key or "DOWN" key" to switch item.
Press MENU" key to enter submenu.

## Clock



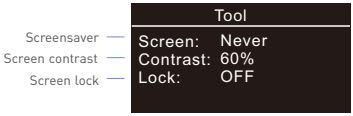

Press "MENU" key to switch item.
Press "UP" key or "DOWN" key to adjust parameter.

## Setting




Press "MENU" key to switch item.
Press "UP" key or "DOWN" key to adjust parameter.

## Tool

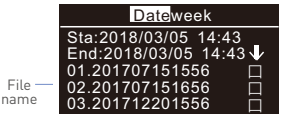



Press "MENU" key to switch item.
Press "UP" key or "DOWN" key to adjust parameter.

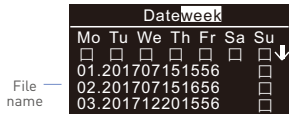
## Timer

Press "MENU" key to switch item, Press "DOWN" key to enter submenu.
Press "UP" key start or stop the timer, tick ✓ in the box means start.
(only effective for timer which has been set).

Data submenu



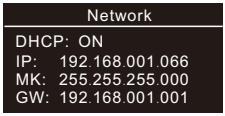

Week submenu




Press "MENU" key to switch item.
Press "UP" key or "DOWN" key to select file, tick ✓ in the box means select it.

## Network

DHCP ON: dynamic IP
DHCP OFF:static IP




Press "MENU" key to switch item.
Press "UP" key or "DOWN" key to adjust parameter.

* Dynamic IP's parameters are automatically updated and cannot be changed manually.

## List

File name

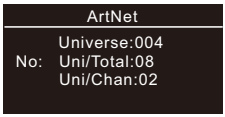
Press "MENU" key to switch item.
Press "UP" key or "DOWN" key to tick ✓ in the box (means select this file).

## Record

Press"UP" key or "DOWN" key to switch ▶ ⏸.
(▶ pause ⏸ record)

## ArtNet

ArtNet space parameters.

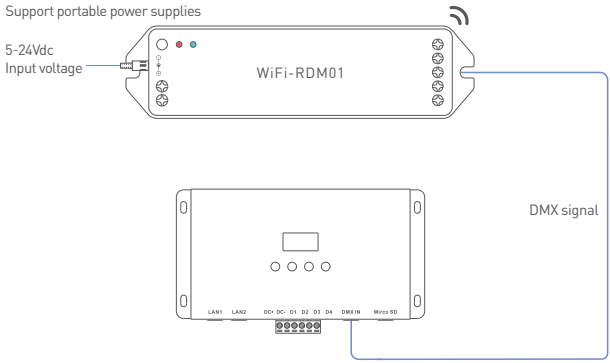



Press"UP" key or "DOWN" key to adjust parameters.

## Work with the RDM Programmer

The ArtNet -SPI Control System can work with a DMX address programmer that follows the standard RDM protocol.

It is recommended to use LTECH RDM Programmer (Model: WiFi-RDM01), which allows remote browsing, parameter setting and DMX address setting.




## Mobile App Interface for the RDM Programmer

Download the App with your mobile phone and connect the RDM Programmer successfully, then you are allowed to set parameters through the APP. Please refer to the WiFi-RDM01 manual for more details.

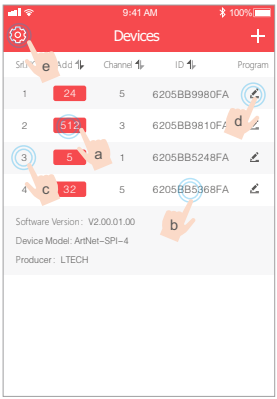
a. At the homepage, click "Add" of the device you are going to operate to edit the address,as shown below in the interface.

b. Click "ID" to get more details for devices.

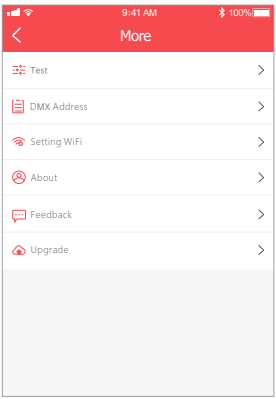
c. Click "No" to issue an recognizing command.

d. Click "✎" to view/modify parameters, including modifying frequency, mode, curve, querying output power and modifying current.

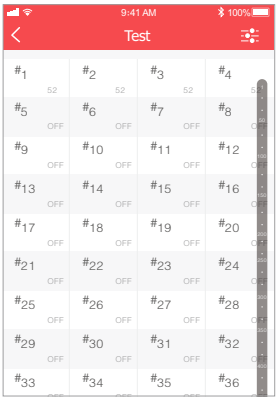
e. Click "⚙" in the upper left corner to access the settings which allows you to test, edit DMX addresses, set WiFi for devices and upgrade firmware.



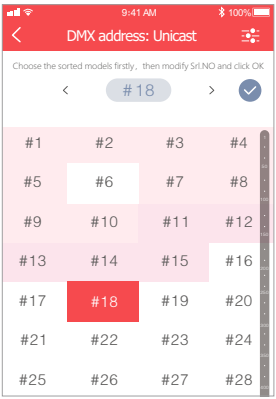

Home page




Setting




Test



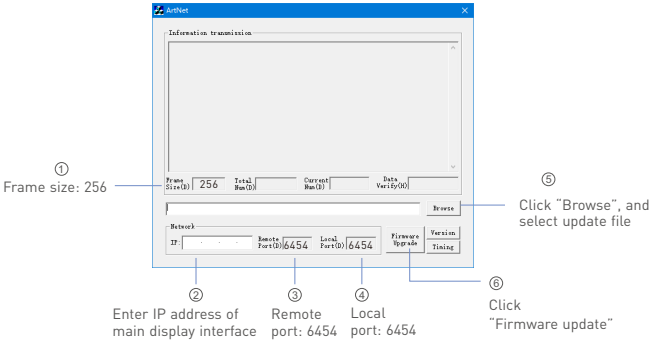

DMX address setting

# Firmware Update

Please connect ArtNet control system to computer, and copy update file to computer.

Method 1. Firmware update with software.

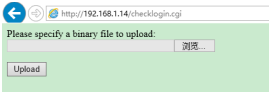
Open software in your computer, enter follow interface and update firmware.




Method 2. Firmware update with explorer.

Open explorer, enter "http://192.168.1.14" in the address bar, "login" interface appeared, enter user name"LTECH", password "123456", then click "login" button.

Enter the following interface, click "browse" button to select the update file, then click "upload" button to update, if "update done!" appeared means update successful.




✻ For firmware update, please contact us for update software and documents.

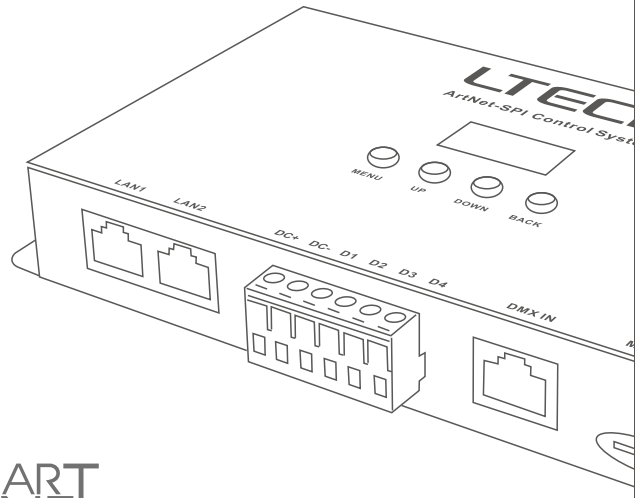
LTECH

www.ltech-led.com

LTECH

# ArtNet-SPI 控制系统

型号：Artnet-SPI-4
Artnet-SPI-8




ART NET ETHERNET

使用说明书

# 产品介绍

- 基于Artnet协议的以太网络控制系统；
- 将网络上Artnet协议中的数据包转换为SPI数据；
- 采用高速ARM处理器，工作稳定可靠；
- 提供RJ45网络接口及RJ45的DMX512接口，支持DMX管理；
- 采用OLED液晶屏，配备4个按键，设置操作方便直观；
- 支持固件更新功能；
- 支持录制功能，支持多台脱机同步播放功能；
- 支持脱机定时播放及循环播放；
- 支持网线的串/并连2种连接方式；
- 支持静态/动态IP设置；
- 可以与兼容Artnet协议的灯光控制软件配合使用；
- 用于LED点阵以及需要大量DMX512数据的舞台灯光控制网络；
- 脱机同步播放无需指定主从机；
- 适用于电视台录播现场、舞台演出、娱乐场所、楼宇亮化等。

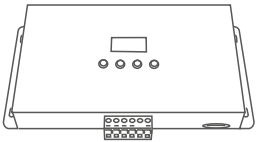
# 性能参数

Artnet-SPI-4 / Artnet-SPI-8

| | | | |
|---|---|---|---|
| 电源输入: | 5-24Vdc | 屏幕: | OLED |
| 输入信号: | 以太网(ArtNet) | 网口隔离: | 总隔离 |
| 输出信号: | SPI | 电源隔离: | 总隔离 |
| SD卡容量: | 8G | 工作温度: | -30℃~55℃ |
| DMX连接: | RJ45 | 产品尺寸: | L170×W90×H25mm |
| 网络连接: | RJ45 | 包装尺寸: | L192×W132×H50mm |
| 控制: | Artnet-SPI-4: 680像素, 4 universe<br>Artnet-SPI-8: 1360像素, 8 universe | 重量(毛重): | 610克 |

兼容IC: TM1809/TM1804/TM1812/UCS1903/UCS1909/UCS1912/UCS2903/UCS2912
WS2811/WS2812/SK6812/TM1803/TLS3001/KL590/KL592D/WS2821/TM1829LS
MBI6120/GW6205/GS8206(BGR)/SM16703/UCS2904/UCS8904B/SK6812(RGBW)

# 包装内容



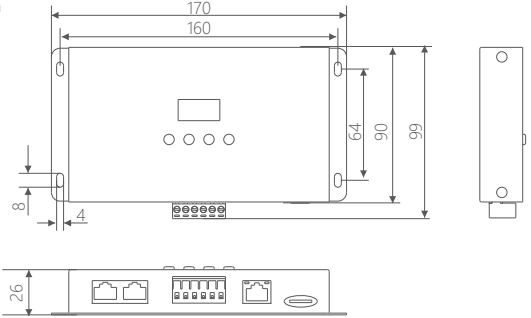
控制系统 1台

SD卡(8G) 1张

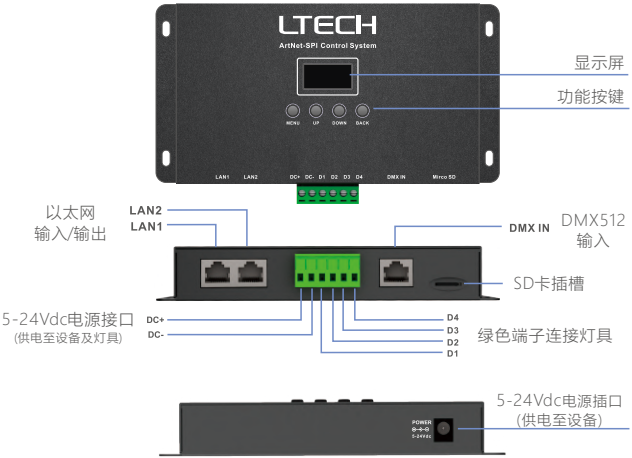
说明书 1本

# 尺寸图

单位: mm



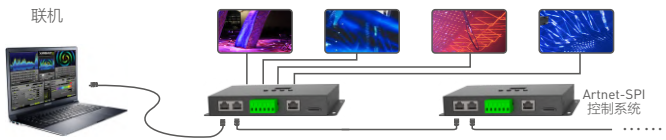

# 产品说明



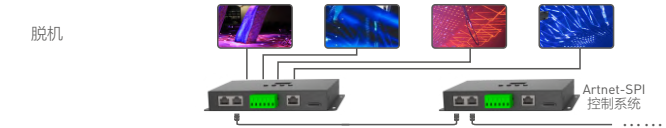
# 连接示意图

## 1、串联示意图

联机



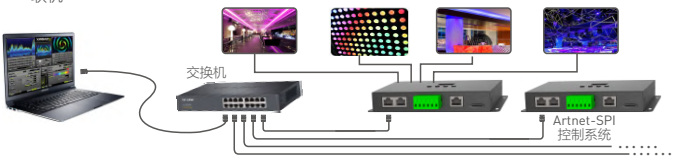

脱机



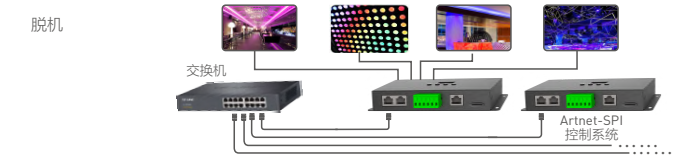

✻ 脱机同步播放无需指定主从机。

## 2、并联示意图

联机




脱机




✻ 脱机同步播放无需指定主从机。

✻ 设备数量较多时，推荐使用并联连接方式。

# ArtNet控制系统连接电脑

本产品支持市面上所有的ArtNet软件, 下面以MADRIX为例进行说明:

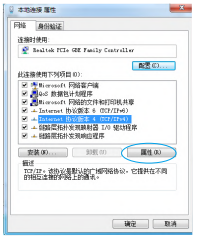
1、安装操作软件: 电脑上安装MADRIX 3软件, 装好后图标显示为:

MADRIX 3

2、ArtNet控制系统连接电源;

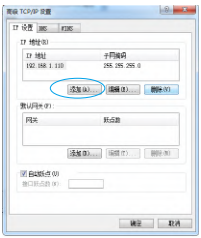
3、用网线将ArtNet控制系统和电脑连接好;

4、IP设置: 本转换器支持任意网段的设置。根据Artnet协议建议，请在电脑添加2.X.X.X或10.X.X.X网段 (X表示任意数值), 方法如下:



(1) 打开网络，点击TCP/IPv4协议的"属性"按钮

(2)点击"高级"按钮



(3) 点击"添加"按钮

(4) 添加2.X.X.X或10.X.X.X的IP地址(X为任意数值)

(5) 添加成功后的界面，确定退出

5、打开MADRIX 3软件，在菜单上选择"首选项"/"设备管理器"；

6、在"设备管理器"对话框中，选择"ArtNet"选项卡, 勾选"启用"，并点击搜索 ；电脑将搜索到ArtNet-SPI-4/ArtNet-SPI-8

7、切换至"DMX设备"选项卡, 连接成功, 将端口状态设置为"开"。现在可以实现电脑通过ArtNet-SPI-4/ArtNet-SPI-8控制灯具了。

✻ MADRIX® 为德国 inoage GmbH公司的注册商标。

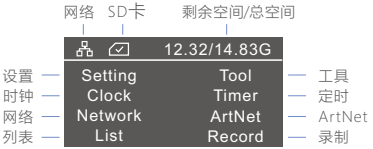
# 显示屏界面

## 按键说明

## 主界面

按“MENU”键进入主菜单，按“BACK”键播放/暂停

## 主菜单

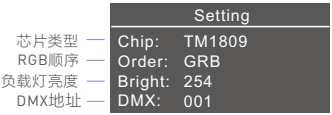



按“UP”键或“DOWN”键切换条目，按“MENU”键进入下级菜单

## 时钟

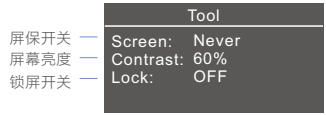
按“MENU”键切换条目，按“UP”键或“DOWN”键调整参数

## 设置



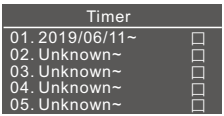

按“MENU”键切换条目，按“UP”键或“DOWN”键调整参数

## 工具




按“MENU”键切换条目，按“UP”键或“DOWN”键调整参数

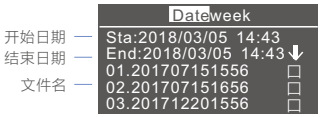
## 定时



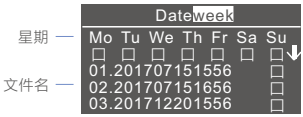

按“MENU”键切换条目，按“DOWN”键进入子菜单

按“UP”键启动或停止该定时器，在 ☐ 内打勾表示启动
（仅对设置过的定时有效）

日期子菜单



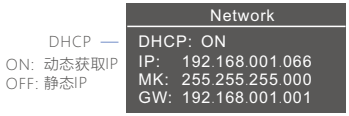

星期子菜单




按“MENU”键切换条目。

按“UP”或“DOWN”键选择需播放的文件，在 ☐ 内打勾表示选中

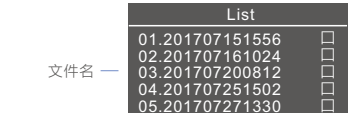
## 网络




按"MENU"键切换条目，按"UP"键或"DOWN"键调整参数

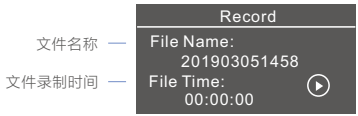
✻ 动态获取IP时参数自动更新，不可手动更改

## 列表




按"MENU"键切换条目，
按"UP"键或"DOWN"键在☐内打勾（表示选择此文件）

## 录制




按"UP"键或"DOWN"键切换 ▶⏸（▶ 暂停 ⏸ 正在录制）

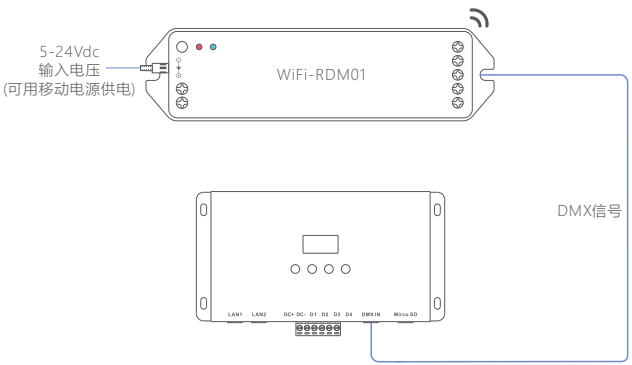
## ArtNet

按"UP"键或"DOWN"键调整参数

# 搭配RDM编辑器使用

ArtNet-SPI控制系统可以与遵从标准RDM协议的地址编辑器配合使用。

建议使用LTECH的RDM编辑器(型号WiFi-RDM01)，可实现手机远程浏览、设置参数、设置DMX地址等功能。




# RDM编辑器APP界面介绍

手机下载APP, 与RDM编辑器连接成功后, 即可通过APP设置参数, 具体请参看WiFi-RDM01使用说明书。

a. 在首页界面, 点击对应设备的 "地址" 方框即可编辑设备地址;

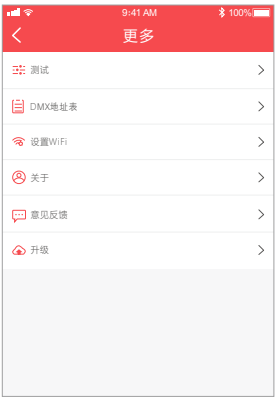
b. 点击 “标识符” 出现设备详细信息;

c. 点击序号发出识别命令;

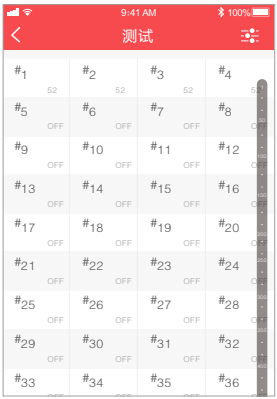
d. 点击编程图标, 可以查看/修改参数。包括修改频率、模式、曲线、查询输出功率、修改电流等功能;

e. 点击右上角设置 ⚙ 按钮, 进入设置界面。可以进行测试、编写DMX地址、设置设备工作的WiFi、固件升级等。

首页




设置




测试

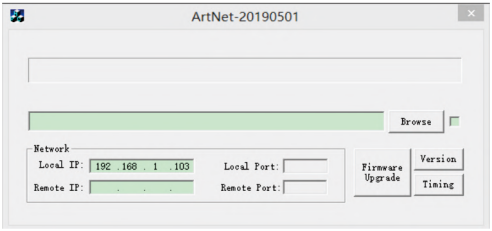
DMX地址设置

# 固件升级

请将本产品与电脑用网线连接好，并将升级文件拷贝至电脑。

方法1、使用软件升级固件

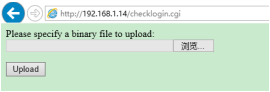
在电脑上打开软件 ，进入以下界面，进行固件升级。




方法2、使用浏览器升级固件

打开浏览器，在地址栏输入"http://192.168.1.14"，出现"login"界面，输入用户名"LTECH"，密码"123456"，然后点击"login"按钮。

进入以下界面，点击"浏览"按钮选择升级文件，再点击"upload"按钮进行升级，如界面显示"update done!"表示升级成功。




✻ 如需固件升级，请联系我们索取升级软件及升级文件。

LTECH

www.ltech.cn