# Table of Contents

Chapter 1 Introduction .................................................................................................................. 4

1.1 Features ................................................................................................................................. 4

1.2 Requirements ......................................................................................................................... 4

Chapter 2 Installation & Uninstallation ......................................................................................... 5

2.1 Installation ............................................................................................................................. 5

2.2 Uninstallation ......................................................................................................................... 5

Chapter 3 How to Run LedStudio ................................................................................................. 6

3.1 LedStudio Interface ............................................................................................................... 6

3.2 LedStudio Menus .................................................................................................................. 7

3.2.1 File Menu ......................................................................................................................... 7

3.2.1.1 New .............................................................................................................................. 7

3.2.1.2 Open ............................................................................................................................ 7

3.2.1.3 Save ............................................................................................................................. 7

3.2.1.4 Save as ........................................................................................................................ 7

3.2.1.5 Open demo file ........................................................................................................... 7

3.2.1.6 Open recent files ......................................................................................................... 8

3.2.1.7 Log off ........................................................................................................................ 8

3.2.1.8 Exit ................................................................................................................................ 8

3.2.2 Control Menu ................................................................................................................... 8

3.2.2.1 Play .............................................................................................................................. 8

3.2.2.2 Play Last ...................................................................................................................... 9

3.2.2.3 Play Next .................................................................................................................... 9

3.2.2.4 Pause ........................................................................................................................... 9

3.2.2.5 Stop ............................................................................................................................. 9

3.2.2.6 Notify .......................................................................................................................... 9

3.2.2.7 Score Manager .......................................................................................................... 11

3.2.2.8 Play PowerPoint File ............................................................................................... 13

3.2.2.9 Stop PowerPoint File ............................................................................................... 13

3.2.2.10 Play VCD/DVD ........................................................................................................ 13

3.2.2.11 Backup Program ...................................................................................................... 13

3.2.2.12 Manager for LED Screen Sever .............................................................................. 13

3.2.3 Tool Menu ........................................................................................................................ 14

3.2.4 Option Menu .................................................................................................................... 14

3.2.4.1 Screen Combination/synchronism .......................................................................... 14

3.2.4.2 Set Screen Brightness/Contrast/Color ...................................................................... 16

3.2.4.3 Screen Area ................................................................................................................ 17

3.2.4.4 Play background/foreground .................................................................................... 19

3.2.4.5 Lock/Unlock LED Screen Properties ....................................................................... 22

3.2.4.6 Turn on/off LED Screen power ................................................................................ 23

3.2.4.7 Schedule Table ........................................................................................................... 24
3.3 How to make a .lsd file

3.3.1 Play Window Setup

3.3.2 Open a New Page of Program

3.3.3 Add New Window

3.3.4 Photo Playing Set

3.3.5 File Playing Settings

3.3.6 Important Notes:

3.3.7 File Window

3.3.8 File(s) Showing Area Settings

3.3.9 File(s) Adding & Listing Window

3.3.10 File Playing Settings

3.3.11 Photo Playing Settings

3.3.12 Text Window

3.3.13 Single Line Text Window

3.3.14 Static Text Window

3.3.15 Table Window

3.3.16 Timer Window

3.3.17 Database Window

3.3.18 VCD/DVD Window

3.3.19 External Exe Window
3. 3. 3. 10 Video Window .........................................................................................89
3. 3. 3. 11 Date/Time Window ..................................................................................90
3. 3. 3. 12 Temperature/Humidity Window .................................................................92
3. 3. 3. 13 Copy Window .............................................................................................93
3. 3. 4 Save Program ..................................................................................................93
3. 3. 5 Play Program ..................................................................................................93
4. 4 3D display ..........................................................................................................94
Chapter 1 Introduction

1.1 Features

LedStudio is a LED Display management software for Linsn LED Display Control System.

LedStudio functions in two ways:
To setup LED display with Linsn LED Display Control System;
To edit and play programs on LED Display.

Supported media file formats:
Document: .txt .doc etc.
Photo: .BMP .JPG .GIF .PCX .PNG etc.
Video: .MPG .MPEG .MPV .MPA .AVI .VCD .SWF .RM .RA .RMJ .ASF etc.

1.2 Requirements

● PC requirements:
  ● OS: Microsoft Windows XP/Windows Vista/Windows 7/8/10(32/64)
  ● Hardware: 1024*768 display (or higher)
  64MB of Disk Space
  A DVI-D port provided by Graphics Card or Motherboard
  A USB port
Chapter 2 Installation & Uninstallation

2.1 Installation

Follow the following steps to install and run LedStudio.

1. Download LedStudio from www.linsn.com or get from the CD-Disk coming with the sending card.

2. Double-click the LEDStudio.exe and flowing on-screen instruction to finish installation.

3. LedStudio program shortcut ICON on desktop.

2.2 Uninstallation

1. Go to Control Panel, click , find and select Led Software to uninstall

2. Select Automatic, click Next till finish uninstallation.
Chapter 3 How to Run LedStudio

3.1 LedStudio Interface
When you open Ledstudio, two windows will pop up:
- Play window

![Simulated screen](image1.png)

A simulated screen. Contents played by LedStudio will be shown on the above Window.

- Control window/panel

![Control window](image2.png)
3. 2 LedStudio Menus

3.2.1 File Menu

3.2.1.1 New
New: create a new .lsd program file (.lsd is one kind of play-list/program file which is generated by Ledstudio).

3.2.1.2 Open
Open: open an existed LedStudio program file (.lsd file).

3.2.1.3 Save

3.2.1.4 Save as
Save as: to save current program file as a new .lsd file.

3.2.1.5 Open demo file
Open Demo File: open LedStudio demo file (when downloading LedStudio software, choose the **With demonstration file** one)
3.2.1.6 Open recent files
Open recent files: open the recently .lsd files.(as following picture)

3.2.1.7 Log off
Log off: log off LedStudio to prevent further operation.
Note: This is related to the user setup option in Option menu.
You don’t need to log off if you did not set the password requirement.

3.2.1.8 Exit
Exit: exit LedStudio.

3. 2. 2 Control Menu

3.2.2.1 Play
Play: Start playing program file (step by step).
Note: If there is no .lsd file loaded, this option will gray out.

3.2.2.2 Play Last
Play last: play previous Step.

3.2.2.3 Play Next
Play next: play next Step.

3.2.2.4 Pause
Pause: pause playing file.

3.2.2.5 Stop
Stop: stop playing.

3.2.2.6 Notify
Notify: insert notice, when ledstudio is playing programs.
When you click on the Notify option, a Notify Manager window will pop up, as follows

- **Play**: start showing Notify Message
- **Stop**: stop showing Notify Message
- **Exit**: Exit the window
- **Screen**: choose which LED Screen to show Notify Message
- **Cycle Index**: Not yet put into use
- **Left/Right/Bottom**: adjust the Notify Message position
- **Transparent**: only work when Background color is Black. Transparent the black background color. (Check the example shown below)
- **Action**: How the Notify Message come into Play Window
- **Effect**: Effects for Notify Message
- **Background**: background color for Notify Message
- **Speed**: Notify Message coming in speed. The larger value, the slower speed
- **Stay**: time duration for Notify Message to stay before next Action is taken place
- **Font**: Font settings for Notify Message
A post is displaying in the Play Window. You can insert a new message through Notify Manager without stopping the playing program.
3.2.2.7 Score Manager

**Score manager:** display scores for competition games when LedStudio is playing programs.

**LED Screen:** choose which LED Screen to show the score

**Play time:** Not yet put into use

**Part1 Time**
- **Reset:** reset the time to count/countdown
- **Start:** start counting/countdown time
- **Stop:** stop time counting/countdown
- **Font:** font setting of time
- **Top/Right:** set position of time (similar to set coordinate X,Y)
- **Countdown:** check this option if needed
- **Minutes:** time duration for count/countdown

**Part2 Time(Second)**
Reset: reset the time to count/countdown
Start: start counting/countdown time
Stop: stop time counting/countdown
Font: font setting of time
Top/Right: set position of time (similar to set coordinate X,Y)
1/10 second display: check this option to show millisecond
Countdown: check this option if needed
Sec: time duration for count/countdown

Part3 Score
Home Team: Team/Player name, in two languages
Guest Team: Team/Player name, in two languages
Score: input score
Lan1 Space: (language1) the distance of two players’ names in showing
Lan2 Space: (language2) the distance of two players’ names in showing
Picture: click the ‘arrow’ button to add pictures
Font: font settings
Bottom: set the position of score contents (player name, score)
Bottom display: display Team/player pictures below score (check ).

Part4 Customize
Show All: show both the time and score you set on the play window
Show Time: only show the time you set on part1&2 to the play window
Show Score: only show the score you set on part3 to the play window
Stop: stop showing the score message
Exit
3.2.2.8 Play PowerPoint File
Play PowerPoint file: play PowerPoint file.

3.2.2.9 Stop PowerPoint File
Stop PowerPoint file: stop PowerPoint File.

3.2.2.10 Play VCD/DVD
Play VCD/DVD: play VCD/DVD in CD/DVD-ROM Drive.

3.2.2.11 Backup Program
Backup program: backup all files of current program/.lsd file.

3.2.2.12 Manager for LED Screen Sever
Manager for LED Screen Sever: to manage remote screen, please refer to Option Menu, Software Setup, Networking for details.
3. 2. 3 Tool Menu

Short-cuts of Microsoft Word, Excel, Paint, Notepad, Calculator. Click to open quickly.

3. 2. 4 Option Menu

3. 2. 4. 1 Screen Combination/synchronism

Screen Combination/synchronism: This is quick-Profiles-switch function.

First, Profile the led display combinations. When more than one led display is controlled by LedStudio, these led displays can be set as INDEPENDENT, CLONE, SIDE BY SIDE to form A bigger led display, etc.

Note: You don’t have to use this even when more than one led screen is controlled.

Go to Software Setup, select Multi-LED Combination/synchronism, Click Combination/synchronism Setting
**Name**: Profile name

**Update Name**: change the Profile name and click update name to refresh

**Add**: add one Profile

**Del**: delete the selected Profile

**Exit**: Exit Combination/synchronism Setting
Soft Screen: set numbers of Play Window/Simulated Screen

Hardware LED Screen: read the numbers of Led display from Display Connection (one Red rectangle means one Hardware LED Screen)
Start X: set the X position of (X, Y) coordination for the selected Soft Screen of Display
Start Y: set the Y position of (X, Y) coordination for the selected Soft Screen of Display
Now, the preset Profiles can be quickly switched.

3.2.4.2 Set Screen Brightness/Contrast/Color

Screen Brightness/Contrast/Color: manually adjust the selected Display brightness, Contrast, Color
Brightness: 0-100, total 101 grades manual brightness adjustment
Contrast: 0-100, total 101 grades manual contrast adjustment
Color: User Color, each color of RGB has 0-100, total 101 grades manual color adjustment; and three preset color choices.

Enable Adjust Bright Auto: Enable if a Function Board is applied for automatic brightness adjustment
Virtual Display: switch between virtual and none-virtual mode for virtual led display. Note: For virtual led display, if Virtual Display does not enable, the virtual led display will be considered as real pixel led display, and only has 1/4 of visual size working. For example, a 384*256 virtual led display, will work as 192*128.

3. 2. 4. 3 Screen Area
Screen Area is the area copied to led display. Contents inside the Screen area will be copied to led display.
Note: if the Screen Area is gray, go check 3.2.4.12 Hardware Setup Note
Display1/Display2/Display3/Display4: led display name
Start X: set the X position of (X, Y) coordination for screen area
Start Y: set the Y position of (X, Y) coordination for screen area
The arrow icon: adjust the start X, start Y, by 1 pixel at a time.
Display width: the selected led display width of Play Window
Display height: the selected led display height of Play Window
Screen width: the width of selected led display
Screen height: the height of selected led display

Always display screen area: enable this; the screen area/red rectangle will be always visible.
Zoom Display: enable Zoom Display, the Display width and Display height will change from gray color to editable.

Set the display width and display height larger than the screen width and screen height.
For example:
1. enable Zoom Display
2. set display width 300, and display height 300
3. disable Zoom Display, and enable Zoom Display again, the red rectangle is now 300, 300
4. Click save to screen, the 300, 300 red rectangle contents will be copied and resize to fit the led display of 256,192.
3. 2. 4. 4 Play background/foreground

Play background/foreground play: Play background/foreground. Only when you set the graphics card and the sending card to extended mode do you need to click play background.

1. How to enable Play Background

Take a 1366*768 computer monitor for example:

1. set the graphics card in extend mode (in most case, right click on your desktop—choose screen resolution (or enter any other page on which you can set the resolution of your monitor) — choose Extend these displays option
2. execute foreground play/play foreground is to set the (X,Y) of Screen Area to the Start X and StartY of Screen Area preset setting.

![Screen Area Setup](image)

3. Exit foreground play/Play background: set the (X,Y) of Screen Area to (1281,0). The Play Window will not be seen in the computer monitor. Important: when proceeding Play Background, choose Floating in Option Menu, Software setup, Play Window. If Lock to LED Screen is selected, Play Window cannot be moved.

**2. How to exit Play Background mode:**

1. Select duplicate these displays instead of extend these displays
Change the appearance of your display

Display: 12. Multiple Monitors
Resolution: 1280 x 768 (recommended)
Orientation: Landscape

Multiple displays: Duplicate these displays

You must select Apply before making additional changes.

Connect to a projector (or press the tab and tap P)
Make text and other items larger or smaller
What display settings should I choose?
3. 2. 4. 5 Lock/Unlock LED Screen Properties

**Lock**: freeze-frame on led display, and **Play Window** continues playing.

**Unlock**: led display continues playing synchronously with **Play Window**
3. 2. 4. 6 Turn on/off LED Screen power

Note: when **Manual Switch Control** is enabled, the **Turn off LED screen power** will automatically disable.

**Turn on/off LED screen power**: with **Function Board** remote power control applied, this function is for remote turning on/off LED screen power from LedStudio.

Without **Function Board** remote power control applied, this function is for turning on/off the sending card signals.
3. 2. 4. 7 Schedule Table

To schedule commands to be carried out. For example, set the led display brightness to a lower value at night time. Or play curtain programs at preset time.

Start up scheduled command: select to enable Scheduled Command
Send to Server: applied in Remote LED Screen Manager Online mode
Note: Send to Server details, please refer to Page49
Send current only: send the Scheduled Command Table to the current selected led display
Send by select: select the led display(s) to send the Scheduled Command Table to
Send to all: send to all led displays listed in Remote LED Screen Manager Online
Edit: modify the selected Scheduled Command
Add: add a Scheduled Command
Delete: delete a selected Scheduled Command
Delete all: delete all listed Scheduled Command
Exit: Exit Scheduled Command Table Window

<table>
<thead>
<tr>
<th>Serial No.</th>
<th>Command property</th>
<th>Screen No.</th>
<th>Program file/value</th>
<th>Execution time</th>
<th>Valid date</th>
<th>Valid day</th>
<th>End Time</th>
</tr>
</thead>
</table>

Serial number: the Scheduled Command list number
Command property: the Scheduled Command Name
Screen Number: the led display that the Scheduled Command will take effect on
Program file/value: contents of the Scheduled Command
Execution time: time for the Scheduled Command to take effect
Valid date: time period that the Scheduled Command will take effect
Valid day: day (Monday to Sunday) the Scheduled Command will take effect

Click Add button you will see the below window:
Turn on/off LED screen power: with Function Board remote power control applied, remote turn on/off LED screen power from LedStudio.

Without Function Board remote power control applied, turn on/off the sending card signals.

Play program file: .lsd file

Pause, stop: pause or stop at the execution time

Show/Hide play window: show or hide the Play Window.

Lock LED screen property: freeze-frame on led display, and Play Window continues playing.

Unlock LED screen property: led display continues playing synchronously with Play Window.

Execute/close external program: run or quite external .exe program in LedStudio Play Window (the .exe program should be tested and it works in LedStudio)

Play/close PowerPoint file: start or close powerpoint file

Shutdown computer: turn off the computer

Execute/Exit foreground play: Play background/foreground. Take a 1280*768 computer monitor for example: Set the Graphic card in extended mode;

execute foreground play/play foreground is to set the (X,Y) of Screen Area to the Start X and StartY of Screen Area preset setting.
Exit foreground play/Play background: set the \((X,Y)\) of **Screen Area** to \((1366,0)\). The **Play Window** will not be seen in the computer monitor. (take the resolution of your monitor is 1366*768 for example)

**LED Screen Brightness**: adjust the led display brightness.
0-100, total 101 grades manual brightness adjustment

**All LED Screen Brightness**: adjust all the led display brightness
0-100, total 101 grades manual brightness adjustment

**LED Screen Contrast**: adjust the led display contrast.
0-100, total 101 grades manual contrast adjustment

**LED Screen Color**: switch among the color temperature of **User Color** (0), **9300K** (1), **6500K** (2), **5000K** (3). Please refer to Set Brightess/Contrast/Color

**Change to Virtual/Real Image**: switch between virtual and none-virtual mode for virtual led display (when playing letters on virtual led display, better visual quality in real mode) refer to Virtual Display in Option, Set Brightess/Contrast/Color
Note: For virtual led display, if Virtual Display does not enable, the virtual led display will be considered as real pixel led display, and only has 1/4 of visual size working. For example, a 384*256 virtual led display, will work as 192*128.

**Power on:** turn on computer

**Update program:** update program from server

**Sleep computer:** put the computer in sleep mode

**Wake up computer:** wake up the computer from sleep mode

**Example** for creating a Schedule command

Click the Add button, the above interface will pop up, choose the option you need to set in the command properties drop-down list.

Take adjusting brightness for example
Select LED Screen Brightness in the Command option, input the value of the brightness you need to adjust to, and set an Execution time.

Note. (The End Time option is gray out for the brightness setting) You can only set the brightness value at a certain time, after that the brightness would be the same as the one you set all the time.

If you want to set the brightness of the led screen to 20 during 3am to 8am, you need to set two command. First set the brightness to 20 at 3:00, and set the brightness to other value at 8:00am.

In the schedule table, you can also set the certain period for the option by selecting set date or set days.

After you set all the command, please choose the start up scheduled command table option to enable the function.
3. 2. 4. 8 Schedule Hide Setup
Enable Scheduled Hide: enable/disable Scheduled Hide

Play Time: show-up time duration for Play Window

Hide Time: hidden time duration for Play Window

Align by: time moment to trigger Hide Time. For example, Align by 11 Minutes means 0, 11, 22, 33, 44, 55 minute within an hour will activate the Hide Time. After Hide Time, it is Play Time.

3. 2. 4. 9 Language

Change the LedStudio interface language. Ledstudio supports many interface languages, including: Simplified Chinese, Traditional Chinese, English, French, Japanese, Korean, Russian, Thai, Spanish, Polish, Italian, Portuguese, Turkish, Dutch, Greek, Bulgarian, Arabic, Romanian and Deutsch.
3. 2. 4. 10 Hide/Show Play Window
**Hide Play Window:** Hide the Play Window, LED display will show the part of computer desktop (desktop within the Screen Area)

3. 2. 4. 11 LED Screen Monitoring

**LED Screen Monitoring** is control panel of Function Board/Card.

![LED Screen Monitoring settings](image)

**Monitoring Settings**
Brightness:
Current Bright: the current brightness read by external light sensor in Function Board
Min Bright: set the minimum brightness for auto-adjust brightness
Sensitivity: set the sensitivity value for light sensor

Fog
Current: Current value
Warning Level: warning value
Statues: on/off
Power off when warning: if enable, power relays on Function Board will be disconnected when warning level reaches warning value.

Humidity:
Inner: Internal Humidity Value
Outdoor: External Humidity Value

Temperature:
Inner: the temperature value detected by internal temperature sensor
Outdoor: the temperature value detected by external temperature sensor
Amend: if detected temperature differs from the environment temperature, amend the value.
Fan-on temperature: Set the temperature value to activate the fan relays of Function Board. Temperature is detected by internal temperature sensor.

Air conditioning-on temperature: Set the temperature value to activate air condition. Temperature is detected by internal temperature sensor.

Fan Status: on/off

Air conditioning status: on/off

Switch Control
Manual: Manually switch on/off the power relays
Rename: rename the names of power relays
Delay: when switch on/off the power relays, it delays 1 to 4 seconds.

Power off when close LEDStudio: if ticked, power replays will be switched off when the LEDStudio is closed

Save to file: save settings as a .dat file
Load from file: load the settings from saved .dat file

Monitor card/box: read and show feedback data from every receiving card

Temperature: Temperature value
Humidity: humidity value
Smog: the status of smog
Brightness: the brightness value

Fan1/Fan2: status of fan. 0 for off, 1 for on
Door: the status of cabinet’s door
Voltage: the value of voltage

Unit: show value of temperature in Celsius or Fahrenheit

Monitoring temperature: set temperature value for monitoring
3.2.4.12 Hardware Setup

**Hardware Setup:** to send .CON file (Display Connection setting file) and .RCG file (led display Driver for receiving card) to receiving cards.

**Load:** to select the correct .CON file

**Test:** test the selected .CON file on receiving cards

**Enable Change Screen Area:** allow the .CON file to change the size of Screen Area

Note: if Enable Change Screen Area is not ticked. The Screen Area will be Gray color as following screen shot.
Save to Led Screen/led display: test before saving the .CON is required. If test result is correct, save to flash memory of receiving cards

**Target**: activate the window for uploading .RCG file

![Password Input](image)

**Load**: to select the correct .RCG file

**Test**: test the selected .RCG file on receiving cards

**Save to screen of led**: test before saving the .RCG is required. If test result is correct, save to flash memory of receiving cards

3. 2. 4. 13 Software Setup
3.2.4.13.1 Play Window

Play Window Setting:
**Software Setup**

- **Lock play window**
- **Multi-LED Combination/synchronism**
- **Floating LED No.**

**Screen1**

Start X: 183
Start Y: -4
Width(W): 100
Height(H): 100
Enable Change By Mouse: Standard

**Always on top**: if enable, Play Window will always on top

**Frames**: Set frames per second

**Accelerator**: enable accelerator

**Save Setup**: save settings of Play Window
Software Setup

- Lock play window
- Multi-LED Combination/synchronism
- Floating LED No.: 1
- Combination/synchronism Setting

Screen1

- Start X: 183
- Start Y: -4
- Width(W): 100
- Height(H): 100
- Enable Change By Mouse: Standard
- Always on top
- Acceleration

Images:
- Standard
- Inverted (180)
- Right (90cw)
- Left (90cw)
3.2.4.13.1.1 Lock to LED Screen

Lock to LED Screen: different from Lock LED Screen Properties.

It sets:
1. all Play Windows at (0, 0) position, and can’t be edited
2. Size same as Display Connection setting. All Play Windows are locked so cannot be dragged by mouse.

3.2.4.13.1.2 Floating

Floating: Play Window can be adjusted at
1. The quantity of Play Windows, in LED Numb, set Play Window quantity, click Update LED Numb
2. Start X, Start Y, of each Play Window (Screen1/Screen2…)
3. Size of each Play Window
4. Enable Change by Mouse: the Size, Position of each Play Window can be adjusted by mouse

3.2.4.13.1.3 Multi-LED Combination/synchronism

Multi-LED Combination/synchronism: set Profiles for Screen Combination/synchronism. Please refer to Screen Combination/synchronism (3.2.4.1). Note: Display QDY in Display Connection should be 2 or more.

Select Multi-LED Combination/synchronism. Click Combination/synchronism Setting

Name: Profile name
Update Name: change the Profile name and click update name to refresh
Add: add one Profile
Del: delete the selected Profile
Exit: Exit Combination/synchronism Setting

Soft Screen: set numbers of Play Window/Simulated Screen
Hardware LED Screen: read the numbers of Led display from Display Connection (one Red rectangle means one Hardware LED Screen)

Start X: set the X position of (X, Y) coordination for the selected Soft Screen of Display
Start Y: set the Y position of (X, Y) coordination for the selected Soft Screen of Display

Now, the preset Profiles can be quickly switched.

3.2.4.13.2 Networking

Networking setting is used for the remote control of led display (computer).
3.2.4.13.3.1 Online/real time remote control

1. Define

Online remote control/real time remote control: allow the Client Computer to fully control the LEDStudio on the Server Computer.

Computer that directly connects to the led display is Server Computer
Computer that remotely controls the Server Computer is Client Computer

All the Server Computers can be controlled by the Client Computers in the local area network. If the server computer and client computer are not in local area network, the server computer must be local dial-up internet access.

2. Settings

1. LedStudio settings on Server Computer: enables Local LED screen and Client Enable Remote Server(online), save setup
Note: **Quit Enable**, if unable it, LedStudio on server computer cannot be closed.

2. **Client computer LedStudio**, enable **Local LED screen** and **Client Remote Manager (online)**, save setup.

3. **Client computer LedStudio**, **Remote LED Screen Manager(Online) Icon** changes from inactivated status to activated status.
And **Manager for Led Screen Server (online)** is activated.

4. **Client Computer LedStudio**, Click **Remote LED Screen Manager (Online) Icon**, or **Manager for Led Screen Server (online)** under **Contrl Menu**, then the following window appears
Click Add

**Screen Name**: Type in the led display name (or leave it empty)

**Server IP**: Type in **Server Computer**’s IP.

**Tip**: use the **Check IP Address** in Help Menu to check the Server Computer’s IP

**Server Port**: same port as **Server Computer** preset port

**Screen Numb**: type in a number

**User Name**: the LedStudio **User** name of **Server Computer**

**User Password**: the LedStudio **User password** of **Server Computer**

Click **Ok**
3. Available Operations after Setting Up

When Client Computer and Server Computer is connected, in Client Computer LedStudio will have the following window.

1. Reconnect/Add/Delete/Edit/Control

   **Reconnect**: try reconnecting to the added Server Computer
   **Add**: add another Server Computer
   **Delete**: delete a selected Server Computer
   **Edit**: change info of selected Server Computer
   **Control**: access to the Server Computer, realize Remote Desktop Control.
   **Command**: send command to Server Computer

2. Schedule Table

   **Schedule Table**: set Schedule Command Table (refer to 3, 2, 4, 7 Schedule Table) and send to Server Computer LedStudio
Send to current screen only: send the Scheduled Command Table to the current selected Server Computer
Send to the selected screen: select the Server Computer(s) to send the Scheduled Command Table to
Send to all: send to all Server Computers listed in Remote LED Screen Manager Online

3. Send Files

Send Files: send files from Client Computer to Server Computer
Target DIR: Server Computer Path to store incoming files from Client Computer
Source File: the outgoing files list
Send: send listed Source File to Target DIR
Exit: quite Send File window
Add: add a file to Source File
Del: delete a selected Source File
Delete All: delete all Source File
Same file name Overwrite: if Target DIR has a file with the same name of Source File, Source File replaces the Target DIR file
Same file name Skip: if Target DIR has a file with the same name of Source File, Source File skips transmitting to Target DIR.
Send current only: send the Source File to the current selected Server Computer
Send by select: select the Server Computer(s) to send the Source File to
Send to all: send Source File to all Server Computers listed in Remote LED Screen Manager Online

4. Send Program
Send Program: send .lsd file from Client Computer to Server Computer
**Source**: the outgoing .lsd file

**Dest**: Destination. **Server Computer** Path to store incoming .lsd file from **Client Computer**

**Browse...**: browse the Client Computer to select the .lsd file

**Send**: send Source to Dest

**Exit**: quit **Send Program** window

**Synchronization for time**: set **Server Computer** time synchronous with **Client Computer**

**Pause playing when is sending**: Pause **Server Computer LedStudio** playing when **Server Computer** is receiving .lsd file from **Client Computer**

**Auto Play after receive the program**: **Server Computer LedStudio** load and play the incoming .lsd file immediately when finishing receiving.

**Same file name Overwrite**: if **Dest** has an .lsd file with the same name of **Source**, **Source** .lsd File replaces the **Dest** .lsd file

**Same file name Skip**: if **Dest** has an .lsd file with the same name of **Source**, **Source** .lsd File skips transmitting the .lsd file

**Send current only**: send the **Source** .lsd file to the current selected Server Computer

**Send by select**: select the Server Computer(s) to send the **Source** .lsd file

**Send to all**: send **Source** .lsd file to all Server Computers listed in Remote LED Screen Manager Online
3.2.4.13.3.2 FTP Server

1. Define:

Client Computer LedStudio uploads settings and files to FTP Server, then Server Computer LedStudio downloads and carries out.

Computer that directly connects to the led display is Server Computer
Computer that remotely controls the Server Computer is Client Computer
Before Settings, the FTP Server should be setup and ready.

2. Settings:

   1. Enable Remote Server (offline) in LedStudio of Server Computer
      Type in the FTP info: FTP IP, Port, FTP User (name), FTP Password
      10 Minute: means every 10 minutes Server Computer LedStudio will fetch updates from FTP server

   2. In LedStudio of Client Computer Enable Remote Manager (offline)
3. Then in **Client Computer LedStudio Remote LED Screen Manager(offline) Icon** changes from inactivate to activate

And **Manager for Led Screen Server (offline)** is activated.

4. **Client Computer LedStudio**, Click **Remote LED Screen Manager (offline) Icon** or **Manager for Led Screen Server (offline) under Ctrl Menu**, then the following window appear
Click Add

Type in the same FTP Server info as the Server Computer
- Screen Name: Name for the Server Computer Led Display
- Server IP Address: the same IP address as in Server Computer (ftp IP)
- Server Port: Same as Server Computer
- Screen Num: type in a number
- User Name: the LedStudio User name of ftp
- User Password: the LedStudio User password of ftp

Click OK
Add: add another FTP server
Delete: delete the selected FTP server
Edit: edit the selected FTP server

3. Available Operations

1. Send Program

Send Program: send .lsd program from Client Computer to FTP Server Computer

Source: the outgoing .lsd file
Dest: Destination. FTP Server Computer Path to store incoming .lsd file from Client Computer
Browse…: browse the Client Computer to select the .lsd file
Send: send Source to Dest
Exit: quite Send Program window
Synchronization for time: set Server Computer time synchronous with Client Computer
Pause playing when is sending: Pause Server Computer LedStudio playing when Server Computer is receiving .lsd file from FTP Server Computer
Same file name Overwrite: if Dest has an .lsd file with the same name of Source. Source .lsd File replaces the Dest .lsd
Same file name **Skip**: if **Dest** has an .lsd file with the same name of **Source**, **Source** .lsd File skips transmitting the .lsd file

**Send current only**: send the **Source** .lsd file to the current selected **FTP Server Computer**

**Send to the selected screens**: select the **FTP Server Computer(s)** to send the **Source** .lsd file to

**Send to all**: send **Source** .lsd file to all **FTP Server Computers** listed in **Remote LED Screen Manager (offline)**

**3.2.4.13.3.3 Play Manager**

![Software Setup](image)

**Play Manager**: works with **Online/real time remote control**

1. **Define:**

Computer that directly connects to the **led display** is **Server Computer**

Computer that remotely controls the **Server Computer** is **Client Computer**

Purpose: Set all the listed **Server Computers Play/Stop** synchronously

![LED Studio](image)

2. **Settings:**

**Note**: Server Computers are set **online remote control/real time remote control**

1. **Server Computers Enable Play Manager**
2. **Client Computer Enable Play Manager**

**Add**: add the Server Computers to the list  
**Del**: Delete the selected Server Computer(s)

3. **Save Setup.**

Click **Play/Stop**, all the listed **Server Computers** will Play/Stop synchronously
3.2.13.4 Other

Auto restart software when fault occurs: automatically restart LedStudio when encounter errors
Restart every day: scheduled restarting LedStudio everyday
Auto Restart Software: restart LedStudio every preset minute(s)
Scheduled Backup: automatically back up files of .lsd file every preset time
Record playing time: record the playing time
No error message: when fault occurs, no prompt allowed
Show prompt message when quit: When quit the LEDstudio, a message will be popped out
U disk plug and play: enable u disk plug and play function. LedStudio load and play .lsd program from USB disk as priority
Play all programs: If enabled, all programs will be played at the same time
Normal Display: For No-Sending Card Mode Only. LedStudio capture the contents of Screen Area and send directly to receiving cards.
Close software is not allowed: If enabled, the software can’t be closed
Pop-up tips when the control cards can’t be found: A message will be popped out when the the control cards can’t be found
Show the borders of program windows: Show the borders of play window, so the size of play window can be changed by mouse
New program windows in full-screen size: the new program windows will be created in full-screen size
New play windows without borders: the new created play windows don’t have borders
3.2.4.1.5 Auto

Auto settings:
- **Start when Windows Starts up**: open LedStudio when Windows starts up
- **Load File when Starting**: Load .lsd file automatically when open LedStudio
- **Play Document when starts up automatically**: start playing files of .lsd file automatically
- **Play Document when starts up manually**: start playing files of .lsd file when click play
- **Change virtual/real by auto**: for virtual led display, playing letters in real-pixel mode for better visual effect, and playing image/video in virtual pixel mode; automatically switch.
- **Mouse hide when soft is playing**: hide the mouse pointer in Play Window when Play Window is playing.
- **Auto update new software**: automatically update LedStudio software
- **Auto minimize**: Minimize LedStudio automatically

**Automatic switch for large screen power play or stop**: the power of screen automatically power on/off according to the...
Save Setup: save settings

3.2.4.1.6 Email settings

Outbox server settings:
SMTP server: the SMTP server address of outbox
Port: the SMTP server port of outbox
Outbox address: the any valid email address for outbox
Password: the password of outbox email

Inbox settings:
Send e-mail every day: if ticked, one email one day
Inbox: the email address for receiving the mail (please clean up the inbox regularly, in case it is full)

Each** minutes to send: the interval time for receiving mail

Email setting when software failure: the email setting when a fault occurs to receiving cards
Fault display: setting the monitoring data for alert email. If ticked, email will be sent automatically when detected value is less than min value or more than max value.

3. 2. 4. 14 User Setup
Add User: add a new user account for LedStudio
Delete User: delete a selected User account
Edit User: Edit the selected User account info
Use Password when StartUp: when open LedStudio, it asks password to unlock.

3. 2. 5 Test Menu

3. 2. 5. 1 Grey Test 1
Grey Test1: test Grey level from 0-255 in sequence of Red, Green, Blue, White

3. 2. 5. 2 Grey Test 2
Grey Test2: select a color, a value (0-255) for testing
Auto Increase: continue testing next grey level up to 255. Then test again from 0 to 255.

3. 2. 5. 3 Grid Test

Grid Test: this can test the correctness of the image on screen. (Select three colors for testing and one static color as Background)

Color Change:

No Change: only the first color (Red color in the upper picture) runs in testing
Two Color: the first two colors run in testing (Red and Green)
Three Color: all three colors run in testing

Grid:
Time: in millisecond; the running speed of testing grid
Gap: the pixel numbers between two testing lines

Horizontal: testing line runs horizontally
Vertical: testing line runs vertically
Left Diagonal: testing line runs in bias way
Right Diagonal: testing line runs in bias way

3. 2. 5. 4 Dot Test

Dot Test: check for bad pixels
3.2.5.5 Color Bar Test 1

Color Bar Test 1:

3.2.5.6 Color Bar Test 2

Color Bar Test 2: Choose color for color bar test

3.2.5.7 Aging

Aging test is used for the aging of LED screen and receiving cards
3. 2. 5. 8 Check Position

Check Position: get coordination of Mouse Pointer

Coordinates (805,426)

3. 2. 5.9 Check Color

Check Color: get RGB value
3. 2. 6 Help Menu

3. 2. 6. 1 Help
Help: activate the LEDStudio manual

3. 2. 6. 2 Knowledge
Knowledge: some tips for LEDStudio

3. 2. 6. 3 Check IP Address
Check IP Address: get the IP Address of computer

3. 2. 6. 4 About LEDStudio
About LedStudio: show LEDStudio Version

3. 2. 6. 5 Play File List
Play file list: can check records that the file has played via LEDStudio

File: type in the File Name for search
Date From TO: select a period of time for search
Show file path: show the path of the file saved in the computer
**Search:** start searching and get record list
**File:** file name
**Degree:** how many times the file has been played
**Time:** total time the file played
**Begin time:** the starting playing time
**Time:** time duration the file has been played for
**Export:** export the search result in Microsoft Excel file format
**Print:** print the search result
**Display detail:** when export or print the search result, including the info of **Begin time** and **Time** (12.43 version, it always shows details when Print or export)

**Empty Log File:** Delete log file.
**Log File save as:** Save log file.

### 3. 3 How to make a .lsd file

#### 3.3.1 Play Window Setup

1) Set the **Play Window** the same size as that of **LED Screen**.
Start X and Start Y is (0, 0); Width & Height

2) Select Lock to LED Screen. LedStudio will set the Play Window size according to .CON file and Or Select Floating to adjust Play Window manually. (Refer to Software Setup Play Window) page 39

3. 3. 2 Open a New Page of Program
3. 3. 2. 1 Add Step, Add Universal Display

Click Allow Edit icon, then New Page of Program icon

Add Step: Program can play cycle
Add Universal Display: this kind of Step have loop play independently. Universal Display is always at an upper layer of Add Step. Usually for Company Logo, etc.
Note: only one Universal Display in an .lsd file
Time Window usually put in Universal Display page, if Time Window put under Step2 for example, then Step 3 and following Steps will not be played, because Time will never stop. Then Step2 will always be played.
3. 3. 2. 2 Step Settings

**Program Name**: Change the Step name (Default from Step 1, Step 2, Step 3…)

**Time (seconds)**: deselect **Waiting to End**, set time durations for the Step. For example, 60, means the **Step1** will be played in 60 seconds, then play **Step2**.

**Hide Window (Second)**: Hide **Play Window** for preset seconds when **Step1** is finished. In the same time, **Step2** is playing.

**Background**: Background color of **Play Window**

**Background Picture**: Background picture of **Play Window**

**Picture**: Center/Zoom/Stretch/Title the background picture

**Background Music**: background music, loop play.

3. 3. 2. 3 Universal Display Settings

Universal Display Setting: only adding Background Music is available. Normal program page plays in order, while overall program page plays continuously, without any time limits. (Such as time display)
To delete a program page, use the delete button \( \times \).

To change the order of page, use the moving button \( \uparrow \), \( \downarrow \).

3. 3. 3 Add New Window

After a Step or Universal Display is added, the New Window icon \( \text{New Window} \), Copy icon \( \text{Copy} \), Paste icon \( \text{Paste} \), Delete icon \( \times \), are activated. \( \uparrow \), \( \downarrow \).
Click the **New Window** icon.
3.3.0 Important Notes:

<table>
<thead>
<tr>
<th>Name</th>
<th>File</th>
</tr>
</thead>
<tbody>
<tr>
<td>StartX</td>
<td>20</td>
</tr>
<tr>
<td>Width</td>
<td>178</td>
</tr>
<tr>
<td>StartY</td>
<td>20</td>
</tr>
<tr>
<td>Height</td>
<td>132</td>
</tr>
</tbody>
</table>

The above window appear in every New Window, it is File Showing Area Setting Window.

File(s) Showing Area Settings: the Showing Area (the green rectangle) is inside the Playing Window. All files of File Window will show inside the Showing Area.

Name: Change the default name File
Frame: Frame of Showing Area; None, no frame line; Single line, one frame line; Double lines, two frame lines; Three lines, three frame lines.
Color: Frame line color

Standard: Inverted (180):
Right (90cw): Left (90cw):

Start X: set the X position of (X, Y) coordination for Showing Area in Play Window
Start Y: set the Y position of (X, Y) coordination for Showing Area in Play Window
Width/Height: Set the size of Showing Area
Lock: when lock, mouse pointer cannot drag to move or drag to resize the Showing Area inside the Play Window
Timer: designed for Time Window.

Based on the PC time: By 30 Minute 30 Sec means every 30 minutes of computer clock, Time Window appears for 30
3. 3. 3. 1 File Window

File window: play various files like documents, pictures, video etc.

3. 3. 3. 1.1 File(s) Showing Area Settings

File(s) Showing Area Settings: refers to Important Notes

3. 3. 3. 1.2 File(s) Adding & Listing Window

Display Path: Showing the file path in the computer

Add File: click Add File icon to add a media file.
Add Homepage: add a web link to show web page in Showing Area
Edit File: edit the selected file. Open and edit
Delete: delete the selected file
Find: find file(s) in the list

3.3.3.1.3 File Playing Settings
3.3.3.1.3.1 Photo Playing Settings
File Playing Settings: settings for the selected file in the File(s) Adding & Listing Window
Note: All the settings only effects on the selected file

The above File Playing Settings is for Pictures.
Background: background color of Showing Area
Center/Zoom/Stretch/Tile: effects for background picture
Background picture: background picture for Showing Area
Background music: background music when playing the selected file
Transparent: Enable Transparent. The selected color will be filtered.

Action: how the pictures come in
Effect: zoom, stretch, center, tile
Text: add text
Speed: file coming in speed. The larger value, the slower speed
Stay: time duration for file to stay
Clear: how the file is cleared out
Clr speed: clear out speed. The larger value, the slower speed.

3.3.3.1.3.2 Video Playing Settings
Background: background color of Showing Area
Center/Zoom/Stretch/Tile: effects for background picture
Effect: the Center/Zoom/Stretch/Tile effect

Sound: 0-100. Adjust the sound of the video
Process: show current playing time of video
Action: how video come in
Speed: the coming in speed. The larger value, the slower speed

3. 3. 2 Text Window

Transparent: Transparent the Showing Area background color
Add Text,
Edit: show/hide the text window

Open: open a .txt file

Save: save as .txt file

Font settings:

Name: default as Text

Background color

Picture, background picture.

Center/zoom/stretch/tile effects for background picture

Action: action for background picture

Speed: background picture coming in speed. The larger value, the slower speed

Stay: time duration for background picture to stay

3.3.3.3 Single Line Text Window

Single line text window: to play single line text window
**Transparent**: only work when **Showing Area** background color is Black. Transparent the black color and show the **Step background color** instead.

**External File**: open a .txt file

**Text**: input text

**Action**: how the text comes in **Showing Area**

**Style**: add effects to the text. And the color for the effect.

**Background**: background color for the text

**Speed**: Text coming in speed. The larger value, the slower speed

**Stay**: time duration for text to stay

**Font**: Font settings for text

**Text invert**: abc ---- cba

**Repeat**: abc---abcabcabcabc
3.3.4 Static Text Window

**Transparent**: only work when **Showing Area background color** is Black. Transparent the black color and show **Step background color** instead.

**Text**: text input

**Line space**: space of text lines

**Word space**: space of neighboring words

**Align**: left/center/right/left&right

**Style**: add text effects and color of effect

**Background**: background picture

**Background color**: add background picture

**Center/zoom/stretch/tile** for background picture

**Font settings**: change text effects and size
3.3.3.5 Table Window

**Table Window:** Used to edit the play list data.

**Table Properties:**

- Font color
- Table background color
- Insert, delete, split/merge

**Add Table**

Table Properties:
Name: Title name of the table
Font settings: Title font settings
Grid: the table grid color
Font color: title font color
Show Title: Show/hide Title
Lock title: when title is locked. Title stays still while Action effect taking place.
Action: table effects
Speed: table coming in speed. The larger value, the slower speed
Stay: time duration for table to stay
Lock row: for example, Lock Row 2, the second row will stay. This only works in Up/Down Action effects.
Lock Column: for example, Lock Column 2, the second column will stay. This only works in Left/Right Action effects.
Ctrl+Enter: start a new line within a single table

3.3.3.6 Timer Window
Timer window: Used for countdown
**Bkg:** background color for Timer

**Center/zoom/stretch/tile** for background picture

...: background picture for Timer

**Transparent:** only work when **Showing Area background color** is Black. Transparent the black color and show **Step background color** instead.

**Static Text:** text input

**Style:** add effects to text and color for effect

**Font settings** for Text.
| **End Date** | 2017/ 5/10 |
| **End Time** | 0:00:00 |

- **End Date**: Date for timer to countdown to
- **End Time**: Time for timer to countdown to
- **Days/Hours/Minutes/Seconds**: show/hide when countdown
- **Multi Line**: enable or disable multi line showing
- **No negative sign**: when countdown pass the End Time, do not show the – in the timer.
- **Zero stop**: stop when Timer finish countdown
- **Customize**: customize the time format for countdown
3.3.7 Database Window

**Database window:** Used to play ACCESS database and ODBC driver data base.

![Database Window Diagram]

**Add Database**

![Select Database Dialog]

**Database Settings**
**Table Properties**

- **Find SQL**: select the database that you want
- **Scripting**: Scripting
- **Action**: effects for how the table comes in **Showing Area**
- **Speed**: table’s coming-in speed. The larger value, the slower speed
- **Stay**: time duration for table to stay
- **Row (in pixels)**: the height for a row
- **Font**: Table1 color
Grid: table grid color
Backgr: background color of table
…: add background picture for table
Center/zoom/stretch/tile for background picture

Font settings for Table1:

Show title: hide/show Table title
Lock title: when title is locked. Title stays still while Action effect taking place.
Show header: show/hide the Column header

Column Properties

Name: column name
Width: column width in pixels
No Show: hide the selected column

Background odd: background color of column header
Background even: background color of column data
Text odd: column header font color
Text even: column data font color
Define: define a rule to apply color
Font settings of selected column:

- Font: Arial
- Align: Left
- Size: 12
3.3.3.8 VCD/DVD Window

**DVD/VCD window:** play DVD/VCD in **Showing Area**

![Diagram of VCD/DVD Window](image-url)
3.3.9 External Exe Window

**External Program Window**: run a .exe program inside Play Window

**Browse**: Browse to select a .exe program

**Window Name**: Select a .exe listed to run in Play Window

**Top/Bottom/Left/Right Margin**: set the position of the .exe program
3.3.3.10 Video Window

**Video Window:** Read Video/audio source from capture card and show on Play Window

LEDStudio will detect what video/audio sources are available from the computer. Select a source and show on Play Window.
3.3.3.11 Date/Time Window

**Background color** for Time

**Center/zoom/stretch/tile** for background picture

... background picture for Timer

**Transparent**: only work when **Showing Area background color** is Black. Transparent the black color and show **Step background color** instead.

**Show Style**

**Style**: Time style

**Style**: effects for Time (not for Analog clock) and effect color

**Static text**: text show together with Time
Font: font settings for static text

Time Day Ahead/Behind: adjust the Time Ahead or Behind computer time
Hour X, Y: width and height for Hour
Minute X, Y: width and height for Minute
Clock: shapes for Analog clock
Hour Font: font setting when shape is Digit
Date/Day: show/hide Date/Day
Date Font/Day Font: font settings
3.3.3.12 Temperature/Humidity Window

This is used to display temperature and humidity.

**Background color:** means the background color of Temperature/Humidity

**Center/zoom/stretch/tile** for background picture

...: background picture for Temperature/Humidity

**Transparent:** only work when Showing Area background color is Black. Transparent the black color and show **Step background color** instead.

**Show Style**

**Style** add effects to text and color for effect

**Font settings** for Text.

**Multi-line:** show between multi-line and single line

Show temperature in different units
Add text before/after Temperature/Humidity Value

3. 3. 3. 13 Copy Window
StartX, StartY: set position of Copy Window
Width, Height: set size of Copy Window
Frame Extracting: for example: Per 10 extracting 5 pixels means in every 10 pixels, extract the last 5 pixels.

3. 3. 4 Save Program
Click saving button or click File Menu, then the file can be saved.

3. 3. 5 Play Program

: Play from the first program

: Play current program

: Pause

: Stop

: To play .lsd file a saved before.
4.4 3D Display

Load and open the video in Ledstudio, right-click on the video - choose Around the screen or Up and down screen according to your video.

For example, choose Around the screen and select 3D Play for the following video.

![Figure 1 Settings for around the screen type video](image)

After choosing the 3D Play effect, a 3D video would be generated through ledstudio’s algorithm as follow.

![3D video example](image)