Keyer Software Toolkit
InstaLogo™
Nomad™

Instruction Manual

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Version 1.0 September 2005

REVISION HISTORY

REVISION	DESCRIPTION	DATE
0.1	Preliminary Version InstaLogo™ only	Nov 03
0.2	Added Preliminary info on Nomad™	Dec 03
1.0	Updated new functions and networking instructions added	Sep 05

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CHAPTER 1: OVERVIEW
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1. OVERVIEW

1.1. OVERVIEW

All Evertz logo-enabled keyer products ship with the Keyer Toolkit CD. This CD contains the InstaLogo™ program used to create logo files for video insertion. These logo files can be static or animated. They may consist of digital clocks, temperature logos, and analog clocks. They may be small or full-frame logos.

InstaLogo™ software is used to import graphic files created from professional graphics programs and transfer them to the logo inserter. The software is a utility for converting existing files from RGB to the YCbCr format used in the video domain. The original creation of these files must be done with other software. Once the files are created you can import and convert the files for use with your Evertz logo-enabled keyer products. Please see the Logo Design Primer in Chapter 4 for more information on the logo creation process.

Also included on the Keyer Toolkit CD is Nomad™ software. Nomad™ stands for Network Object Manipulation and Delivery. Nomad™ integrates the speed of fast Ethernet with the ease of drag and drop functionality to provide a central point of access to all Evertz keyer products. This easy-to-use program allows you to transfer logo and other media files between one or many devices at the same time. You can also transfer true type font files for use with your EAS or crawl option.

1.2. HOW TO USE THIS MANUAL

This manual is organised into five chapters: Software Installation, InstaLogo™ Operation, Nomad™ Operation, InstaMedia™ Operation, and Logo Design Primer. The Installation section contains a brief overview of the software and information on installing the software on your computer and connecting to Evertz keyers. It also contains a glossary to define concepts and terms used throughout the remainder of the manual. We highly recommend taking the time to become familiar with the terms and concepts described here before proceeding into the rest of the manual.

Chapter 2 gives a detailed description of InstaLogo™ software operation for creating logos.

Chapter 3 gives a detailed description of the Nomad™ software operation.

Chapter 4 gives a detailed description of the InstaMedia™ software operation.

Chapter 5 gives basic information on creating logos for standard definition or high definition video applications.

Items of special note are indicated with a double box like this.

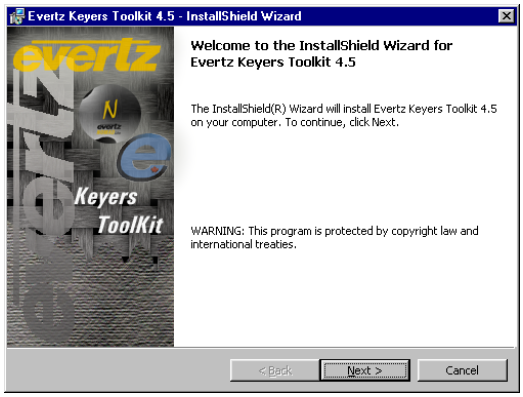
1.3. INSTALLING THE SOFTWARE

1.3.1. System Requirements

InstaLogo™ and Nomad™ software require Windows 98 SE or higher. To use the Ethernet port of your keyer unit for FTP media file transfers and firmware upgrades requires either an available Ethernet port on your network hub or a dedicated network interface card on your PC and the appropriate crossover cable. To upload logos to more than one keyer device all devices must be networked together. See the Ethernet and Network Settings sections of the respective hardware manuals for more information.

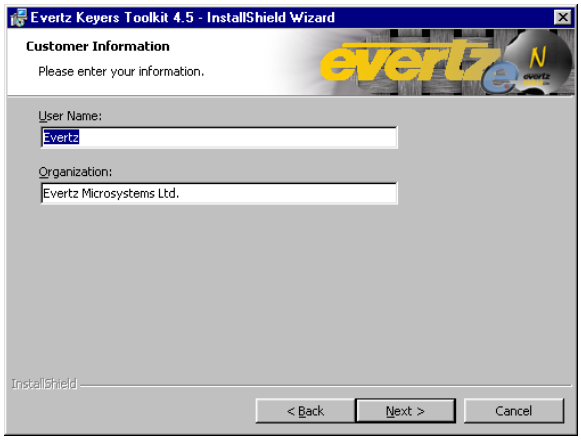
1.3.2. Running the Installation

Insert the Keyer Toolkit CD into an appropriate drive on your PC.
Click the Windows **Start** button on the lower left corner of your Windows desktop. A menu opens.
Click **Run**. Another menu opens
Type "**D:\setup**" (NOTE: if you are using a drive other than "**D:**" please substitute the appropriate letter) and press the **Enter** Key.

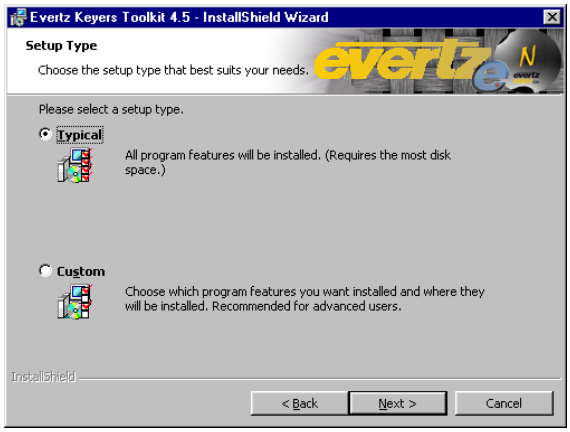


The Toolkit installer uses the latest Windows installation technology available. This may require an update to your current installer. If the installation process detects an older version of the installer, it will prompt you to run the installer upgrade first. This process requires a Windows reboot; so make sure you have saved and closed other open programs. If you make a mistake, you can click **Back** to return to the previous installation screen. Click **Cancel** to exit the installation process.

Click **Next** to continue.

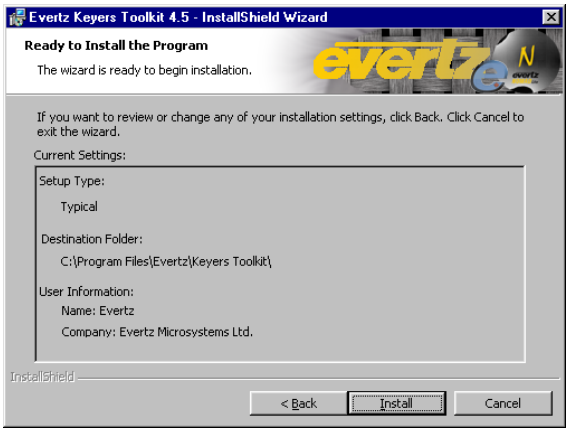


Enter your user Name and Organization name and click **Next**

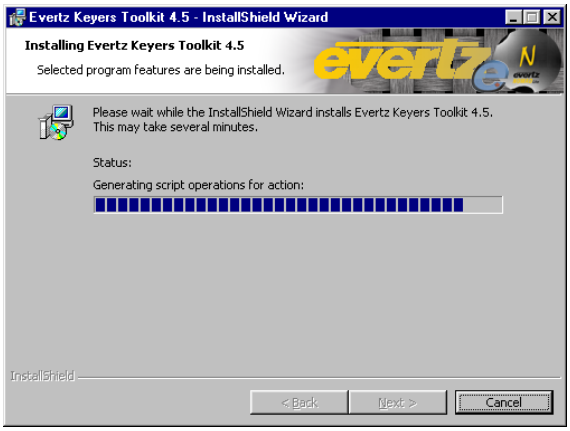


Most installations require a **Typical** setup. This installs both InstaLogo™ and Nomad™ software into the "C:\Program Files\Evertz\Keyers Toolkit\" subdirectory. To install only one program or to specify a different directory, click the **Custom** button and follow the on screen prompts.

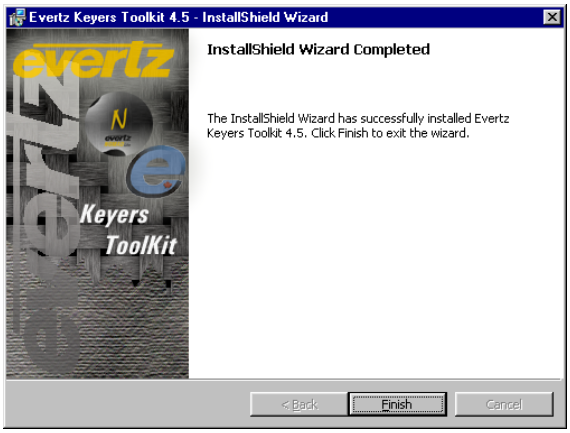
Click **Next** to continue.



Once the installation process has all the information required it offers one more chance to verify everything. If you are satisfied, click the **Install** button.



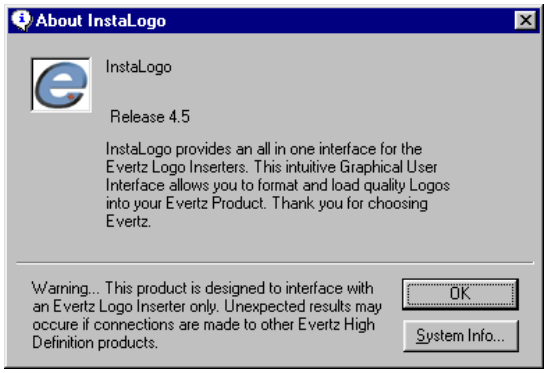
As the programs are installed, you can monitor the progress on the status screen. The progress bar and text indicate the progress of the installation process. The installation requires a few minutes. Then you will be presented with the finish screen.

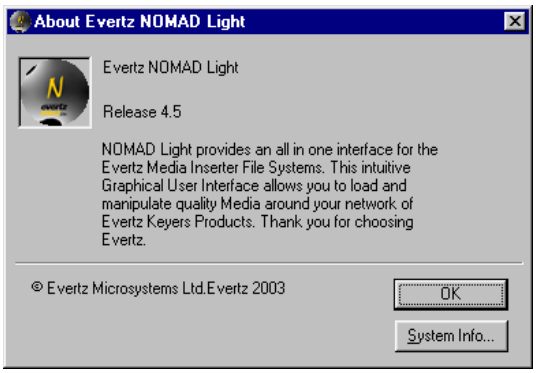


Click the **Finish** button to complete the Toolkit installation.

Run each program to verify correct installation.

Click the Windows **Start** button on the lower left corner of your Windows desktop. A menu opens.
Click **Programs**. A program menu opens.
Select the **Evertz** program group and click on either **InstaLogo™** or **Nomad™** to start the desired program.
At the top left, click **Help.** A menu drops down. Click **About** to ensure the screens on your system match the ones below.





Once the installation is finished, proceed to the relevant chapter in this manual for information on operating the software. Spend some time familiarizing yourself with the software layout. On-line help is available in **InstaLogo™** by pressing the **F1** key. Knowledge of the Windows operating system is recommended. Familiarize yourself with the Logo Design Primer in chapter 4.

1.4. DEFINITIONS

4:2:2 The sampling ratio used in the HDTV digital video signal. For every 4 samples of luminance there are 2 samples each of R-Y (Red minus luminance) and B-Y (Blue minus luminance).

16x9 A wide-screen television format such as HDTV in which the aspect ratio of the screen is 16 units wide by 9 high as opposed to the 4x3 of normal TV.

AES/EBU: (Sometimes abbreviated as AES) Refers to the digital audio standard (AES3-1992) set by the Audio Engineering Society and European Broadcast Union and used by most forms of digital audio from CDs to professional digital video.

Aspect Ratio: The ratio of width to height in a picture. Theatre screens generally have an aspect ratio of 1.85 to 1, widescreen TV (16x9) is 1.77 to 1, and normal TV (4x3) is 1.33 to 1.

CCIR (International Radio Consultative Committee) An international standards committee. (This organization is now known as ITU.)

CCIR-601: See ITU-R601.

Cliff effect: (also referred to as the 'digital cliff') The digital signal is perfect even though one of its signal parameters is approaching or passing the specified limits. At a given moment however, the parameter reaches a point where the data can no longer be interpreted correctly, and the picture becomes unrecognisable. Often caused by excessive cable lengths.

Component analog: The non-encoded output of a camera, video tape recorder, etc., consisting of the three primary color signals: red, green, and blue (RGB) that together convey all necessary picture information. In some component video formats these three components have been translated into a luminance signal and two color difference signals, for example Y, B-Y, R-Y.

Component digital: A digital representation of a component analog signal set, most often Y, B-Y, R-Y. The encoding parameters are specified by ITU-R709 for HDTV signals. SMPTE 274M and SMPTE 296M specify the parallel interface.

Composite analog: An encoded video signal such as NTSC or PAL video that includes horizontal and vertical synchronizing information.

Composite digital: A digitally encoded video signal, such as NTSC or PAL video that includes horizontal and vertical synchronizing information.

D1: A component digital video recording format that uses data conforming to the ITU-R601 standard. Records on 19 mm magnetic tape.

D2: A composite digital video recording format that uses data conforming to SMPTE 244M. Records on 19 mm magnetic tape.

D3: A composite digital video recording format that uses data conforming to SMPTE 244M. Records on 1/2" magnetic tape.

D5: A component digital video recording format that uses data conforming to the ITU-R601 standard. Records on 1/2" magnetic tape.

HD-D5: A component digital video recording format that uses data conforming to the ITU-R709 standard. Records on 1/2" magnetic tape.

Drop frame: In NTSC systems, where the frame rate is 29.97002618 frames per second, the drop frame mode permits time of day indexing of the frame numbers by dropping certain frame numbers. Specifically, frames 0, and 1 at the beginning of each minute except minutes 0,10,20,30,40, & 50, are omitted, to compensate for an approximate timing error of 108 frames (3 seconds 18 frames) per hour. A flag bit is set in the time code to signal when the drop frame mode is in effect.

EBU (European Broadcasting Union): An organisation of European broadcasters that among other activities provides technical recommendations for the 625/50 line television systems.

Embedded audio: Digital audio is multiplexed onto a serial digital video data stream.

ITU: The United Nations regulatory body governing all forms of communications. ITU-R (previously CCIR) regulates the radio frequency spectrum, while ITU-T (previously CCITT) deals with the telecommunications standards.

ITU-R601: An international standard for standard definition component digital television from which was derived SMPTE 125M and EBU 3246-E standards. ITU-R601 defines the sampling systems, matrix values and filter characteristics for both Y, B-Y, R-Y and RGB component digital television signals.

ITU-R709: An international standard for High definition component digital television from which was derived SMPTE 274M and SMPTE 296M standards. ITU-R709 defines the sampling systems, matrix values and filter characteristics for both Y, B-Y, R-Y and RGB component digital television signals.

Letterbox: Placing a wide screen image on a conventional TV by placing black bands at the top and bottom of the screen.

Linear time code: (Also known as Longitudinal Time Code) A digital code used for timing and control purposes on videotape and associated audio tape machines. It is recorded on a linear track with audio characteristics and is referred to as LTC. Each 80 bit code word is associated with one television frame, and consists of 26 time bits, 6 flag bits, 32 user bits and 16 sync bits. This time code may run at 24, 25 or 30 frames per second depending on the video format. See also SMPTE 12M

LTC: See Linear Time Code

NTSC: National Television Standards Committee established the television and video standard in use in the United States, Canada, Japan and several other countries. NTSC video consists of 525 horizontal lines at a field rate of approximately 60 fields per second. (Two fields equals one complete Frame). Only 487 of these lines are used for picture. The rest are used for sync or extra information such as VITC and Closed Captioning.

PAL: Phase Alternating Line. The television and video standard in use in most of Europe. Consists of 625 horizontal lines at a field rate of 50 fields per second. (Two fields equals one complete Frame). Only 576 of these lines are used for picture. The rest are used for sync or extra information such as VITC and Teletext.

Pixel: The smallest distinguishable and resolvable area in a video image. A single point on the screen. In digital video, a single sample of the picture.

Serial digital: Digital information that is transmitted in serial form. Often used informally to refer to serial digital television signals.

SMPTE (Society of Motion Picture and Television Engineers): A professional organisation that recommends standards for the film and television industries.

SMPTE 12M: The SMPTE standard for Time and address code. SMPTE 12M defines the parameters required for both linear and vertical interval time codes.

SMPTE 272M: The SMPTE standard for embedding audio in serial digital standard definition (SMPTE 259M) video signals.

SMPTE 274M: The SMPTE standard for bit parallel digital interface for high definition component video signals with an active picture of 1080 lines x 1920 pixels.

SMPTE 291M: The SMPTE standard for encoding ancillary data packets in serial digital video signals.

SMPTE 292M: The SMPTE standard for high definition serial digital component interfaces.

SMPTE 296M: The SMPTE standard for bit parallel digital interface for high definition component video signals with an active picture of 720 lines x 1280 pixels.

SMPTE 299M: The SMPTE standard for embedding audio in serial digital high definition (SMPTE 292M) video signals.

SMPTE RP188: The SMPTE recommended practice for embedding SMPTE 12M timecode into ancillary data packets in serial digital video signals.

sF: (Also known as *segmented frame)* The picture is progressively scanned, however divided into two *segments*, containing the odd and even lines. The segments are then sent out the serial digital interface in the same way that the fields of an interlaced video signal are. This format is often used at nominal frame rates of 24, 25 or 30 frames per second.

TRS: Timing reference signals used in composite digital systems.

TRS-ID: Abbreviation for "Timing Reference Signal Identification". A reference signal used to maintain timing in composite digital systems.

CHAPTER 2: INSTALOGO™ OPERATION
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2. INSTALOGO™ OPERATION

2.1. WELCOME TO INSTALOGO™

The InstaLogo™ software is used to Import graphic files created from professional graphics programs and transfer them to the Logo inserter. The InstaLogo™ software utility converts existing graphics files from RGB to the YCbCr format used in the video domain. The original creation of these files must be done with other software. Once the files are created you can import and convert the files for use with your Evertz logo inserter. Please see Primer on Creating Logos for more information on the logo creation process.

Guidelines for preparing a logo file to install into the Evertz logo-enabled keyer products:

1. Best results are achieved when you supply both the fill and the key as two separate files. Make sure that the H/V sizes of both files are the same. Make sure that the position of both the fill and the key within the file, is the same.

2. Draw the logo on a black background.

3. Anti-alias all edges within the logo. Try to not anti-alias the outer edges (where the keying will take place).

4. Keep all lines thicker than 2 pixels wide, 2 lines high. The lines will flicker and/or have funny edge artifacts if they are too thin.

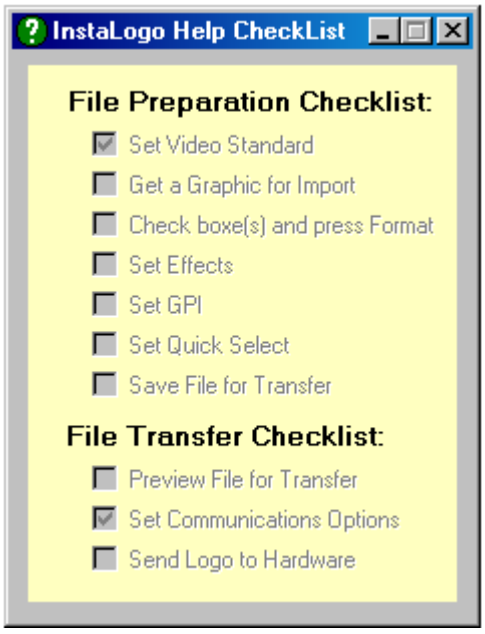
5. Format the logo into a 24 bit per pixel RGB bitmap image.

6. Supported files are UNCOMPRESSED: .BMP, .TGA, and TIFF formats.

7. The insertion process is field one dominant. Insertion starts on a Y/C co-located sample. This means that the first pixel of the first line will be in the first field and the first pixel will be a Y, Cr, Cb co-located sample.

2.2. LOGO CHECKLIST

InstaLogo™ includes an online checklist. To view the Checklist, select "Help" from the drop down menus and select "Check List". The steps outlined on the checklist are automatically checked as the steps are completed. For easy logos follow the checklist from top to bottom.



Checklist Items:
File Preparation Checklist:

Set Video Standard
Get a Graphic for Import (required)
Check box(s) and press Format (required)
Set Effects (optional)
Set GPI (optional)
Set Quick Select (optional)
Save File for Transfer (required)

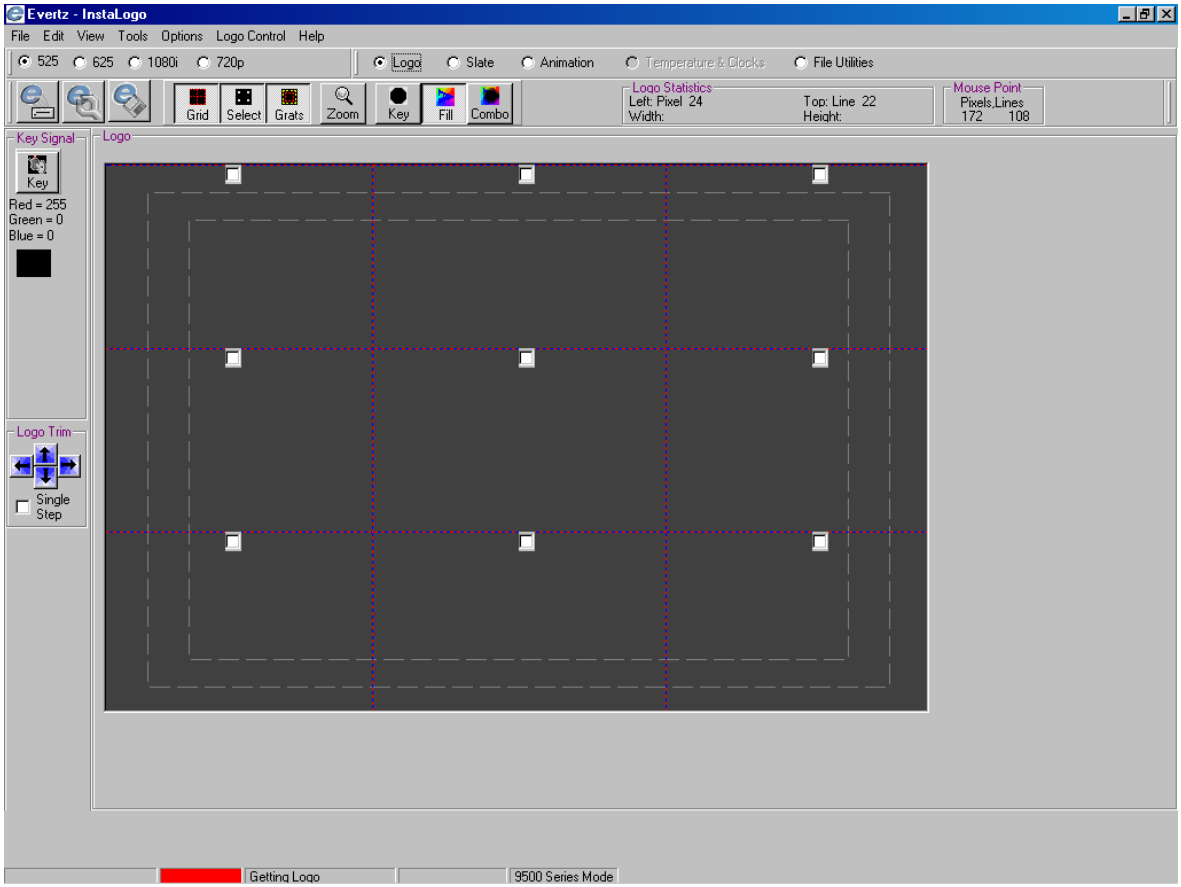
File Transfer Checklist)

Preview File for Transfer (required)
Set Communications Options
Send Logo to Hardware (required)

2.3. LOGO PREPARATION

The Logo Preparation page is used for importing graphics files and preparing them for conversion to the logo inserter hardware format.

To open the Logo Preparation page, check the circle box next to Logo.



2.3.1. Logo Preview Buttons:

Get Logo:  Click the Get Logo button to open a Windows file selection box.
Select your logo file and click the Open button to start the import process.
After the logo file has been imported, InstaLogo™ prompts you to load the associated Key file and again presents a Windows file selection box. When the import process is complete your logo and associated key are displayed in the Logo Preview section.

Format Logo:  Formatting scales the amount of logo data to match the type (.EVL) and amount of data the logo inserter is expecting. The original color information and the positioning of the logo are unaffected by the Format function. If a Key file is not supplied then one will be created for you at this time.

Save Logo:  Saves your logo as an .EVL file, the format used by InstaLogo™ and logo inserter hardware. Please note the location of the saved file, as this information is required when sending logos to the logo inserter.

Grid: 

Turns on or off the Grid squares in the Logo area.

Select: 

Turns the selection boxes in the Logo area On and Off.

Grats: 

Turns the graticules in the Logo area On and Off.

Zoom: 

Valid only in 1080i mode. Toggles the Logo area between a 1:1 view and a 4:1 view, allowing you to work on the entire video frame within the display window. You may only position your logo prior to formatting. You may also click and drag your logo for placement.

Key: View the Key signal

Fill: View only the Fill signal

Combo: View both Key and Fill signals

2.3.2. Sections:

Logo: This area of the screen is the active work area. Use it to place and work on imported graphics as well as view the results of your selections. The height and width of the preview is a 1:1 ratio in Normal view mode, and 4:1 in "Zoom" mode, which is available in 1080i only.

Logo Statistics: 

Indicates the position of the top left pixel of the logo graphic, and the height and width of the graphic.

Mouse Point: 

Indicates pixel positions of the mouse, referenced from the top left corner of either the background or logo. Changes as the mouse pointer is moved.

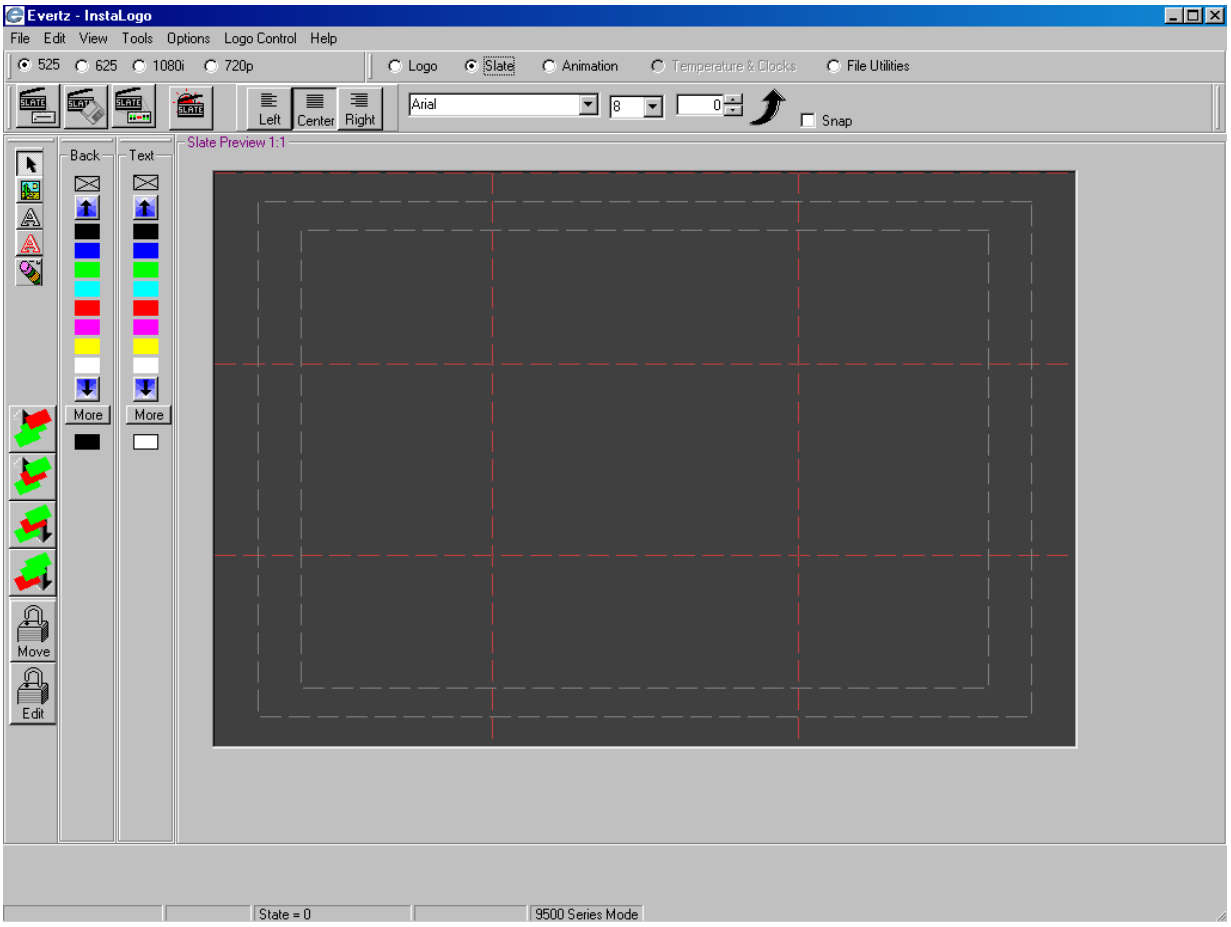
Key Signal: 

When a Key file is provided the Background is disabled.

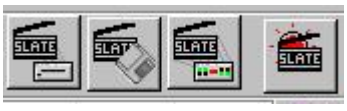
Logo Trim: Use the arrow buttons to position your logo in the Logo area. When checked, the **Single Step** toggle checkbox locks the logo movement to one sample or line per button click.

2.4. SLATE PREPARATION

Use the Slate Preview screen to create and manipulate slates. To open the Slate Preview screen, check the round box next to Slate in the main view.



2.4.1. Slate Preview Buttons



Use **editing** buttons to control your slate files.

Open previously saved text

Save the current slate as editable text

Format the current slate and send it to a logo inserter

Clear the current slate

Use **justification** buttons to align the object or text currently being worked with on the Slate Preview screen.

Left: Align the current object to the left

Center: Align the current object to the center

Right: Align the current object to the right


Select the object to be worked on

Insert a **picture** object

Insert a **text** object

Set attributes of the **text** outline

Delete the selected object

Move the selected object to the **front** of the slate

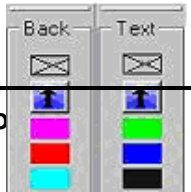
Move the selected object **up** one

Move the selected object **down** one

Send the object to the **back** of the slate

Lock the object in its current **position**

Lock the **contents** of the object



Select Background and Text colors from the color bars.

Use the ↑ up and ↓ down arrows to scroll through the colors.

Click the **More** buttons to open a palette from which you can choose additional colors.

2.5. ANIMATION PREPARATION

Animations are the most complex portion of InstaLogo™. An animated logo is a series of graphic files displayed in rapid succession to simulate movement.

Become familiar with creating static logos before attempting to create animated logos. Review the Logo Preparation and Primer on Creating Quality Logos sections of this manual before proceeding.

The Animation page is designed to help you create animated logos. To open the Animation Preview screen, check the round box next to Animation.

Tell InstaLogo™ what graphic files you have, in what order you want them displayed, how long you want each image to appear, and at what transparency level you want the graphics inserted.

2.5.1. What graphic files do you have?

All graphics are subject to the same design specifications as the static logos. All graphics used in the animation must be 24-bit .BMP, .ICO, JPG, .PNG, .TGA, or .TIF files, and must have the same H and V values. Key file values must be the same as Fill files.

To load graphic files into the animation, click the **Load Logo** button.

A Windows file selection box opens. Choose the file(s) to load as logos. Use the **Shift click** or **Ctrl click** methods to select and load multiple files simultaneously.

One logo must be loaded before any key files. The logo file compares H and V values for any key loaded.

Once you have selected all of the files, click the **Open** button. InstaLogo™ loads the selected file(s) into the Logo File Name drop down box. The first logo selected is allocated to the current frame.

Load the animation graphics first so that they can be allocated as a resource. Evertz animation files consist of a playlist of frames and segments. This is the order in which graphic files play.

To reduce the size of the animation file, only load the graphic files once, and then point to them as required. The frames and segments are the pointers and the **Load logo** and **Key** functions are the graphic images. This allows you to re-use graphic resources as many times as necessary without significantly increasing the size of the animation file.

2.5.2. How Big Can an Animation Be?

2.5.2.1. Standard Definition Logo inserters file specifications

Animations are calculated based on a Tile system. The standard definition logo inserters have approximately 127 tiles that may be used for animation. One tile is 64 lines high by 256 wide. You may make frames of the following size combinations:

Vertical Tiles	Horizontal Tiles	Lines*	Samples*	Key / Fill Combinations
1	1	64	256	127
2	1	128	256	63
3	1	192	256	42
4	1	256	256	31
1	2	64	512	63
2	2	128	512	31
1	3	64	768	42

2.5.2.2. High Definition logo inserter file specifications

Total available space is 127MB of flash memory. There are no tile constraints in this hardware, but keeping to a width of 128 samples or a multiple thereof will optimize hardware usage. All height and width combinations are allowed.

Logo Size	Lines*	Samples*	Key/Fill Combinations	Approx. File size
Full Screen	1080	1920	9	116.5 Mb
Half Screen	540	1920	19	123 Mb
Half Screen	1080	1024	19	123 Mb
1/4 Screen	540	1024	39	126 Mb
1/4 Screen	270	1920	39	126 Mb
1/4 Screen	1080	512	39	126 Mb
1/16 Screen	270	512	156	126 Mb
Maximum	1	128	39	126 Mb

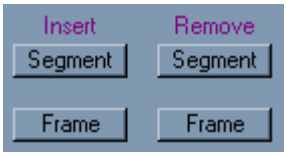
*Lines and Samples = Pixels in computer graphic terms. Lines are height and Samples are width.

2.5.3. In what order you would like them displayed?

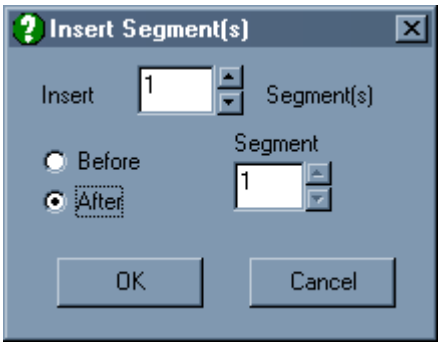
Ordering is what makes an animation appear smooth. The more frames in a transition, the smoother the transition will appear. This is at odds with the space limitations in the Logo inserter, so something must be sacrificed; usually size for content.

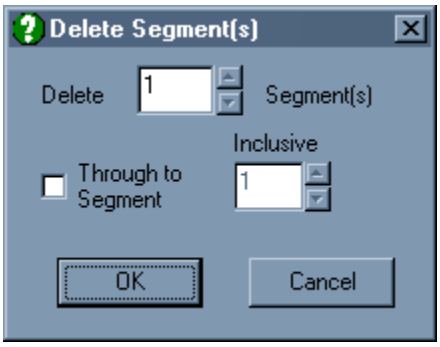
You may have a larger number of smaller graphics or a smaller number of larger graphics. The table above offers a basic guideline of storage capabilities of the Logo inserter. Please keep these in mind when designing graphics for animations.

Animations are made up of segments and frames. Use the **Insert**, **Remove Frame**, and **Segment** buttons to add and remove frames, ranges of frames, and segments.



You may have a maximum of 32 segments in one animation and each of those 32 segments can have up to 256 frame counts.



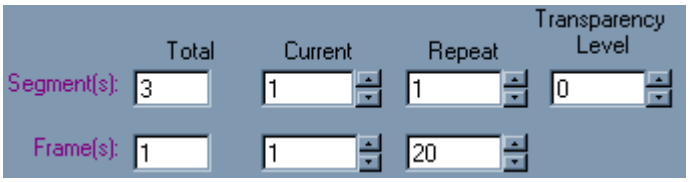


When inserting and deleting frames and segments, choose to insert the items before or after the item identified in the box to the right of the **Before** and **After** buttons. This allows you to quickly insert a range of items at the desired location. You may delete a range of items by specifying the start point in the **Delete** box and then ticking the **Through to Segment** box, and indicating the last item to delete in the **Inclusive** box.

Determining what segments are required and how many frames should be in each segment may take some experimentation on your part.

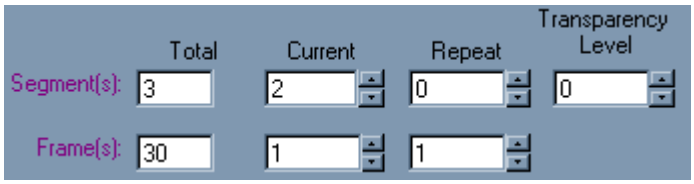
For example, you could make an animation that consists of 30 unique graphic images and allocate them to 30 frames in one segment. A more interesting animation would have 3 segments: one segment for the loading of the animation, one segment for the play-out of the animation, and one segment for the fade-out sequence of the animation. All three segments will use the same 30 graphic images, but the transparency levels will change over time to give the animation an overall cleaner appearance.

2.5.4. Frame and Segment Controls



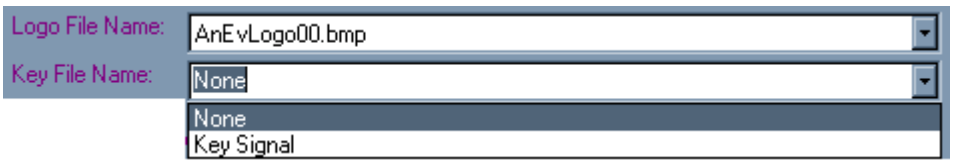
Segment controls are the top line of boxes. In the example above the animation consists of three segments in total. The first segment is the current segment, which will be repeated once and will cause the logo inserter to bring the animation from 100% transparent to 0% transparent in 1 rendering of the segment. This is an important point; the logo inserter will change the transparency of the logo from one segment to the next during one iteration of the segment loop. So even if the segment is set to repeat twice, the change in transparency will occur in the first pass of the segment. All animations start and finish at the 100% transparent level.

Frame controls are the second row of boxes. The example segment contains only one frame. It is the current frame, and will be repeated 20 times. This means the animation will appear to pause on the first frame of the sequence as the frame is faded in over 20 video frames, then the animation will proceed to the second segment.



Click the ↑ (up) arrow beside the **Current Segment** to set the current segment to segment two. InstaLogo™ loads the **Frame** value, **Repeat** setting, and **Transparency** setting for segment two of the animation. This segment has 30 frames; the current frame is frame 1, with a frame repeat count of 1. The segment repeat count of 0 indicates that the animation should continue to play this segment over and over until the **Fade Out** button is pressed.

You can step through each frame of this segment by clicking on the ↑ (up) and ↓ (down) arrows beside the **Current Frame** box. As you change the **Current** frame the number will change and the associated frame **Repeat** value will change as well, to a maximum of 256 for any given segment. You will also notice that the information in the **Logo** and **Key File Name** areas are updated to reflect the values associated with the frames.

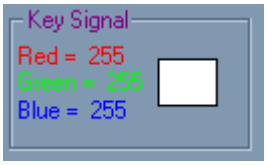


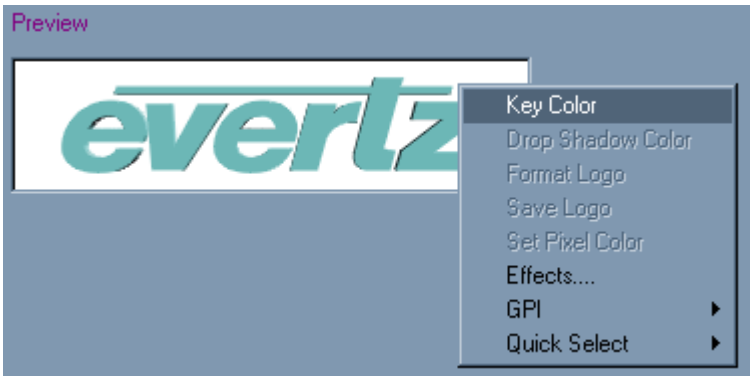
To associate the **Fill** and **Key** file resources previously loaded into the animation, click the ↓ (down) arrow to the right of the **Logo** or **Key** file name. A list of all the file resources available in the animation appears. You can change the allocated frame resource by pointing to a new file name in the list and clicking on it.

New frames added with the **Insert** frame button will have no resources allocated. Use the ↑ (up) and ↓ (down) arrows beside the current frame box to scroll through each frame of the segment and allocate the correct resource to the correct frame of the segment.

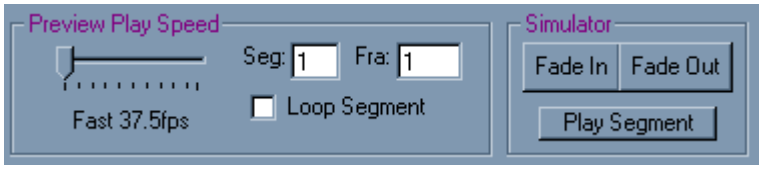
Do the same with the **Key File** resources. The value "**None**" in the **Key File Name** means the entire graphic will be used in the animation, The value "**Key Signal**" means the color associated with this graphic will be used as a transparent color for the logo file.

As with the Logo Preparation screen, the top left pixel establishes the default **Key Signal color** for this value. You can change the **Key Signal** color value by right-clicking on the appropriate color in the Preview area and selecting **Key Signal** from the menu that appears.





2.5.5. Preview Play Speed and Simulator Controls



Use the **Preview Play Speed** and **Simulator** controls to troubleshoot your animation and learn how it will perform when loaded into the logo inserter.

The **Speed** setting is for playback on the PC, and has nothing to do with the logo timing. Control the timing of the animation by setting the repeat counts for individual frames. Each frame of animation is inserted into 1 video frame or 2 video fields. If you are running NTSC 30fps then 30 frames of animation is played out in 1 second on the video.

Most PC video sources use compressed graphics and low frame rates. Animated .GIF files can run as slowly as 8 frames per second. The speed settings allow you to troubleshoot by adjusting the playback rate of the animation on the PC. You can slow the animation to view it frame-by-frame while looking for frames without graphic resources associated, frames in the wrong order, or those not displaying as well as you desire.

The **Seg** and **Fra** boxes indicate the current values displayed in the preview area, and also help you track down any problems within the animation. Checking the **Loop Segment** box plays a segment repeatedly until the box is un-checked. This allows you to troubleshoot one segment at a time, without having to run through the entire animation.

Use the **Play Segment** button to play out the current segment and use the **Fade In** and **Fade Out** buttons to simulate how the animation will perform in the logo inserter. An animation will fade in with the first segment and play all the frames within that segment, then proceed to the second segment and play all the frames in that segment, until it either encounters a segment with a repeat count of "0", or finishes playing all the segments of the animation.

If the animation has a segment with the repeat count of "0" it will continue to play that segment over and over until the **Fade Out** button is pressed, after which the remaining segments will play until the end of the animation.

2.5.6. Animation Preview Buttons

2.5.6.1. New Playlist

The **New Playlist** button clears the animation settings. It unloads all graphics resources from the **Logo** and **Key file** name areas. It also clears the animation back to 1 segment with 1 frame, while resetting **Repeat** counts and the **Transparency** setting.

2.5.6.2. Load Playlist

The **Load Playlist** button loads a previously saved animation playlist. Animation playlists have a file extension of .EVA. They can be stored anywhere on a PC or connected computer. The associated graphics resources are stored as pointers to the files on the hard drive or network. If you want to move an animation to a new PC, you must change the path structure so the graphic resources know where to find the animation. This also means that a change to the underlying graphic resource will be reflected in the animation without having to reload the resource.

The example playlist "AevLogo" is installed during the InstaLogo™ installation. It and all the graphics resource files are saved in the
"C:\Program Files\Evertz\Keyer Toolkit\InstaLogo\samples\animated\sd\aevlogo" subdirectory. If you chose the default installation these files are automatically installed on the hard drive. Use the **Load Playlist** button to open the AevLogo.EVA file from there. If you installed InstaLogo™ into another location or hard drive, you must first create the path and then copy the files into the appropriate subdirectory before loading the animation file.

2.5.6.3. Save PlayList

Clicking the **Save Playlist** button saves the animation values, GPI, and Quick Select settings to the PC or network hard drive. The graphic resources are stored as pointers to their locations on the hard drive; not as graphics within the animation file. This allows for smaller files that can be moved on standard floppy disks, but it also means that you must recreate the graphics file path structure when moving animation files from one computer to another.

2.5.6.4. Save Animation

The **Save Animation** button opens the Windows Save File box. Use it to choose a location in which to store the .EVL file that InstaLogo™ creates.

All logo files must be converted to the YCbCr file format required for video insertion. This can take some time with large animation files. InstaLogo™ creates an internal list of all Fill/Key combinations used, and calculates the total tile requirements for the animation. If the animation is too large for the logo inserter a message box opens and the save animation process is aborted.

When the animation EVL is created InstaLogo™ will prompt you to send the animation to a logo inserter. Click **Yes** to send or **Cancel** to go back to InstaLogo™. You can send this .EVL to any logo inserter that Evertz manufactures. See the "File Transfer" section for more information.

2.5.7. Assigning Animations

From the **Logo Control** drop down menu you can use the **GPI** and **Quick Select** settings to assign the animation to these input sources, similar to what you can do with static logos.

You can display static logos and animated logos simultaneously.

If using a 9525, do this by cueing or fading-in all static logos *before* running the animation. Once the animation is running you are locked out of cueing new logos, and old logos won't be removed until the animation is finished. This is not an issue with 9625 or 9725 models.

For example, bring in a program rating bug to the top left of the Preview screen by using the Cue button to prep it for insertion. Then cue the animation to the middle of the Preview screen.

Use the ↑ (up) and ↓ (down) buttons on the front panel of the logo inserter to select the station bug, and fade it into the bottom right of the Program screen by pressing the **Fade In** button. Play the animation on the Program screen by scrolling the ↑ (up) and ↓ (down) buttons and selecting it with the **Fade In** button.

Next use the ↑ (up) and ↓ (down) buttons to select the violence bug you cued up earlier, and press the **Fade In** button to fade the program bug in on the Program screen while the animation is playing.

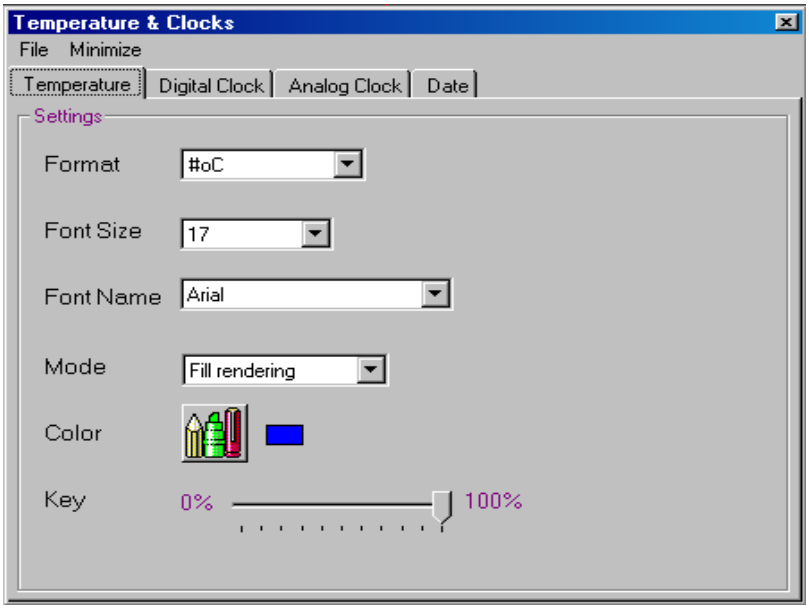
Now fade out the program bug using the **Fade Out** button. Notice that while the program bug is still cued on the Preview output, it has been removed from the Program output. This means you could recall the program bug by pressing the **Fade In** button again, or remove the program bug entirely by selecting the animation logo with the ↑ (up) and ↓ (down) buttons on the front panel and pressing the **Fade Out** button. This removes the animation from the program output.

Then use the ↑ (up) and ↓ (down) and **Fade Out** buttons to remove the animation and the program bug from the preview output. The station bug will still be present.

2.6. TEMPERATURE AND CLOCKS

To open the Temperature and clocks preview screen, check the round box next to Temperature and Clocks.

Click the **Temperature** tab to set the Format, Font size, Font type, Mode, Color, and Key percentage of your desired temperature display.



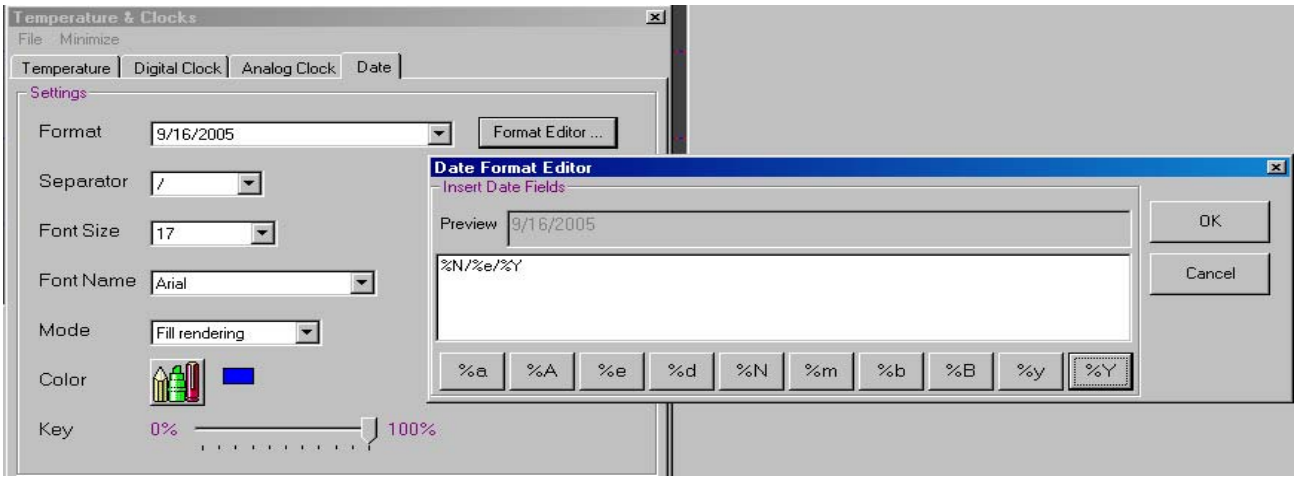
Click the **Digital Clock** tab to set the Format, Font size, Font type, Mode, Color, Key percentage, and Time Offset of your desired digital clock display.

Click the **Analog Clock** tab to set the Format, Radius, Offset, Time Offset, and colors of the hour, minute, and second hands of your analog clock display. Check the box if you wish to create an .EVH file.

Under the **Hands Shape** tab of the Analog Clock tab, select the source of your clock hands. Choose from .EVH file, Custom Files, or Auto Hands Generator by checking the appropriate round box.

Click the **Date** tab to set the Format, Separator, Font s size, Font type, Mode, Color, and Key percentage of your desired temperature display.

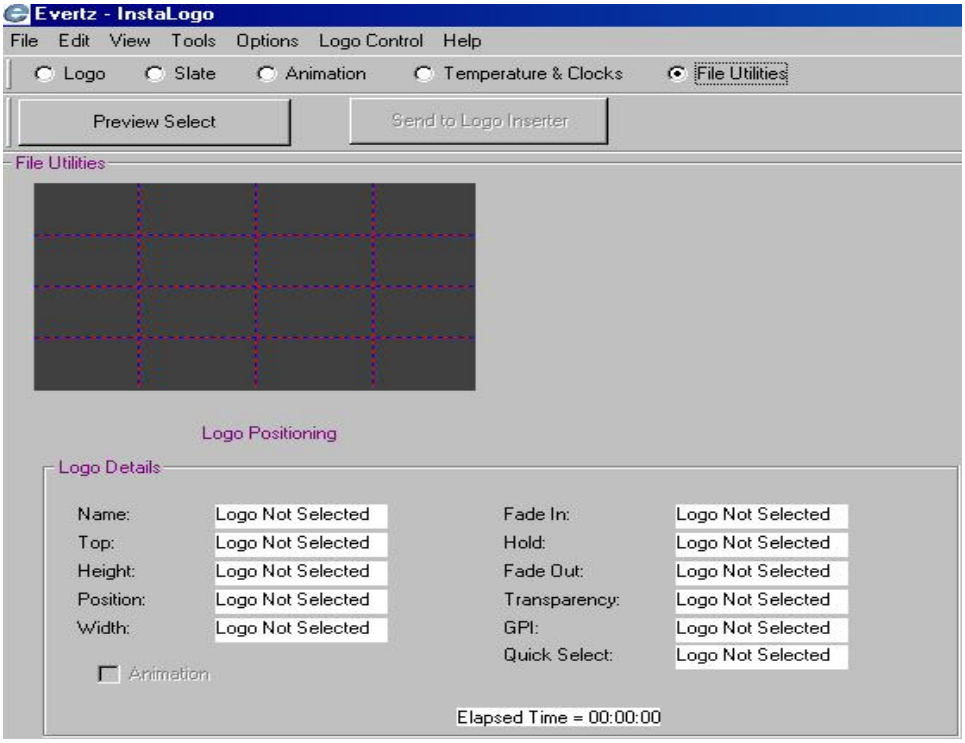
Click the **Format Editor** button to insert date fields.



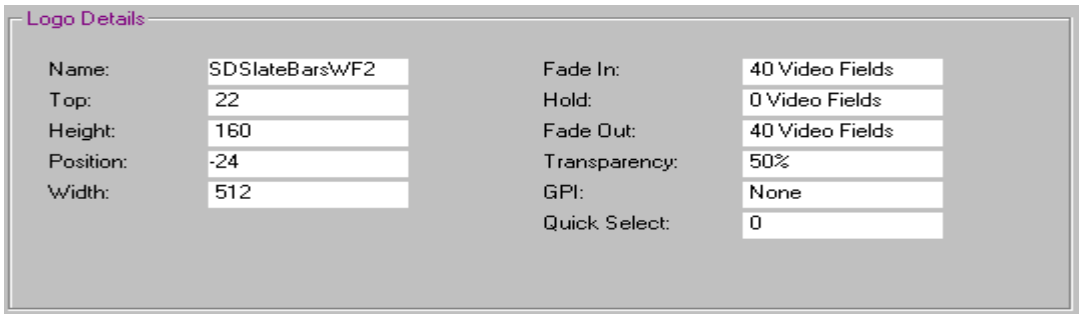
2.7. FILE UTILITIES

The File Utilities preview screen is used to select previously saved .EVL files for transfer to an Evertz logo inserter. To open the File Utilities preview screen, check the round box next to File Utilities.

View important logo details including positioning, GPI, and Quick Select attributes of the logo prior to transferring it to the logo inserter.

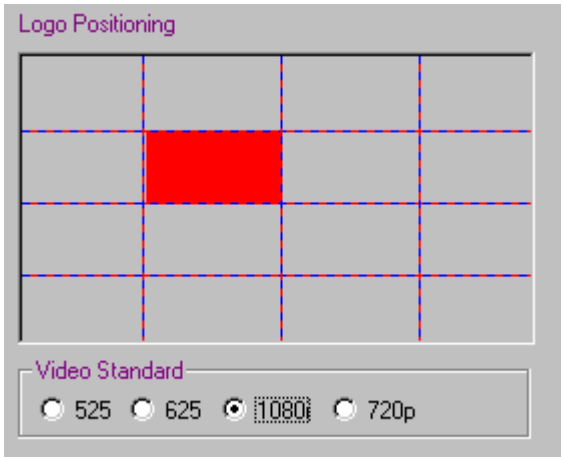


Logo Details: Ensure that the values in the selected Logo file will not overwrite any Logos in the logo inserter before you send the new Logo.

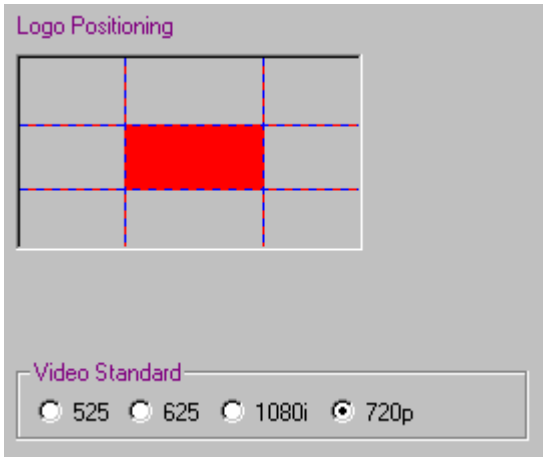


- **Name:** Name of file as saved on the computer file system. This is also the name that the logo inserter uses on its internal file system. When changing a file name ensure that the .EVL file extension is maintained.
- **Top:** The top position in scan-lines that the logo will start to display at.
- **Height:** The number of scan-lines that make up the logo graphic.
- **Position:** The pixel start point for the logo graphic as referenced from the left side of the display area.
- **Width:** The width of the logo graphic measured in pixels.
- **Fade In:** The number of video fields to transition the logo from off to on.
- **Hold:** The number of video fields to maintain the logo in the on position.
- **Fade Out:** The number of video fields to transition the logo from on to off.
- **Transparency:** The maximum intensity percentage (or transparency) to Key the logo at.
- **GPI:** GPI trigger allocated to the logo (A - D only).
- **Quick Select:** Front Panel quick select button allocated to the logo.

Logo Preview: Graphical representation of the size and placement of the logo with respect to the Video Screen. This box is always red; it is a representation only.



(1080i Sample)



(720p Sample)

2.7.1. File Utilities Buttons:

Preview Select: 

Opens the standard window file selection box and allows you to choose a previously saved .EVL file. Once the file is loaded the "Send to logo inserter" button is enabled.

Send to logo inserter: 

Initiates the download process that sends the .EVL logo file to the Evertz logo inserter. The transfer speed is set by the "Speed" settings on the "Options" menu (see Options Menu).

2.8. File Transfer

When the animation .EVL is created InstaLogo™ will prompt you to send the animation to a logo inserter. Click **Yes** to send or **Cancel** to return to InstaLogo™. You can send this .EVL to any Evertz logo inserter.

Transfer Method	Transfer Rate	Time
Serial	9600bps	5 hours
Serial	57,600bps	45 minutes
USB	12Mbps	4 minutes
FTP	100Mbps	32 seconds

Table 2–1: Average Transfer Times for a 12MB file

FTP is the connection method for 9625 models. USB is only available on 9525 models.

2.8.1.1. Network Cable Connection

Use one of two methods to connect a PC to a 9625:

1. A single crossover cable from the RJ-45 interface of the 9625 to the Network Interface Card (NIC) of the PC

   Or

2. One “straight” cable from the PC to a network hub, and a second straight cable from the hub to the RJ-45 interface of the 9625.

2.9. About IP Addresses

IP = Internet Protocol

The **Internet** is a computer network without a main data center, hub, or central data repository.

A **protocol** is a common language electronic devices use to talk with each other.

An **IP address** is a specific address of a device on a network. To ensure correct delivery of information, each device on a network has a different address.

Example: 192.168.0.1

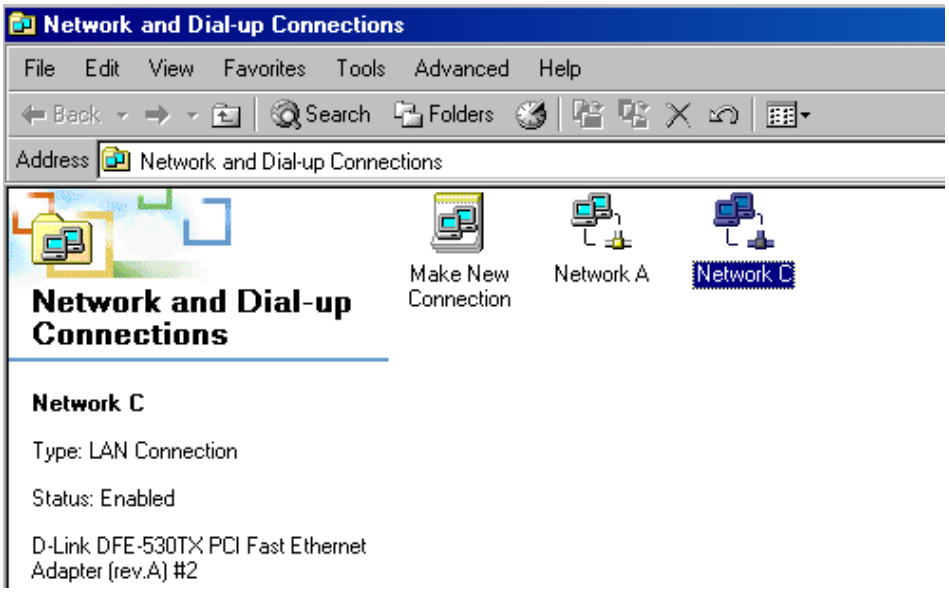
2.9.1. Finding the Computer IP Address

On a network you might not have any control over what the IP address of your computer is. To learn the IP address of your computer in MSFT Windows:

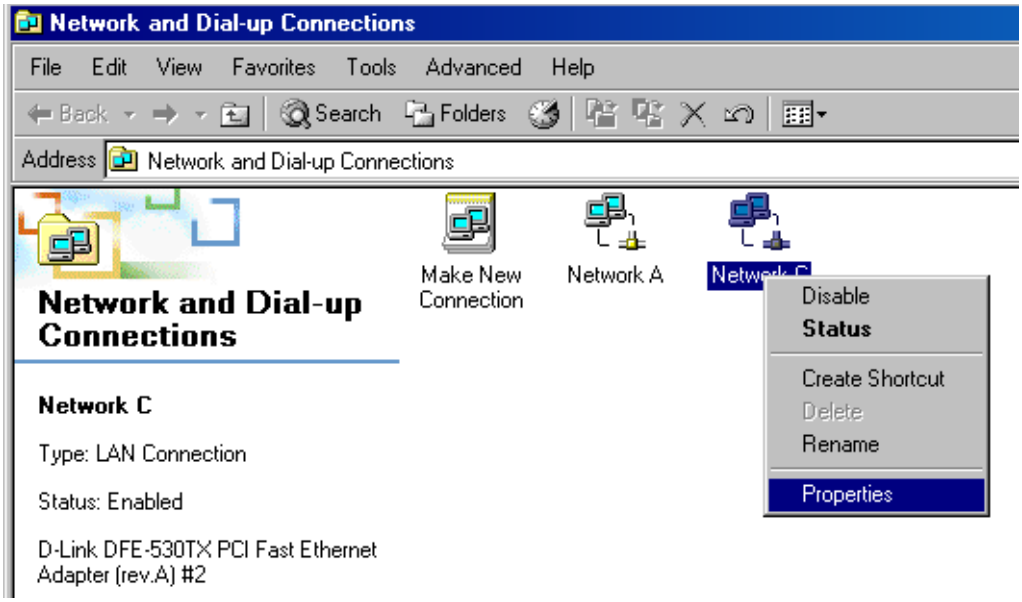
- Click “Start”. A menu opens.
- Click “Programs”. A menu opens.
- Click “Accessories” A menu opens.
- Click “Communications”. A menu opens.
- Click “Network and Dial-up Connections”. A new pane opens. In the new pane will be icons, including one titled “Make a New Connection”. Your network card icon(s) should also be visible there.

  NOTE: If there is no network card icon, or none configured in the computer, please see your IT staff to have one installed.

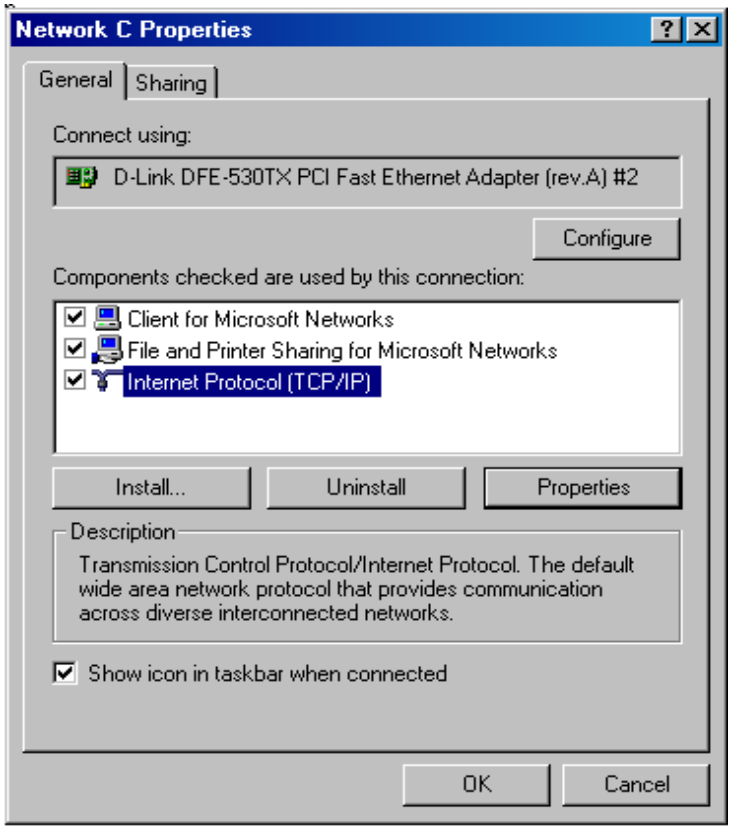
- In the example below there are two Network Interface Cards. Network A is the corporate network, which we won’t change. Network C is what we’ll use to connect to the 9625.



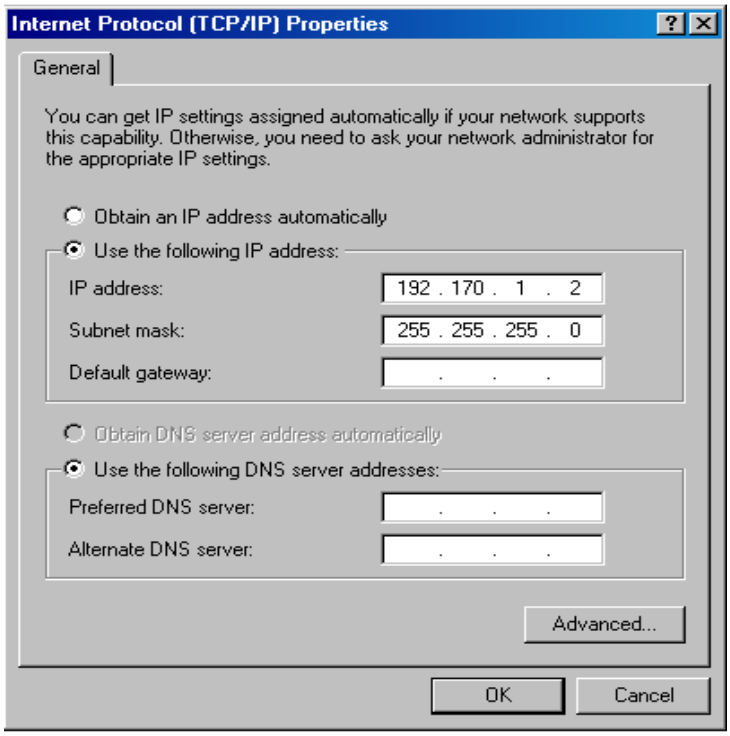
- Highlight the icon of the NIC you wish to use to connect with the 9625.
- Right click the icon. A menu opens.



- Click “Properties”. A Network Properties window opens.



- Ensure a box next to “Internet Protocol (TCP/IP)” is checked, meaning it is installed. If TCP/IP is not installed in the computer, please see your IT staff.
- Highlight “Internet Protocol (TCP/IP)”
- Click on the PROPERTIES button. A TCP/IP Properties window opens.

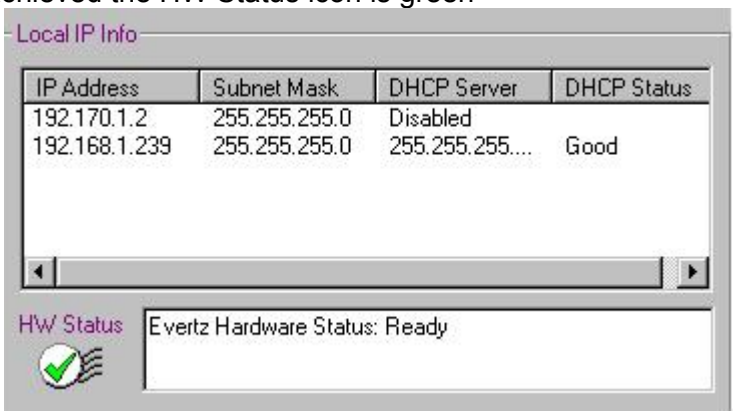


- View the IP Address provided.
- If no IP address is present, you must enter one, as the 9625 is incapable of generating one.

2.9.2. Setting the Computer IP Address

- In the "Properties" window, click the round box next to "Use the following IP address".
- Enter the IP address desired. Example: 192.170.1.2
- Make the first three numbers the same as the first three numbers of your computer NIC.
- Your 9625 and NIC must be on the same subnet. If no number is already specified, enter 255.255.255.0 as the Subnet Mask.
- Click OK. The TCP/IP Properties window closes.
- Click OK. The Network Properties window closes.

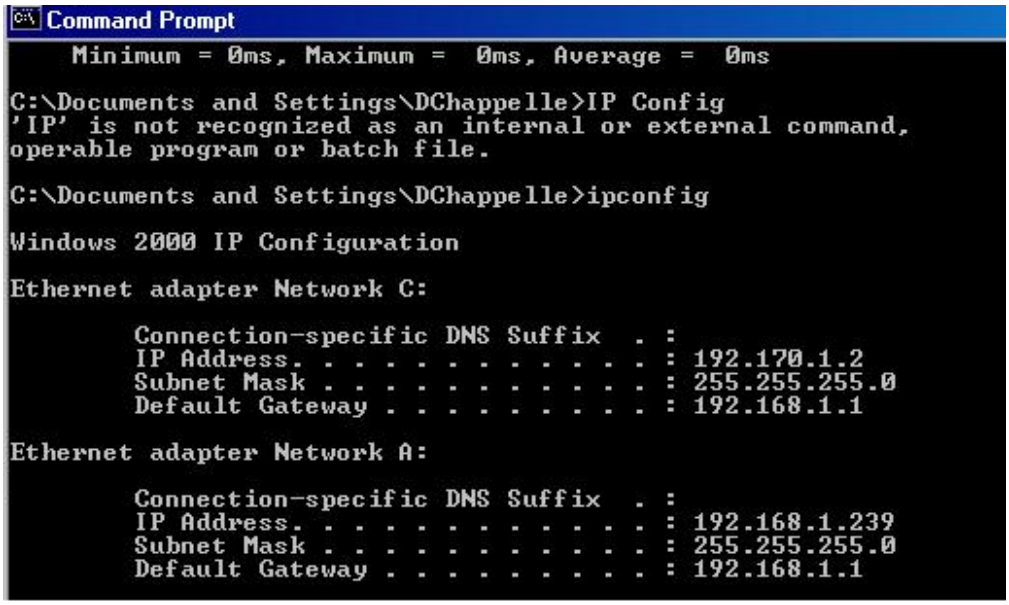
When a connection is achieved the HW Status icon is green



2.9.3. Testing the IP Addresses

You can test the ability of your device IP addresses to communicate with each other by running a short program called ipconfig, which is short for “IP configuration”.

- Click “Start”. A menu opens.
- Click “Run”. A window opens.
- Type “cmd”.
- Press the <Enter> key. A Command Prompt window opens.
- Type “ipconfig”.
- Press the <Enter > key. The IP addresses of your network interface card(s) should appear in the window, along with the subnet mask and default gateway.

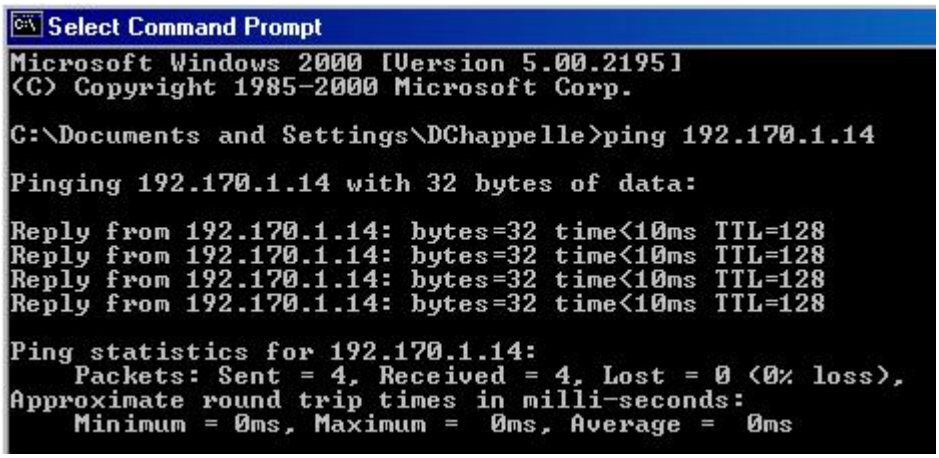


2.9.4. Ping

Ping is a method of determining if a device is connected to a network.

You can ping the addresses of your 9625 and computer network interface cards.

- At the command prompt, type ping, space, and the IP address of the device you are pinging. You should see the results of your ping in the command prompt window.



Once your computer NIC and 9625 IP addresses are correctly configured the two can communicate.

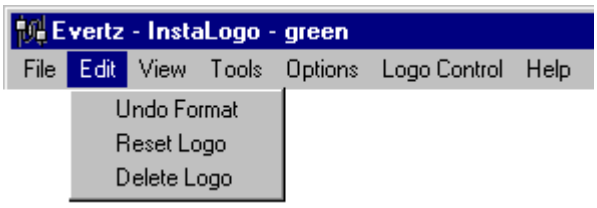
To use FTP for file transfers, select the Option menu and check the FTP option. This enables a box in which you may enter the IP address that is configured in the keyer unit network settings. During FTP transfers the percentage complete is displayed in the status bar at the bottom of the InstaLogo™ pane.

2.10. MENUS

2.10.1. File Menu

Get Logo: Opens the standard Windows file selection box, allowing you to import a logo file created with a professional graphics program.
Get Key: Opens the standard Windows file selection box, allowing you to import a key file. NOTE: A logo file must be loaded first.
Create-A-Slate: For designing logo-based slates.
Print Slate: Sends an image of the screen to a printer.
Exit: Exits the InstaLogo™ software. **Please save your logo before exiting**.

2.10.2. Edit Menu

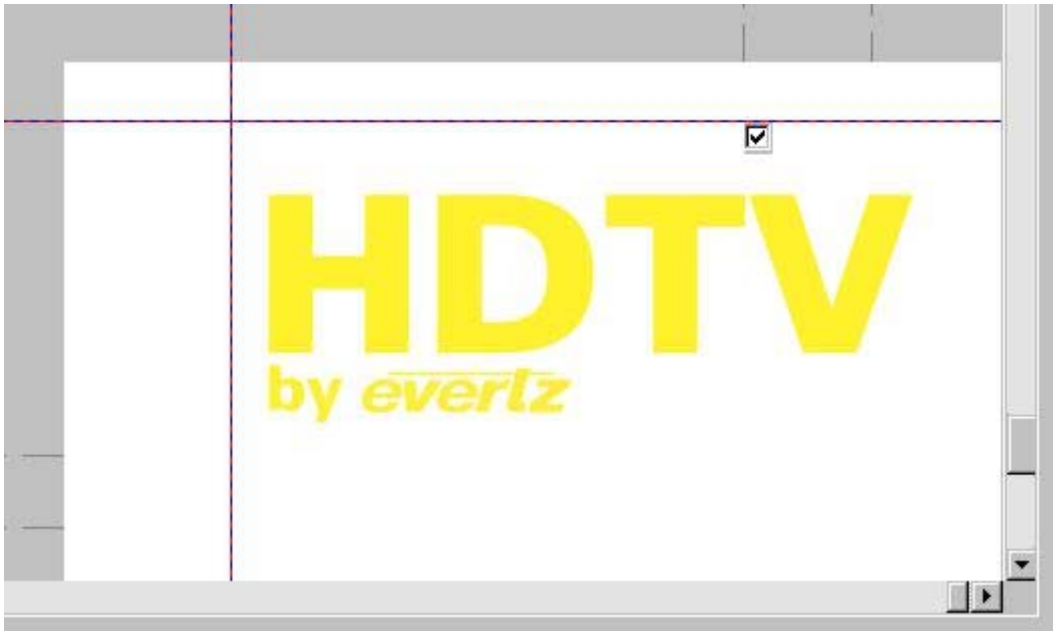


Undo Format: Reverses the effect of a format function. Use this if you are not happy with the placement of your logo or you forget to include a section of the logo when formatting.
Reset Logo: Moves the active logo from wherever it is to the top left corner of the Logo Preview area. Also moves the scroll bar to the top left corner.
Delete Logo: Deletes the logo from the preview window. If one logo is loaded and a new logo is retrieved, the first logo is automatically deleted from the InstaLogo™ software program. Logo files are NOT deleted from the hard drive using this command.

2.10.3. View Menu

Unformatted and Selected:

In the example below of an imported graphic, the logo exceeds allowable limits and must be formatted.



To format a graphic, select the portion of the graphic that you want to use as your logo by checking the box at the top center of each grid. Check all the sections that you want.

To ensure that the white color background is transparent when converted to a logo, open the Logo Control menu by either right clicking on a white portion of the logo or selecting the Logo Control menu from the drop down menu at the top of the screen.

Select "**Key Color**" from the menu and the Key Signal area will be updated to reflect your color selection. Click the **Format Logo** button and InstaLogo™ will create your key while adjusting the size of the graphic.

NOTE: Logo positioning can be adjusted from the front panel of the logo inserter.

Key Only: Changes the display of the Logo Preview area to the Key data of the logo only. A grayscale image displays on the screen.

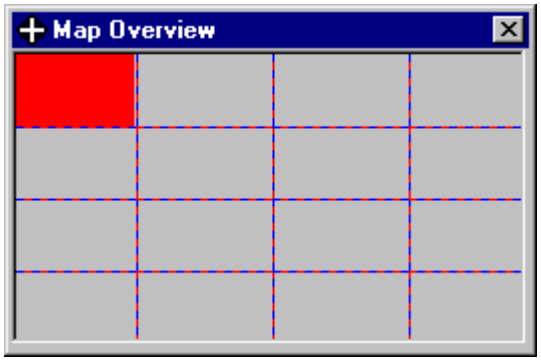
Fill Only: Changes the display of the Logo Preview area to the fill data of the logo only. A full-color image, as created in your professional graphics program, displays on the screen.

NOTE: If no Key file is supplied differences between the original and the new fill graphic result.

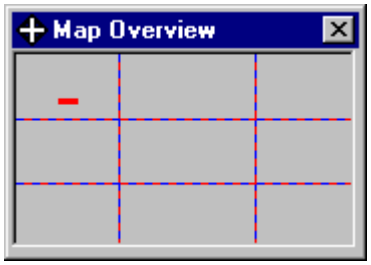
Key Fill: Changes the display of the Logo Preview area to a mix of the fill and key data. A full-color image displays on the screen, mixed with a black background.

Zoom: Valid only in 1080i mode. Reduces High Definition 4:1, allowing you to work on the entire video frame within the display window.

Map Overview: Displays a scaled overview of the HD active picture area, with your logo and grid lines.

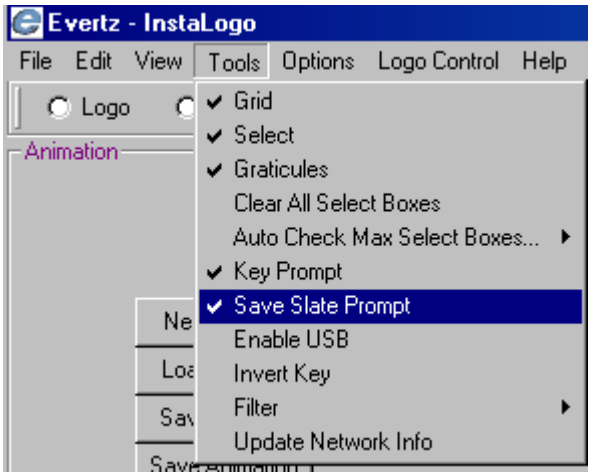


1080i



720p

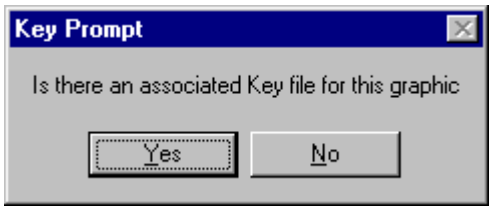
2.10.4. Tools Menu



NOTE: A check mark beside a menu item means the item is active, on, or enabled.

Grid: Turns on or off the Grid squares in the logo preview area.
Select: Turns the selection boxes on or off in the logo preview area.
Graticules: Turns on or off the display of the graticules in the logo preview area.
Clear All Select Boxes: Turns off all select check boxes in the Preview Logo area.
Auto Check Max Select Boxes: Allows you to quickly select logical areas of the Preview Logo screen for formatting into the logo for transfer.

	Video Standard			
	525	**625**	**720p**	**1080i/p**
Left	Left most column	Left most column	Left most column	Left 2 columns
Middle	Middle column	Middle column	Middle column	Middle 2 columns
Right	Right most column	Right most column	Right most column	Right 2 columns
All-	All columns	All columns	Not Applicable	Not Applicable

Key Prompt: 

Turns on or off the "Prompt for Key file" that occurs when a logo is retrieved from the hard drive.

Save Slate Prompt: When toggled On, prompts you to save your current slate data to the hard drive.

Enable USB: A toggle button to enable or disable USB transfer capabilities. USB connectivity is available only on the 9525. You must also have the most current version of InstaLogo and firmware loaded in the LG unit.

Invert Key: Inverts the associated Key data. Use this function if the Key file supplied was created with the fill area black and the background white.

Filter:

Low Pass Color: This multi-pass filter may be applied to any imported graphic file. The filter analyzes the color values for every pixel in the image and smoothes the color transitions from one pixel to the next. If you have a multicolor graphic file, you should apply this filter to ensure color transitions stay within allowable limits. This filter may be applied as many times as you like. However, the fine details in the graphic will diminish with each successive pass of the filter.

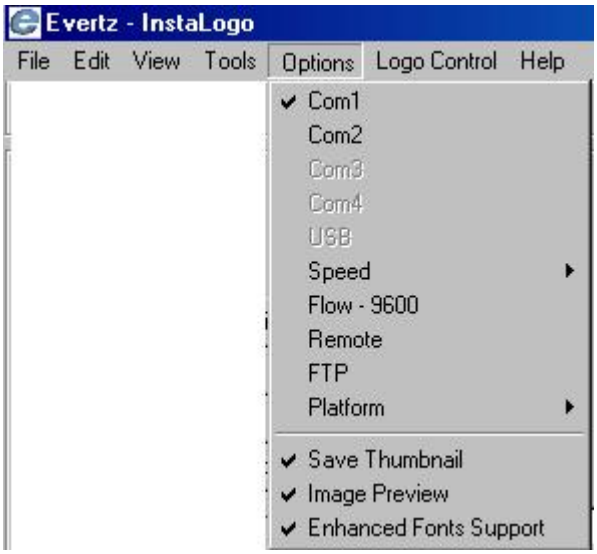
Soft Key: This one-pass filter smoothes the transition points from Background to Fill. If you've selected a Key Signal Color for your graphic and want to create a transparent logo, apply this filter to the Key. When the Auto Filter Key is enabled InstaLogo™ automatically applies this filter where appropriate. If you supply a separate key file along with your logo fill, you may still have to apply this filter. Please see the Creating Quality Logos Primer.

Both: This option selects both the Low Pass Color filter and the Soft Key filter.

Auto Filter Keys: This toggle switch enables or disables the application of the soft key filter. If you disable the filter you will experience hard transition points from background to fill and the logo will appear to crawl around the edges. InstaLogo™ remembers the state of this button even if you close the program. It is recommended that you don't change this setting.

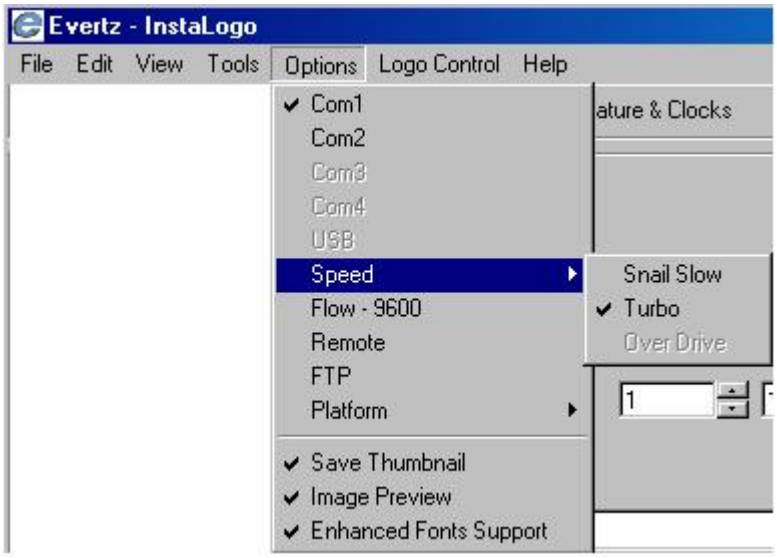
Auto Filter Color: A process for automatically filtering the computer RGB data for video domain every time a color logo is created. Recommended to be ON to avoid inserting non-standard colors into the video stream.

2.10.5. Options Menu



Select the appropriate port (COM1, COM2, USB, FTP) prior to loading logos in the logo inserter. USB is the Default setting for 9525.

When InstaLogo™ starts it automatically detects up to four communications ports installed in the PC. If the menu for the port is unavailable ("grayed out"), it's possible a device is already using the port or the port is not installed. A port may be in use when InstaLogo™ starts, and then be released after a time. However, InstaLogo™ only checks the port status when the program starts, so to access the newly-freed port, InstaLogo™ must be re-started.



Speed: Snail Slow: 9600bps
Turbo: 57,600bps
Over Drive: 12Mbps (Default USB)

Flow-9600: Refers to serial communications flow control, which is platform dependent. 9600 series units must be set to 9600; 9500 series units must be set to 9500.

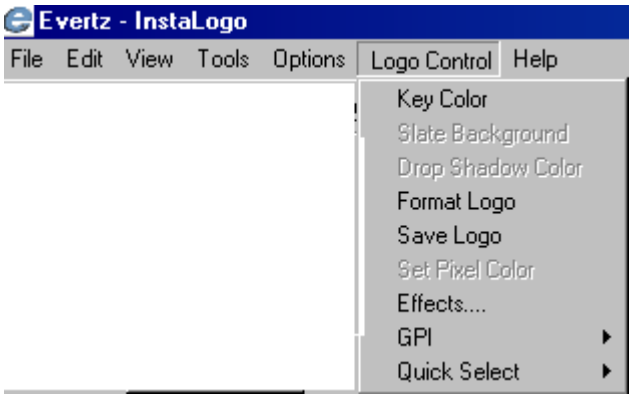
Remote: This is a feature for use with the obsolete USB enabled 9500 series products.

FTP: Check this option to use the Fast Ethernet option. Only valid if an IP address is entered and routing to the logo inserter has been established. If you can PING the logo inserter successfully, then a valid connection exists between it and your PC.

Platform: Sets up the InstaLogo interface for creating either 9500 or 9600 series. This will change the Graphic User Interface you see, depending on what features your Logo inserter is capable of.

For example, you cannot make time and temperature logos for a 9500 series. If the temperature option is disabled, your Platform setting may be at 9500.

2.10.6. Logo Control Menu



Controls aspects of the format function and effects related to the logo display.

NOTE: after loading a logo you can right-click on the logo to access to the Logo Control menu.

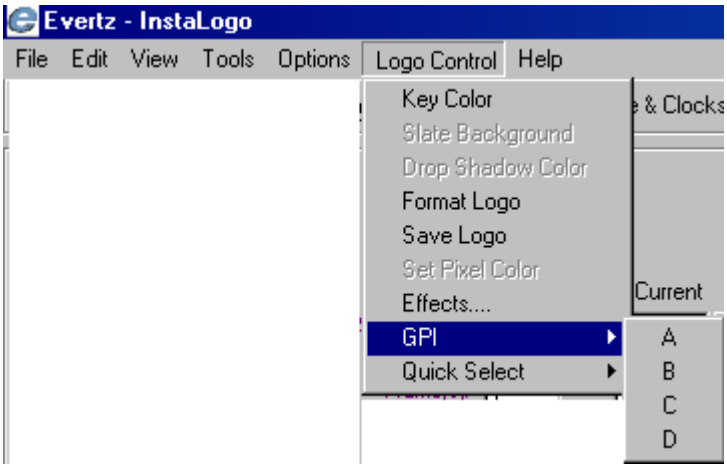
Key Color: Select Key Color to set the background color for the format function. The easiest way to do this is to point to the desired background color with the mouse and "Right Click" on the Logo, then select the Key Color option. Ensure that the Key Color only appears at places where you want full transparency with respect to the video. If your background color appears anywhere in the logo graphic it will also be considered as background and dropped out of the logo. If you supply a Key file you do not have to select the Key Color.

Drop Shadow Color: Disabled

Set Pixel Color: Disabled

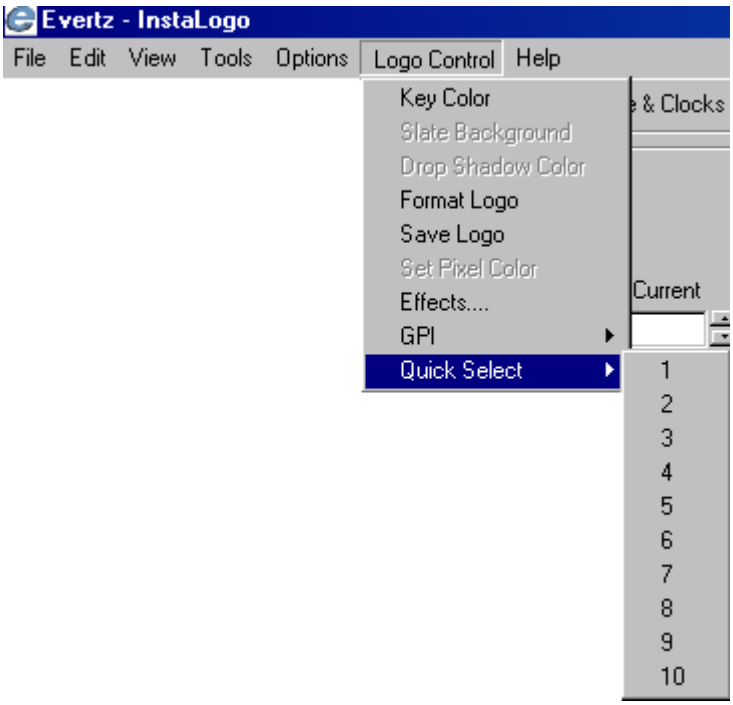
Effects: Selecting Effects allows you to control the display aspects of the logo after the logo is downloaded to the logo inserter.

GPI:



Allows you to select the GPI trigger for the logo. If you download a logo to the inserter with a GPI that is already allocated to an existing logo, the original GPI will be replaced by the newly downloaded logo. The original logo will remain in the logo inserter, but will not have a GPI assignment. The GPI can be reallocated from the front panel of the logo inserter.

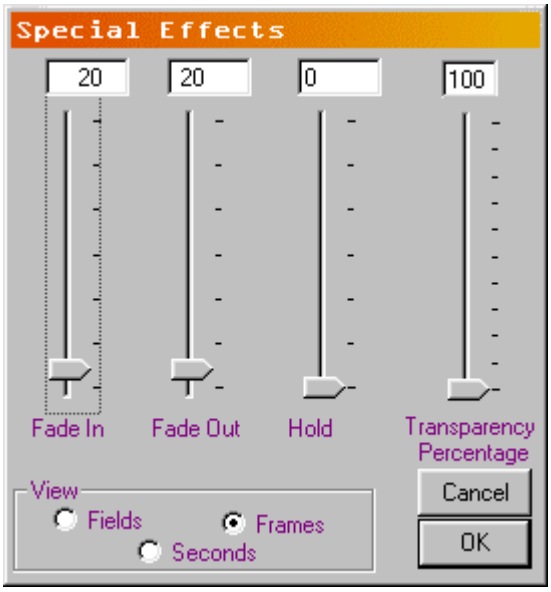
Quick Select:



Allows you to associate a logo with a Quick Select button on the front panel of the logo inserter. If a logo is already assigned to a particular Quick Select button, the newly downloaded logo will replace the originally defined Quick Select setting. The original logo will remain in the logo inserter, but will not have a Quick Select assignment. Quick Selects can be re-assigned from the front panel setup mode of the logo inserter. (Option only valid for models equipped with Quick Select keys)

2.11. MISCELLANEOUS

2.11.1. Effects



Fade In: Controls the length of time required for a logo to display on the video screen. A zero setting makes the logo "pop" on the screen; a higher setting causes it to fade in slowly.

Fade Out: Controls the length of time required for a logo to dissolve from the video screen. A zero setting causes the logo "pop" off the screen; higher setting causes it to slowly fade.

Hold: Controls the length of time the logo is displayed on the video screen. A setting of zero holds the logo on until the **Fade Out** button is pushed or a GPI goes inactive.

Transparency: This setting controls the maximum Transparency level of the logo graphic. A setting of 100% means the logo is fully keyed over the background video.

View: Changes the text display boxes at the top of the three Special Effects control bars. They apply to Fade In, Fade Out, and Hold. The valid settings are as follows.

Field: maximum of 600.
Frames: maximum of 300.
Seconds: maximum of 10.

Buttons:

OK: Accepts the Special Effects settings and closes the window.
Cancel: Discards all changes made and closes the Special Effects window.

2.11.2. Status Bar

The Status bar is located at the bottom of the application and is only visible when the application is maximized. The information displayed is intended for troubleshooting and user verification only.

The Status bar has three sections. The first section shows the Com port, Baud rate, and Settings for the communications port. These settings are changed during the download process depending on the speed settings selected from the Options dropdown. The status bar will not reflect these changes.

The second and third sections contain a visual reference as well as a textual description of the status of particular functions in the program. Please refer to the following table for a description of the status bar items.

Green	Status OK or process complete
Yellow	Status processing
Red	Status busy, do not interrupt
Message	**Color**
"Data Converted"	Green
"File Transfer Enabled"	Green
"Formatting Logo"	Red
"Getting Key"	Red
"Getting Key Signal Data"	Yellow
"Getting Logo"	Red
"Getting Logo Pixel Data"	Yellow
"Interlacing Pixel Data"	Yellow
"Key Retrieved"	Green
"Logo Data Created"	Green
"Logo Data Pack Sent"	Yellow
"Logo Reformatted"	Green
"Logo Retrieved"	Green
"Logo Sent"	Green
"Selection Not Correct"	Yellow
"Writing Logo Data"	Red
“Frames Analyzed”	Yellow

Table 2–2: Status Bar Indications

2.11.3. Messages

"Logo File " & Filename & " Transferred" The file was sent to the logo inserter successfully.

"Hardware Memory Error, Please delete older logos before sending new ones. Error 01" There are too many files in the logo inserter. Please delete one before sending another.

"Error writing " & Filename & " to flash. Error 02" There was an error writing the logo data to the logo inserter file system. Send the logo again. If the problem persists please contact Evertz Customer Service.

"Error Closing " & Filename & " Error 03" There was an error writing the logo data to the logo inserter. Delete an older file and send the logo again. If the problem persists please contact Evertz Customer Service.

"Error in communications, Retransmission failed. Retry transfer at slower speed, or fade out Logos" The maximum retransmission level was exceeded, possibly caused by a bad cable or other hardware problem. Fade the logo out to free up Inserter processor time or lower the transmission speed. See “Speed” in the Options menu for more information.

"Problem with communications Protocol Reset detected" Communication between the logo inserter and the PC were interrupted. Transfer the logo again at a lower speed. If the problem persists please contact Evertz Customer Service.

"Unknown Device, Check Communications" InstaLogo™ can't understand the data from the connected device. Verify that the logo inserter is connected to the same port specified in the Options drop down menu. Also verify that the cabling is correct.

"Error establishing communications, please check connections" InstaLogo™ can't understand the data from the connected device. Verify that the logo inserter is connected to the same port specified in the Options drop down menu. Also verify that the cabling is correct, and that the logo inserter is powered on.

"Not a Valid …, or File Corrupt" The file you attempted to open may contain invalid or corrupt data. Obtain a new file and try again, or convert your data to the supported file type.

"Key File must be the same width as Fill File" Associated files must be of the same size and type. All key and fill files must be 24-bit and be the same size.

"Key File must be the same height as Fill File." All key and fill files must be 24-bit and be the same size.

"Only Uncompressed … files are supported at this time, Please contact Evertz for an upgrade." Some compression algorithms lose data. Please use uncompressed files only.

"Import failed, error reading file" There was a problem reading the file. Please try again or obtain a new copy of the file.

"Please Get a logo to Format" You must load a logo before you can format it. Please refer to the Primer on Creating Logos included with this document.

"Please select a section of the logo to Format" You must select a section of the graphic before formatting it. Check the box(es) in the section(s) you wish to format.

"Improper selection, Selection must be 1 or 2 boxes wide only" Your current version of the hardware supports keying of logos 1024 pixels. This means you may only select 2 box widths in the 720p or 1080i modes.

"Please Format logo to ensure size compliance before Save Function." You must format your logo prior to saving the Logo in the YCbCr format. Please refer to the Primer on Creating Logos.

"Standard not supported" The current version of the software does not support the selected standard. Please select a different standard.

"Current com port selection is not valid" The port specified on the Options menu is invalid. Please check your port and restart InstaLogo™.

"Key already loaded, Please get a new Logo" You may only associate one Key file with one Fill file. If you would like to associate a new Key file, reload your original Fill file.

"Port not functioning, please try another port" The selected port is not responding. Please choose another port from the Options menu.

"File Extension not Recognized" You have selected a file with an unrecognized file extension.

"Only Evertz logo Files may be transferred at this time. Please ensure the file has an .evl extension." All file extensions other than .EVL are ignored.

If you receive any errors referring to "DIB" try using a PC with a PCI or AGP video card. Version 2.0.2 of InstaLogo™ uses Raster Operations for image manipulation. The ROP functions are included in the Windows API and will function on all versions of Windows. However, these functions rely on the underlying hardware. If your video card is not capable of a given function it will attempt the function anyway or return a "DIB" error to InstaLogo™. Please contact Evertz technical support if you have any further questions.

2.11.4. Delete a Logo

If network connections are correct, but PING is successful, the unit may be full. Make room for another logo by deleting a previously installed logo.

Click the Windows **Start** button. A menu opens.
Click **Run**. A pane opens.
Type "ftp xxx.xxx.xxx.xxx" without quotation marks, where the x represent the IP address of the logo inserter. Click **Okay**..A second pane opens.
Press the **Enter** key. You will be prompted for a user name and password
Press the **Enter** key twice. "User logged, proceed" appears on the command prompt.
Type **dir.** The logo list with files sizes appears.
Type "delete filename", substituting the name of the actual file you wish to delete for "filename", and without quotation marks. "Delete Successful" appears at the command prompt.
Close the pane and try accessing the logo inserter again.

CHAPTER 3: NOMAD™ OPERATION
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3. NOMAD™ OPERATION

3.1. WELCOME TO NOMAD™

Nomad™ software integrates the speed of fast Ethernet networking with the ease of 'drag and drop' functionality, delivering a centralized access point to Evertz keyer products. This software allows you to upload media files using the industry standard File Transfer Protocol (FTP) to one or many units, simply by clicking and dragging an item to the device tree.

Move media items from one device to another using the same easy drag and drop technique. By configuring complex multi-unit installations into custom device groupings, media content can be automatically uploaded to all units in one easy step.

Nomad™ software is also the control center for entering crawl text on units equipped with the crawl option. Enter or import text from a text file, then control the crawl location, crawl rate, font, size, and colors. Crawl information can be sent to one or many units or groups already defined within the main Nomad™ device tree.

You can also use Nomad™ to perform firmware upgrades using FTP over an Ethernet connection to one or more units simultaneously. This greatly simplifies maintenance of the units in a complex multi-unit installation.

3.2. NOMAD™ OVERVIEW

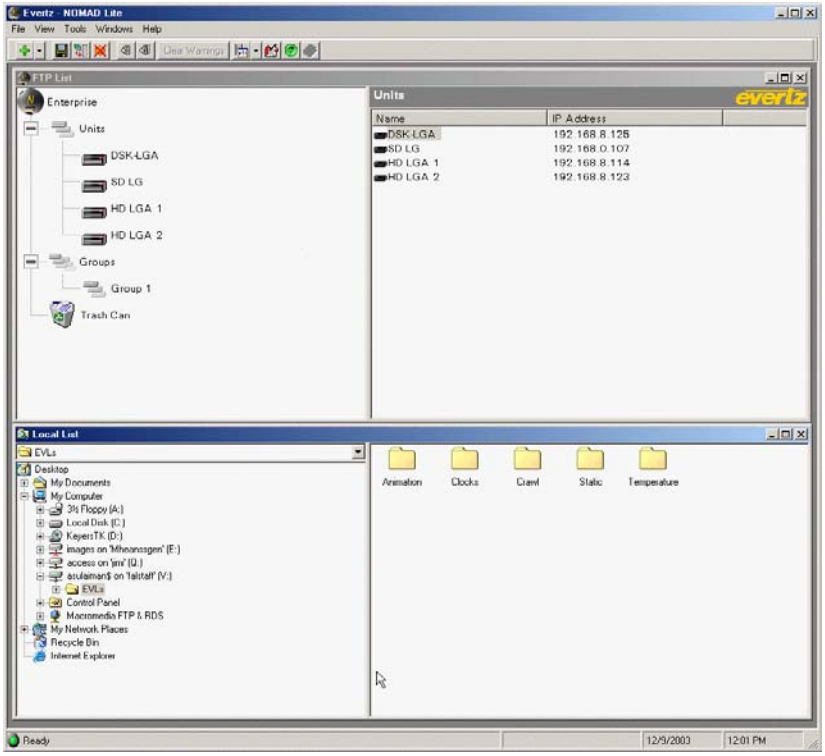
When you first open the Nomad™ software you are presented with the main Nomad™ desktop window, comprised of upper and lower windowpanes. The top pane is the *FTP List* and the bottom pane is the *Local* List.

3.2.1. FTP List Pane

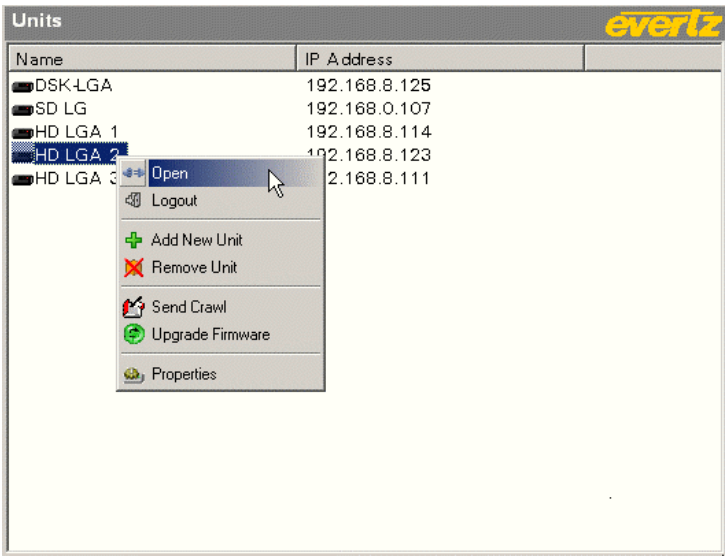
The *FTP* List pane is divided into left and right panes. On the left is a FTP tree list of the keyer units and groups of units that are currently defined. The list is organized as a tree with the Nomad™ enterprise shown at the top.

The *Units* branch shows all the units that are currently defined. The *Groups* branch shows all the groups of units that are currently defined. Nomad comes pre-configured with one unit and one group.

Place Deleted items in the *Trash Can*.



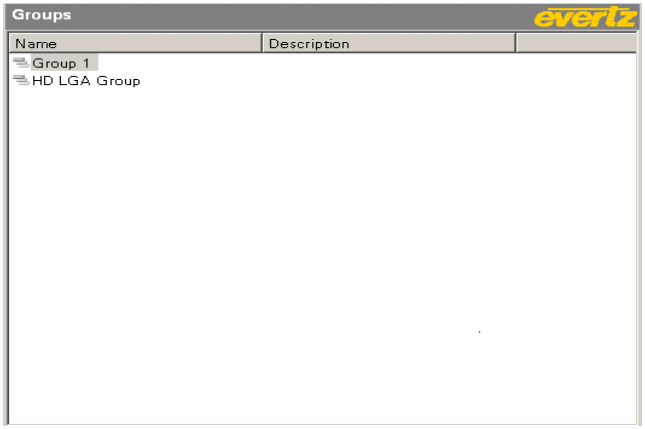
The right pane shows an expanded view of the branch or leaf in the FTP tree that is currently selected in the left pane. Highlight by single clicking on the *Units* node in the FTP tree to see a list of units and their IP addresses in the right window. Right clicking on an individual unit in the *Units* pane allows you to perform additional functions on that unit.



Most keyer hardware has a *Boot* folder that is read only, and a built-in compact flash media folder that shows the serial number of the Compact Flash device. Older keyer units do not have the Compact Flash media folder.

Clicking on a Compact Flash unit in the FTP tree expands the unit branch to show the media folders in that unit. The right pane shows a list of the available media folders within the unit.

Click on the *Groups* node in the FTP tree to see a list of defined groups. Right click on a group to perform additional functions related to a specific unit



Click on a group in the FTP tree. The group branch expands to show the units in that group. The right pane shows a list of units and IP addresses that are available within the group along with their IP addresses.

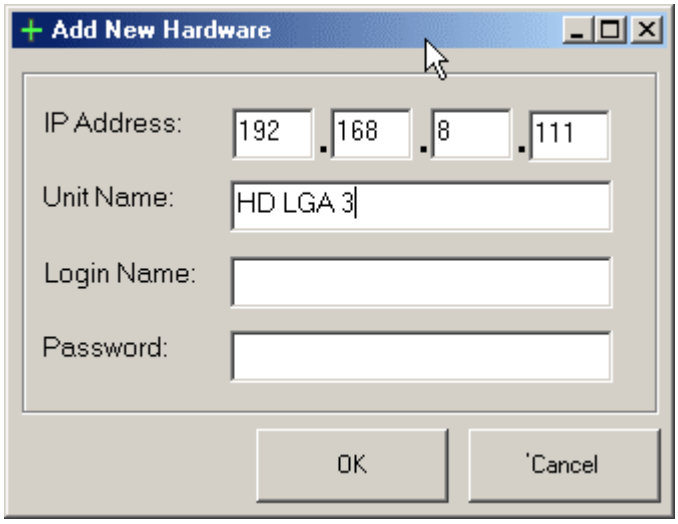
3.2.2. Local List Window

The *Local* List window is divided into left and right windows and shows the file system on the computer that the Nomad™ software is running on, and allows you to drill down to the individual media files on the computer or any network drives accessible to the computer. This window is organized in a similar fashion to the Windows Explorer windows with the directory tree on the left and the details of the selected node on the tree on the right. You can navigate these windows in the same way as you would in the Windows Explorer software.

3.2.3. Adding Hardware Units to the FTP Tree

Before Nomad™ can communicate with a keyer hardware unit in your system, the unit must be added to the list of connected units in the Nomad™ FTP tree.

Press the arrow beside the + button and select *New Unit* from the menu. The *New Unit* window opens.



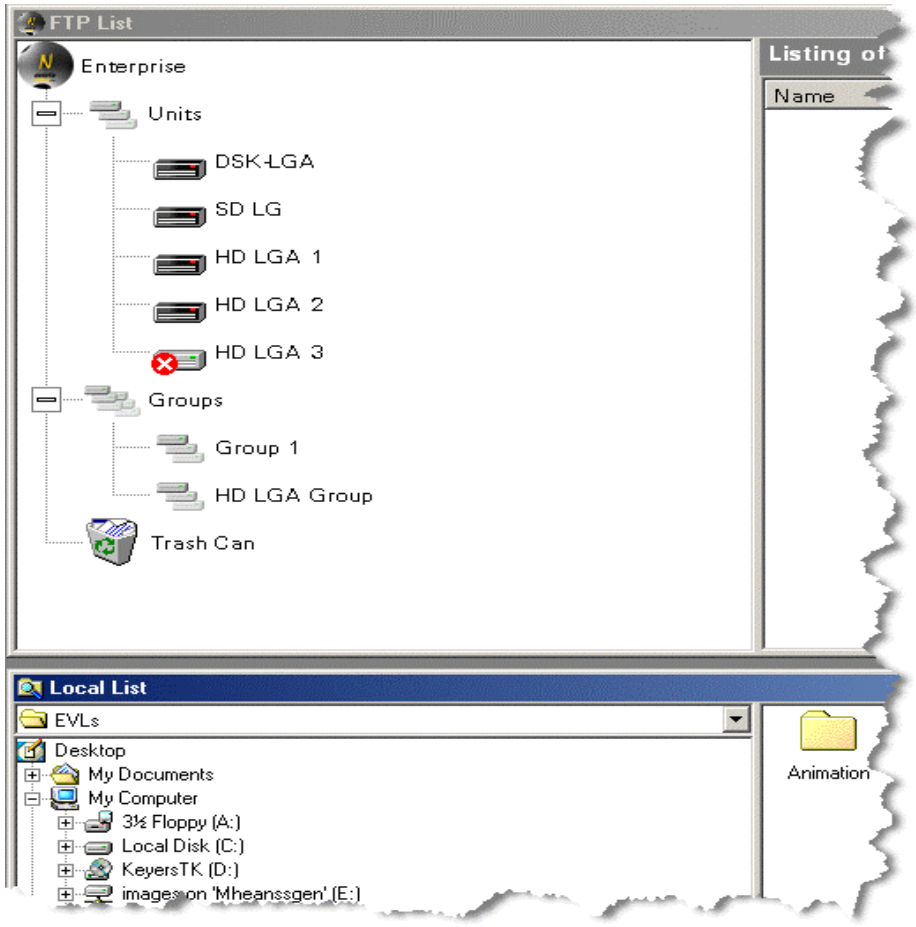
Enter the IP address of the keyer unit and a unit name. If no unit name is entered, Nomad™ inserts the IP address as the name. You may leave the Login Name and Password blank. Nomad™ automatically inserts the default anonymous user information.

Press the **OK** button to complete the process of adding the hardware unit. The unit appears in the *Units* branch of the FTP tree and also in the *Units* window.

You may change the unit name later by selecting the unit properties, but you cannot change a unit IP address after it has been added to Nomad™. To change the IP address of a unit you must delete the unit and add one with a different IP address.

When you click on a unit icon, Nomad™ attempts to establish communications with that unit. If Nomad™ is successful, the unit opens and displays a list of its media folders. If you receive no response after clicking a unit icon, Nomad™ is searching for the unit.

After approximately one minute Nomad™ stops attempting to find the unit and places a red X beside that unit icon, indicating that Nomad™ cannot communicate with that unit. Inspect the Ethernet cabling to the unit, and ensure that the IP address entered into Nomad™ is the same as that entered into the keyer unit.



3.2.4. Deleting Keyer Units from the FTP Tree

To delete a unit, click the *Units* node of the FTP tree. A list of units in the FTP Tree opens in the right pane.

Click the unit icon in the *Units List pane* on the right side and drag it over the *Trash Can* icon in the left pane.

You can also delete a unit by right clicking on it and selecting the *Delete* option. A dialog box appears asking you to confirm the unit deletion.

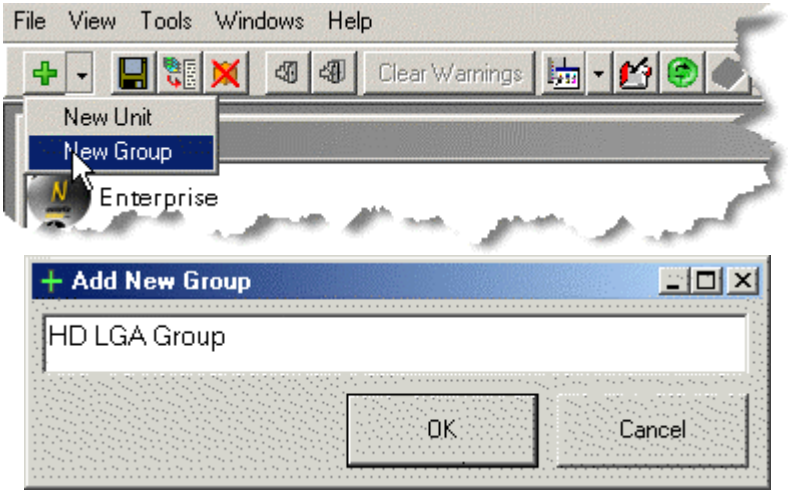
Multiple units can be deleted at the same time using the same techniques.

When the delete process is complete the *Units List* window will be refreshed to show the remaining units.

3.2.5. Adding Groups to the FTP Tree

Managing multiple keyer units can be simplified by making logical groupings of units, allowing Nomad™ to send the same media files to several units at the same time.

Click the arrow beside the + button and select *New Group* from the menu. The *New Group* window opens.



Enter a name for the group and click **OK**. The new group appears in the *Groups* branch of the FTP tree. Click on the group name to show the units that are in a specific group.

Add a unit to a group by dragging that unit icon from the *Units* branch of the FTP tree or from the *Units* windowpane onto the desired group name.

3.2.6. Deleting Groups from the FTP Tree

To delete a unit, click the *Groups* node of the FTP tree. A list of groups in the FTP Tree opens in the right pane.

Click the group icon in the *Groups List pane* on the right side and drag it over the *Trash Can* icon in the left pane.

You can also delete a group by right clicking on it and selecting the *Delete* option. A dialog box appears asking you to confirm the unit deletion.

Multiple groups can be deleted at the same time using the same techniques.

When the delete process is complete the *Groups List* window will be refreshed to show the remaining units.

Deleting a group does not delete the unit within that group

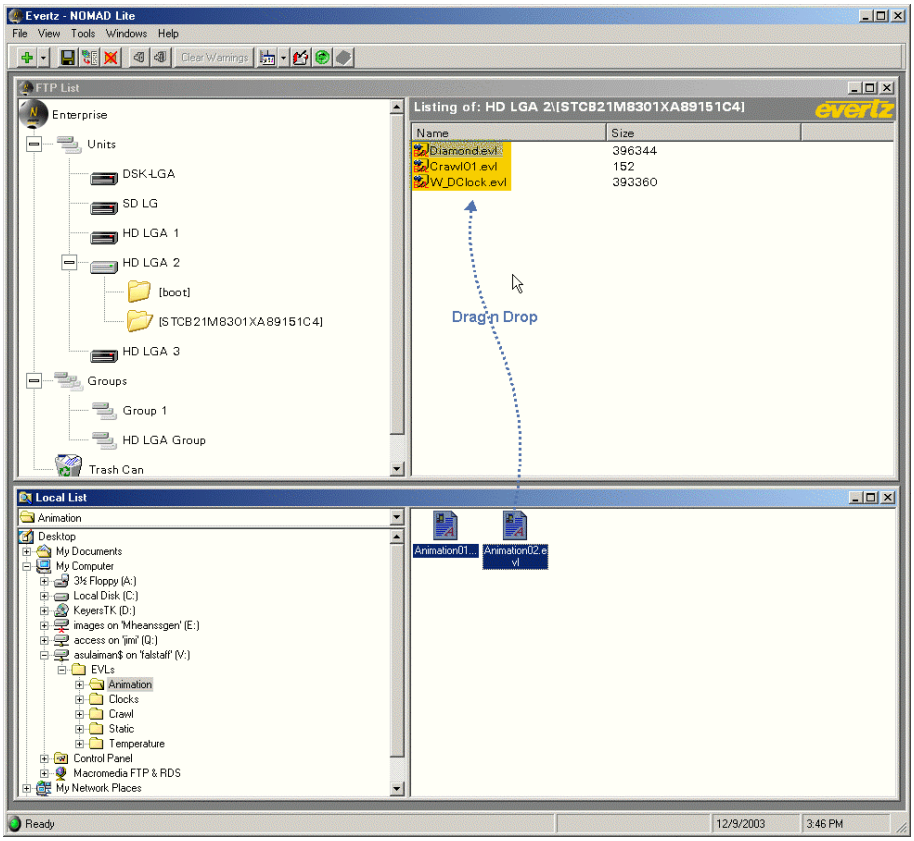
3.2.7. Uploading Media Files to Keyer Units

To upload media files navigate to the source folder in the *Local List*, the left windowpane of Nomad™. Click on the folder in the Local file tree. Files in the selected local or network folder appear in the right pane of the *Local List* windowpane.

Navigate to the destination folder of the unit you want to copy the file to. Click on the unit icon in the *Units* branch of the FTP tree. If there are multiple media storage device folders in the unit, click on the desired destination folder in the FTP tree. In the right windowpane appears a list of files in that media folder.

To copy a media file or multiple files to this folder, click on the file and drag it to the right pane of the FTP List window. A dialog box shows the progress of the file copy. When the copy process is complete the file list in the destination windowpane is refreshed to show the new files.

You can also drag files directly to any unit. By default the file will be placed on the internal flash memory media folder within the keyer unit.



To copy a media file or multiple files to a group of units, click on the file and drag it over the desired group icon in the FTP List windowpane.

3.2.8. Deleting Media Files from Keyer Units

To delete a media file, navigate to the *Units* branch of the FTP tree. Click the icon of the source folder that contains the unit you wish to delete. If there are multiple media storage device folders in the unit, click on the desired destination folder in the FTP tree. The right windowpane shows a list of files in that media folder of the unit.

Click on the file and drag it over the *Trash Can* icon in the left side of the *FTP List* pane.

You can also delete files by right clicking on the file or group of files and selecting the *Delete* option. A dialog box appears asking you to confirm the file deletion.

When the file delete process is complete the file list in the source window is refreshed to show the remaining files.

3.3. CONTROLLING THE TEXT CRAWL OPTION

The crawl option allows you to scroll text across the video picture to announce school closings, weather alerts, stock prices, or any other messages that you want to convey to the viewers.

Use Nomad™ to control the crawl feature of keyer units in which the crawl option is enabled. Input the text into the *Crawl Editor* window and set the crawl vertical position, font type, font size, font color, background color, scroll rate, and repeat count.

Nomad™ allows you to save your commonly used crawl settings along with the text and recall them for different applications.

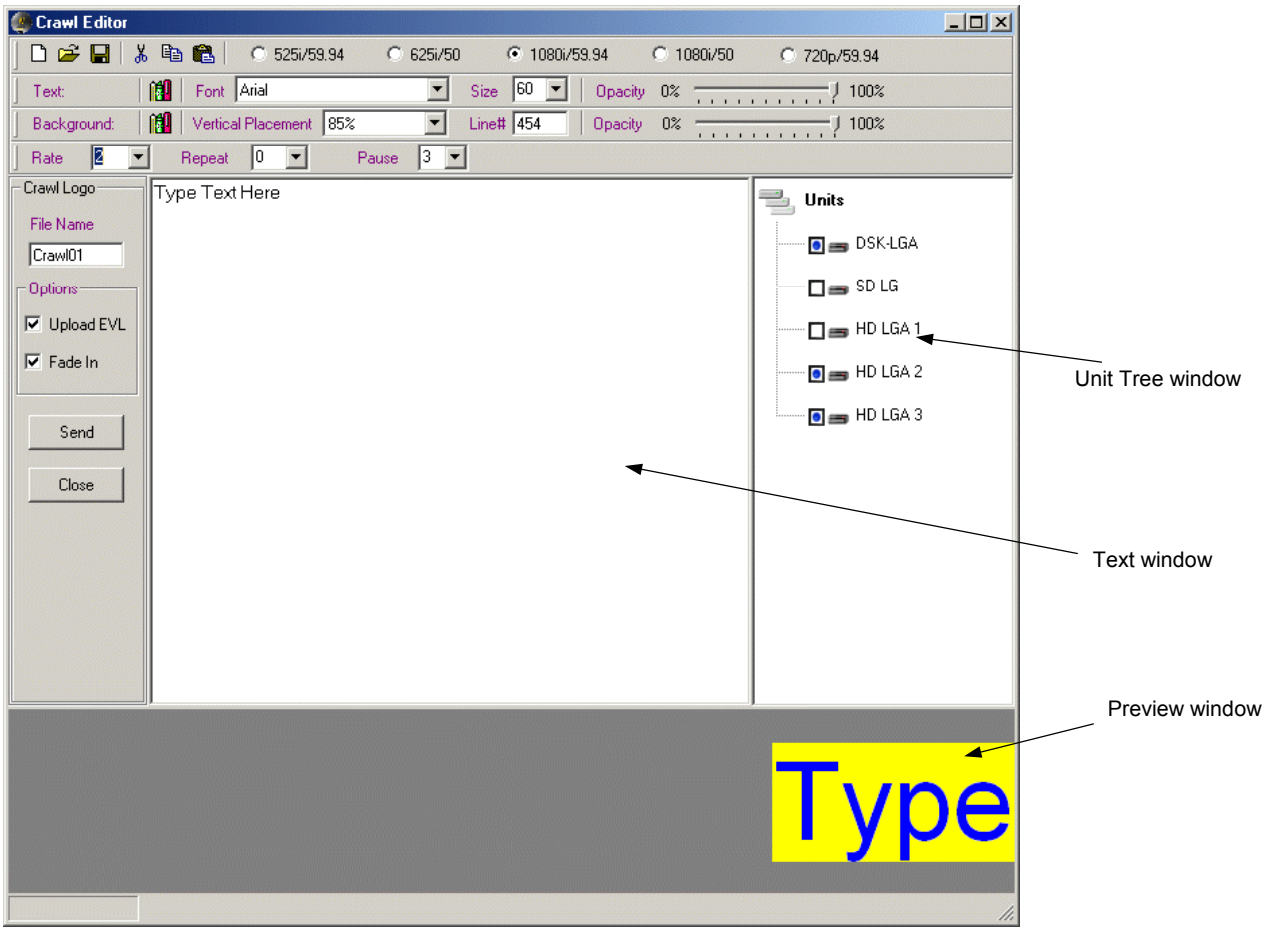
Preview the text message crawl before sending it to the hardware for on-air presentation. The crawl object is treated as a media file, so it can be uploaded to multiple units and faded-in under Nomad™ control.

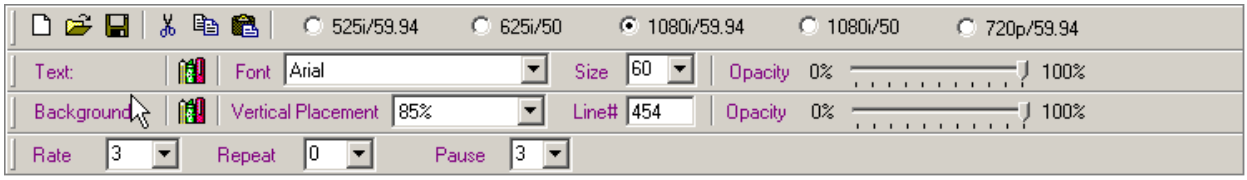
3.3.1. Crawl Editor Window

To open the *Crawl Editor* window click on the *Crawl* button  on the toolbar. You can also right click on any unit or group and select the *Send Crawl* option.

To send a crawl to multiple units, all must be operating the same video standard.

The window is divided into two large panes, with crawl controls on the left side. The left pane is for *Text Entry*. The right pane shows a list of available units. When selected, the unit is highlighted and a dot appears in the box.





Select the video standard used for the keyer units that will receive the crawl.

3.3.1.1. Setting the Crawl Text Attributes

Use items on the *Text* toolbar to control the crawl text.

Use the *Font* control to set the font for the crawl. If the font that you choose is not installed in the unit(s), you must manually upload it to them.

You are responsible for ensuring compliance with licensing requirements of the font files that you use

Set the font size, measured in video lines, from one of the font sizes listed.

Use the *Text Color* button to set the color of the crawl text. Click on the *Text Color* button to open a standard Windows color palette.

Use the *Opacity* slider control to set the opacity (inverse of transparency) of the text. A 100% opacity setting makes text completely opaque. A 0% opacity setting makes text completely transparent.

3.3.1.2. Setting the Crawl Background Attributes

Use items on the *Background* toolbar to control the crawl background.

Use the *Vertical Placement* control to set the vertical position of top of the crawl. The vertical position is a percentage of screen height.

Or use the *Line #* control to set the line number of the top of the crawl directly.

NOTE: the number of video lines shown in the *Font Size* control is visible above the bottom of the screen. Crawls are usually positioned inside the *Safe Title* area of the screen.

Use the *Background Color* button to set the background color of the crawl. Click on the *Background Color* button to open a standard Windows color palette.

Use the *Opacity* slider control to set the opacity (inverse of transparency) of the background. A 100% opacity setting makes the background completely opaque. A 0% opacity setting makes the background completely transparent.

3.3.1.3. Setting the Crawl Scroll Attributes

Use items on the *Scroll* toolbar to control how the crawl moves across the screen.

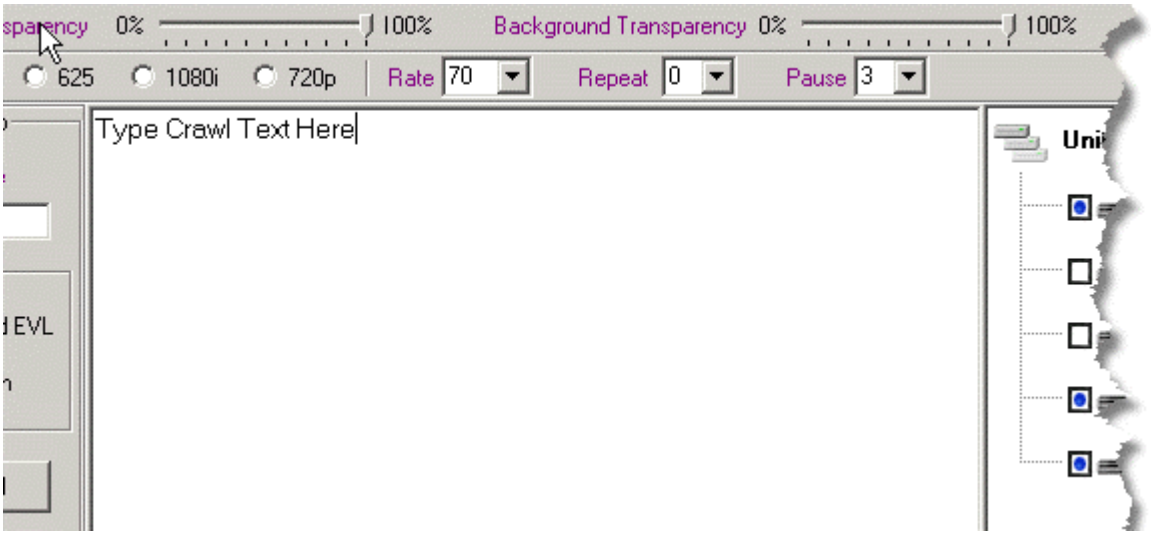
Use the *Rate* dropdown to set the number of pixels that the text moves per video field (frame for 720p).

Use the *Repeat* control to set the number of times the text scrolls across the screen. If set to 0 the text scrolls continuously.

Use the *Pause* control to set the length of time (in seconds) before a new crawl begins.

3.3.1.4. Entering Crawl Text

To enter the text for the crawl, type into the *text* area in the left pane. As you type, a proxy of the crawl text appears in the preview section of the crawl editor windowpane. It is rendered in the font, background colors, and scrolls at the rate you set. Use the **Cut**, **Copy** and **Paste** buttons to manipulate the text.



3.3.2. Saving Crawl Files

Save individual crawl files under different names to allow you to quickly reconfigure crawl parameters and text.

Use the **Save** button to save a crawl file.

Crawl text only can be saved as a text (.TXT) or rich text (.RTF) file.

Text and parameter settings can be saved as an Evertz Crawl logo (.EVL) file.

3.3.3. Recalling Crawl Files

Use the **Open** button to open a crawl file.

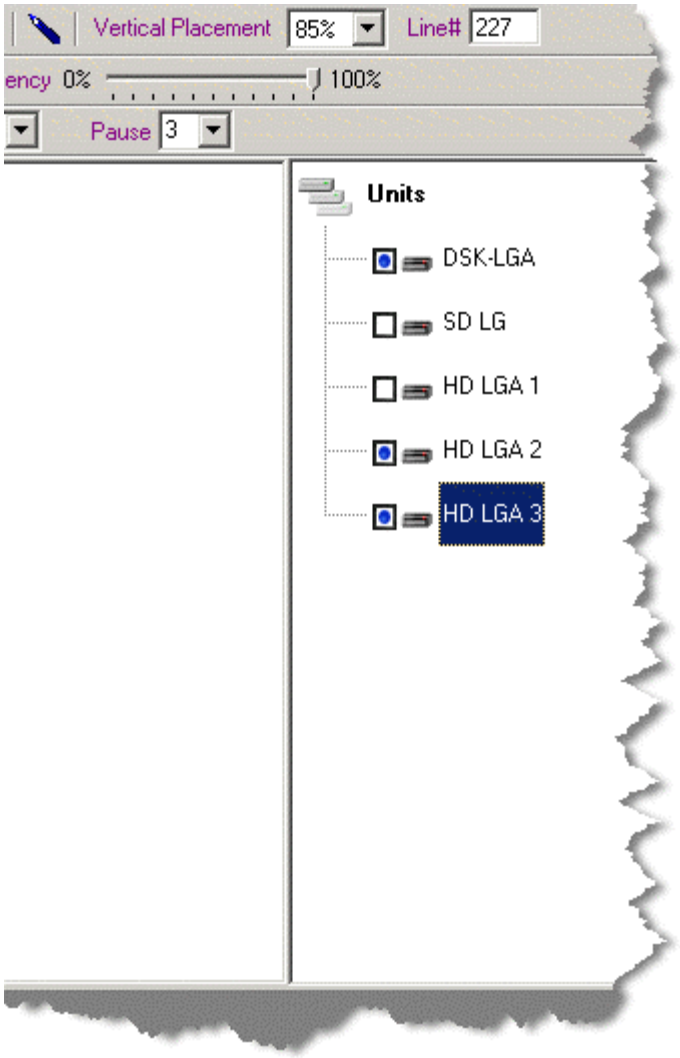
When a .TXT or .RTF file is opened the settings of the crawl window remain unchanged.

When a .EVL file is opened the settings of the crawl window are set to those of the EVL file.

3.3.4. Uploading Crawl Files to the Hardware

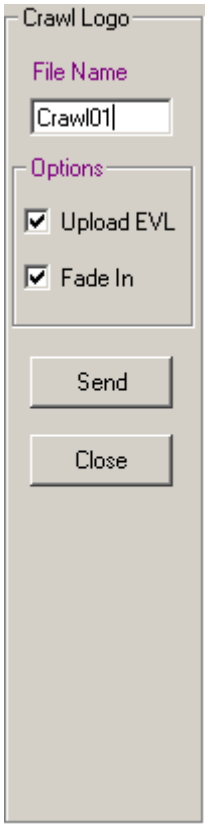
3.3.4.1. Selecting Hardware Units for the Crawl

The right pane of the *Crawl Editor* screen shows a list of all available hardware units. To select or deselect units, click on the box beside the unit name. When selected, the unit is highlighted and a dot appears in the box.



3.3.4.2. Sending the Crawl Files

Click the *Send* button to send the crawl to a selected unit. Three controls that configure what will happen when you press the *Send* button.



The *File* name shown is used to identify the crawl inside the hardware unit. You can replace an existing crawl already loaded in the unit(s), without having to delete the existing crawl, by naming the new crawl the same name as the existing crawl.

If a crawl of the same name is currently displayed in the hardware unit(s), Nomad™ fades it out before sending the new crawl to the selected unit(s).

Check the *Upload EVL* box to create an .EVL file with the name shown in the *File Name* text box. Store the .EVL file in the folder in the *Crawl Options* screen, which you can access from the *Tools* menu. Clicking the **Send** button sends the .EVL file to the selected unit(s).

Check the *Fade In* box if Nomad™ is to fade the crawl in after it has been sent to the selected unit(s).

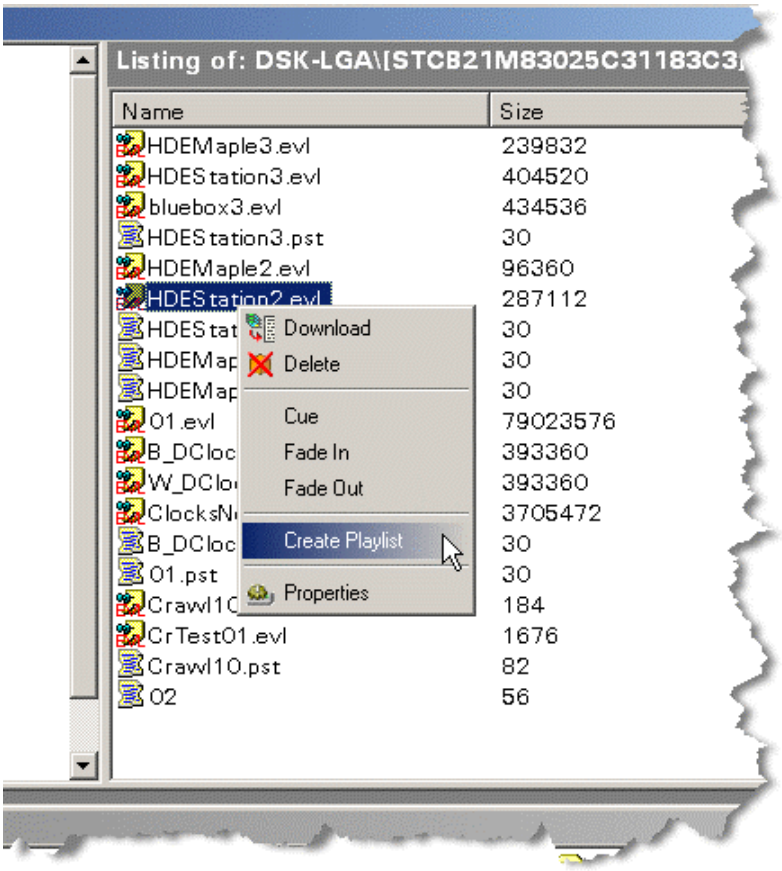
To fade in crawls that are already in the unit(s), uncheck the *Upload EVL* box **before** you click the **Send** button.

Evertz keyer units can display only one active crawl at a time. If a crawl is currently displayed in a hardware unit, Nomad™ fades it out before fading in the new crawl.

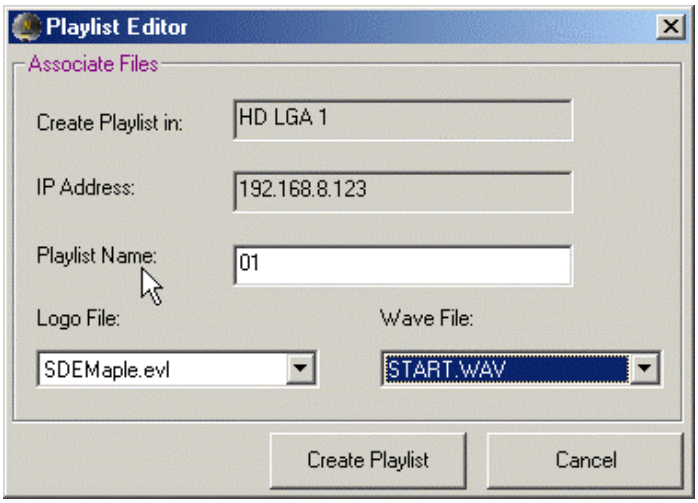
3.4. CREATING MEDIA FILE PLAYLISTS

Use Nomad™ to create and copy media file playlists in keyer units. Playlists associate logo files with audio (.WAV) files, so that the .WAV file is played when the logo is faded in. Before creating a playlist you must first upload the logo files and the audio files into the keyer unit.

To create a new playlist, right click on either the logo file or audio file that you want to use. A menu opens. Click on *Create Playlist*.



The *Playlist Editor* window opens. The keyer unit name and IP address are displayed in gray.



Click the arrow next to the *Logo File* box. A menu opens. Click on the logo file that you want to use.

Click the arrow next to the *Wave File* box. A menu opens. Click on the audio file that you want to use.

Enter a name for the playlist in the *Playlist Name* box.

Click the **Create Playlist** button to create the playlist file in the keyer unit named in the *Create Playlist In* box. The playlist associates the logo and audio files so that the audio clip will play when the logo is faded in.

Once the playlist file is created you can copy it to a local folder on your PC, a network folder, or to another unit or group of units. When copying a playlist into a keyer unit, ensure that the associated logo and audio files are both present on the keyer unit media storage file system.

CHAPTER 4: LOGO DESIGN PRIMER
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4. LOGO DESIGN PRIMER

Thank you for choosing an Evertz logo-enabled keyer product!

Evertz makes the finest equipment for displaying logos and other graphical information in standard/high definition video.

This chapter introduces a few basic principles associated with graphic information on video. It describes the images required for delivery to the InstaLogo™ software. It also provides some guidelines on preparing logos to help you get the best quality possible. If you are familiar with image drawing and preparation for video use, please review the summary at the end of this chapter.

4.1. KEY AND FILL

Evertz InstaLogo™ software formats your artwork and sends it to the logo inserter hardware. To insert an image into video two things are necessary: the image or artwork to be displayed, called the "fill"; and a black and white image that tells the hardware where to display the image and where to display the background or video signal, called a "key".

Where the key is black, the video signal is visible. Where it is white, the fill is visible. Gray areas display a "mixed" value that is partially the background video and partially the logo image, depending on the brightness of the key gray.

4.2. TYPES OF KEYS

InstaLogo™ can extract a key signal out of an image based on a color selected as the background color. This is called "chroma keying", because the selected color is used to create the key. InstaLogo™ takes an image and a color that you select and creates a key that is either black (in areas where the image matches your selected color) or white (otherwise). The resulting key is a black and white image with hard edges between the background/foreground. This is called a "hard key", because of the resulting hard edge between fill and background. InstaLogo™ "softens" the edges so as to not exceed video bandwidth restrictions.

This "self key" technique may work fine for simple images with only a few colors. But if the background has subtle changes or bleeds into the foreground, the edge between the background and fill is jagged and may not follow the contour of the fill.

For better results supply a key image created at the same time as the artwork, with the keying effect in mind. Copying the fill image and converting the foreground area to a gray level that is proportional to the desired mix value, creates a key. Softening (sloping) the edges of the key controls the "hardness" of the background/fill transition.

A key file must:
- be the same H and V size as the fill.
- have the same H and V location as the image in the fill file.
- be the same file format as the fill.
- be black and white only.
- have the same Red, Green, and Blue numbers, everywhere in the file.

4.3. TRANSLUCENCY AND DROP SHADOWS

When a logo is translucent it means that both the fill and background are visible in a mixed proportion (i.e. 60% fill and 40% background). For example, a drop shadow around an object consists of a background mixed with a color (usually dark gray).

Transparency doesn't have to be correct when designing the artwork. Logo transparency can be adjusted in three places: the original key image, the InstaLogo™™ software, and in the Evertz logo inserter hardware. Best results are achieved when the original key has the proper scaling, particularly when translucency differs across various areas.

When drawing separate key and fill, create translucency by placing gray over the desired areas. Remember that bright gray includes more fill than background, and dark gray includes more background then fill.

If your artwork does not have an associated key file, use InstaLogo™ to select a match color (chroma key). All areas of the logo with this color will have a translucent/drop shadow effect. The artist must ensure that the drop shadow color only exists in the areas where a translucent effect is desired. Otherwise, unintended holes appear. For more than one degree of translucency in the same logo, use separate key and fill files. That is why it is recommended to always use separate key and fill files.

4.4. FILE FORMATS

Modern graphics and images come in a wide variety of file formats. When considering the best format for a certain application, know that an image is only as good as its source. A highly compressed JPEG image at 4bpp (4 bits per pixel, or 16 colors) is of lower quality than a full color (24bpp) image. The most accurate format to the final representation as displayed on video is a RGB image.

InstaLogo™ delivers best results with TIFF, TGA, and BMP file formats, provided all files are saved with 24-bit color values. Keep the original artwork in a format as close to these as possible.

4.5. SHARP EDGES AND SKINNY LINES

The final product combined with video has certain limitations that are not present when the artwork was created with modern graphics software. Sharp edges, fast color changes, and small skinny lines can be created and displayed on a computer monitor, but they may not look good after being put on video and displayed on a regular TV monitor. There may be flicker on horizontal lines, banding on vertical edges, or a combination on diagonal edges.

For example, if a simple image is created in Windows Paint™, the result will have edges as described. More sophisticated drawing software has an option called "anti-aliasing" or "feathering" that automatically smoothes edges between different areas of the drawing.

Zoom close in on a sharp edge to ensure it is properly shaped. Be certain there are at least 2 pixels, horizontally and vertically, of transition between two areas. A line that is one pixel wide cannot be accurately reproduced. Make sure that all lines are at least 2 pixels wide, and that their edges are shaped.

4.6. DRAWING THE LOGO

Questions asked when designing a logo are, "How big should it be?" and "How do I draw it to display at the intended size on a monitor?"

To determine the answers, know the total picture size and the size of the logo you intend to insert.

For example, a 1080i high definition video picture area is 1920 pixels wide by 1080 lines high. To insert a logo that is 1/32 the size of the picture, draw an image that is 1920 ÷ 64 pixels wide and 1080 ÷ 32 lines high.

1920 ÷ 63 = 30.5 pixels wide
1080 ÷ 32 = 33.75 lines high

Before you start, configure your drawing package to give you a drawing area of this size.

Draw images at the proper 1:1 scaled size. Images drawn larger or smaller than required and then re-scaled do not look as good. The mathematical process of squeezing/expanding creates unacceptable results, particularly on edges.

Evertz logo-enabled keyer hardware has minimum image memory sizes. For example, the minimum size is 512 pixels wide by 270 pixels high for the 1080i version of the logo inserter. Keeping your image within one memory block size allow you to maximize the number of logos that can be held in the hardware.

4.7. POSITIONING THE LOGO

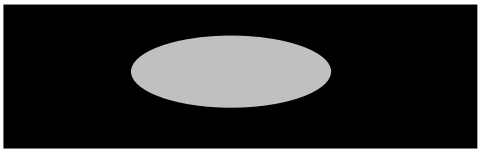
Try to position the logo as close to the actual insertion point as you can, at the time that you import your artwork. Use the InstaLogo™ software to roughly position the logo on the screen. After loading the logo into the hardware, fine-tune the logo position using the front panel controls.

4.8. FILL AND BACKGROUND EDGES

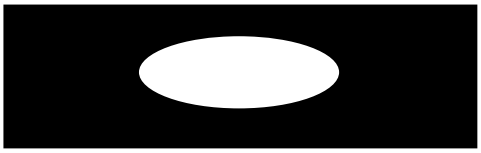
Artifacts can occur on an edge between a logo and background. These may not be obvious at first look, but if you know about them you can draw the image to avoid them.

A background like this:

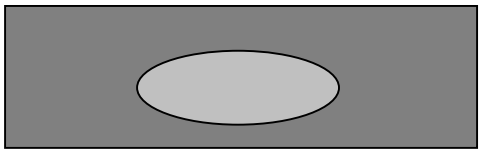
A fill like this:



And a key like this:



Produces a fill over the background with a black border outlining the fill:



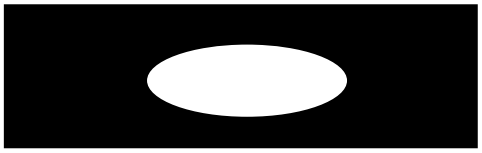
Because the fill image has a transition from the fill color to black, it overlaps the key that also has a transition, from the fill to the background. A small portion of the black around the fill shape sneaks through at the transition edge. This may or may not be a desirable effect.

A note about using this technique to create a border: if the fill has a shaped but sharp edge and the key has a shaped but sharp edge, the key shapes the already-shaped edge, creating an even faster edge. The resulting image has an overly sharp edge, and edge-ringing artifacts may occur!

If a black border is not the intended result, try:

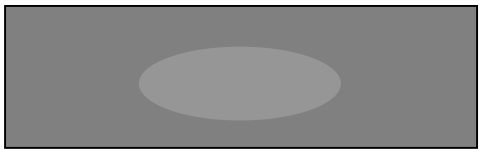
A background like this:

A key like this:



A fill that is bigger than the key, like this:

To get the fill without the black border:



We can use this approach because the key provides the proper edge shape to the fill.

Without a key file it is difficult to avoid an edge effect. One technique is to surround the fill with a color that is just slightly different, but unique, from the image. Instead of black or other contrasting color peeking around the image, the result is a subtle color difference that is not visible.

4.9. SUMMARY

1. Best results are achieved when fill and key are supplied as separate files.
2. Make sure that the H/V sizes of both the fill and key files are the same.
3. Be certain that the position of both the fill and the key within the file is the same.
4. Ensure that the key file contains only luminance values (R=G=B).
5. Draw the logo on a background that is close to, but distinct from, the edge of the logo.
6. Draw logos 1:1; do not resize after drawing.
7. Try to keep the logo under the size of one block of memory (512 pixels wide by 270 pixels high). This saves memory space in the logo inserter hardware.
8. Anti-alias all edges within the logo. Do not anti-alias the outer edges where the keying takes place.
9. Keep all lines thicker than two pixels wide and two lines high. When lines are too thin, they flicker and/or have unsightly edge artefacts.
10. Format the logo and key into a 24 bit per pixel RGB bitmap image.
11. We are field one dominant and start on a Y/C co-located sample. This means that the first pixel of the first line is in the first field and the first pixel is a Y,Cr,Cb co-located sample.

5. INDEX

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