

LTECH

LT-600 LED Lighting Control System



FC CE RoHS 5-Year Warranty

LT-600 lighting control system is our latest launch of a world's advanced LED lighting products video display control system. LT-600 kernel is VLSI. It can achieve computer's simultaneously play, offline video on demand, WiFi wireless transmission, automatic timing control and its exterior connect with DMX console to reach the world's first 5 in 1 function. Achieving synchronization/offline seamlessly switch, no need any splitter. Online control doesn't need to add DVI display adapter and send cards, easy to install, matching software's function perfect. Easy to operate. Compatible with a variety of LED driving IC; break through traditional rule of cabling restrictions, support a variety of any cabling's abnormal lighting project, make the controlling cabling more flexible, apply to any indoor or outdoor LED lights online / offline control. Advanced color grey level processing technology, consistent with human eye's visual sensory, display effect will be more vivid, higher brightness, richer color. Let your LED lights effect performance thoroughly, one-upmanship!

1. Specifications:

LT-600 LED Lighting Control System

Working voltage:	12Vdc (with a power supply adapter)
Output signal channels:	16 channels
SPI output:	Max 1364 pixel×16CH 21824 pixel
DMX output:	Max 170 pixel×16CH 2720 pixel
Input & output interface:	RJ45
Grey level:	Max 65536 scale (64K)
Refreshing frequency:	60Hz~3000Hz
Online transmission mode:	TCP/IP standard internet protocol
Off-line storage media:	SD memory card
SD card capability:	Max. 2GB
The 3th interface:	DMX512/1990 Protocol
Operating system:	Support Chinese and English Windows 2000/2003/XP/Vista/Windows 7/10
Product size:	L203×W125×H47(mm)
Packing size:	L267×W138×H88(mm)
Weight:	920g(N.W.) 1450g(G.W.)

2. Features:

- One set controller collect 5 kinds major function, which reached by previous multiple controllers.
 - Ethernet real time computer control via synchronous display, supporting WiFi wireless transmission.
 - Offline play stored programme in SD card, stored programme, speed chosen and other functions will be seen with half an eye on the LCD.
 - Compatible with DMX protocol, connecting DMX console to build lighting control network.
 - Support WiFi wireless transmission, suitable for special occasion, no wiring needed.
 - Supporting timing display. Realize display different programs, no matter on working day or weekend.

- Output DMX signal directly, and controlling various LED driving chips, The LED lights base on the following IC can be controlled: 74HC595, 6B595, MBI5026, DM134, ZQ9712, LPD6803, LPD6813, LPD1101, D705, UCS6909, UCS6912, UCS1903, UCS1909, UCS1912, UCS2903, UCS2909, UCS2912, WS2801, WS2803, WS2811, WS2812, WS2812b, HL1609, SM16716, SD600, P9813, LPD8803, LPD8806, LPD8809, LPD8812, TLS3001, TLS3002, TLS3003, TM1803, TM1804, TM1809, TM1812 etc..
- LED lights not only in accordance with the rule of cabling, but also support a variety of any cabling's abnormal lighting project, easy to operate via setting software.
- Extra large control capability, 16 channels signal output, Max. control 32768 full color pixels per LT-600. Support network synchronization of multiple controllers, multiple networked can control max. 250,000 full-color pixels.
- On-line controlling adopt universal 10/100/1000MBPS network interface, with TCP/IP standard Ethernet protocol, accommodate to wide range. Reliable communication, support WiFi wireless network transmission and real-time simultaneous display.
- Adopting advanced image processing technology. Online synchronous play doesn't need to add DVI display adapter or send card, any desktop and laptop can control it, convenient for project's debugging and demonstration.
- Adopting the way of network synchronization, synchronous controlling of multiple can be achieved through network switch. The transmission distance will be unlimited.
- Animation, video files converted generate ultra-fidelity off SD card's read files. ultra-small size, let the time of request programmes longer. And the content more affluent, SD card is easy to play the animation, either pull down and then use card reader to update, can also be updated remotely via Ethernet.
- Advanced color grey level processing technology, consistent with human eye's visual sensory, display effect will more vivid, higher brightness, richer color. Effectively remove the tooth angle produced by the floating line in video, show the smooth and natural image.
- Perfect software function, simple to operate, built-in video player, support most media format. User can compile various picture, texts, cartoon, video as programmes that will be present. Can input any text display in the process of play. Support viewfinder read the display on screen directly. Breakthroughing the restrictions to code stream format, play format file at will. Achieve split screen display, can divide screen at will. Switching Chinese and English version freely.

3. Spare Parts:

- | | |
|---------------------------|--------|
| 1. Network cable | 2 pcs |
| 2. Signal cable converter | 16 pcs |
| 3. Power supply adapter | 1 pcs |
| 4. SD memory card | 1 pcs |
| 5. SD card reader | 1 pcs |



Network cable



Signal cable converter



Power supply adapter

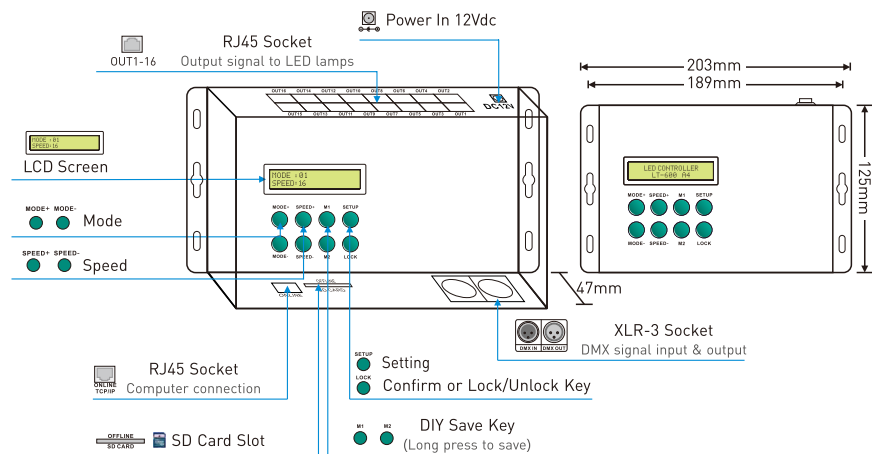


SD memory card



SD card reader

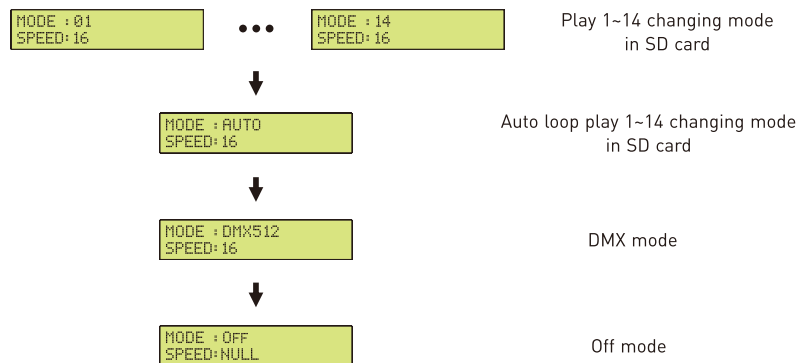
4. Product Diagram:



5. Offline Operating Instructions:

There are 8 function keys on the controller: MODE+/MODE-, SPEED+/SPEED-, M1/M2, SETUP, LOCK

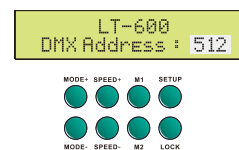
5.1 Press MODE+/MODE- to switch:



5.2 Long press LOCK key to lock/unlock the keypad:

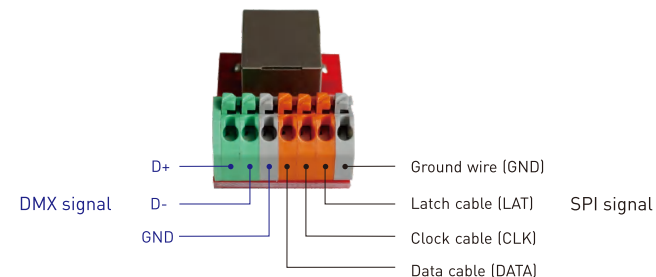


5.3 Press SETUP key to setup DMX address:



Press MODE+/- to adjust the hundred numbers.
Press SPEED+/- to adjust the ten digit numbers.
Press M1/M2 to adjust the single digit numbers.
Press LOCK to confirm.

6. Signal Cable Definition:



7. Compatible with Various IC:

Connection	Signal cable	Support IC Model	Software IC Option
	2 cables DATA GND	TM1803, TM1804, TM1809, TM1812, UCS1903, UCS1909, UCS1912, UCS2903, UCS2909, UCS2912, WS2811, WS2812, WS2812B, GS8206(BGR), SM16703	1804/1812
		TLS3001, TLS3002, TLS3003	3001/3002
	3 cables DATA CLK GND	LPD6803, LPD1101, D705, UCS6909, UCS6912	6803/D705
		WS2801, WS2803	2801/2803
		SD600	SD600
		P9813	P9813
		SM16716	16716
	4 cables DATA CLK LAT GND	LPD8803, LPD8806, LPD8809, LPD8812, LPD6813	8803/8806
		74HC595, 6B595, MBI5026, DM134, ZQ9712	RGB
	3 cables D+ D- GND	DMX512/1990	DMX512

8. Install and Uninstall the Software:

8.1 System Requirements

System Versions: □ Chinese/English Windows 2000/2003/XP/Vista/Win7/Win 10.

Interface type: RJ45 Ethernet interface.



8.2 Software Installation

Please use the incidental SD card reader in the product packing box to read the installation file "LED-Player_V7.4.exe". Double click to run and installation according to the hint.

8.3 Software Uninstall

Uninstall the software with the operating system's uninstall function, or with the direct uninstall program of the operating system.

8.4 Software Running

Double click to the generated shortcut:



Software running interface as right,

the interface can be displayed or hidden.



Software running interface

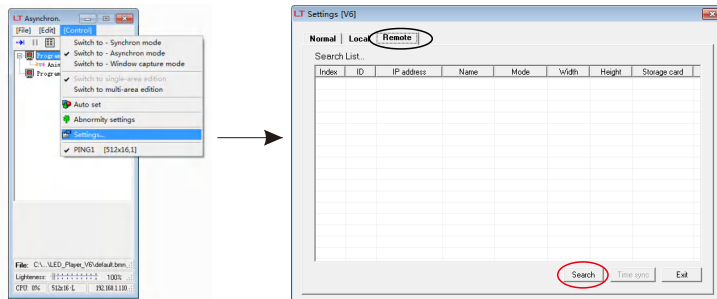
9. How to Use The Software:

Attn: Please connect the LT-600 controller with computer directly or through a switch/router.

9.1 Parameter Setting:

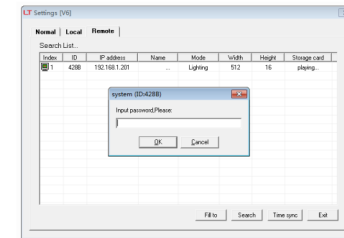
9.1.1 Search controller

Click [Control] menu and select [Settings], then click [Search] on the pop-up interface to search the connected LT-600 controller list.

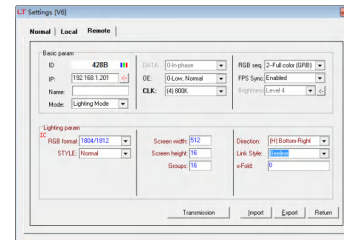


9.1.2 Enter the main interface of setting

Double click the LT-600 controller to be controlled, enter "led888" as password to the main interface of setting.



Password input dialog box

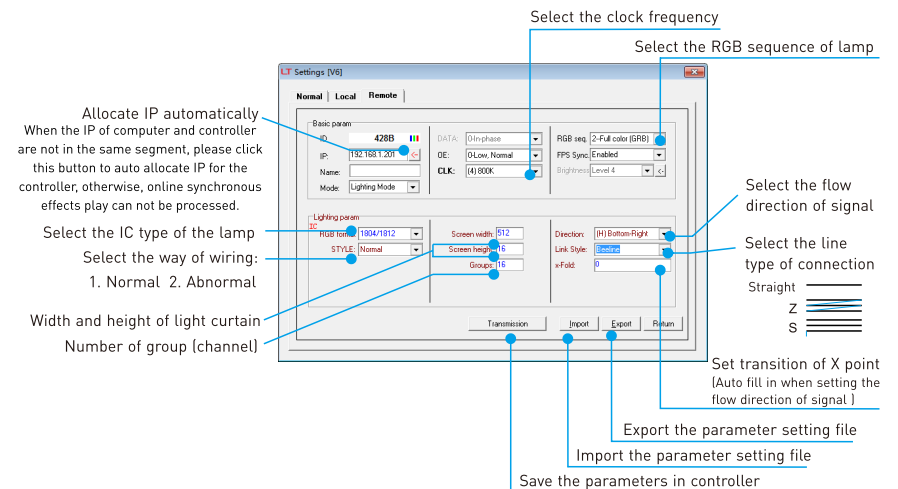


Main interface of setting

9.1.3 Setting parameters

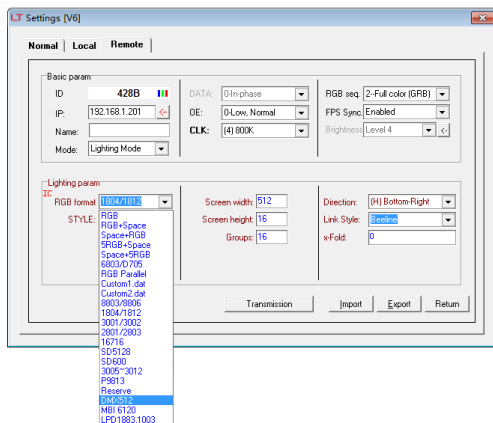
Set parameters in the main interface of setting, then click [Transmission] to save the parameters on the controller.

Attn: For abnormal wiring, the file should be placed under the root directory of software installation.



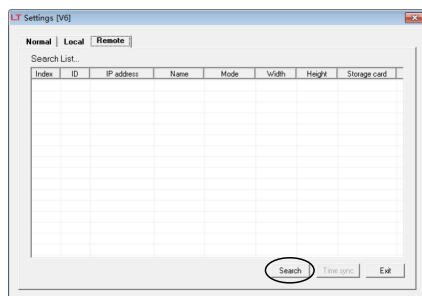
Main interface of setting

If the signal is DMX512, please select it in the [RGB format].

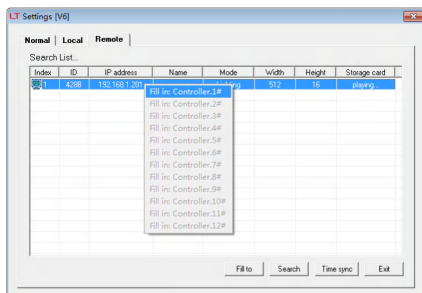


9.1.4 Fill in controller

After setting the correct parameters , click [return] button on the main interface of setting interface to the search interface, click [search] button, then select [fill in controller 1 #] on the right-click menu of the listed controller, enter "Computer parameter setting" interface.



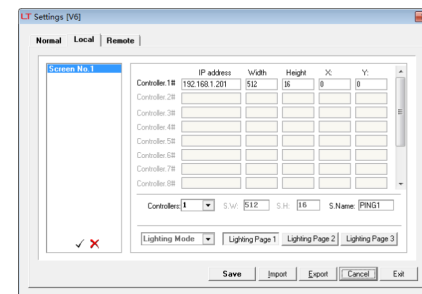
Search controller



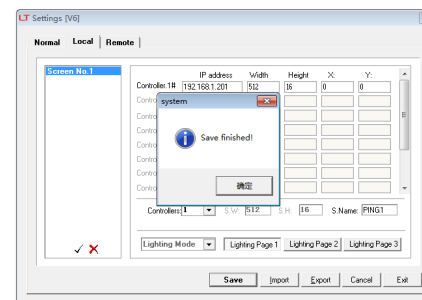
Fill in controller

9.1.5 Save computer parameter setting

Click [save] button on the [computer-setting] and then close the window.



Computer parameter setting

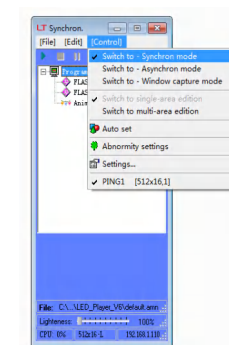


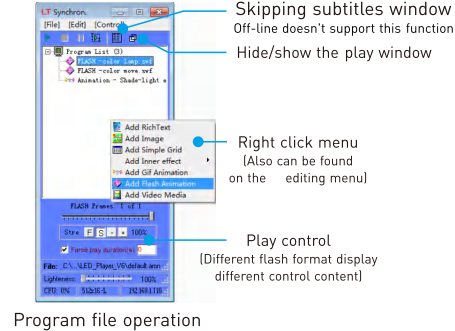
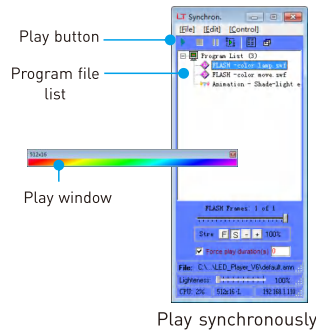
Save the parameter of computer setting

9.2 Play program:

9.2.1 Online synchronous mode

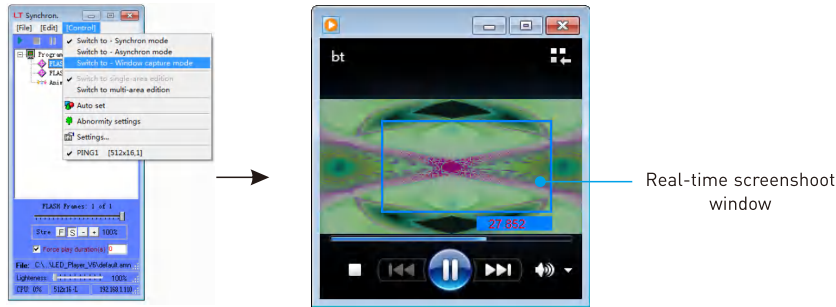
Click [Control] menu and choose [switch to - synchronous mode], under this mode, computer and controller play flashes, pictures, videos, and skipping subtitles synchronously.





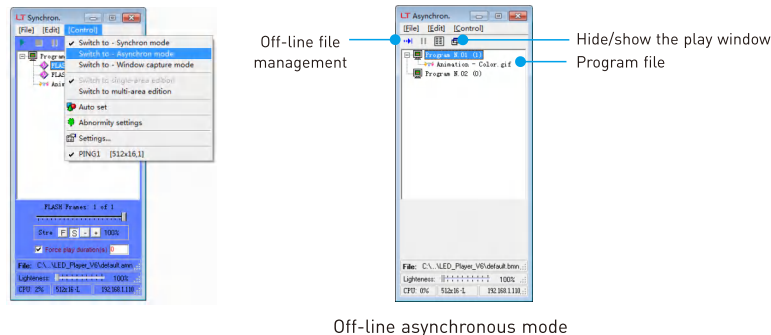
9.2.2 Windows capture mode

Click [Control] menu, and select [switch to-Windows capture Mode]. Under this mode, it can real-time capture the flash effect on the computer desktop and the controller play synchronously.

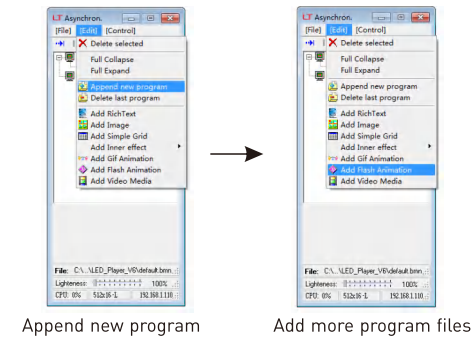


9.2.3 Off-line asynchronous mode

A. Click [Control] menu and select [Switch to-Asynchronous mode], reach asynchronous mode interface



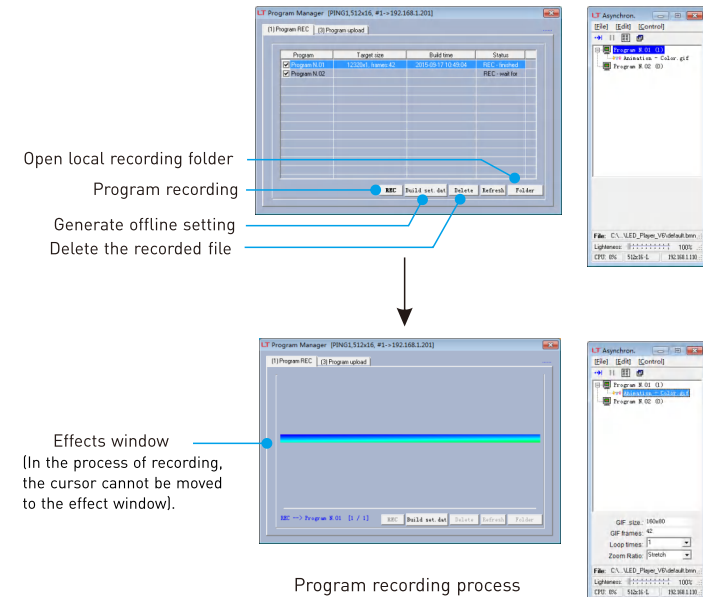
B. Click [Edit] menu and select [Append new program], which can append 14 sets of programs; click [Add Flash Animator] or other program files to add more files on existing program.



C. Click [Off-line file management], pop up [program manager] interface.

a. Recording programs

Click [REC] to generate offline file, and click [Build set. dat] after the completion of all the program recording. Finally, it generates offline configuration file.

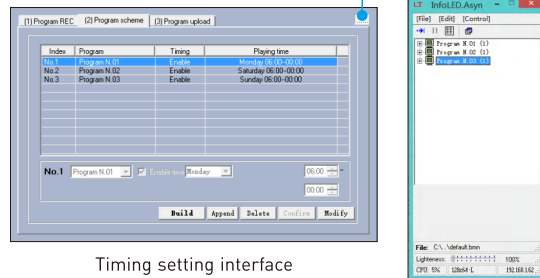


b. Timing

If you need timing offline playback, please click the tab [program scheme] to timing setting interface. Click [Append] or [Modify] to set timing, finally click [Build].

Timing effect as follows: The first set program playback on Monday 6:00-00:00, the second set program playback on Saturday 6:00-00:00, the third set program playback on Sunday 6:00-00:00.

Open the [program scheme] tab

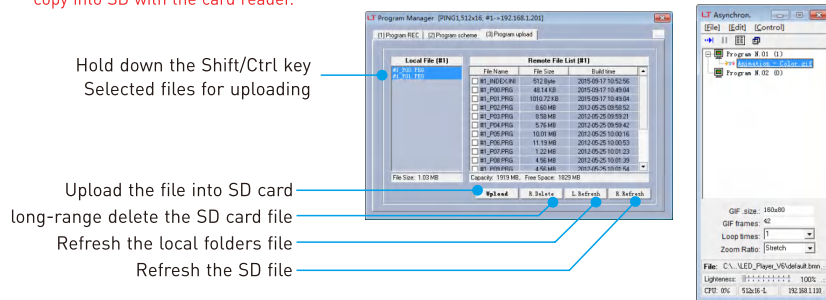


Timing setting interface

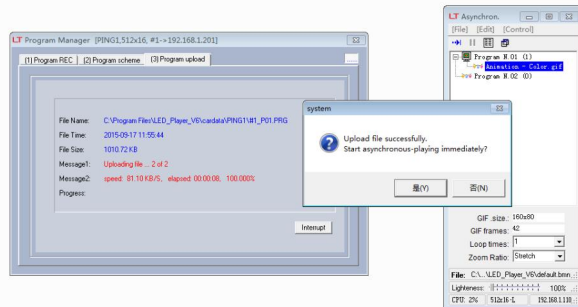
c. Play file transmission:

Click [upload] , system began to upload the play file and other files to the SD card

Attn: if the Play file is bigger, such as video files generated large files, you can click [Program REC] TAB to open the program recording interface, and then click [folder], all files under the directory will copy into SD with the card reader.

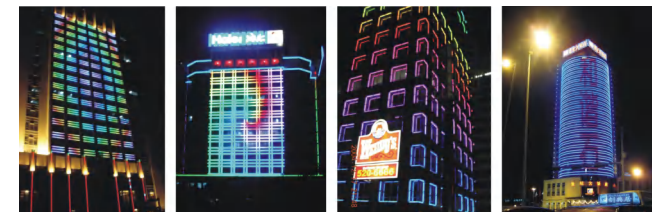
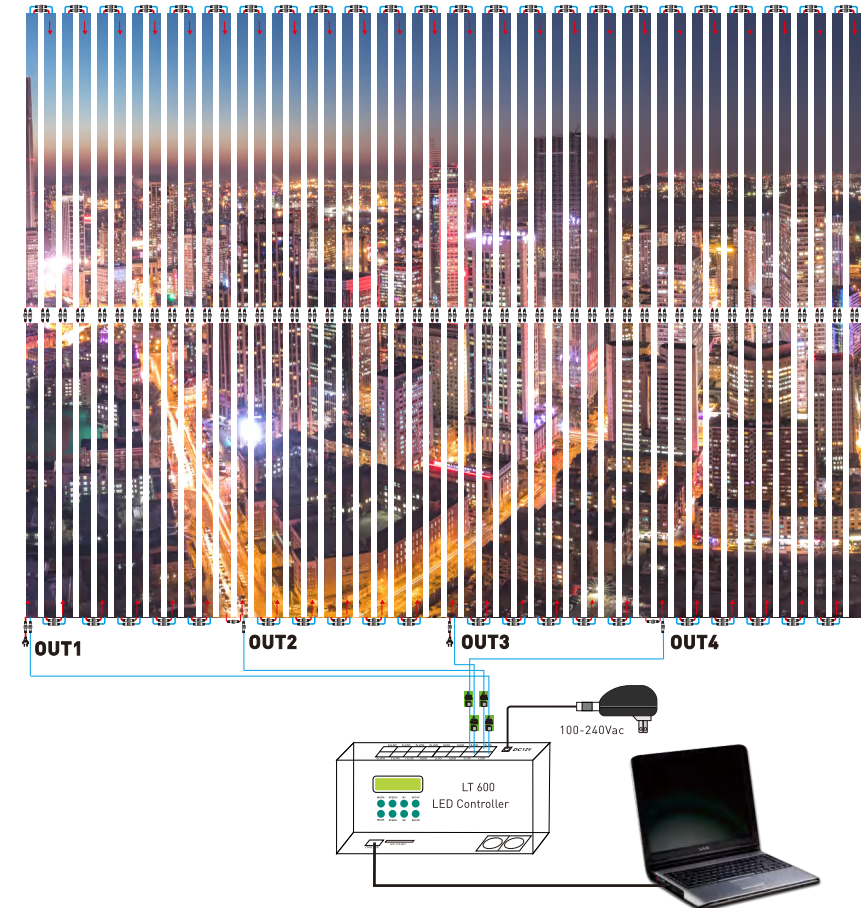


Offline playback can be started immediately after the completion of play file transfer

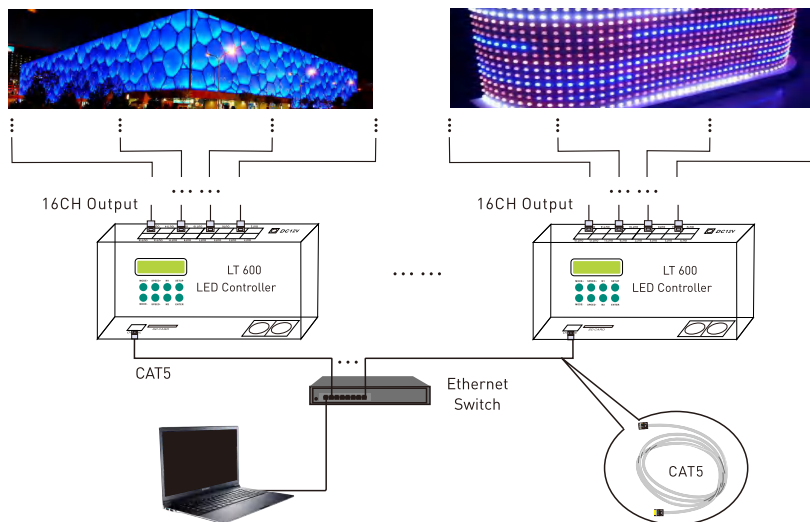


10. Wiring Diagram:

10.1 Connection with tube:

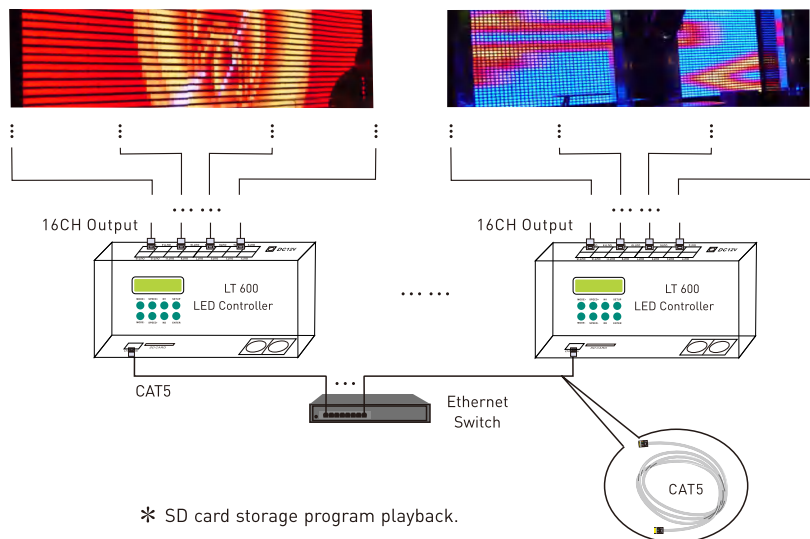


10.2 Connection with computer:



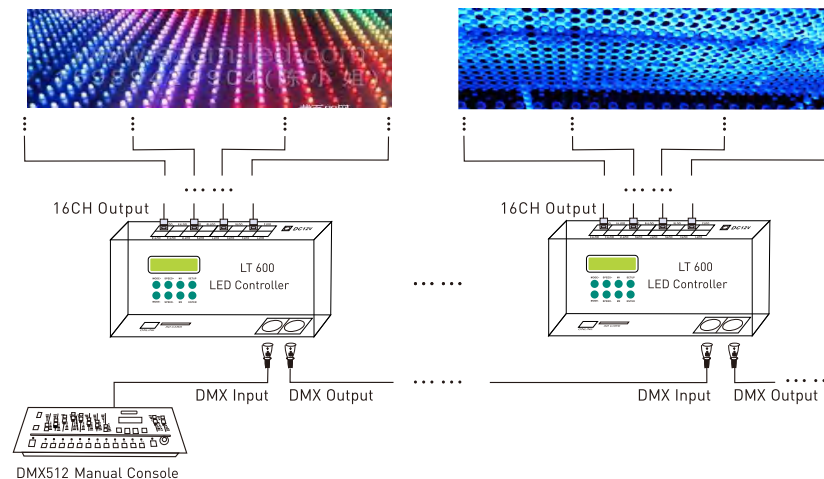
* Real-time computer playback.

10.3 Offline:



* SD card storage program playback.

10.4 Connection with DMX Console:



* DMX console selects the program of controller SD card and controls speed.

11. Attention:

1. Products shall be installed by qualified professionals.
2. LTECH products are non-waterproof (special models excepted). Please avoid the sun and rain. When installed outdoors, please ensure it is mounted in a water proof enclosure.
3. Good heat dissipation will extend the working life of products. Please ensure good ventilation.
4. Please check if the working voltage used complies with the parameter requirements of products.
5. The diameter of wire used must be able to load the light fixtures you connect and ensure the firm wiring.
6. Before you power on products, please make sure all the wiring is correct in case of incorrect connection that causes damage to light fixtures.
7. If a fault occurs, please do not attempt to fix products by yourself. If you have any question, please contact your suppliers.

12. Warranty Agreement:

- Warranty periods from the date of delivery 5 years.
- Free repair or replacement services for quality problems are provided within warranty periods.

Warranty exclusions below:

- Beyond warranty periods.
- Any artificial damage caused by high voltage, overload, or improper operations.
- Products with severe physical damage.
- Damage caused by natural disasters and force majeure.
- Warranty labels and barcodes have been damaged.
- No any contract signed by LTECH.

1. Repair or replacement provided is the only remedy for customers. LTECH is not liable for any incidental or consequential damage unless it is within the law.
2. LTECH has the right to amend or adjust the terms of this warranty, and release in written form shall prevail.

LTECH

LT-600 LED 灯光控制系统



FC CE RoHS [质保5年]

LT-600 LED灯光控制系统是我公司最新推出的一项世界先进的LED灯光产品视频显示控制系统。LT-600内核为超大规模集成电路，可以实现计算机同步播放、脱机节目点播、WiFi无线传输、自动定时控制、外接DMX控制台控制世界首创五合一功能，实现同步/脱机无缝切换；系统无需分控，联机控制无需加DVI显示适配器和发送卡，安装调试更容易，配套软件功能完善、操作简单。兼容市面上常用的各种LED驱动IC芯片；突破传统的规则布线限制，支持各种异形灯光工程，使控制布线更加灵活，适用于各种室内外LED灯光产品的联机/脱机控制先进的颜色灰度处理技术，符合人的眼睛视觉感观，显示效果更逼真清晰、亮度更高、色彩更艳丽丰富，让您的LED灯光产品表现得淋漓尽致，胜人一筹！

一 技术参数:

LT-600 LED 视频控制系统

工作电压:	12Vdc (配电源适配器)	脱机储存介质:	SD记忆卡
输出信号信道:	16 路	SD卡容量:	Max. 2GB
SPI输出:	Max 1364像素 × 16路 21824像素	第三方接口:	DMX512/1990 协议
DMX输出:	Max 170像素 × 16路 2720像素	操作系统:	中、英文Windows 2000/2003/XP/Vista/7/10
输入输出端口:	RJ45	产品尺寸:	L203XW125XH47(mm)
灰度级别:	最大65536级(64K)	包装尺寸:	L267XW138XH88(mm)
刷新频率:	60Hz~3000Hz	产品重量:	920g(净重) 1450g(毛重)
联机传输方式:	TCP/IP 标准网络协议		

二 功能特点:

1. 一台控制器简单集合了以往多款控制器才能达到的5大功能:

- 以太网实时电脑同步显示控制。
- 脱机SD卡储存节目点播，节目、速度选择等功能在液晶屏一目了然。
- 兼容DMX512协议，连接DMX控制台构建灯光控制网络。
- 支持WiFi无线传输，适合特殊场合，无需布线。
- 支持任意时间自动定时播放，实现周一到周日、节假日播放不同节目。

2. 能直接输出DMX信号，也可以控制各种LED驱动芯片，基于如下IC驱动的LED灯具都可以控制：

74HC595, 6B595, MBI5026, DM134, ZQ9712, LPD6803, LPD6813, LPD1101, D705, UCS6909, UCS6912, UCS1903, UCS1909, UCS1912, UCS2903, UCS2909, UCS2912, WS2801, WS2803, WS2811, WS2812, WS2812b, HL1609, SM16716, SD600, P9813, LPD8803, LPD8806, LPD8809, LPD8812, TLS3001, TLS3002, TLS3003, TM1803, TM1804, TM1809, TM1812等等驱动IC。

3. LED灯具不仅可以按照规则布线方式，而且支持各种任意布线走向的异形灯光工程，通过软件设置方法简单易用。
4. 超大控制能力，16路信号输出，每台最大控制32768全彩像素点，支持多台控制器联网同步，多台联网最大可以控制25万个全彩像素点。
5. 联机控制采用标准10/100/1000MBPS网络接口，结合TCP/IP标准以太网协议，适应范围广，通讯可靠，支持WiFi无线网络传输实时同步显示。
6. 采用先进的软件图像处理技术，联机同步播放不需加DVI显示卡和发送卡，任何台式电脑、笔记本电脑都可控制，方便工程调试和演示。
7. 采用网络同步方式，多台同步控制可以通过网络交换机来实现，传输距离不受限制。
8. 动画、视频文件转换成脱机SD卡读取文件超保真，超小容量，让你的点播节目时间更长，储存内容更多；SD卡播放动画更新方便,既可以拔下来用读卡器更新,也可以通过以太网远程更新。
9. 先进的颜色灰度处理技术，符合人的眼睛视觉感观，显示效果更逼真清晰、亮度更高、色彩更艳丽丰富；有效消除了视频中移动的线条所产生的齿角，展现光滑而自然的画面。
10. 软件功能完善，操作简单：自带视频播放器，支持绝大多数流媒体格式，用户可以编排各种图文、动画、视频作为播出节目表，播放同时，可以输入任意文字显示；支持取景框直接屏幕读取显示，突破码流格式限制、播放任意格式文件；实现分屏播放，可以任意分割屏幕；自由切换中英文版本。

三 产品配件:

- | | |
|-----------|--------|
| 1. 网线 | 2 PCS |
| 2. 信号线转换器 | 16 PCS |
| 3. 电源适配器 | 1 PCS |
| 4. SD 储存卡 | 1 PCS |
| 5. SD读卡器 | 1 PCS |



网线



信号线转换器



电源适配器

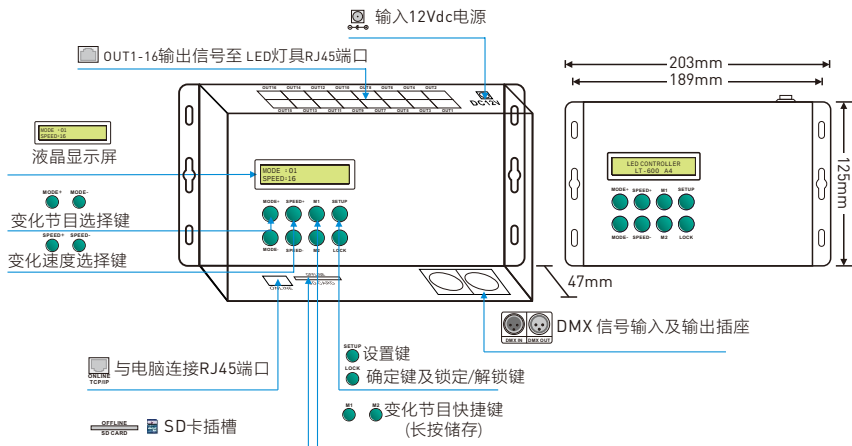


SD 储存卡



SD读卡器

四 产品结构图:

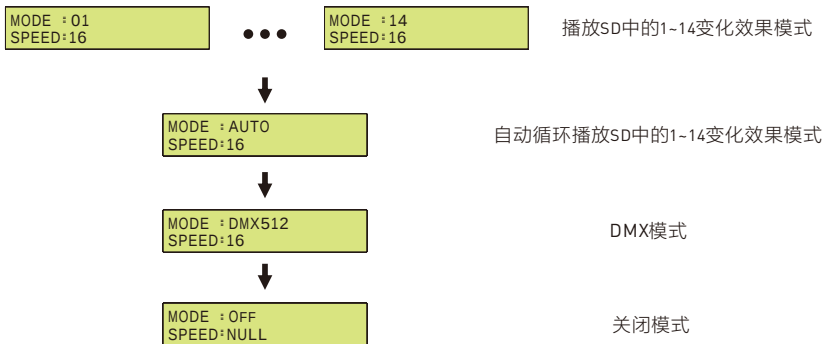


五 脱机使用说明:

控制器有8个功能设置键MODE+/MODE-(模式)、SPEED+/SPEED-(速度)、M1/M2(情景)、SETUP(设置)、LOCK(确认/按键锁)。

基本操作

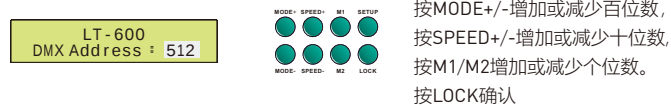
(1) 按MODE+/MODE-键, 切换:



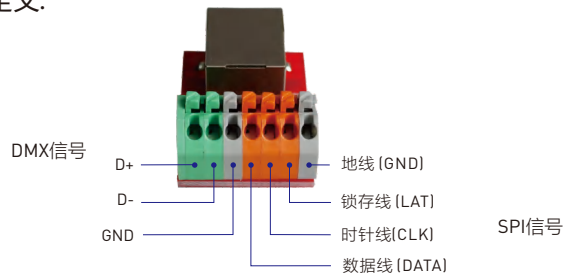
(2) 长按LOCK键锁定/解锁按键:



(3) 按SETUP键进入设置DMX地址:



六 信号线定义:



七 兼容各类IC:

接线方式	信号线	支持芯号型号	软件IC类型选项
	2 线 DATA GND	TM1803, TM1804, TM1809, TM1812, UCS1903, UCS1909, UCS1912, UCS2903, UCS2909, UCS2912, WS2811, WS2812, WS2812B, GS8206[BGR], SM16703	1804/1812
		TLS3001, TLS3002, TLS3003	3001/3002
	3 线 DATA CLK GND	LPD6803, LPD1101, D705, UCS6909, UCS6912	6803/D705
		WS2801, WS2803	2801/2803
		SD600	SD600
		P9813	P9813
		SM16716	16716
	4 线 DATA CLK LAT GND	LPD8803, LPD8806, LPD8809, LPD8812, LPD6813	8803/8806
		74HC595, 6B595, MBI5026, DM134, ZQ9712	RGB
	3 线 D+ D- GND	DMX512/1990	DMX512

八 软件的安装和卸载:

(1) 系统要求

系统版本：中英文Windows 2000/2003 / XP/Vista/win7/win10

接口类型: RJ45以太网接口

(2) 软件安装

请用产品包装盒内附带的SD读卡器读取SD卡内的安装文件LED_Player_V7.4.exe，双击运行，并根据提示安装即可。

(3) 软件卸载

按照操作系统的软件卸载功能卸载，也可以直接运行系统自带的卸载程序。

(4) 软件运行

双击生成的快捷方式 ，软件运行后图界面如下，界面可显示/隐藏。



运行界面

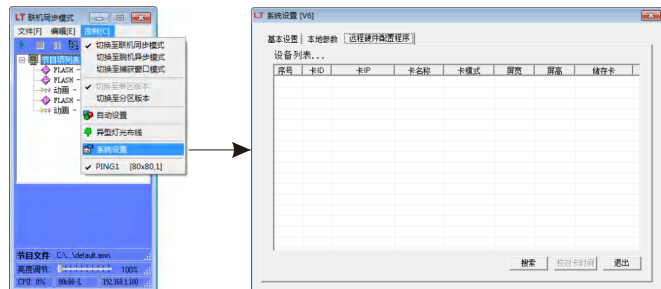
九 软件使用说明:

注：在进行以下操作前，请先进行LT-600控制器与电脑的连接，电脑可以直接连接LT-600控制器，也可以通过交换机或路由器连接LT-600控制器。

(一) 设置参数

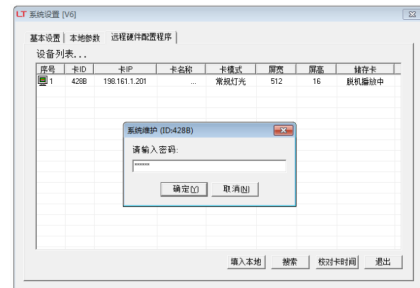
1. 搜索控制器

单击【控制】菜单，选择【系统设置】，在弹出对话框中按【搜索】按钮，搜索出已连接的LT-600控制器列表。



2. 进入设置主界面

双击要控制的LT-600控制器，输入密码：led888，进入系统设置主界面。



密码输入框

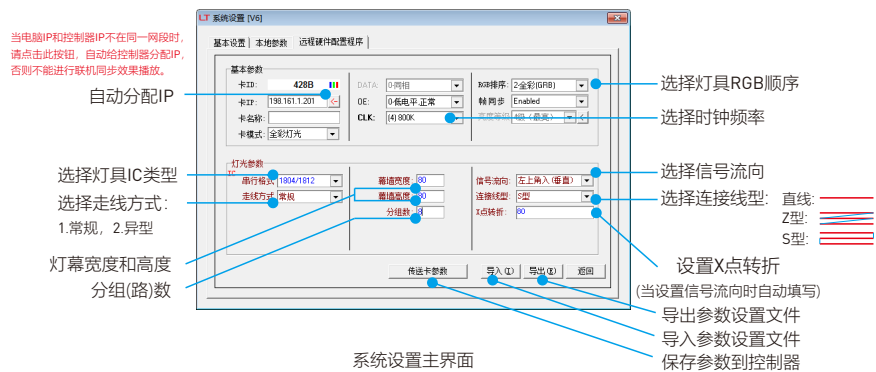


系统设置主界面

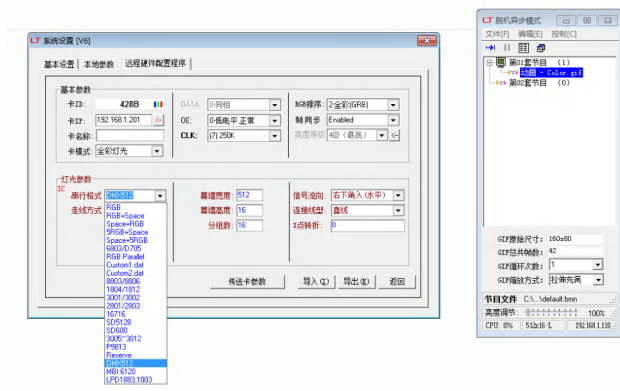
3. 设置参数。

在系统设置主界面设置各种参数后，点击【传送参数到控制器】保存参数到控制器。

注：如果走线方式为异型，异型文件须要放软件安装根目录下。

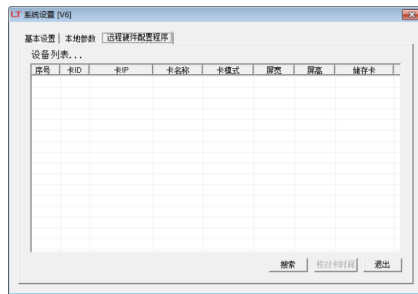


当使用DMX512信号时，请在 [串行格式] 框里进行选择。

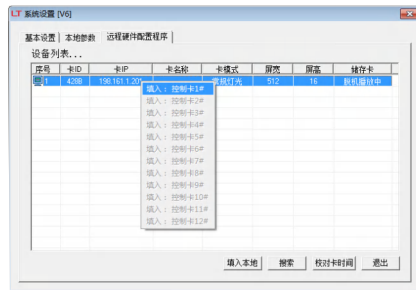


4. 填入控制器

参数设置无误后，在参数设置主界面点击【返回】，返回搜索界面，点击【搜索】，在列出的控制器上“右键”弹出菜单，选择【填入：控制器1#】进入【电脑参数设置界面】。



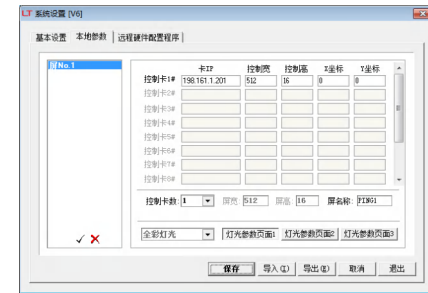
搜索控制器



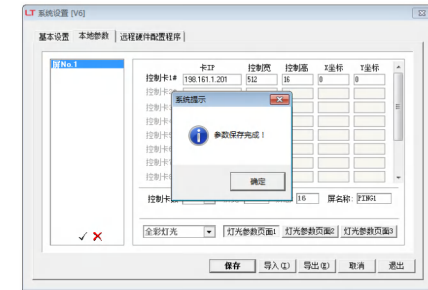
填入控制器

5. 保存电脑参数设置

在【电脑参数设置界面】点击【保存】后即可关闭窗口。



电脑参数设置界面



电脑参数设置保存

(二) 播放节目

1. 联机同步模式

点击【控制】菜单，选择【切换至联机同步模式】，在此该模式下，电脑与控制器同步播放指定动画、图片、视频以及游动字幕。

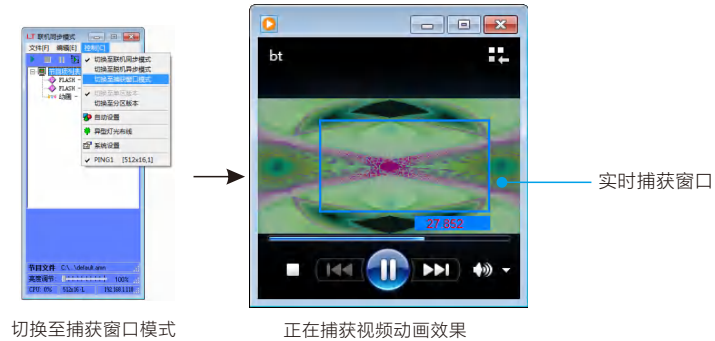


同步播放

节目文件操作

2. 捕获窗口模式

点击【控制】菜单，选择【切换至捕获窗口模式】，在此该模式下，实时捕获电脑桌面上显示效果并控制器同步播放。



3. 脱机异步模式

(1) 点击【控制】菜单，选择【切换至脱机异步模式】，打开脱机异步模式界面。



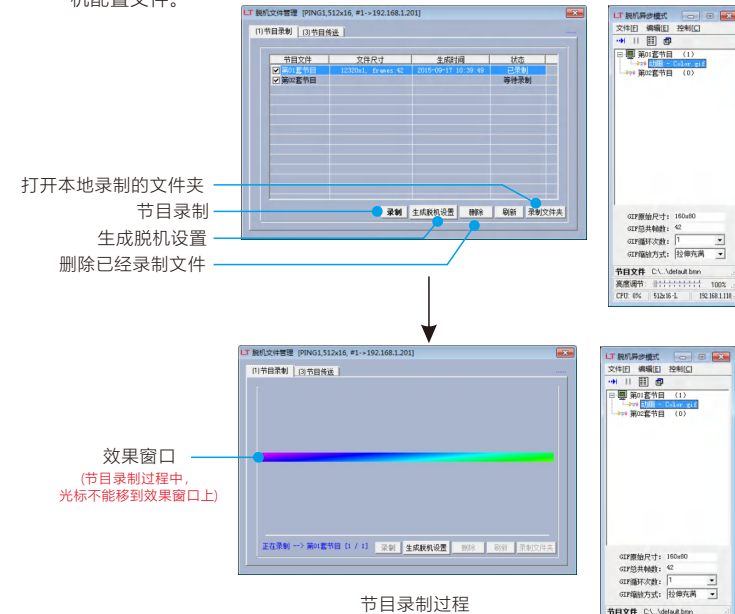
(2) 点击【编辑】菜单，选择【添加一套新节目（脱机）】，可以添加14套节目；选择【添加FLASH】等节目文件，为节目套添加效果文件。



(3) 点击【脱机文件管理】，弹出脱机文件管理界面

A. 录制节目

点击【录制】录制生成脱机文件，所有节目录制完成后，点击【生成脱机设置】，生成脱机配置文件。



B. 定时

如需定时脱机播放，请点击【节目定时】选项卡，切换到定时设置界面，点击【添加】或者【修改】定时设置，最后点击【生成清单】。

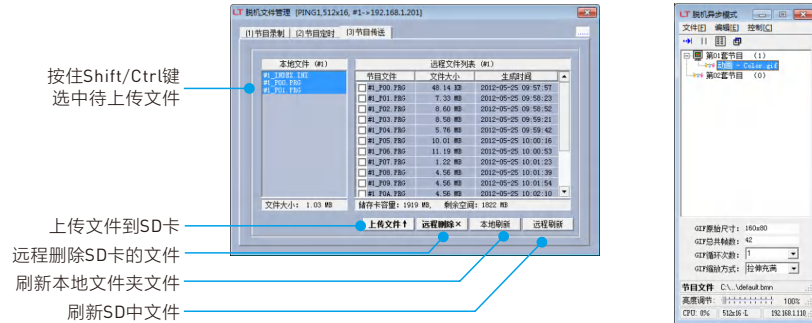
如下图定时效果是：第1套节目在星期一6:00-00:00播放，第2套节目在星期六6:00-00:00播放，第3套节目在星期日6:00-00:00播放。



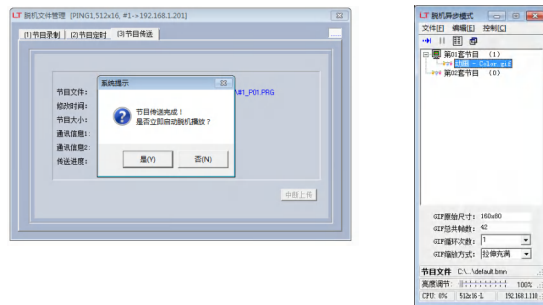
C. 节目文件传送

点击【上传文件】，系统开始将录制好文件和其它设置文件上传到SD卡。

注：如果节目文件比较大，如视频文件生成的大节目文件，可以点击【节目录制】选项卡打开节目录制界面，再点击【录制文件夹】，将此目录下所有文件用SD读卡器全部复制到SD中去即可。

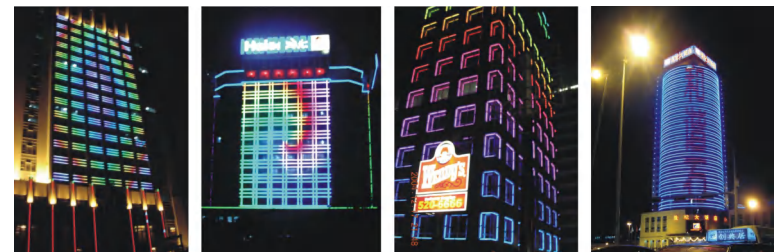
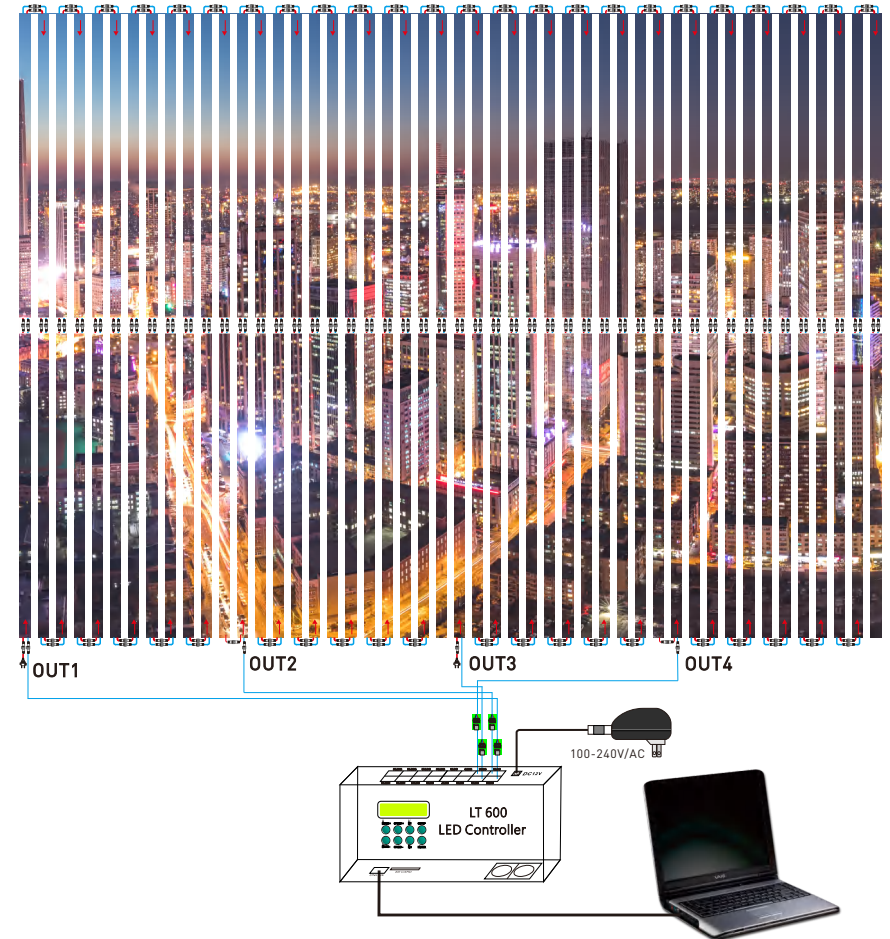


节目传送完成后就可以立即启动脱机播放。

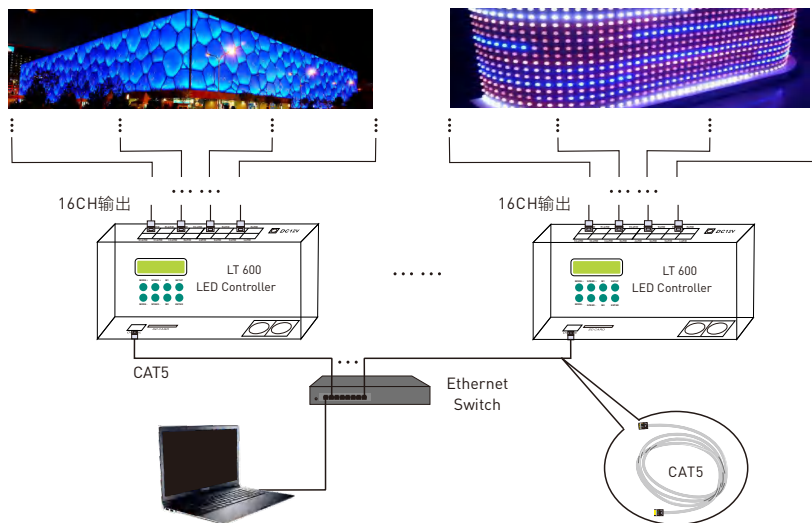


十 连接示意图:

10.1 灯管连接图

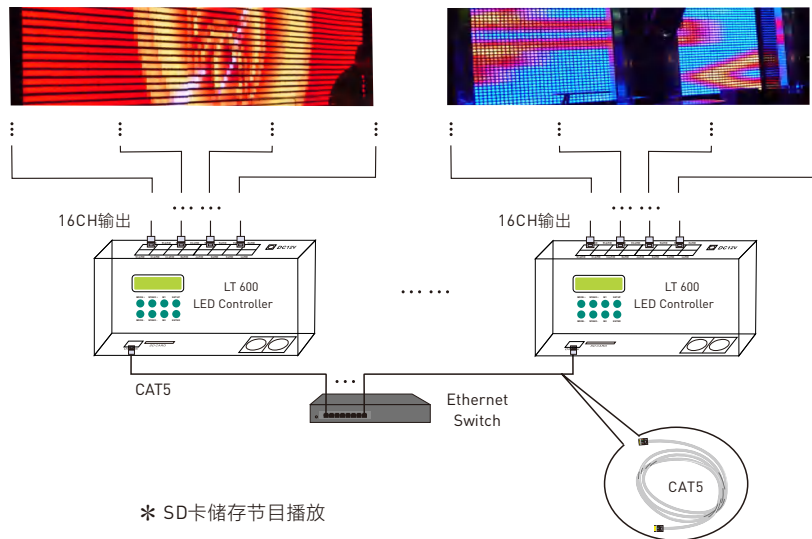


10.2 连接电脑



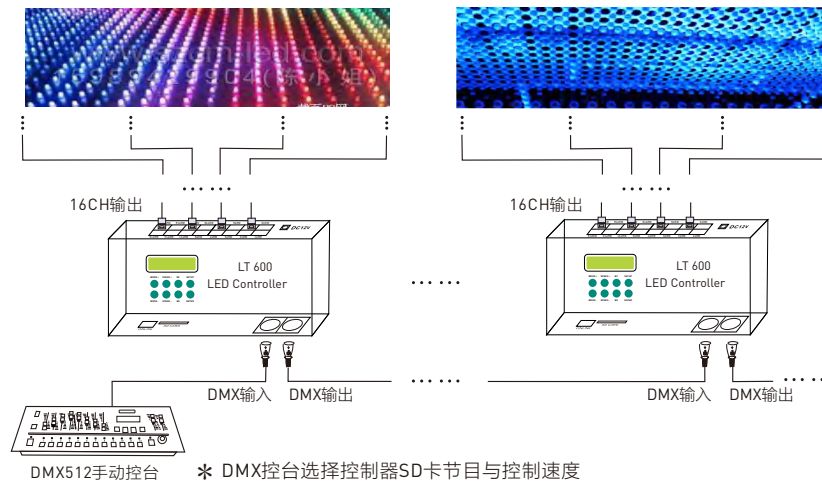
* 电脑实时播放

10.3 脱机使用



* SD卡储存节目播放

10.4 连接DMX控制台



* DMX控制台选择控制器SD卡节目与控制速度

十一 注意事项:

- 1、请由具有专业资格的人员进行调试安装;
- 2、雷特产品 (专有型号除外) 不能防水, 需避免日晒雨淋, 如安装在户外, 请用防水箱;
- 3、良好的散热条件会延长产品的使用寿命, 请把产品安装在通风良好的环境;
- 4、请检查使用的工作电压是否符合产品的参数要求;
- 5、使用的电线直径大小必须能够负载连接的LED灯具, 并确保接线牢固;
- 6、通电调试前, 应确保所有接线正确, 以避免因接线错误而导致灯具损坏;
- 7、如果发生故障, 请勿私自维修; 如果有疑问, 请联系供应商。

十二 保修条例:

- 自出厂之日起保修服务期为5年。
- 在保修服务期内出现产品质量问题雷特将给予免费修理或更换服务。

以下情况不在免费保修或更换服务范围之内:

- 已经超出保修服务期;
- 过高电压、超负载、操作不当等人为造成的损坏;
- 产品外形严重损坏或变形;
- 自然灾害以及人力不可抗拒原因造成的损坏;
- 产品保修标签和产品唯一条形码损坏;
- 无雷特签订的合同或发票凭证。

1. 修理或更换是雷特对客户唯一补救措施。雷特不承担任何附带引起的损害赔偿, 除非在适用法律范围之内。
2. 雷特享有修正或调整本保修条款的权利, 并以书面形式发布为准。