Windows Software Rev# 1

Nu-Media Display Systems Inc.

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Contents of this manual:

This manual will cover the installation and operation of the Nu-Media LED Display Windows based software.

If you require hardware related information, refer to your service manual or call Nu-Media at (905) 568-0990 or 1-800-676-4502.

1. Installation & System Requirements

SYSTEM REQUIREMENTS:

- Windows 95 or Higher
- 8Mb RAM
- 5Mb Hard Drive Space
- System Font Capable of both fixed and variable widths

INSTALLATION:

If installing from an Installation CD

1. Run SETUP.EXE from the root directory of your CD.
2. Follow the prompts for the type of installation required.

The sign32.exe file is the only program that needs to be listed in the start menu or on the desktop for the program to work properly. It will allow basic editing of sign message content, and posting of that content to the signs. In order to access all the functionality and properties of Sign32, such as font and effects, the program must be started in managerial mode. Most installations of Sign32 will already be setup to start in this mode. In the case that your version is not, and you need access to the higher functions, the transfer to managerial mode can be easily done. In order to start Sign32 in managerial mode the program name must be trailed by '/m' on startup, this is achieved by altering the Target property in the Sign32 Shortcut Property Pages.

- Normal mode – sign32.exe
- Managerial mode – sign32.exe /m

2. Functional Overview

The Sign32 software has two main information posting modes, automatic or override (manual mode). In automatic mode the software will check external files and retrieve the necessary data to be printed on the signs, this mode does not require any input from the user. Automatic systems are usually connected to POS systems and display information like availability of a particular item. Manual mode requires that an operator input all messages to be displayed on the sign.

When in automatic mode, any one sign can be put into manual mode, hence the term override. Once in override mode, the message is manually entered in by the user, and will then be transmitted to the sign. All of the setup options for the Sign32 interface are contained in two files, AUTOCON.CFG and SIGN.CFG. It is not recommended that these files be modified prior to contacting your NU-MEDIA representative, as it could disable your sign system if the wrong settings are used.

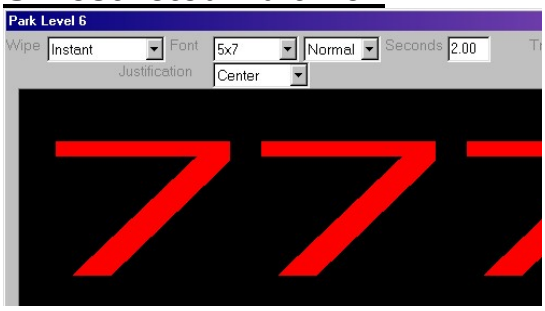
The software is designed in such a way so as to allow an unskilled operator to modify messages, without being able to change any configuration options or higher order sign effects. To enable access to these higher order functions you need to start Sign32 in managerial mode. This is done through the use of the /m option (See pg.2 Installation and System Requirements).

When first executing the software, you are presented with a screen with various black boxes, which may or may not contain text depending on the configuration of your software. These are called sign edit boxes. To change a message on a sign you double click on the appropriate box, or with the cursor in the box press a character key on the keyboard. If the sign is in automatic mode you will be asked if you want to load that box with the automatic message. Selecting either yes or no opens the edit box.

2. Functional Overview (cont'd)

Restricted Edit Box

Unrestricted Edit Box



Restricted Edit Box - (regular mode)- only message changes can be made.

Unrestricted Edit Box - you are able to change the message as well as all of the display attributes for that message including font, message display time, justification, etc. Some functions on the unrestricted edit box may not be available depending on the AUTOCON setup, for example fixed width font (f) limits font size and justification. The display attributes that are set will remain constant for the whole message. Once you have made the necessary changes to the message press the OK button and the message is automatically sent to the sign.

Message Edit Box Extended Command Codes

In addition to regular text you can insert extended command codes into the body of the text to achieve desired effects such as a line feed or form feed. The command codes will still appear as text in the edit box, but should cause the proper display effect on the sign. Extended command codes are **listed** in **Chapter 5**. All codes are case sensitive and may not work in all sign systems depending on the application. Contact your Nu-Media representative to find out if your system will support the extended commands.

3. Menu Options

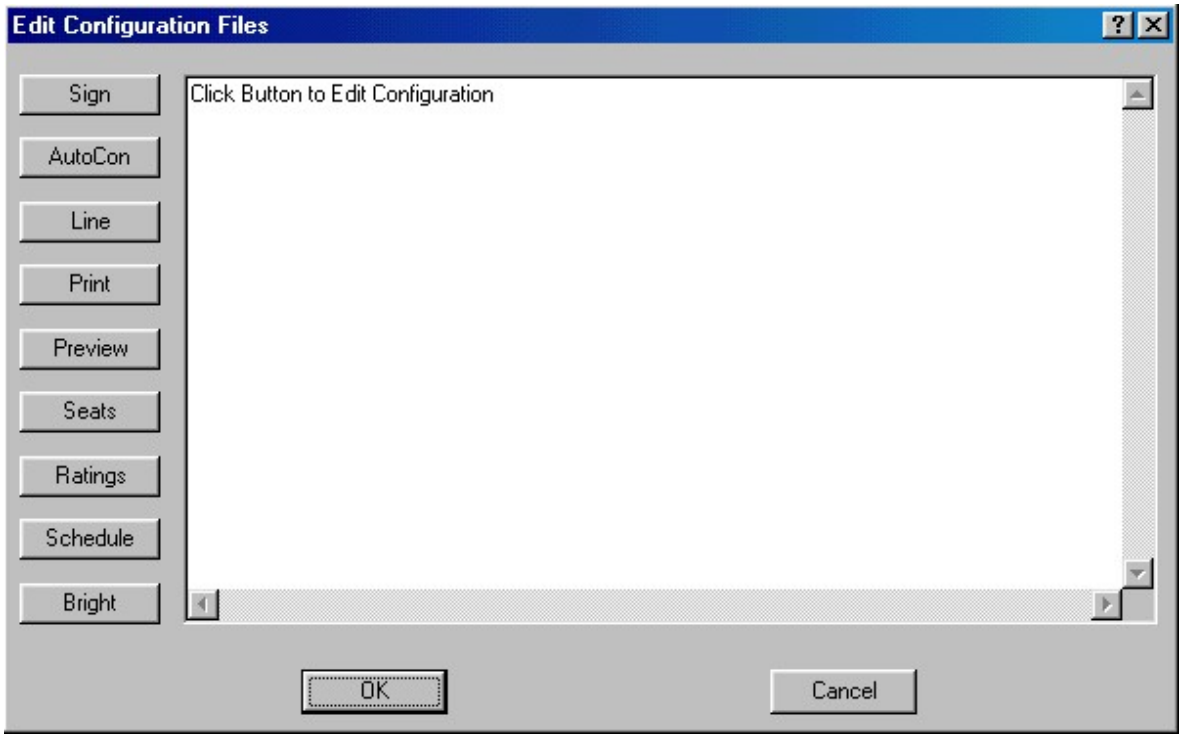
The file menu contains selections that allow you to open and save sign message box contents. It allows you to do this for single signs as well as for all signs contained in the interface.

File	File Open	Opens a previously saved message file and loads it into the currently selected message box. The file must first have been saved using **File Save (As) or File System Save (As).**
	File Save	Saves the currently selected message edit box contents, using the default name of the last item saved. This file can be retrieved later using **File Open**.
	File Save As	Saves selected sign message. Saves the selected message edit box to a filename determined by the user.
	File System Open	Opens System message file. The file must first have been saved using **File System Save or File System Save As.**
	File System Save	Saves message edit box data for **all** signs contained in the interface using the default name of the last file saved.
	File System Save As	Saves message edit box data for **all** signs contained in the interface to a user selected file name.
	Delete All Overrides	Deletes all saved override sign box messages.
Edit	Override Text	Opens up the currently selected edit box for editing. When 'OK' is selected the edit box will automatically enter override mode and will display the entered text on the sign.
	Configuration	Opens up the sign configuration menu. This is only available in managerial mode.
Communications	Send to All Signs	Updates all sign messages with current message edit box contents.
	Send to Current Sign	Sends current message in selected message edit box to sign.
	All Signs Automatic Mode	Loads all message edit boxes with current automatic files. Then transmits messages to signs.
	Current Sign Automatic Mode	Loads selected message edit box with automatic file. Then transmits message to sign.
	All Signs Override Mode	Loads all message edit boxes with previous override files. Then transmits messages to signs.
	Communications Settings	Opens communications settings menu.

4-a. Interface Setup – Configuration Menu

In order to access this menu you need to start the software in managerial mode. Figure 1 illustrates the configuration menu. Your configuration menu may not look exactly the same depending upon your sign's interface setup.

Figure 1



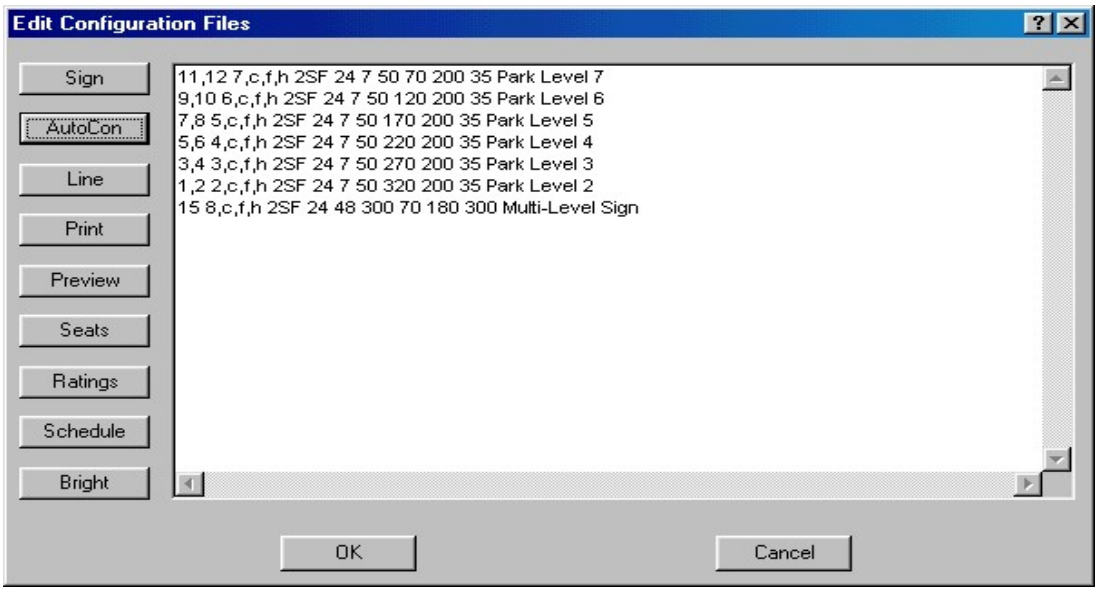
This section covers the setup parameters of all Sign32 Interface setup files. It will allow you to tailor your interface to meet your requirements. With the exception of the schedule (SIGN.LOG), brightness (BRIGHT.LOG), and the STOP.CFG file, these files should not be altered without knowing exactly what is being done. **Incorrect configuration can render your sign inoperative.** If there is any doubt in adjusting these files please feel free to contact your NU-MEDIA representative**.**

4-a. Interface Setup – Configuration Menu (cont'd)

AUTOCON

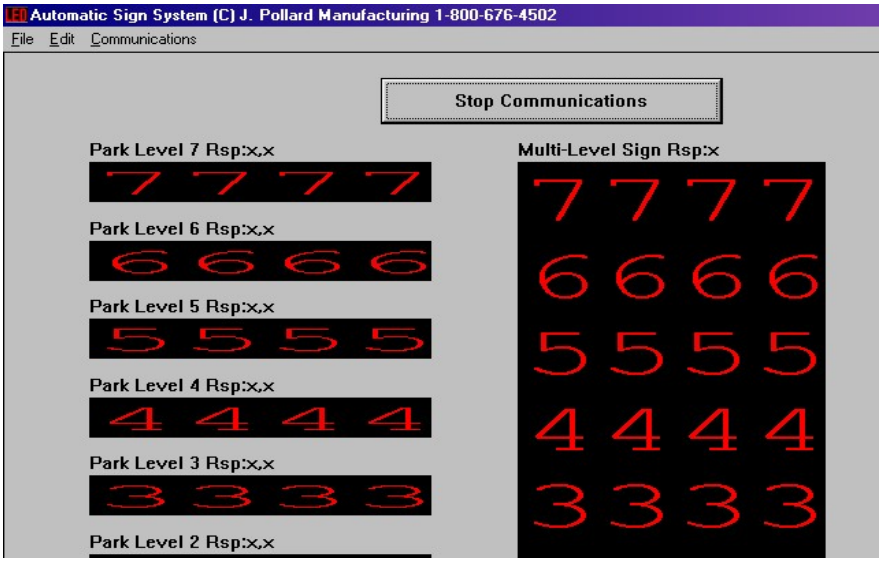
We remind you that **modification** of the AUTOCON file is **not recommended** without first contacting your NU-MEDIA representative. This file controls placement of message boxes on the computer screen, as well as sign addresses, configuration, and file numbers for data retrieval (in the example @file_07.st1 or file_07.st1). Figure 2 illustrates a typical AUTOCON configuration menu.

FIGURE 2



This file will create 6 boxes in one column and one larger box to the right as illustrated in Figure 3.

FIGURE 3



4-a. Interface Setup – Configuration Menu (cont'd)

AUTOCON - example

```
11,12 7,c,f,h 2SF 24 7 50 70 200 35 Park Level 7
```

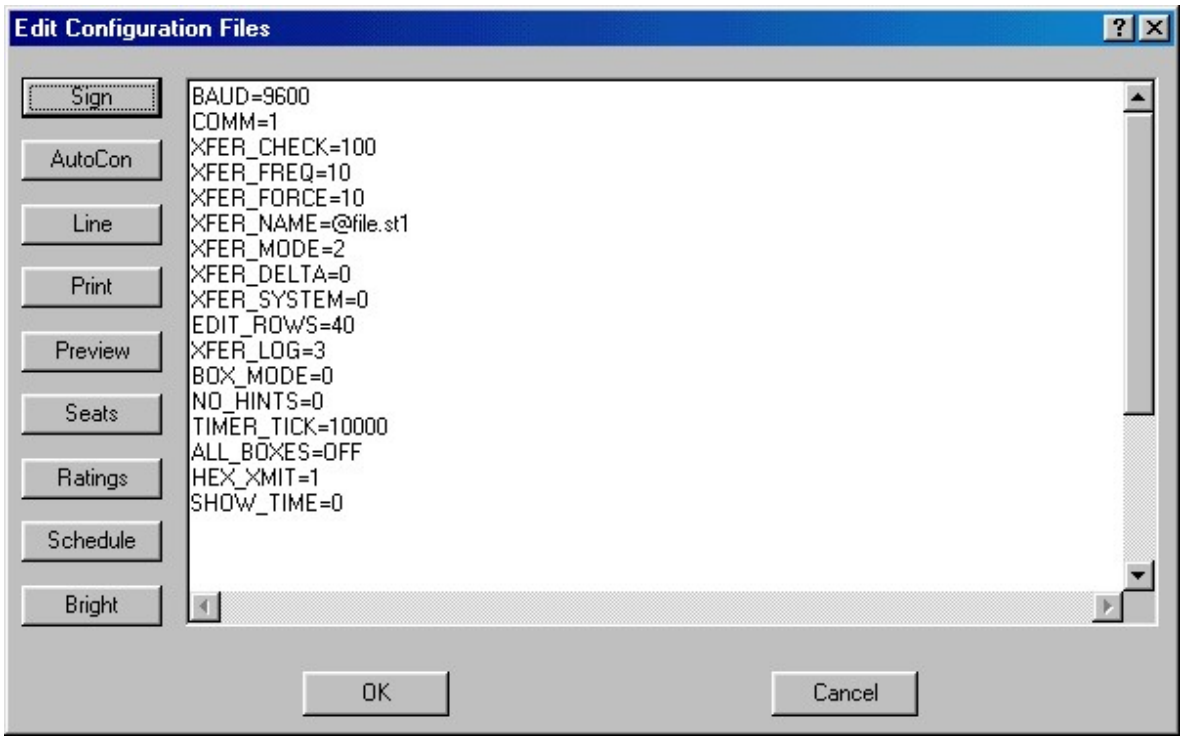
11,12	Physical Controller Address. This is the network address of the sign or signs that the edit box relates to. Two sign address can be configured by using a comma as the separator. Controllers displaying the same data can also be copied to allow for more than 2 signs that always display from a single edit box, without displaying the edit box on screen: e.g. 3 54 2SF 0 0 0 0 0 0 -By using zeroes for the edit box sizing it becomes hidden.
7	Logical Controller Number (LCN) This number determines what the file names will be for the related sign. (@file_xx.st1, file_xx.st1). It also indicates what mode is the default mode for that sign box. 0-50 Automatic Mode with overrides 51-90 Manual Mode (overrides only) 90-99 Reserved
c,f,h	LCN Configuration Attributes These are extra configuration options and **should not be modified**. To invoke these, a comma follows the LCN Number as well as separates all attributes. They may not work with all sign systems, and could cause both sign, and edit box display problems. a Secondary automatic source n No wipes c No codes transmitted to sign f Fixed width fonts only s Squished (For non-full matrix signs) l Only one line high fonts allowed w Fixed Width Fonts Only h Hold Override / auto state for next power up xn,m n standard lines, m extra on top split (ex: 94,x4,2 = 4+2 lines top directory, 4 lines bottom directory) en Limits edit rows to n t Time capable zn Limits the number of edit lines in the override box.
2SF	Protocol Selector Determines the communications protocol, as well as fonts, wipes, etc. 2SF Secondary Starfire Protocol SF Primary Starfire Protocol PA Page Ansi Protocol
24	Sign width in pixels.
7	Sign height in pixels.
50	Edit box start position from left of screen (pixel position).
70	Edit box start position from top of screen (pixel position).
200	Edit Box Width (pixel dimension).
35	Edit Box Height (pixel dimension).
Park level 7	On-screen user readable name for the sign(s).

4-a. Interface Setup – Configuration Menu (cont'd)

SIGN

This file is accessed through the sign button on the configuration menu. It contains all global options controlling sign communications, and is stored in the SIGN.CFG file. Do not be alarmed if your SIGN.CFG does not look exactly the same as the sample in Figure 4, differences will exist depending on your sign setup.

FIGURE 4



4-a. Interface Setup – Configuration Menu (cont'd)

SIGN - example

BAUD=n	Sets communication to n baud rate.
COMM=n	Sets the communications port to port n.
XFER_CHECK=n	Used to determine how long in milliseconds the system should sleep or wait after executing a command such as information sending. In the case of slower systems this is usually increased to prevent a command execution before completion of a previous command, thereby preventing an endless loop.
XFER_FREQ=n	How often the script.chk file is processed, in n x 10 seconds.
XFER_FORCE=n	This determines the time interval between full system communications. This only relates to a system that is set up to only send out data that has been modified, in n x 10 seconds.
XFER_NAME=n	This is the file name that is sent to each sign. If this field is blank the file that is sent will reflect the LCN number. For most systems this should be @file.ST1.
XFER_MODE=n	Determines the sign interface used. Can be set from 0-4. 0-debug mode 1-white/black 2-red/black 3-white/black with responses 4-red/black with responses
XFER_DELTA=n	Determines if sign data will constantly be transmitted, or only when data is modified. 0-transmits continuously 1-transmits only when data is modified, or when XFER_FORCE timer expires.
XFER_SYSTEM=n	Determines which system the sign interface is configured to integrate with. 0-generic 1-theatre 2-parking
EDIT_ROWS=n	Determines the number of editable pages that are accessible while an edit box is in override mode.
XFER_LOG=n	Determines if, and under what conditions, a log file will be created. 0-no log file created 1-logs all communications data in file 3-logs only communications errors in file 5-logs all communications, creates new file for every pass 7-logs only communications errors, creates new file for every pass 9-logs all communications data in file, then runs batch file (signerr.bat) 11-logs only communications errors in file, then runs batch file (signerr.bat) 13-logs all communications data, creates new file for every pass, then runs batch file (signerr.bat) 15-logs only communications errors, creates new file for every pass, then runs batch file (signerr.bat)

Continued on next page.

4-a. Interface Setup – Configuration Menu (cont'd)

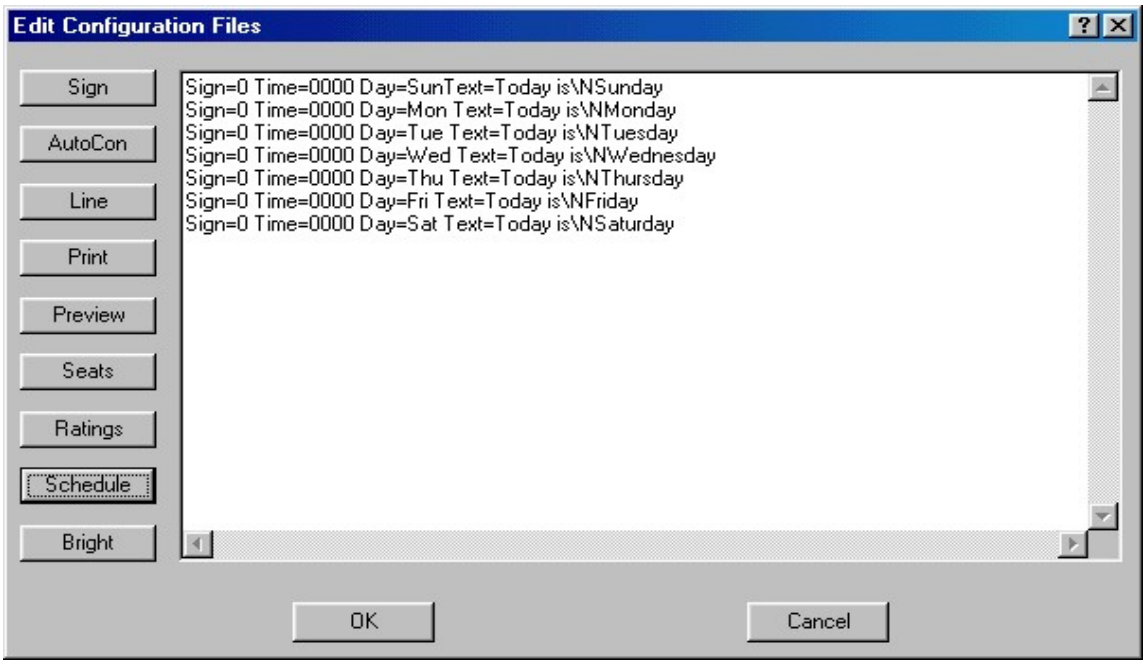
BOX_MODE=n	This option determines how data will be displayed on box office directory signs (theatre software only). This should not be changed from the factory setting. 1 - Standard 2 - Time, Title 3 - Title \n Time
NO_HINTS=n	This enables or disables hints located on the status bar of the sign interface. With this option enabled, all of the pull down menu options will show short functional descriptions on the interface status bar. 0 - Enable 1 - Disable
TIMER_TICK=n	This is used to synchronize timing of program operations and is set using the computers internal millisecond timer. All other timers in the program will use a multiple of this value. **The value of the tick should never be set below 1000.**
ALL_BOXES=n	This is only to be used in the case of having many edit boxes to update, but only a few signs that the combined information will be sent to. ON – all edit boxes correspond to a sign OFF – all edit boxes do not have a physical sign
HEX_XMIT=n	Determines the electronic format of information sent to the sign, different sign systems will require different formats. 0 – Send data in raw binary form 1 – Send control characters designated as \hh (hex) 2 – Send control characters designated as ~hh (hex)
SHOW_TIME=n	Turns on or off the option of displaying the current movie start time after the movie title on the auditorium sign. 0 – Don't show current movie start time (default) 1 – Show current movie start time

4-a. Interface Setup – Configuration Menu (cont'd)

SCHEDULE

The schedule option allows the user to display certain messages at specific times during the day. This information is stored in the SIGN.LOG file regarding time of day, sign address, and the message to display on the sign. **The entries in the schedule file must be in ascending chronological order (by both day and time).** This is due to the fact that Sign32 will stop reading this file upon encountering the first entry where the time condition (time=nnnn Day=nnn) is later than the current time. To modify this file, simply press the schedule button on the configuration panel. In order for this to work properly, the respective sign or signs must be placed into automatic mode, also the SCHED command must be placed in the SCRIPT.CHK file. A typical schedule configuration menu is displayed in Figure 5.

FIGURE 5



SCHEDULE - example

Sign=0 Time=0000 DAY=SUN Text=Good SUNDAY Morning\Nall Signs

Sign=n	Sign number to display text on. This references the LCN in the AUTOCON. (0 or ALL will send to all signs)
Time=n	Time of day to start displaying text using the 24hr. clock.
DAY=n	Day of the week to display text.
Text=n	Text to be displayed.

All the extended command codes listed in **Chapter 5** can also be used in the SIGN.LOG file additional commands that can be used in the file are:

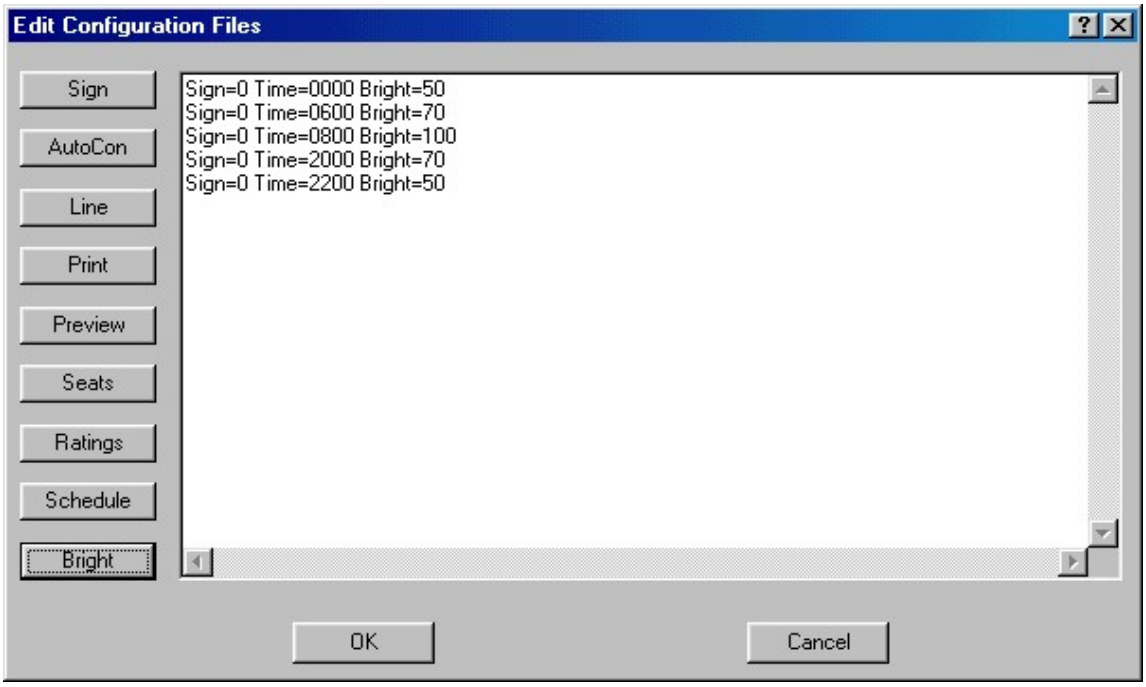
Date=YYYYMMDD Starts displaying the message only after this date is passed
DateEnd=YYYYMMDD Stops displaying the message when date is reached.

4-a. Interface Setup – Configuration Menu (cont'd)

BRIGHT

The bright option, available through the configuration menu, allows the user to adjust the brightness for the sign. Figure 6 shows an example bright configuration. It references to the time of day and dims the sign according to the settings that are stored in the BRIGHT.LOG file. If no file exists then no brightness information is sent to the sign. This option is generally used for outdoor signs to dim them at night. To activate this feature you must place the BRIGHT command within the SCRIPT.ATM and the SCRIPT.OVR file, also the SCHED command must be in the SCRIPT.CHK file.

FIGURE 6



BRIGHT – example

Sign=0 Time=0000 Bright=50

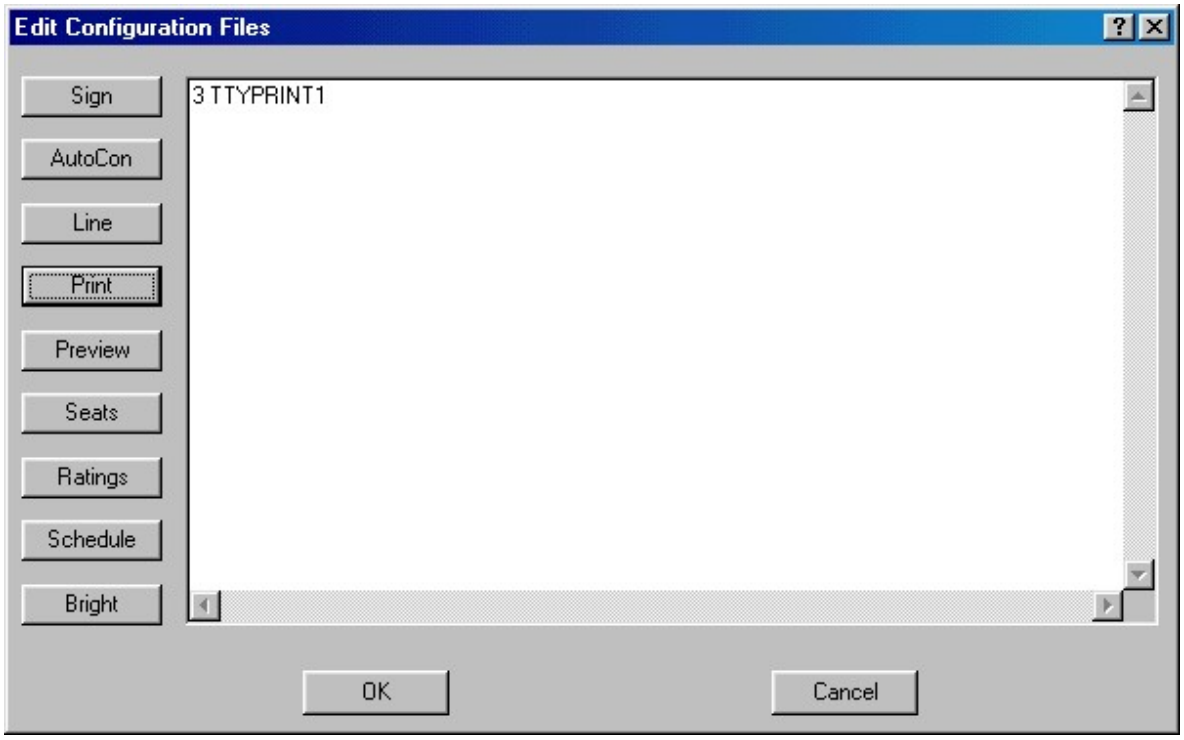
Sign=n	Sign number to affect. This references the LCN Number in the AUTOCON. (0 or ALL will affect all signs)
Time=n	Time of day to start display, using the 24-hour clock.
Bright=n	Percentage brightness to display at, in this example 50%.

4-a. Interface Setup – Configuration Menu (cont'd)

PRINT

The print file, accessed through the print button, allows redirecting of sign output to a network print device. The file is in a simple format of a controller number followed by the Windows name for the printer to send to (i.e. '3 TTYPRINT1'). This is used when sign data is sent through a printer instead of the COMM port, and can also be used in the case of having many signs connected to one controller. In this case the sign address is sent with the data and only the sign with the corresponding address will display the message. A sample print menu is shown in figure 7.

FIGURE 7



PRINT – example

3 TTYPRINT1

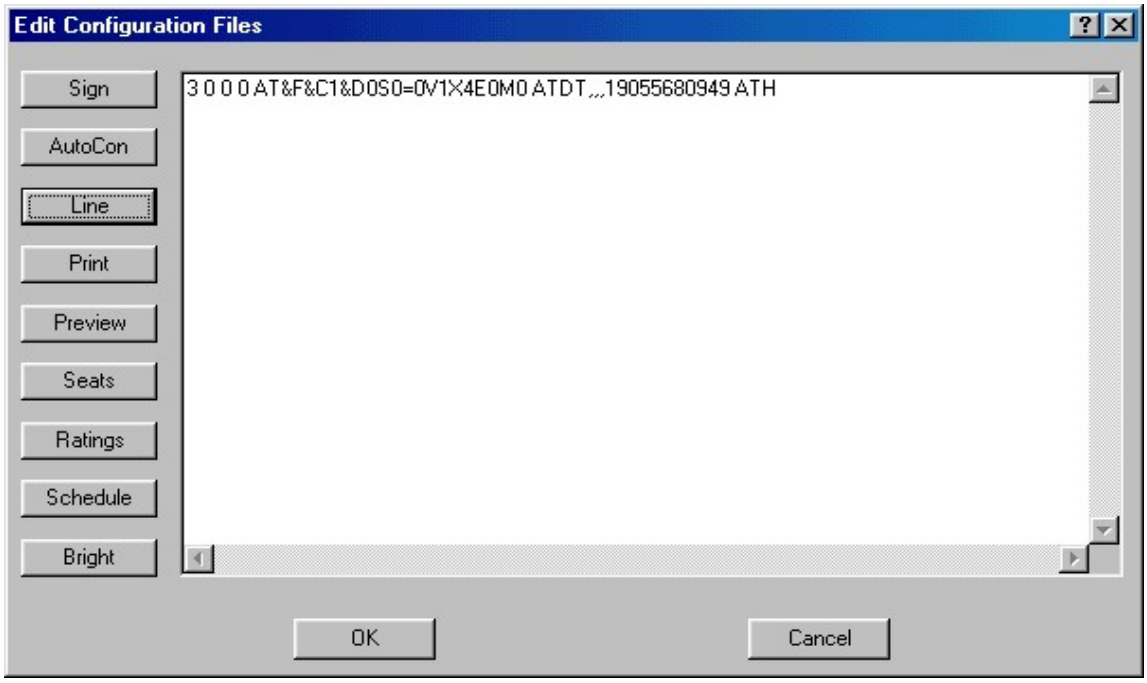
3	Controller number.
TTYPRINT1	Windows name for the printer.

4-a. Interface Setup – Configuration Menu (cont'd)

LINE

The line file contains information for connecting to signs through modems or to an alternate COMM port. The first number in the file is the controller number to access through the modem. The next two numbers are for overriding the COMM port settings and should not normally be changed, a zero indicates using the default setting. The next four entries are the strings used by the modem for time out, initialization, dialing and hanging up respectively. Figure 8 shows a sample line configuration menu.

FIGURE 8



LINE - example

(3 0 0 0 AT&F&C1&D0S0=0V1X4E0M0 ATDT,,,19055680949 ATH)

3	Sign controller number to access.
0	COMM port number. (0 uses the default configuration)
0	Baud transmission rate. (0 uses the default configuration)
0	Modem time out – the amount of time without transmission to disconnect the modem. (0 uses the default configuration)
AT&F&C&D0S0=0V1X4E0M0	Modem initialization parameter.
ATDT…19055680949	Number to dial.
ATH	Hang-up parameter.

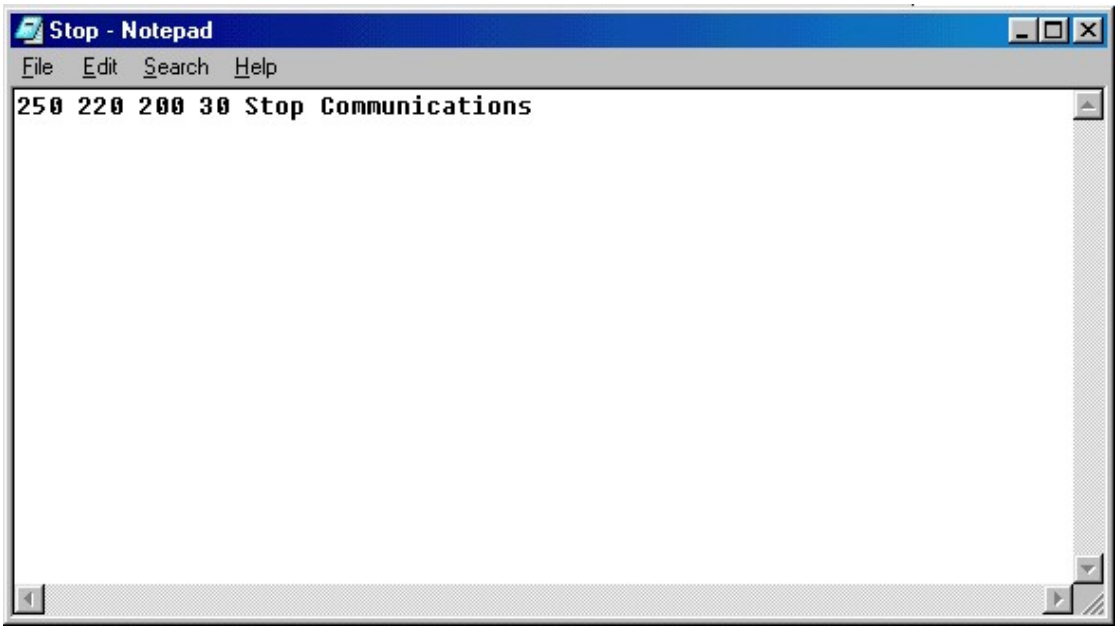
4-a. Interface Setup – Configuration Menu (cont'd)

STOP.CFG

While the program is sending data to the sign, no other functions within the sign software are accessible. Stopping the communications will allow access to menus and messages.

The STOP.CFG file can be modified either in DOS (using the edit command), Notepad (as illustrated in Figure 9), or a similar text editor. This file allows the user to modify the placement of the Stop Communications Button. The following example shows a typical STOP.CFG file explaining how each field affects the button. Not all Sign32 installations come with a STOP.CFG file, in this case it must be created.

FIGURE 8



STOP.CFG – example

250 220 200 30 Stop Communications

250	Start position from left of screen in pixels
220	Start position from right of screen in pixels
200	Width in pixels
30	Height in pixels
Stop Communications	Name displayed for button on edit screen

4-b. Theatre Setup – Configuration Menu

This section covers the configuration menu buttons most commonly found in Sign32 theatre applications.

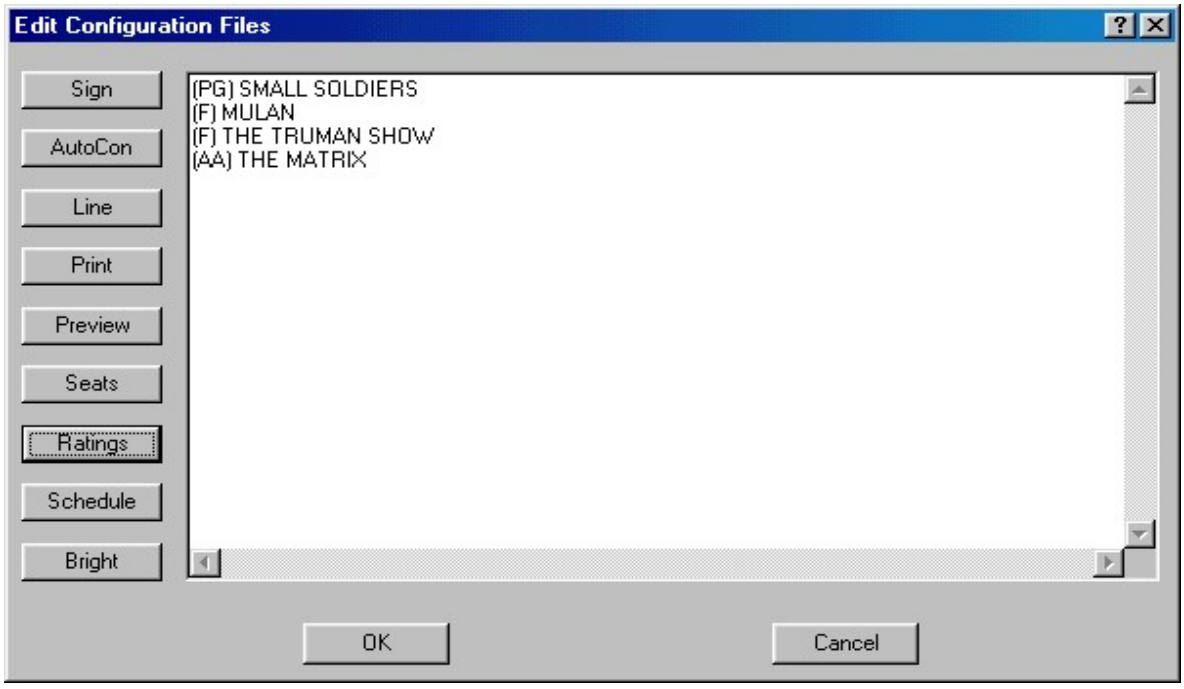
The software usually requires no intervention with the exception of signs that do not have a cinema reference. The Sign32 software contains specialized functions that only pertain to theatres that are running the software in automatic mode and get the sign information from the Point of Sale system. In such theatres the system is able to automatically change the cinema entrance signs to the next movie that will be playing in each cinema. The software can also be set up to display when a cinema has reached either its limited seating capacity or a sold out condition. It also allows movie ratings to only be displayed on, and special previews to be omitted from, the main directory sign.

RATINGS

The ratings file allows the movie ratings to be displayed on the directory sign and not on each cinema entrance sign. Figure 9 shows a typical configuration, the file format is as follows:

(RATING) MOVIE NAME 1
(RATING) MOVIE NAME 2
….
(RATING) MOVIE NAME X

FIGURE 9



The movie name must match the output of the POS system exactly. If unsure, the easiest way to find out the exact name is to simply look at the directory for spelling and syntax.

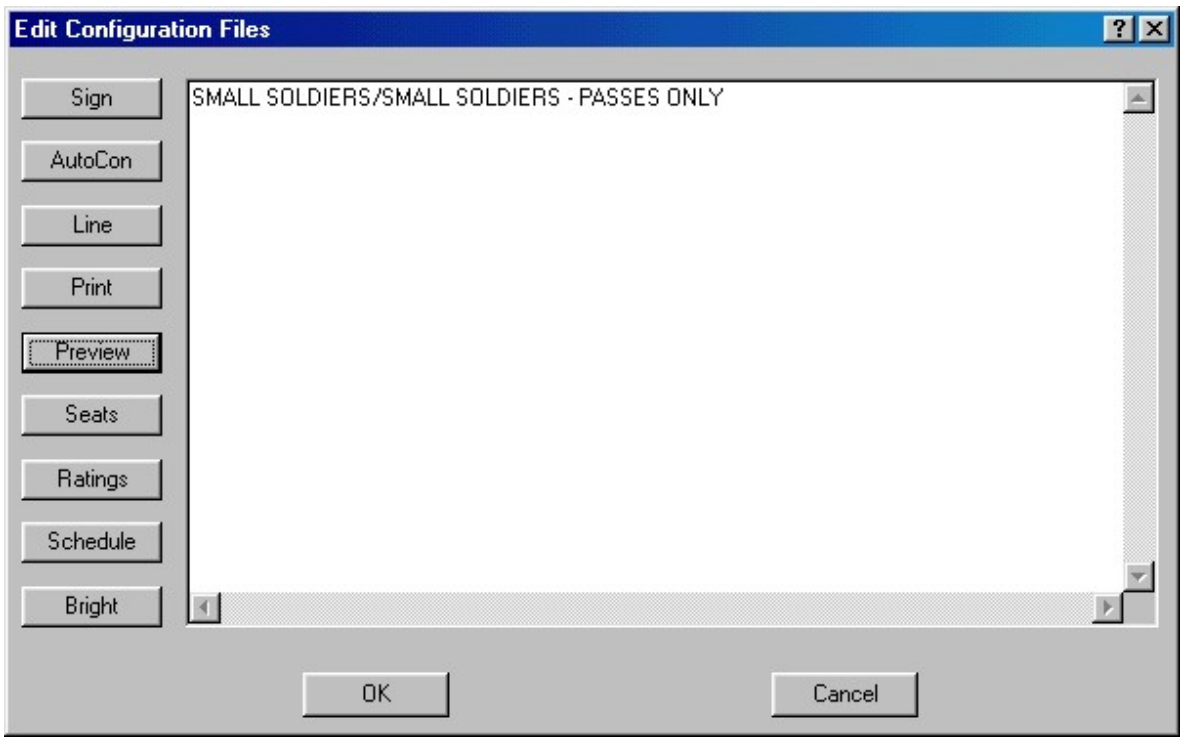
4-b. Theatre Setup – Configuration Menu (cont'd)

PREVIEW

The preview file allows the movie name to be removed from the directory listing, and allows a custom name to be displayed over the theatre. Figure 10 shows an example configuration menu, the format for this file is:

MOVIE NAME 1/NAME TO SHOW
MOVIE NAME 2/NAME TO SHOW
…
MOVIE NAME X/NAME TO SHOW

FIGURE 10



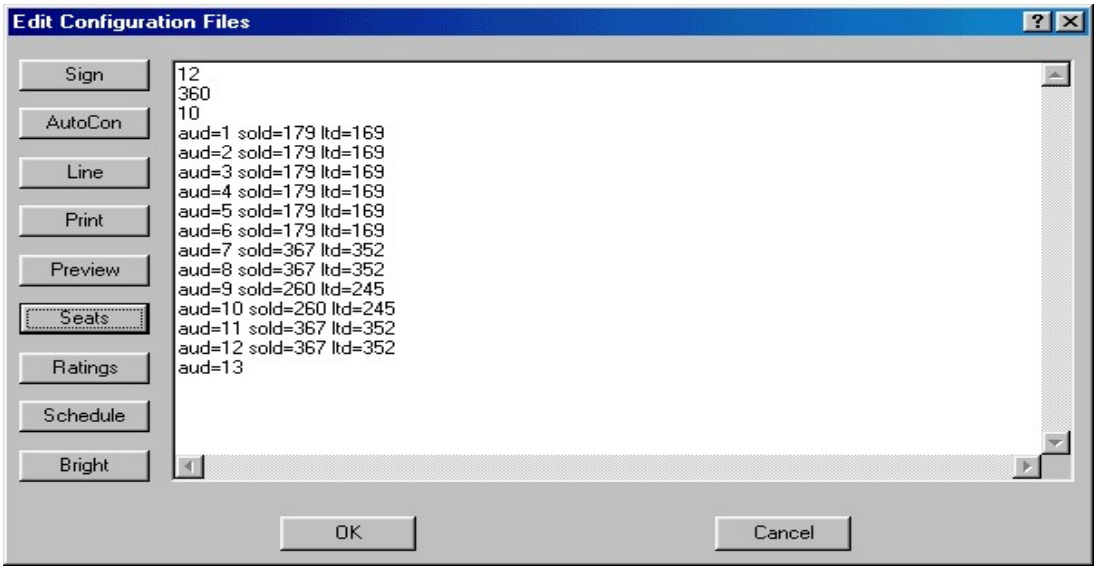
The movie name must match the output from the POS system exactly.

4-b. Theatre Setup – Configuration Menu (cont'd)

SEATS

This file contains the capacities of each cinema within the theatre complex. It also controls the sold out and limited seating thresholds that are displayed on the main box office directory sign. Figure 11 shows a typical configuration menu.

FIGURE 11



SEATS – example

12	Time display mode, 12 or 24 hour.
360	Day Wrap Offset
10	Shave time.

aud=1 sold=179 ltd=169
aud=2 sold=179 ltd=169
aud=3 sold=179 ltd=169
aud=4 sold=179 ltd=169
aud=5 sold=179 ltd=169
aud=6 sold=179 ltd=169
aud=7 sold=367 ltd=352
aud=8 sold=367 ltd=352
aud=9 sold=260 ltd=245
aud=10 sold=260 ltd=245
aud=11 sold=367 ltd=352
aud=12 sold=367 ltd=352

Day Wrap Offset - This is the amount of time, in minutes, that is added to the end of the day before the sign software will see the true end of day. This is required so that movies playing after midnight will not have their movie times placed in the incorrect order on the main box office directory sign.

Shave Time – This is the amount of time that is shaved off of the previous movie time on a cinema entrance sign. This is required for the case where two different movies are playing back to back in the same cinema. The shave time in this case will change the cinema entrance title to the next movie 10 minutes prior to the first movie ending.

5. Extended Command Codes

The extended command codes can be used in the on screen edit boxes, and the SIGN.LOG file.

COMMAND CODE	FUNCTION
\CTIME	Inserts the time from the Sign Clock into the message.
\CDATE	Inserts the date from the Sign Clock into the message.
\CFAHR or \CCELC	Inserts the temperature from the sign into the message. This is in either Fahrenheit or Celsius, and is **only available on signs equipped with a thermostat.**
\CTRAV	Sends the message to travel across the sign.
\CTSP#(0-7)	Sets the travel speed for the sent text. 0-Fastest, 7-Slowest. This must be the first command placed after text to be transmitted. This command will not cause any actual line travel. **Every time the travel speed is changed the sign will start a new page.**
\CFNT=(0-D)	Sets the message font. There are fourteen possible choices form 0 to D (hexadecimal). Font options are as follows 0-5x7, 1-4x7, 2-6x7, 3-7Serif, 4-4x5, 5-5x9, 6-6x12, 7-10x14, 8-14Serif, 9-9x16, A-10x16, B-16Serif, C-16Shadow, D-7x16.
\CTWD=(0,1)	Enables or disables the tall and wide font effect. **Care should be taken in implementing this function because it can make the font to large to be displayed properly on the sign.** 1 - enabled 0 - disabled
\CTLL=(0,1)	Enables or disables the tall font effect. **Care should be taken in implementing this function because it can make the font too tall to be displayed properly on the sign.** 1 - enabled 0 - disabled
\CWDE=(0,1)	Enables or disables the wide font effect. 1 - enabled 0 - disabled
\N	Inserts a line feed into the message. **Care must be taken in using the \n because of the way the sign interprets it.**
\CCRLF	Inserts a carriage return line feed into the message.
\CFORM	Inserts a form feed into the message. This will start another page for the sign.
\CCLRR	This will cause all subsequent text to appear red.
\CCLRG	This will cause all subsequent text to appear green.
\CCLRY	This will cause all subsequent text to appear yellow.

6. Script Files

These files come pre-set from the factory. Modifying these files can render your system inoperative.

The script files are the secret to the versatility of the Sign32 software. These files control specific sign functions and can be configured to perform complex file mapping tasks.
SCRIPT.OVR / SCRIPT.ATM (.OVR – Override Mode / .ATM – Automatic Mode)
The script files are simple scripting language files that customize the way the software communicates with the sign. Generally this file contains commands that directly communicate to the sign.

SCRIPT.CHK
This file allows the software to execute commands. It controls global commands that are executed on all signs whether they are in automatic or override mode. This file is executed every time there is a communication between the interface and a sign.

The commands for these files are grouped into five categories. They are listed below.

Starfire Commands	Sign Control Commands	File Commands	Control Commands	File Filter Commands
INITP	STOP	FCOPY	WAIT	SCHED
INIT	START	FCMP	EXE	RDS
DIRX	SEND	DEL	SHELLEX	ICON
FXRX	VERIFY	FSET		OMNI
DISK	RESET	FAPPEND		HTML
STATUS	SETTIME	FEND		RD_SDF
SAVE	BRIGHT	FCAT		
GETTIME	FMODE	FXTX		
SETDATE				
DELSIGN				
INTEG				

7. File Types – Designation and Use

The file name and extension indicates what each file is required for. These files are for use by the Sign32 software, deletion of any of these files can render the sign system inoperative. The normal file naming system is as follows:

*.ST1	Starfire Text File Format.
*.GRF	Starfire Graphics File Format.
@file_*.st1	(1-50) Automatic Mode System Generated File.
file_*.st1	(51-89) Override Mode System Generated File.
@file_*.st1	(91) Directory Sign (Single Controller).
@file_*.st1	(92) Directory Sign (Left Controller, 1/2).
@file_*.st1	(93) Directory Sign (Right Controller, 2/2).
@file_*.st1	(94) Directory Sign (Top Left Controller, 1/4).
@file_*.st1	(95) Directory Sign (Top Right Controller, 2/4).
@file_*.st1	(96) Directory Sign (Bottom Left Controller, 3/4).
@file_*.st1	(97) Directory Sign (Bottom Right Controller, 4/4).
file_*.st1	Same designations as above – Override Messages.
box.st1	Unformatted data to be displayed on a directory.
@stubdir.st1	Contains message formatting data for the directory sign.
@stub*.st1	Contains formatting information for individual signs.
polcom32.dll	Communications DLL.
cw3220.dll	Program DLL.
owl501f.dll	Program DLL.
bds501f.dll	Program DLL.
sign32.exe	Main executable windows program.
signctrl.*	Copy of software required for signs – For diagnostics only.
pollard.exe	Self-extracting software installation file.
pollard.zip	Copy of files required for sign software installation.
__xmit.txt	Extended text format of last transmission to the sign.

8. Physical Connections

The Starfire Signs can be configured to support RS-232, RS-422/RS-485 controllers. Other configurations are possible with additional hardware allowing parallel, Ethernet, token ring, RF, and many other connections. For connections other than serial connections please refer to your supporting documentation.

The pin use is as follows:

RS-232 (DB-9):		(DB25)	
2	TX	2	RX
3	RX	3	TX
5	GND	4	RTS
7	RTS	7	GND

RS-422:

1	TX-
5	RX-
6	TX+
9	RX+

RS-485:

5	TX/RX-
9	TX/RX+

The converter normally required for RS-422/485 communications from the PC has a 9 pin MALE RS-232 port. To connect to the converter, you must use a 9f-25f or a 9f-9f serial cable. Connecting a regular male to female serial extension type cable to the female DB-9 on the converter will not work.

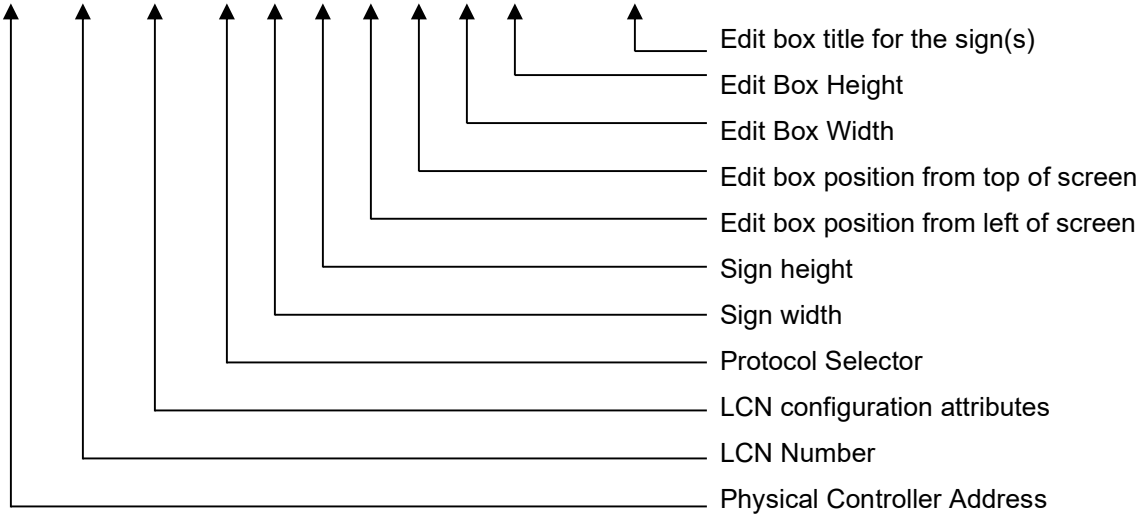
Improper grounding or termination of 422/485 cables can cause communications problems that may appear unrelated to wiring. Be sure wiring is correctly installed and that you are using a single ground point. When using a Nu-Media converter, any LED that is always on (other than the power LED) is an indication of a wiring problem. Should this occur and communications still function, check all wiring to prevent the sign(s) or converter(s) from communications problems and potential chip damage. If the communications have failed, please check all wiring from the PC to the signs before calling for service.

9. Configuration Files - Summary

NOTE: All measurements for on-screen boxes or buttons are in pixels.

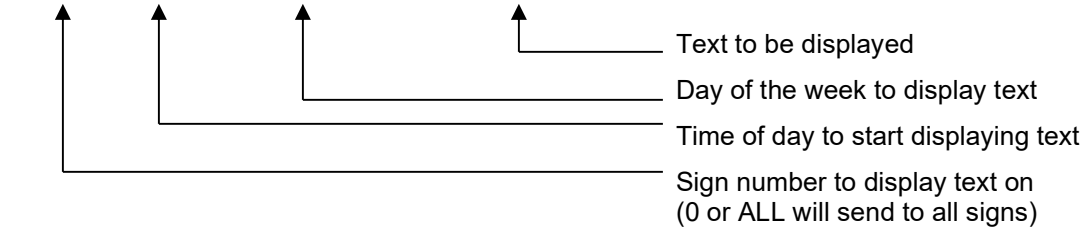
AUTOCON

```
11,12 7,c,f,h 2SF 24 7 50 70 200 35 Park Level 7
```



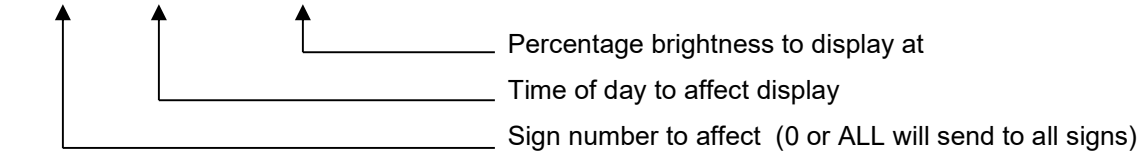
SCHEDULE

```
Sign=0 Time=0000 DAY=SUN Text=Good SUNDAY Morning\Nall Signs
```



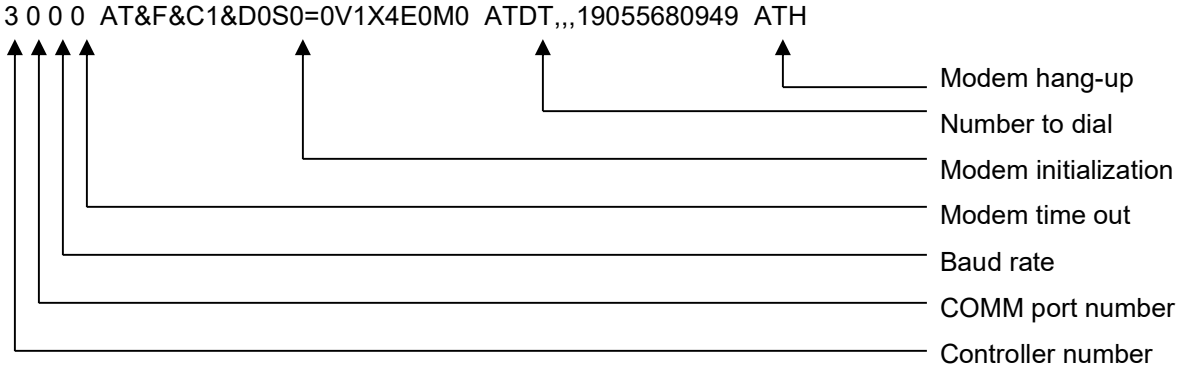
BRIGHT

```
Sign=0 Time=0000 Bright=50
```



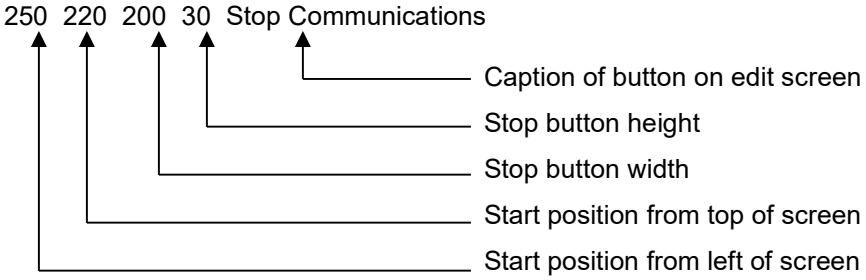
9. Configuration Files – Summary (cont'd)

LINE



to access

STOP.CFG



10. Trouble Shooting

Problem	Possible Solution
Windows shows the message, but the sign is blank.	Check the communications cables and connection to be sure the data is getting to the sign. Check the power connection for the sign, and reset(unplug and plug-in) the sign if unsure. Upon power-up the sign should display a test message.
The sign doesn't update to display the message showing in Windows.	Check the communications cables and connection to be sure the data is getting to the sign.
Both windows and the sign are showing a blank message.	Check that the data source is running in **Automatic Mode**. If in **Over Ride Mode** check the message edit box and replace with text if blank.
The sign displays the same message as the Windows screen, but it is not the desired message.	Check that the data source is running in Automatic Mode.
The Windows screen keeps flashing (or flashes too often)	Examine all Configuration Files and reset to the correct shipping defaults.
When changing text in the **unrestricted edit box** all functions available in the example are not visible.	Examine LCN configuration attributes in the AUTOCON file. Settings that affect font will affect availability in the edit box. e.g. The f option will allow only fixed width fonts.
It is hard to read the text in the edit boxes. The text appears squished or elongated.	Check the settings for the edit box in the AUTOCON file. Adjusting the edit box width and height can affect text accordingly. Greater height stretches text vertically, greater width stretches text horizontally.
Only a portion of each letter is being displayed on the sign.	Check that the font size you are using is not too large for your sign. Check that the tall and wide font (\CTWD) or the tall font (\CTLL) effects are not enabled.