LedCenterM Software Operation Manual (C-POWER)

This manual is intended for LED program edit & management personnel like LED system integrator, manufacturer and end user.

Typesetting notes Special typesetting symbols are described below :

Symbols	Description
1 Preface	Chapter number and chapter title
2.1 System configuration	
Figure 1 Software language	Figure number and description
switching	
Table 1 Button list of console	Table number and description
tool bar	
Common font	Text
Bold font	System terms, for example "LedCenter"
The Wave underline	Important points, special attentions required
1)2)3)	Operation steps. Installation and setting shall be made in
	accordance to the steps.
1.2.3	Important list
a.b.c	
A.B.C	
•	Less important list
Underline	

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1 Preface

1.1 Software application background

Thank you for using **LED Center** software. **LED Center** is a professional LED control system supporting software.

LedCenterM (asynchronous display version) is intended for the control system of LED asynchronous display and its main functions are:

- Support editing and making programs of **AniView** series control card for bar-style led screen and graph led screen.
- Support editing and making programs of **C-Power** series control card for advanced led screen.
- Program related operations: program definition, setting of program window layout, programs (such as text, clock and picture) editing, program preview and adjustment, program sending and etc.
- Setting function: automatic tasks, time setting and communication ports setting and etc.

1.2 File description

Take LedCenterM (asynchronous display version) $V3.52^{1}$ as an example, this manual describes how to control and manage the control system of C-Power gray-scale led screen with LedCenterM software.

Each part of the Manual is stated as below:

- Chapter 1 <u>Preface</u>
- Chapter 2 Introduction to C-Power control system
- Chapter 3 <u>Brief introduction and basic settings</u>: LedCenterM software characteristics, installation, uninstall and basic settings and etc.
- Chapter 4 <u>Program edit management</u>: concepts and operation methods, by which the programs of C-Power series gray-scale led screen control system are edited, sent and played with **LED Center** software.
- Chapter 5 <u>Other functions</u>
- Chapter 6 <u>Appendices</u>: usage of buttons in tool bar, trouble shooting and etc.

¹ Note: Functions may differ due to version.

2 Introduction to C-Power control system

2.1 System configuration

C-Power series control system consists of:

- A. **DS06ATC** main control panel: directly control the program display and management of LED display screen.
- B. LedCenter software: supporting software of LED control system. LedCenter connects with the main control panel through computer COM port usually.
- C. Other supporting accessories: directly connected to the main control panel and performs special functions, for example: optical probe, temperature probe, humidity probe and etc.

2.2 System communication

C-Power system communication connection supports TCP/IP mode, or RS232 and RS485 modes.

• TCP/IP mode

It is also called network mode. The computer can remotely manage the display screen through LAN (Local Area Network) or Internet.

• COM port mode

<u>RS232</u>: With RS232 mode, the computer COM port connects to main control panel directly. LedCenterM simultaneously manages and controls only one LED display through one computer serial port.

<u>RS485</u>: With RS485 mode, the computer COM port connects to main control panel through the RS232 \Leftrightarrow RS485 converter. But the main control panel can be cascaded with 485 BUS, and LedCenterM can simultaneously manage and control 255 LED displays through one computer serial port.

• GPRS/CDMA mode

Wireless GPRS/CDMA mode: The computer can remotely manage the display screen through mobile phone network by connecting GPRS or CDMA communication DTU.

• Other wireless mode

The computer can remotely manage the display screen through public wireless band by connecting wireless module (for example: RF module or ZigBee Module).

3 Brief introduction and basic settings

3.1 Software characteristics

Main features of LedCenterM (asynchronous display version) V352¹:

- Supports C-Power series controlling system.
- C-Power 5000 supports RGB full color, 256 gray degree scales.
- C-Power 4000 supports RGB color, large size, no-gray scale.
- With clear and simple interfaces, non-professionals can easily make, play and control programs.
- Software menu is easy and reasonable, which avoids error operations.
- With hierarchical management of programs in menu type so as to keep clear structure and convenient maintenance.
- With multi-program mode. Any multiple programs can be stored on control panel.
- C-Power control system supports the segmentation of the playing window. Up to 10 windows could simultaneously play different action modes.
- C-Power control system supports various program types such as animation, picture, Word/Excel, clock, text and etc.
- Supports text program which is edited in any language, any font and any size.
- Supports word library text program.
- Supports temperature display (temperature sensor shall be installed externally).
- Supports RTC management and settings of real-time clock, and the display of both simulated clock and digital clock.
- In networking mode, up to 256 LED screens can be networked and managed
- Programs are allowed to be played according to the designated time.
- Supports optical setting of multiple adjustment modes such as manual, timing or automatic adjustment (light sensor shall be installed externally)

3.2 Software running environment

- 3.2.1 Computer environment
 - OS: Windows98/ME/NT/2000/XP/Vista.

3.2.2 External running environment

LedCenter is the supporting software of LED display control system. Therefore, it shall establish communication with the hardware part of the LED control system. The communication connection modes are serial port, network port and etc.

3.3 Software installation and uninstallation

During installation, run "LedCenterM_V352.exe" on install CD, and according to the prompt.

¹ Note: functions may differ due to different types of control panel; also, functions may differ due to software version.

During uninstall, run "Start" - "All programs" - "LedCenterM3.52" - "uninstall LedCenterM".

3.4 Software running and setting

3.4.1 Software running

Run "Start" - "All programs" - "LedCenterM V3.52" - "LedCenterM"; or double-click "LedCenterM" shortcut icon on the desktop directly.

Click "Setting" – "Language" in menu bar to switch language. LedCenter supports English, simplified Chinese, traditional Chinese and so on. The language switching is described below:

File Edit Play Setting Tools Help	
Auto Task Time on LED screen	〒 ☆ ◇ ▶ ■ ■ ヱ
LED Screen Cf Show preview window Program[1 Show editor Wind Advance	Name Image Sign X
Wind: Language Wind: Option Wind: Option [rext]Welcomel flower.jpg landscape3.jpg fruit2.jpg landscape2.jpg landscape3.jpg landscape3.jpg	Mode Lenter Play in this period Repeat Sunday Begin Umonday Umonday 00:00 ± Umonday Umonday End Umonday Umonday Umonday Play time 300 ± s Friday Saturday Saturday
	Window Copy 6 - Layout

Figure1 Software language switching

3.4.2 Software setting

The software setting is to perform "Define LED screen".

Purpose: when the software is run for the first time, the LED screen definition is the first step, which aims to establish the program and set the communication mode. After it, the LedCenterM software is combined with the LED screen hardware through the program.

Methods and steps:

- 1) Click "Setting" "Advance" "Define LED screen", as shown in Figure 2.
- 2) Click "New" button in the "LED screen" list window, as shown in Figure 3.
- 3) Enter password in the authority confirmation box, and the box of "Screen editor" pops up, as shown in Figure 4 and Figure 5.

File Edit Play Setting Tools Help	
Auto Task Time on LED screen	🗴 ↔ 🕨 🔳 📓 🔽
LED Screen C-7 Show preview window Program[1 < Show editor The Window	Name 🛛 🖉 🖉 🗶
Advance)	Define LED screen
➡ Windk Language ➡ ≥ 24 ➡ Windk Option ➡ [TextWelcome!] 1 ➡ Indscape3.jpg 1 ➡ Indscape3.jpg 1 ➡ Indscape3.jpg 1 ➡ Iandscape3.jpg 1 ➡ Iandscape3.jpg 1	COM port setting GPRS setting Change password Play in this period Monday UMonday UMonday UMednesday UMednesday UMednesday UMednesday UFiriday USunday UMednesday UMednesday USunday UMednesday UMednesday UMednesday UMednesday USunday UMednesday UMednesday USunday UMednesday UMednesday USunday UMednesday UMednesday USunday UMednesday UMednesday USunday UMednesday UMednesday USunday UMednesday UMednesday UMednesday
Window[4] Sheet.xls Window[5] [Clock] Window[6]	Window Copy



Model	Name	ID	Color	Gray	Width	Height	COMM Type	COMM Parameter
C-Power5000(256x256) C-Power5000(256x256) C-Power5000(256x256) AniView3000-I(512x128) AniView2000-II(256x32)	C-Power5000[1] C-Power5000[4] C-Power5000[5] AniView3000[3] AniView2000(1)	1 4 5 3 1		256 256 256 2 2	256 256 256 256 256	256 128 128 128 32	R5232/485 R5232/485 R5232/485 R5232/485 R5232/485 R5232/485	COM1: 57600,N,8,1 COM1: 115200,N,8,1 COM1: 115200,N,8,1 COM1: 115200,E,8,1 COM1: 57600,E,8,1

Figure3 LED screen list

- 4) In the dialog box of "Screen editor", define LED screen according to the hardware setting condition of the screen controller.
 - A. Model: select the correct controller type at the left side of the dialog box.
 - B. <u>Name:</u> user can name the LED screen freely. The name will appear at the edit field. If no name input, the system will automatically display "C-Power 5000 (*ID*)"
 - C. <u>ID</u>: it is used to distinguish two or more LED screens. If there is only one screen, use the default value "1".
 - D. Color: select the color of the LED screen: Full color.
 - E. <u>Width and Height</u>: actual pixels of the LED screen.
 - F. Communication type: select COM port mode, network mode, or GPRS/CDMA mode.

<u>COM port mode</u>: RS232 or RS485 mode

It needs to set the original port of PC COM port¹ communication, and then Baud rate.

Model C-Power5000(256x256)	Name
C-Power4000(2048x256)	Walite
AniView3000-I(512×128) AniView3000-II(1024×64) AniView3000-III(256×256)	ID 1 Color Full color
AniView3000-IV(2048x32) AniView2000-II(256x32) AniView2000-II(T)	Width 256 • Height 256 •
AniView2000-III(512x16)	Communication type
AniView2000-III(T) AniView2000-IV(128x64)	
AniView2000-IV(T) AniView2100(RGB)	© R5232/485 C GPRS C Network
AniView1000(160x16)	
	Port COM1 Baud rate 57600

Figure4 "Screen editor" dialog box under COM port mode

• Network mode

There are the following setting items after connecting the network port with the control panel.

a. IP address: the IP address of the control panel

Local area network: if it is local area network or the control panel is connected by net twines, user can directly input IP address of the control panel (set IP address by using LedTool).

<u>Internet</u>: if the control panel is connected by internet, user should input IP address of the internet gateway.

b. Port: network port

<u>Local area network</u>: input network port of the control panel (set network port by using LedTool).

<u>Internet</u>: input network port of the control panel. Besides, allocate this network port to computer and control panel through the gateway setting port which computer and control panel lie in.

c. ID code: the IP package ID code of the control panel (such as password).

ID code should be the same as the control panel setting, so that it can be recognized and controlled by the control panel (set the IP package ID code by using LedTool).

¹ For port number of PC COM port, it can be also be modified through Menu Bar "Setting" – "Advance" – "COM port setting" after defining LED screen. User needn't enter "Define LED screen" again.

Model	
C-Power5000(256x256) C-Power4000(2048x256)	Name
AniView3000-I(512×128) AniView3000-II(1024×64) AniView3000-III(256×256)	ID 1 Color Full color 💌
AniView3000-II(256x32) AniView2000-II(256x32) AniView2000-II(T)	Width 256 • Height 256 •
AniView2000-III(512×16) AniView2000-III(512×16) AniView2000-III(1) AniView2000-IV(128×64) AniView2000-IV(T) AniView2100(RGB) AniView1000(160×16)	Communication type
	IP Addr. 192 . 168 . 1 . 222
	ID Code 255 . 255 . 255 . 255
	Port 5200
H	

Figure5 "Screen editor" dialog box under network mode

• GPRS mode

Both GPRS and CDMA modes are sending signals through wireless network by connecting GPRS or CDMA DTU. For details, please refer to relevant documents.

- 5) After the LED screen definition is completed, **LedCenter** will set up a playbill for each screen, so the mapping between panel and software is completed, and then the editing and management of programs is started.
 - After the LED screen definition is completed, engineers shall backup the file "screen.cfg" which is automatically created under the installation directory of LedCenter. If software or computer is installed again, overwrite the file under the installation directory of LedCenter with the backup, so that the related settings of software will be restored. User needn't enter "Define LED screen" again.

4 Program edit management

4.1 Software overview

During the normal running of software, the interface is shown as Figure6, which consists of two parts: **console** and **program preview window**



Figure6 Software running interface

4.1.1 Preview window

Preview window is an important part of LedCenterM software. It can simulate the same display effect as the actual LED screen and provide "what you see is what you get" program edit interface.

- **Program** overall preview: user can see overall display effect through preview window after **program** editing is completed. Please refer to section 4.3.4.
- **Play window**: user can adjust the size and position of each **play window** through preview window. Please refer to section 4.3.2.
- **Play item** preview: user can preview the actual play effect through preview window when each **play item** is edited.

In order to simulate LED screen to get better effect, the preview window is independent. For more settings of preview window, please refer to section 5.1.

4.1.2 Console

Console is an operating platform of program edit, setting and sending. The console is shown as Figure7 and Figure8, which consists of main menu, tool bar and program edit zone.

Main menu and tool bar: For the button function of tool bar, please refer to section 6.1.

File Edit Play Setting Tools Help	Main manu	LedCenter	_ 🗆 🔀
	Main menu	File Edit Play Setting Tools Help	
	Tool bar 🛛 🗲		

Figure7 Main menu and tool bar

• Program edit zone consists of "Playbill" zone and "Attribute box". After playbill item is selected, the attribute box shows each attribute of the item which can be set.



Figure8 Program edit zone

4.2 Playbill

When the LED screen definition in section 3.4.2 is completed, **LedCenter** will create a **playbill** for each led screen. The playbill zone which is located at the left side of the program edit zone in Figure8 is the well-edited playbill of "C-Power5000[1]".

- Each **playbill** consists of one or more **program**(s).
- The **playbill** switching of display screens is shown as Figure9.
- Playbill of each led screen will be stored automatically. In addition, with "Import" and "Export" functions, the backup and recovery of current playbill can be done. For the advanced operations of playbill, please refer to section 5.2.



Figure9 Playbill switching of display screens

4.3 Program

Program is the display content of LED screen. It consists of **play window** layout, various **play items** and so on.

• Each **playbill** consists of one or more **program**(s). If permitted by program data size, C-Power control system can store 512 **programs** at most. That is, the **playbill** of C-Power control system can consist of 512 **programs** at most. The window layout and content of each **program** in one playbill may be different.

As shown in Figure 10, a complete program consists of the following three parts:

1. Program

- C-Power5000 control card can store 512 different programs at most.
- In playbill, **programs** are played from the top to the bottom.
- User can set the play time of each program to play at the appointed time period.

For details of **program** management, please refer to section 4.3.1.

2. Play window

- Each **program** can be divided into 10 **play windows**.
- The contents of different **play windows** for each program are absolutely independent and played simultaneously.

• The position and size of the window can be freely adjusted, and sometimes overlapped. Therefore, please note that whether **play windows** are overlapped during division. When one or more windows are overlapped, the content of the window that window **number** is smaller will be covered by the bigger one. For details of **play window**, please refer to section 4.3.2.

3. Play item

• User can set many **play items** within one **play window**.

• Many **play items** under each **play window** are played from the top to the bottom.

• Types of **play item**: text type, clock type, environmental data type and external document type.

For details of **play item**, please refer to section 4.3.3.



Figure10 Levels of playbill

4.3.1 Management and setting of program

1. Program management

Method 1: select a program from the playbill (at the left side of the console); click "Add", "Delete", "Move up", "Move down" under "Edit" in Menu Bar.

Method 2: click the relevant tool button in Tool Bar, as section 6.1 shows.

Method 3 (recommended): right click a **program** in playbill (at the left side of the console); select right shortcut in the pull down menu, as shown in Figure 11.



Figure11 Shortcut management of program

2. Program setting

In Figure 12, when one **program** is selected in playbill at the left side of the console, the attribute box at the right side will show its attribute. The following items can be set:

A. <u>Name</u>: self-define **program** name.

B. <u>Background and mode</u>: select background picture and its layout of the current **program**, which means displaying the background pictures needed to be displayed where is not covered by all the **program windows**

C. <u>Program play control</u>: when more than one programs coexist, they are played according to program number from the top to the bottom. User can set the repeat times or play time of each program. If only one program is played, it will be played repeatedly without restriction of this attribute setting.

D. <u>Play restricted by time period</u>: If it is selected, the current program will be played in restricted time period only. Otherwise, the current program is played normally in all time periods.

Skills of setting time selection

- Start time equals to end time: for example, the start time is "00:00" and the end time "00:00", the program is played all day.
- Start time is less than the end time: for example, the start time is "8:00" and end time "20:00", the program is played during "8:00~20:00"
- Start time is greater than end time: for example, the start time is "20:00" and the end time "8:00", the program is played during "20:00 ~ 23:59" and "0:00 ~8:00".

Note: if all programs are set to "play restricted by time period" and no content is appointed in the some period, the screen appears to be a black one with nothing.

E. Initial setting of play window

<u>Copy</u>: click "Copy" button to pop up a "Copy program's window". User can select and copy the currently existed program, as shown in Figure 13.

<u>Number of play window(s)</u>: select the number of **play window(s)** for the current program.

<u>Layout</u>: click "Layout" button to select the division type of play window for the current **program**.

- Note: It is to simply set the **play window** for the current **program**. Generally speaking, it is to set the **play window** for the new **program**. If it is used to set the well-edited program, it may lead to its data loss, please be aware!
- For details of management and setting of **play window**, please refer to section 4.3.2.



Figure12 Program attribute



Figure13 Copy program's window layout

4.3.2 Management and setting of play window

In each **program**, program display screen can be divided into up to 10 independent **play windows**. **Play windows** can differ from each other in size and position.

1. Management of play window

Method 1: in **program** setting, user can set the number and layout of the **play window**, or directly copy the existed program. Please refer to section 4.3.1 and Figure 13.

Method 2: select a **play window** item from the **playbill** (at the left side of the console); click "Add", "Delete", "Move up", "Move down" under "Edit" in Menu Bar.

Method 3: click the relevant tool button in Tool Bar, as section 6.1 shows.

Method 4 (recommended): right click a **program** or a **play window** in playbill (at the left side of the console); select right shortcut in the pull down menu, as shown in Figure 14.

- Within one program, the position of each **play window** can be overlapped, and the content of the window that window number is smaller will be covered by the bigger one.
- 2. Setting of play window

When the **play window** is selected, the attribute box at the left side will show its attribute, see Figure 14. The following items can be set:

- A. Name: self-define the name of the play window.
- B. <u>Waiting</u>: if all **program items** in the current **play window** have completed playing while the **program items** in other **play window** haven't completed playing, user can select the waiting modes of current play window.
- C. Position and size: input the position and size of the play window.
- Freely adjust **play window**: when a "**Program**" or "**Play window**" is selected in the playbill, the mapping position of each **play windows** in current **program** will appear in the preview window. The frame of current **play window** is bright yellow while the others are green, as shown in Figure 15. The position and size of each **play window** can be adjusted freely by use the mouse to drag the black block on the frame

Right–click the mouse	Image: Constraint of the state of the s	Attribute of play window

Figure14 Play window management



Figure15 Editing of size and position of play window in preview window

4.3.3 Management and editing of play item

1. Management of play item

Each **play window** can hold any number of **play items**; every **play item** is played in sequence from the top to the bottom. The **play item** is managed in following ways:

Method 1: select one **play item** in the **playbill** at the left side of the console; click "Add", "Delete", "Move up" or "Move down" under "Edit" in Menu Bar.

Method 2: click the relevant tool button in Tool Bar, as section 6.1 shows.

Method 3 (recommended): right click a **play item** in **playbill** (at the left side of the console); select right shortcut in the pull down menu, as shown in Figure16



Figure16 Management of play item

Click "Add play items", more external documents can be added to the current play window, as shown in Figure 17.

Look in: 🔁 sourc	e	- 🗢 🖻 (* 💷 *	
2608.gif dragon.gif flower.jpg fruit1.jpg fruit2.jpg fuit2.jpg	grí001 a.grí grí002 a.grí grí023.grí grí028.grí grí028.grí grí028.grí grí 130.grí	HappyYe HappyYe horse.gi Iandscap iandscap	ear32x256.gif e1.jpg e2.jpg	
	ver.jpg" "fruit1.jpg" "fruit2.jpg upported files	'' ''furim13.gif'' '	Open Cancel	Preview

Figure17 Add play items

2. Editing of play item

The content of each **play item** can be selected by clicking "Play item type" button, as shown in Figure 18. The types are listed below:

- <u>Text type</u>: Text mode (font library stored in the control card) and Image mode (using the computer's font library and converted into picture before sending)
- Clock type: simulative clock, digital clock, etc.
- **<u>Environmental data type</u>**: temperature (Celsius or Fahrenheit)
- External document type: animation, graphic document, Office document, text document, etc.

The following sections introduce each type of editing the **play item** in details.

4.3.3.1 Text type

At the left side of the playbill, select the **play item** to be edited. If **w** button is clicked, the type of the play item is text. Please see Figure 18 and Figure 19.

There are two modes of text type: "image mode" and "text mode".

1. Image mode

As shown in Figure 18, it use the fonts of computer and convert the content in the edit zone to picture format It supports the text program of any languages, fonts and sizes.

- To set and modify fonts, size, text color, background color, bold (**B**), italic (*I*) and underline (U) of the selected words
- To set row spacing, and Y-offset, it can adjust the text height and position exactly even by every screen pixel.
- Click *integrable* and *integrable* buttons above the text edit zone to open TXT or RTF files or save text which are edited well in the edit zone to files.

2. Text mode

As shown in Figure 19, display the text with the attached font library of the main control card.

- Set and modify the size, color and reverse color (2) of selected words
- Click *integral* and *integral* buttons above the text edit zone to open TXT or RTF files or save text which are edited well in the edit zone to files.







Figure19 Text program (text mode) edit interface

4.3.3.2 Clock type

In the playbill at the left side of the program edit zone, select the play item to be edited. If

"clock" button 🔯 is clicked, the type of the play item is clock. Please see Figure 20.

- A. <u>Digital clock</u>: select display items, display on line or not; selection of clock format: Chinese format or English format (2001-01-01Mon 00:01).
- B. Simulative clock: select "Show hands" and "Show marks" to simulate the clock effect.
- C. <u>Character</u>: user can add concise message before clock information, for example: "Beijing time", etc. Besides, in English format, the font "8, 16, 24, 32" can be selected freely.

<u>File Edit Play Setting Tools H</u>		
D 🗗 😼 🔽 🐔	12 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
LED Screen C:Power5000[1] Program[1] GlockTIME ClockTIME ClockTIME CockTIME CocKTI	Caption TIME 16 Caption Caption Cap	*
	Transparent	

Figure20 Clock program edit interface

- Clock transparent display: as shown in Figure 21. User needs to set 3 places to achieve the transparent display effect.
 - 1. Select "Transparent".

2. The play window of clock should be overlapped with the play window to be covered.

3. The play window number of clock should be bigger than the one to be covered.



Figure21 Setting of transparent display of clock

4.3.3.3 Environmental date type¹

In the playbill at the left side of the program edit zone, select the play item to be edited. If

¹ For this type of program, sensors (temperature sensor, etc.,) shall be installed externally.

"Sensor" button III is clicked, the type of the play item is environmental data type. Please see Figure 22.

- A. <u>Character</u>: User can add concise message before temperature information, and set the stay time and color of the character. In English format, the font "8, 16, 24, 32" can be selected freely.
- B. <u>Temperature unit</u>: Celsius or Fahrenheit.



Figure22 Temperature program edit

4.3.3.4 External document type

In the playbill at the left side of the program edit zone, select the play item to be edited. If

"Document" button is clicked, an "Open file" dialog box pops up. Please see Figure 23. C-Power control panel supports the following document types:

- "Text files" (*.txt)
- "Office document" (*.doc 、*.xls、*.rtf) 、
- "Image (picture or animation) file" (*.jpg、*.bmp、*.gif、*.png、*.tif)

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	File <u>n</u> ame: Files of <u>type</u> :	flower.jpg	d files			<u>O</u> pen Cancel		Preview	
1	D 2608	All supporte	d files kt) omplipglaifitif	s <u>)</u>					
		~		C-Power5000	[1]	C-Power5000	Full color	256	256

Figure23 Open file window

1. Text file and Office document

When the selected document is Word (*.doc), Excel (*.xls), Text-only format (*.txt) or Rich text format (*.rtf), the attribute box of the relevant documents will appear at the right side of the program editing zone, as shown in Figure 24.

- <u>Effect selection</u>: to set the play effect, speed and stay time of the document. For some different documents, there are special setting items.
 - a. Word file (*.doc): **View as text**: text will be recomposed automatically to comply with the size of the play window; **Color inverse**: background color and text color will be reversed.
 - b. Rich text format (*.rtf): **Color inverse**: background color and text color will be reversed.
 - c. Excel file (*.xls): **Color inverse**: background color, text color and sheet frame color will be reversed.
 - d. Text-only format (*.txt): to set text color.

2. Animation file

As shown in Figure 25, if GIF animation file is selected, animation may be played.

• Picture processing "Mode", "Repeat" times of animation play and the setting of "Color inverse" can be selected. GIF files can also be selected to be displayed as static picture (view as still image).

3. Picture file

As shown in Figure26, the play effect of pictures can be set if JPG, BMP, PNG, TIF files are selected or GIF files are displayed as static pictures (view as still image).

- To set picture "Effect", picture processing "Mode", "Play speed", "Stay time" and "Display in reverse color".
- Reduce image data: Though compressing the picture data can greatly reduce data size



and time of transmission, the picture quality may be slightly reduced.

Figure24 Effect setting of Office file

Elle Edit Blay Setting Tools Help ED Screen C-Power5000[1] File IteD Screen C-Power5000[1] IteD Screen C-Powe7	📕 LedCenter	E.	
LED Screen C-Power5000(1) LED Screen C-Power5000(1) Network.doc File DIO\LedCenterMv351\work\source\2608.gif File DIO\LedCenterMv351\work\source\2608.gif File DIO\LedCenterMv351\work\source\2608.gif File DIO\LedCenterMv351\work\source\2608.gif File DIO\LedCenterMv351\work\source\2608.gif File DIO\LedCenterMv351\work\source\2608.gif Color inverse Vindow(3) File DIO\LedCenterMv351\work\source\2608.gif View as still image View as still image View as still image File DIO\LedCenterMv351\work\source\2608.gif File DIO\LedCenterMv351\work\source\2608.gif View as still image File DIO\LedCenterMv351\work\source\2608.gif File DIO\LedCenterMv351\work\so)	
Image: Stratch image		1 ☆ ☆ ◇ ▶ ■ 图 ズ	
		File DIO\LedCenterMv351\work\source\2608.gif Mode Stretch Mode Color inverse View as still image]

Figure25 Effect setting of animation file

LedCenter		
<u>File E</u> dit <u>P</u> lay <u>S</u> etting <u>T</u> ools <u>H</u> elp		
Der Gel 🖸 🔽 🎋 🏌		物 ☆ ◇ ▶ ■ ■ 四 マ
LED Screen C-Power5000[1]	3	
🖃 🔷 Program[1]		
🖻 🖶 Window[1]		File DIO\LedCenterMv351\work\source\landscape2.jpg 💕 💋
 Network.doc Iandscape2.jpg 		
landscape3.jpg		5how Random 💌 Mode Stretch 💌
 Fruit1.jpg 		
Fruit2.jpg	9	ipeed 100 - Stay 3 - s
Network.doc		
🖃 🕒 Window[2]		Color inverse Reduce image data
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🖻 🚫 Program[2]		
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Clock]TIME		
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≥ 2608.gif		
Window[3]		
TextWelcome!		
	C-	Power5000[1] C-Power5000 Full color 256 256 //

Figure26 Effect setting of picture file

4.3.4 Program preview

After program edit is completed, user can preview the program in the preview window:

- 1) Click "Play" "preview" in menu bar or button in the tool bar. In the preview window, the effect of this display screen can be shown.
- 2) Click "Play" "Stop" or press **b**utton in the tool bar, stop preview.

4.3.5 Program data sending

After program edit and preview confirmation are completed, send the well-edited playbill to the main control panel of the screen:

- 1) Confirm the communication cable connection between computer and C-power card.
- 2) Click "Play" "Send program data..." in main menu; or click subtraction in tool bar, and the box "Send data to screen" pops up, as shown in Figure 27. The choices are:
 - <u>Send to current</u>: send program data to the current panel.
 - <u>Send the selected data</u>: send the program data of the selected panel at the left side "LED screen list".
- When sending is completed, the prompt box "Finish sending data" pops up, as shown in Figure 28:

Screen	Selec	t all Unselect all	Selected sc	reen (ō	Send to a	work
C-Power5000[1] C-Power5000[2] C-Power5000[3]			-Current s Name Items Data si	C-Power500	00[1] 2 9 bytes	Send to se	lected
Detail of current				Detail of screen		🗔 Show data	of screen
Filename	Size	Modified		Filename	Size	Modified	
playbill.lpp 00010000.lpb 00010001.lpb	48 856452 235549	09.03.30 17:44:36 09.03.30 17:44:34 09.03.30 17:44:36					

Figure27 Dialog box of sending data

Prompt		×
Send to 1	Success 1 Failed 0	OK
C-Power5000[1]: Finish send	ling data!	

Figure28 Data sending completed

5 Other functions

5.1 Software option

Select "Setting" – "Option", user can set the display of the software, as shown in Figure 29.

File Edit Play Setting Tools Help	
Auto Task Time on LED screen	(1997년 1월 1898년 1998년 1988년 1998년 1988년 19888년 1988년 1988년 1988년 1988년 1888년 1888년 1888년 1888년 1
LED Screen C·f ✓ Show preview window □ ◇ Program[1 ✓ Show editor	
Gradie Winde N Advance	File E:\TEST_STUDIO\LedCenterMv351\work\source\lar 💕 📝
Language	Show Random Mode Stretch
- ▷ frt <mark>Option</mark> ▷ fruit2.jpg	peed 100 ÷ Stay 3 ÷ s
Network.doc Glock)TIME	Color inverse Reduce image data
Program[2]	
Clock]TIME Window[2]	
2608.gif	
🖻 📭 Window[3]	

Figure29 Go to "Option" dialog box

1. "View" page layout

Main window view:

"Minimize window to system tray bar": if this setting is selected, the software window is minimized to system tray bar by clicking



Figure30 Minimize window to system tray bar

Preview window view:

A. <u>Align to main window</u>: to set the position of preview window whether it is aligning to the main window.

• Freedom: the preview window is not aligning to the main window. User can move it to any place.

- Align top: fixed the preview window to the top of the main window.
- Align bottom: fixed the preview window to the bottom of the main window.
- Align left: fixed the preview window to the left of the main window.
- Align right: fixed the preview window to the right of the main window.
- B. Preview window always on top: the preview window is always on top, which can't

be covered by other program window.

C. <u>Hide preview window when application startup</u>: when application starts, preview window will not be displayed. Click **D** to display.

Tip: right click the preview window and see the display times (100%, 200%, 300%, 400%). The preview window can be zoomed in or out.

Figure31 Option dialog box

2. "System" page layout: to set the shut down time of Windows system.

5.2 Playbill advanced management

After LED screen definition is completed (see section 3.4.2), **LedCenter** sets up program data for each screen and save them automatically.

For the program data of each screen, the following operations can be done:

5.2.1 Build new playbill

Target: Clear the old playbill of current screen and create new one.

Method and step: click "File" – "New" in menu bar, or click D in tool bar.

5.2.2 Export program data

Target: export the program data of well-edited current screen to playbill file (*.lpl). Method and step:

- 1) Click "File" "Export" in menu bar, or click in tool bar.
- Select export position in the dialog box "Export to playbill" (as shown in Figure 32) and enter the export file name. Click "Save". The playbill file of current panel will be stored

to the file.

Save jn: 🗀	work	• + •	💣 🎟 •
a7sd source tmpfile tpsd twsd demo.lpl			
File <u>n</u> ame:	demo.lpl		<u>S</u> ave
Save as type:	LedCenter playbill (*.lpl)	•	Cancel

Figure32 Dialog box of export playbill

5.2.3 Import program data

Target: import the program data which are well-edited. Method and step:

- 1) Click "File" "Import" in menu bar, or click in tool bar.
- 2) In the dialog box "Import playbill" (as shown in Figure33), select the program file (*.lpl) to be imported. The "Information" at right side of the dialog box shows the screen parameters of the program file. Confirm the imported program consistent with the parameters of current screen.
- 3) Import to multiple screens: if select the option "To multiple screens" as shown in Figure33, a dialog box "Import to multiple screens" as shown in Figure34 pops up after a file is selected. Hold Ctrl key and click the screen list, user can select multiple screens, and then import the program file to multiple screens which is consistent with the file information.

nport playbill	 ?
Look jn: a7sd source tmpfile tpsd twsd demo.lpl	Information demo.lpl Target screen: Type (C-Power500 Color Full color Width (256
File name: demo.lpl Files of type: LedCenter playbill (*.lpl)	 □pen Cancel

Figure33 Import playbill

Import E:\TEST_STUDIO\L	edCenterMv351\work\demo.lpl		
To screen(s):	Select all Unselect all		
C-Power5000[1] C-Power5000[2]		OK Cancel	
C-Power5000[3]			
AniView3000[1] AniView2000(1)		File information	
	Screens list	Type C-Power5000	
	Screens list	Color Full color	
		Width 256	File informatior
		Height 256	
		Current screen	
		Type C-Power5000	
		Color Full color	
			a
			Screen
		Height 256	information

Figure34 Import to multiple screens

5.3 Setting and inquiry of screen time

Function description: set or calibrate the time of real time clock of current screen.

Steps:

- 1) Click "Setting" "Time on LED screen" in menu. The dialog box of "Time setting" pops up, as shown in Figure 35.
- 2) Select the screen (from the screen list on the right) which is connected with the computer. Hold Ctrl key and click the screen list, user can select multiple screens.
- Input time manually or adjust according to the current computer time, and then click "Set to screen".
- 4) Click "Read from screen" to search the current time of real time clock of the main control panel; click "Read version information also" to get the version information.

	Screen	Select all Unselect all	Сору
Date and Time	Screen name	Information	1
✓ Current computer time 2009- 3-30 + × 18:02:12 +	C-Power5000[1] C-Power5000[2] C-Power5000[3] AniView3000[1] AniView2000(1)	2009-03-30 18:02:28 (1.8-2.0-1.2) Time Version	

Figure35 Time setting

5.4 Setting and inquiry of auto task

Function description: set automatic on/off; set screen brightness.

Steps:

- 1) Click "Setting" "Auto task" in menu. The dialog box of "Auto ask manager" pops up, as shown in Figure 36.
- <u>Power on/Power off</u>: to set the ON/OFF time of the screen; during "ON-OFF" time period, the screen is turned on, while during "OFF-ON" time period, the screen is turned off.
- 3) <u>Brightness</u>: There are 32 grades of brightness adjustment for C-Power control panel. User can set all brightness or brightness for each time period.
- 4) After setting is completed, select the target screen and click "Set to screen".
- 5) Before or after sending, click "Read from screen" button to search the setting condition of the current auto task of the main control panel.

Screen C-Power5000[1] C-Power5000[2] C-Power5000[3] AniView3000[1] AniView2000(1)	ON 08:00 Enable OFF 22:00
	Brightness Value: 16 16 25 26 25 25 25
Read from screen Set to screen	Close

Figure36 Auto task manager

6 Appendices

6.1 Button function of tool bar

No.		Function	Corresponding position in main menu
1	D	Create new playbill	"File" – "New"
2	問	"Import" playbill	"File" – "Import"
3	튭	"Export" playbill	"File" – "Export"
4		Display/close the program preview window	"Setting" – "Show preview window"
5		Display/close program edit zone	"Setting" – "Show editor"
6	1 1	Add one playbill item	"Edit" – "Add"
7		Add items	"Edit"- "Add items"
8	,	Delete one playbill item	"Edit" – "Delete"
9	수	Move upwards the selected playbill item	"Edit" – "Move up"
10	차	Move downwards the selected playbill item	"Edit" – "Move down"
11	۲	Start to preview programs	"Play" – "Preview"
12		Stop previewing programs	"Play" – "stop"
13		Send notice	"Play" – "Send notification"
14	4	Send well-edited program data to panel	"Play" – "Send program data"

Table1 Button list of console tool bar

6.2 Trouble shooting and warning dealing

	Trouble or warning	Check software	Reason and resolution
1	Not found the LED screen with $ID \times$; can't send data! (or setting fails, reading from screen fails, etc.)	When communicating with the screen, software detection warning happens under the following conditions: send program data, set the screen clock, set the auto task, etc.	 Computer and screen control panel are not well-connected. Check the communication port and its setting, cable, (for example: baud rate, COM port, IP address of network port), etc. Screen ID number is inconsistent with LED screen definition. Check the screen ID number and LED screen definition, etc.
2	Sometimes there is not any program to be played.	When sending program data, software warning happens.	The warning happens if all programs are set "Play restricted by time period" and the designated program isn't played during the time period. Please note that the program is normally played every day and every hour.
3	The playbill refer to inexistent external file(s).	When sending program date, software warning happens.	For play items of "external document type", the corresponding document isn't found. Check whether the route of each external document is correct.
4	Importing program data fails.	When importing program data, software warning happens.	The parameters of the imported program data are inconsistent with the current screen.

Table 2 Quick search for trouble shooting and warning dealing