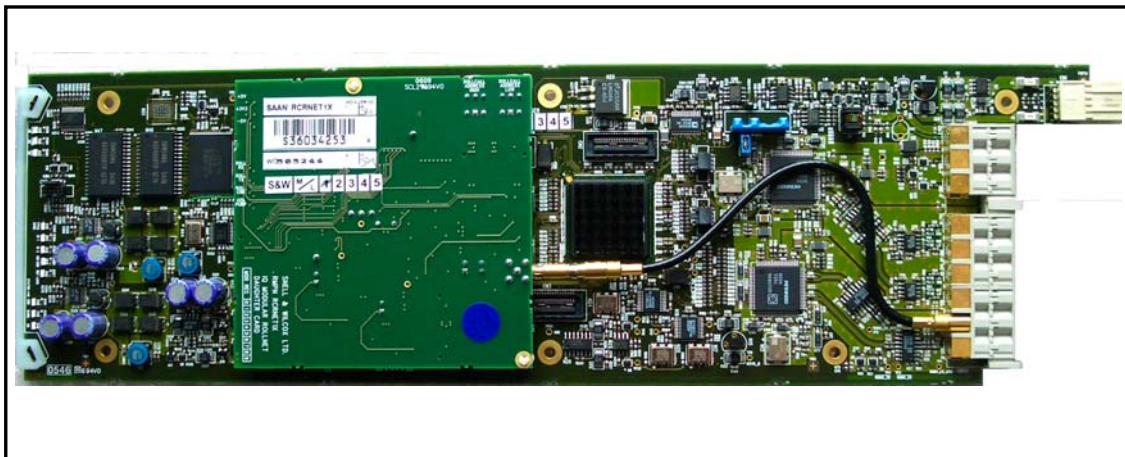


IQLOG LOGO IMPORTER

HD-SDI LOGO IMPORTER



USER INSTRUCTION MANUAL



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Acknowledgements

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Before Starting

Thank you for purchasing your new IQLOG system. This User Instruction Manual will help you through each stage of the setup, configuration and operation of the IQLOG Logo Importer. If you have any questions regarding the use and operation of your Logo Importer, please refer to the contact details listed at the rear of this manual.

Before you can use this Product

Important:

The software used to run this application has to be downloaded directly from the **Snell & Wilcox** website in the "Support/Downloads" area of the website.

Important:

In order to transfer logos to an IQLOG module, the PC must be connected directly to the gateway via Ethernet, or connected to the gateway over Ethernet using an IP Proxy Server.

Light Bulb Symbol



The light bulb symbol will appear in sections throughout this manual, it signifies a helpful hint or tip.

Overview

There are two versions of the IQLOG Logo Importer, they are:

1. The IQLOG00 provides logo insertion for both HD-SDI 1.5 Gbit/s and SD-SDI 270 Mbit/s signals.
2. The IQLOG01 provides logo insertion for SD-SDI 270 Mbit/s systems.

These units are capable of adding a static 10-bit color logo into the SDI stream at any point within 4:2:2 boundaries of the active picture. Up to 2.6M pixels of logo storage is available. Logo control is via RollCall template, GPI or RollTrack triggers, and logos can be efficiently downloaded over the RollCall network via a PC application and stored in non-volatile memory.



The user instruction manual will be broken down into 3 key sections, as described below:

Section 2 **Loading the IQLOG Logo Importer Application Software** - this section of the manual will deal with installing the IQLOG Logo Importer software.

Section 3 **PC GUI Operation** – explains how to use the Graphical User Interface (GUI). This generates the files that are suitable for download to the IQLOG00 and IQLOG01 modules.

Note:

The software can be used in a "stand alone" configuration, for example on a laptop computer that is not connected to any network, this means that logos can be processed away from any system setup.

Section 4 **Logo Transfer** - this section will deal with transferring the ingested logos over a PC network and installing them into the IQLOG module flash.

Software Installation and Using the PC Graphical User Interface (GUI)

Section 1: System Requirements

PC based system using a 1GHz processor or better

256Mbytes RAM

Windows XP™ 32bit

11Mbytes of Hard Disk Space for application files + 90Mbytes for Java J2SE runtime environment 6.0 if this has not already been installed.

Please Note:

This version of software can be downloaded directly from the Snell & Wilcox website in the "Support/Downloads" area of the website.

Section 2: Loading the IQLOG Logo Importer Application Software

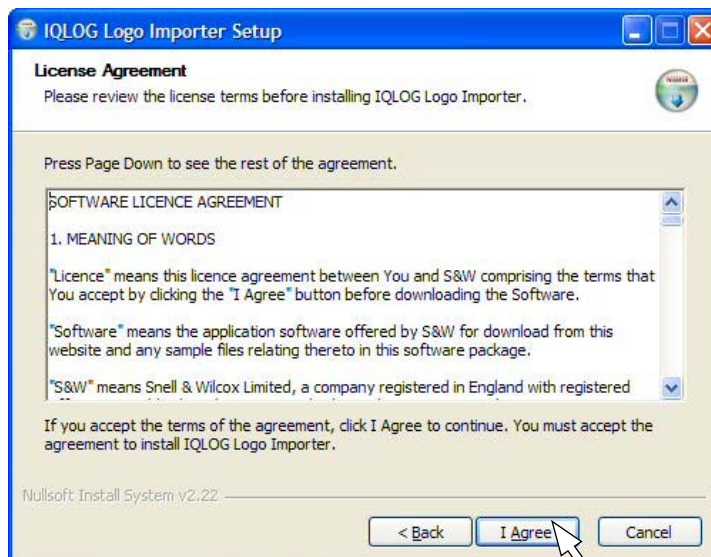
Software Installation

This is the first menu that will appear after selecting the executable file from the Snell & Wilcox website.

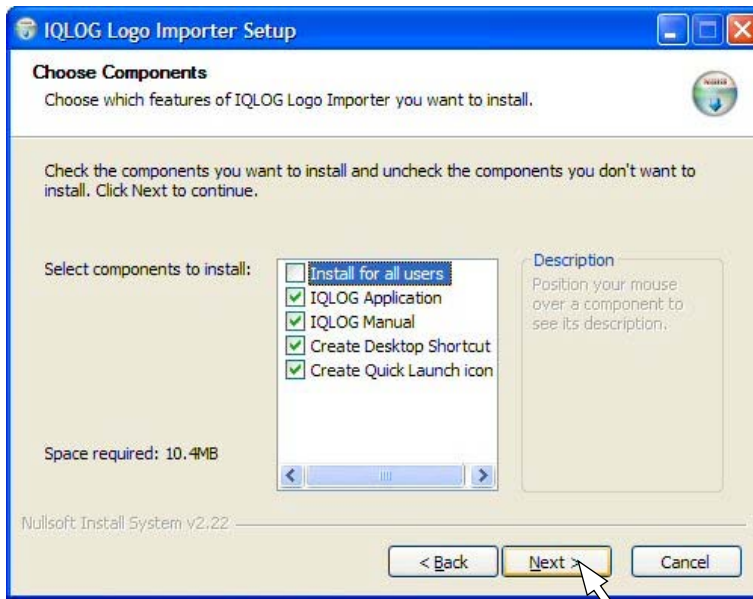


Once in to the Welcome menu press **Next** to continue.

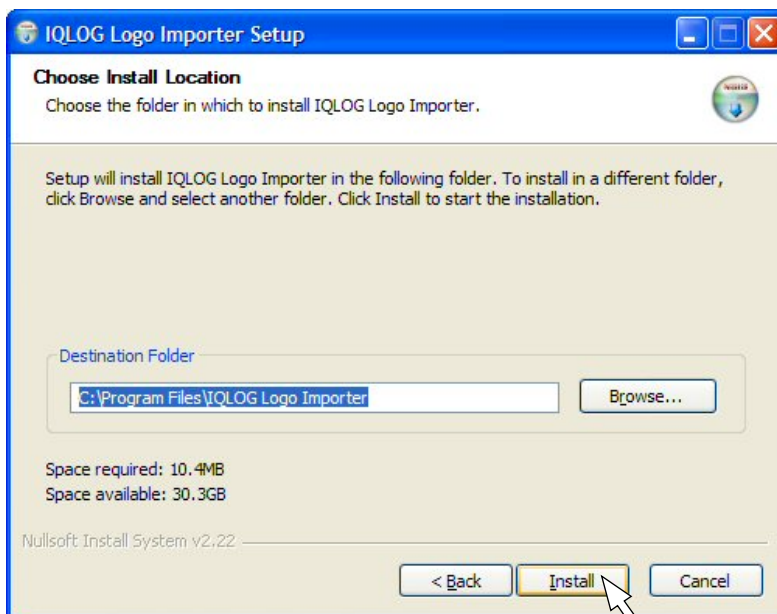
After reading the Software License Agreement, select "**I Agree**" in the License Agreement menu.



In the next menu, select the components that are required and then press **Next** to continue.



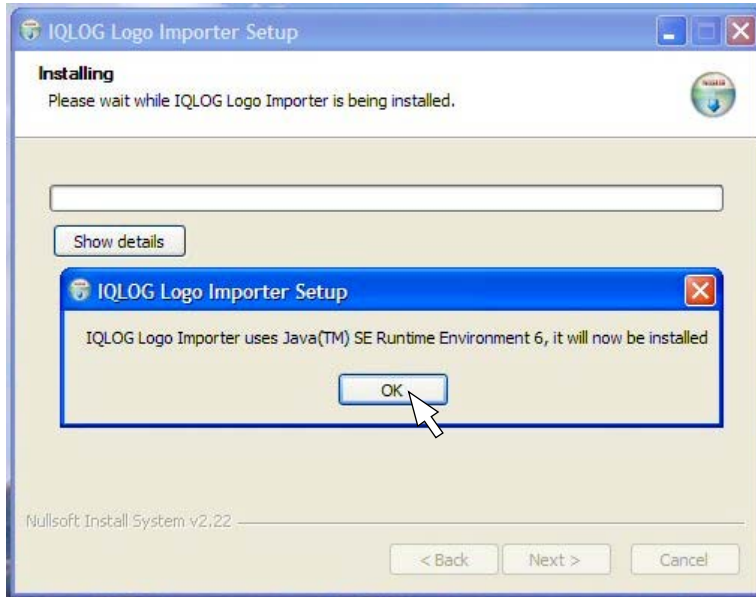
Press **Install** to install the software in the default installation location or press **Browse** to select the desired installation location.



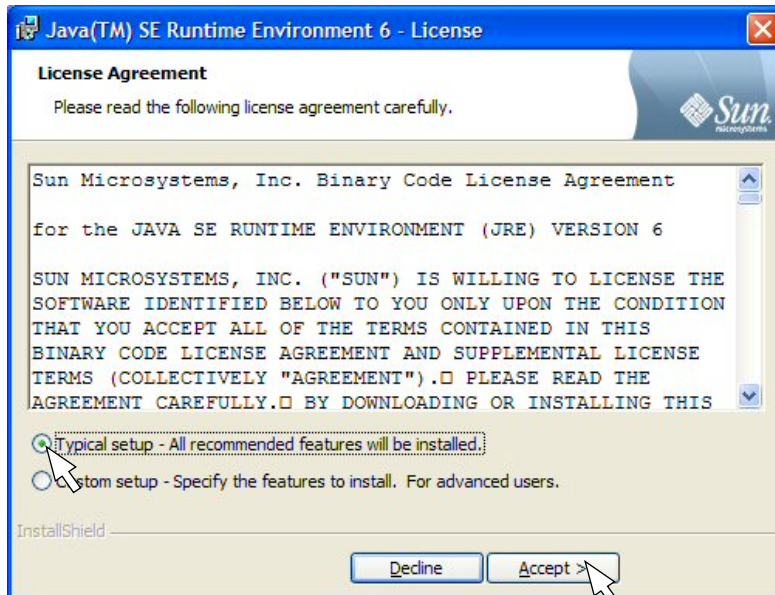
If Java has not already been installed on that machine, the Java installation prompt will now appear, press **OK** to continue the installation.

Note:

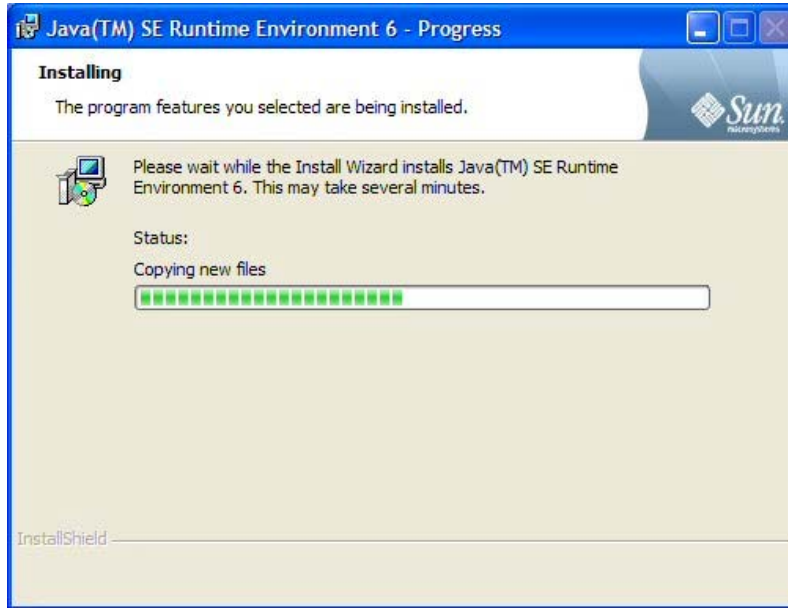
This software has been designed to work with J2SE V6.0



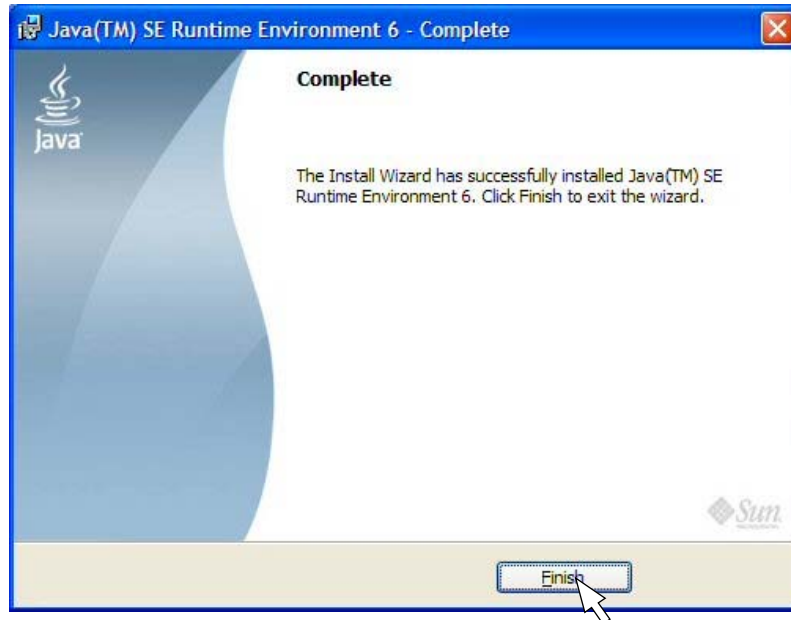
In the final License Agreement menu, select the type of setup required then press **Accept**.



Please wait whilst the software starts to install. When the installation is finished press **Next**.



The software installation is now complete, press **Finish**.



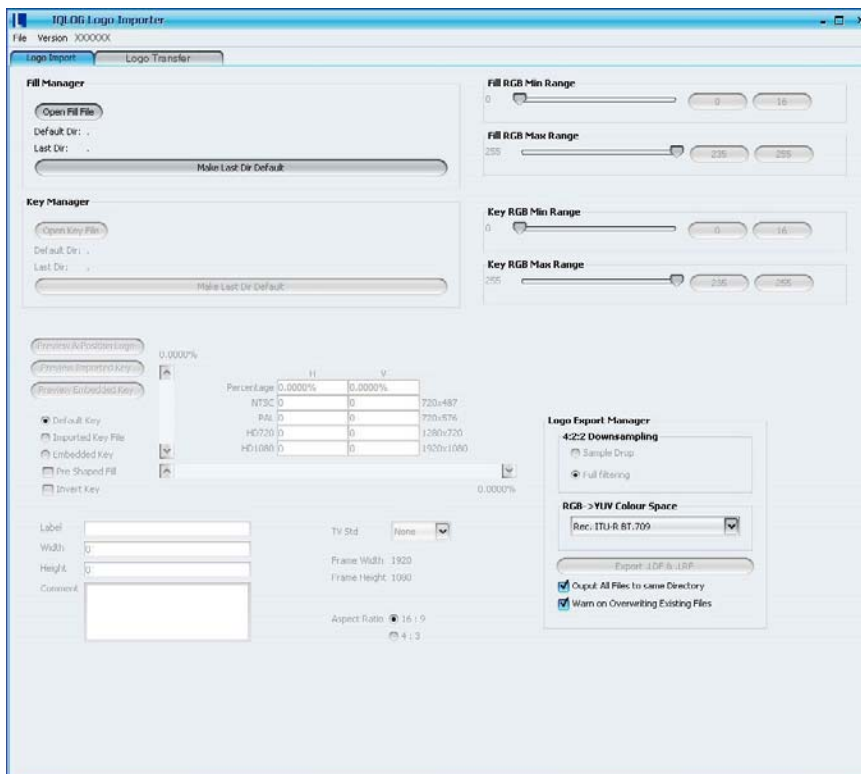
Finally, check the “**Run IQLOG Logo Importer**” box to run the application after exiting the “Setup Wizard”, then press **Finish**.



If the “**Run IQLOG Logo Importer**” box was selected, the Logo Importer main menu will now appear, and is ready to use.

Note:

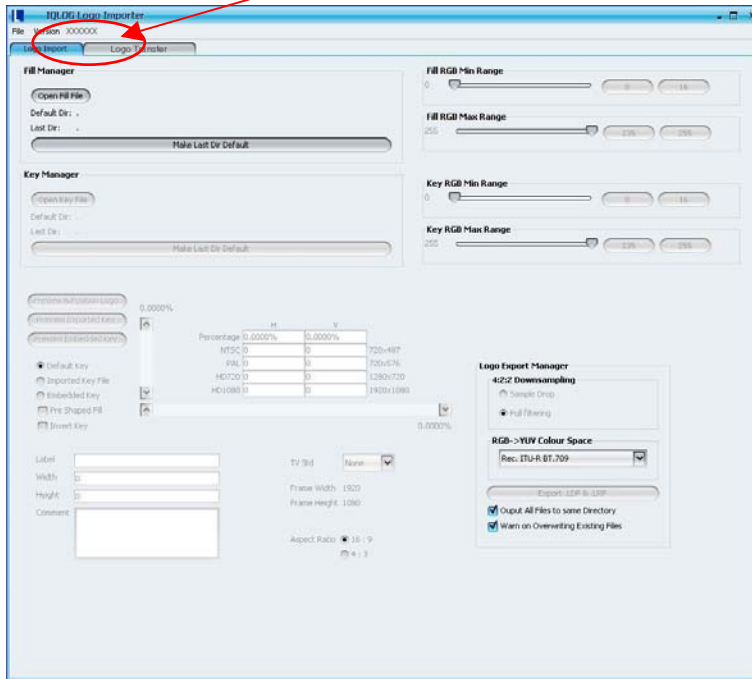
An icon will also have been placed on the desktop, as shown below (if selected in the “Choose Components” menu on page 5.).



Section 3: PC GUI Operation

The diagram below is the PC GUI user menu, displaying all the controls and parameters.

Note: The PC GUI software version is displayed in the top left corner of the menu as shown below.



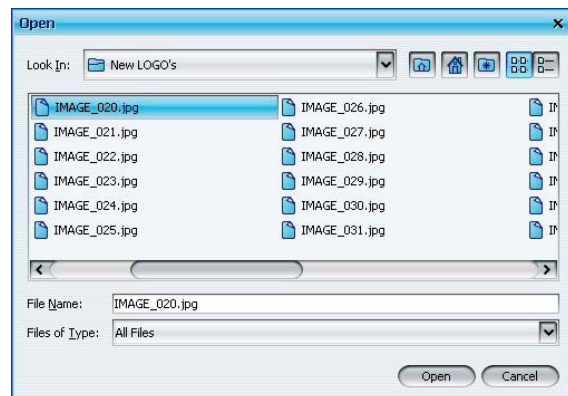
IQLOG system can accept logos in many different graphics file formats. These include .BMP, .TGA, .Tiff, .PNG, .PPM, .JPEG, .GIF, .PBM, .PGM, .RGB and .PCX

The application software will automatically recognize the file type and apply the appropriate file conversion.

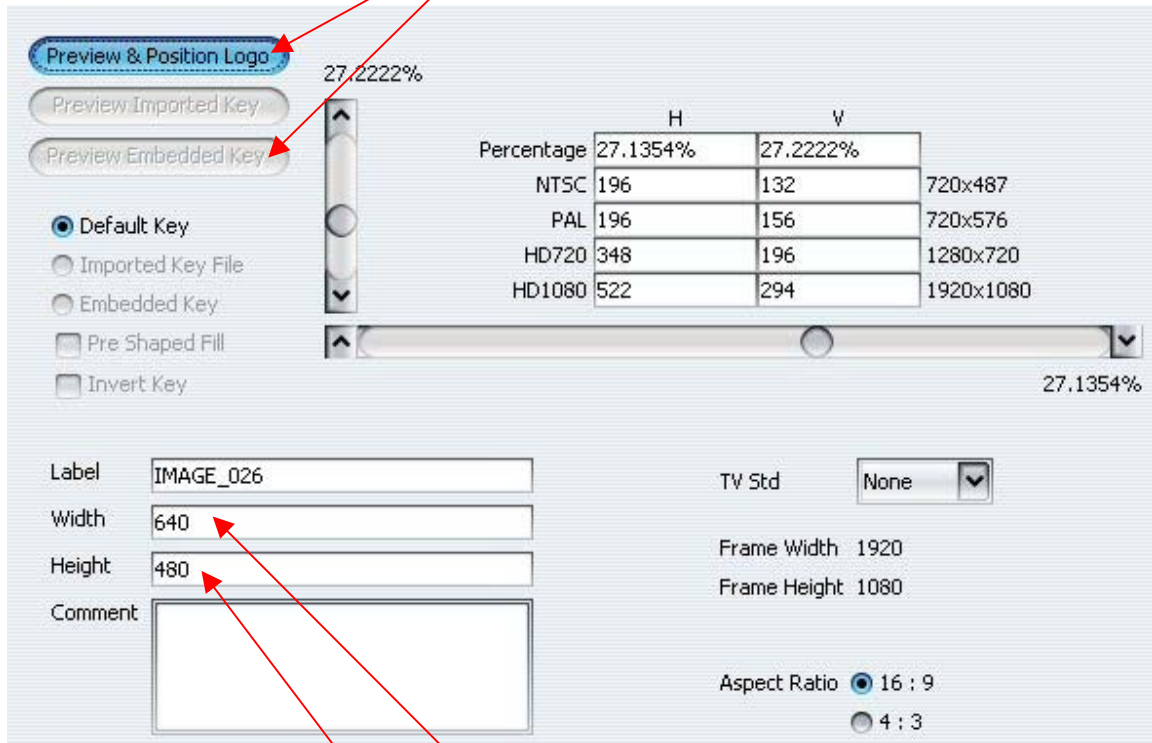
After a Logo graphics file has been imported, control and label metadata is then entered, and finally the Logo is converted into a format that is both suitable for TV display and for download to the IQLOG module.

Using the PC GUI

To select a graphics file for import select **Fill Manager - "Open Fill File"**, then navigate to the required "LOGO" graphics file, click on the file and select open.



If the import is successful, the “**Preview and Position Logo**” button will be highlighted and the logo label; Width and Height dimensions will automatically be updated. If there is an embedded key file, the “**Preview Embedded Key**” button will also be highlighted.

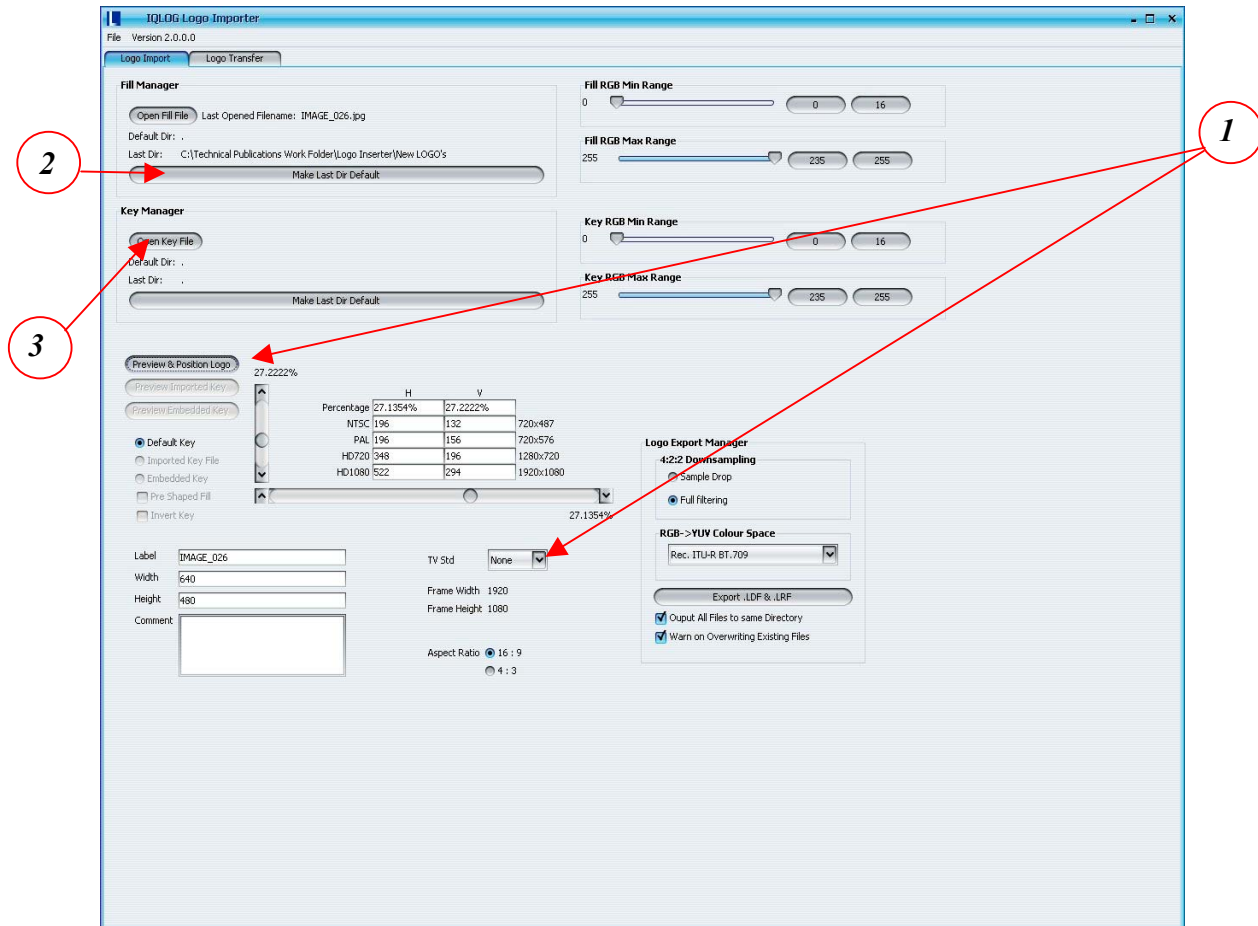


Note: 1 The Logo **Height** and **Width** parameters highlighted above cannot be modified.

Important Note: There is no facility to either resize or change the aspect ratio. It is up to the user to ensure that the logo is the correct size and shape for the appropriate TV standard.

Note: 2 If the logo has an odd number of horizontal pixels, then the last pixel will be automatically truncated, as the system only supports logos with even numbers of pixels. A dialog box will pop-up advising that this has occurred.

Selecting the “**Preview & Position Logo**” button (1) will preview the imported logo. The Logo will be then displayed in a preview window that is the same size as the selected TV Standard. Changing the TV standard will change the size of the preview panel.



The imported Logo image file is automatically set to be the Fill image, the GUI can import both Fill and Key files as will be explained later in this section.



Keying is the process of inserting a specific part of one graphic (Fill file) into another graphic file (background) to create a composite image. The Key file is used to cut a hole into the background and fill that hole with the Fill graphic.



The user can make the current directory the default start directory for the Logo file browser by selecting the “**Make Last Dir Default**” button (2) in the “**Fill Open Path**” section. If a separate Key file is provided select the “**Open Key File**” button (3), navigate to the key file, and then select open. The Key and Logo file formats do not have to be of the same type, but must have the same size and shape.

Select Key



The Logo Key must be selected from one of three different sources.

1. Default Key - Auto generated Default Key (hard edge box that is the same size as the Logo)

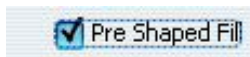
2. Imported Key File - A separate imported graphics file, if this has been imported

3. Embedded Key - An embedded Key file if embedded Key is supported by a particular file format [e.g. .tga].

Important Note:

The size and shape of the key file must exactly match that of the Logo image. If the size and or shape of the Key does not match the Fill, then the system will not import the selected Key.

Pre Shaped Fill



Tick this box if the Logo has already been properly shaped, and a matching key has been provided. In this case the Logo will simply be added to the keyed background image. If this box has not been ticked, then both the logo and the background will be multiplied by the key signal prior to addition.

Key Polarity



The IQLOG system uses a positive Key. If the key file is inverted, then tick the key invert check box.

Note:

Checking the invert key box will not modify the key in the "Preview Embedded Key" window.

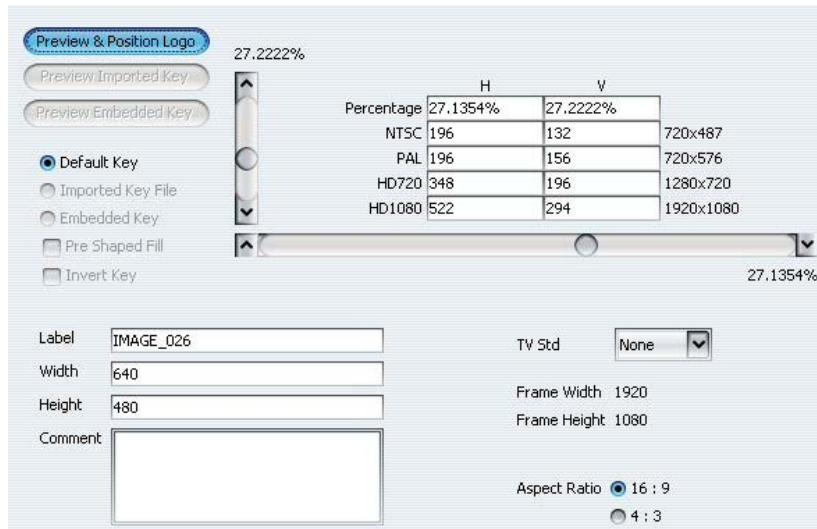
Coding Range

The coding range for PC 3x8 bit RGB graphics, and Key files is typically 0 to 255 (Black to White), Whereas 8 Bit digital Broadcast TV systems have Black at code 16 and White at code 235. However some Logos may have been created using the TV number ranges, the GUI allows the user to dial up the number range of the original graphics file, default is "0:255"



Metadata

The following **metadata** can be entered using the controls as shown below.

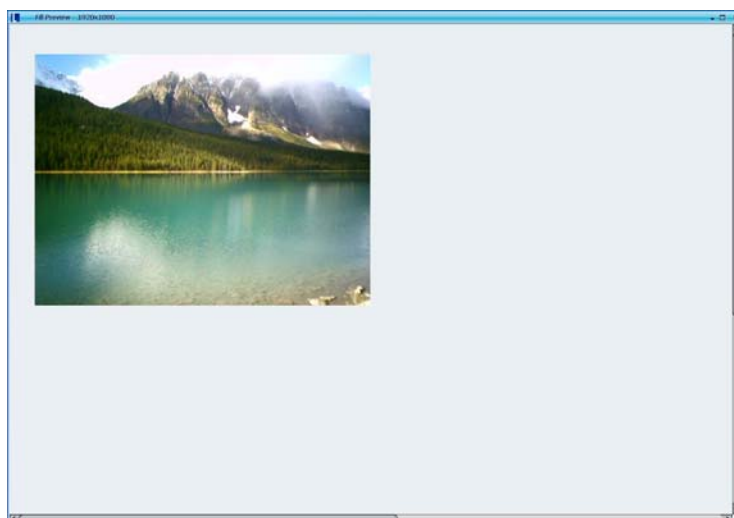


Label - This is how logos stored in the module are identified and can be completely separate from the Logo file name. It is important that the label field is correctly filled in. The default label is automatically derived from the first 24 characters of the imported fill file name but can be changed by left clicking in the label box and entering the required value in the pop up dialogue box

Note: The default name for the body of the exported files will be taken from this label. Max length 24 characters including space, however RollCall systems currently display the first 19 characters, so users are advised to restrict label names to 19 characters.

H and V Position – These parameters are the intended position of the Logo on screen – digital TV active pixels and lines. This may be entered either by typing a number in a box for a particular TV standard, entering a percentage value, using the scroll bars, or by dragging the logo around the screen in the Preview and Position viewing pane (shown below). To enter a value, click on the field to be changed, enter the value in the pop-up dialogue box and then select 'ok'.

Note: The selected H and V position should be consistent with the intended TV standard. The Logo on-screen position can be changed using the module controls after the Logo has been exported and downloaded.



Metadata: continued

TV Std - This gives an indication of the spatial resolution of the screen size that the logo was intended for. The user can either explicitly specify a specific TV STD [SD NTSC, SD PAL, HD 720, HD 1080], or can choose a generic setting [SD, HD, None].

If a specific standard has been chosen, then this indicates that the Logo is intended only for that particular standard.

Height and Width – These parameters display the Width and Height of the graphic file (these parameters cannot be adjusted).

Comment – Optional usage, free form comment field. Max length 64 characters.

Aspect Ratio - Select between 4:3 or 16:9

Output Conversion

During this final conversion process the RGB 4:4:4 Logo is converted to ITU-R BT.601/709 10 Bit Broadcast Y,Pb,Pr 4:2:2 format. A choice of 4:4:4 to 4:2:2 down-sampling and RGB to Y,Cb,Cr matrices can be applied.



4:2:2 Down-sampling

Where the Logo has been correctly band-limited then apply “Full Filtering” option. For non band-limited graphics, “Sample Drop” option may give better results.

Colour space conversion

For HD outputs select ITU-R BT.709. For European SD output select ITU-R.BT.470. For NTSC SD outputs select SMPTE170M

Note:

Logo graphics formats are assumed to be 8 bit RGB 4:4:4, Logos with a higher bit depth will be converted to 8 bits prior to output processing. The Logo RGB graphics primaries are assumed to be the correct primaries for the intended TV standard. No RGB gamut processing is applied.

Output File Formats

There are 2 separate file types created:

1. Logo Descriptor File [.ldf]
2. Logo Record File [.lrf]

The Logo descriptor file contains all the static metadata belonging to a single Logo. This also includes an embedded time and date stamp indicating when this file was originally created. This is independent of any operating system local copy time and date.

Note:

Two Logo Record files “.lrf” are created regardless of the TV standard, these contain 2 segmented fields of the Logo record, and are suitable for display on both progressive and interlaced TV systems.

Default File Name

Label (24 characters).LDF e.g. abcdefghijklmnopqrstuvwxyz.Ldf

Field 0 (top field) frame 1

Label (24 characters)0000.LRF e.g. abcdefghijklmnopqrstuvwxyz0010.lrf

Field 1 (bottom field) frame 1:

Label (24 characters)0001.LRF e.g. abcdefghijklmnopqrstuvwxyz0011.lrf

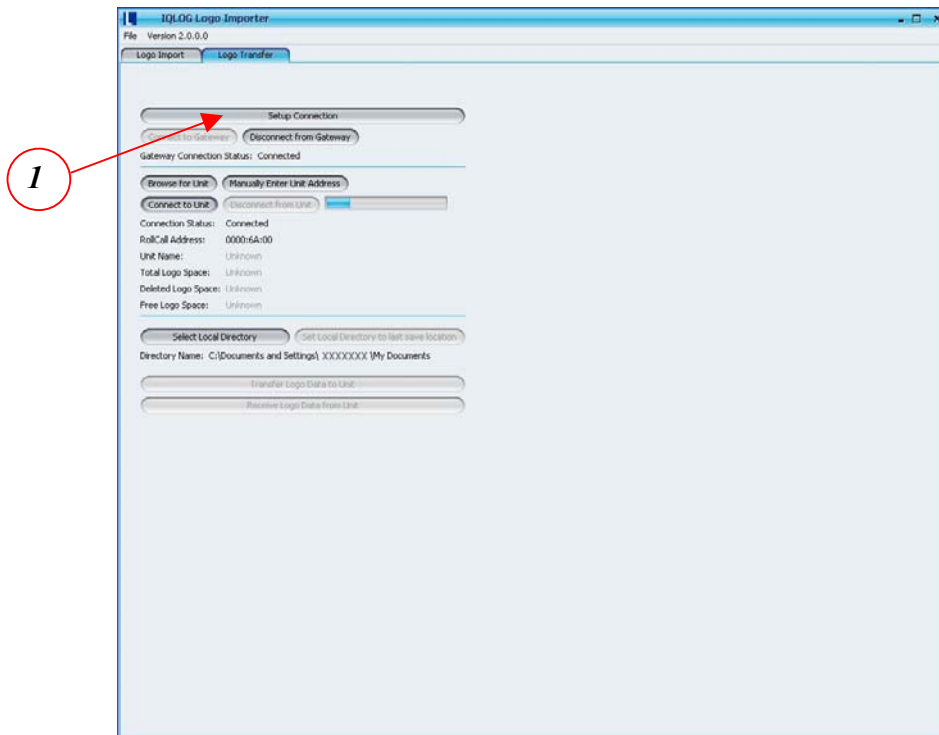
Important Note:

The IQLOG system only supports file names with a maximum length of 32 characters including the file extension in “28.3” format

Section 4: Logo Transfer

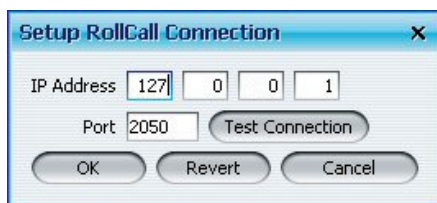
The **Logo Transfer** page is used to connect to a IQLOG module on a RollCall network, and transfer logo's to and from a PC/Network drive and the IQLOG module flash memory.

The diagram below displays the Logo Transfer page before connecting to the RollCall network.



Step 1:

To connect to a RollCall network, press the **“Setup Connection”** button (1) and a Setup RollCall Connection IP Address dialog box will appear (as below).



Enter the RollCall **IP Address** of either the IP address of the gateway card to which the **Arcnet** port of the IQLOG module is attached, or the IP address of a **RollCall IP Proxy**. Enter the **Port** number that is being used by the gateway or IP Proxy.

Press **“Test Connection”**, if the connection is successful another dialog box will appear stating that the connection succeeded.



Step 2:

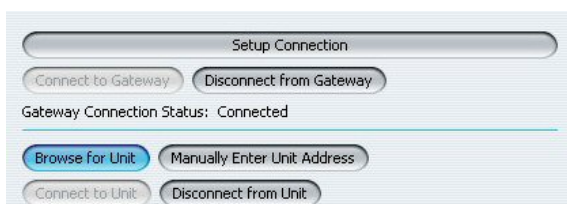
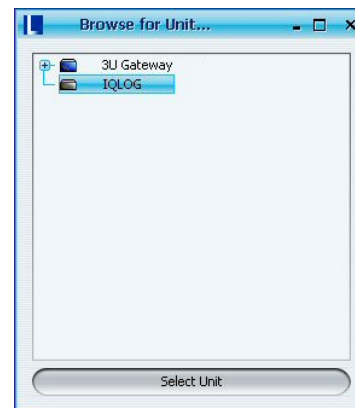
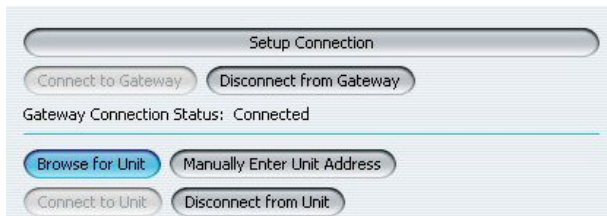
Next press the **“Connect to Gateway”** button and the PC is connected to the Gateway.



Step 3:

There are two methods of connecting to an IQLOG module, browsing or manually entering the module RollNet address and manually connecting.

To Browse: press the **“Browse for Unit”** and a dialog box will appear with a listing of all the modules that are connected to that gateway. Select the required module, then press **“Select Unit”** or double click on the required module. This will then automatically connect to the module.



To Manually connect: **Manually Enter Unit Address**, as it states, this menu allows the user to manually enter an RollCall Address. Select

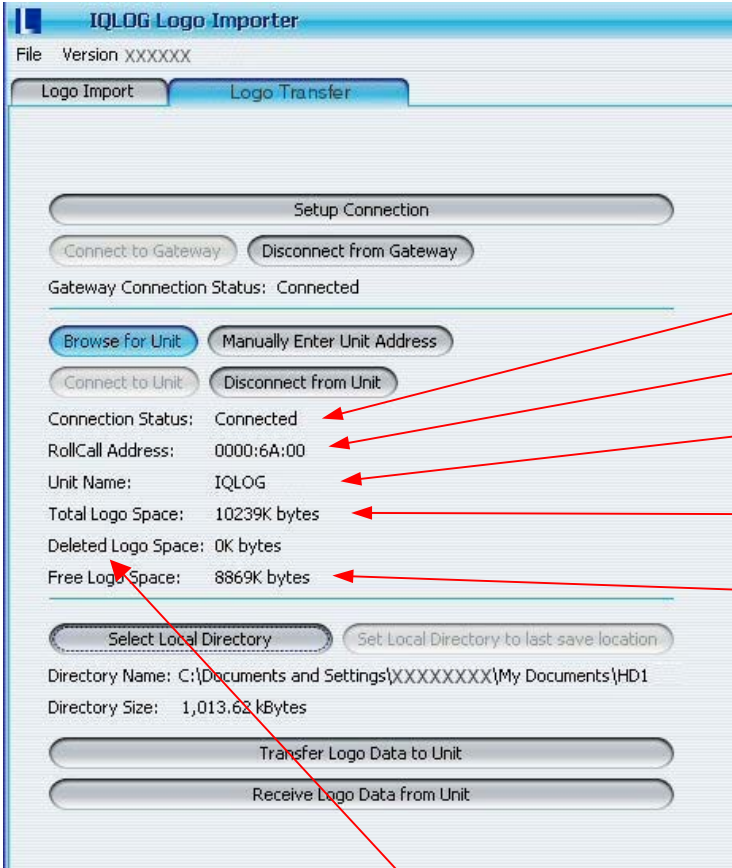


“Manually Enter Unit Address”, type in the known RollCall Address, press **“OK”** and then finally press the **“Connect to Unit”** button.

To connect to another unit attached to the same gateway manually re-enter the unit RollCall Address. To connect to another unit on a different gateway, press **“Disconnect from Unit”**, and then repeat the connection procedure.

Logo Information

The PC is now connected to the Gateway and connected to a unit attached to that Gateway. The following information should now be displayed:

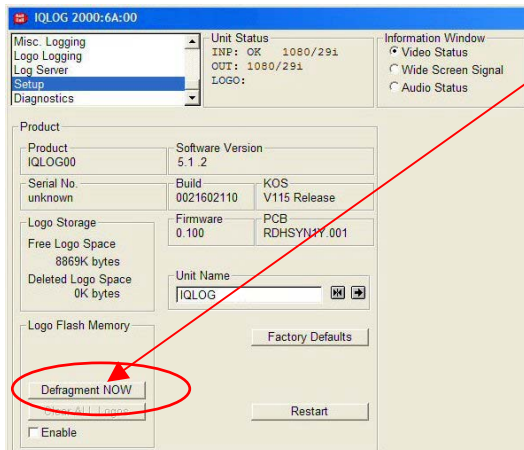


- PC to Unit Status
- The RollCall Address of the Unit that the PC is connected up to
- The Units given name
- Total space available in the module's Flash Memory
- Modules free (available) Flash Memory space

Deleted Logo Space – is the space occupied by deleted logos in the Flash Memory.

Due to the way Flash Memory works, once a logo is deleted, the memory space that the logo occupied does not get freed up. In order that it can be used by another imported logo, the flash memory has to be “defragmented”. This can either be done manually – or will automatically happen during the download process.

To Manually defragment the logo flash memory, use the “Defragment NOW” function in the **RollCall Control Panel** (shown below). This will then make the deleted space available for Logo storage.



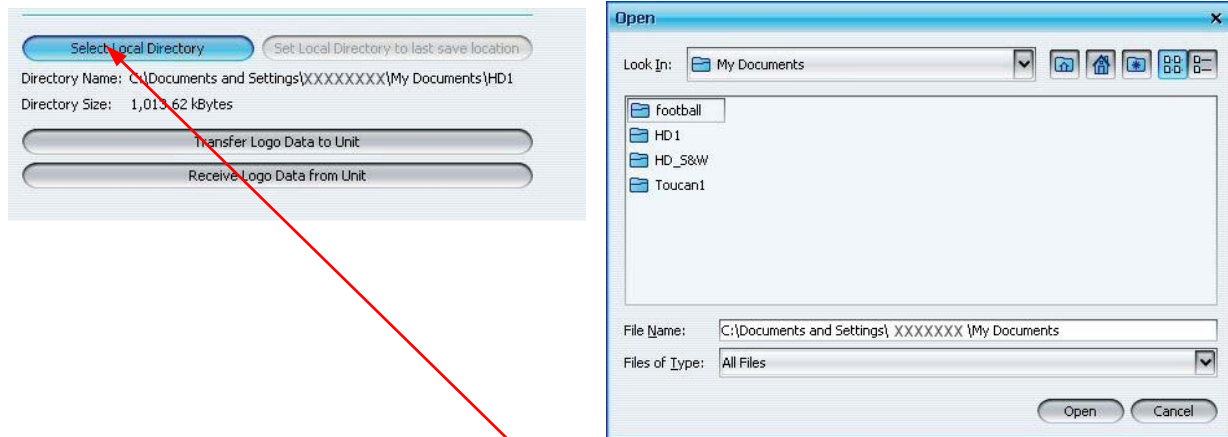
Logo Upload and Download

Step 4:

The final step is to transfer the logo's into the Flash Memory of the of the IQLOG unit. The system is designed to synchronize the contents of the Logo flash memory with the contents of a designated **directory** on a PC network. The directory may be on a local PC or may be a network drive. All the files and directories on the PC network will be duplicated in the IQLOG flash.

The user can assemble and organize all the required logos for an IQLOG module in a convenient directory using standard PC tools. If required, this directory can then be duplicated on several IQLOG modules. If it is necessary to recover logos from an IQLOG module, then this can be achieved by synchronizing the IQLOG module with an empty PC directory.

During the transfer process, the IQLOG flash memory will be scanned and a 'job list' will be created. This will show the files and sub-directories that have to be deleted and copied in order to align the 2 directories. If the IQLOG flash memory needs to be de-fragmented or formatted during this process then this will also be scheduled, and will occur automatically.



Press the **“Select Local Directory”** and browse to the folder that contains the logos that are to be transferred to the unit's logo flash memory. Simply select the folder that you wish to be synchronized with the logo module memory, alternatively, If you browse to a file and select a file, then all the files and subdirectories within that file folder will be selected.

Directory Name – The directory that the system defaults to after the first installation will vary depending on the system setup. Using the **Select Local Directory** function the user is able to select the required directory.

Note:

This will then become the default directory each time the PC GUI is restarted, until the user selects a different directory.

Note:

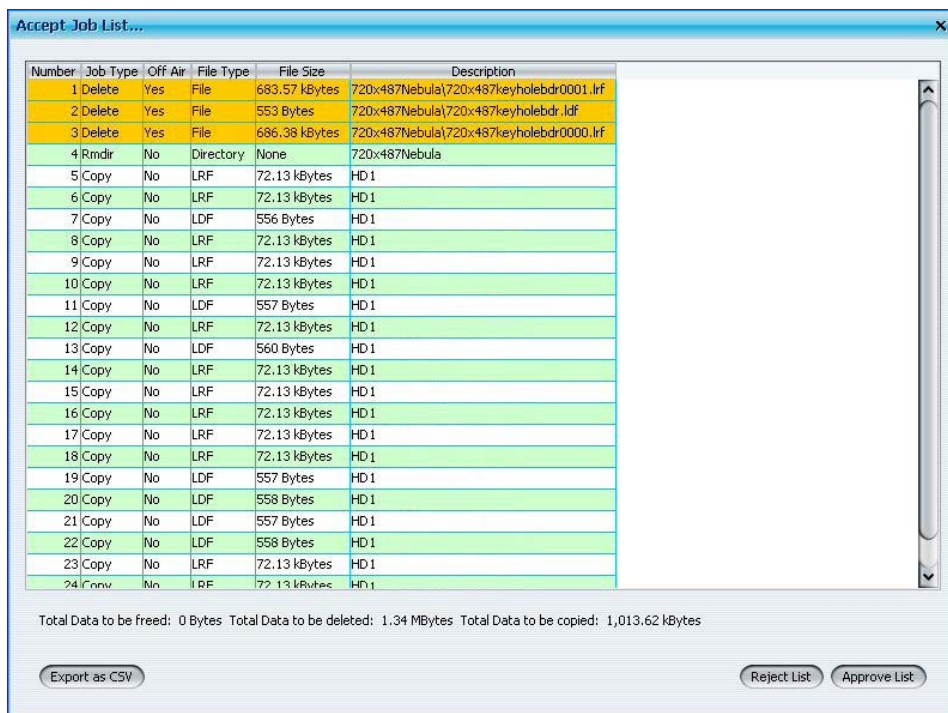
The system will always select the entire contents of a folder – including all files and sub directories. The selected directory structure will be replicated in the logo flash memory.

Important Note:

It is recommended that the unit is off-air before starting the download process.

If the unit is left on-air, then any logo that is on-air, and is deleted from the flash memory, will also be taken off-air.

The name of the directory is displayed below the **“Select Local Directory”** button. The selected directory will be saved as the local directory, so the user will always return to that directory when importing or exporting logos.



Once the directory has been selected, press the **“Transfer Logo Data to Unit”** button. A **Job List** dialog box will appear (shown above) that will list the logos that will be copied between the two units. The uploaded logos are highlighted in Green. The job list can be exported as a spreadsheet compatible **.csv** file, select **“Export as CSV”** if this is required. The user can then **“Reject”** or **“Accept”** the job list. If accepted the job list will be executed, the logos will then be transferred to the Flash memory.

Important Note:

The files highlighted in Yellow are files that already existed in the Flash Memory, but are not present in the **Local Directory** they will therefore be deleted out of the memory if the **“Accept List”** button is pressed.

Important Note:

During the upload/download process, the unit should **not** be turned off or re-set. If this occurs then it may lead to corruption of the module flash memory.

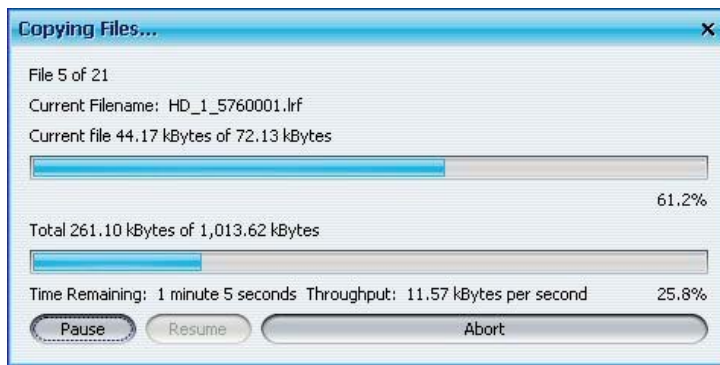
Step 5:

The **Accept Job List** menu displays the files that are in the modules Flash Memory, and the files that have been selected from the local directory, if happy with the selected files, press the **Approve List** button to upload the files to the module.

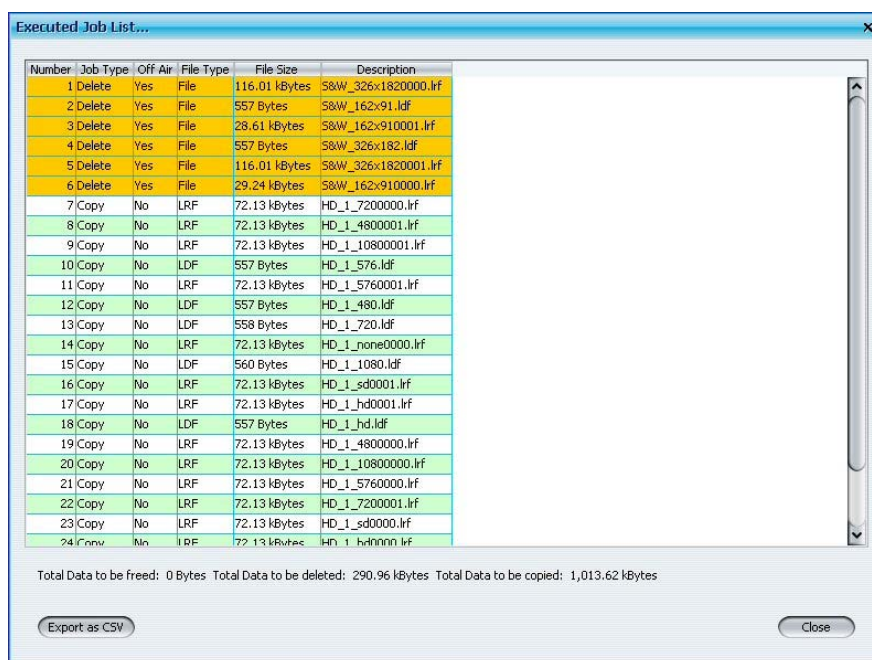
A dialog box will appear displaying the existing files stored in the Flash Memory (shown in Yellow in the Accept Job List menu) being deleted as shown below:



After the existing files have been deleted another dialog box will appear displaying the new files being uploaded to the module as shown below:



Once the files have been successfully uploaded to the module, a menu will appear displaying a list of the deleted files and the files copied to the Flash Memory.



CONTACT INFORMATION

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