LogoSTAR™

Logo Insertion System

User's Guide

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INTRODUCTION TO LogoSTAR™

LogoSTAR™ is a memory-based downstream linear key system that inserts logos into incoming video.

The system satisfies the diverse display requirements of cable, satellite or TV broadcast operations, from standard logo insertion to the display of full-screen images.

Logo Features

LogoSTAR™'s enhanced operation elevates it well above the level of standard logo insertion equipment.

- The memory stores up to 32 small logos, 16 small and one full-screen, or two full-screen images
- Each stored small sized logo has its own changeable on-screen X/Y position and key level percentage characteristics
- Changes can be made in real time
- Several image file formats accepted as logo input files

System Control

The flexibility built into the system offers a control scheme to suit most needs.

- Front panel control right from the unit
- Remote software-driven control via Video Data System's Logo Conversion PC/Win software run on a user-supplied computer
- Computer connection is direct only
- Remote GPI control through a user-supplied contact closure device
- Scheduling software allows events to be programmed by day and time for automated operation

System Requirements and Connections

System signal flow is simple. The single rack-mountable LogoSTAR™ unit takes an incoming video signal and sends it out with keyed logo to any destination.

A second video output -- for monitoring only -- can go to a monitor for selected logo previews.

All other connections are for the various external control possibilities.

For computer operation, minimum PC configuration requirements include:

- ?? 486/66 or higher Intel compatible processor
- ?? Video display card capable of at least 16 bits per pixel (High Color)
- ?? Windows 95 or higher Windows NT

The Manual

This manual details LogoSTAR™ installation and operation.

The logic of the manual follows the flow of information needed to install and then operate the system. As such, it begins with installation information.

Operational sections begin with front panel manual operation, the simple and direct way to use the unit.

The complete computer operation instructions -- given step by step, operation by operation -- will allow any user to begin using LogoSTAR™ right away.

These sections begin with the software installation. Initializing computer communication follows.

An overview of the menus in the operating program presents an overall introduction to the software. Actual operation of every function in the computer program in the basic order they will be needed is discussed in a section of its own.

Finally, external GPI control operation is explained.

In the last section of the manual there is important logo creation information that must be employed when creating logos for use by LogoSTAR™. Make sure to read this section before attempting to either create logos or have them created by an outside vendor.

Note that the Contents page calls out in parentheses the menus involved in the operations discussed in each section. Use the contents page as a quick reference to which menu is needed for which functions.

There is also an extensive Index to help find the exact page where discussions of specific topics or functions can be found.

1. INSTALLATION AND CONNECTION OVERVIEW

LogoSTAR™ is rack mountable in one standard rack unit.

Video wiring includes video connections that bring incoming video to the unit, a video out that sends the video out with the keyed logo inserted, and a second video out for logo monitoring only over a black background.

Wiring for key control from an external contact closure device is done with either TTL connections or dry contact relays to the terminal strips on the rear of the unit.

One serial connector on the rear of the unit connects the unit to a user-supplied PC for extensive software control. The second serial connector is a spare that will be employed for future use.

1.1 Video Connections

Video In — Connect the incoming video to this input. This must be the source video over which LogoSTAR™ will insert its logos.

Video Out — Connect this output of LogoSTAR™ to the destination that must receive the keyed video. Any keyed-in logo will be over the incoming video stream.

In the event that power to LogoSTAR™ is interrupted, the looped VIDEO IN and VIDEO OUT connectors will pass the incoming video through the unit without affecting the signal.

Monitor — This monitor-only output can be connected to a video monitor to preview the currently selected logo over a black background. The logo is visible regardless of whether LogoSTAR™'s key is on or off. This connection is optional and does not affect the unit's operation.

1.2 Contact Closure Connections

Either TTL connections or dry contact relays can be used to connect an external contact closure device to the unit for external key control. In either case the connections are the same.

CT Terminal — This terminal is the main control for LogoSTAR™'s key state.

Wire the two connections from this terminal to the closure device that will control the unit's key state. For TTL connection, connect the TTL ground to the G terminal. The jumper should be taken out before wiring.

When the contact is closed, the keyer is on. Physically, when the jumper is plugged in, the key is on. External control will close it electronically.

When the contact is open, the keyer is off. Physically, when the jumper is removed, the key is off. External control will open it electronically.

18-Position GPI Terminal

On the unit's rear panel is an 18-position terminal block. The first seven positions of this terminal block (A - G) are used to select images for display. By providing a contact closure (or TTL level) to GND, the indicated image is selected as current.

Which image is selected depends on the memory configuration.

Memory Configuration		Contact Closure Selection						
		A	**B**	**C**	**D**	**E**	**F**	**G**
Full Screen Bit Map 1	Full Screen Bit Map 2						B2	B1
Full Screen	16 logos	L1	L2	L3	L4	L5	L6	B1
32 logos		L1	L2	L3	L4	L5	L6	L7

1.3 Serial Connectors

Serial 1

Use the supplied communications cable to connect Serial 1 to the serial port on the computer that will control LogoSTAR™ via Video Data System's Conversion PC/Win software package.

Serial 2

At this time Serial 2 is not used.

1.4 Temp Connector

If the optional Temperature-only Weather Package is ordered, the system will display temperature information on screen when a layout is composed and scheduled.

There is an 8-pin mini-DIN connector on the rear panel that connects to the temperature transducer. This transducer is typically located outdoors and sends the outdoor temperature reading to the unit. Temperature range is from -40 to +127 degrees Fahrenheit. Centigrade and Fahrenheit can be displayed (simultaneously if desired).

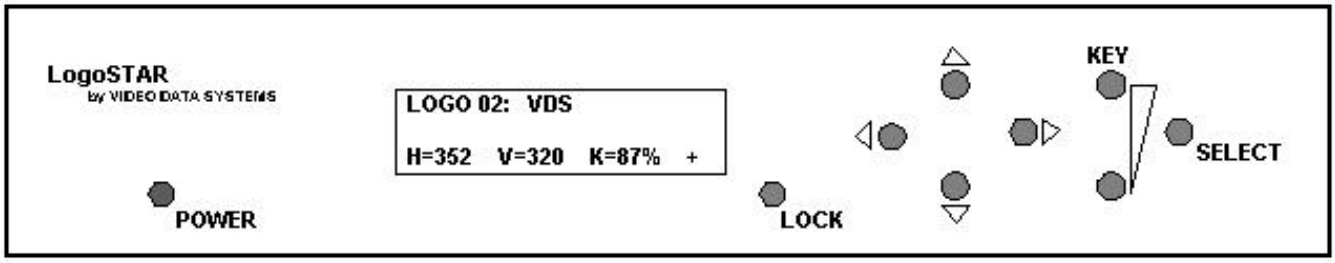
2. FRONT PANEL OPERATION OF LogoSTAR™

Front panel operation allows an operator to perform only the most basic operations:

?? Selection of any loaded logo
?? Change key level percentage with up to 32 selectable key levels
?? Change logo on-screen position

The front panel is not generally used to bring the logo key in or take it out (although taking the key down to 0% will make it disappear from view while the key is still on). Bringing the key in and out is usually done either through GPI control or through computer operation.

Transferring logos into LogoSTAR™ is not done from the front panel. It is done via the computer interface (See 4.1 How Logos are Loaded Into LogoSTAR™), or logos can be preloaded by the factory.



2.1 LED Indicators

The Power LED lights red when power is supplied to the unit.

The Lock LED lights when the unit genlocks to an incoming video signal.

2.2 LCD Display Screen

The LCD screen gives the basic information needed to operate the unit from the front panel. It is also a good place to look to see what the unit is doing at any given time.

LOGO 02: VDS
H=352 V=320 K=87% +

LOGO 02: VDS Identifies the current logo by its memory slot and name.

A memory slot is the numerical listing of the logo as stored in LogoSTAR™'s memory. There are 32 possible memory slots in LogoSTAR™. When Logos are sent to

LogoSTAR™, they are sent to specific memory slots for storage (See 4.3 Sending a Logo to LogoSTAR™

The name VDS in this example identifies the current logo as Video Data Systems'. A logo's file name is given to it at the time of its creation or when it is stored in the unit. The logo is loaded as a file into the computer for downloading to LogoSTAR™. The name can be changed in the computer program if desired (See 4.4 Changing a Logo Name

).

H= Is the logo's current horizontal position as defined in pixels from screen left, which is 0.

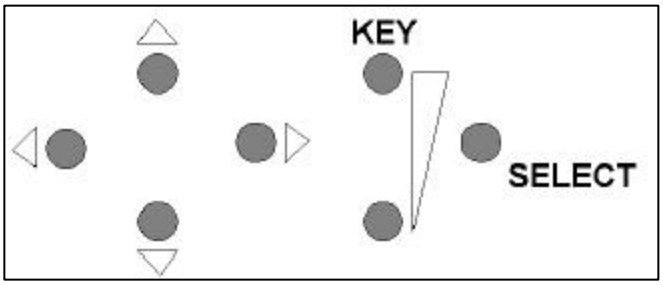
V= Is the logo's current vertical position as defined in scan lines from the top of the screen, which is 0.

K= Is the percentage of the current key. Range is from 0-100% in 3% increments.

+ Means the key is on. If the key is off (logo not on screen), a – is displayed.

2.3 Logo Control Cluster

All manual operations are performed on the panel with the seven push button controls.



Use a pen, pencil or anything that will fit inside the circles to push them in and initiate an operation. Each click of the control will cause a response. If a control is pushed in and held, the operation will repeat itself until the control is released.

Logo Selection

The SELECT control (rightmost button) changes the current logo. Pressing SELECT cycles through all available logos in order of memory slot. Selected logos appear on screen.

The LCD display shows which logo is now active, giving memory slot number and name.

The list cycles forward only. If a desired logo is passed by, get back to it by cycling through the list until it comes up again (and this time don't pass it by).

Logo Positioning

The four positioning controls move the logo around the screen in the directions their arrows indicate – up, down, left and right.

The position numbers are referenced from the upper left corner of the logo. Full screen images are fixed, their positions can not be changed.

Up/Down Movement

The up and down arrow controls move the logo 16 scan lines per push. Screen top is 0. Range of available positions is 0 – 464.

Left/Right Movement

The left and right arrow controls move the logo 32 pixels per push. Screen left is 0. Range of available positions is 0 – 608.

Note: Using the LogoSTAR™ software, a logo can not be positioned so that any portion of the logo is off screen. However, using the front panel controls, it is possible to position a logo partially off screen.

Logo Key Percent Controls

The KEY controls adjust the key percentage of the current logo.

Increasing Key Percent

The top control increases the key percentage by 3% with each push.

Decreasing Key Percent

The bottom control decreases key percentage by 3% with each push.

As the key percent is taken down, the logo (or full-screen image) will become transparent and background video will show through it. As the key percent approaches 0%, the key will no longer be visible. While the key is still active, it is effectively equivalent to key off since the logo image is not seen.

3. ENABLING COMPUTER OPERATION OF LogoSTAR™

LogoSTAR™ is operated remotely via a user-supplied computer running Video Data Systems' Logo Conversion PC/Win software. The computer communicates either directly to LogoSTAR™ through a supplied serial cable interface (as described in the Installation procedure).

Before computer operation of LogoSTAR™ is possible, the PC/Win program must be installed and run.
Then communication between the computer and LogoSTAR™ can be established.

3.1 Installing the LogoSTAR™ Software

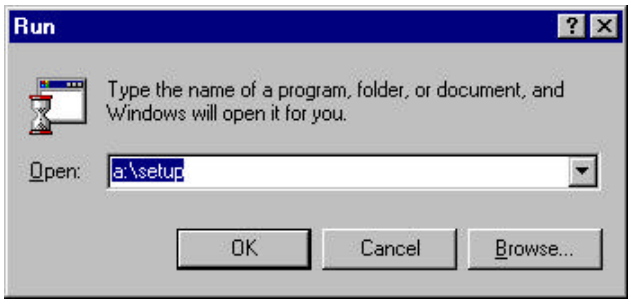
The LogoSTAR™ software is installed on the user-supplied computer that will be used to operate LogoSTAR™ remotely.

The current version of LogoSTAR™ is supplied on three floppy disks.

1. Place disk 1 in the computer floppy drive.
2. Click on the Windows Start menu.

   The Start menu window comes up with all its choices.
3. Click on Run...

   The Run window comes on screen.



4. Assuming the floppy drive is drive a, type a:\setup into the entry box.
5. Click on OK or press Enter.

   The installation procedure begins and boots up to the Welcome window.

6. Read the Welcome information and verify that conditions are correct for installation.

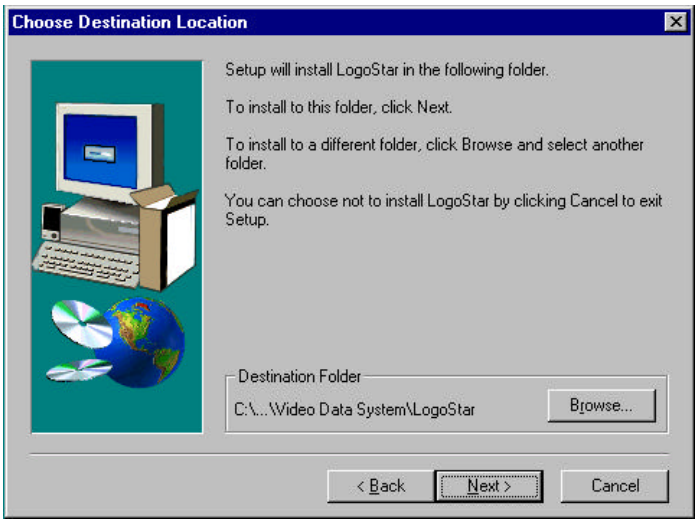
7. Click Next or press Enter to continue the installation.

   The Software License Agreement screen comes up.

   To continue installing the software, the terms of the agreement must be accepted.

8. Click Yes or press Enter to accept the Software License Agreement.

   The Choose Destination Location window comes up.



9. Specify the directory where the LogoSTAR™ Software should be installed.

   The default directory is c:\Program Files\Video Data System\LogoSTAR™.

   To specify a different directory, click the Browse… button and either type in the desired directory name in the box that comes up or navigate to the directory.

   If a directory is specified that doesn't exist, a prompt window will ask if the directory should be created. Click Yes to get back to the Choose Destination Location window.

10. Click Next to continue the installation.

    The installation program creates three subdirectories to LogoSTAR™ and begins copying files to the specified hard drive.

Program files are stored in the subdirectory called bin. Sample logo files are stored in the subdirectory called examples. The subdirectory called logos is the default directory for storing all logo files that are transmitted to the connected LogoSTAR™ unit.

11. When prompted throughout the installation, insert the correct floppy disks into the drive and click OK or press Enter.

    When installation is completed, the Setup Complete window comes up.

12. Click Finish to complete the installation process.

    The installation program will close down and bring up the Windows desktop.

The installation will have created a VDS LogoSTAR™ icon that runs the LogoSTAR™ program on the Windows desktop.

3.2 Running The LogoSTAR™ Program

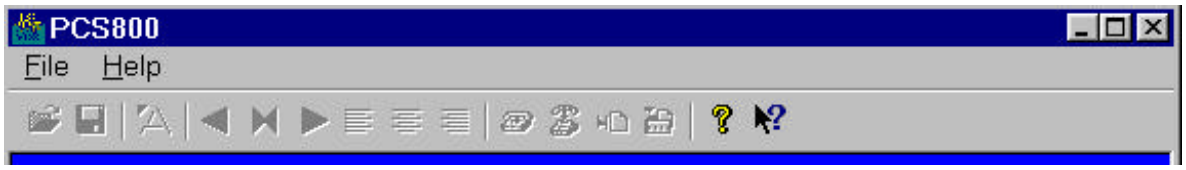
The LogoSTAR™ program is run from the windows main desktop.

To run the program:

Double click on the VDS LogoSTAR™ icon. 

The program can also be run from the Start Menu in Programs by selecting the VDS LogoSTAR™ program choice.

When you start the program you will see the following menu bar:



3.3 File Menu

The purpose of the functions available here is to allow you to select the Logostar that you want to create/edit data for. You may have more than one unit that can be connected to your PC. These menu functions allow you to manage multiple units.

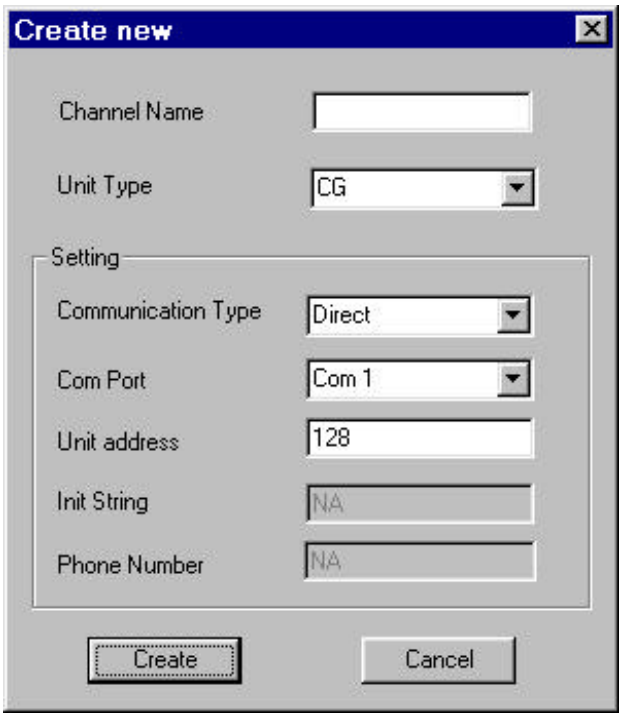
3.4 Channel Selector

This function is used primarily to select the unit that you want to control

3.4.1 Creating a channel

The first time you click on Channel Selector you will be presented with the following blank

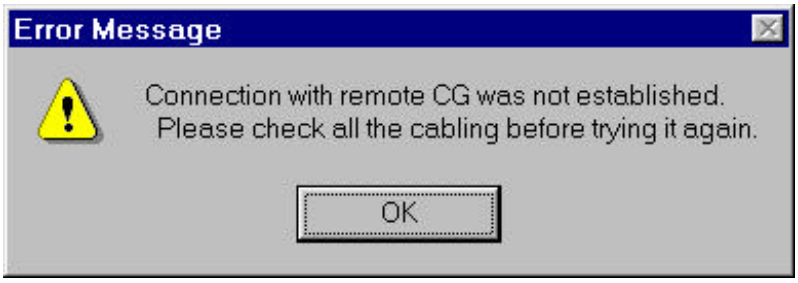
dialog box. You must set up the parameters for the serial port connection to the remote 840AE character generator. Click on Create and you will see the following:



In the Channel Name box you can enter any one word (no spaces allowed) text name that will be more convenient for you to know which character generator this connection designates, for example: "Cafeteria"

The Unit Type should remain as CG. If you are connected via a cable from your PC to the 840AE then the Communication Type is Direct. You then select the Com Port that your PC cable is connected to. If you have one 840AE unit connected then leave the Unit Address at 128. If you have more than one unit connected to the Com Port, then you need to identify the channel address for the unit you are setting up. You will be given this information when a multiple unit system is shipped. If you are connecting by means of a modem then select Modem in the Communication Type box. You must still determine the Com Port your modem is connected to and the unit address as above. This program will automatically search your Windows registry for the correct initialization string for your modem, and whenever you attempt a modem connection that string will be used. If your modem requires a special initialization string, enter it in the box shown. Your new initialization string will be sent to the modem AFTER the initialization string found in the registry has been used.

Then enter the phone number, including any access and area codes in the Phone Number box. When all parameters have been entered, click the Create button. You will see a message informing you that the program is trying to verify that the communications channel you just set up really is there. If you haven't connected all your wires and turned on your 840AE, then you should do so before clicking Create. If you have not established the connection and you click Create, the software will keep attempting to test the connection for about 30 seconds. You will then see a message

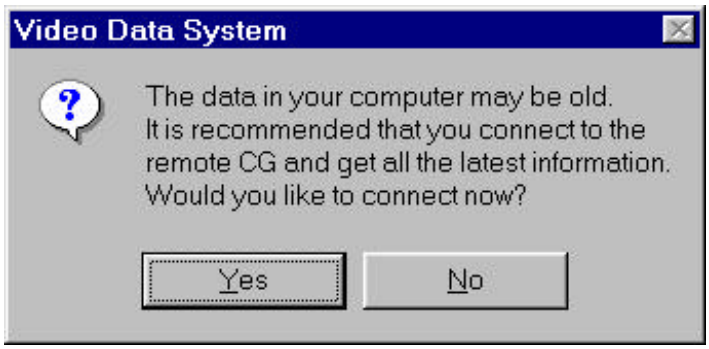


You must have the connection made so that the software can obtain certain parameters from the character generator that it requires for proper operation. Once you have established a connection then you can use the software without having your character generator connected

When a proper connection is found, you will get a message indicating that all is well and the channel will appear in the connection table. In order to make this channel the current one for editing you must click your mouse on the Channel ID. The first time you connect you select this channel you will see the message:

Clicking OK then lets the software interrogate the remote character generator and get the data contents, if any, into the computers memory. This synchronizes the computer with any data that might have been changed by another user in that particular character generator.

Subsequent connections made to that channel will show this message:

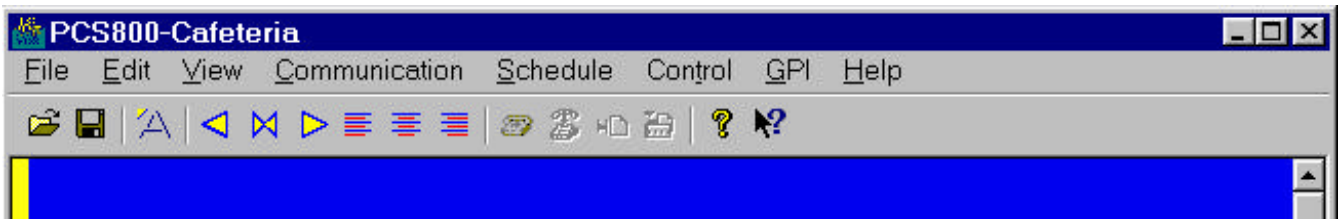


Click Yes or No depending on what you wish to do.

You are now ready to edit or control your remote character generator

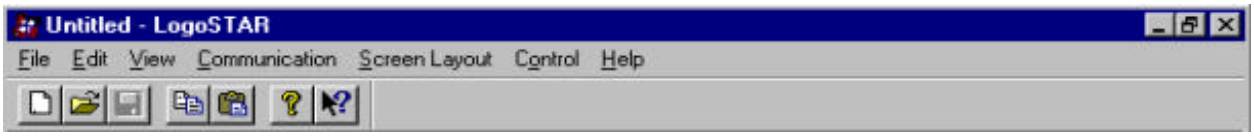
To connect more than one 840AE to your computer see **Error! Reference source not found.**

The original Menu bar at the top of the display will be replaced by the following:



3.5 Menu Overview

Along the top of the program window is the menu bar that is accessed to operate the program. Each menu bar selection brings up a drop-down menu with its function choices.



Menu Selection with the Mouse and Keyboard

Using the Mouse — Clicking with the left mouse button on any menu bar item selects the drop-down menu that gives the various function choices. Selections in the drop-down menu are then made by clicking on what is desired. All selections in the program can be made with the mouse if desired.

But using the mouse is by no means the only way to make selections.

Using the Keyboard — Some functions are also selectable with keystrokes on the keyboard. Every menu bar item name has one character underlined. Holding down the Alt key and pressing the underlined character in the name will access the menu.

For instance: To access the File menu, hold Alt down and press the f key. The File menu's drop-down menu will come up just as if File were clicked on with the mouse.

Once a drop-down menu is on screen, any function in the menu that has an underlined character can be accessed by simply pressing that letter key.

For instance: To access the Open function in the File menu's drop-down

menu, press O. The selection will be made just as if Open were clicked on with the mouse.

In addition, notice that the Open function has Ctrl+O called out to the right of it on the drop-down menu. That means those keystrokes are the keyboard equivalent to using the menu to access the function.

Pressing Ctrl+O at any time will access the Open function right from the program screen without using the menus at all.

There are a few keyboard equivalent functions in this program, and there are several standard ones in most every windows program. Many users find them to be faster and easier than using a mouse.

Finally, very often an expected response is automatically highlighted, such as OK. The highlighting means that pressing Enter will select that choice without using the mouse or any other key.

For simplicity's sake, selection operations described in this manual will be based on using the mouse. But operators should use any selection method with which they feel comfortable.

File Menu

Open This function is used primarily to open a selected logo file. A logo file in any ***directory of the computer or in its floppy disk drive can be opened. (See***

4.2 Opening a Logo File

When a logo file is opened, the logo comes on screen.

Before a logo can be sent to LogoSTAR™ for storage in its memory, the logo file must be opened in the program.

It is convenient to have the logos that LogoSTAR™ works with located in a single folder within the LogoSTAR™ directory rather than spread all over the computer in other program directories or even residing only on floppy. Simply copy the logos into a folder in the LogoSTAR™ directory that can easily be accessed when a logo file must be opened.

Save As — This function creates a copy of an open file under another name, keeping the original file unchanged. This allows the new one to be altered or simply kept as a backup of the original.

Recent File — The numbered list in this function contains the last four previously opened files. If one of them is desired, selecting its number will automatically open that file. It's a faster way to open a file.

Exit — Selecting this choice closes the program. It is equivalent to clicking on the close icon in the upper right of the menu bar.

Edit Menu

Editing or creating of logos is normally done in your favorite graphics editing program.

Copy — This selection allows you to copy the logo that is currently displayed on the screen into the Windows clipboard. You can then paste the image you just copied into your favorite graphics editing program where it can be edited.

Paste — This selection takes the image that is in the Windows clipboard and pastes it onto the display. Typically, you would use this function after editing an image in your favorite graphics editing program, and then copying that image to the Windows clipboard. You can then save the edited image by going to the File Save menu.

Clear — This selection clears the currently opened logo from the screen. The Delete key does the same thing.

View Menu

This menu is used to remove or put on screen the Toolbar and Statusbar. If the selection has a checkmark, it is active and on screen. Clicking the selection cycles it on and off.

Toolbar — The Toolbar includes the six icons below the menu selections that are shortcuts to some menu functions. From left to right they include New, Open, Copy (inactive), Paste (inactive), About and Help. Their names appear if the mouse pointer is held over them for a moment. (About gives the version and copyright date for the loaded software.)

Statusbar — The Statusbar resides on the bottom of the screen and displays descriptions of selected menu functions when they are pointed to by the mouse. It also indicates on its right side when Caps Lock, Num Lock and Scroll Lock are active.

Communication Menu

From this menu communication between the computer and the LogoSTAR™ is established. Until communication is established, the computer has no control of LogoSTAR™ (See 3.4 Establishing Direct Computer Control of LogoSTAR™ (Communication Menu)). As this is an interactive program, most functions are only available when the program is connected to a LogoSTAR.

Connect — This choice allows communication to be established. It is in an active state and selectable when there is currently no communication with LogoSTAR™. It is grayed out when the two are communicating.

Disconnect — This choice allows communication to be broken. It is in an active state and selectable when there is currently communication with LogoSTAR™. It is grayed out when the two are not communicating.

The Communication menu accesses many of the functions that affect the logos in the system.

Send Logo — This essential function must be used to send a logo to LogoSTAR™ for storage in the unit's memory (See 4.3 Sending a Logo to LogoSTAR™). A logo can not be used until it is sent to the unit.

Send Logo is used to clear individual logos from the system (See 4.5 Erasing a Logo from a Memory Slot).

Changing the name of a logo file is also done through this parameter (See 4.4 Changing a Logo Name

Select Logo — This selection gives access to the Settings window that gives a list of all logos in LogoSTAR™ for review (See 4.7 Changing Logo Settings). Access is available from that window to the function for changing logo settings, such as X or Y screen position and key percent level (See 4.7 Changing Logo Settings).

View Current Logo — This gives immediate access to the function for changing settings on the current logo only, the logo that is currently selected for keying. Changes can be made to the logo's X or Y screen position and key percent level (See 4.7 Changing Logo Settings).

Erase Logo — A single logo can be erased with this selection.

Erase All Logos — All logos in the system can be erased with this selection.

Screen Layout Menu

Edit — This is the only menu selection for Screen Layout. Selecting this menu item brings up a new menu bar that provides the functions needed to determine the appearance of the logo on your LogoSTAR™ display. Functions are also available so that you can insert a real time clock display, a current temperature (optional) display, as well as provide an automatic on/off function for the display based on the real time clock. (See 4.10 Automated operation).

Control Menu

There is only function available from this menu, Display. See 4.9 Real-time Control of the Current Logo for details about this function.

Help Menu

Help Topics — Access to the on-line help system in the program is given through this selection. Help is essentially this manual available on the system itself.

About — This window gives the loaded program's software version, our company name and the software's copyright date.

3.4 Establishing Direct Computer Control of LogoSTAR™ (Communication Menu)

To control LogoSTAR™ directly from the computer, communication between the two devices must first be established using the Communication Menu.

To establish direct computer communication:

1. Click on Communication Menu.

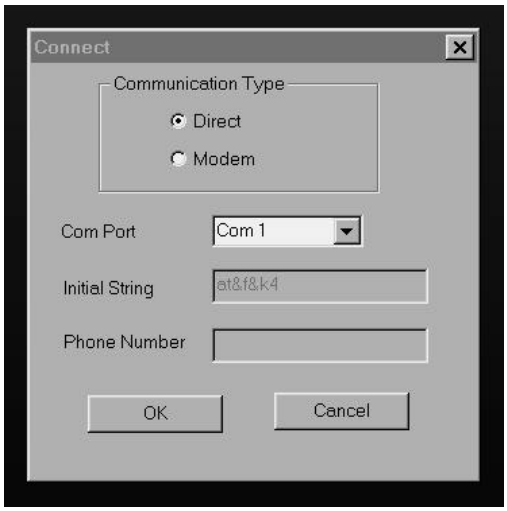
   A drop-down menu comes up with one of the two connection choices active – Connect or Disconnect.

   If Connect is active in the menu, it means that the computer is not currently connected to LogoSTAR™ and a connection can be established by clicking on Connect.

2. Click on Connect.

   The Connect menu comes up.

3. For a direct serial connection to LogoSTAR™, click on Direct. (If it is already selected and has a black dot, clicking is not necessary.)

4. Click on the arrow in the Com Port window and from the drop-down choices select the computer serial port into which the LogoSTAR™ is connected, typically Com 1.

5. Click OK or press Enter.

   A confirmation window appears indicating the connection was successful.

3.5 Disconnecting Computer Control of LogoSTAR™ (Communication Menu)

Disconnecting computer control of LogoSTAR™ is done in the Communication Menu.

To disconnect computer communication:

1. Click on Communication Menu.

   A drop-down menu comes up with one of two choices active – Connect or Disconnect.

If Disconnect is dark, it means that LogoSTAR™ is currently connected to the computer and the connection can be broken by clicking on Disconnect.

2. Click on Disconnect.

   A window appears for verification.

3. Click on Yes or press Enter if Yes is highlighted.

   Disconnection is complete.

4. COMPUTER CONTROL OF LogoSTAR™

Through computer software control of LogoSTAR™ an operator can:

?? Send up to 32 logos to the unit for storage and display
?? Delete logos from the unit
?? Key in/out any loaded logo (either faded or popped in/out)
?? Change key level with up to 32 selectable key levels
?? Change logo on-screen position

4.1 How Logos are Loaded Into LogoSTAR™

Before LogoSTAR™ can display a logo, it must have the logo sent to it for storage in its memory.

Standard system memory capacity will store up to 32 small logos or one full-screen image and 16 small logos, or two full-screen images. A small logo size can be from 32 x 16 pixels to 256 x 120 pixels. A full screen image is 640 x 480 pixels.

LogoSTAR™ treats any image that is less than 250 by 120 pixels as a logo. Any image that is exactly 640 by 480 will be treated as a full screen image. Any other size image will be rejected. Any image that does not have a palette of 256 colors (8 bits per pixel) will be rejected.

Logos can be in any directory in the computer. For instance, they can be in the directory of the graphics program where they are created. Or a logo can be on a floppy or any other media for opening into the LogoSTAR™ program. But it is more convenient to keep all wanted logo files together in a folder in the LogoSTAR™ directory.

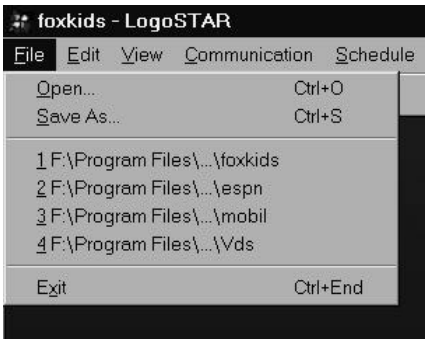
The installation program created a default directory called logos where all sent logos are stored.

To send a logo to LogoSTAR™, first open the logo file through the File Menu.

The opened file is then sent to LogoSTAR™ via the Communication Menu.

4.2 Opening a Logo File

To open a logo file:



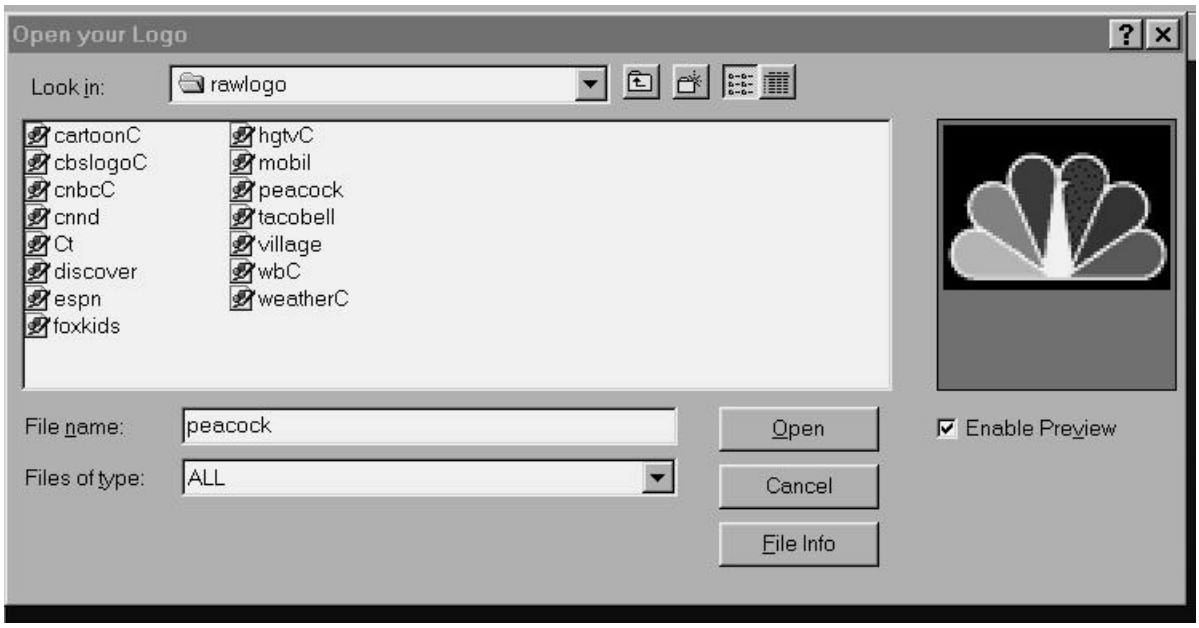
1. Click on the File menu.

   The File drop-down menu comes up.

   The numbered list contains the last four previously opened files. If one of them is desired, selecting its number or double clicking on it will automatically open that file. If the desired file is not there…

2. Click on Open.

   The Open your Logo window appears. This is an important window.



The Open your Logo window's Look in: field allows browsing through all directories and disk drives in the PC to find the logo that must be opened.

3. Click on the Look in: field's drop-down arrow and navigate to the directory that holds the logo file desired.

   The icons to the right of the Look in: field can help.

   The leftmost one, Up One Level, will go back up one level in a directory.

   The rightmost one, Details, gives expanded information about the files (Size in KB; Type, such as TIF Image, Bitmap Image, File Folder, etc.; and last date Modified)

   Second from the right is List, the normal list view with no file info.

   The remaining one, Create New Folder, does just that if needed.

   The files in each directory or folder accessed will be listed in the large open area.

   The list will contain the file types selected in the Files of type: area. Select ALL as the file type to display, so files with all extensions will be seen.

4. Once the desired logo file is found, click and highlight it in the large detail area.

   The highlighted file's name appears in the File name: area.

   If the Enable Preview check mark is active, the file is previewed in the window.

   For more information about the file, click on File Info. The width, height and bits per pixel of the image file selected will be detailed. *Note that 256 x 120 is maximum image size for use in LogoSTAR™.*

5. Click on Open (or double click on the file listing).

   The main screen appears with the opened logo displayed in the upper left.

The selected logo is open in the program, but it has not yet been sent to LogoSTAR™. That is next.

4.3 Sending a Logo to LogoSTAR™

A logo that is to be sent to LogoSTAR™ must first be opened in the program and active on the LogoSTAR™ desktop.

To send an opened logo file to LogoSTAR™:

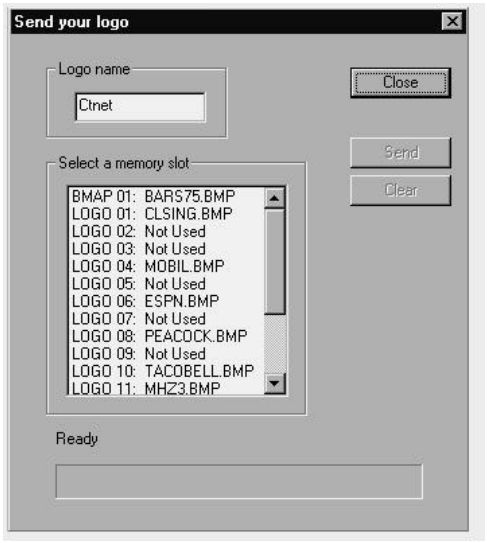
1. Click on the Communication menu.

   The Communication menu drop-down window appears.

2. Click on Send logo.

   The Send your logo drop-down window appears.

   The open logo's name appears in the Logo name field.



3. In the Select a memory slot area click on any of the 32 memory slots.

   Memory slots are the memory registers in LogoSTAR™ where logos are stored.

   Slots indicate by name the logos stored in them. Empty slots are defined as Not Used.

   An already occupied slot can be selected. The system will prompt for confirmation that overwriting is desired when asked to send the new logo. When okayed, the new file will overwrite the original one.

4. Click on Send.

   A message indicating that the file is being sent appears near the bottom of the window along with blue graphic bars building left to right as the file is loaded.

   The image will also be saved into the logo directory (in the Microsoft/OS2 .bmp format) under the specified name prior to sending to LogoSTAR™. If a file with that same name was already in the logo directory, that file would automatically be overwritten by the new image file.

   Sending a single logo takes about one minute. Sending a full-screen image takes about 16 minutes.

When the send is complete, the Settings for logo # window appears for the logo now in the slot.

5. After any desired changes are made to the settings (See 4.7 Changing Logo Settings), or if no changes need to be made, click OK or press Enter.

   The send operation is complete and the window leaves the screen.

Sending a Logo Alternative Method Using Windows Copy and Paste

A logo created in a graphics program on the PC that controls LogoSTAR™ can be transferred to LogoSTAR™ using the basic Windows Cut and Paste functions.

1. Start the LogoSTAR™ program and connect to LogoSTAR™.
2. Minimize the running program.
3. Start the graphics program and create or select the logo to be sent.
4. Copy the logo to the Windows clipboard with the Copy function.
5. Switch back to LogoSTAR™.
6. Select Paste from the LogoSTAR™ Edit menu.

   The logo appears on the LogoSTAR™ desktop.

7. Use the Save As function in the LogoSTAR™ File menu to save the logo into the logos directory with all other logos.

   Regardless of the format of the original image, the saved image will be in Windows/OS2.bmp format.

4.4 Changing a Logo Name

A logo's name can be changed only during the send process on the Send your logo window (See4.3 Sending a Logo to LogoSTAR™). The change can be made only on an open file before it is sent to LogoSTAR™.

To change a logo's name:

1. Click on the Communication menu.

   The Communication menu drop-down window appears.

2. Click on Send logo.

   The Send your logo drop-down window appears.

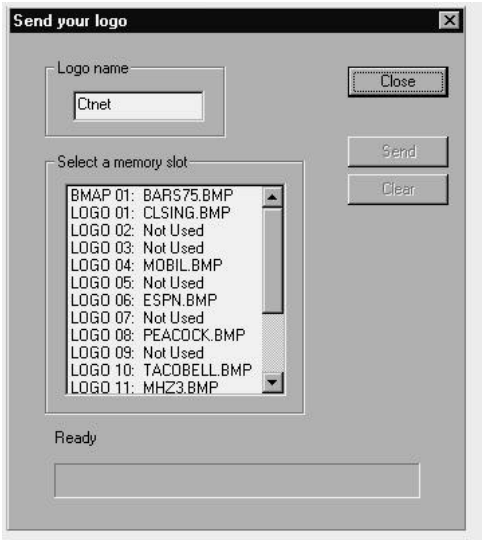
   The open logo's name appears in the Logo name field.

3. In the Select a memory slot area click on any of the 32 memory slots.

4. Before sending the logo, highlight the logo's name in the Logo name field.

5. Rename the file by typing the new name over the old one.

6. Click on Send.



   The logo will be sent to LogoSTAR™ identified with the new name.

   Understand that the original file in the computer still has the original name. Only the name that identifies the file as stored in LogoSTAR™ has been changed.

4.5 Erasing a Logo from a Memory Slot

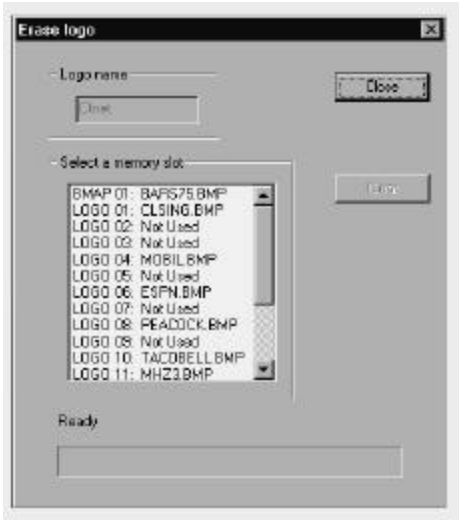
Any logo can be erased from the memory slot it occupies. When cleared, the memory slot reads Not Used.

To erase a logo from a memory slot:

1. Click on the Communication menu on the menu bar.

   The Communication drop-down menu appears.

2. Click on Erase logo.



The Erase logo window appears.

3. Select and highlight a memory slot to clear.

4. Click on Clear in the drop-down window.

   The memory slot displays Not Used.

4.6 Erasing All Logos from the System

All logos can be erased from the system memory in one operation. When cleared of logos, all the memory slot will read Not Used.

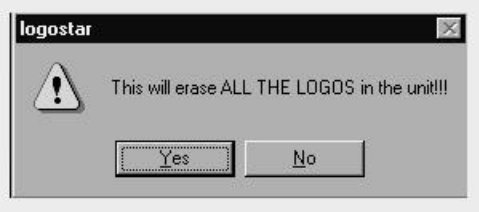
To erase all logos from all memory slots:

1. Click on the Communication menu on the menu bar.

   The Communication drop-down menu appears.

2. Click on Erase All Logos.

   A warning window comes up making sure the operator understands the critical nature of the operation – that all logos are about to be erased.



3. Click on Yes.

   All logos in the system are deleted and all memory slots will read Not Used.

4.7 Changing Logo Settings

The X and Y screen positions and the key level percentage of a logo sent to LogoSTAR™ can be changed as desired using the Settings for Logo window. Full screen images can only have their key level changed.

Default X and Y position for a sent logo is top of screen, flush left (0 for both in this menu). Default for Key level is 100%.

Accessing the Select Logo Window

While the Settings for Logo window comes up automatically when a logo is sent to LogoSTAR™, there are two other ways to call it up at any time to change settings for a logo.

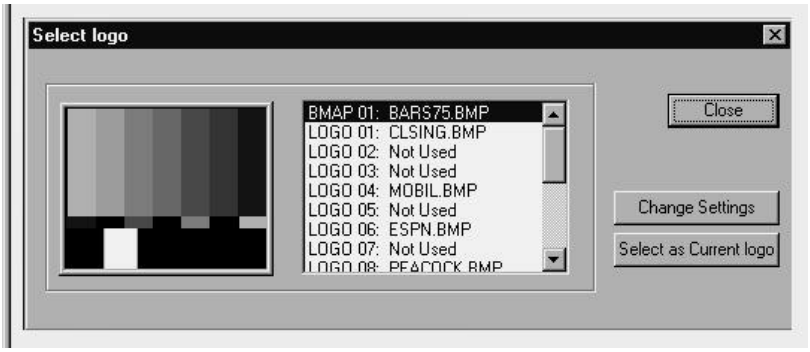
One way allows the setting for any logo slot to be accessed. The other way calls up the settings for the current logo only.

Settings for any logo slot

1. Select the Communication Menu on the menu bar.

2. Choose Select logo from the drop-down menu.

   The Select logo window comes up with a list of all loaded logos.



3. Highlight the slot for the desired logo and click on Change Settings.

   The Settings for Logo window for that logo comes up.

   Make any desired changes as described below.

Understand that if the logo selected for changes is not the current logo, the changes made will not be seen on screen until that logo is keyed in.

The current logo is defined as the logo currently keyed over incoming video.

Settings for the current logo

1. Select the Communication Menu.

2. Choose View Current Logo.

   The Settings for Logo window automatically comes up for the current logo.

   Make any desired changes as described below.

All changes made to the current logo will occur on screen when OK is selected.

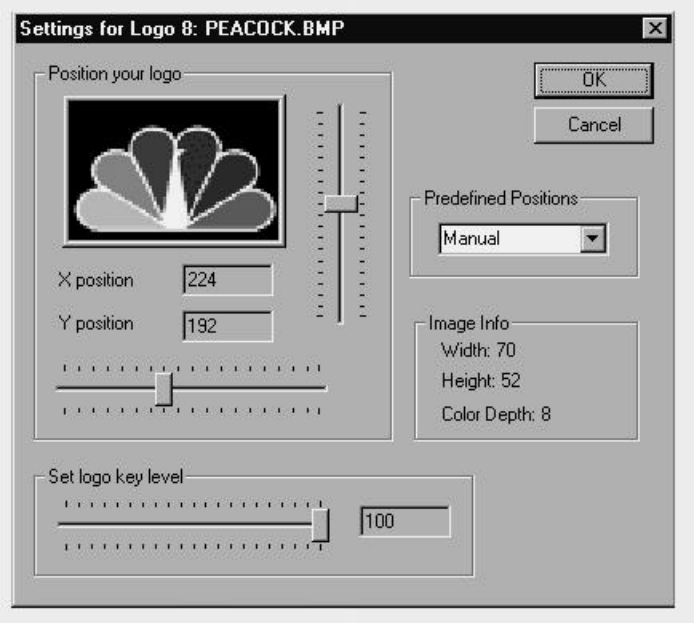
Changing X/Y position or Key level

Click left and hold on the slider head for the selected parameter and slide the slider in the direction of the change.

Another way is to click left anywhere along the slider track and the slider head will jump closer and closer to the mouse pointer with each click.

The values in the X position, Y position or Set logo key level windows will change as the slider moves.

Range for X movement is from 0 – 640 pixels.



Range for Y position is from 0 – 480 scan lines.

Physical change for X and Y adjustment is pretty much proportional to the position on the slider range, so judgements can be made that way.

The X and Y position adjustments are based on the upper left corner of the logo. Any number that will result in the entire defined logo box to appear on screen will be allowed.

Range for key level is from 0 –100% in 3% increments.

Predefined Positions

This window allows four predefined logo screen positions to be selected from the drop-down list:

Lower Left
Lower Right
Upper Left
Upper Right

The default mode is Manual, the mode where the sliders are used. Manual will be displayed in the window until a predefined selection is made.

When a predefined selection is made, that selection will be displayed in the window. The X/Y values change to reflect the chosen position. If the sliders are accessed at any time, Manual mode is reselected and the sliders determine the logo position.

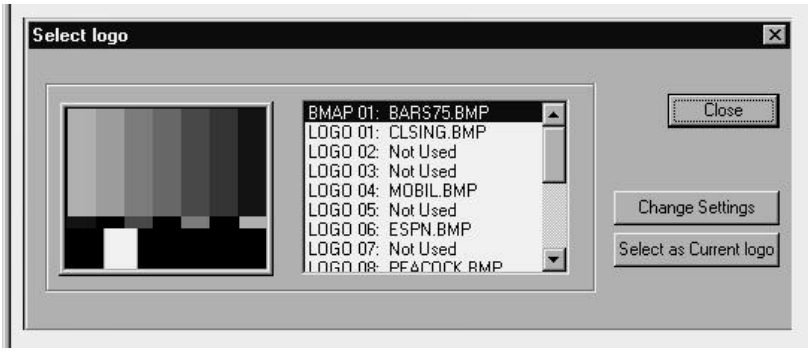
4.8 Selecting/Changing the Current Logo

The logo that is keyed into the video can be changed at any time by defining a different logo as the current logo.

To select a logo as the current logo:

1. Select the Communication Menu on the menu bar.
2. Choose Select logo from the drop-down menu.

   The Select logo window comes up with a list of all loaded logos.



3. Click and highlight the memory slot with the logo that should become the current logo.
4. Click on Select as Current logo.

   The logo is selected as the new current logo and will appear keyed over the video if the key is currently active.

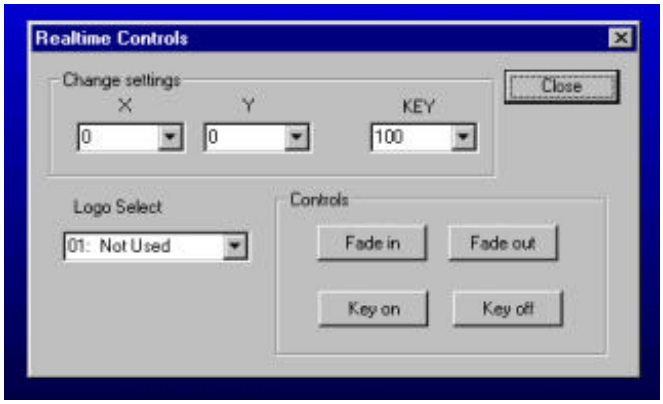
4.9 Real-time Control of the Current Logo

The current logo can be controlled in real time through the real-time control functions accessed through the Control selection of the main menu bar. These functions are only available when LogoSTAR™ and the computer are communicating via a connection established in the Communication menu.

Control includes:

?? Changing the selected current logo

- ?? Changing logo X position
- ?? Changing logo Y position
- ?? Changing logo key level
- ?? Fading logo in and out
- ?? Keying logo on and off



All changes are made immediately on screen.

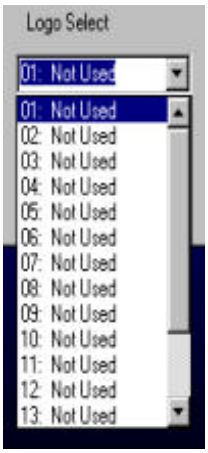
All real time operations will be done from the Realtime Controls window. The window is broken down into three basic sections.

Logo Select Section

Use Logo Select to change which logo is the current logo.

The default condition for Logo Select when the window appears is the currently selected logo on the LogoSTAR™ display.

Changing the Current Logo



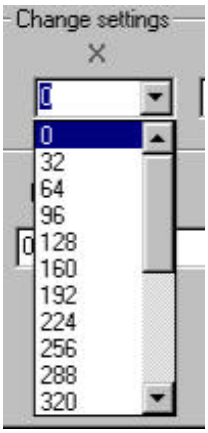
1. Click on the arrow in the Logo Select field to get the drop-down menu.

2. Click on the logo name.

   The new logo immediately appears on screen. The drop-down window closes and the selected logo appears in the Logo Select field. The parameters stored in the LogoSTAR™ memory for the selected logo appear in the X and Y position and Key level boxes.

Change Settings Section

When the window comes on screen the current values for Logo X position, Y position and KEY level appear. As you make changes to these values the changed value is sent to the connected LogoSTAR™for immediate display.



Changing X Position

1. Click on the arrow in the X field to get the drop-down window.

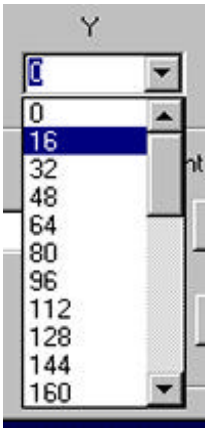
2. Click on the desired value.

   The logo responds on screen immediately.

The range is from 0 – 640 with a resolution of 32 pixels, where 0 is screen left and 640 is screen right. However, the maximum value of X position depends on the actual logo being positioned. In any case you will only be able to position the logo so the right edge of the logo is always on screen.

Note: Left/right positioning values are the same as those displayed on the front panel and is specified in screen pixels.

Changing Y Position



1. Click on the arrow in the Y field to get the drop-down window.

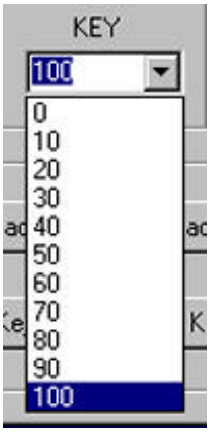
2. Click on the desired value.

   The logo responds on screen immediately.

   The range is from 0 – 480 with a resolution of 16 scan lines, where 0 is top of screen and 480 is bottom of screen. However, the maximum value of Y position depends on the actual logo being positioned. In any case you will only be able to position the logo so the bottom edge of the logo is always on screen.

Note: Top/bottom positioning values are the same as those displayed on the front panel, and is specified in scan lines.

Changing KEY Percent Level



1. Click on the arrow in the slot field to get the drop-down window.

2. Click on the desired value.

   The logo responds on screen immediately.

   The range is from 0 – 100 in three percent increments, where 0 is no key level and 100 is full level. However, depending on the logo, it may disappear before 0 level. Adjust as necessary.

Controls Section

In the Controls section the current logo can be faded in and out. Fade rate is about one second.

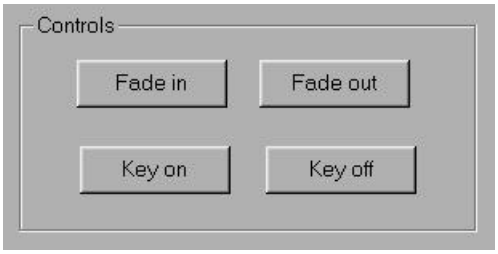
When the key is faded out, the key mode is still active but its percent level has simply been reduced to zero.

The key can be turned on or off in the Controls section, which pops the key off and on screen. If the contact closure has taken the key off, then the key can not be turned on here.

When the key is off, the key mode has been exited and the key is no longer active.

Effectively, key off and fade out are the same since both remove the logo from the screen – one popping and one fading. But to LogoSTAR™ they are different operating modes.

Fading the Key In and Out



Click on Fade in and Fade out.

An inactive key (CT contact closure closed) can not be brought in with Fade in.

Turning the Key On and Off

Click on Key on and Key off.

An inactive key (CT contact closure closed) can not be turned on with Key on.

Note: *If the key has been brought off screen with Fade out, it will not come back with Key on.*

If the key has been brought off screen with Key out, it will not come back with Fade in.

4.10 Automated operation

Setting up a Screen Layout

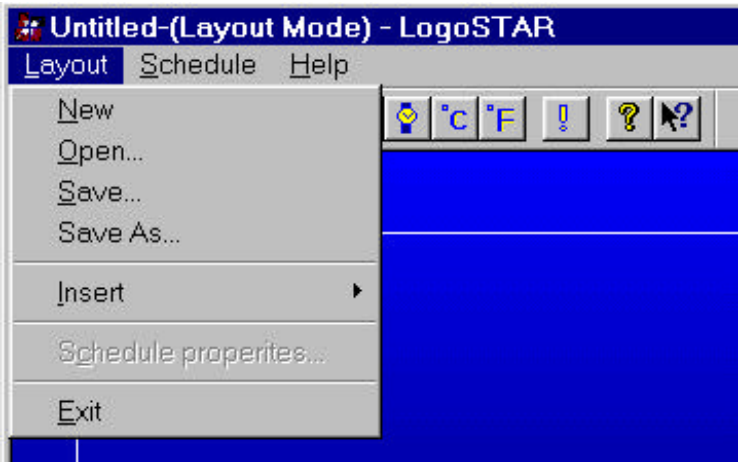
The LogoSTAR™ is capable of automatically displaying various combinations of a logo, the current real time, and the current temperature (when the optional temperature sensor package is purchased). The desired combinations of these parameters are placed into a *layout* which is stored in the LogoSTAR™ memory. You are then able to determine how frequently this layout is to appear on the display. You can determine the calendar dates that the layout is to appear. You can also set the specific days of the week and times of day. You can also determine how many times the layout will appear each hour, and at what frequency and for how long the layout will remain on display.

To create your layout you select Screen Layout from the main menu and then click on Edit.

You will then see the following menu bar:

When you edit a layout you select the physical positioning for each item on the display. You can store many different layouts in your computer. You are presented with a new clean screen that has a rectangle drawn on it. This rectangle represents a 90 percent safe area. Use these guidelines to help position the various display items so that you can be assured that they will be visible on the television display. LogoSTAR™ layout files are stored with the extension .lsf.

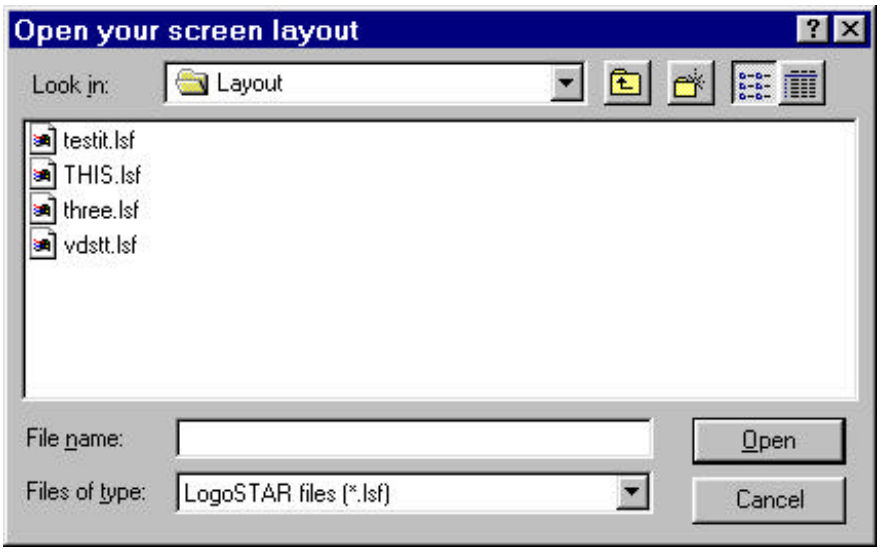
Click your left mouse button the Layout selection and you will then see the following menu selections:



The first four items relate to storing and retrieving your layouts from the computers memory

New — This menu selection will initialize the current layout screen to blank.

Open — This menu selection allows you to retrieve a previously stored layout from the computers memory. This dialog box will show you a list of the current layout files that are in your computer's memory. You can select any of them for editing by highlighting the file name and then clicking on Open.

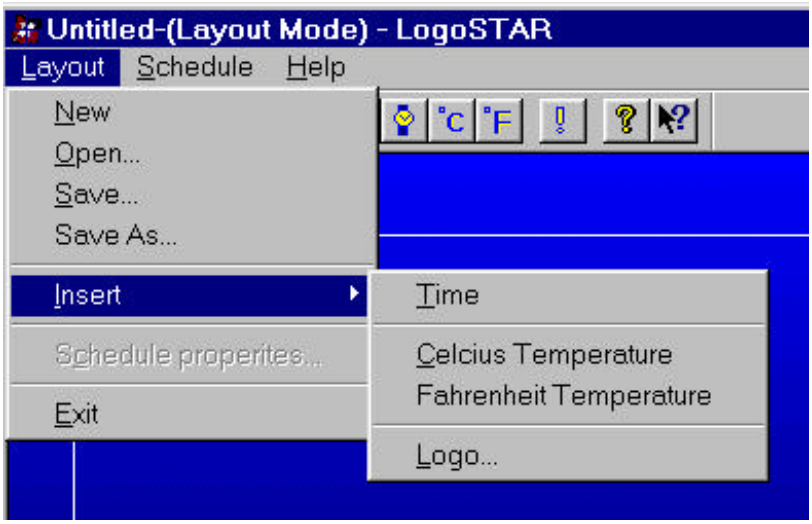


Save — After editing a layout you may save the new layout in your computers memory with this selection. You will overwrite the previous copy.

Save As — This selection will allow you to save an existing layout, or an edited version of an existing layout, under a different name.

Once you have determined that you are creating a new layout, or editing an old layout, you can then pick the item you wish to place on the layout.

Selecting Insert will then give you additional choices:



This is the menu selection that allows you to place display items into the layout. The time and temperature items will appear on your layout screen as a gray box with an identifier. You will see the actual logo selected on your screen You can then position these display items onto the layout. In order to position an item, place your mouse cursor on the item, press the left mouse button and drag the item to where you want to appear. You will only be allowed to position the item based on the positioning constraints of the LogoSTAR. If you attempt to position the item to an illegal position, the item will 'snap' to the nearest allowable position. You may also select an item by clicking on the appropriate button of the toolbar. The box that appears on your layout screen represents a 90 percent 'safe title' area of the actual LogoSTAR™ display.

Time

This selection will place a gray box onto the screen which represents the size of the display of the real time clock in the format of HH:MM where HH is the current hour and MM is the current minute. The time display is always in 12 hour time format. The time is derived from the real time display within the LogoSTAR. The clock in the LogoSTAR™ is synchronized to the clock in your PC when you use the Schedule function. The selected box appears as:

Celsius Temperature

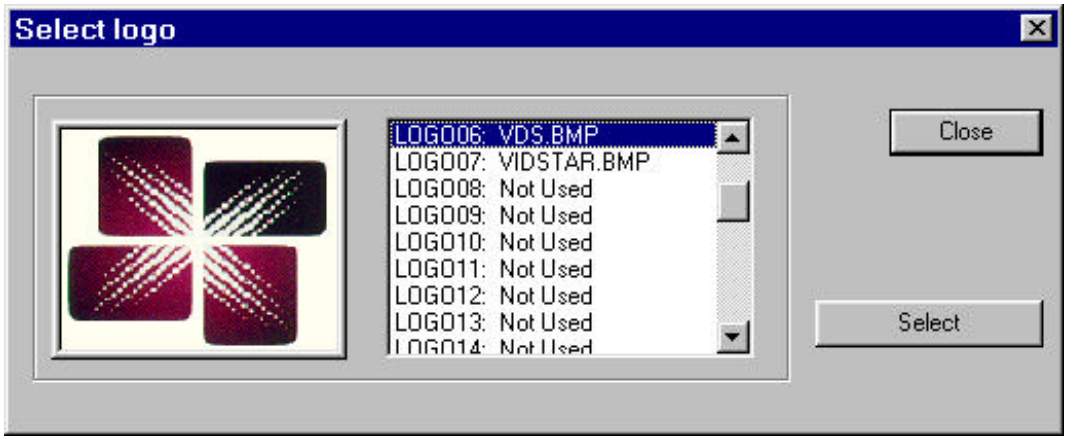
If you have purchased the temperature option for your LogoSTAR™ then you can display the temperature. The temperature is updated once per minute while the display is active. You will see a gray box that represents the area that the temperature display will require in order to display up to 3 digits, the degree symbol and a capital letter for Celsius. The actual display on the LogoSTAR™ will be left justified. For example, if the temperature were 7 degrees, the number 7 would appear at the left margin of the box. If the temperature were to be –10 then the – sign will be at the left margin. The selected box appears, for both Celsius and Fahrenheit temperature as:

Fahrenheit

similar to Celsius Temperature except display is degrees Fahrenheit. You can select either Celsius or Fahrenheit. You can not select both simultaneously.

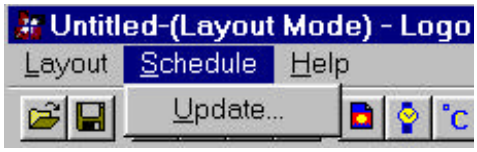
Logo

Selecting this item will present you with a Logo Selection dialog box. Highlight the logo that you want to appear on the display. Click on select and you will then see that logo on your layout screen.

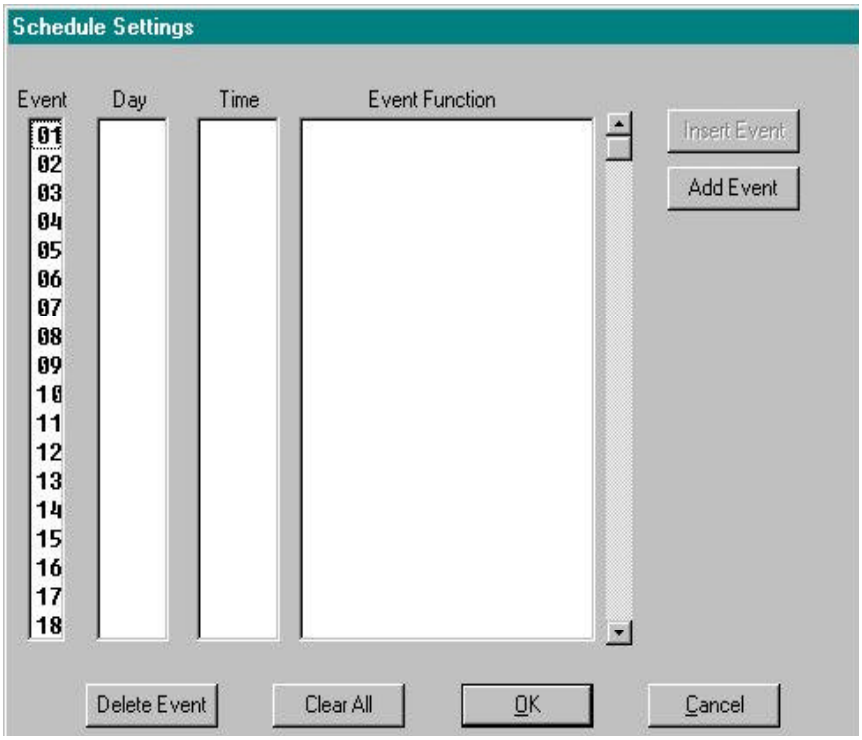


Scheduling a Screen Layout

Schedule — After you have saved your layout, or if you have selected a previously saved layout, this menu item will be available. You can then set up the time constraints you desire for when that layout is to appear on the display by selecting Update from the Schedule menu:



You will see the following screen:



Event – This column represents indexes into the event list. Note that the index for an event may be changed later by this software, since the software will place each event in chronological order.

Day – This column represents days in a week, so the user can specify the day for a given event. Note that if the user selects "++", then it means every day. To select the day of week for an

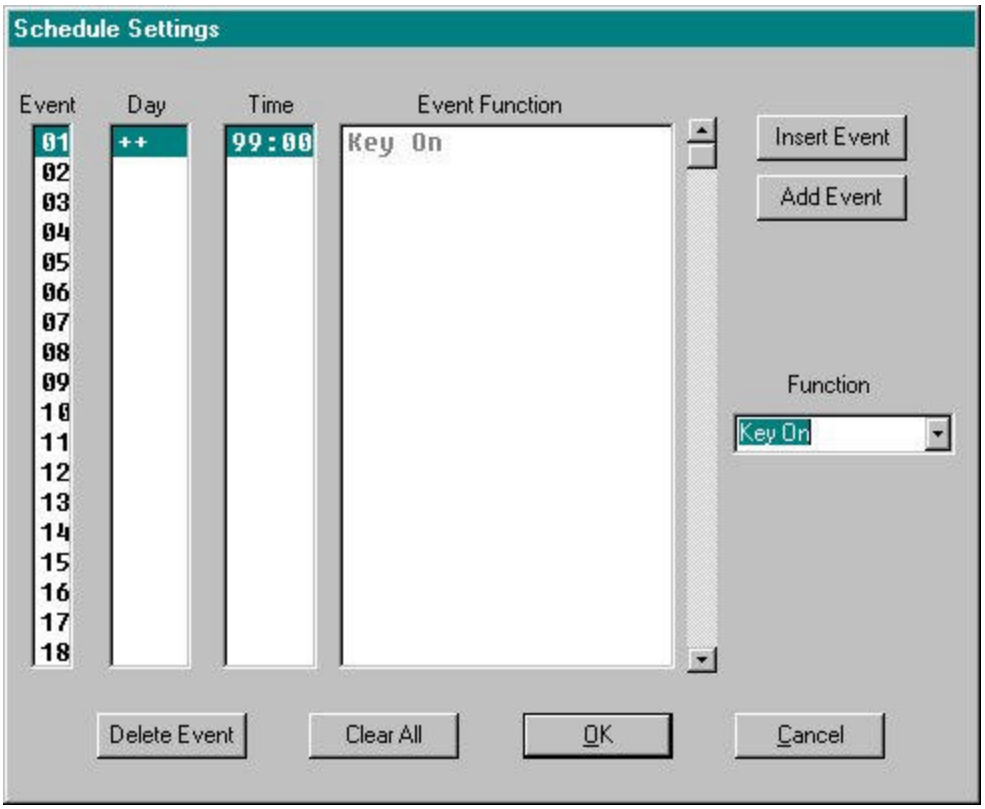
event click your mouse pointer on the Day column for the desired event, then select the day of week from the drop down list.

Time – This column represents hours and minutes for the scheduling of the given event. Hour should be in military format. If the hour is set to 99 it means the event repeats each hour. All events will activate at the 00 second of the indicated minute. To select the hour of the day for an event, click your mouse pointer on the Time column for the desired event and then type in the hour and minute required.

Event Function – The user can not modify this column directly. Whenever the user selects an item from the list "Function" this column will update automatically.

Insert, Add, and Delete – "Add" will add an event into the list and "Insert" will insert an event into the list. Since the list gets sorted by time the functions of Add and Insert perform identically.

When you add or insert an event, the following dialog will appear:



Using the function dialog, you can select "key on" , "key off", "logo", "layout", "disable bitmap", or" clear text". If "logo" or "layout" is selected, there will also be another drop-down to select the duration of the event(from 0 to 99 secs). Selecting zero will give the event an infinite duration.

5. EXTERNAL GPI CONTROL

External control of LogoSTAR™ can be done through GPI (General Purpose Interface) commands when it is wired to an external contact closure device that can issue the commands for control.

The simplest form of this external control is turning the key on and off.

Limited selection of logos as the current logo is possible through GPI control.

5.1 Key On/Key Off

The CT contact closure on the back of LogoSTAR™ controls the key state – on or off. The external controller acts as the agent to open or close the closure, whether it is through a button push or other means.

When the controller issues the command to LogoSTAR™ that closes the CT contact closure on the back of LogoSTAR™, the key is turned on.

When the controller issues the command to LogoSTAR™ that opens the CT contact closure on the back of LogoSTAR™, the key is turned off.

5.2 Selecting Logos

The first seven logos in LogoSTAR™'s memory slots are accessible through the first seven positions (A – G) of LogoSTAR™'s 18-position GPI terminal. Any of the seven logos can be selected as the current logo through commands from the controller that close the closure dedicated to that logo, whether it is through a button push or other means.

When the controller issues the command to LogoSTAR™ that closes any of the seven wired positions on the GPI terminal, that logo is immediately made the current logo and is keyed into the video.

6. LOGOSTAR™ MEMORY ORGANIZATION

This section presents details of the way LogoSTAR™ utilizes its memory slots. The basic logic behind how LogoSTAR™ stores logos and full-screen images is discussed so that users can better understand the system and more efficiently organize the storage of needed images.

?? LogoSTAR™ is shipped from the factory configured for 32 logos, using the maximum number of 32 memory slots available to store logos and full screen images.

?? Each full screen image requires the use of 16 memory slots.

?? When using the PC based software for the first time to load logos into the system, full-screen images MUST be loaded BEFORE any small logos. Any slot location in the Send logo window can be selected when loading the first full-screen image.

> If the system is loaded with 32 small logos and a full screen logo is then loaded, it will erase the first 16 logos. Logos numbered 17 and up will still be there but their reference number will be changed to 1 through 16.

?? To send a second full-screen image to LogoSTAR™ when there is a full screen image currently in the first 16 slots and the last 16 are full of individual logos, select any slot from 1 through 16.

> The second full-screen image will overwrite the 16 individual logos and they will be erased.
>
> If the first full-screen image memory slot is selected for the second full screen image's destination, the new full-screen image will replace the original full-screen image and the 16 individual logos will be preserved.

?? If a memory slot is occupied and it is selected as the destination of a new logo, then the current logo in that slot will be erased when the new one is sent.

> Logos are always erased in pairs. A pair is always defined as an odd number followed by an even number. So if there are logos in slots 1 and 2 and the logo in slot 1 is replaced, the software would erase both logos in 1 and 2. But when the new logo for slot 1 is sent, the software automatically resends the logo that was in slot 2. That process is invisible to the user and nothing is lost.

?? To replace a full-screen image with up to 16 smaller logos, open a small logo (maximum size 250 x 120) on the LogoSTAR™ desktop. In the Send logo dialog box, click on the BMAP image entry.

When this logo is sent to LogoSTAR™ it will automatically reconfigure the memory to store 16 logos in place of the full screen image. This logo will be placed in the first memory location.

If there had been logos in the first 16 memory slots in addition to the full screen image, then those 16 logos would be moved up to the last 16 slots. For example, what had previously been numbered Logo 1 would now be referenced as Logo 17. There would be 32 logo slots available.

If there had been two full-screen images in LogoSTAR™ memory, then sending a small logo by clicking on either BMAP entry would remove the second full-screen image. The new logo would appear in logo slot 1 and there would be 15 additional logo slots available. The first full-screen image would remain in memory.

7. IMPORTANT LOGO CREATION INFORMATION

There are many parameters that must be considered when creating a logo for LogoSTAR™ in a graphics program. The more familiar users are with these parameters, the more efficiently they can create compatible images to use with the LogoSTAR™ system.

Any graphics package that creates images to meet these requirements can be used. One example is Paint Shop Pro from JASC Inc. A trial copy of the Paint Shop Pro is supplied with your LogoSTAR™ software. This trial copy is valid for a 30 day license period. To continue to use the program, please contact JASC, the manufacturer of the software, to obtain a license.

7.1 Image Creation and Editing Constraints

?? All images must use a palette of 256 colors (8 bits per pixel).

?? Each palette entry can be defined by up to 24 bits (8 bits each for R,G,B).

?? LogoSTAR™ automatically reduces the color resolution to 16 colors per palette entry (5 bits for red and blue, and 6 bits for green).

?? Pixels on LogoSTAR™ are square format. The aspect ratio will be exactly as seen on a PC screen.

?? The key, or transparent, color that will be replaced by external video MUST be assigned to the last palette entry (number 255). Any occurrence of this palette entry in the logo image will result in external video appearing on screen.

?? The size of a full-screen bit-map image is exactly 640 by 480 pixels. There are no positioning adjustments for a full-screen image.

?? The maximum logo image size is 250 by 120 pixels. Any image larger than that (in either direction) will be rejected.

?? Text can NOT appear over a defined logo box, it can only appear over external video. The layering order for small logos is always external video in the background, logo image over that, and characters over any portion of external video only.

?? Text can be displayed over a full-screen bit map image. The layering order is external video in the background, full-screen image over that, and characters over the image.

?? The rectangle size that is keyed into the video is rounded up from the actual image size to the nearest multiple of 32 pixels horizontally and 16 lines vertically.

Logo Example

The sample logo at right is 88 pixels by 88 lines and has been saved into a .BMP file with a size of 250 pixels by 120 lines.

If the color represented by the gray area was specifically assigned to palette entry 255, the entire gray area would appear as external video and only the white box and graphic elements would be keyed over the video. If palette entry 255 had another color assigned to it, the logo would key in as a rectangle exactly as shown.

If the image was saved with a size of 96 pixels by 96 lines, then the LogoSTAR™ software would **automatically** assign all pixels beyond 96 by 96 the color palette value of 255. That would result in the input video signal being displayed beyond the 96 by 96 defined area. There would be a 96 by 96 box keyed into the video showing the image as it appears at right, including the gray edges, which were within the defined area.

Again, if the original file is edited so that the palette color value of this outer gray edge was at palette entry 255, then the logo image alone would be keyed over the incoming video.

Positioning

When positioning a logo stored in LogoSTAR™ memory on the screen, positional resolution is 32 pixels by 16 scan lines. To position the logo with finer resolution, save the logo offset at the pixel position within a 32 by 16 rectangle.

For example:

To have the above logo appear on screen at pixel 430 line 328

Set the position via LogoSTAR™ at the nearest horizontal multiple of 32 that is less than 430, which would be 416

Set the nearest vertical multiple of 16 that is less than 328, which would be 320.

Before the logo image is saved as a .BMP file, move the area of the desired logo so that the pixel that is currently at pixel 2 line 1 will be at pixel 14 (430-416) line 8 (328-320).

When the logo is displayed, the screen position of the upper left pixel will be at 430 line 328.

Using Input Video

To display input video anywhere on screen in addition to graphics items, have the color that is defined as the key color (palette entry 255) in the area where the video should appear.

For example:

To have the full screen bit map to really be an L key with a left margin of 100 pixels and a bottom margin of 320 scan lines, make the rectangle bounded by 100,0 and 640,320 have the palette color 255.

The actual color used to visually indicate this area is not important.

7.2 File Format Requirements

LogoSTAR™ accepts logos created in several file formats. As long as the logos do not exceed the system's size limits, there should be no problem.

Accepted File Formats

Format	Extension
Kodak Photo CD	*.pcd
PCX	*.pcx
PhotoShop PSD	*.psd
Postscript Raster	*.ras
TGA	*.tga
TIF	*.tif
Window Meta File	*.wmf
Win & OS/2 Bitmap	*.bmp
Word Perfect Graphics	*.wpg
Win Icon	*.ico

File Size Limits

Small logos from 32 x 16 pixels to 250 x 120 pixels in size

Full-screen logos up to 640 X 480 pixels in size

8-bit palette per pixel from a palette of 65,536 colors

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