

MOVING SIGN

MOVING SIGN SOFTWARE USER MANUAL

PROGRAMMABLE INDOOR
SINGLE LINE
LED SIGN
v2.0



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INTRODUCTIONS

Before you start using the LED sign and software, please review the safety instructions provided in the User Manual. Also, the User Manual covers a good deal of the terminology and functionalities described in this Software Manual. The Moving Sign software is intended for programming the LED sign with a computer instead of the infrared remote control. The infrared remote is more advantageous and quicker in certain situations, such as running a saved program or creating small program files and sequence files. On the other hand, the software is more beneficial when creating complex messages and custom graphic images.

NOTICE: Please, review all safety instructions provided in the User Manual.

WARNING:

1. Usage and installation of the Moving Sign software is at your own risk. Currently, Grandwell does not offer support for this software.
2. The software does not have **Undo** and **Redo** commands. So be absolutely careful with erasing commands or texts as there is no way to undo them.

PRODUCT SPECIFICATONS

Pixel Matrix: 7x80
Characters: 13, 2.1"/5cm height.
Memory Size: 8K, 7000 Characters, 100+ Programs, 500+ Pages.
Dimensions: Height: 4"/10cm, Width: 26"/66cm, Depth: 1.3"/3.4cm
Gross Weight: 6lbs/2.7kg Total Package.
3lbs/1.4kg LED Sign
Power Input: LED Sign: 5V DC Input, 4 Amp
Infrared Remote Control: 2x AAA 1.5V Batteries
Data Input: RJ11 Input Jack for RS232 Serial Cable.
Environment: 32°F/0°C to 113°F/45°C, non-condensing humidity below 95%.

Features: 24 Display Methods	8 Built-in Graphics	Password Protection
16 Color Styles	8 User Defined Graphics	Auto On/Off Timer
7 Font Styles	International Character Set	Real Time Clock
8 Animations	Programmable Alarms	Advance Scheduling
30 Symbols	Memory Backup	

SYSTEM REQUIREMENTS

- PC with Pentium 200 or Higher Process
- Microsoft Windows 95 or Higher
- 100 MB of Hard Disk Space
- 32 MB of RAM
- Mouse or Compatible Pointing Device
- Serial Port
- Minimum 16 bit Color Graphic Card
- Minimum 2MB of Display Memory.
- Minimum 800x600 Pixels Screen Area Size
- Floppy Disk Drive (Installation Only)
- Internet Connection (Installation Only)

INSTALLATION

HARDWARE SETUP

Follow the simple steps below to quickly setup the LED sign and connect it to the computer. Please, review the safety instruction and installation information provided in the User Manual.

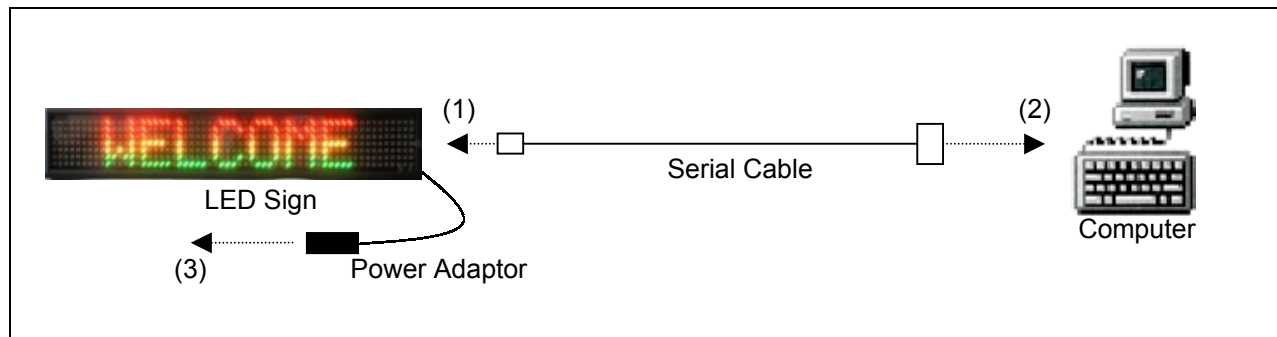


Diagram 1: LED Sign and Computer Setup.

1. Connect the serial cable's RJ11 end (telephone head) to the LED sign's RJ11 jack.
2. Connect the serial cable's 9-pin end to the computer's serial port (COM PORT).
3. Assemble the power adaptor and power cord together; connect one end to the LED sign and the power plug to an electrical socket.
4. The LED should automatically power up and run the default message when the power is connected. To turn on/off the sign, use the infrared remote's on/off buttons or unplug/plug the LED to the power.

Note:

1. While the LED sign's RJ11 jack may look similar to a telephone jack, it is not a one. Therefore, do not connect telephone or telephone cable to it. It is not a modem jack.
2. Make sure power cord and cable are placed away from traffic areas, so people do not trip over them.
3. Do not use regular telephone cable to connect the sign to a computer.
4. Use only the power adaptor that came with the LED sign.
5. Place the power supply on a flat surface away from chemicals, water and liquid.
6. Do not mount or attach the power supply to anything.
7. Do not let the power supply hang loose.
8. The LED sign is intended for indoor use only.



IMPORTANT: A NOTE ON USB TO SERIAL ADAPTERS

Most LED Signs, including your single line sign, connect to a computer using a Serial, or RS232 cable. However, computer makers have recently stopped including serial ports in newer computers. Because of this, we have included a USB to Serial Converter cable with your sign.

While these USB to Serial Converter cables are reliable, and do work well, they are somewhat complex to set up. They are, unfortunately, the best solution available. We cannot use USB directly with our signs, because USB cables can only be approximately 6 feet long...the technology is very limited on cable length. The longer, 50 foot, capability of serial/RS232 cables is still required so that the sign can be placed farther away from the computer.

Please see the appendix at the end of this manual that describes how to use and configure USB to Serial Adapters.

Using the Software

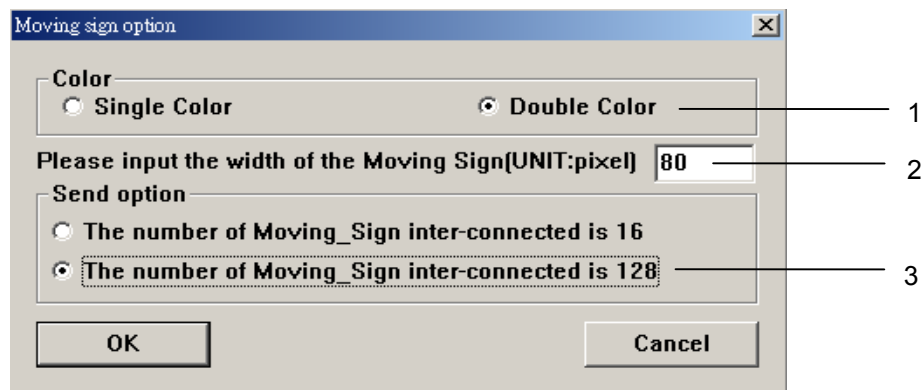


Figure A: Moving Sign Options

Number	Field	Description
1	Color	Select Single Color if the sign is monochrome red*. Select Double Color if the sign is tri-color.
2	Sign's Pixel Width	Number of pixels across. Default value is 80 for SLC16H-IR.
3	Send Option	Number of signs networked together. Default value is 128 .

7. Make any necessary changes to the Moving Sign options and click **OK**.
8. The main window, Figure 3, should appear.
9. Software setup is complete.

Note: The Moving Sign Options window will appear every time you start up the software. However, the previous settings will be retained, so changes to the settings are not necessary.

MAIN WINDOW LAYOUT AND OVERVIEW

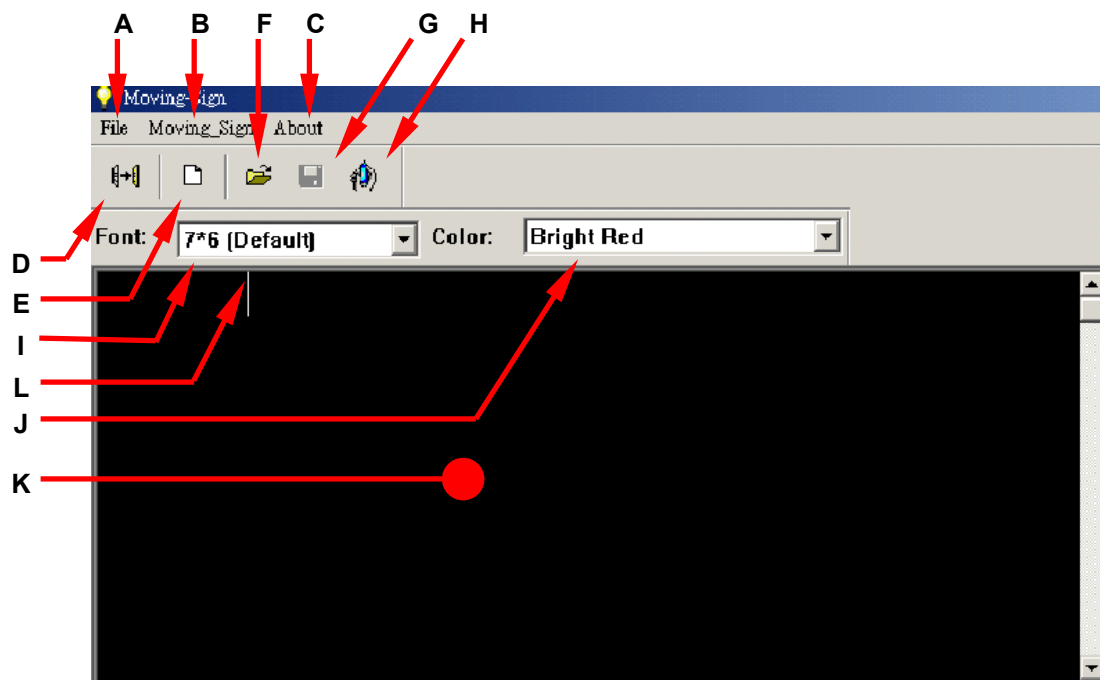


Figure B: Moving Sign's Main Window

The following table describes the specific areas, menus and commands found on the Moving Sign software's main window.

Window Sign Menu Options

Letter	Main Menu	Sub Menu	Description
A	File	Clear	Clears all content in the Text Edit Area (K).
		Open ...	Open a saved program file. (*.sdv format)
		Save	Save current message in a program file.
		Save As ...	Save current message as a different program file.
		Exit	Exit the Moving Sign software.
B	Moving Sign	Send>	Edit Area's Content: Sends current message in Edit Area to sign. Disk File: Sends message from a saved file to the sign.
		Execution lattice	Launches a tool to create custom 7x80 graphic images.
		Special Function	Launches a window where users can create sequence files, set auto on/off timer, set alarms and set date/time.
		Moving Sign Options	Launches the software option window. See Figure 2.
		Test	Prompts sign to run test program to detect any bad LED pixels.
C	About		Access the software version.
D	Send		Sends the current message in Edit Area to the LED sign.
E	New		Starts a new message files, prompts to save changes to old file.
F	Open		Opens a saved program file.
G	Save		Saves current message in a program file.
H	Graphic Editor		Launches a tool to create custom 7x80 graphic images.
I	Font		Font options. Default font is 7x6.
J	Color		Color options. Default color is Bright Red.
K	Text Edit Area		Enter/type message in this area.
L	Active Cursor		Indicates where in the Text Edit Area where text and commands are entered into the area.

MESSAGE PROGRAMS

Creating text messages for the LED sign is fairly straightforward and easy to do. With the Moving Sign software you can create as many message programs as you want. However, the LED sign can only store up to 100 different programs files. The difference between a program file and a message program is that program file is an individual program stored into the LED sign's memory slot while a message program is a file created and saved (format *.sdv) on the computer by this application.

EXERCISE 1: HOW TO CREATE A TEXT MESSAGE

The following exercise will demonstrate how easy it is to create a text message.

1. Type in a message, similar to the one in Figure 1a, into the Text Edit Area. Press the "Enter" key to start a new line. The ↵ symbol indicates a new line, which translates to a new page on the LED sign.

Note: Up to 7,000 characters can be stored on the LED sign across all program files combined.

2. Click on the **Send** button.

A new window, see Figure 1c, should appear.

Note: The message will be stored in program file slot 01 on the LED sign, as denoted by the label **FILE 01**.

3. Input the sign address into the field. Default address value is "0".

4. Select the COM port (serial port) that is connected with the serial cable to the LED sign.

5. Click **OK** to send the message to the LED sign. The message should start running once transmission has completed.

Figure 1a: Enter a Text Message.

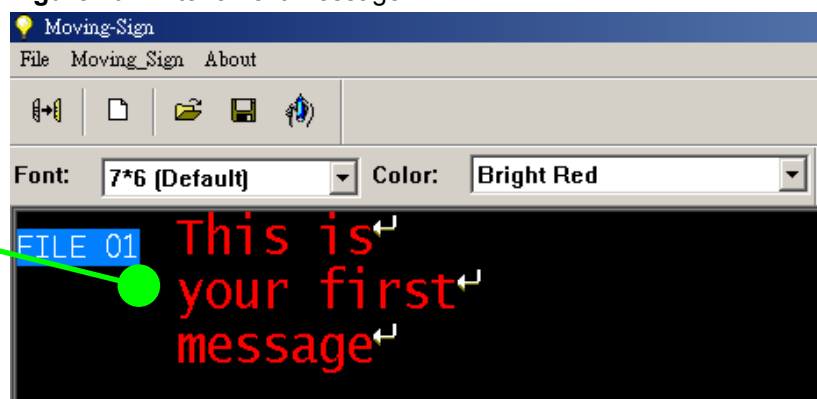


Figure 1b: Click Send Button.

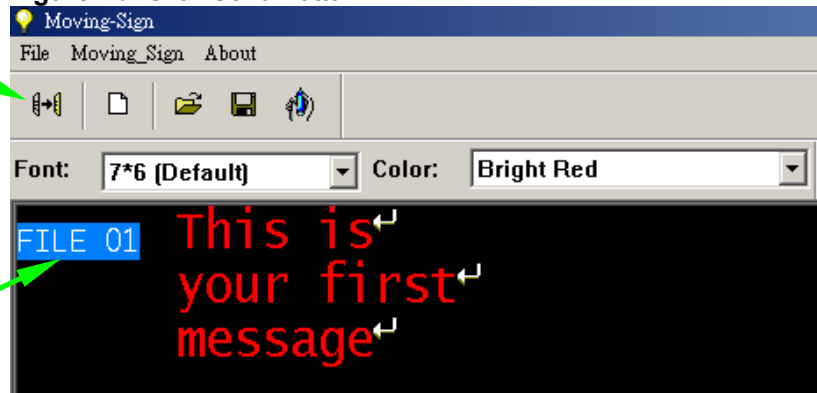
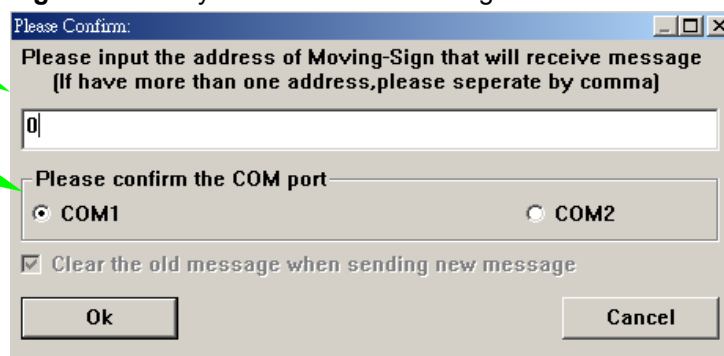


Figure 1c: Verify Communication Settings.



Tip: Use the Delete key on the keyboard to remove any mistakes. *Be careful, deletes cannot be undone.*

EXERCISE 2: HOW TO CREATE MORE SOPHISTICATED MESSAGES

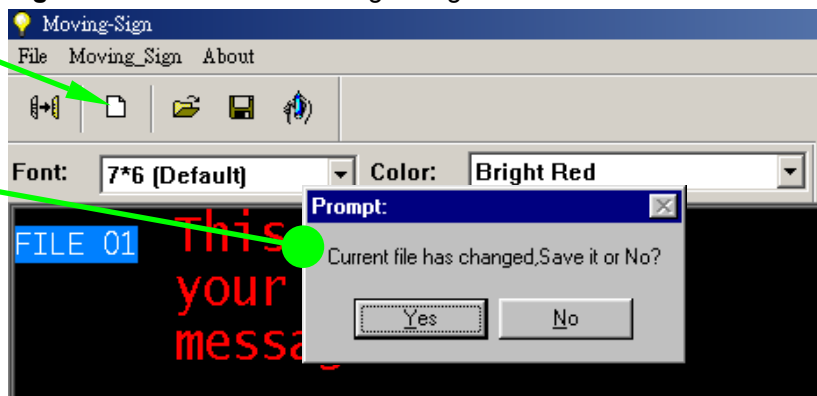
In order to create more effective and eye catching messages that will attract your audience's attention, you will need to know how to change the font and color of your messages, to add different graphics and beeps, and to change the speed of the message. The following exercise will go through the steps of using the message enhancements described below.

1. Continuing from the last exercise. Click on the **New** message button.

2. A window will prompt you to either save or discard your previous message program.

Note: If you do save the changes, a new window will open up requesting where on your computer to save the message program to and a name for it. We recommend that you create a separate folder to hold your message programs.

Figure 2a: Start a New Message Program.



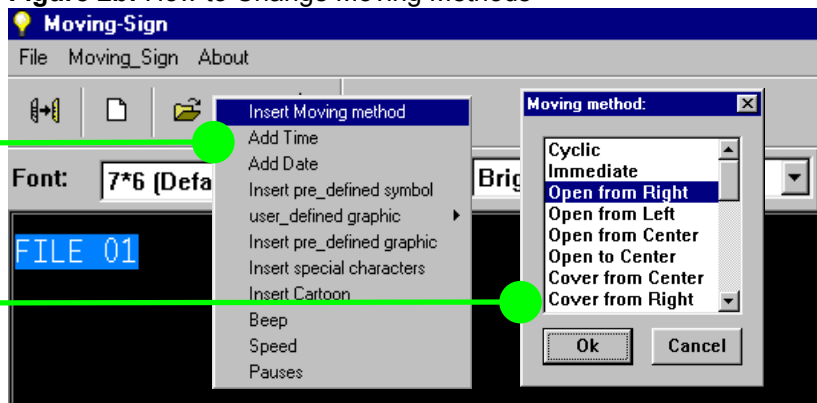
3. Right click on Text Edit Area. A window with more commands will appear. This window is called the **Command Window**.

Select **Insert Moving Method**.

The Command Window will close and a list of moving methods will appear.

Select **Open from Right** and click **OK**. A description of all the moving methods is available in Appendix A.

Figure 2b: How to Change Moving Methods



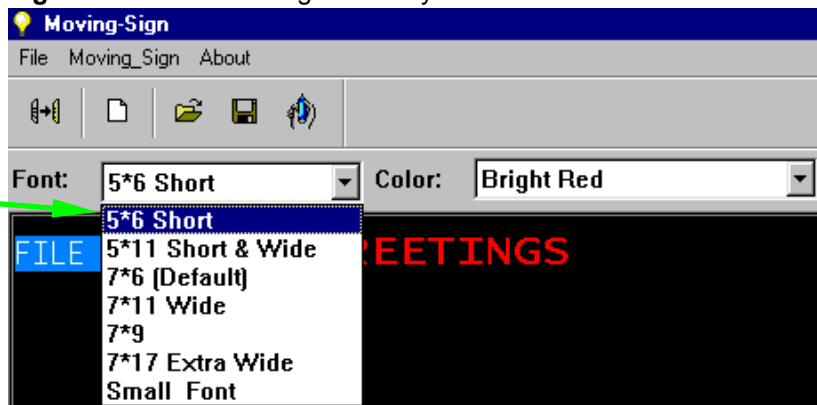
Tip: The default moving method is **Cyclic**, which cycles through all the methods at random. If the message's length does not fit entirely within the LED screen, then the Open from Right method will be used instead of the selected method. The message will scroll from right to left like a ticker.

4. Click on **Font** drop down list and select the font you want. All new texts typed will use that font.

To change existing text, highlight the text you want to change. Click on **Font** drop down list and select the color you want.

Type in "GREETINGS" and change the font to **5x6 Short**.

Figure 2c: How to Change Font Style

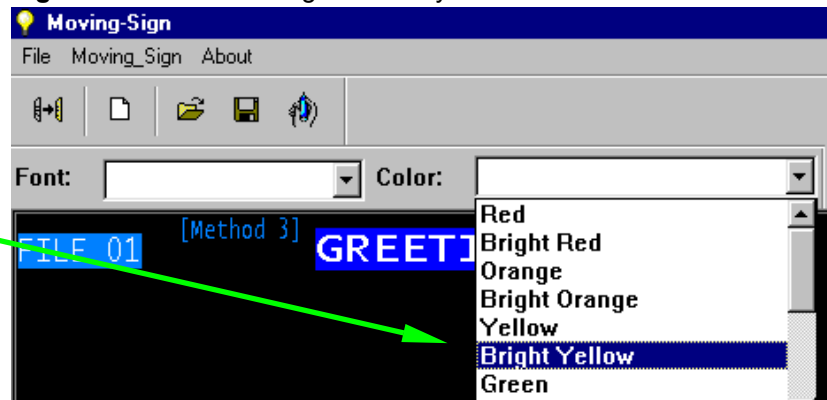


5. Click on the **Color** drop down list and select the color you want. All new text will use new color style.

To change existing text, highlight the text you want to change. Click on Color drop down list and select the color you want.

Change the color for "GREETINGS" to **Bright Yellow**.

Figure 2d: How to Change Color Style



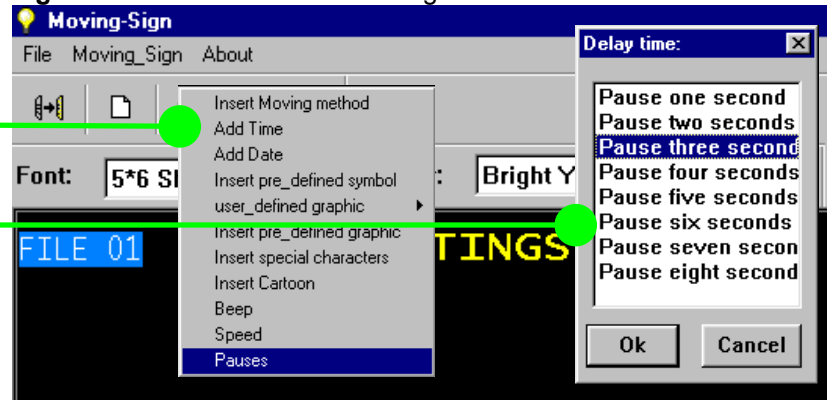
6. Right click on Text Edit Area. The Command Window will open.

Select **Pauses**. The Command Window will close and a list of delay pause options will appear.

Select **Pause three seconds** and click **OK**.

Tip: To pause longer than eight seconds, use multiple pauses strunged together.

Figure 2e: How to Pause A Message

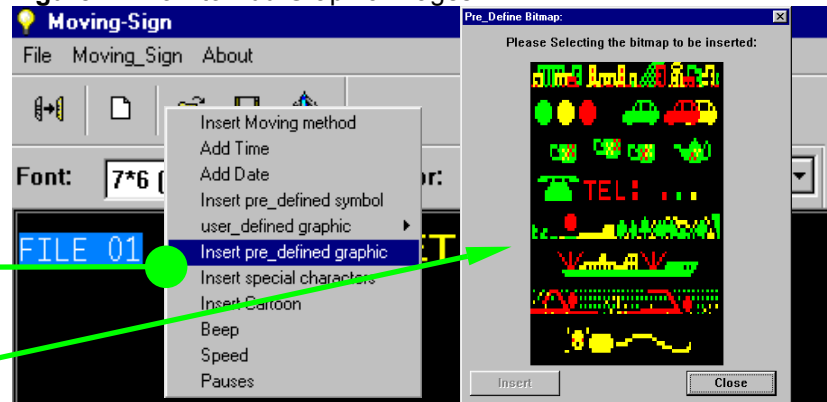


7. Press "Enter" key and a new line will appear. The new line will have the default value for font, color, and moving method.

Change moving method to **Scroll Up** (Method 11).

Open up the Command Window, select **Insert Pre-defined Graphic**. Command Window will close and a list of built-in graphics will appear. Select the Outdoor Landscape image.

Figure 2f: How to Add Graphic Images.

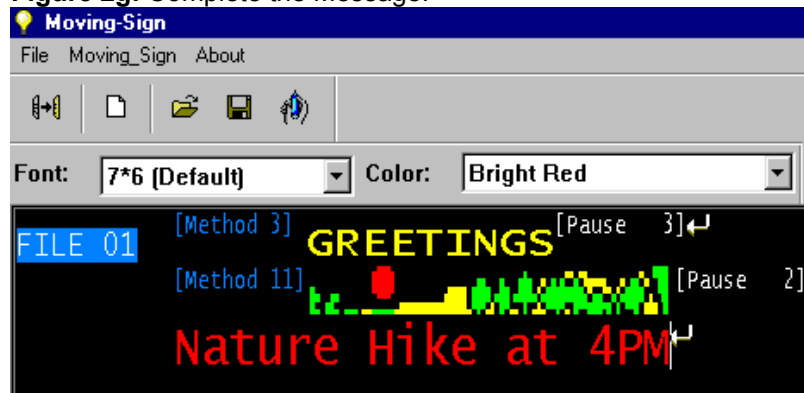


8. Add a 2 second pause to the end of the second line.

Type in the message "Nature Hike at 4PM".

Note: The message "Nature Hike" will not fit entirely in the LED screen at once. Therefore, the sign will use Open from Right method instead of the default method or whatever selected method. The message will scroll from right to left like a ticker.

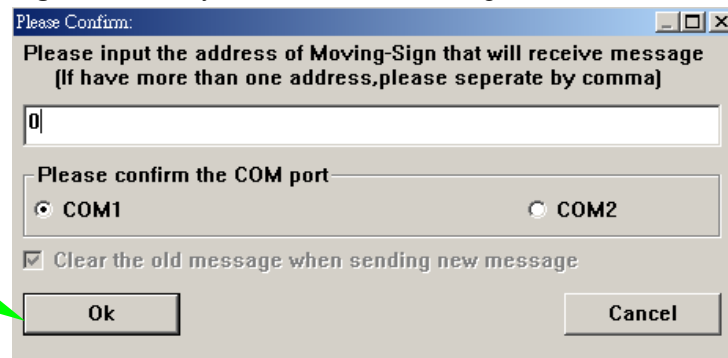
Figure 2g: Complete the Message.



9. Click on the **Send** Button and the Communication Settings Window will appear. The software will retain the previous send's settings. So no modification should be necessary.

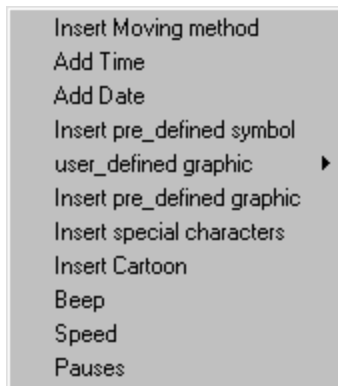
10. Click **OK** to send the message to the LED sign. The message should start running once transmission has completed.

Figure 2h: Verify Communication Settings and Send



Congratulations on having created a more sophisticated message. The exercise only covered a small portion of the full messaging capabilities that the software and LED sign can do. Please, review the following description of all the functionalities available through the Command Window. The Command Window will open when you right click Text Edit Area.

Figure C: Command Options



1. **Insert Moving Method:** Adds a moving/display/transition method to the message. **Cyclic** is the default value. If a message will not fit entirely on a LED screen at once, the sign will use the **Open from Right** method instead.
2. **Add Time:** Adds time to the message.
3. **Add Date:** Adds date to the message.
4. **Insert Pre-defined Symbol:** Adds one of thirty available single color graphic symbols.
5. **User-defined Graphic:** Inserts custom graphics or change the graphic list used by the LED sign. *Please, review Exercise 6 and 7 before you attempt to perform this action.*
6. **Insert Pre-defined Graphic:** Adds a built-in graphics.
7. **Insert Special Characters:** Allows you to insert international characters and symbols.

8. **Insert Cartoon:** Inserts an animation sequence into the message.
9. **Beep:** Adds an audible beep to the message. Useful for attracting attention to the sign.
10. **Speed:** Changes the speed of the message.
11. **Pauses:** Pauses the message for a few seconds so audience can better read the message.

Important things to remember about the above exercise:

1. The LED sign executes command in sequential order. Therefore, place the command in the order you want them to appear. For example, if you wish to use a particular moving method, then insert the moving method in front of the message so the message will appear using that method.
2. There are two main ways to change the font and color style, which is similar to how MS Word changes font and color styles. Change the font and color styles before the message is entered in the Text Edit Area or highlight portions of the message you want with the mouse and then change the font or color style.
3. Any message that is longer (will not fit entirely at once) the space available on the LED screen, the sign will disregard the default or selected moving method and use Open from Right method instead.
4. Moving Sign software remembers your previous values for the Moving Sign Options and Communication Settings. Therefore, once you have set up your configuration, you should not have to make any modifications.

SEQUENCE/SPECIAL FILES

Sequence files, referred to as special files in the Moving Sign software, combines separate program files into one large program and runs them on the LED sign sequentially at a designated time. Benefits of the sequence file functionality include reusing existing programs files, to quickly create different messages for varying occasions and to schedule programs for a specific run time. Please, note program files and message programs are two different things. A program file is an individual file stored in its own slot on the LED sign. While message program is a program created by the Moving Sign application and saved (format *.sdv) on the computer. A message program can hold up to 99 different program files.

SEQUENCE FILE SCENARIO

Let's say that the owner of a deli called, John's Deli, wants to quickly advertise different daily specials every day. He already has the following program files created and stored in the LED sign.

Program File No.	Message Content
01	Welcome to John's Deli
02	Our today's special is
03	Meat Loaf Sandwich
04	Hot Turkey Club
05	Chicken Caesar Salad
06	and cup of
07	and bowl of
08	Minestrone
09	Chicken Noodle
10	Clam Chowder
20	for \$3.95
21	for \$4.95
22	for \$5.95
30	Add chips & large soda for \$1.50
31	Ask us about our awards program.

By using a sequences file, the owner can advertise today's special of meat loaf sandwich and a cup of minestrone soup for \$3.95 by combining program files 02, 03, 06, 08 and 20 sequentially (in that order) to create the desired promotion. By changing the selected program files to 02, 04, 07, 10 and 21, the owner can change the day's special to hot turkey club and a bowl of clam chowder for \$4.95 relatively easily and quickly. Furthermore, the owner can also appended additional messages, such as adding chips and soda for \$1.50 or prompting his award program, to the above message by including program files 13 and/or 14 to the sequence file list. Lastly, he can schedule the sequence file to run from 10AM to 2PM every Monday, Wednesday and Friday.

The first step to create a sequence file is to know how to create program files. The following exercise illustrate how to do so.

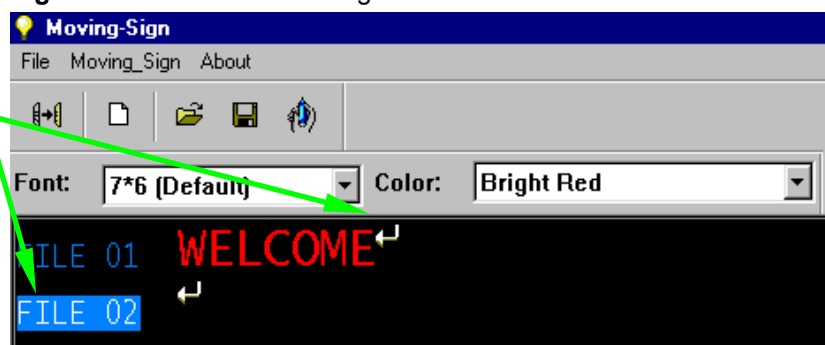
EXERCISE 3: HOW TO CREATE A PROGRAM FILE

1. Starting from a new message program. Type in a message, like "WELCOME".

2. Instead of pressing the Enter key on the keyboard to create a new line. Hold the CTRL key down and then press the Enter key (CTRL + Enter) to create a new program file.

Note: You can create up to 99 different program files in one message program.

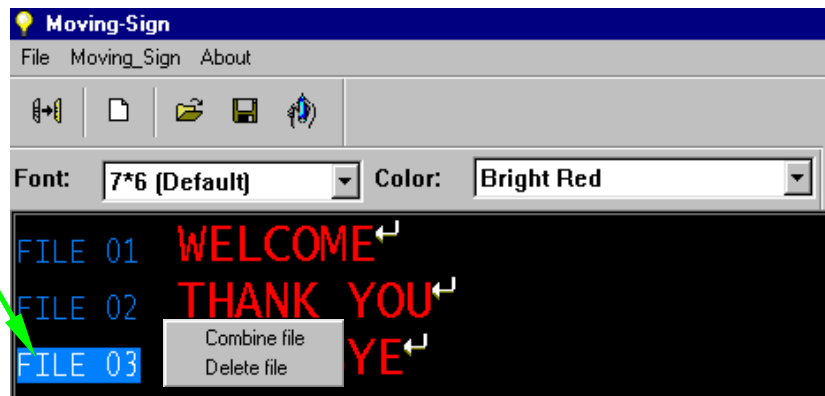
Figure 3a: Create a New Program File.



EXERCISE 4: HOW TO DELETE/COMBINE PROGRAM FILES

1. Select the program file you want to delete or combine with the below program file. Move the active cursor to the program file line.
2. Right click on the highlighted program file number. And a new window with two options, combine or delete, should appear.
3. Select the option you want. If combining, a window will prompt for confirmation.

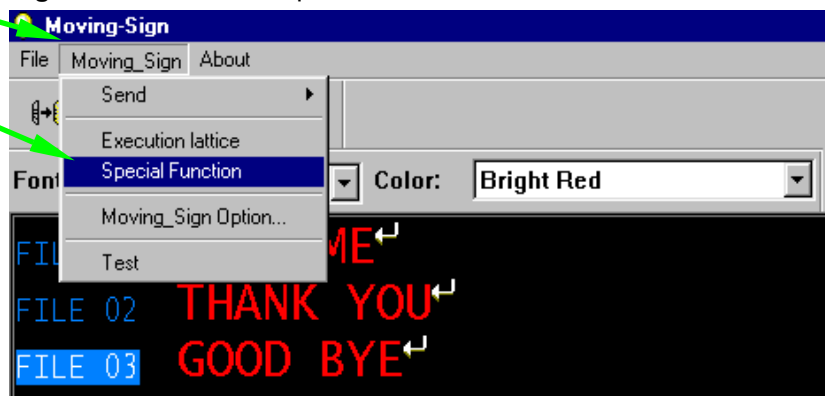
Figure 4: Delete/Combine a Program File.



EXERCISE 5: HOW TO CREATE A SEQUENCE FILE

1. Click on the **Moving Sign** menu option.
2. Select the **Special Function** option. The Special Function Window should appear. See Figure 5b.

Figure 5a: Create a Sequence File



3. Specify which sequence file you want to set up.

Note: You can create up to 10 different sequence files.

4. Set up the Start Time. Use the drop down list or type in a value.

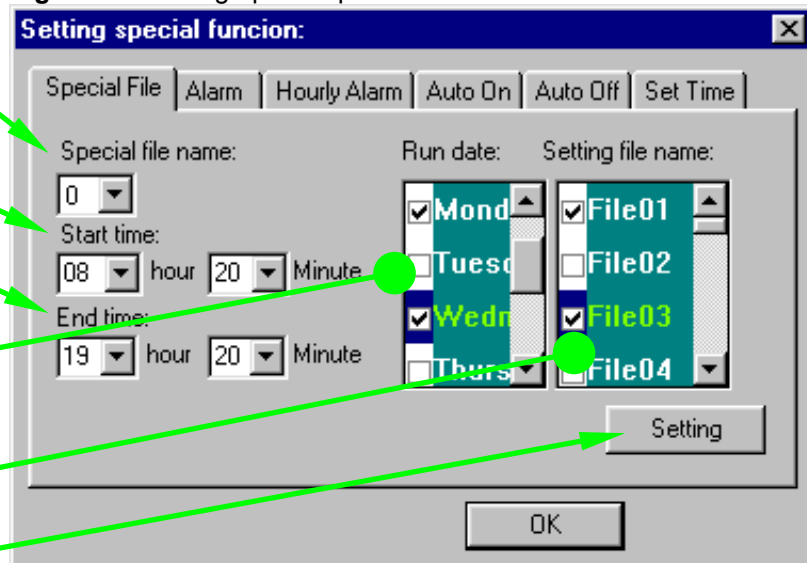
5. Set up the End Time. Use the drop down list or type in a value.

6. Check the Days in the week you wish to have the sequence file run.

7. Select which program files you want to run sequentially in order.

8. Click on **Setting** to Send the sequence file settings to the LED sign.

Figure 5b: Setting up a Sequence File



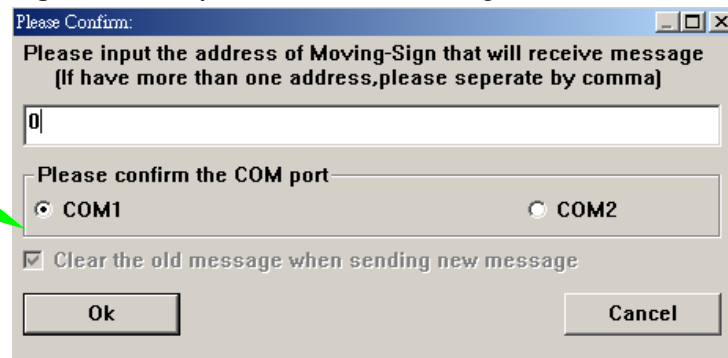
Note: 1) The time setting is designed to be flexible. You can just set the days and skip the starting and ending time, which will cause the sequence file to be valid only for the selected days.

2) If there are multiple saved sequence files with concurrently valid time settings, the LED sign will run those sequence files in order from file 0 to file 9. Therefore, be careful about the time setting of multiple sequence files and make sure that they do not conflict with each other.

9. The Communication Settings Window will appear. Verify that the settings are correct.

10. Click **OK** to send the sequence and program files to the LED sign. The message should start running once transmission has completed.

Figure 5c: Verify Communication Settings and Send



Note: If a sequence file's start and end time are enabled and the time is valid, the sequence file will run immediately after the sequence file is transmitted to the LED sign. Otherwise, the sequence file will wait till the time is valid before it starts running.

UNDESTANDING THE BENEFITS AND LIMITATION OF SEQUENCE FILE.

When using sequence files, plan out the structure of your program files. The program files should be structured numerically with the various options grouped together, such as program file example in the Sequence File Scenario for John's Deli.

Remember via the Moving Sign software, the sequence file can only run program files in numerical order, because of the selection interface. For example, if program files 01, 04, 05, and 09 were selected. Those program files will run in that order sequentially. Its not possible to run program files out of numerical order, such as 01, 09, 05, and 04. Therefore, plan out the structure of your program files. The LED sign can store up to 99 seperate program files, so designated 10 through 19 for introduction, 20 through 40 as events or products, etc. Also, remember a program file can have multiple lines of message. You are only limited to a total of 7000 characters across all 99 program files.

TIP: If you want to create a sequence file that runs the programs out of numerical order, then use the infrared remote control to create the sequence file instead of the Moving Sign software.

Sequence file when properly set up will save you time and effort from having to create similar complex messages over and over again, such as point of purchase daily specials. In addition, the Moving Sign software allows you to easily edit, delete and combine program files. The Windows interface makes moving program files around easier than using the infrared remote. *Unfortunately, at this time, the Moving Sign software does not support standard Cut and Paste functionality.*

Another benefit of sequence file is the ability to schedule programs to run and stop at a specific time on designate days of the week. You can use sequence file to run one specific program file at a specific time each day. For example, instead of creating multiple program files, just create one long complex program file and use the sequence file to run that program at a specific time. However, the scheduler can not be set for specific a specific date, such as July 4th, only on specific days in the week.

GRAPHIC FILES

Graphic images can easily enhance any message by providing a visualization of products or serviced offered by your organization. Exercise 2 demonstrated how graphic images are added to messages. This section will cover how to create your own custom graphic images and logos. Up to eight separate custom graphic images can be created.

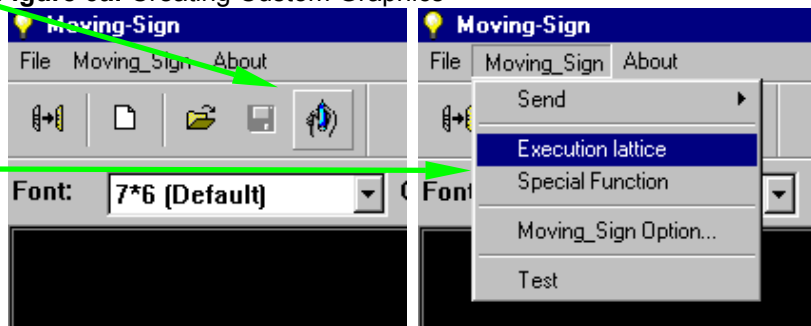
EXERCISE 6: HOW TO CREAT CUSTOM GRAPHICS & LOGO

1a. Either click the **Draw** icon.

Figure 6a: Creating Custom Graphics

1b. Or click the **Moving Sign** menu option and select **Execution lattice**.

The Drawing Tool will appear, see Figure 6b.



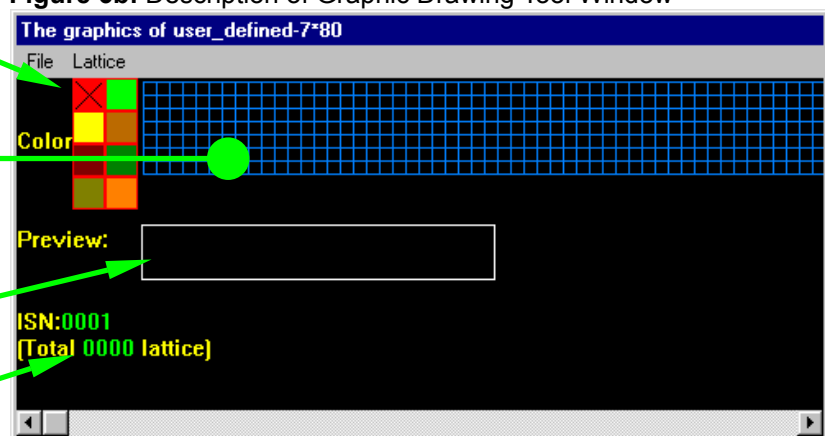
Color Palette: Select color to draw with. "X" indicates the current color selection.

Drawing Area: Click to draw a dot. Right click to erase dot. Hold down the click button and move mouse around to fill space.

Preview Pane: Condensed view of drawn graphic image.

File Number (ISN): Current file's number and total number of files that have been created.

Figure 6b: Description of Graphic Drawing Tool Window



Note: Lattice refers to graphic image created from a grid matrix. *All modified files are automatically saved as the current ISN file number.*

Tip: Expand the Drawing Tool's window size to see the entire drawing area.

Graphic Tool Menu Options

Name	Sub-menu	Description
File	Save as...	Save current graphic file as another file (*.dat).
	Create Sending List	Save all the custom graphics as an "*.lst" file. Send the graphic list to the sign. (Note: The maximum number of user-defined graphics stored on the LED sign is eight (Graphic A - Graphic H).
	Exit (ESC)	Close the graphic editing window. Press ESC key to exit drawing tool.
Lattice	Create a New Lattice	Create a new graphic file.
	Editing Old Lattice	Open an old graphic file for the editing. Type in the ISN file number, (in green) on the bottom left hand corner of window.
	Clear Current Lattice	Clears the current drawing palette. Any modifications will prompt a request to continue or stop the discard.

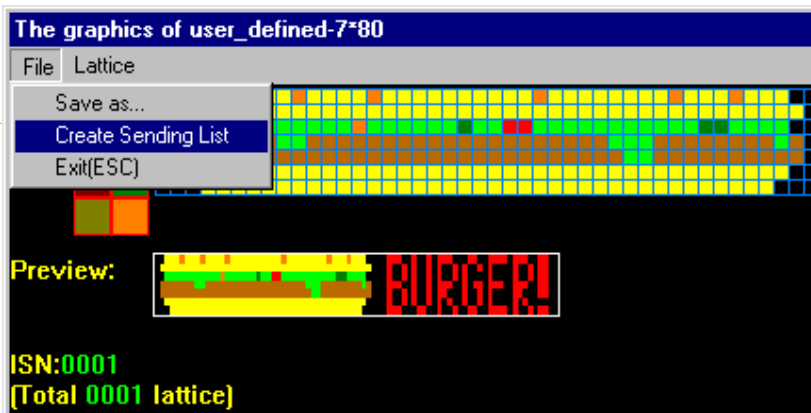
EXERCISE 7: HOW TO CREAT & SEND A GRAPHIC LIST

In order to use custom graphic images in a message, a list of graphic files must be created first. While the Moving Sign software allows you to create many custom graphic files, the LED sign can only store a maximum of eight custom graphics. Therefore, the graphic list contains up to eight graphic files you can use in a message. In addition, you can create numerous graphic lists for quick reference or particular messages.

1. From the Drawing Tool screen, click the **File** menu and select **Create Sending List**.

The Graphic List window will appear, see Figure 7b.

Figure 7a: Creating Custom Graphics



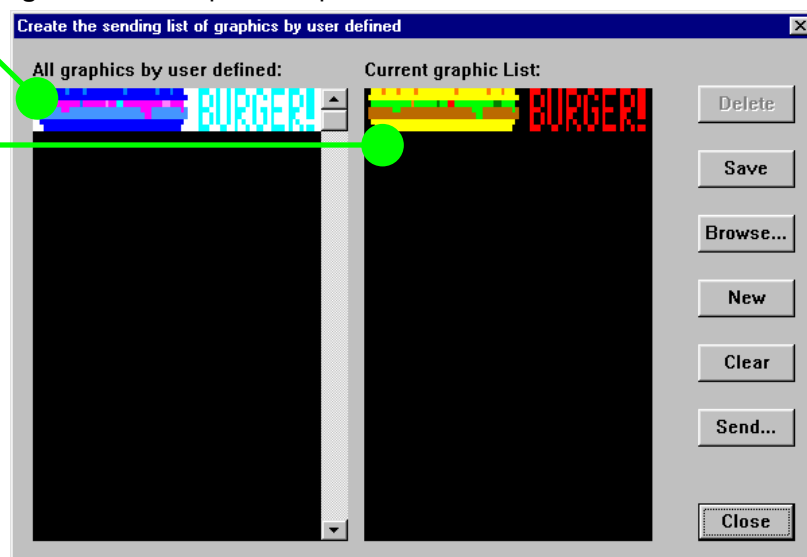
Left column shows all graphic files that have been created.

Right column is the download list of graphic images. The list can only hold a maximum of **eight** graphic images.

To add a graphic file to the download list, double click on the graphic image in the left column.

Save: Saves the current list (*.lst)
Browse: Finds a graphic list.
New: Creates a new list.
Clear: Clears the current list.
Send: Send graphic list to sign.
Close: Close the Graphic List window.

Figure 7b: Description Graphic List Window



Click on **Send** button to send the graphic list to the LED sign. If changes to the list were not saved, you will be prompted to save the graphic list.

The Communication Settings Window will appear. Verify that the settings are correct.

Click **OK** to send graphic list to the LED sign.

Figure 8c: Verify Communication Settings and Send



ALARM & TIME SETTINGS

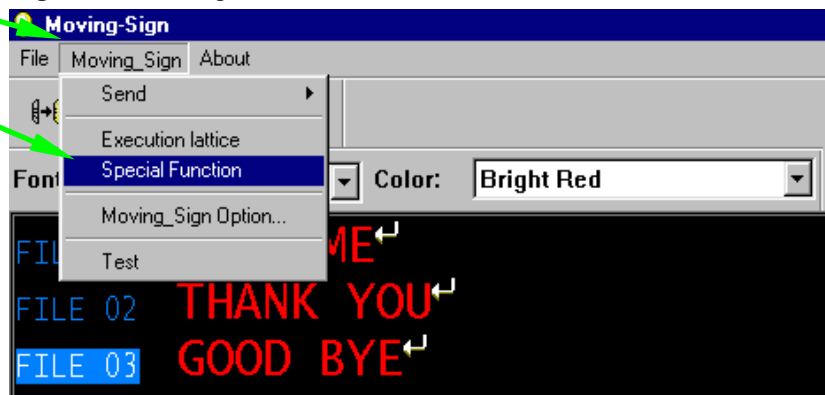
The LED sign is equipped with a real time clock that can be used to automatically turn the LED sign on and off. In addition, alarms can be set to sound at the top of every hour or at intervals. Note: The clock does not automatically adjust for day light savings or leap years. To change and set all the alarm and time values, open the *Special Function* window.

EXERCISE 8: HOW TO SET TIME FORMAT

1. Click on the **Moving Sign** menu option.

2. Select the **Special Function** option. The Special Function window should appear. See Figure 8b.

Figure 8a: Setting Time Format



3. Select Set Time option.

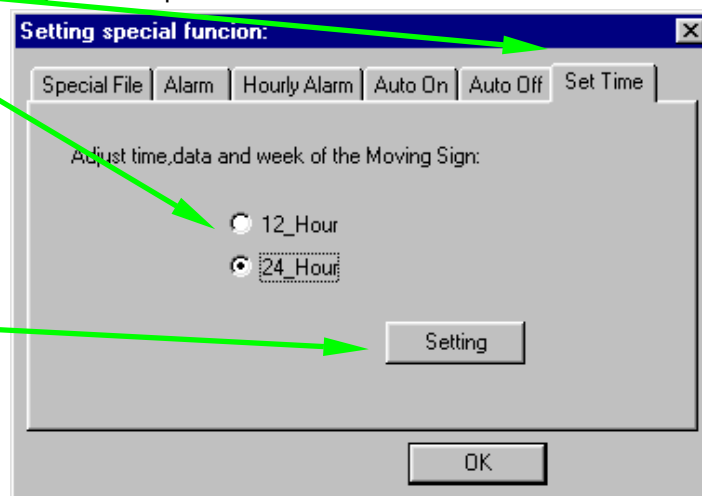
4. Click on which format you want to use.

12 Hour format displays time with AM and PM.

24 Hour format shows time in 24 hour cycles, like 20:00 for 8PM.

5. Click on Setting to send the time format (or alarm settings) to the LED sign.

Figure 8b: Special Function Window



9. The Communication Settings Window will appear. Verify that the settings are correct.

10. Click **OK** to set the time format on the LED sign.

Figure 8c: Verify Communication Settings and Send



ALARM SETTINGS

Alarm Times: Shows the number of times the alarm will fire.

Interval of Alarm: Interval in minutes between each alarm.

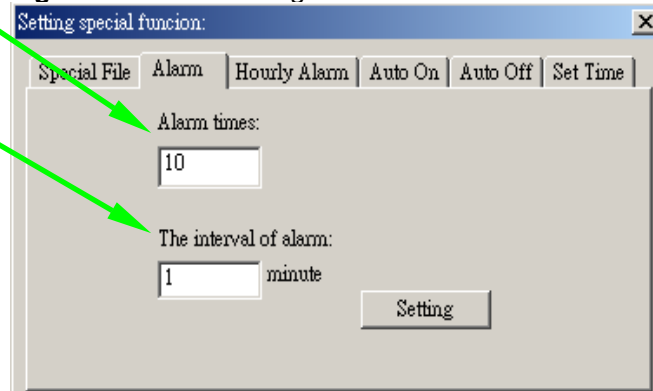
If Alarm Times is greater than "0", the alarm will automatically start when a message is ran. However, the first alarm will not trigger until the interval has elapsed. A value of 0 interval will not cause the alarm to trigger.

Check the box to turn hourly alarms on. The LED sign will sound an alarm at the top of every hour.

Set the time to automatically turn the LED sign on.

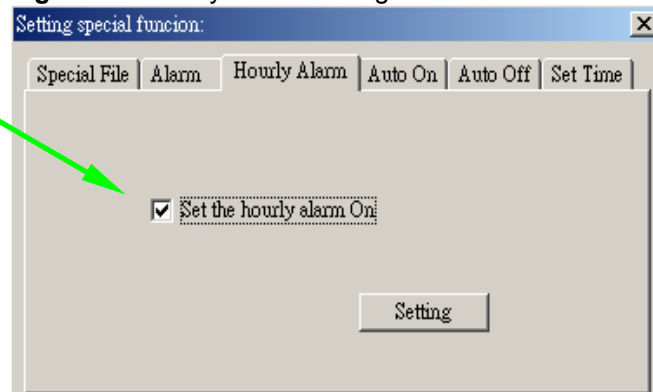
Set the time to automatically turn the LED sign off.

Figure 9a: Alarm Setting



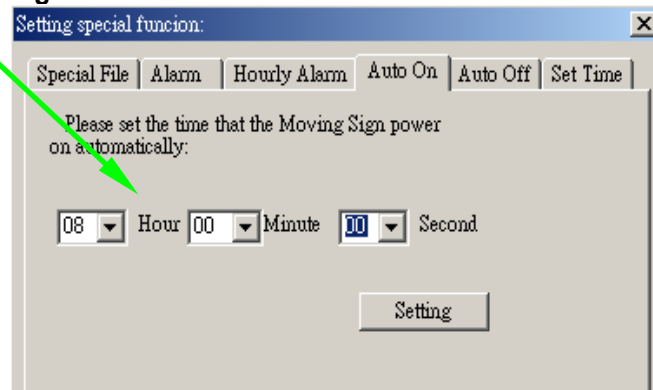
The dialog box titled "Setting special function:" has tabs for "Special File", "Alarm", "Hourly Alarm", "Auto On", "Auto Off", and "Set Time". The "Alarm" tab is selected. It contains two input fields: "Alarm times:" with the value "10" and "The interval of alarm:" with the value "1" and the unit "minute". A "Setting" button is at the bottom right.

Figure 9a: Hourly Alarm Setting



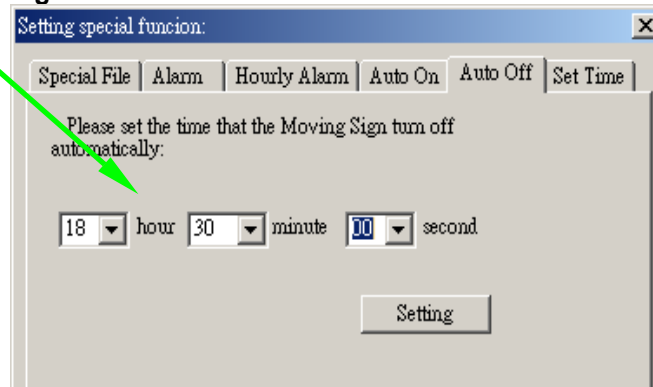
The dialog box titled "Setting special function:" has tabs for "Special File", "Alarm", "Hourly Alarm", "Auto On", "Auto Off", and "Set Time". The "Hourly Alarm" tab is selected. It contains a checked checkbox labeled "Set the hourly alarm On". A "Setting" button is at the bottom right.

Figure 9a: Auto On Timer



The dialog box titled "Setting special function:" has tabs for "Special File", "Alarm", "Hourly Alarm", "Auto On", "Auto Off", and "Set Time". The "Auto On" tab is selected. It contains the text "Please set the time that the Moving Sign power on automatically:" followed by three spinners for "Hour" (08), "Minute" (00), and "Second" (00). A "Setting" button is at the bottom right.

Figure 9a: Auto Off Timer



The dialog box titled "Setting special function:" has tabs for "Special File", "Alarm", "Hourly Alarm", "Auto On", "Auto Off", and "Set Time". The "Auto Off" tab is selected. It contains the text "Please set the time that the Moving Sign turn off automatically:" followed by three spinners for "hour" (18), "minute" (30), and "second" (00). A "Setting" button is at the bottom right.

APPENDIX A: MOVING METHODS

The following is a list of description for the 24 different moving methods. The moving methods are also referred to as display or transition methods. Moving methods determine how the LED sign shows and remove a message/text from the sign.

Options	Description
CYCLIC	Default display style. Randomly cycles through all the display styles and color options.
IMMEDIATE	Immediate.
OPEN FROM RIGHT	Open/push from right to left.
OPEN FROM LEFT	Open/push from left to right.
OPEN FROM CENTER	Open from center to edge.
OPEN TO CENTER	Open from edge to center.
COVER FROM CENTER	Cover from center to edge.
COVER FROM RIGHT	Cover from right.
COVER FROM LEFT	Cover from left.
COVER TO CENTER	Cover from edge to center.
SCROLL UP	Scroll/push up.
SCROLL DOWN	Scroll/push down.
INTERLACE TO CENTER	Interlace from edge to center with previous screen.
INTERLACE COVER	Interlace cover horizontally with previous screen.
COVER UP	Cover up.
COVER DOWN	Cover down.
SCAN LINE	Yellow dot scan from left to right from top row down, changing each pixel as it moves over it.
EXPLODE	Exploding firework.
PAC MAN	PAC-Man chomps from left to right.
FALL & STACK	Falls down and stack up like sand in an hourglass.
SHOOT	Pixels are shot from right to left moving up and down.
FLASH	Flashes several times.
RANDOM	Each pixel is randomly changed.
SLIDE IN	Pieces are slide in from right to left.

*Note: If the message's length does not fit within the LED screen, the sign will use the Open from right method and ignored any designated display method.

APPENDIX B: TROUBLE SHOOTING

Problem	Possible Solutions
Nothing appears on the LED sign.	<ol style="list-style-type: none">1. Make sure the AC power supply is properly plugged into an electric outlet and to the back of the LED sign.2. Make sure the electric plug to the AC power supply is firmly connected.3. Check if the electric outlet has power.4. Check if the auto on/off timer is properly set.
Nothing changes on the LED sign after message is sent.	<ol style="list-style-type: none">1. Change your COM PORT setting.2. Make sure the serial cable is properly connected to the computer and to the back of the LED sign.3. Make sure you are using the cable provided with the LED sign. The serial cable looks like regular telephone cable, but is not.4. Check if cable has continuity. Use a RS232/485 tester and send a test signal or open the 9Pin side of the cable to check for any loose wiring.5. Use infrared remote control to check if program file was downloaded and if so, use remote to run program.
Nothing appears on the LED sign after send.	<ol style="list-style-type: none">1. Check if the auto on/off timer is properly set.2. Check if there are no conflicting program files. If you are not sure, delete the following items.<ol style="list-style-type: none">a. Remove all sequence files.b. Remove all alarms and on/off settings.c. Remove all saved files.d. Note: There are no ways to undo a delete, so be absolutely sure before you do so.

USB TO SERIAL PORT CONVERTERS

Most LED Signs connect to a computer using a Serial, or RS232 cable. However, computer makers have recently stopped including serial ports in newer computers. Because of this, we have included a USB to Serial Converter cable with your sign.

While these USB to Serial Converter cables are reliable, and do work well, they are somewhat complex to set up. They are, unfortunately, the best solution available. We cannot use USB directly with our signs, because USB cables can only be approximately 6 feet long...the technology is very limited on cable length. The longer, 50 foot, capability of serial/RS232 cables is still required so that the sign can be placed farther away from the computer.

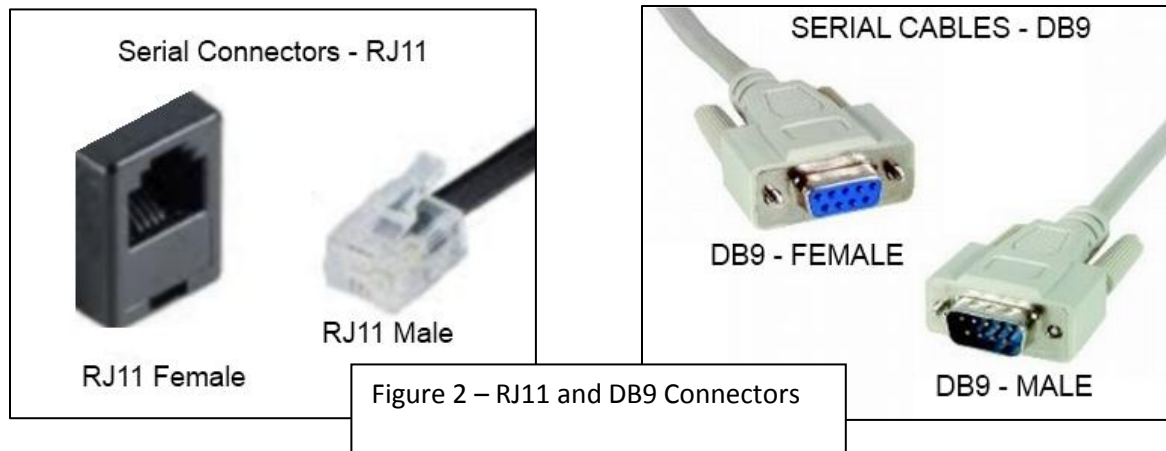
This guide will help you get your USB to Serial Converter Cable working with your sign.

This is what a USB port looks like, we have included pictures of both the male and female connectors. Your computer has the female connector, and one end of the USB to Serial converter has the male connector. See Figure 1 for detail.



Figure 1 - USB Ports

This is what a Serial Port looks like. There are two different styles of connectors...RJ11, which looks like a telephone connector, and a DB9 connector, which has a metal shell and 9 pins or sockets.



Specifically, your sign has 2 cables.

Cable #1: A serial cable that has a male RJ11 connector at one end, and a DB9 female connector at the other end. The RJ11 connector plugs into the sign, and the DB9 connector plugs into either the computer (if it has a real serial port), or into the USB to Serial Converter.

Cable #2: A USB to serial cable that has a DB9 male connector on one end (plugs into Cable #1), and a USB connector on the other end (plugs into your computer).

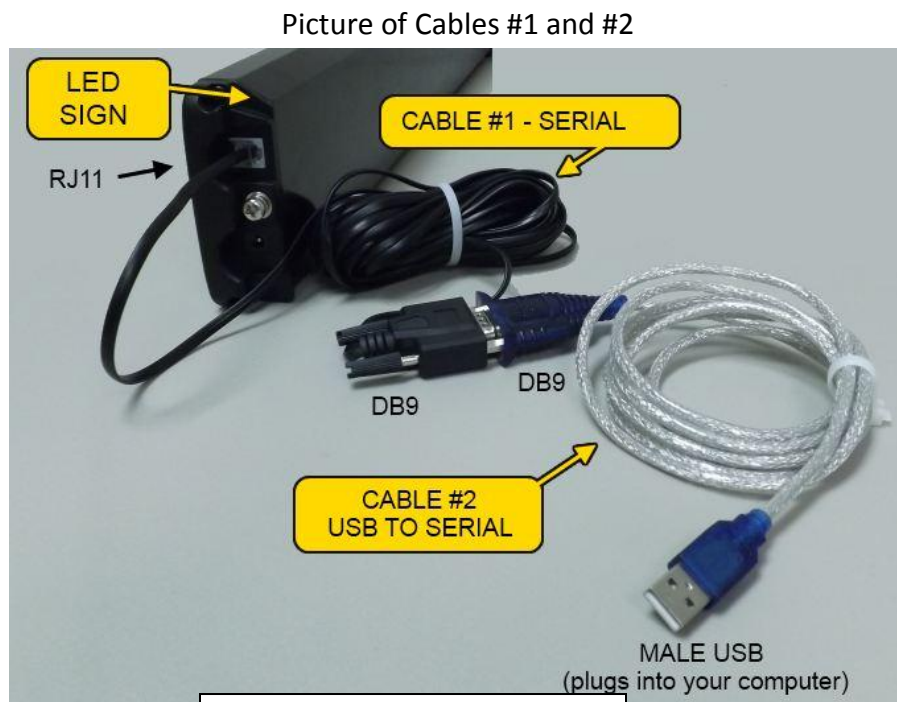
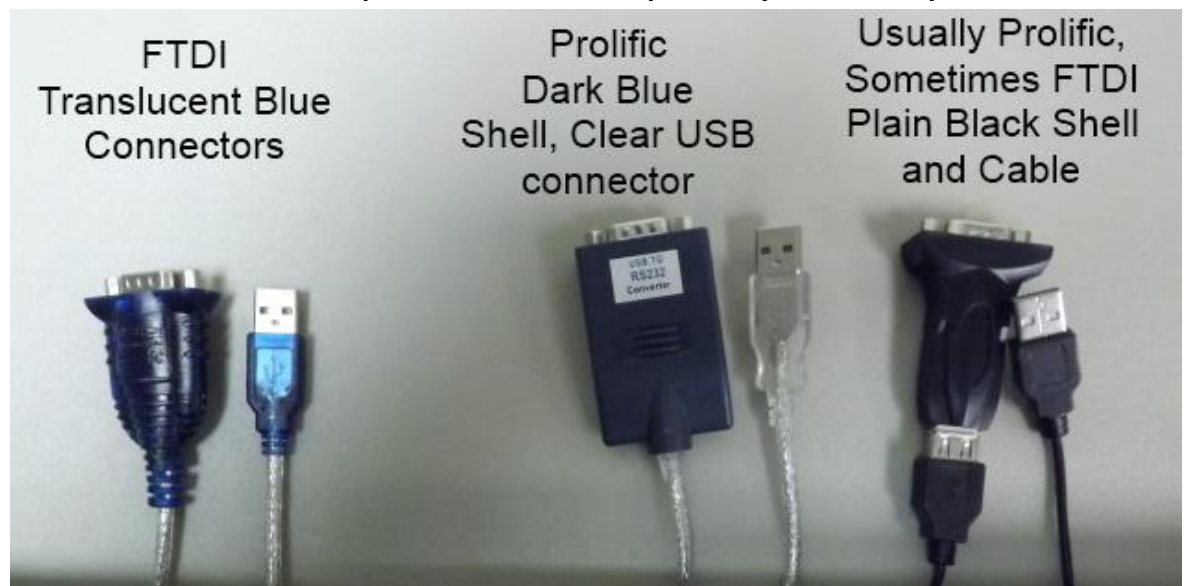


Figure 3 – The Two Cables

INSTRUCTIONS TO GET THE SIGN WORKING

1. Device Drivers

- a. If you are running Windows 7, your computer should automatically download and install the drivers for the USB to serial converter once you plug the USB cable into a port on the PC. This can take several minutes. Usually, you will see some indication of the activity in the lower right hand corner of the screen. If, however, you run into issues, see step 1b that covers how to manually install drivers.
- b. If you are not running Windows 7, you will need to manually install the drivers. There are two different major manufacturers of USB to Serial Converters, and the driver you download will depend on which one you have. If you aren't sure, you can download and install both. The two major manufacturers are "FTDI" and "Prolific". The picture below can help identify which one you have:



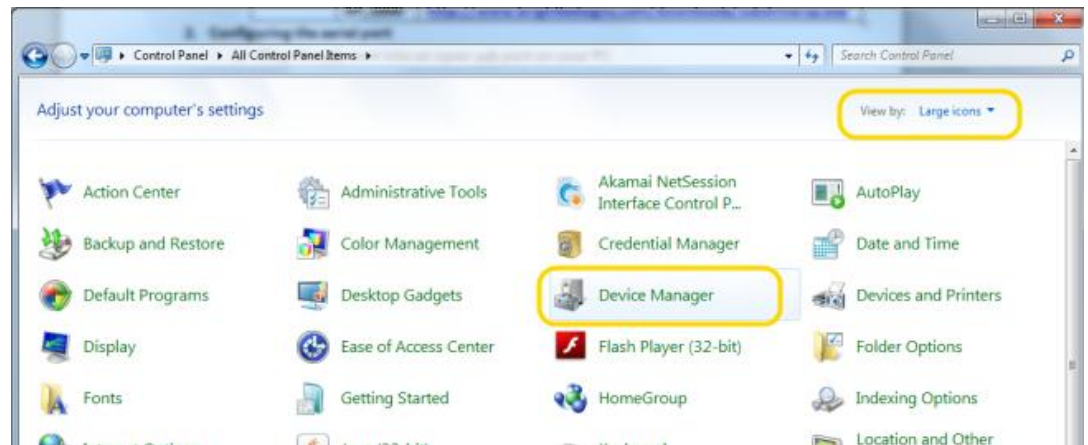
- c. Where to download the drivers

USB Type	Windows Version	Download Link
FTDI	ALL	http://www.brightledsigns.com/downloads/ftdi-drivers.exe
Prolific	7, Vista	http://www.brightledsigns.com/downloads/usbdriver.exe
	XP, 2000	http://www.brightledsigns.com/downloads/usbdriverxp.exe

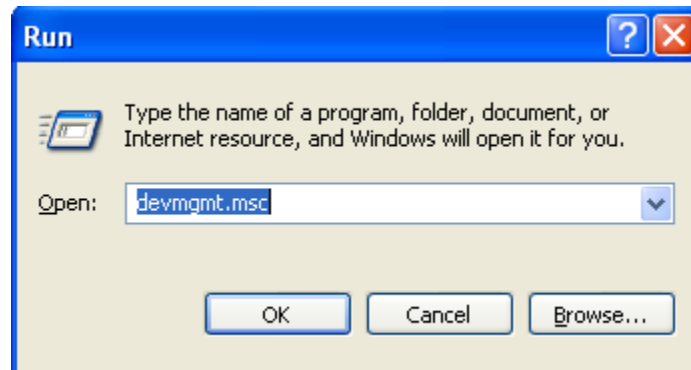
2. Configuring the serial port

- a. Plug the usb cord into an open usb port on your PC

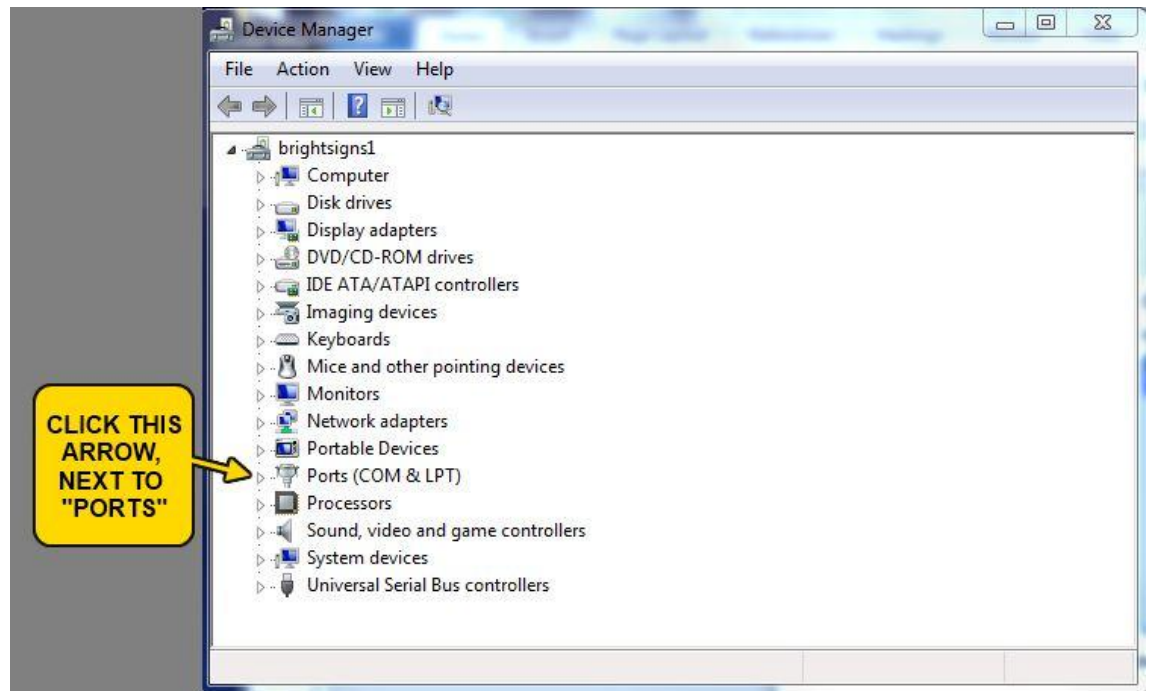
- b. You should see some activity in the lower right hand side of your screen as windows detects and installs the USB to Serial Converter. WAIT SEVERAL MINUTES FOR THIS TO FINISH.
- c. Start the Windows Device Manager
 - i. Windows 7 – Start the control panel, then in the upper right corner of the window, change the “View By” from “Category” to “Large Icons”. You’ll see an icon for “Device Manager” that you can click.



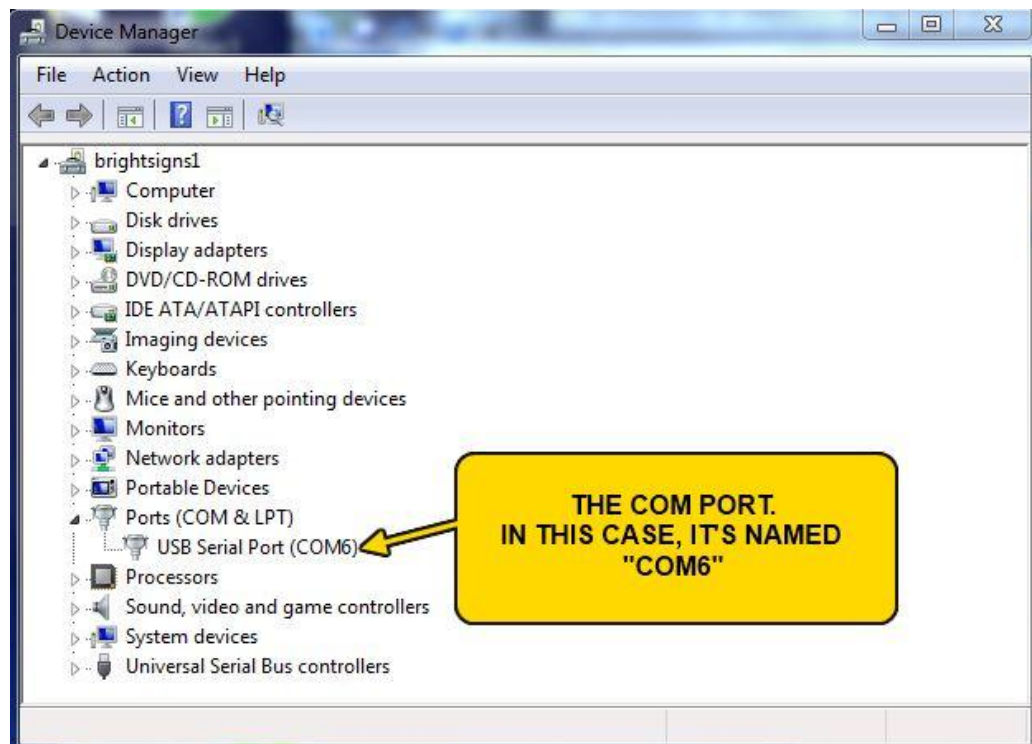
- ii. Other Versions of Windows – Select “Run” from the Start Menu and type in ‘devmgmt.msc’, then press the ‘OK’ button



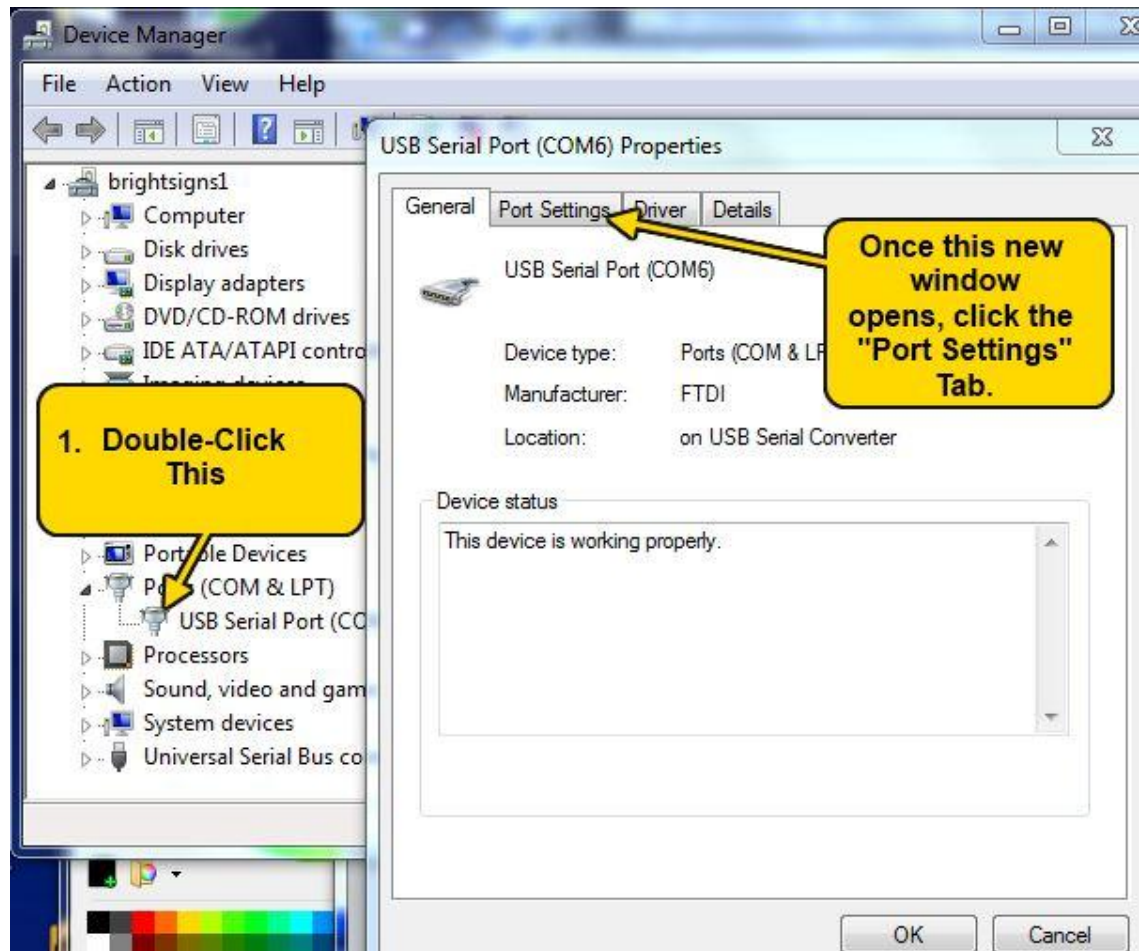
- d. You should now see a window for the Device Manager, like below. Click the little arrow



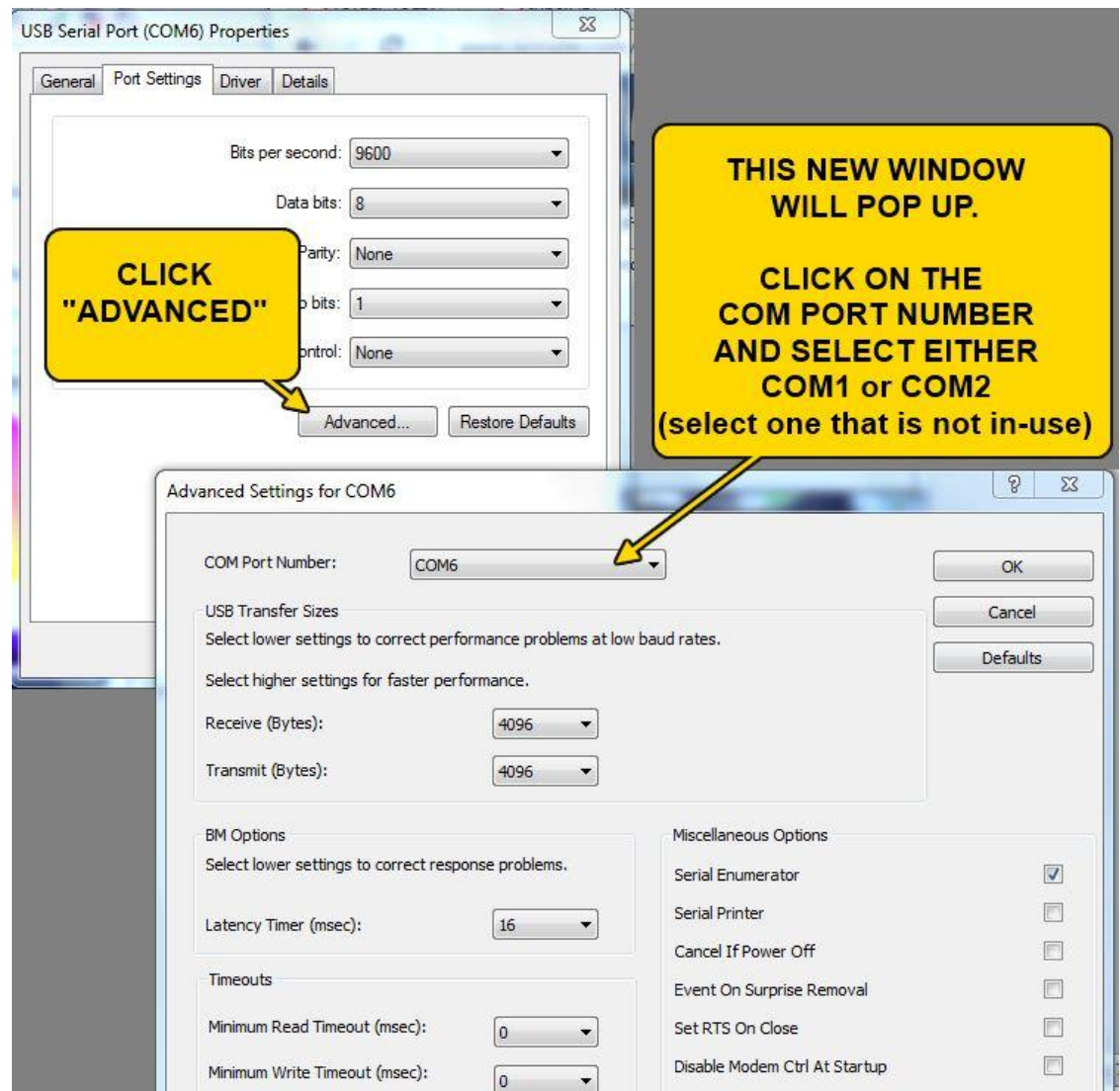
- e. Once you've clicked the arrow, it will show the serial port. This one says "USB Serial Port (COM6)". It might say something different like "FTDI" or "Prolific", but it will always say which COM port it is..like COM2, or COM6 or COM12, etc.



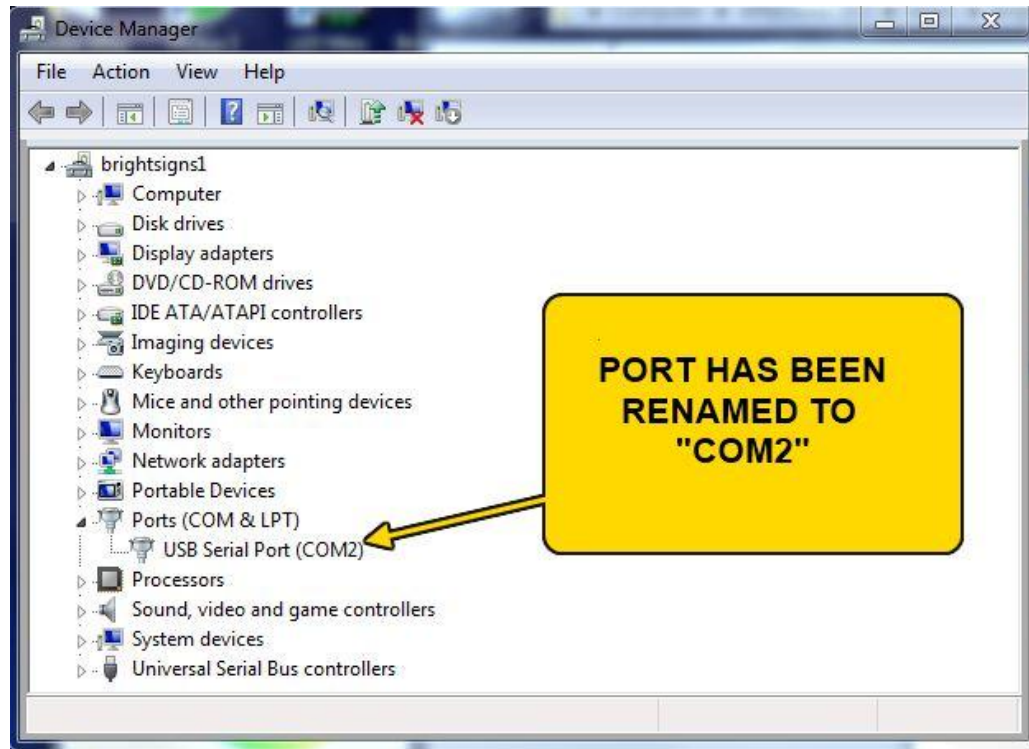
- f. In order for the COM port to work well with the software, it will need to be renamed to either COM1 or COM2 (instead of COM3, COM6, COM11, etc). To rename it, double click on the port.
- g. Once you've double-clicked, you'll see a new window. Click the "Port Settings" tab.



- h. Once you have the Port Settings Tab open, click on “Advanced”, and set the COM port number to either COM1 or COM2. Pick a COM port that is not marked as “in use”.



- i. Now click on “OK” on each window until you are left only with the original Device Manager window. You should see that the COM port was renamed to either “COM1” or “COM2”.



- j. Your sign is now ready to use with the software. If you need a new copy of the software, see the following links

Sign Type	Download	Link
Single Line M500, M1000, M1500	Software	http://www.brightledsigns.com/downloads/single-line-v4-software.exe
Single Line M500, M1000, M1500	Remote Control Manual	http://www.brightledsigns.com/downloads/remote-control-manual-single-line.pdf
Single Line M500, M1000, M1500	PC Programming Manual	http://www.brightledsigns.com/downloads/pc-manual-single-line.pdf

- k. IMPORTANT NOTES:

- i. Please be sure to select the right COM port (COM1 or COM2) from within the sign software. The sign software asks you which port to send the data to.
- ii. If you plug the USB cable into a different port than the original one on your PC, it will rename the port, and you will have to repeat this procedure. Similarly, if you install a different USB to Serial converter, it can also cause the port to be renamed. Always run the windows Device Manager to double-check the COM port number if you aren't sure.