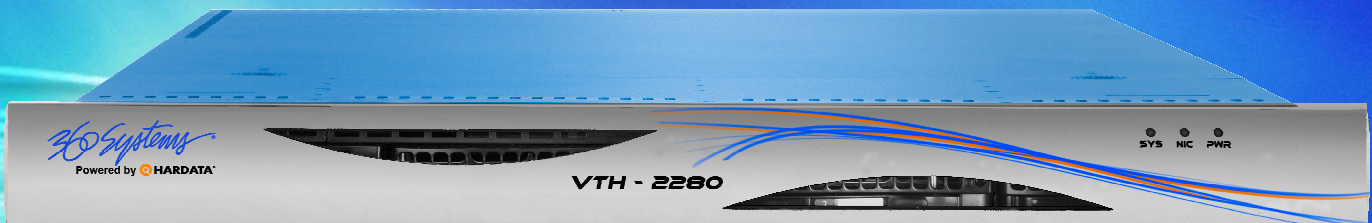


360 Systems®

Powered by  **HARDATA**®

VTH

Broadcast Video Server



Operations Manual

Revision 8 Sep 2015

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Preface

This manual provides installation, setup and operating instructions for 360 Systems' VTH Multi-Format Broadcast Video Server. It is organized to provide quick access to topics of primary interest. An extensive Table of Contents is provided at the beginning, and a subject Index at the end, to assist in locating information.

If you have already used other video servers or VTRs, you may find the discussion of the basic server to be covering familiar topics. However, it is strongly recommended that engineering managers and staff members operating the server read through this manual. Being familiar with its operation can prevent operational mistakes, and will make all users aware of important set-up and maintenance issues.

Software and Operations Manual Revisions

Software revisions are released from time to time that introduce new product features, or improve the performance of the product. When such revisions are shipped as a USB flash drive, printed operational notes are included. When revisions are introduced in the course of product production, an updated Operations Manual will be shipped with new servers.

The title page of an Operations Manual indicates its revision number, which should always match the software revision of the server with which it is used. Operations Manuals for the latest revision may be obtained from 360 Systems Customer Service, or from 360 Systems' web site.

Your comments are welcome. If anything in this manual seems unclear, please let us know by sending an email to support@360systems.com.

Typographical Conventions

The following typographical conventions are used to clarify meaning:

- Connector or indicator labeling that appears on the unit is shown in **Arial Narrow Bold**.
- GUI menu items are shown in **Arial Bold**.
- GUI sub-menu paths are shown by the > symbol.
- Text typed into the GUI and Key Commands are shown in **Courier Bold**.

Safety Notices

Safety Terms and Symbols

The following warning symbols are used in this manual:



English	ATTENTION: refer to owner's manual for important information.
Français	ATTENTION: veuillez vous référer au mode d'emploi pour une information importante.
Italiano	ATTENZIONE: fate riferimento al manuale per informazioni importanti.
Español	ATENCIÓN: favor de referir al manual de operación por información importante.



English	WARNING: electrical shock hazard.
Français	AVERTISSEMENT: danger de choc électrique.
Italiano	AVVERTIMENTO: pericolo di shock elettrico.
Español	ADVERTENCIA: peligro de choque eléctrico.

General Safety Caution

- Heed the following important cautions regarding the server in order to avoid personal injury or equipment damage.
- Only qualified personnel should perform installation and service. Refer to appropriate sections of this product manual for instruction. Contact 360 Systems Customer Support for further explanation, or to clarify any uncertainty.
- Disconnect the power cord before removing the cover.

Personal Injury Precautions

To avoid electric shock, do not operate this product with covers removed.

To avoid risk of fire or electric shock, replace the power cord only with same type and rating as specified. Replace damaged power cords immediately.

This product is grounded through the grounding conductor of the power cord. To avoid electric shock, do not remove or modify the contacts on the plug.

Prevent the power cord from being walked on, pinched, or abraded.

To reduce the risk of fire or electric shock, do not expose this unit to rain or moisture.

Remove jewelry such as watches or metallic necklaces before servicing this equipment.

Important Safety Instructions

These instructions are required per applicable safety standards.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Unplug this apparatus during lightning storms or when unused for long periods of time.
13. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
14. Where the MAINS plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.

Product Damage Precautions

- 360 Systems' VTH server contains hard disk drives and other fragile electronic and mechanical devices. While designed to be very reliable, it is still vulnerable to shock. Handle with care, and exercise caution not to drop or bump the server as damage to internal components may result. Always turn off power before moving the server.
- Do not obstruct air vents. Maintain an ambient temperature below 30°C (86°F).
- Clean only with a soft cloth dampened with water. Do not spray cleaners or solvents directly on the product.



CAUTION:

Replace the motherboard battery only with the same, or equivalent battery type. Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the equipment manufacturer. Discard used batteries according to manufacturer's instructions. Follow all local laws regarding the disposal of BR and CR Lithium batteries. Batteries should be fully discharged prior to disposal.



CAUTION:

Never disconnect AC power to shutdown the server. Doing so may cause errors in the hard disk array. Should this happen, the array can be reinitialized without any data loss; however, the process may take several hours. Shutdown the system only by momentarily pressing the front panel power button, or through the On-Screen user interface.

Product Registration

Important: As the owner of new capital equipment, you will want to take advantage of product information, enhancements, upgrades, or notifications issued by 360 Systems. Please visit 360systems.com/support/register or send in your Name, Company Name, Address, Phone Number, Email, Model and Serial Number to support@360systems.com so 360 Systems may remain in contact with you. Mail or fax it to 360 Systems offices in the USA at the address provided below.

Product Improvements and Upgrades

360 Systems reserves the right to make changes and/or improvements to its products without incurring any obligation to incorporate such changes or improvements in units previously sold. Certain features mentioned in this document may not be present in all models. This product is not offered for sale in all countries.

General Notices



A **NOTE** provides important information concerning the system operation.

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1. Introduction

360 Systems' VTH broadcast video server is a multi-channel, multi-format high-definition / standard-definition video server designed for broadcast, production, and Pro A/V applications. It can play or record two independent video streams at once, and stores between 60 and 400 hours of HD/SD encoded video¹ with up to 16 audio channels per video stream. It occupies just 1¾ " of rack space. The server's extensive feature set makes it an excellent choice for VTR replacement, broadcast automation, remote trucks, corporate, educational, house-of-worship, and live entertainment presentations. Each VTH Broadcast Video Server input and output can be independently configured for standard definition or high definition at 720p or 1080i.

Built on field proven Hardata Hdx Server 3 software technology, the VTH server provides a secure, modular, flexible and scalable platform, from which content can be easily accessed and managed.

360 SYSTEMS VTH is much more than just a playout server. Overlay graphics, animated logos or flash animations with the built in Character and Graphics Generator, or add scrolls and upload text directly from the metadata of the content or external text files. A Powerful automation suite allows for scheduling recordings and playout, enabling unattended use over prolonged periods.

Seamless Installation in New Facilities

The VTH system's features smooth installation in a new setting, providing both SD-SDI and HD-SDI video. Program file transfers are available over Gigabit and 10 Gigabit Ethernet. Its standard suite of codecs offer flexibility for file based workflows.

Up to 16 channels of Embedded audio are supported on each input and output (depending on the video format in use).

The system's versatility is unique among video servers, and provides a seamless fit in existing facilities and new build-outs.

Exceptional Storage Capacity

The system contains four 1- or 2-Terabyte drives in its compact enclosure, providing up to several hundred hours of storage with exceptional image quality. Storage time varies depending on the file encoding type, resolution and bit rate.

The server's RAID-5 disk array provides a high level of security for stored program content, by spreading parity information across all drives. The self maintaining array provides added uptime protection, even in the event of a drive failure, and supports the data rates required for multiple streams of high definition video. Both the video content and the operating system are protected by the RAID array, there is no separate "system disk".

¹ At 80 Mb/sec data rate. Actual storage will vary depending on the video resolution and encoding format of the files.



Audio Features

The system provides SDI Embedded audio on all inputs and outputs. Depending on the file format used, up to sixteen embedded audio channels are available for each video stream.

The Graphical User Interface

The VTH System incorporates a graphical user interface (GUI) which provides quick access to every server function. It is controlled by a standard keyboard and mouse (supplied) and requires only a SVGA display. The full GUI is also available from remote workstations installed on a PC platform.

The GUI displays a control panel for each server channel as well as other functions; these include Transport Control, Media Library, Time Delay and Graphics Generator. The GUI is designed to easily operate the server's systems without the need for other equipment.

System configuration is clear and straightforward through the GUI. It provides access to encoding parameters, audio options, and time-code settings. Whenever new server features are installed, new set-up parameters and user-interface features become immediately available.

The server's optional Remote Workstation Software allows the system to be remotely operated from a standard PC over Ethernet. The server functionality is replicated at each remote location. Separate work areas can be easily created within a building for ingest, trimming, scheduling, system monitoring or play-to-air.

File Transfers over Ethernet

The VTH Broadcast Video Server goes beyond just base-band connections for video and audio. File transfers over Gigabit or 10Gigabit Ethernet allow the transfer of video content across the room, or across the country, at high speed and low cost. With Ethernet switches and broadband connections, the server's design enables low-cost networking of broadcast operations from ingest to storage, for editing, play-to-air and archiving.

Reliability

360 Systems has over 40 years of experience manufacturing equipment for television broadcast and other industries that require high reliability. With more than 30,000 hard disk products in service around the world, we understand quality, reliability, and protecting your stored content.

2. Installation

2.1. Rack mounting the system

The VTH server includes the necessary hardware to properly mount the server on most common 19 inch rack enclosures.

The rack rails include provisions for mounting directly in enclosures with square holes in the mounting rails. Customers using this rail system on racks with threaded holes in the mounting rails, please remove the cast square mounting blocks from the front and rear rails of each side prior to mounting on the rack.



CAUTION: If you are not mounting the unit in a standard rack, make certain adequate airflow exists and that the vents on the server are not blocked.



WARNING: Before mounting in any rack, ensure that if necessary the rack is secured to the floor or walls per the rack manufacture's instructions. Failure to follow these instructions may result in damage or injury.

Attach the outer rail and outer rail extension by aligning the pins with the adjoining slots and slide together. Item #1 in Figure 2-1

If the rack does not have square mounting holes, insure that the square mounting blocks have been removed from the front and rear of each set of outer rack rails. Install the left and right outer rails into the proper position on the rack enclosure using the included screws.

Attach the left and right side rail extensions into position of the rear of the server (Item #2 in Figure 2-1).

Slide the server into the outer rails that were previously installed in the rack enclosure. Secure the server into the rack by use of the included thumb screws in the front of the rack rails.

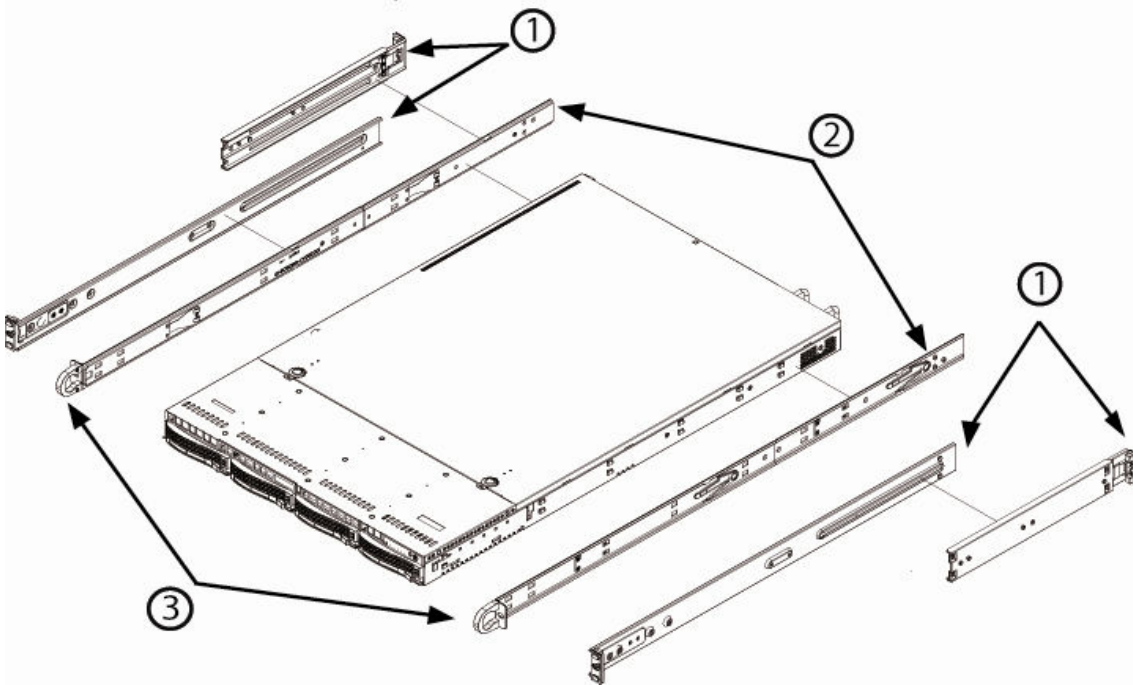


Figure 2-1

2.2. General Connections



WARNING: Before performing the following procedure, review the safety notices included in the beginning of this manual.

Once the equipment is installed in the rack, connect the keyboard and mouse, (provided with the equipment) to the appropriate PS2 connectors on the server's rear panel, as shown in Figure 2-3(VTH Rear).

Attach a 17" or larger monitor (not supplied) with a recommended minimum resolution of 1600 x 900 pixels, preferably with a 16:9 aspect ratio (wide screen) for a better viewing of the application. This monitor must be attached as shown in Figure 2-3 using the DVI connector attached to the video card. A DVI to VGA adapter (provided) can be used with monitors that do not have DVI connections. Do not use the VGA connector in the motherboard for this monitor. (Unused connectors have caps on them, these should be left in place.)



NOTE: The monitor must be connected and powered up during the server's power up in order to set the correct monitor resolution. If a KVM Switch is in use, the switch must be set to the server during power up. If this is not done, the monitor resolution will be set to the default (normally 1024x768).

Plug the Ethernet network cable into the RJ-45 connector or a qualified 10GB cable into the appropriate port.



NOTE: This server supports both Gigabit and 10GB Ethernet connections. The actual transfer speed to and from the server will depend on the workload being performed on the server and network conditions.

Attach the two power cables supplied with the equipment, one for each power supply, and connect the power source.

VTH Front View

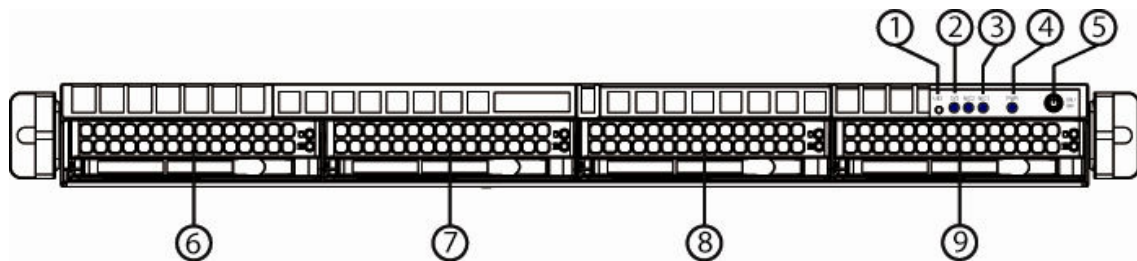


Figure 2-2

- | | |
|---|--------------------------------|
| 1. UID – Unit Identification Button | 5. On / Off Button |
| 2. UID / System LED: On – UID / Blinking – System Problem | 6, 7, 8, 9. RAID 5 Drive Array |
| 3. Network LED: On – connected; Off – no connection | |
| 4. Power LED: Off – no power; On – power is on | |

VTH Rear View

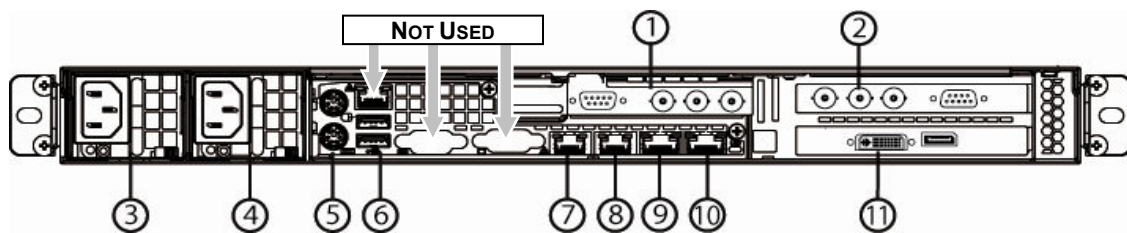


Figure 2-3

- | | |
|--|--------------------------------|
| 1. Ch. 1 SDI Video I/O and Serial Port | 7. Gigabit Ethernet Port 1 |
| 2. Ch. 2 SDI Video I/O and Serial Port | 8. Gigabit Ethernet Port 2 |
| 3, 4. Power Supply Modules | 9. 10 Gigabit Ethernet Port 1 |
| 5. PS2 Keyboard / Mouse Ports | 10. 10 Gigabit Ethernet Port 2 |
| 6. USB Ports | 11. DVI Video Monitor Output |

Unused connectors on motherboard are capped to prevent use.



NOTE: It is highly recommended that an uninterruptible power supply (UPS) be used to ensure continuity of service and the proper regulation of voltage and frequency, in order to protect the equipment. Choose a unit that features constant conversion (as opposed to switchover on power loss).



CAUTION: Verify that the power cables supplied with the equipment are standard for use in your country. If different cables must be used, please verify that they are properly rated for the appropriate power consumption as stated in the previous paragraph.
Do not use adapters for electrical outlets on the equipment as this may cause an electrical hazard.

In the example below, the VTH-2280 allows for an input and an output on each channel. Each channel can be independently configured as either a record or playout channel. If using a channel as a playout channel, the input feed can be used as a “live feed” placed in the playlist.

Connect the appropriate cables to the BNC Connectors as shown in Figure 2-4 for each video card.

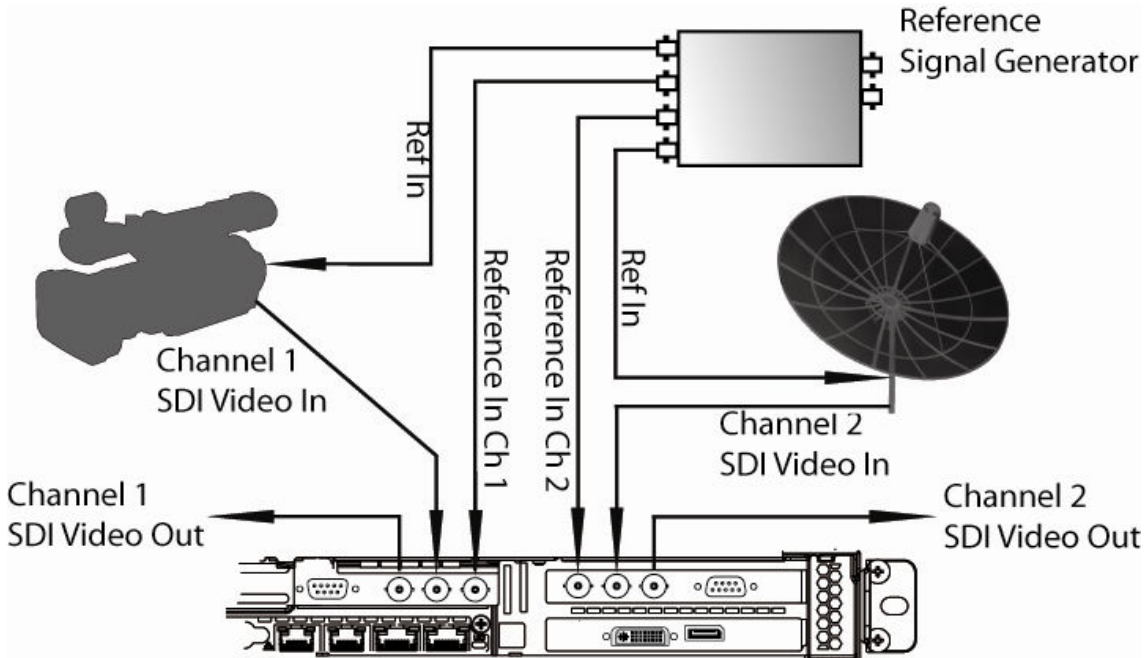


Figure 2-4 (VTH-2280 shown)



IMPORTANT: For the correct functioning of the equipment when working with LIVE signals or feeding to other referenced equipment, you must connect a reference signal (Black Burst or Tri-Level) to the reference inputs of **each** channel’s video card indicated as “Ref In”. Not connecting a reference may result in audio and video synchronization problems and loss of frames. See Appendix E on page 100.

2.4. Powering on Your Server

Before turning on the equipment, make sure all the loose cables are secured with Velcro strips or plastic ties and are not excessively tight in order to not incur damage.



NOTE: It is highly recommended that cable management system be used to prevent cables from stressing the connectors on the back of the server. Heavy cables used for SDI connections, power, Ethernet and video can cause damage over prolonged periods of time if left hanging directly from the connector.

Once all the connections are secured, turn on the display and press the power button located on the front of the equipment. (See Figure 2-2) Wait until the system finishes booting and the main interface screen appears.

The system will open a window and display the End User License Agreement (EULA). Please read and accept the EULA in order to continue to using the system.

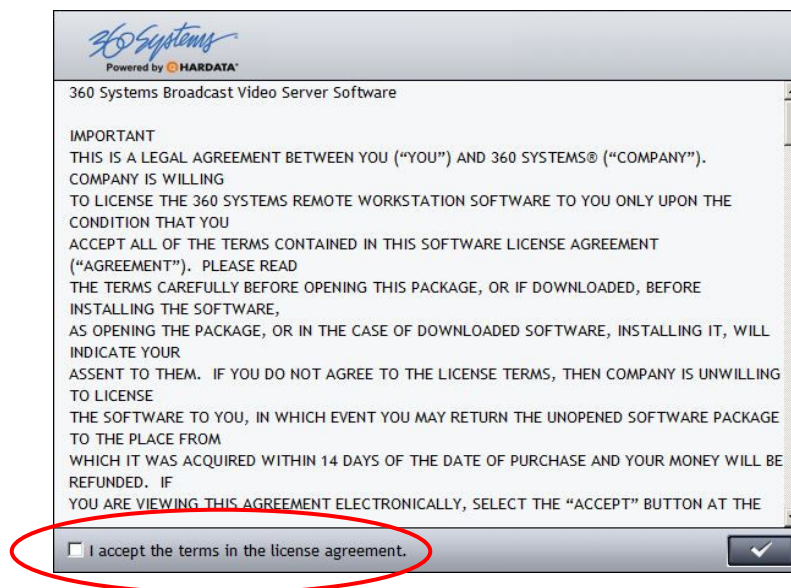



Figure 2-5

Once you have read the agreement, you must select the option “I accept the terms in the license agreement.” and then click on the confirmation key 



NOTE: The acceptance of this software license agreement is required to be able to use the equipment. If not accepted, the installation process will be unable to continue. Once accepted, the agreement pop up will close and it will not appear again, allowing normal use of the equipment.

2.5. Initial Settings - Setup Wizard




WARNING: Before starting this section, please read and complete the General Connections in Section 2.1 of this User's Manual.

The first time the system starts, the **360 SYSTEMS VTH** Setup Wizard begins and allows the set up of the language, playout resolution, Channel name and the broadcast mode.

First, select the language the server will use for all menus and content:



Figure 2-6

Click the Continue  button.

In the next window make the proper selections for the Channel 1 output resolution, output aspect Ratio, and file format for recordings. If you wish the server to read the AFD information and select the appropriate aspect ratio, check the associated box.

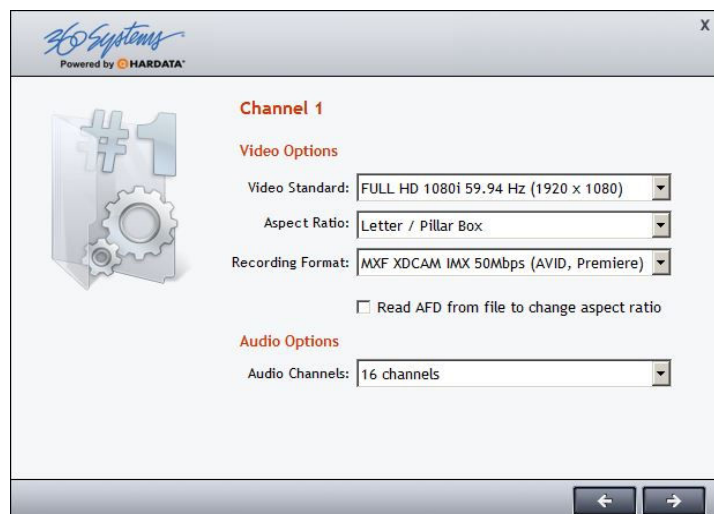




Figure 2-7

Click the Continue  button.

In the next window make the proper selections for the Channel 2 output resolution, output aspect Ratio, and file format for recordings. If you wish the server to read the AFD information and select the appropriate aspect ratio, check the associated box.



Figure 2-8

Click the Continue  button.

For ease of channel identification, enter a user friendly name for each of the Channels.

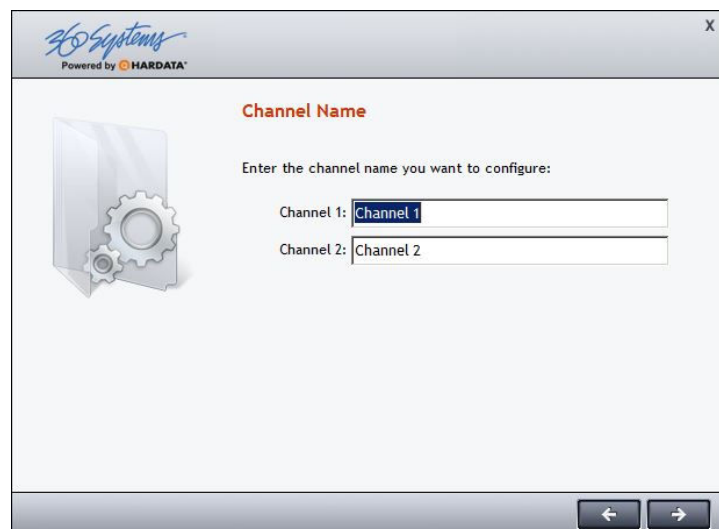



Figure 2-9

Click the Continue  button.

The wizard will prompt that the configuration setup is complete.

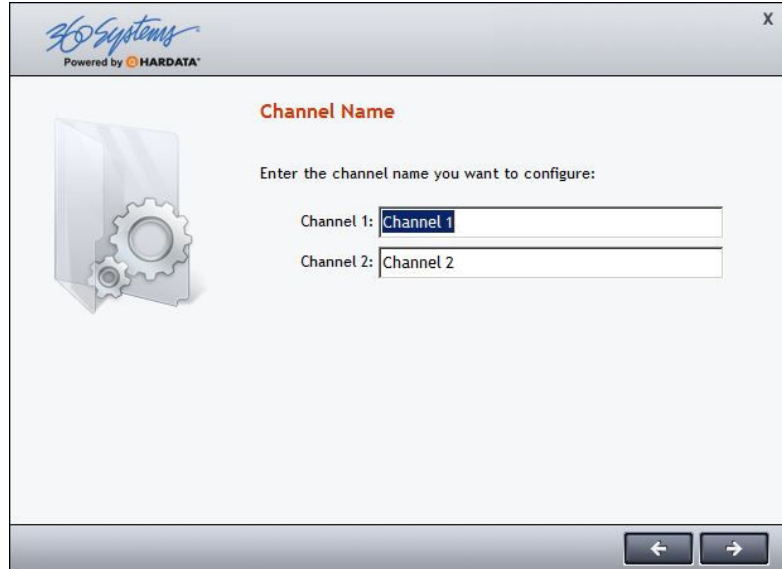



Figure 2-10

Click on the confirmation button  to accept the changes.

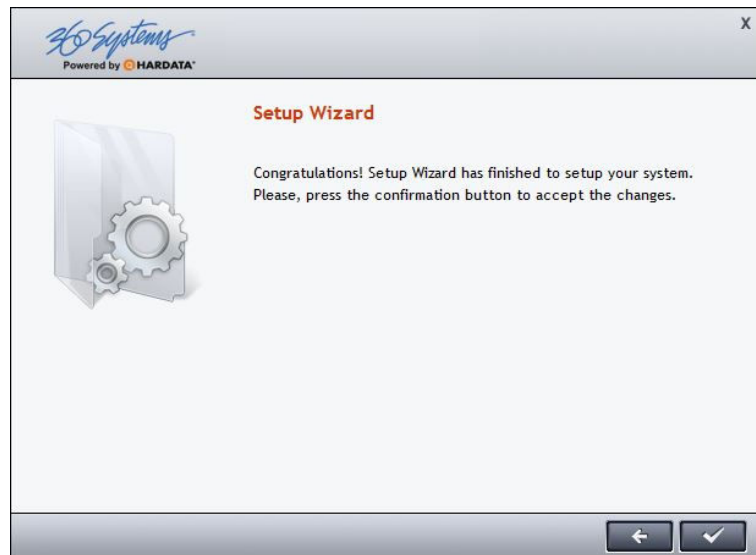


Figure 2-11

After this, the application will automatically open and load a Default Playlist into the Playlist window similar to the one in Figure 2-12.

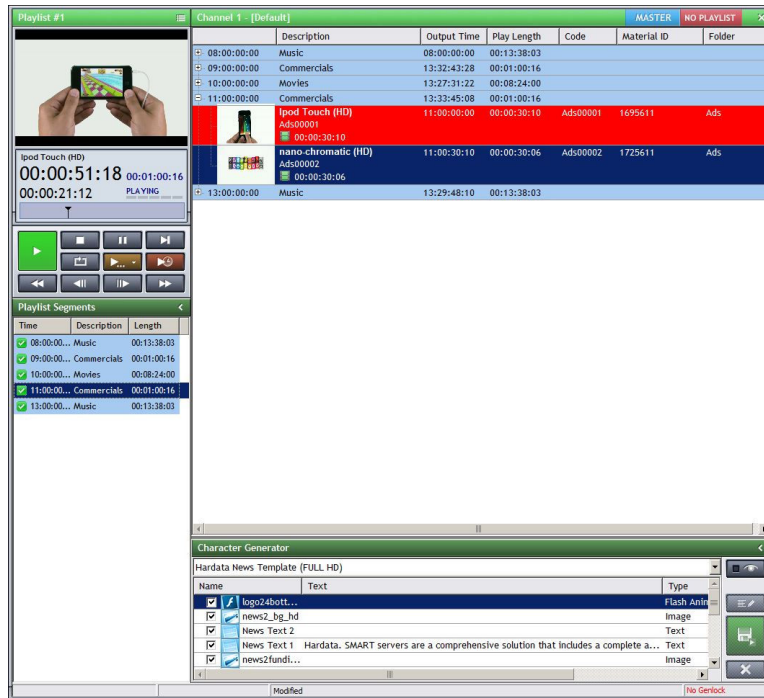


Figure 2-12

2.6. Initial Settings


The server is set up configured at the factory with the following default parameters:

- Computer Name: VTH2280
- Operation Mode: Master
- IP address NIC 1, 2, 3, & 4: DHCP

Should these setting require altering, please refer to section 3.1 “System Preferences”, of this user’s manual, or the “Setup Wizard” in section 0.

3. System Setup

Administrator permission is required to access the System Setup. Only users with the appropriate understanding of the system settings should be granted access to the System Setup.

By clicking the  button from the toolbar and entering the administrator password, the following menu will be displayed:

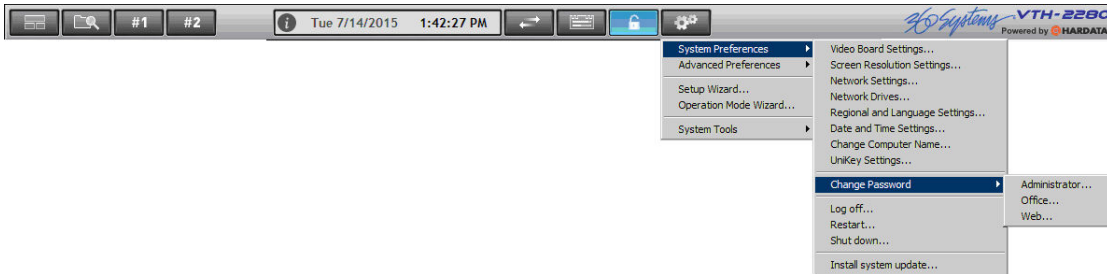




Figure 3-1

 **NOTE:** If you do not know the system administrator password, contact your authorized dealer in your country to provide it, or contact the 360 Systems Technical Support department at support@360systems.com.

 **NOTE:** In order to protect the integrity of your equipment and the system settings, the system administrator password must not be provided to standard users. Only provide this password to authorized personnel who have the technical knowledge to perform system changes.

3.1. System Preferences

The System Preferences menu option allows and administrator to alter the operational system parameters.

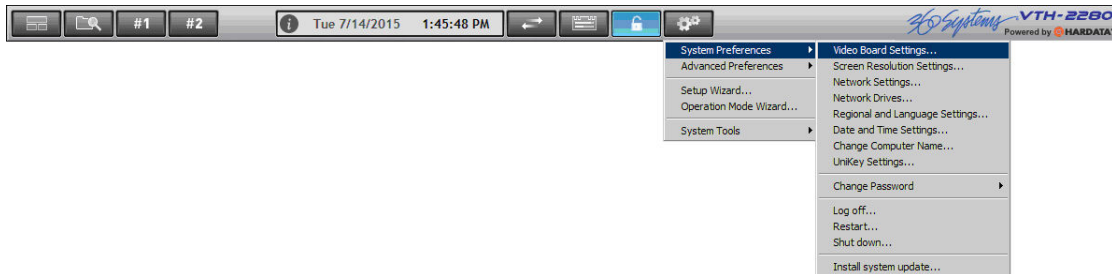


Figure 3-2



NOTE: The operating system is configured and optimized at the factory for the correct operation of the video server application. There is no user access to the operating system. Only items located in the System Setup menu may be changed by the user. Altering any other settings or attempting to install additional software is a violation of the EULA and may cause the system to stop functioning correctly.

3.1.1.1. Screen Resolution Settings

This option opens a dialog box which allows the resolution of the monitor to be adjusted.

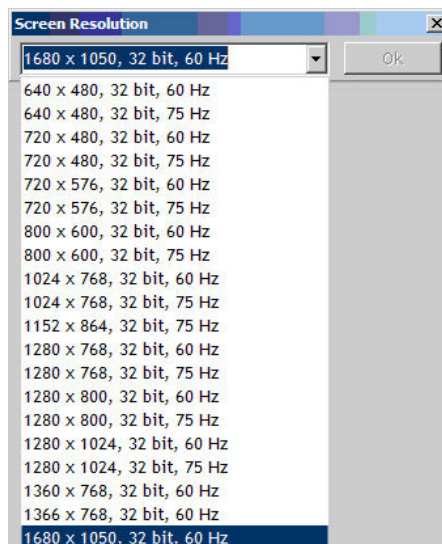


Figure 3-3

By clicking on the dropdown, the system will display all of the available screen resolutions. Please select the best resolution supported for the monitor being used then click the “Ok” button to save the changes.



NOTE: Changing this resolution does not affect the video output of the playout server. The Channel playout resolution is set in the server setup wizard – see page 27.

3.1.1.2. Network Settings

This option will open a dialog box which allows the modification of the network settings so the equipment can connect with a LAN. The IP address, subnet mask, gateway and DNS

servers may be entered into the specified fields. The first two Ethernet connections are Gigabit, while the second two are 10GB connections.

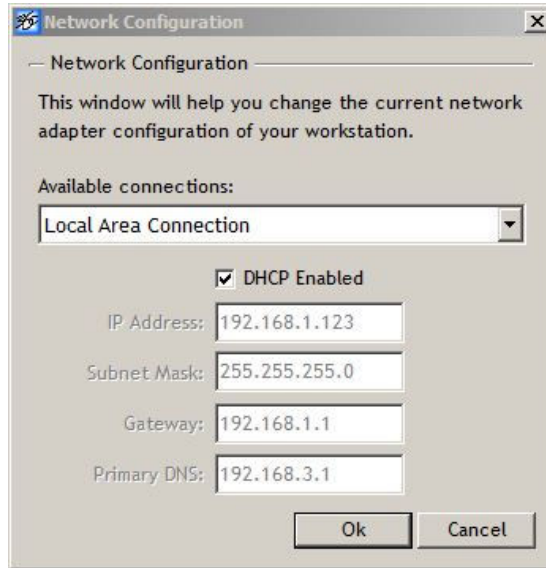


Figure 3-4

3.1.3. Network Drives

Adding a network drive to the system allows access to a shared directory on your network. This may be necessary for importing and exporting media, playlists or other material to and from the server.

Clicking the “+” button will bring up a dialog where the network share may be assigned a drive letter for use on the system.

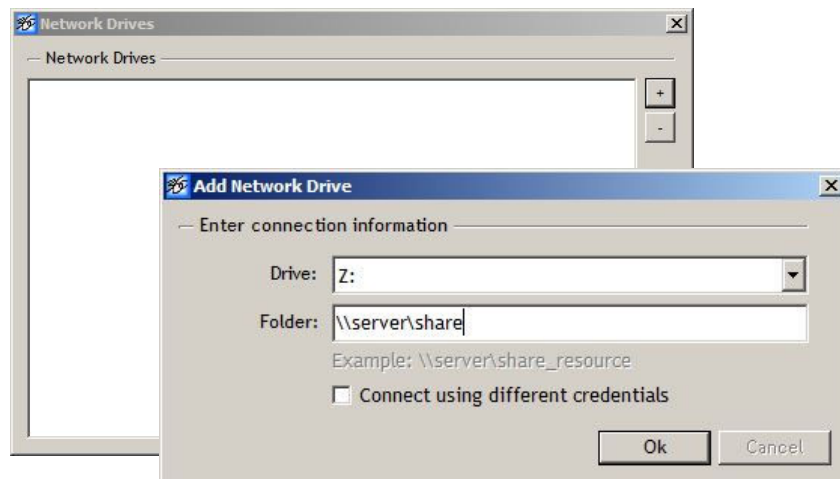


Figure 3-5

3.1.4. Region and Language Settings

This option will open a Windows® dialog box which allows you to modify the regional, language and keyboard settings. This is also where the displayed time format may be changed from the default 12 hour format to the 24 hour format.

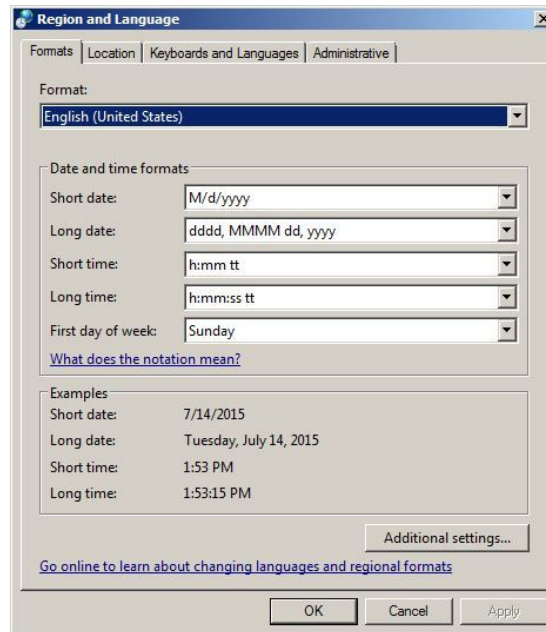


Figure 3-6

3.1.5. Date and Time Settings

This option will open a Windows® dialog box which allows the modification of the date, time and time zone. This is also accessible by clicking the date in the lower right of the system tray.



Figure 3-7

3.1.6. Change Computer Name

This option will open a dialog box which allows the modification of the name of the server. Do not change the name of the server unless advised by 360 Systems technical support or an IT specialist; if changed it may cause the system to be unreachable on the network.

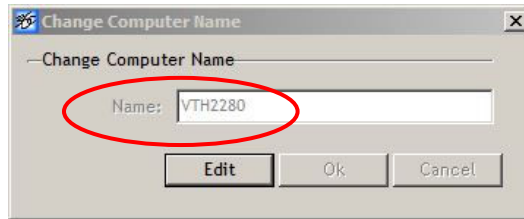


Figure 3-8

3.1.7. Change Password

This option will open a dialog box which allows the changing of the Administrator, Office and Web access passwords. In each case the system will open a dialog box allowing the entry of the new password. The password must be re-entered on the second line as confirmation. Click the “Ok” button to complete the change.

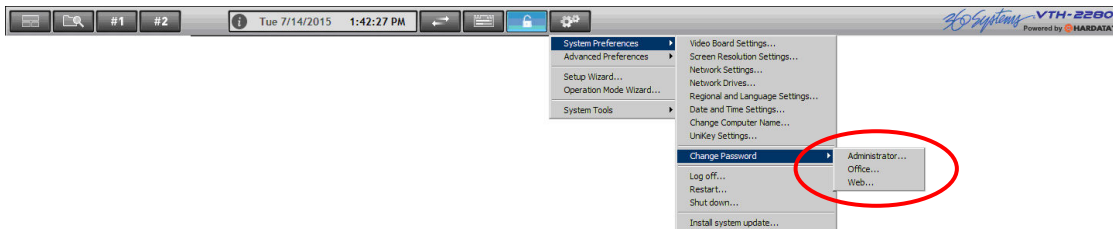


Figure 3-9



Figure 3-10

3.1.8. Logoff

This option allows the user to logout from the current session.

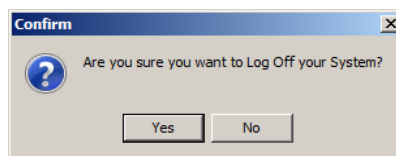


Figure 3-11

IMPORTANT : All playout and recording is stopped when the user is logged out.

3.1.9. Restart

This option allows the user to restart the System. Once executed, a prompt will ask for confirmation with the following dialog box:

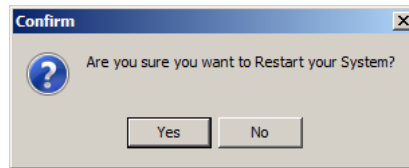


Figure 3-12



IMPORTANT: All playout and recording is stopped when the system restarts.

3.1.10. Shutdown

This option allows the shutdown of the system, which once executed will ask for confirmation with the following dialog box:

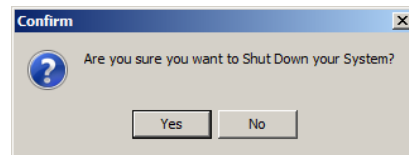


Figure 3-13



IMPORTANT: All playout and recording is stopped when the server is shutdown. The server should always be properly shutdown using this method to reduce the risk of file corruption or damage to the system software.

3.2. Advanced Preferences

3.2.1. Social Preferences

The server has the ability to send preprogrammed messages that are inserted into the Playlist programming to a Twitter account. Potential uses may include the posting of programming information, Channel updates, special news bulletins or other various announcements. A different Twitter account can be assigned to each Channel independently by selecting it from the Social Preferences menu. To link the account to a Channel, follow the instructions provided in the window below.

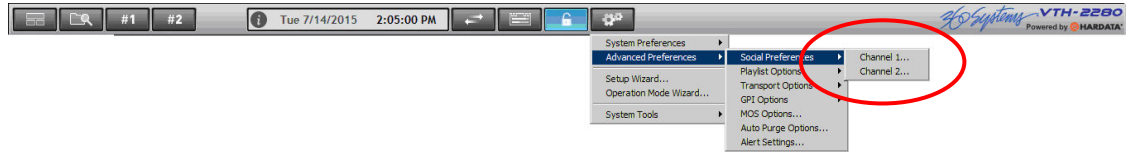


Figure 3-14

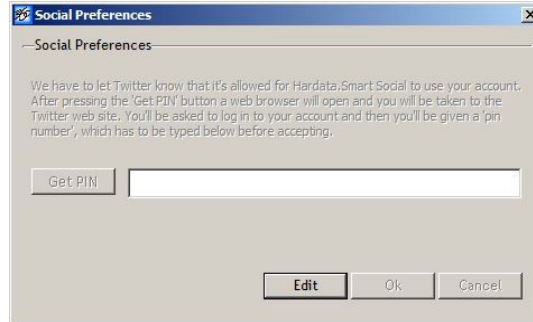


Figure 3-15

A sample command is listed in the Library as an example of how this may be used. For further information regarding the use of Commands, please see Section 4.2.9 of this manual.

3.2.2. Playlist Options

This option allows changing specific options on each channel depending on its mode of operation. By clicking the *Edit* button, you can change the options listed below on each Channel independently.

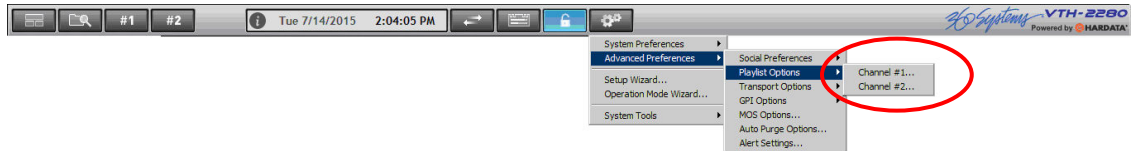


Figure 3-16

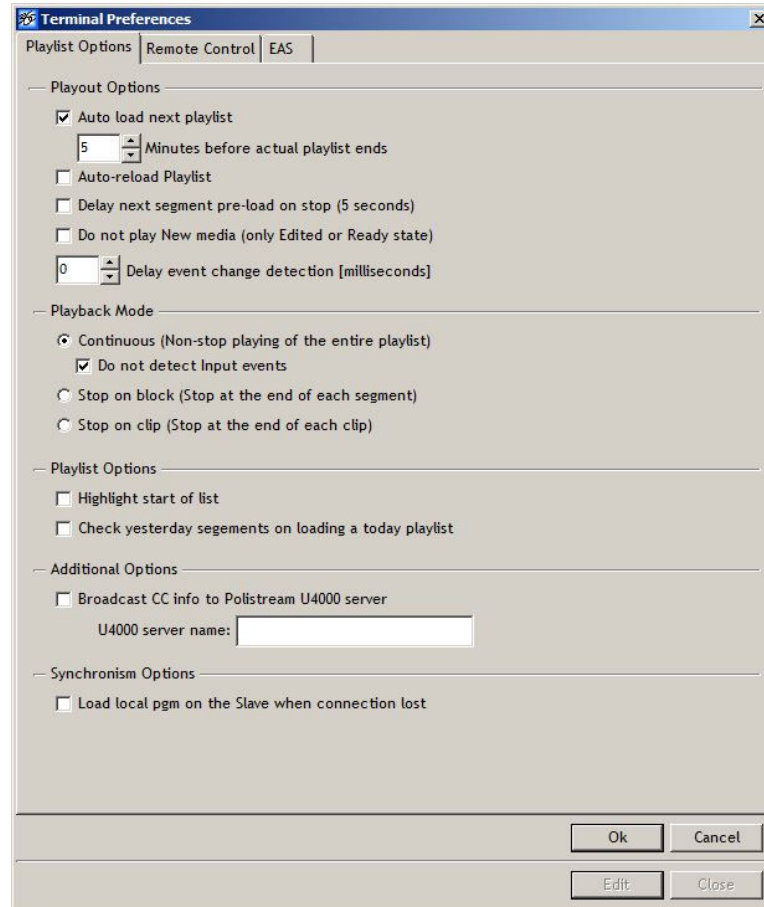


Figure 3-17

3.2.3. **Auto load next playlist**

This controls whether or not the system will automatically proceed to the next day's programming.

If this option is enabled, and there is no next day's programming, and a Default Playlist exists for the channel, then the Default Playlist will be loaded and played.

The "Minutes before actual playlist ends" field controls how long before the end of today's programming that tomorrow's Playlist will load.

3.2.4. **Auto-reload Playlist**

Normally if the current day's Playlist is edited in another window (such as the Playlist Builder) and saved as the current day's programming, a warning will pop up to let the operator know that the program has been changed. In order for the changes to take effect the operator must refresh the list.


When Auto-reload Playlist is enabled, whenever there is new programming, the list is automatically refreshed and the changes go into effect immediately.

3.2.5. **Delay next segment pre-load on stop**

When playback modes Stop On Block or Stop On Clip are in effect, when this option is enabled the playback will hold on the last frame for a short time rather than immediately cuing the first frame of the next clip. This will avoid showing that frame in the case of a slightly late switch away to other programming.

3.2.6. **Do not play New media**

This option prevents the airing of clips that have not been edited or OK'd by editorial. This status is set in the Media Properties in the Other tab. See the section 4.2.11 Media Properties on page 45.

When a clip has any status other than Ready or Edited, a red warning bar symbol  appears next to its Code.



In addition, in the Playlist Segments display, any Segment that contains a clip that cannot be played will display this symbol as well.

This does not mean that the segment will be skipped, other media that is Ready or Edited in that segment will play.



3.2.7. **Playback mode**

There are three playback mode selections that control when the list stops automatically and waits for some action to begin playing again. This is used to create commercial breaks or news rundowns for example. Another use is to pause for a network feed in an environment where the feed is switched by external equipment (and the server's Live content feature is not used).

- **Continuous** (Non-stop playing of the entire playlist)
Plays all events and segments without stopping.
The "Do not detect Input events" disables the GPI Inputs.
- **Stop on Block** stops at the end of each Segment.
- **Stop on Clip** plays one event at a time.

3.2.8. Highlight start of list

This option causes the first item in a newly loaded or inserted list to be displayed in a different color.




	Description	Output T
+ 00:00:00:00	Morning Break	00:00:00:
+ 00:49:17:00	Paid Programming	
+ 00:49:46:00	NewsBreak	00:49:17:
+ 00:59:41:00	Commercials	00:59:12:
+ 01:33:45:00	Afternoon Programming	01:33:17:
+ 01:35:49:00	PrimeTime	01:35:21:
+ 02:02:45:00	Evening	02:02:18:
02:02:45:00	Late Night	02:14:51:
+ 00:00:00:00	Morning Break	02:14:51:
+ 00:49:17:00	Paid Programming	03:03:39:
+ 00:49:46:00	NewsBreak	03:04:08:
+ 00:59:41:00	Commercials	03:14:04:

Figure 3-18

3.2.9. Check yesterday's segments when loading today's playlist

It is not necessary to have a particular day's playlist start and end at midnight. A list may run overnight and end on the next day. For example, you might program each day starting at 6am and ending at 6am the next day. When a Playlist is initially loaded, normally only the Playlist that corresponds to today's date is loaded. If this action is taken before the previous day's program would have ended, enabling this option causes the previous day's programming to be checked to see if it contains material that is scheduled to play today (after the current time). If so, it is automatically loaded into the Playlist before today's programming.



WARNING: If yesterday's list contains elements that overlap the beginning of today's list, today's programming may be delayed or not start.

3.2.10. Broadcast CC info to Polistream U4000 server

The system can send Closed Caption information to a Screen Systems Polistream Universal 4000 captioning server. Simply check the enable box and enter the name of the Polistream server in the "U4000 server name" field. Contact Screen Subtitling Systems for further details.
<http://www.screensystems.tv/contact/>

3.2.11. Load local pgm on the slave when connection lost

When running a pair of servers, the Slave server is normally only loading a limited amount of programming. When this option is enabled, as soon as the Slave detects the Master is no longer connected, it loads the entire day's programming. (In most applications this should be enabled.)

3.2.12. Transport Options

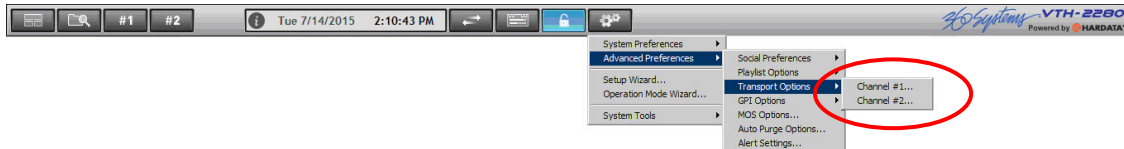


Figure 3-19

There are independent settings for each channel. The Remote Control options are currently unused.

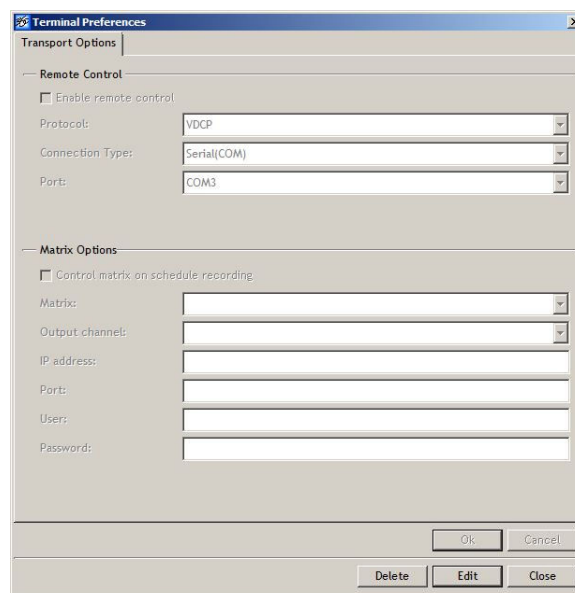


Figure 3-20

Video Matrix Control Options allows configuring the communication settings for a video switcher to select among various sources for scheduled recordings.

Currently this supports only the . Contact 360 Systems for further information.

3.2.13. MOS Options

Media Object System allows a Newsroom system to tell the server what clips are to be used for a particular newscast. These are supplied to the system in the form of Playlists accessible from the Open Playlist dialog. See the discussion of MOS RO Playlists in section 4.4.10 Open Playlist on page 76.

These parameters allow configuring the VTH Server to connect with the Newsroom computer system.

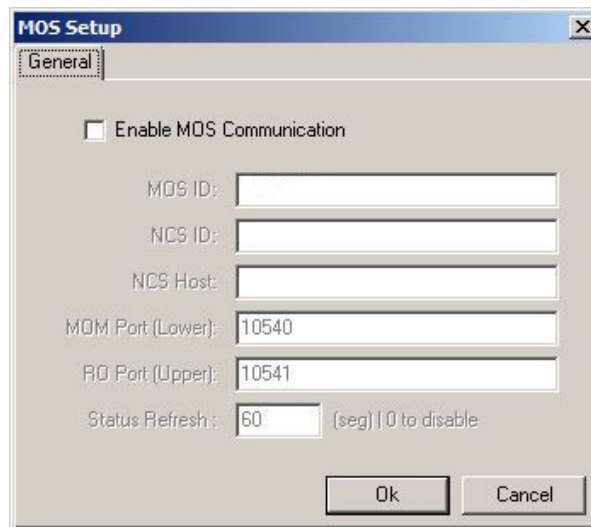


Figure 3-21

3.2.14. Auto Purge Setup

Auto Purge will look for any video media that is not scheduled and automatically delete it from the system. The process is triggered when the amount of available storage drops below the percentage set in the Trigger After Reaching field, and will continue until the percentage has been restored to the percentage set in the Stop on Reaching field.

It prioritizes the oldest media first based on the modified date (i.e. the last edit, not the creation of the clip). If you want **all media that is not currently in a playlist to be purged**, set Stop on Reaching to 0%.

There is not any method to manually start the Auto Purge process, it will start automatically when enabled if the percentage of storage used exceeds the Trigger value. It automatically checks the percentage every hour after that.

Note that the Kill Date (see page 45) does not have any effect on Auto Purge.

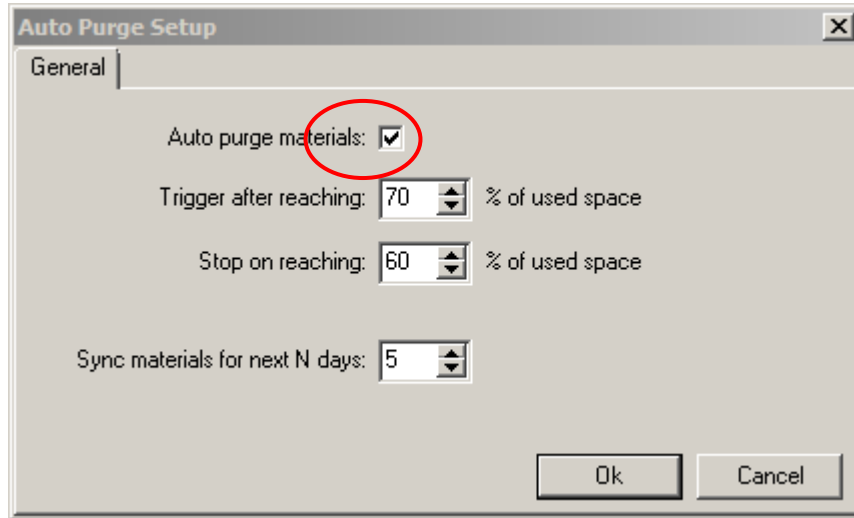


Figure 3-22

3.2.15. Alarm Settings

In this window you can enter the e-mail address(es) of personnel who should receive messages regarding specific events that occur on the server. There are two categories of events, System Alerts and Media Alerts.

3.2.16. System Alerts

These alerts are system generated fault conditions related to the server hardware. Messages will be sent to e-mail address(es) listed as they relate to the error condition. For further information regarding the actual error condition, the user can log into the Web Interface (see Section 6) and review the errors under System Health.

3.2.17. Programming Alerts

Programming alerts generate an e-mail when a program is running on a channel and no saved programming exists for the next day. The e-mail will be sent two hours prior to the next day's programming load, warning the user that there is no programming for the next day and that the Default Playlist will load automatically.

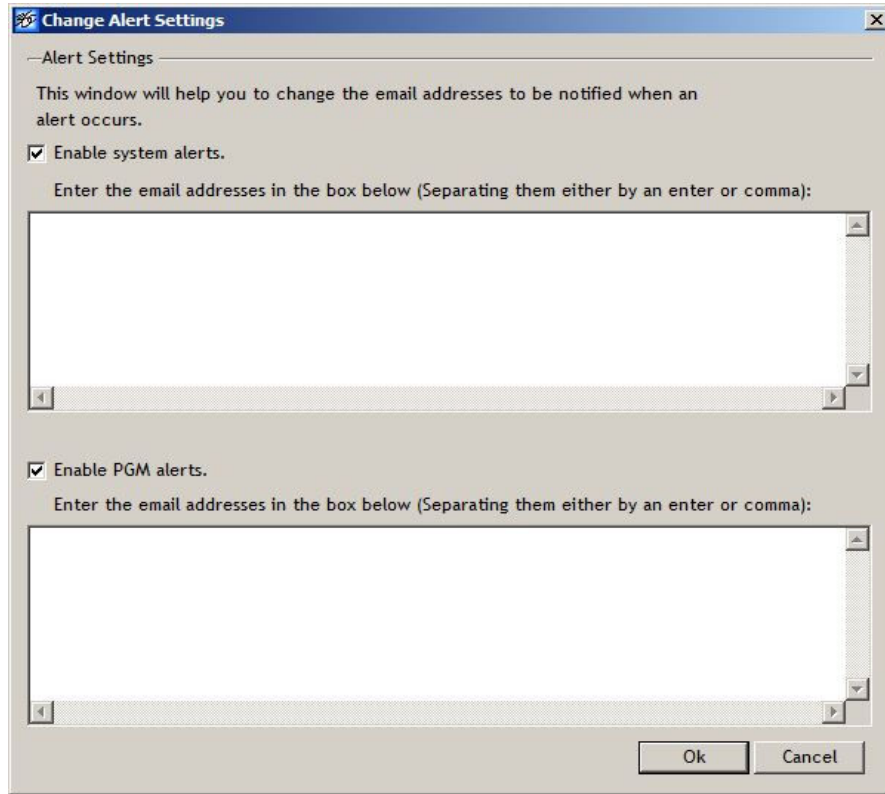


Figure 3-23

3.3. Setup Wizard

This option starts the Setup Wizard discussed in Section 3 System Setup, and allows the set up of the language, playout resolution, Channel name and the broadcast mode. Please refer to that section for detailed information on using this wizard.

3.4. Operation Mode Wizard

IMPORTANT: Before starting this option, read General Connections, section 2.2 of this User's Manual.

This option starts the Operation Mode Wizard, and allows the set up of the Playout Sync service, described in Appendix A, where a server is defined as Master, or as Slave.

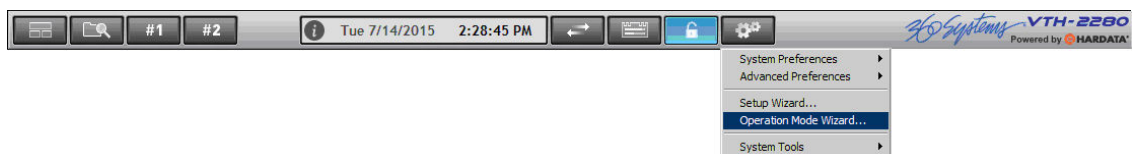


Figure 3-24

The first wizard screen allows the selection of the role for the server. Select Master if this server is designated as the primary or sole server, or select Slave if this server is to be the secondary server.



Figure 3-25

Click the Continue  button to continue.

If Master was selected, the wizard will prompt that the setup is complete.

Click the Confirmation  button to accept the changes.


If instead on the first screen Slave was selected, after clicking the Continue  button, the next step will prompt for the name or the IP Address of the Master equipment:



Figure 3-26

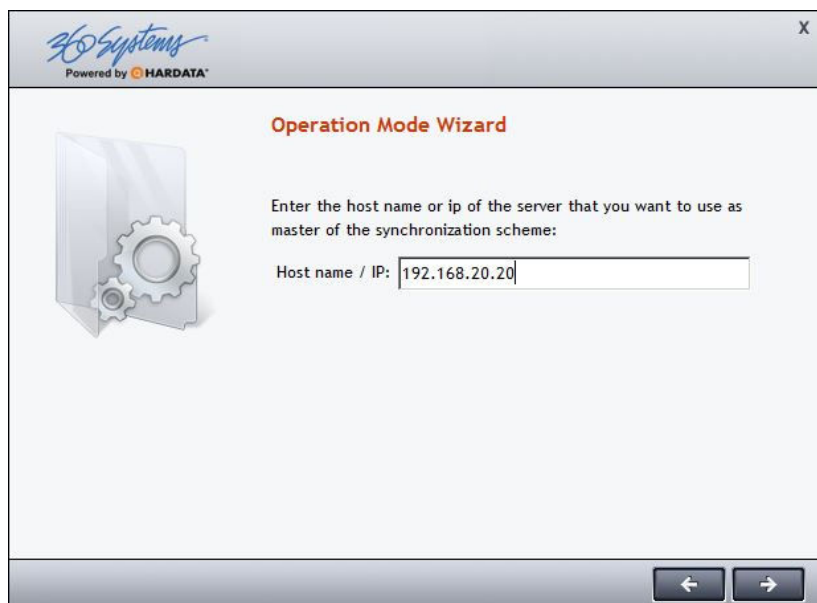



Figure 3-27

Enter the name or IP address of the Master server and click the Continue  button.

Click the Confirmation  button to accept the changes.

4. System Operation

The following describes the operational functions of each system window and its features.

4.1. Work Environment

The application's main window has a toolbar at the top with the following functions:

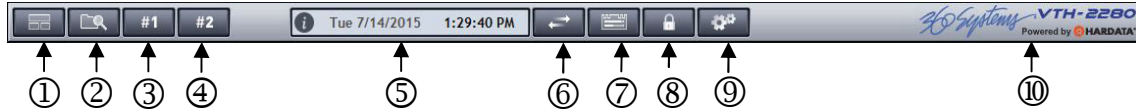



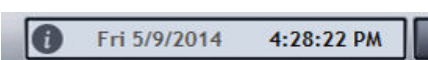









Figure 4-1

- ①  Tile Windows button
- ②  Media Library button
- ③  Channel 1 button
- ④  Channel 2 button
- ⑤  Time and Date
- ⑥  Media Transfer Status
- ⑦  System Health
- ⑧  Settings Lock button
- ⑨  Settings button
- ⑩  Logo Button



4.1.1. Tile Windows Button

The Tile Windows button  is used to automatically arrange the open windows so they are visible within the full screen.

4.1.2. Media Library Button

The Media Library button  is used to open the library window. See Section 4.2 on page 32 to learn more about this window.

4.1.3. Channel Buttons

The Channel Buttons  and  are used to open the various windows that are associated with each channel. They open a drop down menu allowing selection of the desired window.

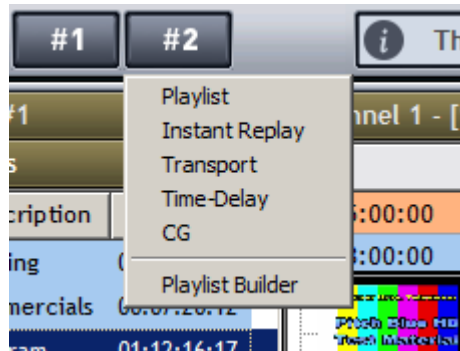


Figure 4-2

Playlist, Instant Replay, Transport, Time Delay and CG each use the output and so only one can be open at a time. When one is open the others will be disabled. If the open window is not visible in the GUI, it can be brought into view by selecting it again. Close the window to allow one of the other windows to be opened.

The Playlist Builder is independent and can be opened at any time.

4.1.4. System Time and Date

This bar displays the date and time of the system, using the format configured in System Preferences in the Region and Language dialog. See page 15.

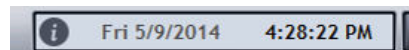



Figure 4-3

Clicking on it will display the system name:



Figure 4-4

4.1.5. Media Transfer Status

The button  is used to view the status of media being synchronized between Master and Slave systems. It is not used in a single server system.

4.1.6. System Health

By clicking on the Dashboard button , the system status can be examined.

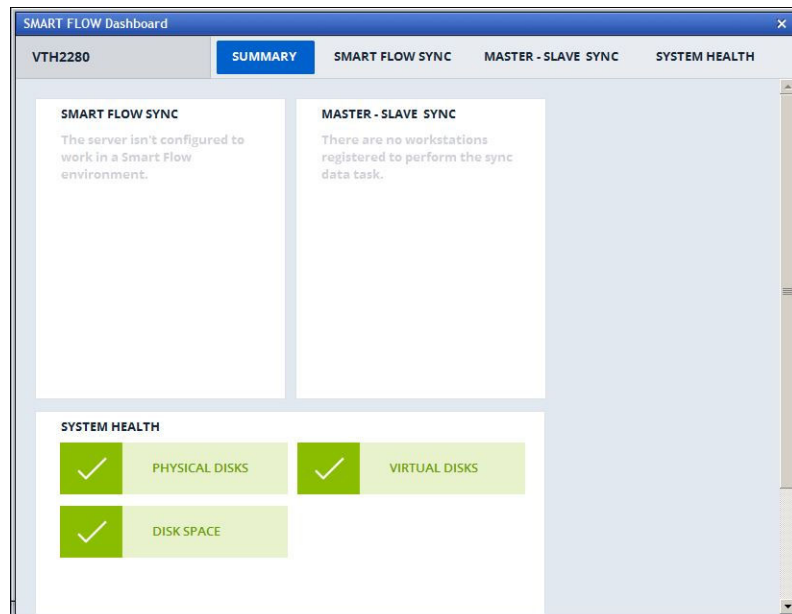
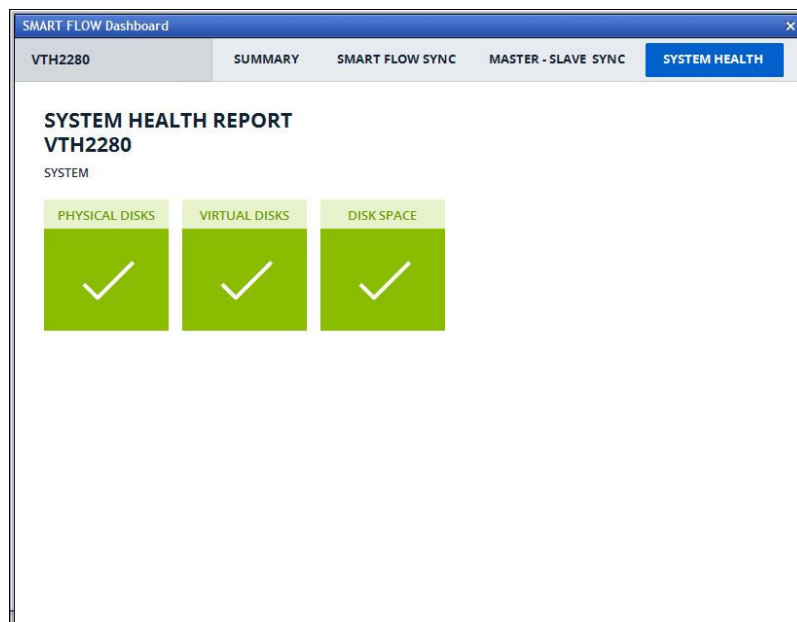


Figure 4-5

The Smart Flow Dashboard allows access to several features. Smart Flow sync is not currently implemented. Master-Slave sync controls the use of two VTH servers in a primary/backup arrangement. This is discussed in [section](#). The System Health Report shows the status of the RAID storage system.



4.1.1.7. Settings Lock Button



By clicking on the button  , a dialog box will open where the user can enter his / her password.



Figure 4-6

4.1.1.8. Settings Button

Clicking on the settings button  will display a menu where the system’s main settings can be changed and the **Setup** Wizard is accessible.

In order to change certain system settings, it may be necessary to close all open windows.

If the system is logged in as a simple user, a pop up window will present itself for administrative authentication:



NOTE: If you do not know the system administrator password, contact your authorized dealer in your country to provide it, or contact the 360 Systems Technical Support department at support@360systems.com.



IMPORTANT: In order to protect the integrity of your equipment and the system settings, the system administrator password should only be provided to authorized personnel that have the technical knowledge to perform system changes.

Once the administrator’s password is entered, a menu with the following options is displayed.

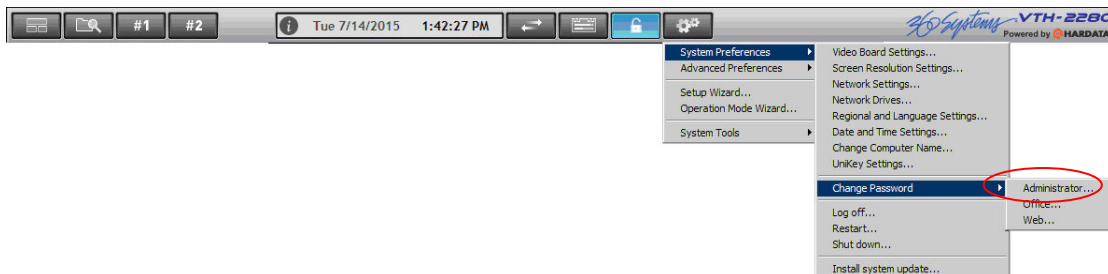


Figure 4-7

See chapter 3.1 in this operations manual to learn more about each option.

4.1.9. Logo Key


If the logo  located in the upper right side of the screen is clicked, system license and software version information is presented. This information is important when communicating with technical support.



Figure 4-8

By clicking the License Information button, the current license key and information regarding the key will be displayed.

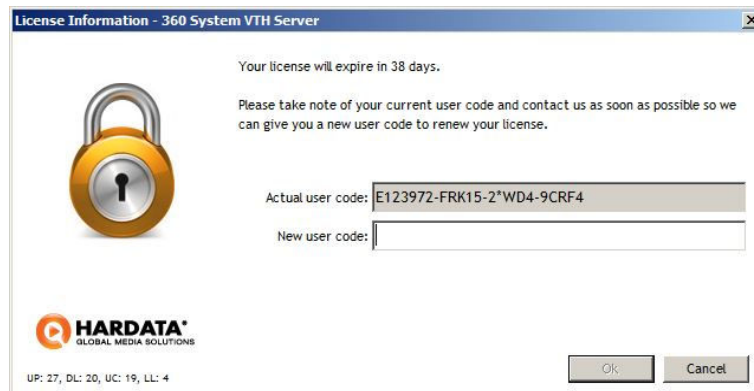



Figure 4-9

4.2. Media Library Window

The Media Library window is opened from the second button in the toolbar .

This window is used to copy, mark, search and organize the video content on the server. The creation of Live Feed clips and Commands is also accomplished within the Media Library window. Video files ingested into the system via ftp are displayed within the watch folder located in this window. Note: the watch folder does not appear until a file is transferred.

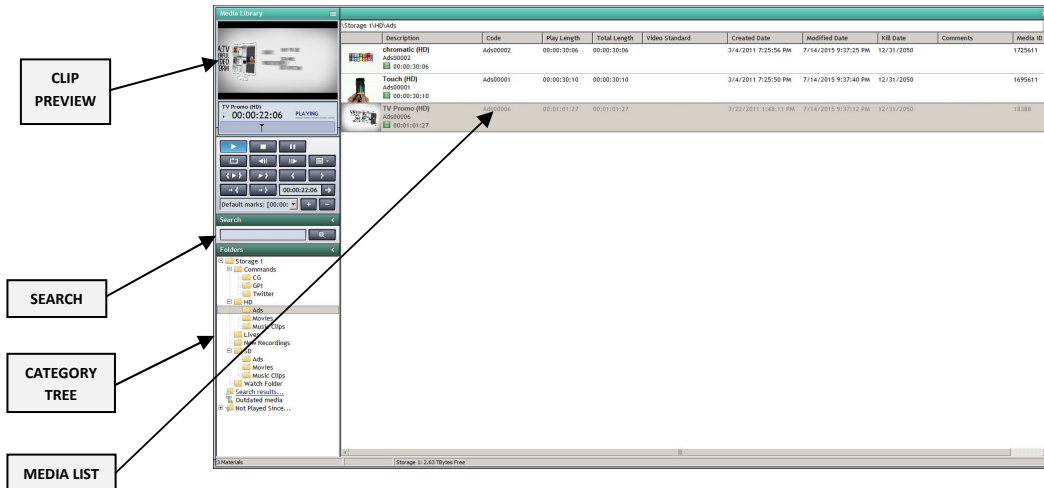


Figure 4-10







There are four main areas within the Media Library window. On the left is the area for content preview with transport controls, a search area, and the category folder tree. Any content located within the selected folder will display on the right side in the Media List.

Import of content can be performed here by right clicking in the Media List. FTP ingest and recording of programs is not performed here. See section 4.2.10 Import Content and section 6 FTP Access for further information on ingesting and importing content.

Refer to Appendices F and G in this manual for further information.

4.2.1. Media

The right hand area of the window displays the video file information with a snapshot image, the metadata included with the content, and one or more icons:

-  **Digital Video:** Indicates a video program from a file on the system.
-  **Command:** GPI or other command.
-  **Live Content:** Live show content.
-  **Marks:** Mark In and Mark Out. These appear if the Default Marks are set. They are independent, if only one mark is set then that part of the icon will appear.
-  **Content Not Available:** Indicates that the content event is included in the database, but for some reason the system is unable to access the file.
-  **Content Not Ready:** Indicates that the content event has not been cleared to be put on air, or is beyond its Kill Date. See the discussion of the Playout setup option **“Do not play New media”** on page 20, and Media Properties on page 45. (This is currently only seen on media items when in the Playlist.)

4.2.2. Preview Section

The preview window in the Media Library allows the user to view any clip in the Media Library, set Marks and create segments (Subclips).

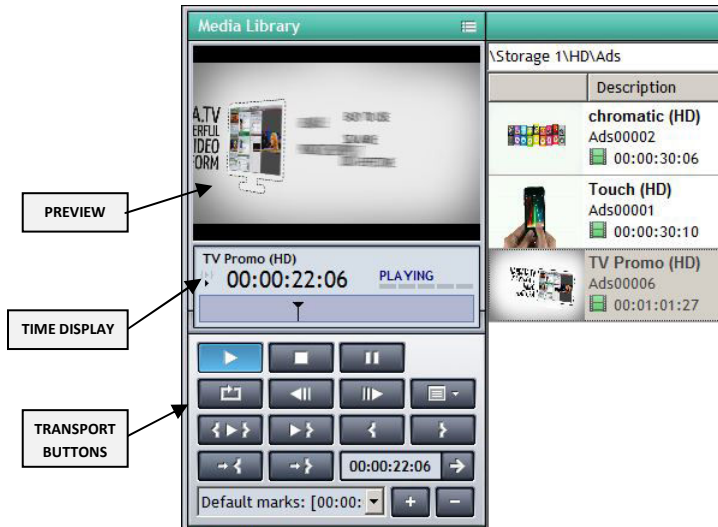


Figure 4-11

For detailed information on using the transport buttons and their features, please refer to the Section 4.3 Transport Window on page 48.

4.2.3. Folders

The Folders area is basically a browser window that displays the folder tree structure where media is stored.

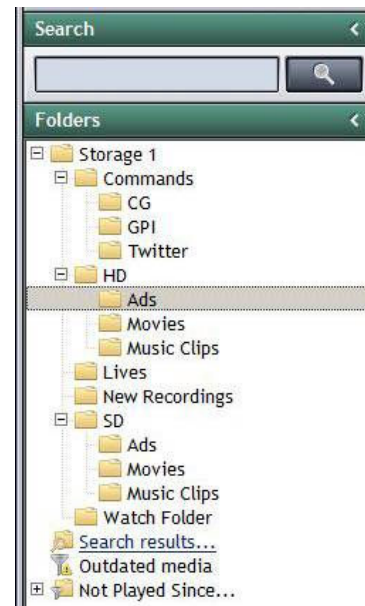


Figure 4-12

The folder tree also displays saved search results, as explained in section 4.2.5 page 36.

4.2.4. Folders Menu

To create a new folder, simply select the folder where you will nest the new folder, and click the right mouse button. In the context menu, click on the option *Create Folder*.

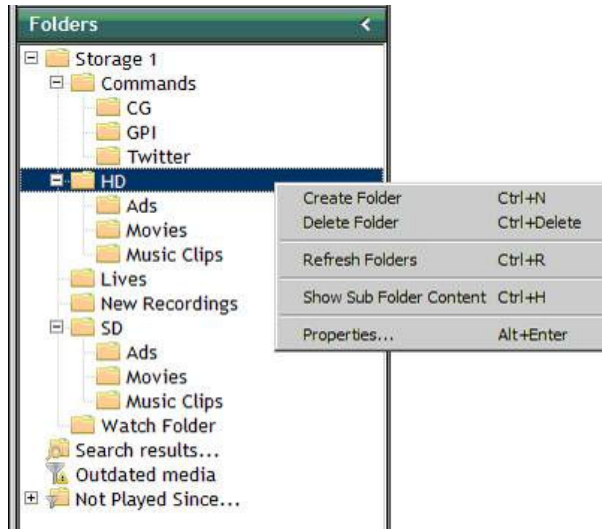


Figure 4-13

When creating a new category folder, a *Name* and a three-letter *Prefix* that identifies the type of content to be saved in that category folder must be assigned. The *Counter* field sets the number from which the automatic counter for the content to be added will begin.

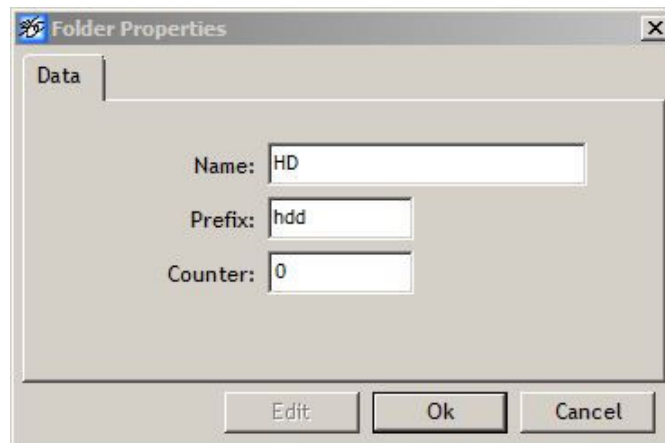


Figure 4-14

By setting this, the Code identifier for each piece of content ingested in that folder is automatically created with a prefix and a number. For example, if you create a category for storing movies called MOVIES, assign the prefix MOV, and start the counter at 20, the first content ingested in that category will be called MOV00020, the next MOV00021, and so on. See section **4.2.10** Importing Content for more info.

The other Category Menu options are as follows:

Create Folder	Ctrl+N
Delete Folder	Ctrl+Delete
Refresh Folders	Ctrl+R
Show Sub Folder Content	Ctrl+H
Properties...	Alt+Enter

Figure 4-15

- **Delete Folder:** Delete the selected category, if it is empty.
- **Refresh Folders:** Updates the content of the categories on the screen, as there may have been changes made from other terminals which are not reflected immediately.
- **Show Sub Folder Content:** Displays the contents of the subfolders of the selected folder.
- **Properties:** Displays the name, the prefix and the last number assigned to the content of the selected Category.

4.2.5. Content Search

In the search box, a user can type a word and click the “Search” button, (magnifying glass icon) and the system will search for a match in the entire database. All Media items that contain that word in their Title, Code or Comments will then be displayed in the Content area. Search terms are not case-sensitive.

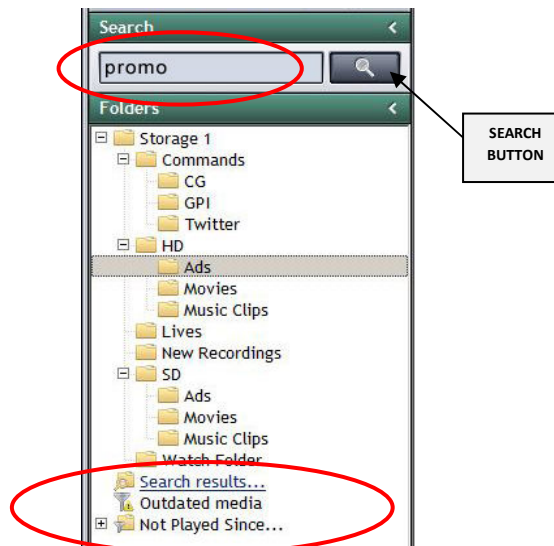



Figure 4-16

To later view the results of the previous search, click on the *Search Results* folder in the folder category area. There are also several predefined searches. *Outdated Media* will

display all content that has reached its expiration date as defined in the contents' properties for Kill Date (see page 45). *Not Played Since*, when expanded, has several date ranges that can be used to find older content that is no longer being used.

4.2.6. Content Selection

The Folders window displays the categories created to organize the content. By clicking on each of the folders, all content contained in that category is displayed in the Materials section on the right side of the window.



NOTE: Grouping of content into categories provides an effective way to organize it by type or purpose. For example, categories may be created to hold commercials, music clips, news, movies, etc. This facilitates the management of content and the ability to quickly find the content needed.

4.2.7. Other Content Types

There are two other forms of content that can be added to the Media Library - Live content and Secondary Events.

To add new content of these types, click the right button on the mouse while the cursor is over the Content List (right side of the Materials Window), select *Create material of type* and then select either *Live* or *Secondary Event*. The following menu is displayed:

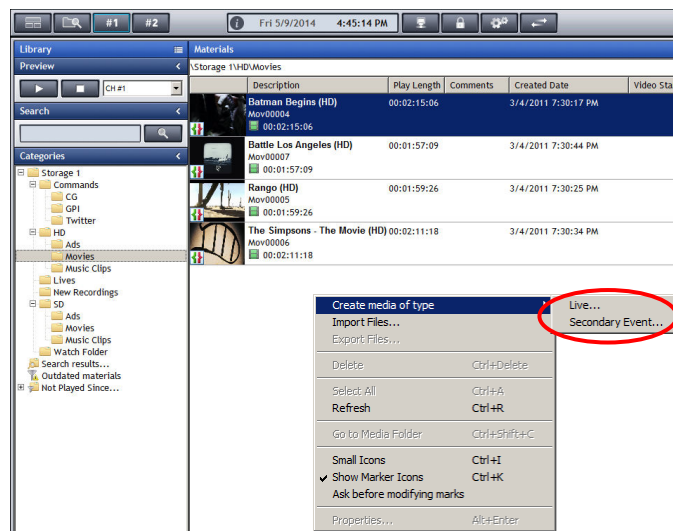


Figure 4-17

4.2.8. Live Content

Creating Live content allows for the insertion of a segment of a live feed into a playlist. Once the content is created with a length, the segment will be displayed in the Library window and can then be added to a Playlist.

By choosing the Live option in the menu, a pop up will appear. Enter a title and the duration of the event.

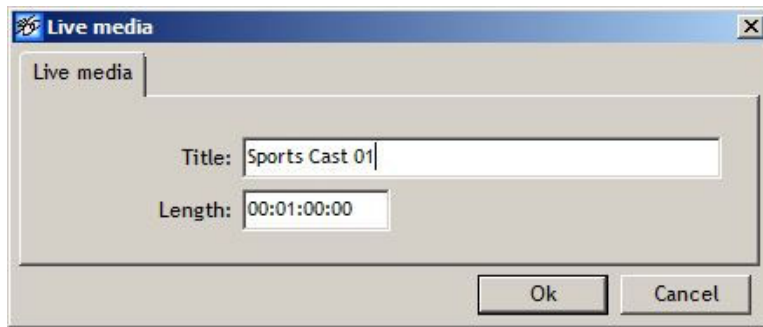


Figure 4-18

By clicking “Ok”, the new live content will appear in the content list. Right click on the new live content and select properties to make changes or add info to it.

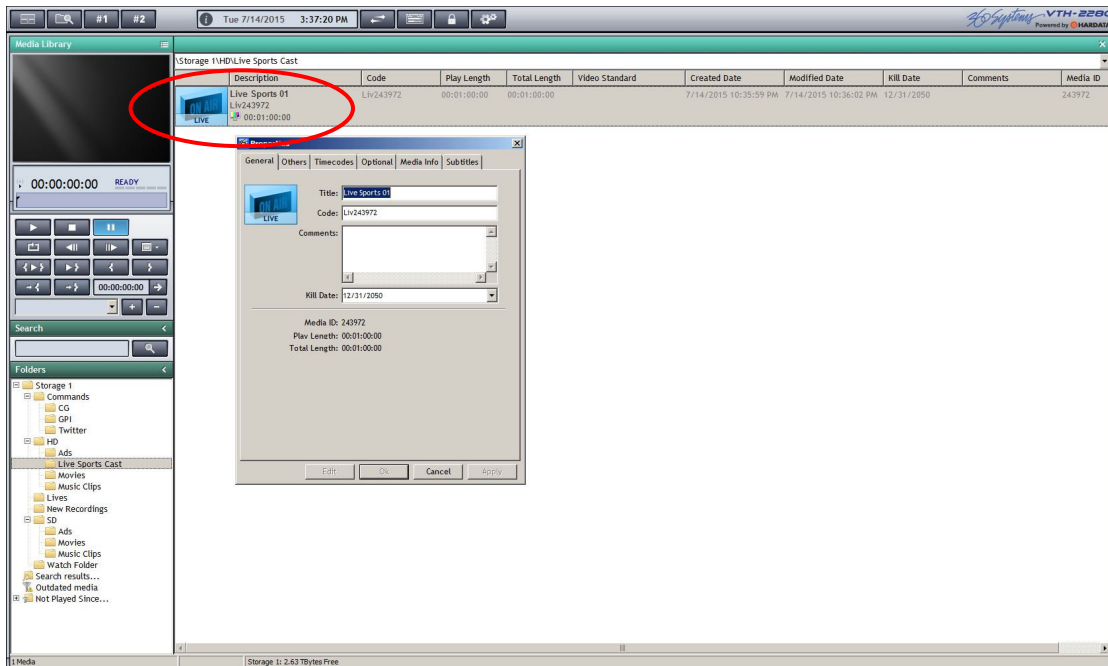


Figure 4-19

Only the General Tab is used for editing Live Content items, information in other tabs is not applicable.

4.2.9. Secondary Events

Secondary Events are used to specify and set in motion particular control functions. For instance, commands need to be established in order to add and remove CG overlays or to trigger a specific event within a playlist. The most common use for a Command is the insertion of Graphics Projects into a Playlist. Choosing the *Secondary Event* menu option will bring up a new window where the title, identification code, command type and the trigger time codes must be entered.

As an example, if a CG is created to overlay a station ID during playout, a command needs to be built that loads that CG. Once built, that command can be dragged from the Library into the Playlist and dropped on the Clip that is playing at the point it is to be shown. The command will then display in the Playlist directly under the Clip that it is associated with. A “+” or “-” symbol will appear on the Clip to allow showing or hiding the commands associated with it.

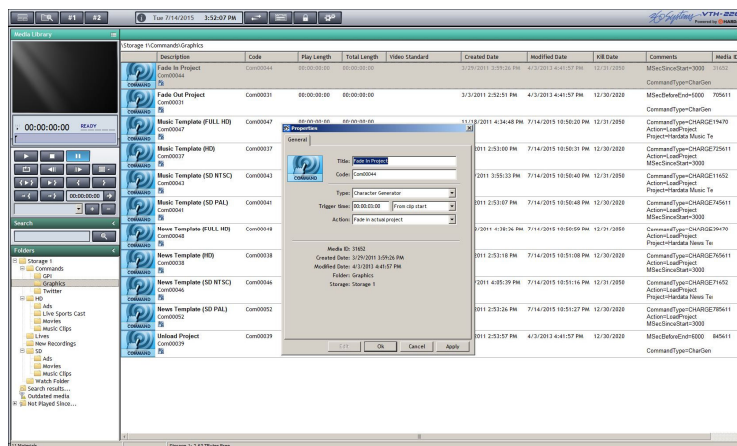
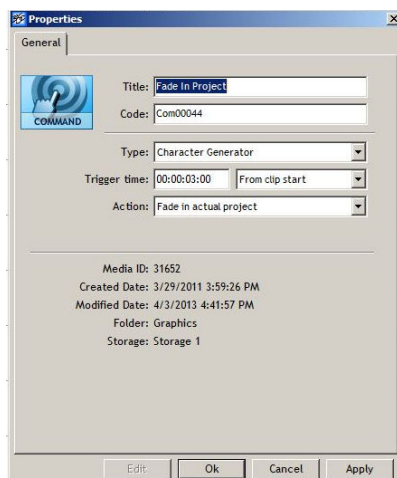


Figure 4-20



Title: This is usually a brief description or name of the Command.

Code: If left blank, this will automatically be assigned the next number based on the category the command is being assigned to (determined by the folder in which it is being created).

Type: There are four basic commands, detailed on the following pages:

Character Generator: This is used when a graphics overlay is to be inserted / removed.

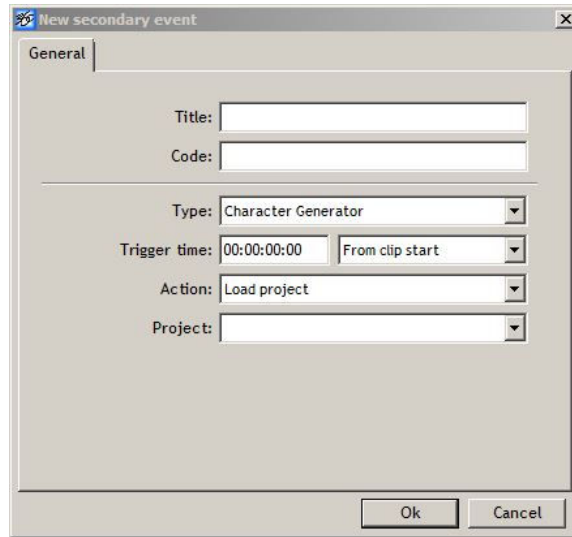


Figure 4-21

GPI: This is used to trigger an external event on an external piece of equipment.

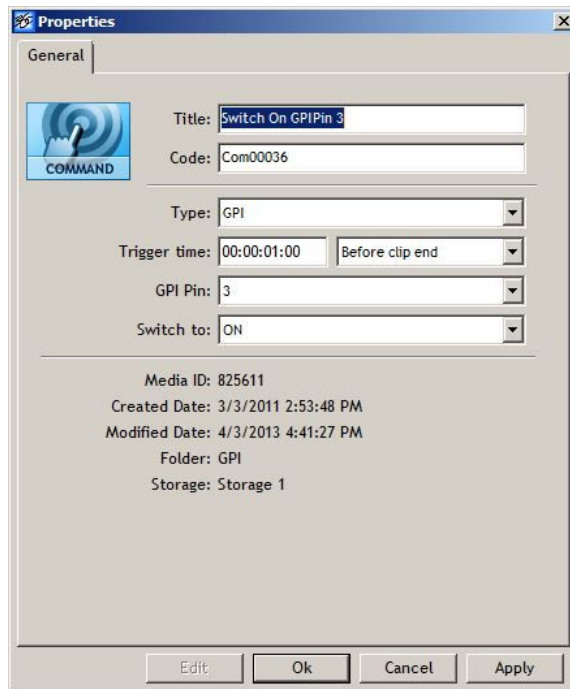



Figure 4-22

 **NOTE:** The functionality to incorporate GPI commands requires the optional GPI/GPO CXP-5 control module.

General: This command will allow a change to the Playlist mode. For example, it can be used to set the Playback Mode to Continuous or Stop at End of Each Clip, or turn Auto mode on or off.

Twitter: This command allows the system to automatically send specific information directly to a Twitter account that has been assigned to a Channel. For a list of specific commands and examples, please see Appendix E.

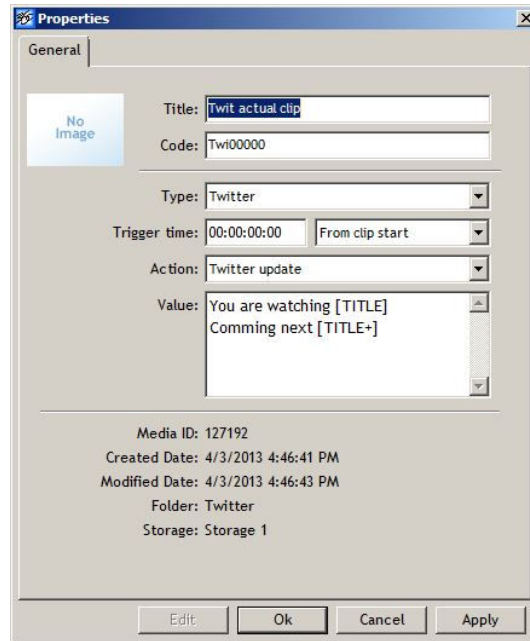


Figure 4-23

Main Fields: There are several main fields in most commands that the user can select from to complete the command structure.

Trigger Time: This is the time the command is to be executed, relative to the drop down box selection *From Clip Start*, *Before Clip End* or *Before Clip Start*.

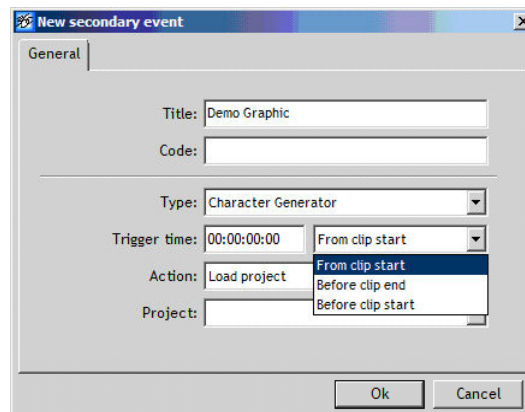


Figure 4-24

Action: The Action defines what the command is supposed to accomplish. In the example of a Character Generator command, the overlay could be loaded, unloaded, faded in or faded out.

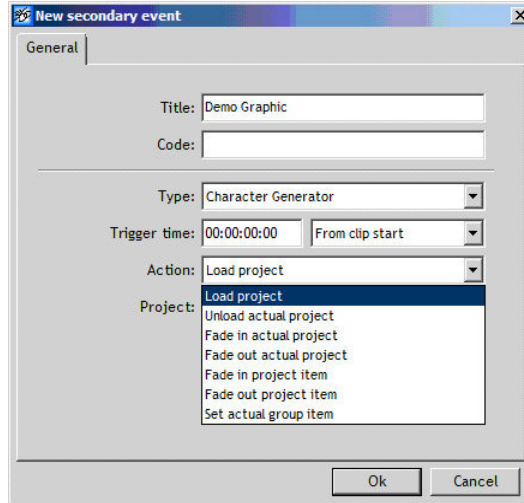


Figure 4-25

Project: In a CG command, this is the name of the actual CG project that was previously created. (See section 4.3 for information on creating CG projects.) By clicking the drop down, a complete listing of all CG projects will be displayed. Select the appropriate project.

Value: For a Twitter command the value contains text and commands specific to what information will be sent to the Twitter account.

For a listing of available commands, please see Appendix F of this manual.

4.2.10. Import Content

Select a Category folder on the left side of the Library window, then by right clicking in the Media area on the right, a menu will display. Selecting *Import Files To* and selecting the appropriate storage device allows importing media from an external drive or network location.

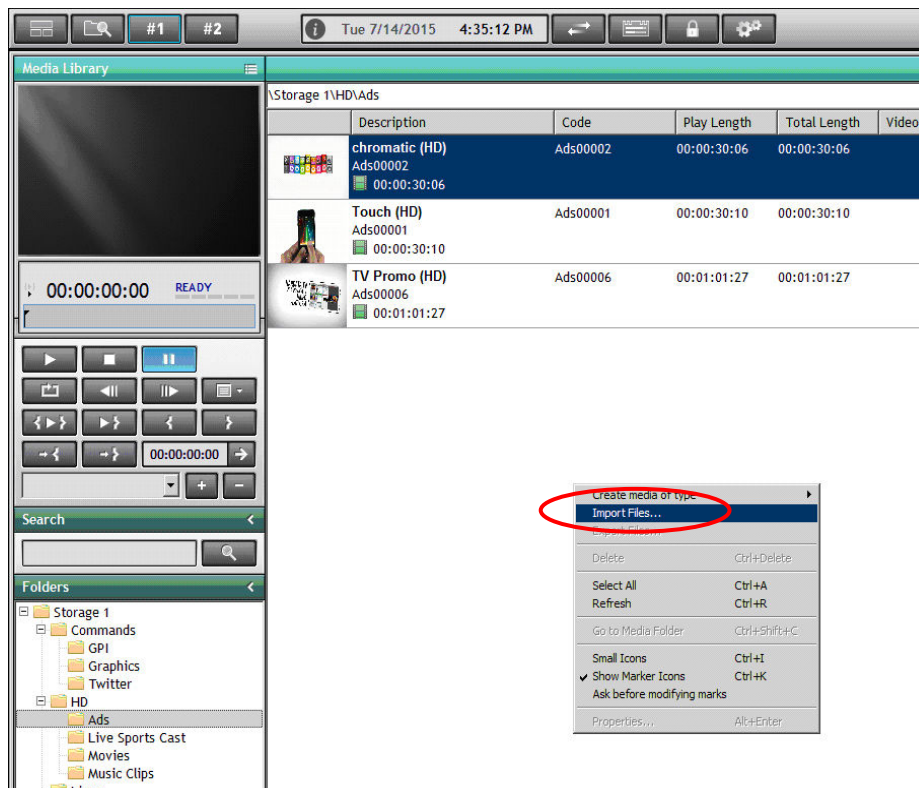


Figure 4-26

In the window, choose the storage location where the new content is located.

NOTE: Only content that meets the specifications of the system may be imported into the server. Content not meeting these requirements will not appear in the Library following the transfer. Supported file types: MPEG-2, MPEG-4, H.264, DV, and XDCAM with the following containers: .MXF, .AVI, .MOV, .MPG, .MP4, .MPEG, .TS, .DV.

Locate the file to import, click on it to select, and then click on “Open”.

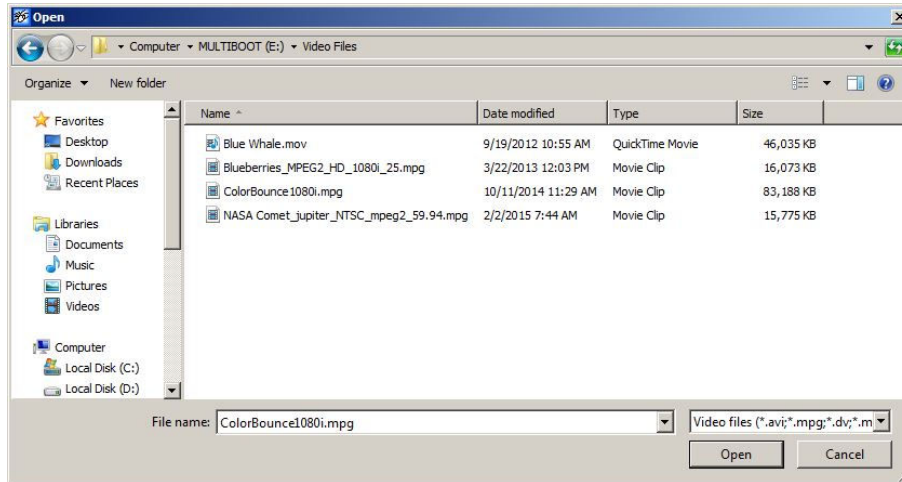


Figure 4-27

A pop up will indicate the progress of the file transfer.

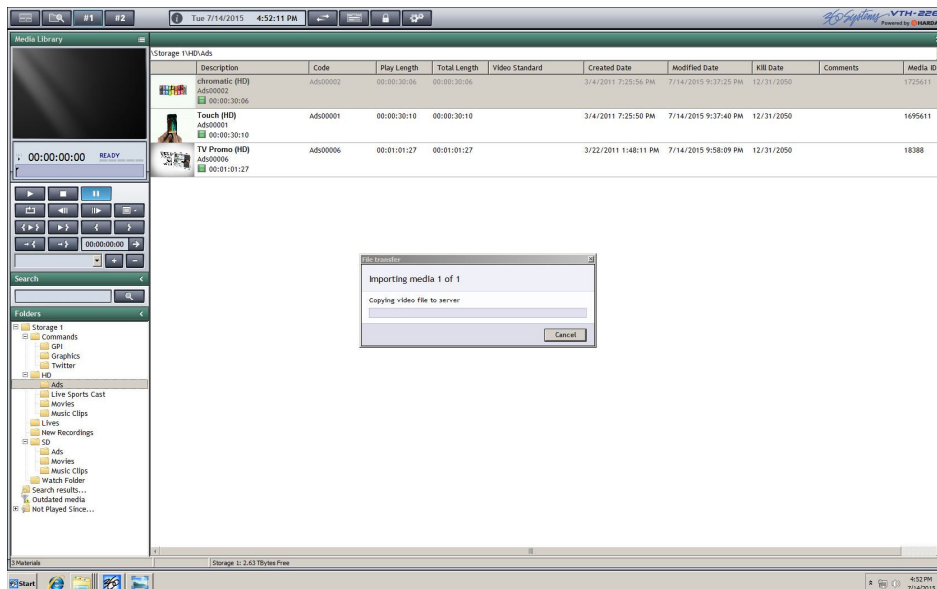


Figure 4-28

When completed, the imported clip will appear in the selected folder. The properties window can be opened by right clicking on the imported content and selecting properties so the metadata associated with the content may be entered.

This process takes over the GUI for the duration of the Import operation. (It does not stop playback.) If you need to ingest material while operating, use the FTP transfer process.


4.2.11. Media Properties

When working with Media in any of the dialog windows, right clicking on a media item and selecting “Properties” will display the general properties dialogs. Initially all items are in a display only mode, click the Edit button at the bottom of the dialog to allow changes. The following figures show some of the items that can be programmed for each media item.

Title – This is a descriptive name for the operator to identify the program or command.

Code – The Code is the primary identifier for the media on the system. For Video media it is also the file name that is presented in the FTP directory (with an extension added appropriate for the type of media).

Comments – Additional description of the media.

Kill Date – This is the date at which the media is no longer to be used. It will show an error condition if it is included in a Playlist - the Media Not Available icon  will be displayed and the clip will not be played. Positioning the mouse over this icon will show the message “Out of Date Media”. It is also possible to Search for Media items that are past their Kill Date - see page 36. Note that Kill Date does not have any effect on Auto Purge operation - see page 23.

Display only items include Media ID (the system’s own unique ID for the item), Play Length (as defined by the In Point and/or Out Point programmed in the Default Marks) and the Total Length (the actual length of the unedited clip). Multi-Segment marks are displayed in the Timecodes tab shown in Figure 4-31 below.



Figure 4-29

State – Allows setting several status categories for the media: New, Ready, Edited, Emitted and Rejected. These can be used to prevent playing media that is not either Ready or Edited. See the section “Do not play New media” on page 20.

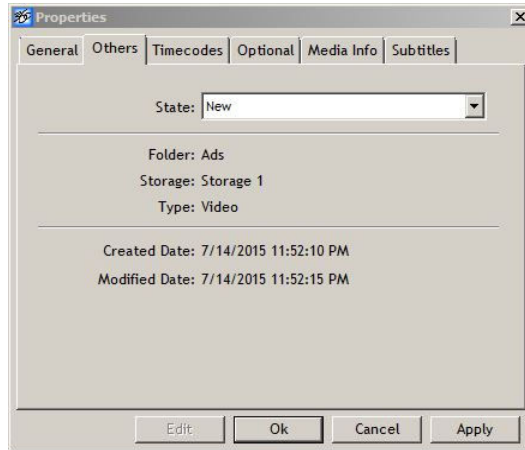




Figure 4-30

Timecodes Tab – These fields are used to view and set the initial start time of the clip and the times associated with the Default Marks’ In and Out points. Display only fields show the Total Length of the clip, and the Play Length as set by the Default Marks.

Additionally, the Multi-segment marks can be viewed and edited here. The Add  and Delete  buttons create and remove segments.

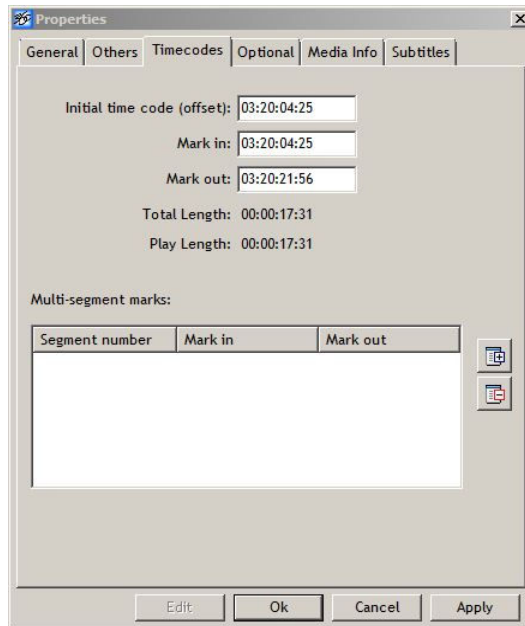


Figure 4-31

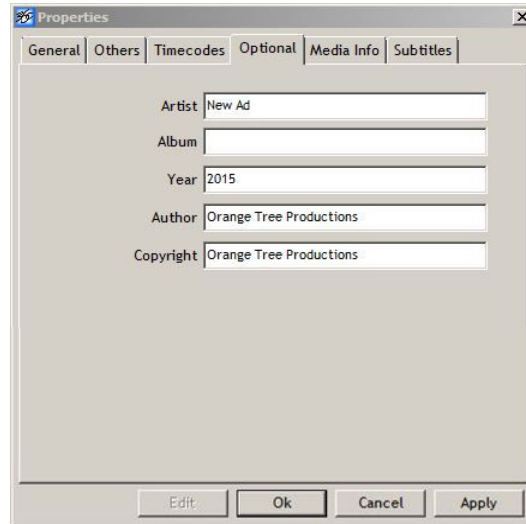


Figure 4-32

Optional Tab – These fields are used by the Graphics Generator to insert text associated with a playing clip. It is designed originally for labeling of music videos, but the fields can be used for any information that you would like to present in a Graphics Project on a per clip basis. This text is not referenced by the Search function. See Insert a Text Item on page 60.

Media Info Tab shows the clip’s video and audio parameters.

Subtitles allows various subtitle files to be associated with the clip. This is not related to Closed Captioning – contact 360 Systems for further details.

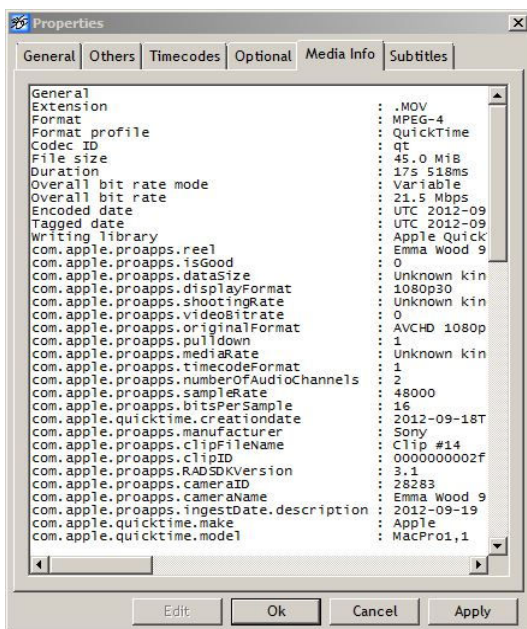


Figure 4-33

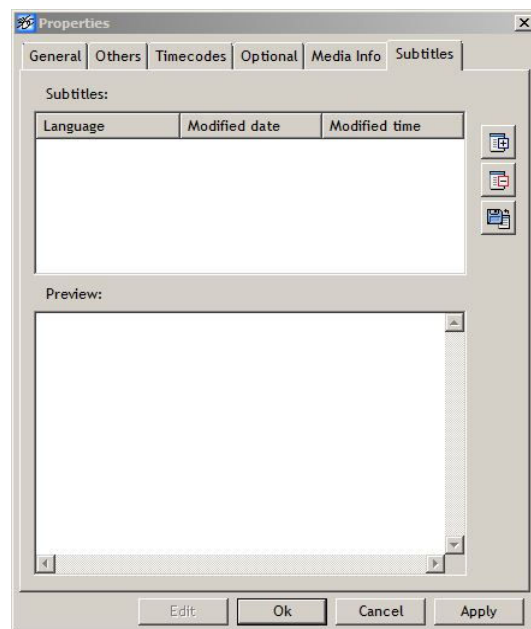


Figure 4-34

4.3. Transport Window

The Transport window is opened from any of the channel buttons by selecting Transport from the dropdown menu. If the channel selected is in use, the Transport option will be grayed out; close the currently open Playlist, CG or Instant Replay window for that channel.

The Transport window can be used as either a record channel or a preview/playout window. When in preview/playout mode you can create multiple numbered Subclips by setting Mark In and Mark Out points. The following describes the operations available using the Transport window.



NOTE: When using the Transport window for Preview, the output is still live to air. This is different than using Preview in the Media Library, which only outputs to the GUI.

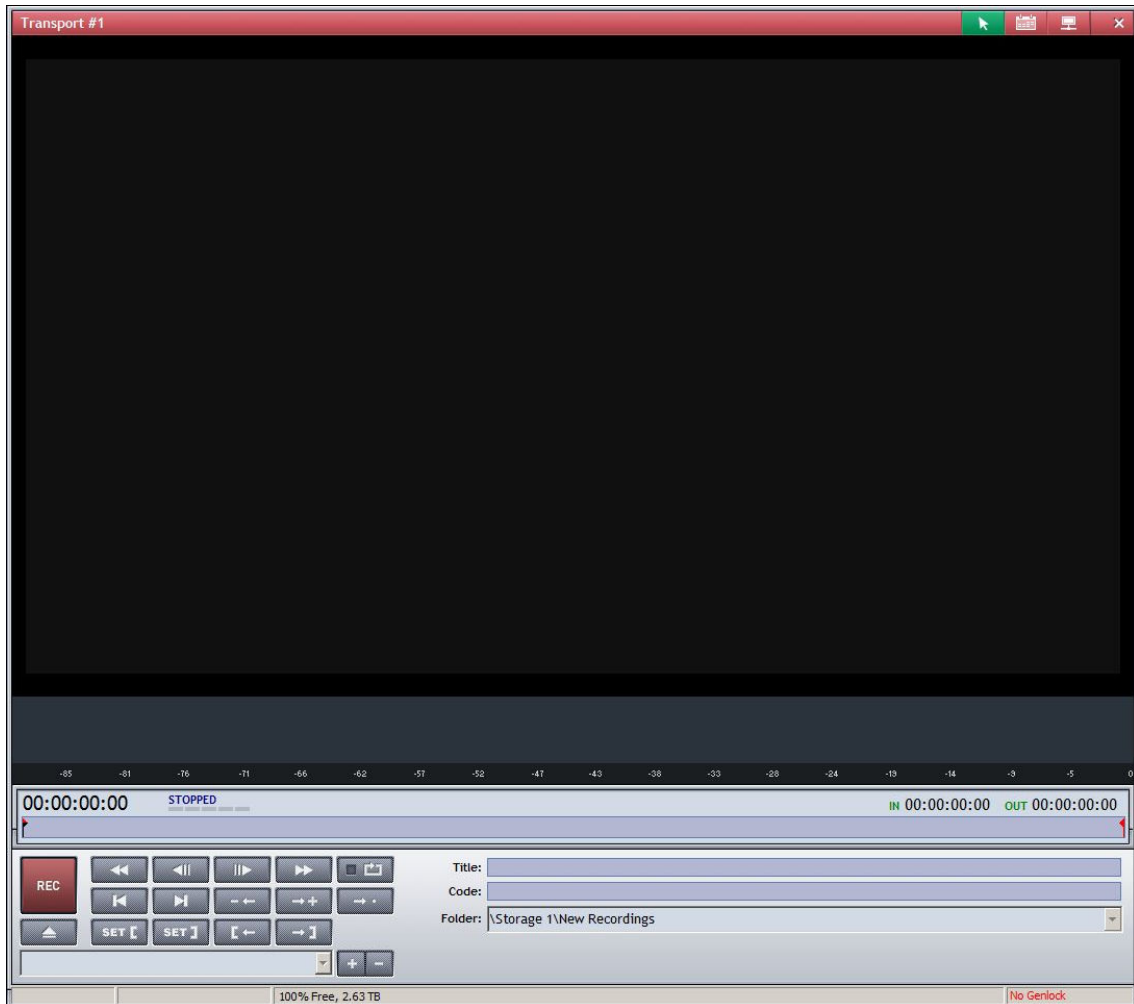


Figure 4-35

4.3.1. Transport panel

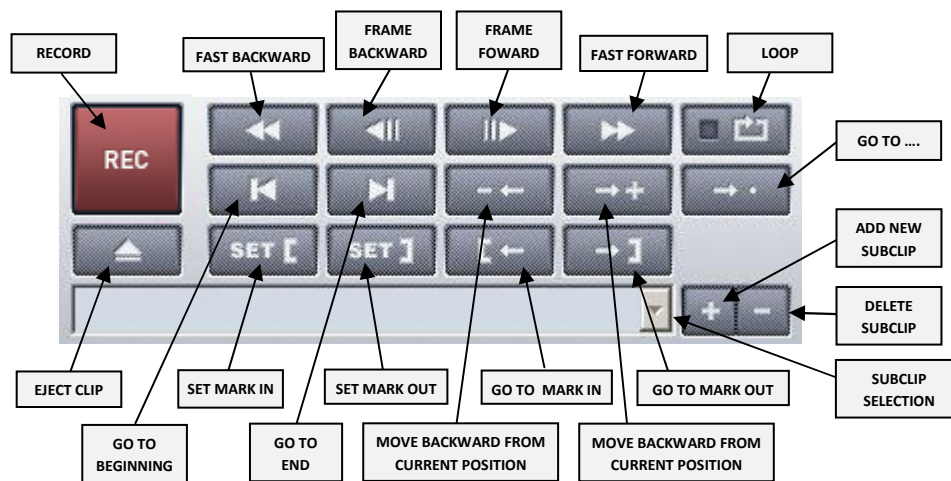

























Figure 4-36

-  **REC:** Prepares for recording by entering Record Ready mode.
-  **REC READY:** Initiates the recording.
-  **STOP:** Stops a recoding in progress or if in preview mode, stops payout
-  **PLAY:** Plays the previously stopped recorded file or if in preview/payout mode, starts the payout of the loaded clip.
-  **PAUSE:** Pauses the payout of content being previewed.
-  **Eject Clip:** Unload current clip, or end Record Ready mode without recording.
-  **Loop:** Play the selected content continuously.
-  **Frame Backward** and
-  **Frame Forward** jog the video one frame in either direction.
-  **Fast Forward** and
-  **Fast Reverse** play the clip at high speed. Pressing multiple times increases speed.
-  **Go to Beginning of clip**
-  **Go to End of clip**

-  **Move Backward** and
-  **Move Forward** bring up dialogs to set a relative position to move to from the current position, in hours, minutes, seconds and frames.
-  **Move To:** allows specifying a particular time position to locate to.
-  **Set Mark In** and
-  **Set Mark Out** set the corresponding Mark to the current position.
-  **Go To Mark In** and
-  **Go To Mark Out** set the current position to the corresponding Mark.
-  **MENU:** Display the MENU (only appears in Automatic and Remote Modes)
-  **Add Subclip:** Adds a new Subclip.
-  **Delete Subclip:** Deletes the current Subclip.



Subclip Selector: Select and display Subclip Marks or the Default Marks. See page 56.

4.3.2. Menu Key

Displays the majority of the options presented on the buttons described above

Actions	Record	F4
Markers	Eject Clip	Ctrl+E
Recording Mode	Play	K
Schedule Recording...	Fast Reverse	J
Upload to other Harddata server	Fast Forward	L
	Frame Backward	Alt+J
	Frame Forward	Alt+L
	Go Start	Home
	Go End	End
	Move Backward from Current Position...	Num -
	Move Forward from Current Position...	Num +
	Go To ...	Num *
	Loop	Ctrl+L

Figure 4-37



NOTE: The right side of each menu command lists the keys or key combinations by which you can access that command without opening the Menu or using the mouse. For example, pressing the K key on the keyboard is equivalent to the PLAY function for the selected content.

4.3.3. Manual Transport Mode

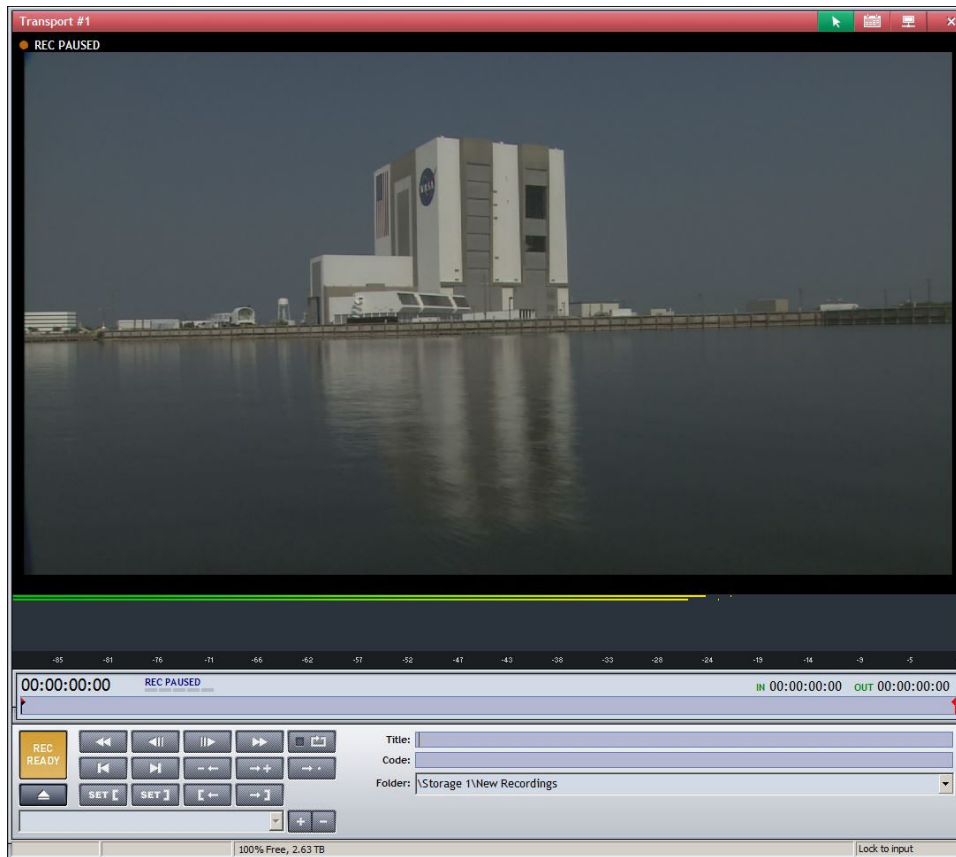


Figure 4-38

In this mode, recording or playout is controlled by use of the Transport buttons. Manual interaction with the GUI is required.

To load a clip into the Transport for playout or editing, open the Media Library window. Drag the selected clip to the Transport and drop it anywhere within the Transport button area:

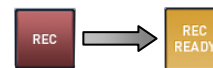


4.3.4. Recording

The main function of the Transport window is to record content directly onto the server for playout at a later time, file storage or transfer to an NLE.

To record an input, click on the Record button.

The Record button changes to the Record Ready button.



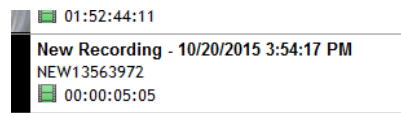
At this point the title of the new recording may be entered into the Title field. A unique code may also be entered into the Code field; if not when the recording starts a Code is generated automatically based on the programming of the Folder that is selected. The Folder can be selected from the Folder Drop Down menu.

Pressing the Record Ready button will begin the recording.

The Title will become the file name, with an extension added that is appropriate for the selected recording format.

4.3.5. Crash Recording

By clicking the Record button and then the Record Ready button immediately, a crash recording will begin. The Title will be New Recording followed by the Date and Time. The Code will be a combination of the Prefix programmed in the properties of the selected Folder, and the Media ID of the recording.



4.3.6. Automatic Transport Mode

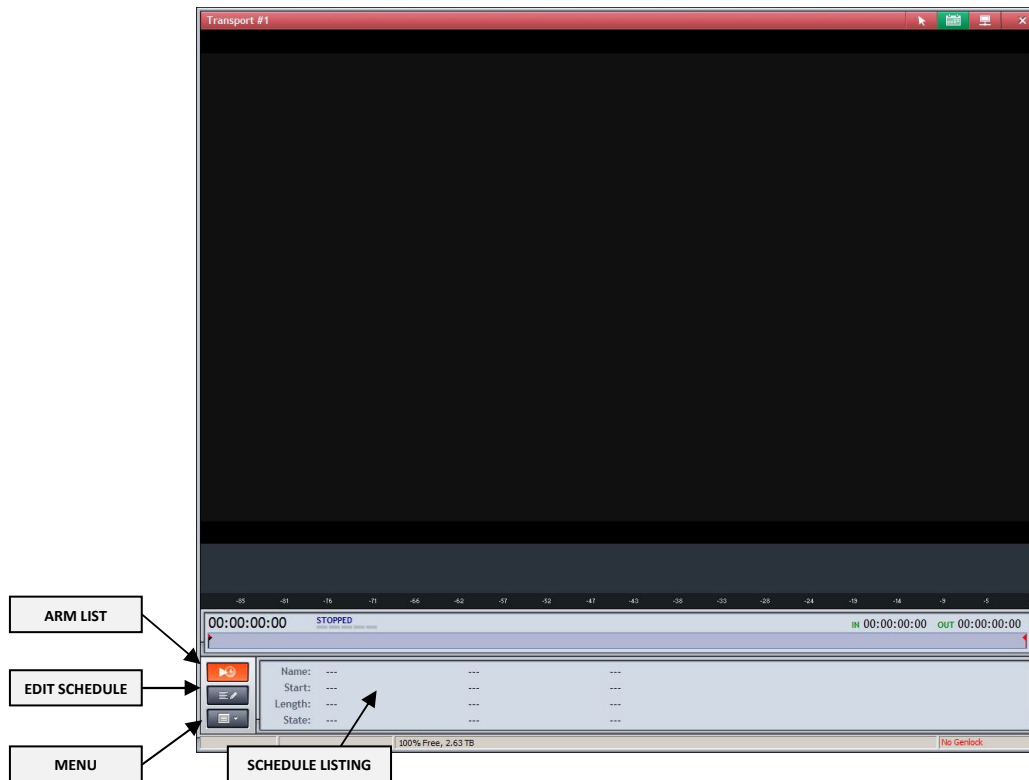


Figure 4-39

This mode is for the scheduling and making recording automatically. This can be done using the Edit Schedule button. Use the Month view to set the date of the list. Double click on a time slot or a list item to open the event editor that allows you to set the

scheduling parameters for the day, time, duration and name of the recording. This can then be edited or viewed in either the Month view or List view.

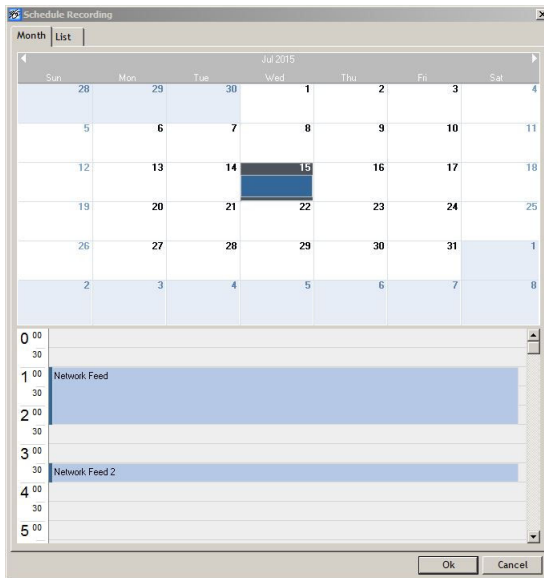


Figure 4-40

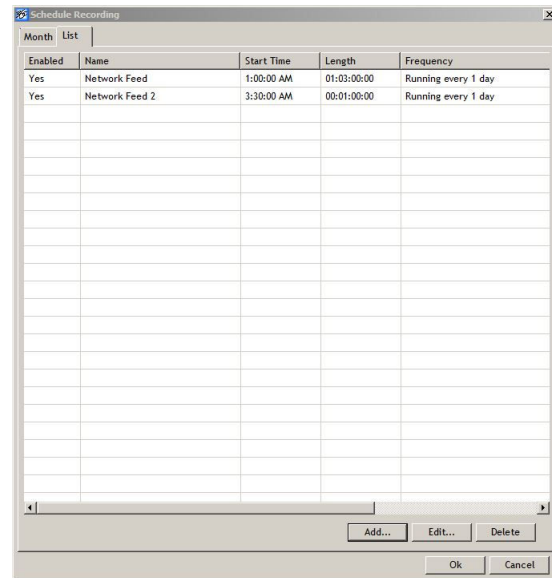


Figure 4-41

Events can also be added or deleted from the List tab.

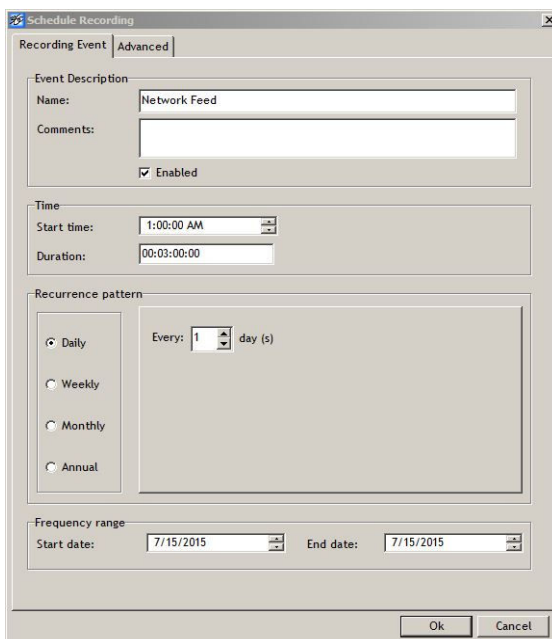


Figure 4-42

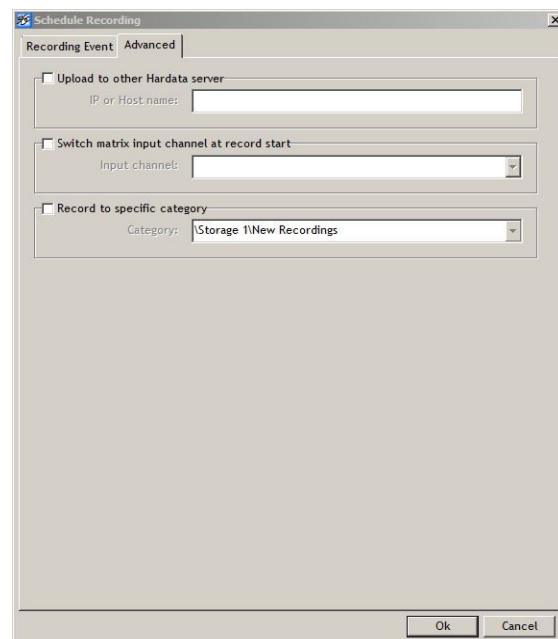




Figure 4-43

The recurrence interval can be set for every day, every 1-7 days, or to Weekly, Monthly or Yearly. To disable recurrence set the Start date equal to the End date. In the Advanced tab, Record to Specific Category allows the selection of the folder you want the recording to appear in.

Once an event is added to the Schedule, it appears in the Schedule Listing at the bottom of the Transport Window. The list is armed when the Arm List button is bright red:  This is the default state of the Automatic Transport. If there is an event programmed in the schedule, the transport goes into Record Ready. The input signal is fed to the output and to the Preview in the GUI for monitoring, and when the next start time is reached the recording will start.

Clicking Arm List will **DISARM** the list:  The input is no longer monitored, and the schedule **WILL NOT execute**. Disarming the list will also **stop any recording in progress**.

The Actions menu is available by clicking the Menu button or right-clicking anywhere in the Schedule Listing. The primary use is to make a crash recording by selecting Record twice – once to go into Record Ready and again to start recording. You can also Stop a recording in progress. The Menu can also be used to create a schedule item by selecting Schedule Recording, or to change the Transport mode to Manual or Remote.

4.3.7. Remote Transport Mode

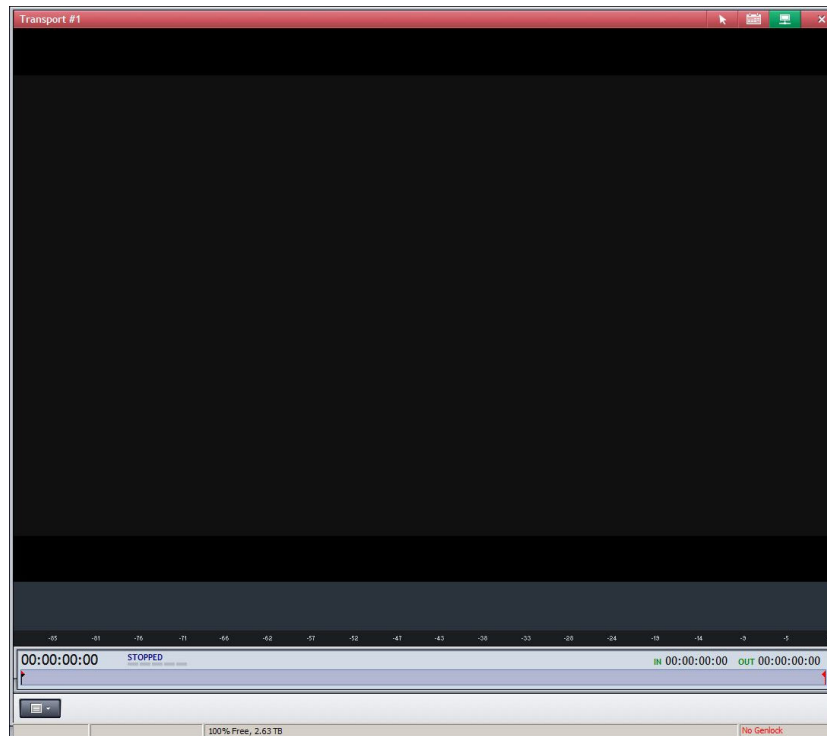


Figure 4-44

Placing the Transport window in Remote mode will allow other external devices to take control over the channel. See the sections and appendices for the relevant control protocol.

4.3.8. Actions Menu Functions

This menu duplicates the Transport button functions, and serves as a guide to the Keyboard shortcuts to those commands.

4.3.9. Markers Menu Functions

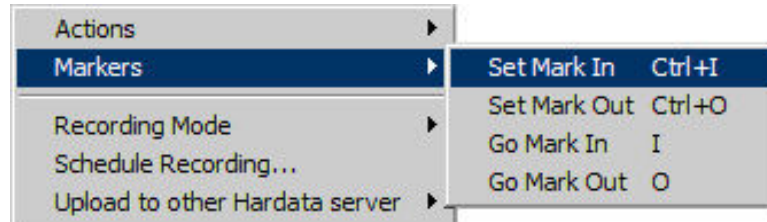


Figure 4-45

This menu provides the ability to program start and end marks within a clip. With the Markers menu commands, you can set, go to, or remove the Mark In and Mark Out points. The menu items show the key commands that correspond to each item. These functions are also available using the buttons in the Transport and Preview windows as previously described.

4.3.10. Recording file formats

Recording file formats are preset based on the selection made in the Setup Wizard. If the server is set up for SD input, all recordings are in the MPEG-2 IMX 30 file format in either MXF or MOV containers. If the server is set up as an HD server, all recordings are in the MPEG-2 IMX 50 file format.



NOTE: Recordings are not available for playout until completed.

NOTE: When recording a feed, the SDI output is available for monitoring the recording channel's input signal.

To end the recording, press the STOP button.

Once the recording is stopped, the recorded content appears in the selected Folder in the Media Library. It can now be

- Played in the Media Library to preview in the GUI and possibly be edited (using In and Out Markers and Subclips).
- Dragged to a different folder in the Media Library.
- Loaded into the Transport Window to be played in the GUI *and* the Channel Output, and possibly be edited.
- Dragged into a Playlist to be added to programming.

4.3.11. **Playout or Previewing**

Media can be Previewed and edited directly in the Media Library without affecting operation on the Output Channels. To play a clip in the Media Library, double click on a Media item to load and play it, or click once to select it and then use the transport controls such as the Play button in the Left Pane.

Opening a transport window in an unutilized channel allows previewing and editing on an external monitor, or playing to air.

Content may be dragged from the Media Library window into an open Transport window and will be available for preview. Note that you must drag to the control area, not the picture area. (This is because the picture area is under direct control of the video display system; it is not “owned” by the Transport Window.)



While using a Transport Window, the program is output to the GUI as well as the SDI output to use an external monitor or play to air. (It is not possible to disable the output to SDI.)

4.3.12. **Marking Subclips**


Subclips are simply numbered pairs of In and Out Marks.

Marks and Subclips are non-destructive, they do not affect the actual contents of the media file. They are saved as part of the database information for the clip. They are not saved with the clip itself, and so will not travel with it during file transfer operations.

Each clip also has a pair of marks called the Default Marks. These are used when you want to set a default start and end for the clip whenever it is used (the basic “top and tail” operation).

The mark points are set by locating to the position in the clip that you want to mark and pressing the corresponding Set Mark In  or Set Mark Out  button.

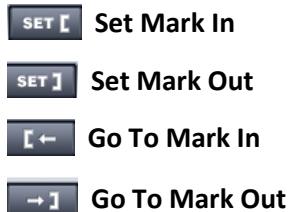
You will see a symbol appear in the timeline at the point the mark is set. When setting the Default Marks there will also be an indication in the icon in the Media Library item. There are individual icons for In Mark and Out Mark. The Default Marks exist for each clip and cannot be deleted.

To add a set of numbered marks to define a Subclip, press the  button. The new set will be created and selected automatically in the drop down menu. If the Marks were already set, you will see the timeline symbols return to the beginning and end indicating that the marks for this new Subclip are not set. However, the clip is still at the last position so it is a simple matter to mark the in point of a new Subclip on the frame or the frame after the last Subclip’s Mark Out point.

Now when playing the clip it will stop at the Mark Out point defined by the selected Subclip number. When selecting a Subclip, the clip position is set to the Mark In point.

Jump to the current Mark In point using the **Go To Mark In** [←] button, or the Mark Out point using the **Go To Mark Out** [→] button.

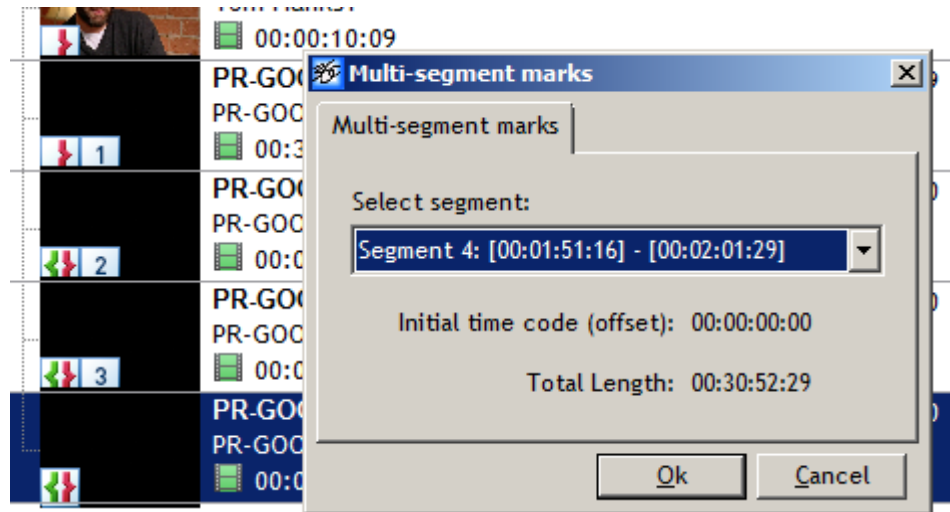
To remove a set of marks use the [−] button.



These operations can be performed in either the Transport or Media Library Preview. In addition, the Preview window has Play Subclip and Preview End buttons.

Play Subclip plays from the Mark In point to the Mark Out point. Preview End plays from the current position up to the Mark Out point. Note that you can set the current position by clicking in the Position Bar.

When a clip has one or more sets of numbered marks, when it is included in a Playlist it is possible to select one of these Subclips. The clip must not be cued to play. Right click on the item in the playlist and select Change Payout Marks. You will see the dialog below:



Once a segment has been selected, its number is displayed in the Playlist Item as shown above.

In order to play multiple Subclips of the same clip, insert multiple instances of the clip in the playlist (one for each subclip) and select the corresponding segment marks for each one as described above.

Graphics Generator (CG) Window

The Graphics Generator (CG) window can be opened by using either of the channel buttons on the tool bar and selecting Graphics Generator from the menu. If the channel selected is in use, the Graphics Generator option will be grayed out.

In this window, graphic projects may be created, opened, edited or deleted.

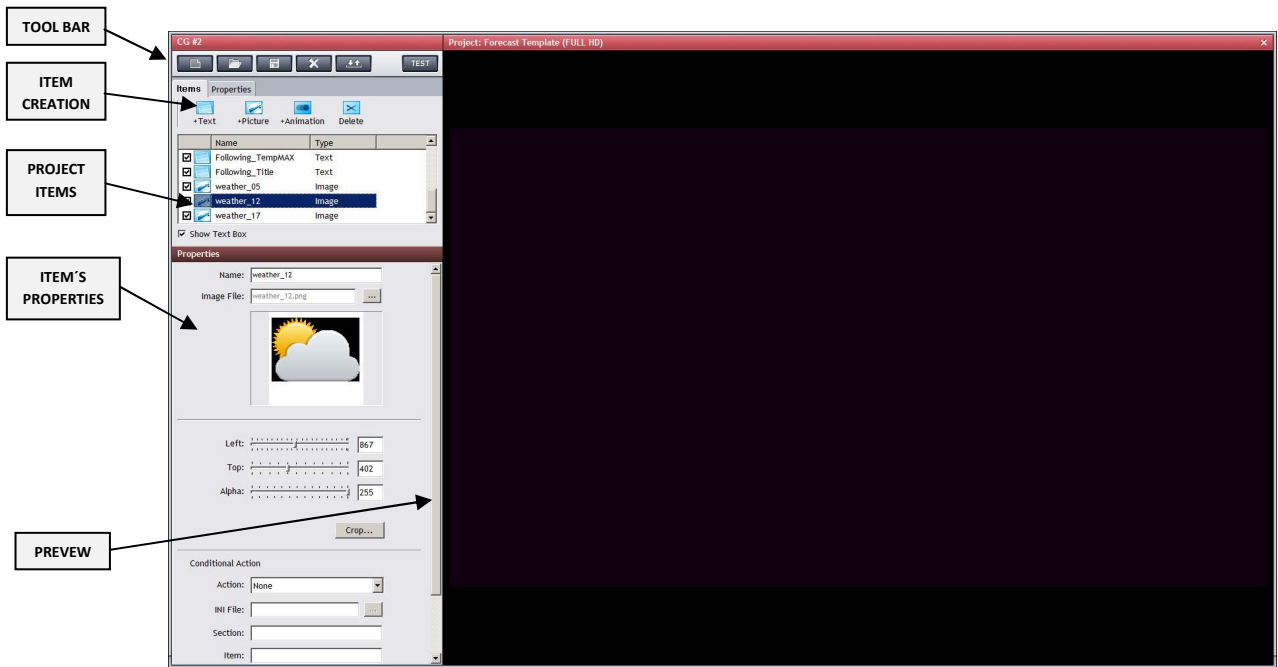


Figure 4-46

There are four different areas in the window. The left side displays the Elements Toolbar tab, and Properties tab for the Project's properties. The lower portion lists the Project Items, and the currently selected item's properties.


On the right side is a preview area where a Preview of the graphic project is displayed. The Graphics Generator uses the channel resources, but does not display the project on the video output, only here in the Preview area.

4.3.13. Graphics Project Toolbar



Figure 4-47

4.3.14. Project Creation

To create a new project, press the  button. You will be asked to choose the Video Standard for the project. Once created, items may be added and the properties set up.

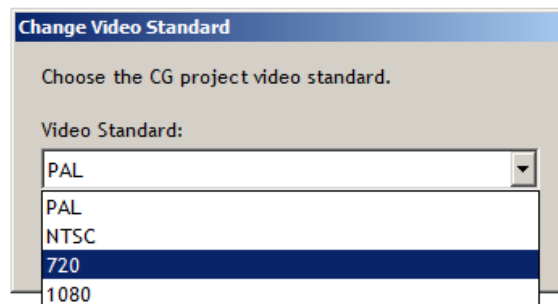


Figure 4-48

4.3.15. Project Properties

By clicking on the Properties Tab, the Fade On and Fade Out times and a project Version number may be entered.



Figure 4-49

- **Fade In:** The time it will take the items in the project to become completely visible (or reach the visibility set by any alpha values in effect). Typically this is a value of 200 to 2000 msec.
- **Fade Out:** The time it will take the items in the project to become completely transparent. Typically this a value of 200 to 2000 msec
- **Version:** Indicates the version of the project.

4.3.16. Items

Each project is composed by one or more items. There are three different types:

- **Text Items:** Generally used to scroll text across the screen but may be static as well, and can be positioned anywhere on the screen.
- **Image Items:** Static graphics for generating overlays or special logos. Graphics items accepted include .bmp .jpg .png .tga .tif and .wmf image formats.
- **Animation Items:** Animated flash graphics (.swf), image sequence (.gif) or a series of images used to animate logos or overlays.

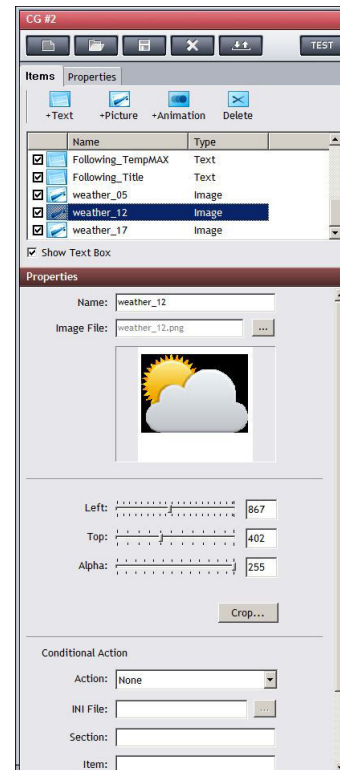



Figure 4-50

4.3.17. Insert a Text Item

In order to insert a text item press the “Text” button  and select the text source from the drop down menu.

- **Text:** The content is assigned from the window.
- **Text from DB:** Text is automatically inserted from the current clip’s metadata. See the section on Media Properties Optional Tab on page 47.
- **Text from File:** Text from a .txt file is automatically uploaded.
- **Hour:** The content is the system’s current time.

- **Subtitle:** The content is added from the subtitles.*

If the option “Show text box” is selected, a color rectangle associated with each text item will be displayed in the preview area.

Once uploaded, the text item properties may be set up and defined:

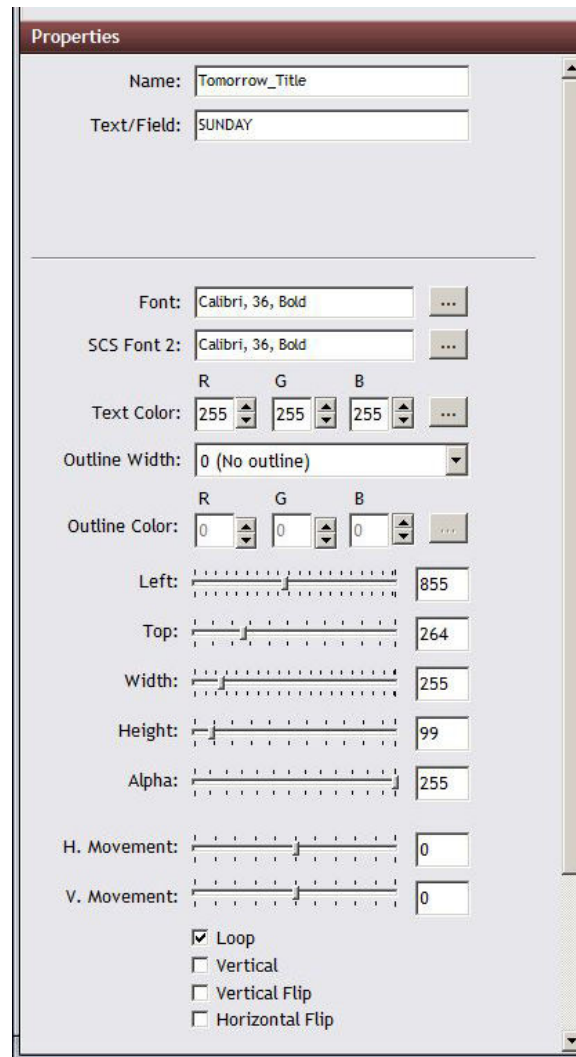


Figure 4-51

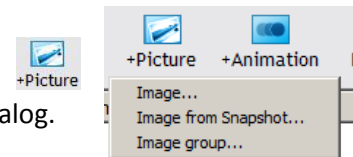
- **Name:** Name assigned to the item for identification purposes.
- **Text/Field:** Contains a brief description of the text item.
- **Text File:** When the content is uploaded from a file, this indicates the source file.
- **Font:** Displays the font of the text.

* This is not for Closed Captioning. It creates Open Captions, which are inserted as graphics over the video.

- **Color:** Indicates the text color.
- **Outline Width:** Indicates the thickness of the contour line of the text.
- **Outline Color:** Indicates the color of the contour line of the text.
- **Left:** Indicates the initial horizontal text position.
- **Top:** Indicates the initial vertical text position.
- **Width:** Specifies the width of the scrolling of the text when using the horizontal scroll.
- **Height:** Specifies the height of the scrolling of the text when using the vertical scroll.
- **Alpha (Transparency):** Indicates the transparency of the text.
- **H. Movement:** Indicates the speed and the direction of the text movement in the horizontal plane. If the number is negative the text will move backwards.
- **V. Movement:** Indicates the speed and the direction of the text movement in the vertical plane. If the number is negative the text will move backwards.
- **Loop:** If selected, the movement will be continuous.

4.3.18. Add an Image Item

To add an image item, press the “Picture” button and select Image, then select the file from the file dialog.



Once the image file is selected it will appear in the project Preview. It can be positioned by dragging and dropping it within the Preview window, or by setting the Top and Left values using either the sliders or direct numeric entry of the values.

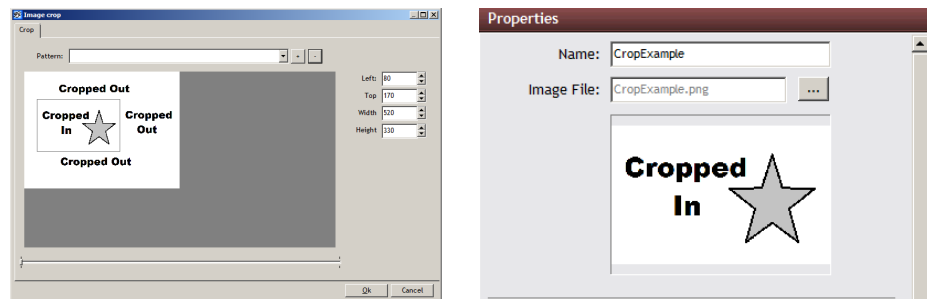
Once an image has been added, the data is part of the Project. Changes to the original file (including its deletion) will have no effect on the Project. In order to update to a new version of a particular file, the item must be deleted and a new item created that includes the new version. (When editing an exported version of a Project on an external PC you can replace the referenced files and they will be updated upon importing. **See the section on Advanced Graphics Control.**)

The other properties that can be set are Alpha and Crop. Alpha sets the transparency of the graphic as described in the section above.

Crop allows setting a new frame within the graphic, only the portion within this new frame will be shown.

The crop values are Left, Top Width and Height. As these are edited, the new boundaries of the cropped image are shown. These dimensions can be saved as a Pattern by clicking the + button next to the Pattern field. Give the pattern a name and it will be available for similar edits of other images.

Click OK and the results of the crop will be shown in the Properties display.

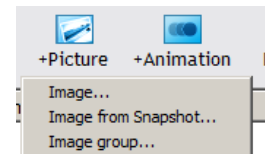


The result of a crop is destructive to the copy of the image in the Project. It can be re-edited to reduce its size but if it needs to be increased then delete the item and recreate it from the original image file.

See the section on Advanced Graphics Control for information on the Conditional Action settings.

4.3.19. Add an Image Group Item

Image Group allows the selection of folder of image files, which can then be selected by Secondary events in the playlist. This allows the inclusion of a variety of graphics, only one of which will appear at any one time. For example, a newscast might have a selection of lower thirds that identify on-air personalities, or a shopping channel might have an “item card” that appears for particular products shown during a broadcast.



The Actual item can be selected from a drop down menu, this allows previewing the various graphics in the group. When the project is saved this determines which graphic will appear initially when it is loaded in the Playlist. The Left, Top and Alpha values apply to the group as a whole, not the individual graphics. (If you need to control the position and transparency of individual graphics, and still control their selection this is accomplished in other ways.)

Image from Snapshot places the image that appears in the Media Library for the currently playing clip into the project. This is not particularly useful in most applications; it can supply a small logo or bug that is particular to a clip. The clip must contain this image at the beginning. It is usually edited out of the actual clip playback.

Once Added, the image may be previewed and its properties defined in the Properties panel.

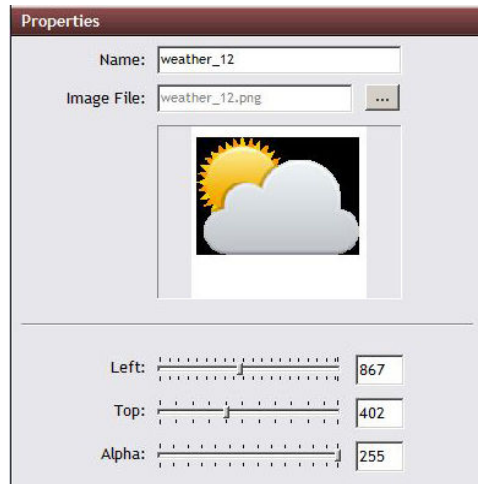



Figure 4-52

- **Name:** Name assigned to the image.
- **Image File:** Source file.
- **Left:** Indicates the initial position of the image in the horizontal direction.
- **Top:** Indicates the initial position of the image in the vertical direction.
- **Alpha (Transparency):** Indicates the transparency of the image.

You can position the image within the output frame by dragging it with the mouse.

As each item is added to the project it positions in front of other elements. You can drag the item up and down in the list to position it in back or in front of other elements.

4.3.20. **Add a Flash Item**

In order to Add a Flash item, press the “Flash” button  and select the location of the .swf file.

Once Added, the properties of the image may be defined.

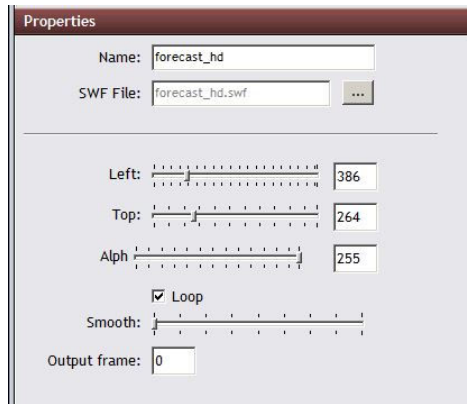


Figure 4-53

- **Name:** Name assigned to the Flash animation.
- **SWF File:** Source file.
- **Left:** Indicates the initial position of the flash animated logo in the horizontal direction.
- **Top:** Indicates the initial position of the image in the vertical direction.
- **Alpha (Transparency):** Indicates the transparency of the image.
- **Loop:** Indicates if the movement of the animation will be continuous.
- **Smooth:** Indicates the sharpness of the animation.
- **Output Frame:** Indicates the last frame after the Fade Out.

4.3.21. Show Item

Each item on the left has a checkbox. If checked, the item will be visible in the project, otherwise it will not.

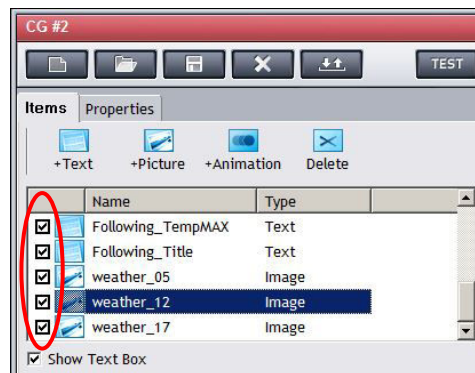



Figure 4-54


This feature can be used during the editing process to isolate various parts of a complex Project. Saving the Project with some elements visible and others not will determine the initial state of each element when the project is loaded in the Playlist. Items that are initially not visible can be “turned on” via manual operation in the Playlist. Also, you can save a series of projects using a

common group of elements, each with different combinations of visible elements.

4.3.22. Delete Item

In order to delete an item already in a project, first select the item and then press the “delete” button.  +Delete

4.3.23. Open a Project

In order to open a project, press the “Open Project” button  . A dialog will open with the list of existing projects on the system. Select the one you wish to open and press “OK”.

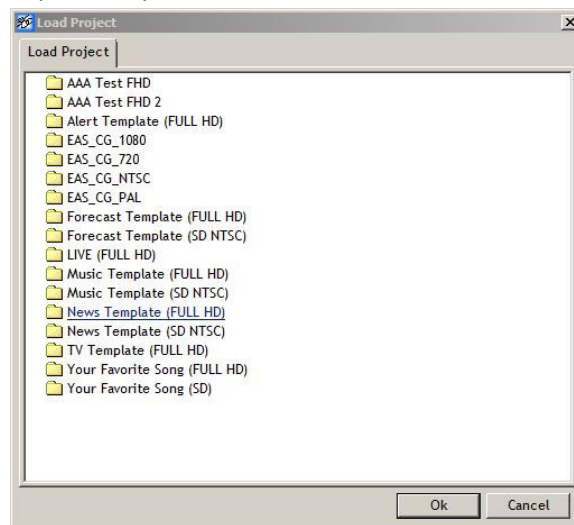




Figure 4-55

4.3.24. Save a Project

To save a Project, press the “Save Project” button  . A dialog will open where the new project name may be entered. Press “OK” to save the project.

4.3.25. Delete a Project

In order to delete a Project, press the “Delete Project” button  . It will open a dialog with the list of existing projects on the system. Select the one you wish to delete and press “OK”.

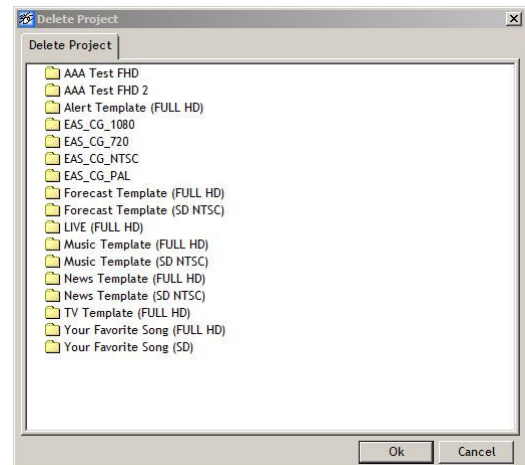

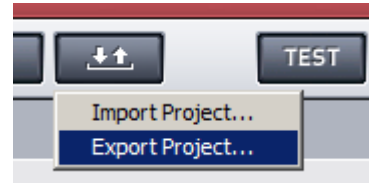


Figure 4-56

4.3.26. Export a Project / Import a Project

Exporting a Project allows the graphic elements in the Project to be edited on another PC. In order to Export a Project, press the “Export Project” button  . Choose Export Project from the menu.



You will be asked to load a project first as shown in Figure 4-55 above. (This is to allow exporting a project while a different one is loaded for editing.) Then you will see a Save As dialog where you can change the name and choose a storage location.

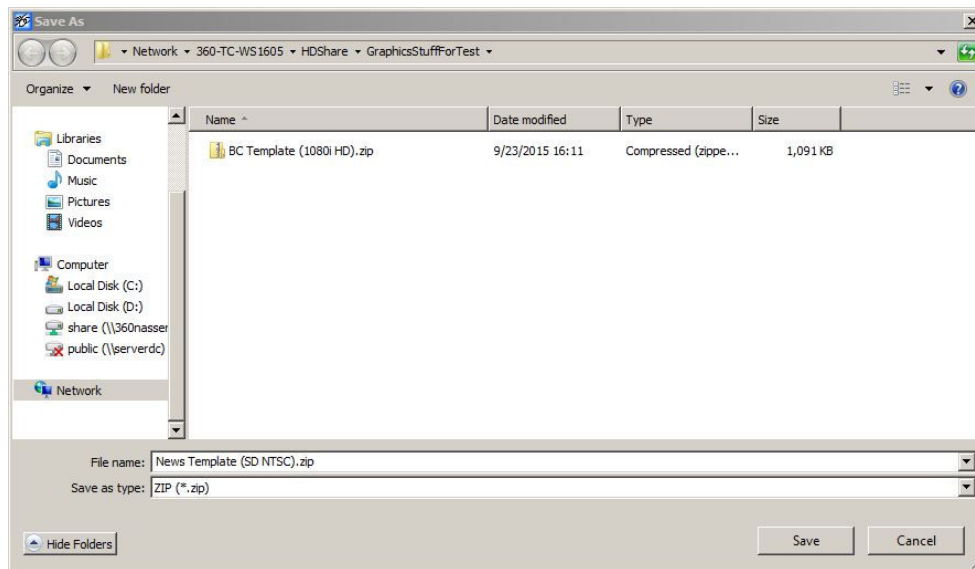



Figure 4-57

Projects are exported as Zip (.zip) archives. When using these in another system to edit or add graphics, you will probably expand them into a folder of the same name as the .zip file. However, when re-archiving them it is important to select only the files within the folder – do not Zip the folder itself.

Importing a project is simply the reverse process, a project that was edited on a PC or created on another VTH server is brought into the system.

4.4. Playlist Builder

The programming window is accessed by clicking on any channel button and selecting Playlist Builder from the menu.



NOTE: Playlists are built on a per channel basis. To use the same playlist on two different channels, the playlist needs to be exported and then imported into the other channel. (See Importing and Exporting playlists later in this chapter.)

In this window, programming can be created, edited, opened, deleted, imported or exported.

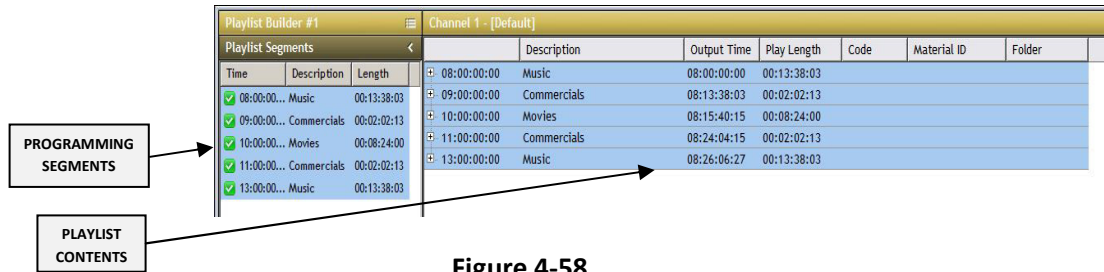


Figure 4-58

In the Programming window there are two main areas: On the left, the preview buttons and programming segments and on the right, the content's playlist.

4.4.1. Playlist Components

Playlists consist of Segments, Media, and Commands:

A Segment is a group of Media and command items. All Playlists start with at least one segment, but additional segments are not required. They have two primary functions:

- **They allow the contents of the list to be grouped and viewed selectively.** They can be given names to help in identifying particular day parts or programs, and they facilitate moving around in the list to view the various parts of the schedule.
- **They can control the start time** of the media they contain when using Auto mode. Each segment has a Time value, which needs to be set for the first segment but thereafter is initialized in new Segments based on the initial start time and the run time of all previous media. This time is not automatically recalculated when previous items in the list change.

Segments can not be moved. A Segment can be deleted, which deletes all of the Media and Command items it contains. (This does not delete the actual Media files or the Command entries in the database.)

Media and Commands can be moved from one Segment to another using select, drag and drop.

4.4.2. Playlist Menu

By clicking the right mouse button within the content playlist, the main menu for the Programming window will display.

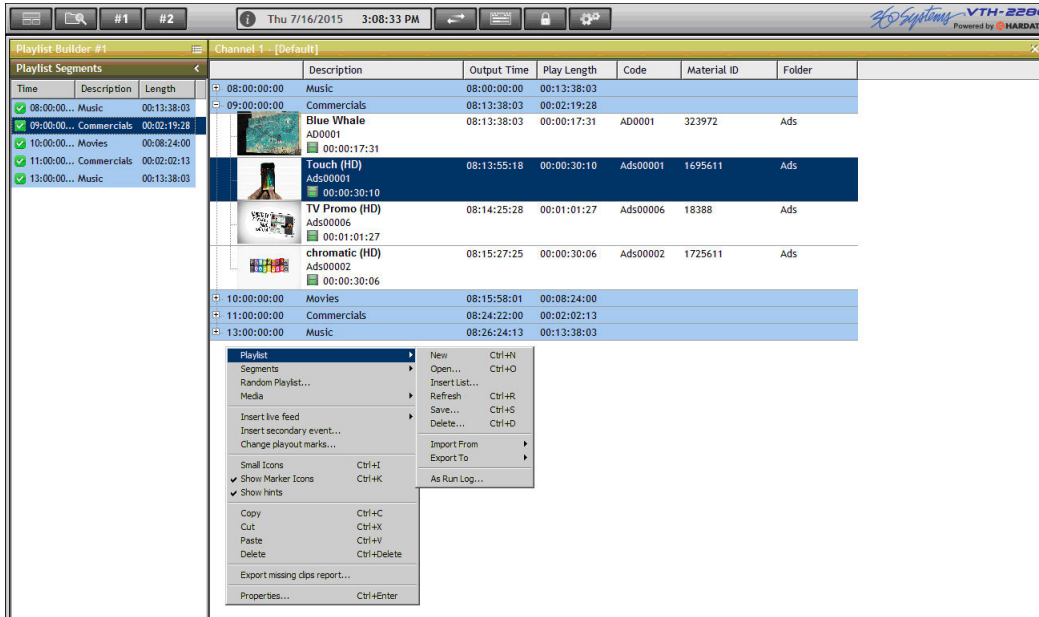


Figure 4-59

All the actions necessary to create programming for one or several days are located in this menu. This programming will then be used as the playlist for the Playout Window.

4.4.3. Create a New Playlist

In order to create a new Playlist, open the menu and select "New".

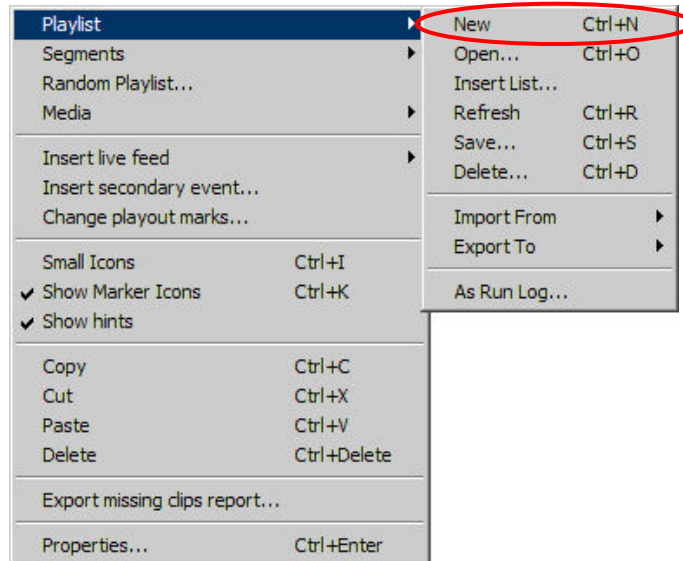


Figure 4-60

With this action, a blank Playlist will be presented.

4.4.4. New Segment

In order to start adding programming content, a new segment must first be created. Segments are used to contain content and assist in categorizing content within a playlist. To create a new Segment, open the main menu and select “new” under the “Segments” option.

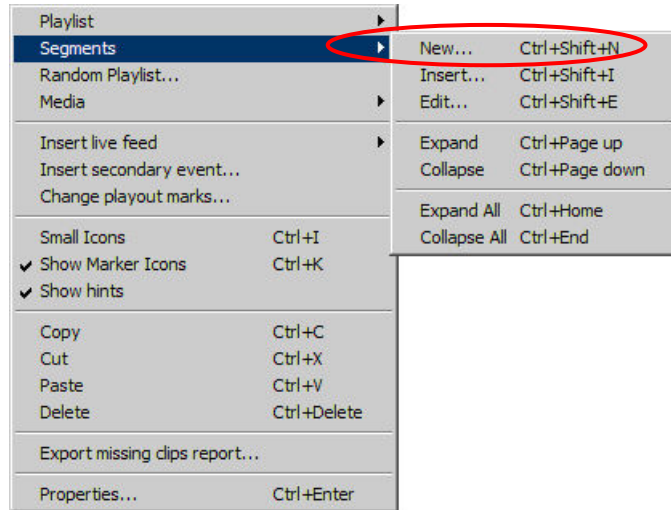


Figure 4-61

The system will open a pop up where a short description (optional) and the start time for the segment must be entered.

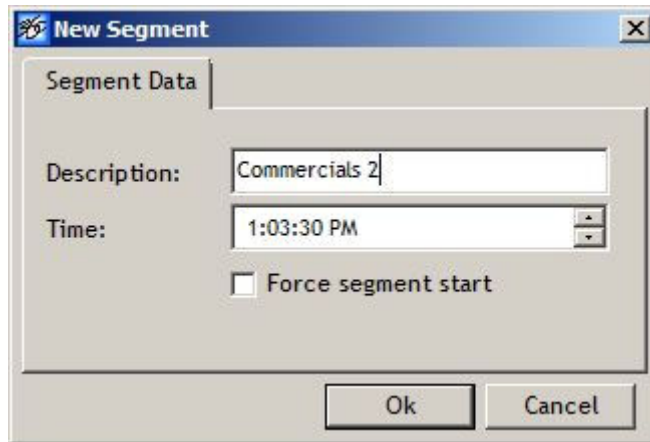


Figure 4-62

Each new segment created will be shown on the left panel. On the playlist panel a blue bar outlines all the segments and displays the description and timeframe.

4.4.5. Insert a Segment

Each new segment you create is located beneath the last one. To locate a segment between other ones previously created, place the mouse cursor over the Segment above the position the new Segment is to be located and click the right mouse button. A menu will open and “Segments”, then “Insert” may be selected.

4.4.6. Edit a Segment

To modify the description or Start Time of an existing Segment, point the mouse cursor over the Segment to be changed and click the right mouse button to open the menu, then select “Segments” then “Edit”.

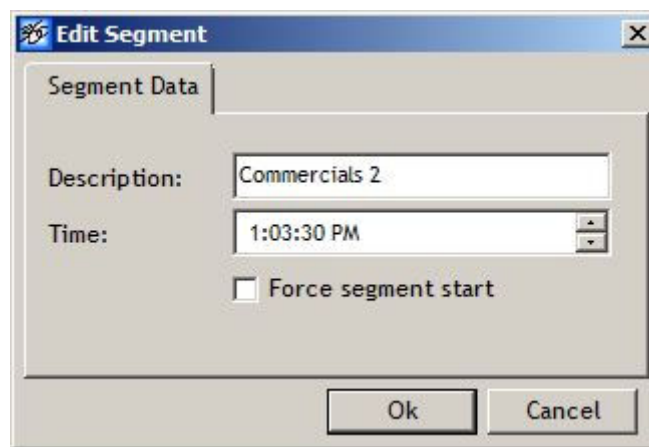




Figure 4-63

“Force segment start” makes the start time a “hard” start time. When in Auto mode, when a hard start time is encountered, if media is still playing that Media is stopped and the media in the new Segment starts. If the previous Media ends before the hard start time, the system waits to start the new Segment.

4.4.7. Programming Playlist Content

Once at least one Segment is created in the Playlist window, content may then be added to the program timeline. In order to add content into a Segment, open the Library window by clicking the  button and then clicking the Tile Windows button .

This will display a screen split in two windows, the Programming window and the Media Library window.

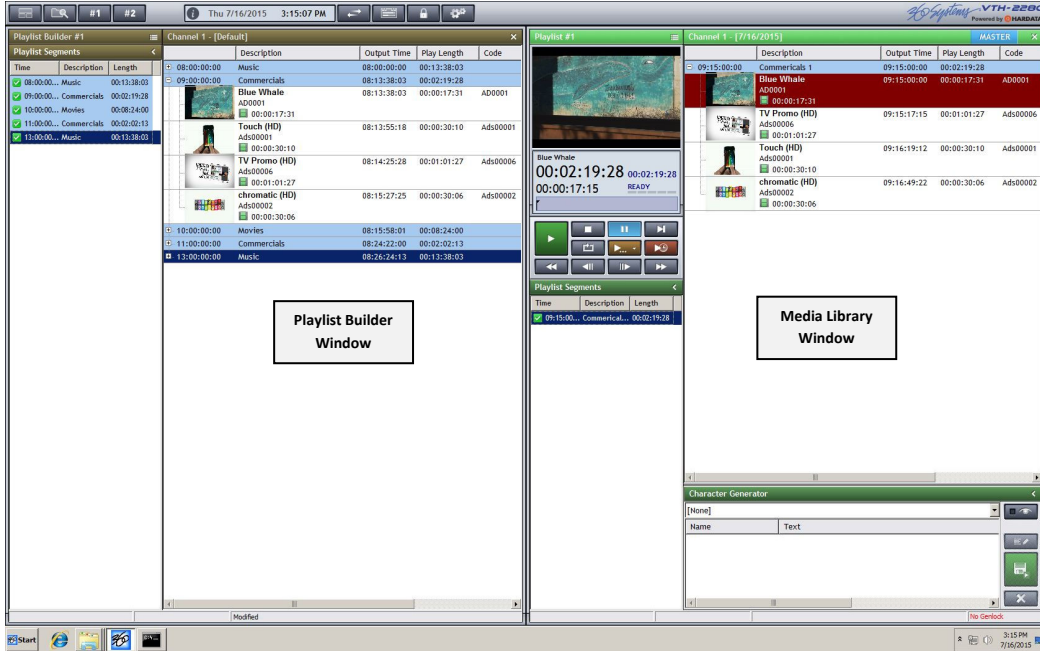


Figure 4-64

Content from the library window may then be inserted into the Playlist by simply dragging and dropping clips using the mouse into the previously created Segments.

NOTE: Content must always be contained in segments. If content is dropped into a blank playlist, the system will automatically create a new segment.

Each piece of content added in the segments will automatically update the duration of the segment and adjust the Output from the start time on each segment.

On the left side of each blue segment bar, a “ + ” or “ - ” sign is displayed which allows the expanding or collapsing of the content display for each segment.

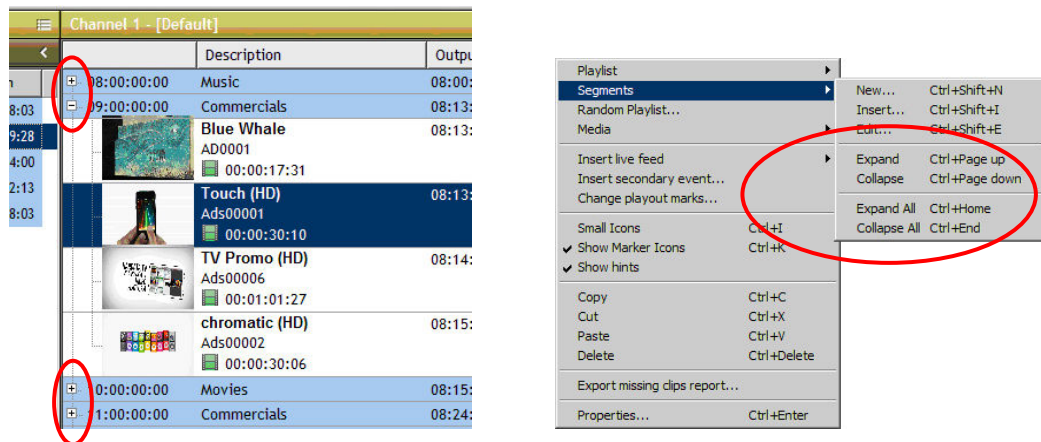


Figure 4-65

This may also be done using the menu, by clicking on Segments and then selecting Expand, Collapse (which apply to the selected Segment), Expand All or Collapse All.

Once Playlist programming is completed, it needs to be saved and assigned a date. Once assigned to a date, the programming will automatically load into the Playlist Window on the specified date.

Alternately, lists can be saved with a name rather than a date. This is useful for saving sequences of media or commands that you will use repeatedly to build other Playlists.

4.4.8. Save a Playlist

In order to save the Playlist, click the right mouse button, open the Playlist menu and select “Save”.

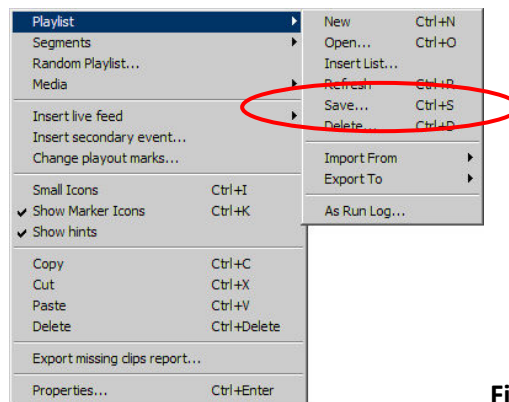


Figure 4-66

When saving a Playlist, the system will open a calendar window. Select the date for the programming and click on “Ok”.

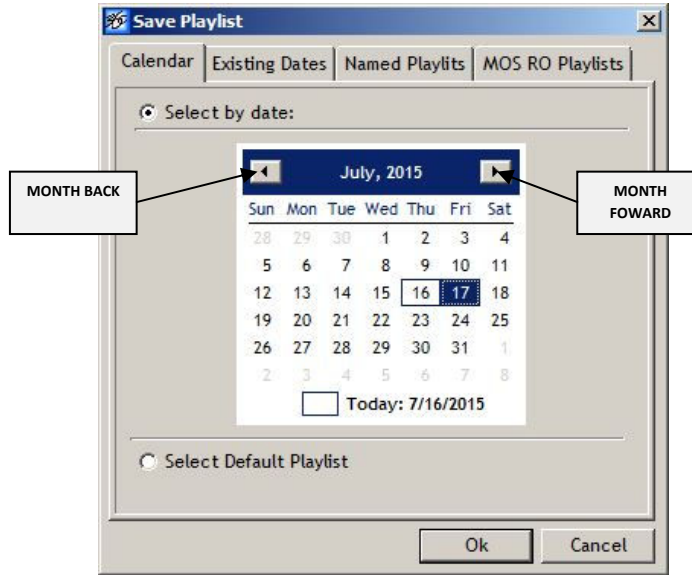


Figure 4-67

After saving the Playlist, the date the Playlist is designated to broadcast will be displayed in the header bar. This should always be verified to ensure the correct date was selected.

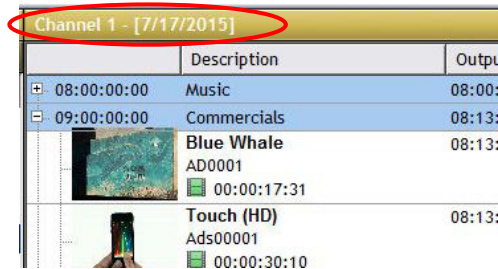


Figure 4-68

4.4.9. Default Playlist

The Default Playlist is a very important failsafe feature. Should a playout reach the end of a day and no playlist has been assigned to the next day, the playlist designated as the Default Playlist will be automatically loaded and played. This may be used to prevent a channel from going off air. To save a Default Playlist, select the option *Select Default Playlist* in the calendar window.

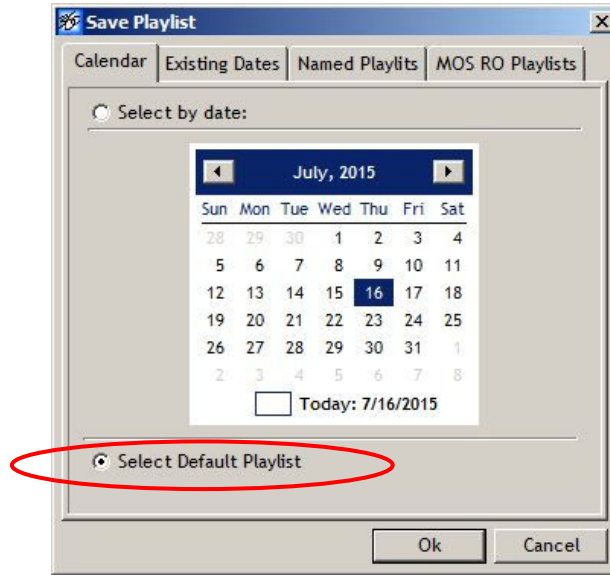


Figure 4-69

Again, the broadcast playout window loads the Default Playlist when it does not have any programming for the day or if the programming ended before 12 pm.

NOTE: Always keep an updated Default Playlist on the system in order to avoid automatic broadcast stopping due to lack of content for a particular date.

Once the Default Playlist is saved, verify “[Default]” is shown in the upper left side of the screen in the playlist’s title bar.

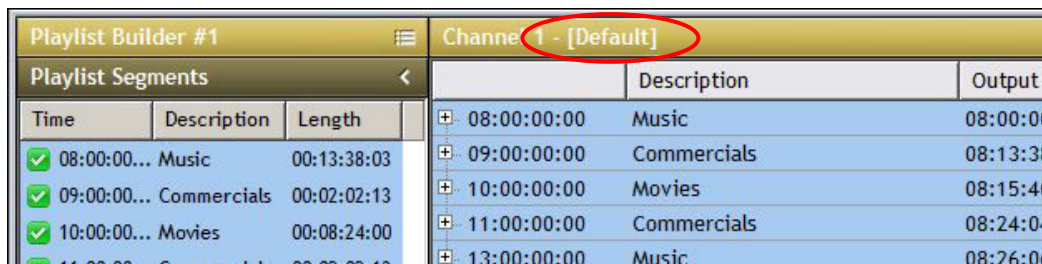


Figure 4-70

NOTE: If programming for a specific date is saved from one terminal, and at the same time another user is working on that date’s programming, the second user will see a pop up announcing that new programming has been saved for that specific date. The second user will need to Refresh the Playlist in order to see the changes.

4.4.10. Open Playlist

A previously saved Playlist can be opened to modify it, to use as a starting point for a similar Playlist, or simply to review it.

To view an existing Playlist, execute the option “Open” from the Playlist menu:

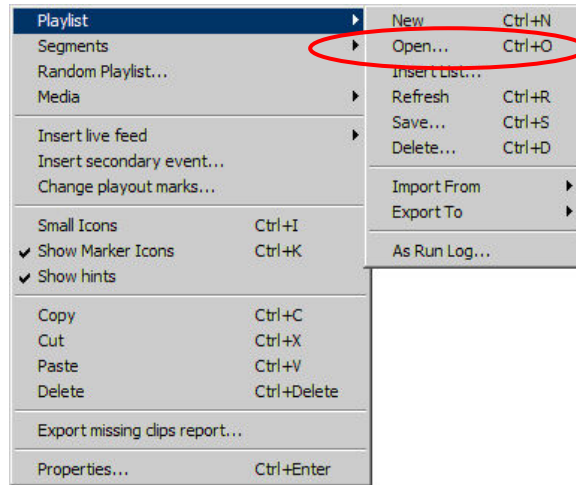


Figure 4-71

This action will open a calendar window, where the programming date to be opened can be selected. Alternately, Playlists may be opened by clicking the “Existing Dates”, “Named Playlists” or “MOS RO Playlists” tabs. Select a Playlist and click on “Ok” in order to open it.

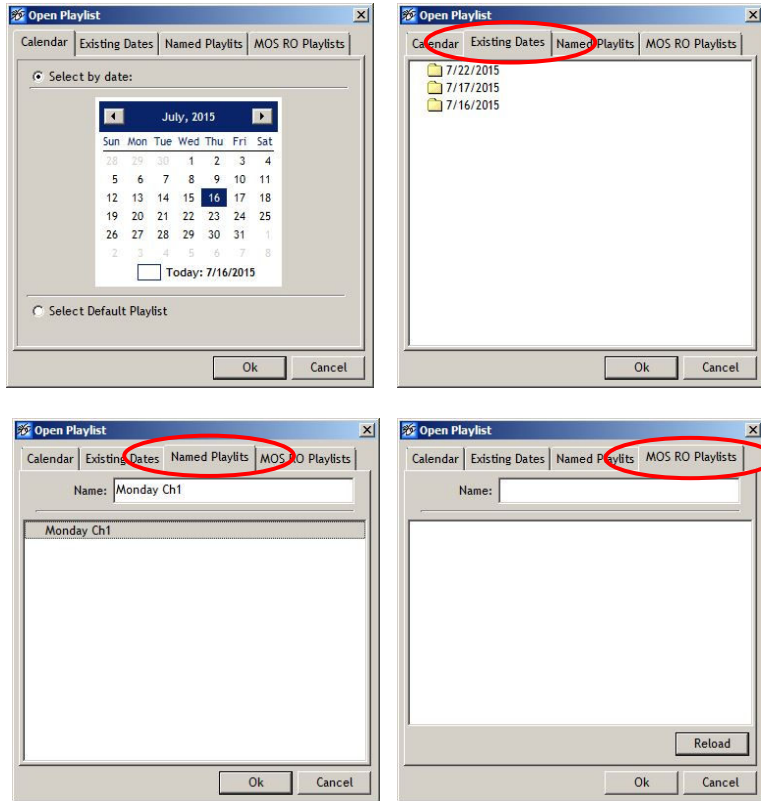


Figure 4-72

To open the Default Playlist, select the option “Select the Default Playlist” and then click on “Ok”.

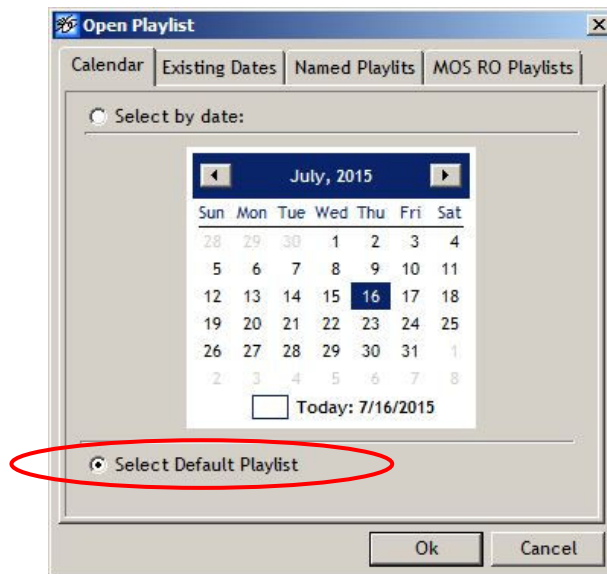


Figure 4-73

4.4.11. Delete Playlist

To delete a Playlist from the system, open the Playlist menu and select “Delete”.

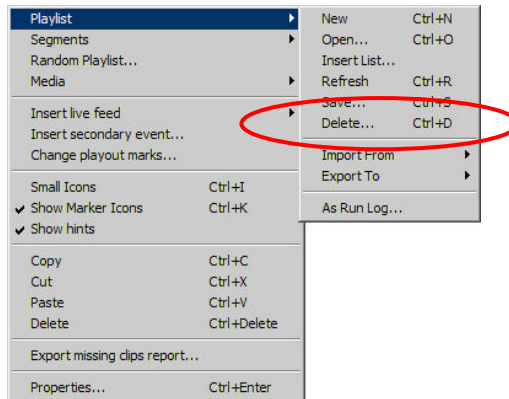


Figure 4-74

This action will open a pop up window with the programming list. Select the Playlist to delete and then click on “Ok”.

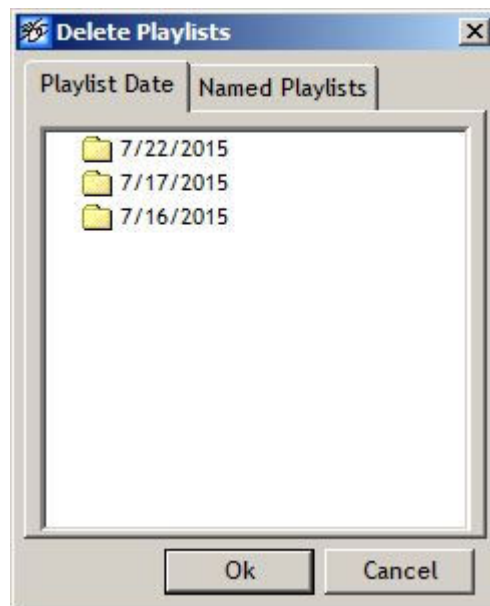


Figure 4-75

4.4.12. Import Playlist

Another way to load a Playlist into the system is by importing a text file containing the Playlist information. This text file can be uploaded from the Playlist menu by choosing the option *Import From* and then select *Txt...*

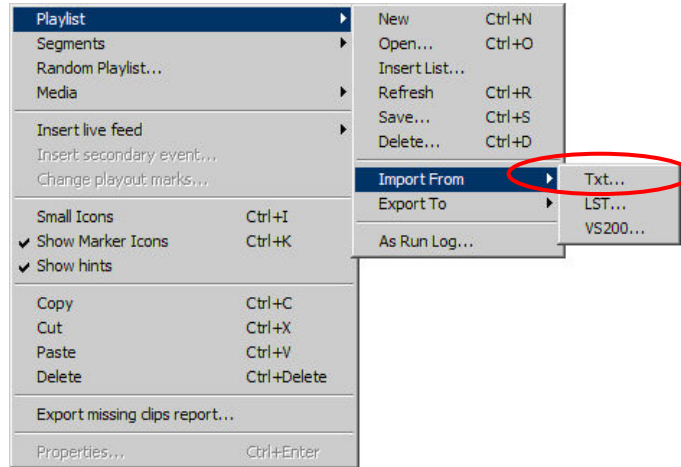


Figure 4-76

The system will display an explorer window in order to locate the .txt file to be imported.

A file for importing a Playlist may be created from any plain text editor, such as Windows[®] Notepad, following the example below. The syntax and the characters detailed must be followed carefully.

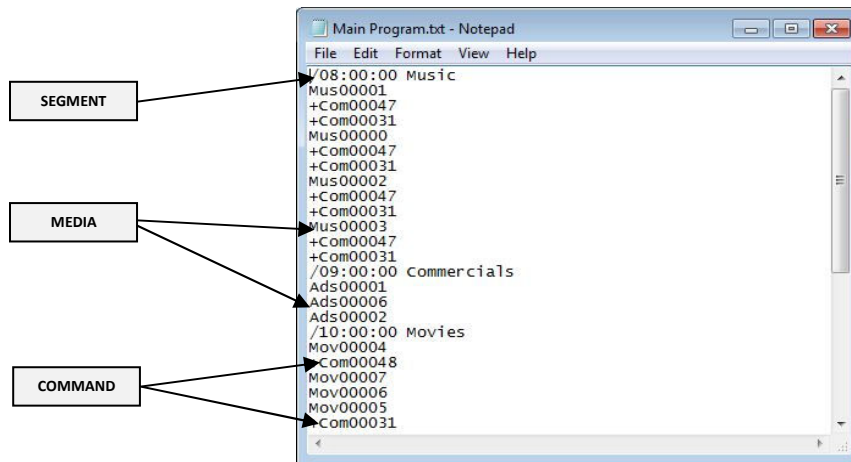


Figure 4-77

In order to create a Segment, use [/] without spaces and the time separated with [:] using the format [hh:mm:ss], [hh] stands for hour , [mm] for minutes , and [ss] for seconds. The Segment name may be added by providing a space after the time and entering the Segment name.

For the content included in the Segment, list the Code for each media item, one below the other.

To insert commands for specific media within a Segment, add them below the media Code by using a plus sign [+] and the command's Code with no spaces between them.

Once finished programming, save the .txt file and then import it as described previously in this section.

NOTE: If traffic software is used to assemble commercials, the system can be set up to export the playlist in this .txt file format. These are then imported as described previously.

If the text file contains Codes for media or commands not found in the system database, a warning message will be displayed.

4.4.13. Export Playlist

In the same way a Playlist can be imported, the system allows the export of a previously saved Playlist in a plain text file.

In order to export the Playlist, select “Export To” then “Txt...” in the Playlist menu.

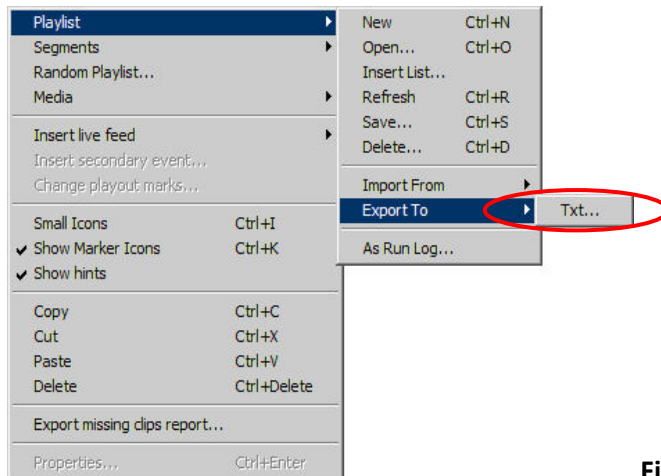


Figure 4-78

The system will open an explorer window which allows for the selection of the drive and file where the Playlist .txt file is to be saved.

4.4.14. Refresh Playlist

When the currently loaded playlist is worked on from different windows or work stations, it is possible that the most current information may not be displayed. By choosing *Refresh* from the “Playlist Builder” menu, the most current information will be displayed. This operation is like using Open Playlist and reopening the current list.

WARNING: When you execute “Refresh”, if there are any unsaved changes in the Playlist, the system will prompt to save the changes. If accepted and the changes are saved, **you will be overwriting any changes from other workstations.** Only your version of the playlist will be saved!

4.4.15. Media

By clicking the right mouse button on the main screen, the menu will be displayed. By selecting Media from the menu, searches, Unprogramming and Replacing content within the program may be accomplished.

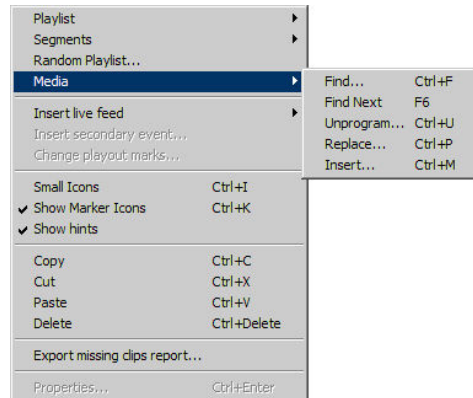


Figure 4-79

4.4.16. Find Content

With the Find option, content can be located by name, keyword(s) or partial characters.

4.4.17. Find Next

Once content is located using the *Find* option, clicking *Find next* will locate the next one with the same name or word.

4.4.18. Unprogram Content

To remove multiple instances of specific media from a program, use the option “*Unprogram...*” Note that this does not delete the media from the server, it only removes it from the current Playlist. When selecting specific media from the Playlist and executing this action, the system will ask for confirmation each time it finds that media.

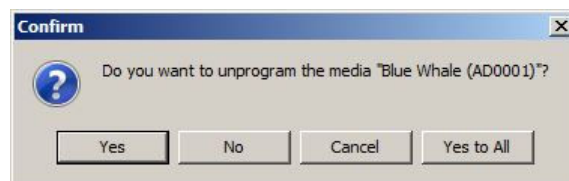


Figure 4-80

To remove only the one instance, click “Yes”. To remove all instances, click on “Yes to All” and the system will remove all instances of that media within the current Playlist without additional confirmation.

4.4.19. Replace Content

With the option “*Replace...*”, one piece of content may be substituted for another one within a program.

In order to replace content, open the Programming and Library Windows and press the Tile Windows button to align the windows.

Then select the content to be changed in the Programming Window, and in the Library Window select the replacement content.

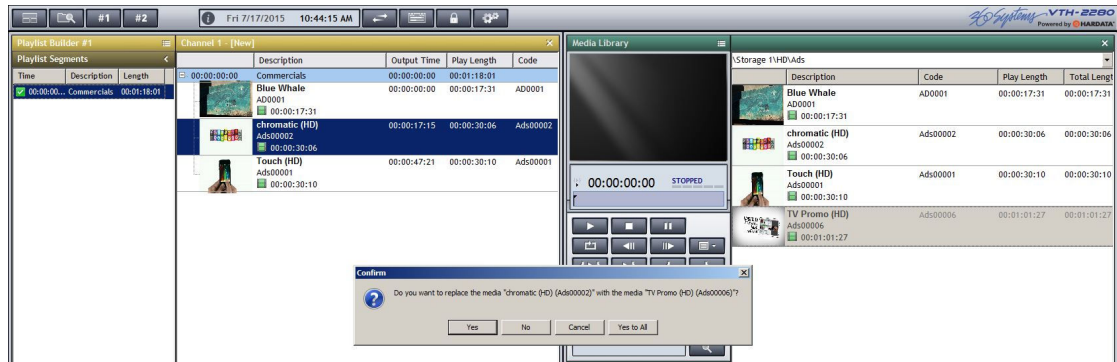


Figure 4-81

Right click on the Programming Window and select *Media*, then *Replace...* When selecting the option *Replace...*, the system will ask for a confirmation each time it finds the content in the program.



Figure 4-82

Much like Unprogramming, to replace only the one instance, click “Yes”. To replace all instances, click on “Yes to All” and the system will replace all of the content it finds within the Playlist without additional confirmation.

NOTE: As an example, with this function a commercial may be replaced with a modified or a new version automatically every time it appears in the Playlist.

4.5. Playlist Window

The Playlist window opens from the drop down menu under any of the channel buttons.

In this window, a saved Playlist may be loaded for broadcast either manually or automatically, along with graphics and character generator projects. It can also be used to create or edit Playlists, and control the graphics overlays manually or automatically.

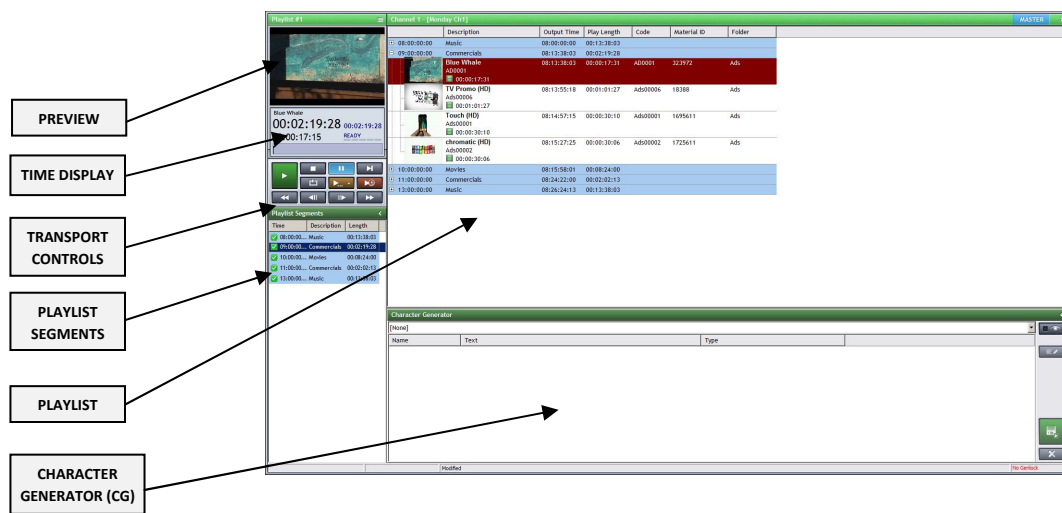


Figure 4-83

The Playout window has 2 different parts. On the left side, the Time Display, the Transport, and finally a Playlist Segments panel with all the programming segments.

On the right side, the Playlist (separated in Segments much like in the Playlist Builder window), and below it the Character Generator section.

4.5.1. The Left Panel

The left panel displays the time code reference and the transport buttons used to control the playlist. The lower portion displays the programming segments.

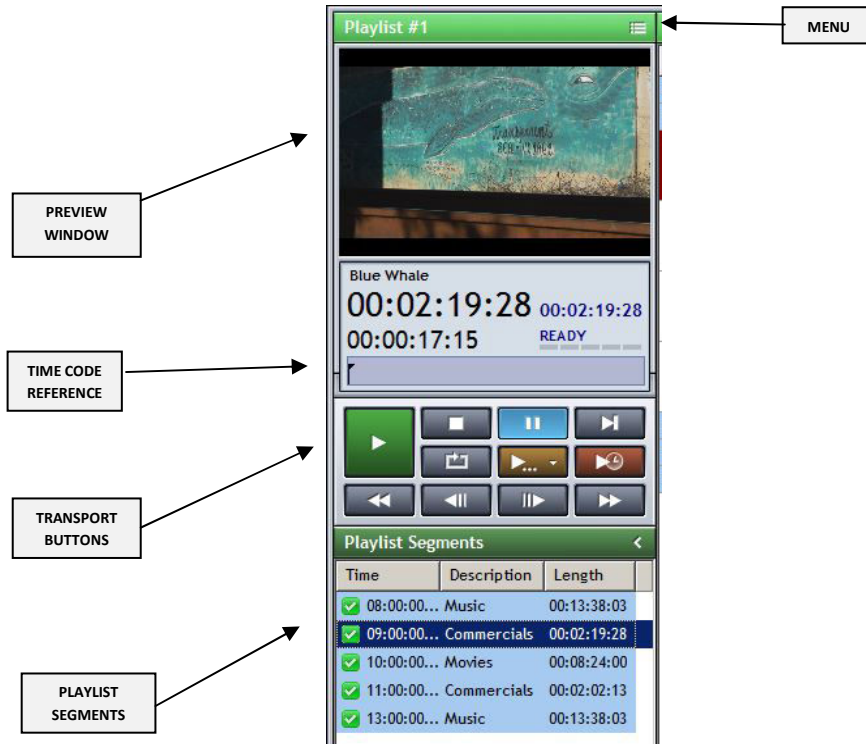


Figure 4-84

4.5.2. Time Display Panel

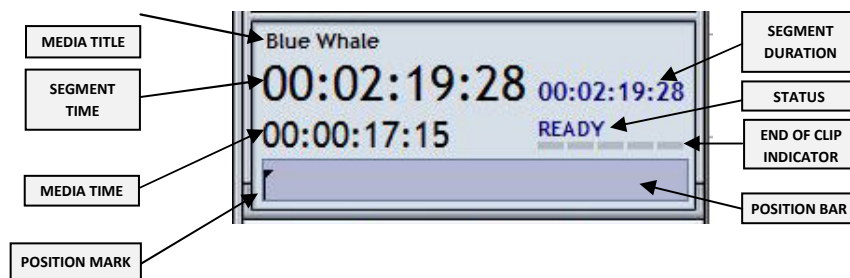


Figure 4-85

- **Media Title:** Displays the selected content's title.
- **Segment Time:** A countdown of the total duration of the segment.
- **Media Time:** A countdown of the total duration of the content.
- **Segment Duration:** The "total length" of the current segment.
- **End of Clip Indicator:** Indicates the media is nearing the end of playback.
- **Position Bar and Position Mark:** The Position Mark indicates the current position during playout. When the system is stopped or paused, the cursor position may be moved with the mouse by clicking before or after the Mark, or dragging it to the desired position.

- **Status:** Displays the status of the current content. This will vary between the following states:
 - **READY:** The content is selected and ready to play.
 - **STOPPED:** The system is stopped and there is no content selected.
 - **PLAYING:** The selected content is currently playing.
 - **PAUSED:** The current content is paused.
 - **SEEKING:** This displays when a specific position is selected with the advance cursor.
 - **ERROR:** A problem or error in the current content exists.

4.5.3. Playout Transport Buttons

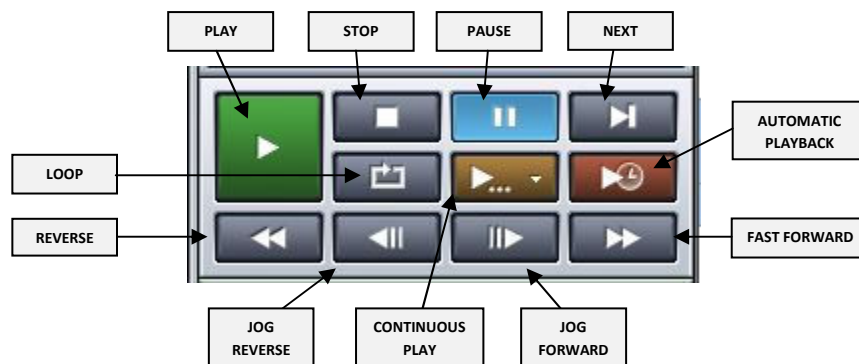















Figure 4-86

-  **Play:** Initiates playout of the selected content. This button will change colors to indicate when the system is playing .
-  **Stop:** Stops the current playout.
-  **Pause:** Pauses the content, leaving the cursor on that position. You can continue with the playout by clicking the PLAY button. The Pause button will change colors when active .
-  **Loop:** Plays the selected content continuously. The Loop button will change colors to indicate when active .
-  **Frame Backwards:** Reverses the clip one frame backwards.
-  **Frame Forward:** Advances the clip one frame forward.
-  **Automatic Playback:** Automatic continuous playback system. The automatic playout button will change colors when in this mode .
-  **Continuous Playback:** Selects the way the playout functions.

- The Continuous Playback button  can be set for three different states depending on the option selected within the menu:

- Stop at the end of each clip:

When playing content, when the clip ends, playback stops.

- Stop at the end of each segment:

When playing content, playback stops after the segment ends.

- Continuous playback :

The system continues playing until the programming ends. When a segment ends, it plays the next one until the programming ends.

4.5.4. Preview panel

This section displays what is currently being output on the channel. When in Manual mode (Auto button is off) it is also possible to use the transport controls to pause, fast forward and rewind a clip, and jump to the next clip in the list.

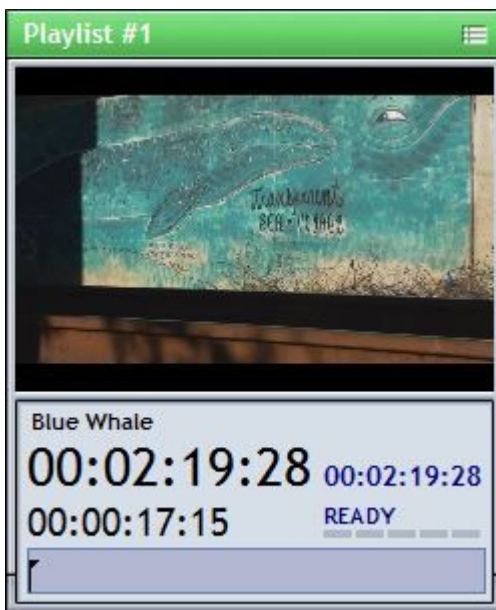


Figure 4-87

4.5.5. Playlist Segments Panel.

On the lower part of the left panel, the system displays the Playlist Segments. Clicking the right mouse button within this panel opens a menu with the functions described under Section 4.5 'Playlist Window'.

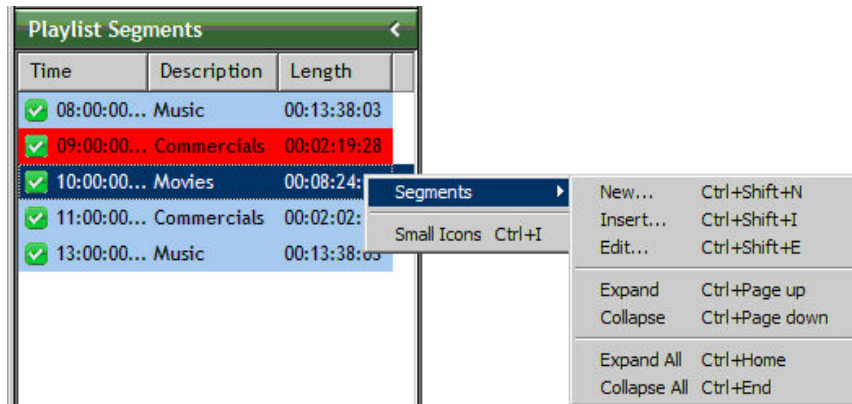


Figure 4-88

An additional option available in the menu is "Small Icons", which when selected displays the playlist programming panel with smaller icons.

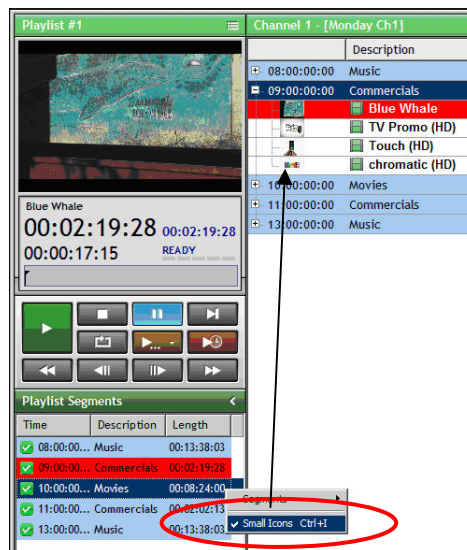


Figure 4-89

You can uncheck this function and return the icons on the right panel to their normal size again.

4.5.6. The Right Panel

The upper portion of this panel displays the day's programming playlist. In the lower part, the character generator projects are displayed.

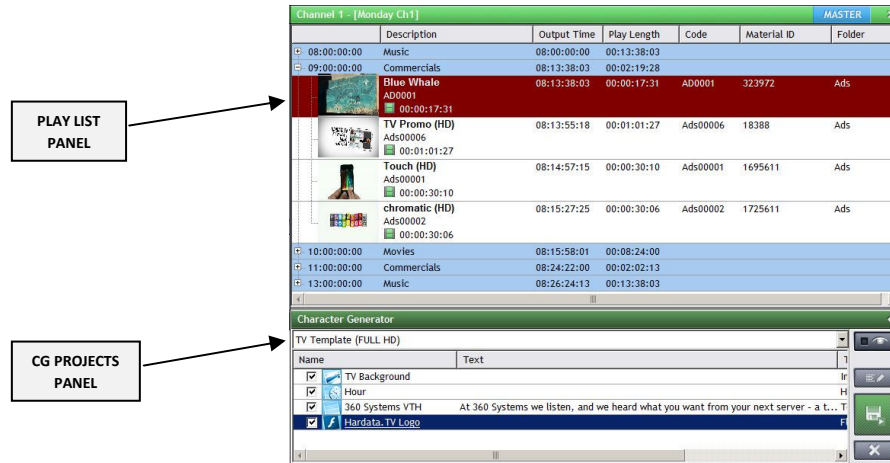


Figure 4-90

4.5.7. Playlist Panel

In this panel, the system automatically loads the programming for the day. If it does not exist, the system loads the Default Playlist. See section 4.4.9 Default Playlist, page 74.

Just as in the Programming Window, the programming displayed in the playlist panel is separated into segments. Within each segment, content is located which may be associated with commands.

Channel 1 - [Monday Ch1]						MASTER
	Description	Output Time	Play Length	Code	Material ID	Folder
+	08:00:00:00	Music	08:00:00:00	00:13:38:03		
+	09:00:00:00	Commercials	08:13:38:03	00:02:19:28		
	Blue Whale AD0001 00:00:17:31	08:13:38:03	00:00:17:31	AD0001	323972	Ads
	TV Promo (HD) Ads00006 00:01:01:27	08:13:55:18	00:01:01:27	Ads00006	18388	Ads
	Touch (HD) Ads00001 00:00:30:10	08:14:57:15	00:00:30:10	Ads00001	1695611	Ads
	chromatic (HD) Ads00002 00:00:30:06	08:15:27:25	00:00:30:06	Ads00002	1725611	Ads
+	10:00:00:00	Movies	08:15:58:01	00:08:24:00		
+	11:00:00:00	Commercials	08:24:22:00	00:02:02:13		
+	13:00:00:00	Music	08:26:24:13	00:13:38:03		

Figure 4-91

On the left side of the segments bar there is a plus “+” or minus “-” sign which allows the expansion or collapsing of the content of the segment.

This option is also located in the menu, under Segments, along with the option to expand or collapse all of the Segments.

4.5.8. Open a Program

In order to open a specific day’s programming, open the Programming menu by clicking the right mouse button and selecting “Open” from the submenu.

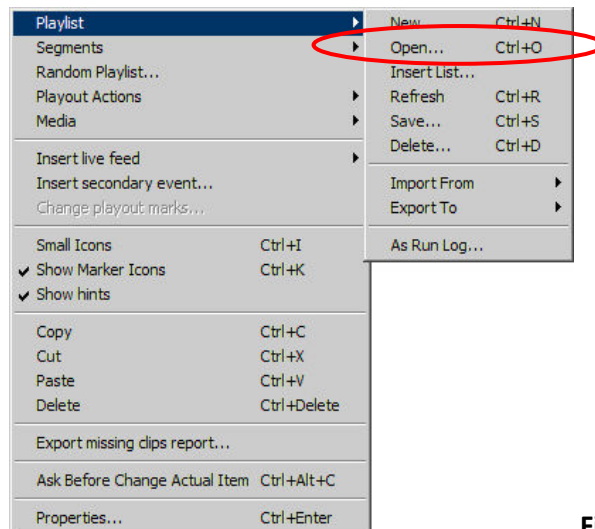


Figure 4-92

This option will open a dialog box with a calendar where the programming date to open may be selected.

4.5.9. Payout Actions

The functions in the main menu of the Payout Window are the same as described under section 4.4.2 of the Programming Window, with the exception of the “Payout Actions” option. This menu option lists the most important transport commands such as “Play”, “Stop”, “Pause” and “Next” with their shortcuts:

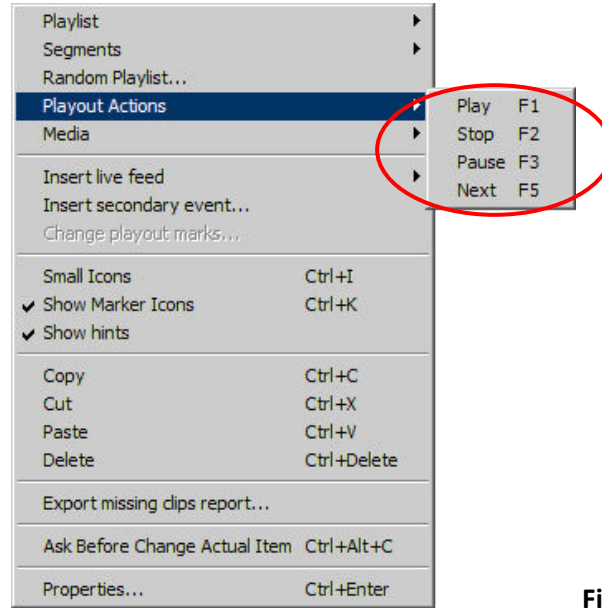


Figure 4-93

4.6. Instant Replay Window

The Instant Replay window is a powerful tool for quick access and playout of media. Each of the 10 “banks” or pages allows for instant access to 20 video clips. This provides on-the-fly, instant video spot play, with complete control over clip playout. The Instant Replay window opens from any of the channel buttons by selecting Instant Replay from the dropdown menu. The channel must be idle; if not first close the applicable Transport or Playlist window.

In the main Instant Replay window, content may be loaded into the “content keyboard” and from there be broadcasted automatically or by selecting specific clips to play.

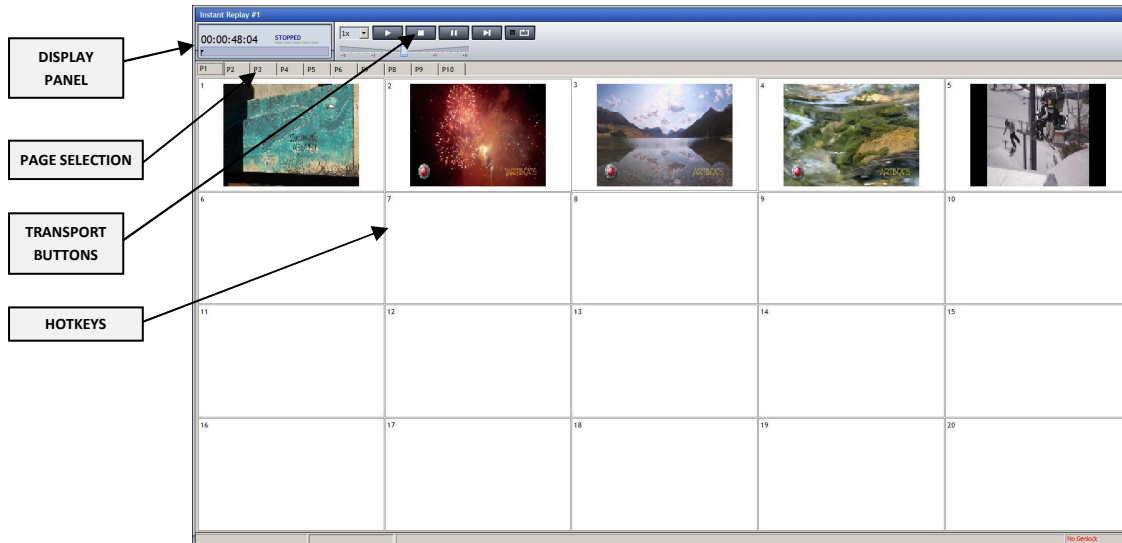


Figure 4-94

4.6.1. Display Panel

The Display Panel displays the total length of the selected content as well as the status of the selected clip.

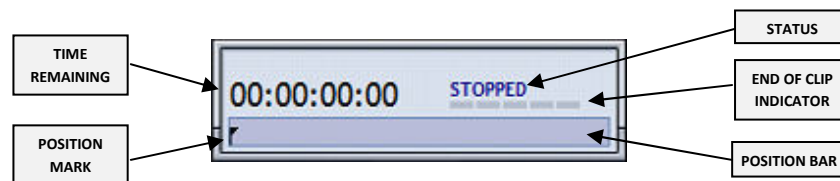


Figure 4-95

When the selected clip is played, the counter displays the remaining clip time.

Time Position Bar and Position Mark: The Mark indicates the current position during playout. The cursor position may be moved with the mouse by clicking before or after the mark, or by dragging it until the desired position is obtained.

Status: Status indicates the current operational mode on the channel. There are five possible statuses.

- **Seeking:** A clip has been selected and is being loaded.
- **Ready:** A clip has been selected and is cued for playout.
- **Stopped:** No clip is playing. Either the played clip reached the end of playout and no other clip was selected to play next, or the stop button was manually activated.
- **Paused:** The pause key has been manually activated.
- **Error:** A problem or error in the current content exists.

Clip End Bar: This indicator is located just below the status. As the playing clip nears its end, the indicator bar will change from green to yellow to red.

4.6.2. Hot Key Page Selection

Content to be accessed by the Instant Replay window is displayed on “Hot Keys” within any of ten pages, denoted by tabs labeled P1 through P10. By clicking on any of the ten tabs, any content stored on that specific page will be displayed.

4.6.3. Transport Buttons

The transport buttons operate in the same way the playlist transport buttons do. Please refer to section 4.5.3 for descriptions of the specific button’s operations.

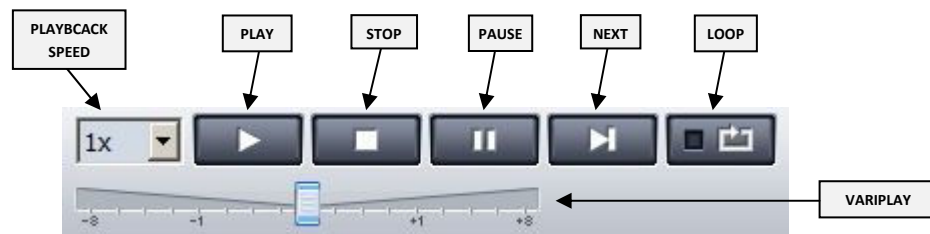



Figure 4-96

4.6.4. Hot Key Pages

Each Hot Key Page contains twenty “keys” where content available for instant play is displayed. To place video media on a key, open the Media Library Window and drag media onto a key in the Instant Replay Window.



The icon representing the content will be displayed on that key. The media is now available for playback.

4.6.5. Loading, Cueing and Playout

To play any clip, select the content to be played by clicking the corresponding key. The key will briefly turn yellow as the content loads and then will turn green as soon as the content is cued. To start the playout of the selected content click the “PLAY” 

button or click on the selected clip. The key for the playing clip will turn red for the duration of the payout.

To cue a clip to play automatically at the end of the first clip, click on another key on any of the ten key pages. The selected key will turn yellow and then green indicating that it is cued for payout. When the first clip finishes payout, the next cued clip will automatically start to play. To deselect a cued clip, click the right mouse button on a cued clip and select “Unselect Next” from the menu.

At any point during payout, a clip may be paused or stopped by clicking the “PAUSE”  transport button. To force the payout of the next cued clip, click on the “NEXT”  button.


To cause a clip to loop continuously, click the “LOOP”  button once the clip is cued, or during its payout.



Figure 4-97

4.6.6. Removing Clips

There are two ways to remove clips from Hot Keys.

To remove all of the clips from all of the keys on a specific key page, click the right mouse button on any area of the page you wish to clear and select “Clear Page” from the menu.

To remove a clip from a specific key, click the right mouse button on the key that is to be cleared and select “Clear” from the menu.

4.6.7. Displaying Content Information

To display the content information, title, code and total time within the key, right click anywhere on a key page and select Show Information Info. This will remain active until it is selected again.

5. Web User Interface (Preliminary Info)







All **VTH series servers** include a remote client Web User Interface that can be run using virtually any web browser. This interface offers the ability to upload and download content, run reports on clips played, view licenses and obtain server status (if management server is being used).


5.1. Accessing the Interface

On a computer with network access to the server, open a web browser session, and in the address bar of the browser, type the IP address or fully qualified domain name of the server and press the Enter key. A logon screen will appear where the server password will be entered. (The default password is "360pass".) The main screen will then be displayed.

5.2. Explorer

By clicking on the "Explorer" button, a listing of the Categories will show on the left of the window. By clicking on one of the Categories, the content will be displayed on the right.

By moving the mouse over the image of a clip, the properties of the clip will be displayed and three small icons    will appear to the lower right of the image of the clip. By clicking the delete  icon, the interface will prompt to delete the clip. Clicking "ok" will remove the clip from the server. By clicking the  icon, the properties of the file will be displayed for editing. By clicking the  icon, you can download the clip to the computer the web interface is running on.

To upload a file to the server, move the mouse cursor over the category you wish to copy the new clip into and click on the  icon that appears.

An upload window will then appear. Click on the "Select" button and a browser window will open where content to upload may be selected. Once the new content is selected, enter a Title and click the "Upload" button.

Once the file is transferred, a properties window will open for editing. When complete, click the "Ok" button.

5.3. License Control

By clicking "License Control", all of the licenses, key codes and associated expiration dates are displayed. This information may be required when communicating with technical support.

5.4. Report Manager

By clicking “Report Manager”, a window with three different types of reports is displayed. A description of each of the different reports is listed and can be run by clicking the specified link.

5.5. Server Status

The Server Status window shows the status of the connected management server and sync status.

5.6. System Health


The System Health window reports the status of the server hardware. Here you will find indicators for hardware items such as drives, fans, RAID and temperature. Any reported problems need to be corrected immediately as a error condition may adversely affect the operation of the server.

6. FTP Access

6.1. Accessing the Server via FTP

In some cases it may be desirable to send content to the server via an FTP connection. To access the server using an FTP client on a PC or Mac, start a new site or a quick connect session. For the address, enter the IP address of the server. The default User Name is “360user” and the default Password is “360pass”.

There are several folders displayed in the FTP directory when you first log on. Most simple video file transfer operations use only the contents of the Storage folder, which contains the file folder structure that has been created in the Media Library. The others are used for transferring Playlists, caption or subtitle data files, or ingesting video that has corresponding metadata. These operations are described later.

 **NOTE:** This section is incomplete at this writing.

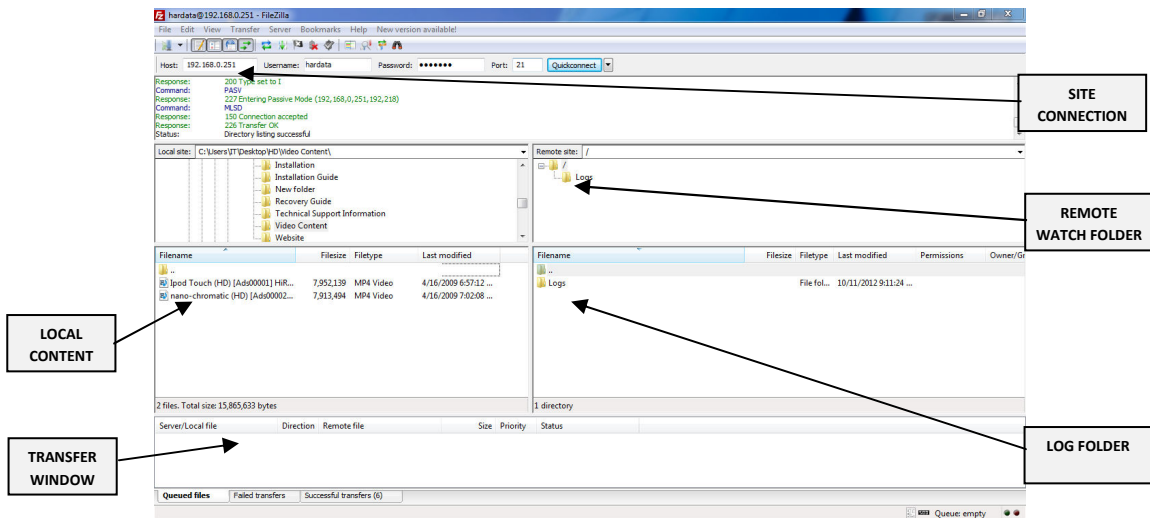


Figure 6-1

Any content sent to the server using FTP will show up in the Watch Folder listed in the Library window. Once in the Watch Folder, right click on the content and select Properties and fill in the items as needed. To move the content from the Watch Folder to another Category folder, simply drag and drop the clip from the Watch Folder to the desired Category folder.

As with the other methods of importing content, only content that meets the specifications of the server system software will be allowed. See section **4.2.10** for a list of supported file types. Content not meeting these requirements will not be saved on the server and not show in the Watch Folder. In the event the transfer of material completes but never shows in the Watch Folder on the server, please review the logs located within the FTP client remote window for further information. The .log files can be opened with any plain-text editor such as Windows® Notepad.

7. System Recovery

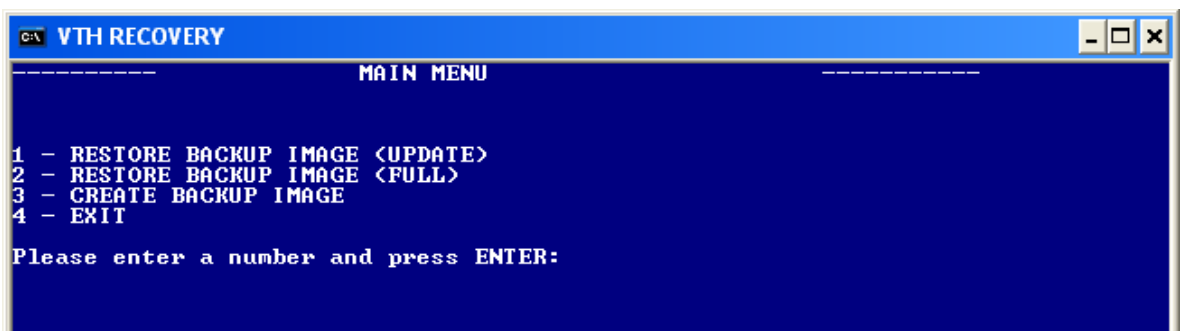


IMPORTANT: System recovery will return the server to the initial state, restoring the factory settings. There are two methods to restore the system.

Performing an **UPDATE** will not result in a loss of any data.

A **FULL INSTALL** will completely wipe the system, resulting in a loss of all data and a complete restore of the system settings.

- 7.1. To restore the system, shut the server off by logging off the application and clicking the shutdown button on the main screen.
- 7.2. Insert the restoration USB key into one of the USB slots on the back of the server and power on system using the power button on the front.
- 7.3. The server will boot to the main restoration menu.



- 7.4. For an UPDATE enter “1” and press ENTER. An UPDATE will restore the operating system and application and will preserve the data, including video content.
- 7.5. A warning message will appear and you will be asked to confirm if you wish to continue. Enter “y” and press ENTER.
- 7.6. The installation will automatically locate the install image and ask you to confirm that the correct version is to be loaded. Enter “y” and press ENTER.
- 7.7. When the installation is complete you will be notified and asked to press ENTER to continue. Press ENTER to continue.

- 7.8. For a FULL INSTALL enter “2” and press ENTER. CAUTION: A full installation will format the entire system, restoring the system to factory defaults and removing all video content and databases. Only complete a full installation if advised by 360 Systems’ technical support.
- 7.9. A warning message will appear and you will be asked to confirm if you wish to continue. Enter “y” and press ENTER.
- 7.10. The installation will automatically locate the install image and ask you to confirm that the correct version is to be loaded. Enter “y” and press ENTER.
- 7.11. When the installation is complete you will be notified and asked to press ENTER to continue. Press ENTER to continue.
- 7.12. Once the restore process has completed, Enter “4” and press ENTER to exit. You will be reminded to remove the USB key after the shutdown of the server. Press ENTER to continue.
- 7.13. After the server shuts down and powers off, remove the USB key and power on the unit from the front panel. Your system will reboot into the factory restored state.

1. Additional Information

The warranty information may be included in this Operations Manual or in a separate document.

The license application terms and conditions may be found in the system documentation included on the multimedia DVD provided with your equipment or at <http://www.360systems.com>

For the most current version of this document, please check online at <http://www.360systems.com>. This document may be modified without prior notification.

Contained on the multimedia DVD are additional resources that include documentation and tools to set up and administrate the system.

For system upgrades and system components check <http://www.360systems.com> or contact our technical support service at support@360systems.com or +1 (818) 991-0360.

2. Troubleshooting



WARNING: Never attempt to install or replace components without the assistance of trained technical support personnel. Incorrect or improper handling of the equipment may pose a serious risk of harm, injury or even death.

For additional troubleshooting tips, please refer to the respective section in this Operations Manual or the documentation accompanying the system.



NOTE: To receive remote technical support, TCP/IP ports 41881 and 3389 must be opened through your router from internet to the local IP address assigned to the server.

If unsure how to accomplish this, please contact your network administrator for assistance.

For questions regarding any of the procedures in this manual or other documents accompanying the system, please contact 360 Systems technical support at support@360systems.com or see www.360systems.com

Thank you for your purchase and trust in 360 Systems products.

Appendix A Playout Synchronization Solution (Preliminary Information)

With a second **VTH** server, you can set up the MASTER/SLAVE mode. This scheme allows the SLAVE equipment to be synchronized with the MASTER, copying all the content and following the playout list in order to generate a second video signal identical to the main one.

On one hand Hdx Server 3 Sync service replicates the SQL databases, schedules and content, keeping both server, Main and Backup, mirrored and synchronized.

On the other hand, the Hdx Playout Sync service synchronizes the playout window of the Master server with the Slave window of the Backup server.

The Slave window will instantly replicate all actions and changes that take place in the Master window, even those made last minute by the operator manually. This way, there are two identical video signals synchronized on line, and both can access the Playout switch. If the Main server fails, simply switch to the other signal and operation can continue on the Backup server.

For further information and answers to questions, please contact our Technical Support service. support@360systems.com



Appendix B Graphics and Programming (Preliminary Information)

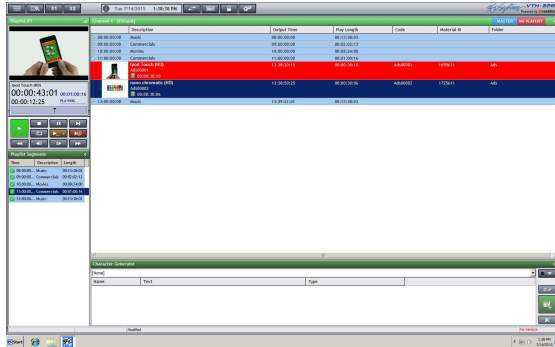
In order to create programming and graphics projects, it is not necessary to work directly on the Playout server. Instead, the VTH Remote Workstation software package may be purchased. This software connects to the Main server and can import content, catalog, search, display content, build schedules, create graphic projects and complete many other administrative tasks.

You can connect up to two Video Offices to a **VTH** server and there are two options to do so. The first is to purchase the software only, which you can install on a standard PC (see the VTH Remote Workstation operations manual for details of the minimum configuration required.)

See the VTH Remote Workstation operations manual for details on the set up and installation of the software. For questions, please contact Technical Support service at support@360systems.com

Appendix C Remote Control (Preliminary Info)

If controlling the server from a remote location is required, the VTH Remote Workstation may be added. The Remote Workstation connects to the VTH Server, remotely controlling all its functions.



application and installed on a standard PC.

This is ideal for those stations where the Video Server is installed in a machine room, cable head end or transmission facility and the server is operated from a Master Control Room or a remote studio.

The VTH Remote Workstation software may be purchased as a licensed software

See the VTH Remote Workstation operations manual for details on the set up and installation of the software. For questions, please contact Technical Support service at support@360systems.com



Appendix D Storage Expansion (Preliminary Info)

If additional content storage is required beyond the capacity of the system's internal storage, a NAS (Network Attached Storage) server with MAM (Media Asset Management) is an effective solution.

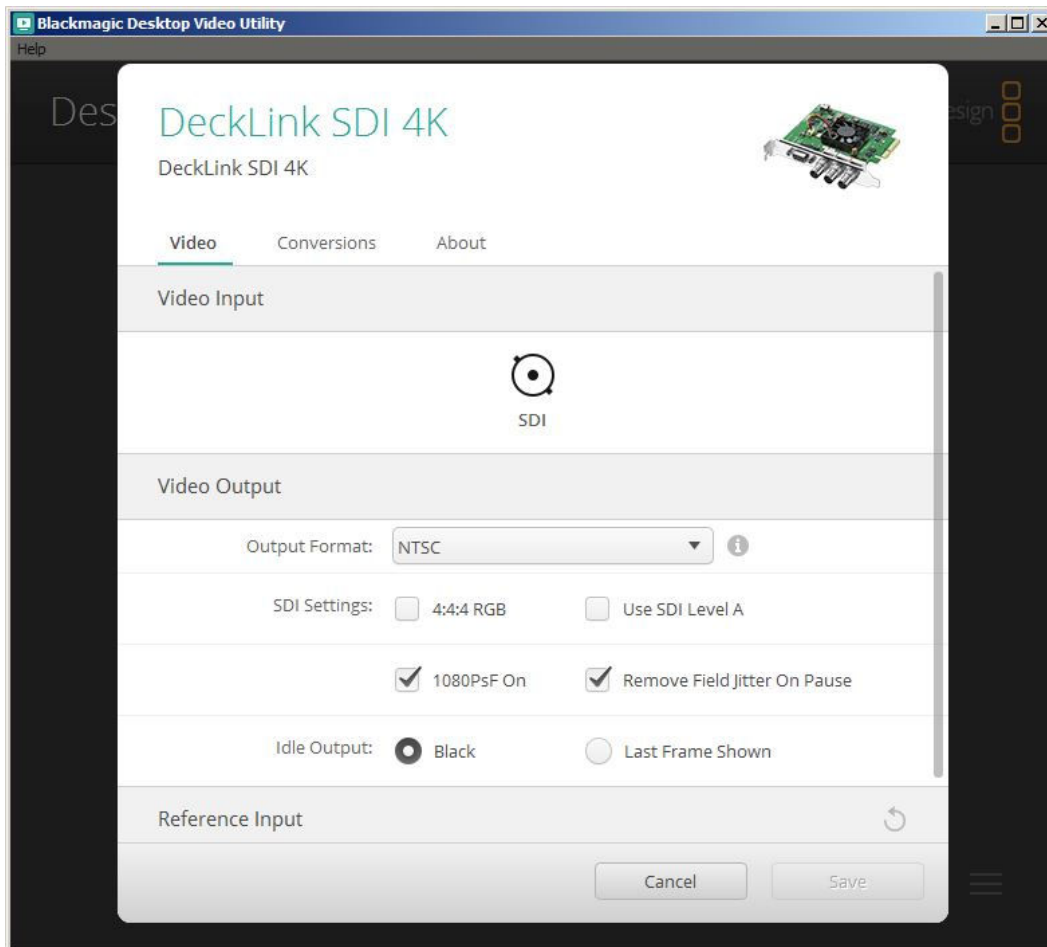
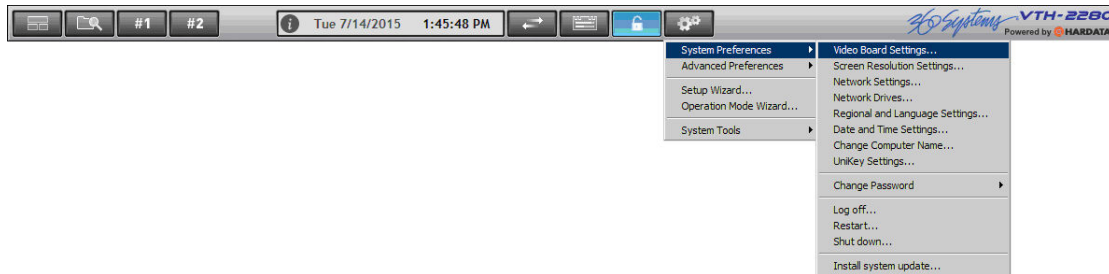
Options are available for NAS / MAM servers. Different models may be purchased with the amount of storage needed depending on the number of hours of video storage required. This provides not only additional storage, but the addition of the MAM turns this system into a complete platform for managing digital content.

This option also integrates editing islands through web interfaces and adds cross-platform cataloging positions, visualization, search and subsequent recovery of digital content for playout or storage.

For questions, please contact Technical Support service at support@360systems.com

Appendix E Advanced Video Card Settings

The Video Card Control Panel allows for changing settings directly related to the video card such as setting the video output resolution and adjusting reference timing.



Notes regarding use of clips and channels at differing frame rates

The VTH server automatically converts the frame rate of clips that are not consistent with the frame rate set for the channel they are being played on. This is true in either Transport or Playlist modes. It affects not only the actual rate of the output signal, but the operation of the Transport controls and time displays.

For example, when editing 25 or 50 fps content in a channel set for 29.97 operation, the operation reflects the result of frame rate conversion; Jog moves through 29 frames and doubles some of them, just as when the clip is played.

In systems that are set up to use different frame rates in each channel, the Library Preview window uses the frame rate setting of channel 1. If it is desired edit with the time display in the channel 2 frame rate it is necessary to use the Channel 2 Transport window.

Note that if a clip is edited in a different frame rate than the channel it is output on the edit points are still quite accurate. The edits are stored as time values that can be converted to whatever standard is in use. Therefore,

- Clips edited in either channel can be played out on the other.
- In the event that it is useful to change the frame rate of an output, the edits will maintain their accuracy.

Appendix F Programming Commands (Preliminary Info)

In order to utilize certain functions in conjunction with playout of media clips, a Command must be written and saved in the Library. Below is a list of the basic commands and their specific functions.

- **Command Types:**

- CHARGEN
- GPI
- GENERAL
- TWITTER

- **CHARGEN:**

Allows the automation of the Character Generator (graphics, animations, etc.) within the playout window.

- CommandType=CHARGEN
- MSecSinceStart= (time in ms)
- MSecBeforeEnd= (time in ms)
- Action= (values: LoadProject, UnloadProject, FadeIn, FadeOut, FadeInItem, FadeOutItem)
- Project= (name of the project) (for LoadProject)
- Item=(name of the item) (for FadeInItem, FadeOutItem)
- Depending on the action issued, the required parameters may vary:
 - If the Action is LoadProject, the parameter *Project= (name of the project)* is required
 - If the Action is UnloadProject, no other parameters are required
 - If the Action is FadeIn, no other parameters are required
 - If the Action is FadeOut, no other parameters are required
 - If the Action is UnloadProject, no other parameters are required
 - If the Action is FadeInItem, the parameter *Item= (name of the item)* is required
 - If the Action is FadeOutItem, the parameter *Item= (name of the item)* is required

- **GPI:**

Allows the triggering of events on external devices during playout. (Requires installation of the external GPI interface.)

- CommandType=GPI
- MSecSinceStart= (time in ms)
- MSecBeforeEnd= (time in ms)
- GPIPin o GPI=(GPI pin number to control)
- GPIValue=(ON, OFF)

- **GENERAL:**

Allows the changing of specific operation modes during playout: autoplay, satellite, etc.

- CommandType=GENERAL
 - MSecSinceStart= (time in ms)
 - MSecBeforeEnd= (time in ms)
 - PlaybackMode=(Continuous, StopOnBlock, StopOnClip, AutoPlay)
 - SatelliteMode=(Local, Remote)
 - AutoPlay=(ON, OFF)
- NOTE: Only one action may be used per each command.
 - **TWITTER**
Allows the server to automatically send specific information directly to a Twitter account that has been assigned to a Channel.

[CODE]
[TITLE]
[AUTHOR]
[ARTIST]
[COMMENTS]
[ALBUM]
[YEARALBUM]
[COPYRIGHT]

By adding a "+" to the end of any of the above commands, the data for the next clip to be played will be sent. For example, [TITLE+] will send the title of the next clip to be played.

As an example, in the value field you may enter:

Now Playing [TITLE]
Next up [TITLE+]

When the Twitter command is then added to a clip in a playlist, the server will automatically send the text associated with the criteria.

Appendix G Metadata Files (Preliminary Info)

Description:

A metadata file is a sequentially organized, flat text file with an .xml extension. In order for the .xml file to function properly, there are mandatory lines that must exist. All the other lines are optional. All the metadata information is placed between greater than and less than signs.

This is a simple .xml file, so it may be modified or created using any workstation. Any simple text editor, such as notepad, may be used to create the file. Once the file is created, simply rename the extension to *.xml. The encoding must be ANSI.

Metadata Example:

Below is an example of a .xml file containing metadata. A detailed description of each point is shown in the following example.

The lines marked in red (also underlined) are mandatory, and any modification to them and the .xml file will not function properly. All the other fields are optional.

<?xml version="1.0"?>

<HDVideoMetadata>

<HDVideoMetadataXMLVersion>1.0</HDVideoMetadataXMLVersion>

<MaterialID>ENTER MATERIAL ID</MaterialID>

<Title>ENTER TITLE</Title>

<Code>ENTER CODE</Code>

<ArtistName>ENTER ARTIST NAME</ArtistName>

<AuthorName>ENTER AUTHOR NAME</AuthorName>

<AlbumName>ENTER ALBUM NAME</AlbumName>

<GenreName>ENTER GENRE</GenreName>

<CompanyName>ENTER COMPANY NAME</CompanyName>

<Comments>ENTER COMMENTS</Comments>

<Length>ENTER LENGTH</Length>

<StartPos>ENTER START POSITION</StartPos>

<EndPos>ENTER END POSITION</EndPos>

</HDVideoMetadata>

XML Details:

Below lists all of the details for each of the fields in the previous example.

MATERIAL ID

The material ID is a unique set of characters for each material in order to be identified properly.

TITLE

The Title is the name of the file and how it is going to be listed in the database. The title is the simpler way to identify a material as the library Window will display the title in the first column.

CODE

The code is used to identify a material on an advanced level. If your station identifies media by code you must complete this field. The code can be both numbers and letters up to 50 characters in length. Other characters, including spaces, may not be used.

ARTIST NAME

Complete this field if you wish to display this information on the xml file.

AUTHOR NAME

Complete this field if you wish to display this information on the xml file.

ALBUM NAME

Complete this field if you wish to display this information on the xml file.

GENRE

Complete this field if you wish to display this information on the xml file.

COMPANY NAME

Complete this field if you wish to display this information on the xml file.

COMMENTS

Complete this field to list any notes or comments related to the material. For example, information related to the artist, age, nationality, etc. may be listed in this field. Also, specific information regarding the particular theme, for example, the last hit of the music band may be used.

LENGTH

Complete this field if you wish to establish the file length in milliseconds. If not completed the system will search for this information automatically and obtain it from the video material.

START POSITION

Complete this field if you wish to establish the file start position in milliseconds. If not completed the system will search for this information automatically and obtain it from the video material, in this case at the beginning of the file.

END POSITION

Complete this field if you wish to establish the file end position in milliseconds. If not completed the system will search for this information automatically and obtain it from the video material, in this case at the end of the file.

Notes:

- The material code may be numbers and letters with a max of 50 characters. Other characters, including spaces, may not be used.
- If you have any problem or issues, please contact technical support at support@360systems.com.

File Format Types:

The server supports multiple file formats, such as subtitles, programming and video formats detailed below.

Subtitle Files:

The subtitles formats supported are .txt, .srt and .pac.

Programming Files:

The programming format supported is .txt. For more information on how to generate these files, please refer to Appendix G of this manual.

Video Files:

The video formats supported are:

Video with Audio (multi-format, multi-resolution)

AVI files (.avi):

Video: MPEG 2, MPEG-4 Part 2, H.264, DV25, DVCPPro25, DVCPPro50

Audio: PCM, MPEG 1 Layer 1,2,3, AAC, Dolby AC3

MPEG 2 PS / TS files (.mpg, .mpeg, .ts):

Video: MPEG 2

Audio: PCM, MPEG 1 Layer 1,2,3

MPEG-4 files (.mpg4):

Video: MPEG 2, MPEG-4 Part 2, H.264

Audio: PCM, MPEG 1 Layer 1,2,3, AAC, Dolby AC3

QuickTime files (.mov):

Video: MPEG 2, QuickTime IMX, MPEG-4 Part 2, H.264, DV25, DVCPPro25, DVCPPro50

Audio: PCM, MPEG 1 Layer 1,2,3, AAC, Dolby AC3

MXF Files (.mxf):

Format: MXF_OP1a_MPEG-2

Video: MPEG 2

Audio: PCM, MPEG 1 Layer 1,2,3

Warning:

The name of this .xml file to be imported to the Materials folder from the watch folder must be the same as the video file you are importing. For example:

Material file: Daily_Show_(HD).mov

Xml file: Daily_Show_(HD).xml

If a name is used that does not match a media file that exists on the server, the metadata (.xml) file will not be imported.

Importing Files:

The watch folder is an FTP service that can import Playlists, Media files or subtitle files. For information on the FTP service please refer to Section 6 of this manual.

Flowchart:

There are different fields in which information may be written. If you do not upload the .xml along with the video file, the material will be filled with the metadata information contained within the material.

The following text describes the watch folder flowchart regarding how to import a video file with your optional metadata file:

Importing only the video material will assign the name of the material as a code and then check if there is any material in the database with the same code:

If exists, replace it without modifying the metadata.

If not, import the material and assign the name of the material to its code.

Importing the material with its .xml, an evaluation is performed to determine if the field [Material ID] of the xml is complete:

If it is complete, check if the [Material ID] already exists in the database.

If it exists, replace the material with all the .xml data.

If it does not exist, the material will not be replaced.

[Material ID] must always match for the .xml to be replaced.

If it is not complete, import the material with all the information contained in the .xml file.

Sample:

```
<?xml version="1.0"?>
<HDVideoMetadata>
  <HDVideoMetadataXMLVersion>1.0</HDVideoMetadataXMLVersion>
  <MaterialID>Mus00001</MaterialID>
  <Title>Titanium ft. Sia (HD)</Title>
  <Code>Tita-HD</Code>
  <ArtistName>David Guetta</ArtistName>
  <AuthorName>David Guetta</AuthorName>
  <AlbumName>Nothing But The Beat Ultimate</AlbumName>
  <GenreName>House</GenreName>
  <CompanyName>EMI</CompanyName>
  <Comments>David Guetta last song</Comments>
  <Length>246000</Length>
  <StartPos>0</StartPos>
  <EndPos>245000</EndPos>
</HDVideoMetadata>
```

Appendix H Playlist Files

Playlist description:

The playlist is a simple .txt file that can be modified or created from any workstation. Any simple text editor such as Windows® Notepad may be used to create the file. Once the file is created, simply rename the extension to *.txt. All data fields must be left justified and use the encoding ANSI or UTF-8.

The next section of this guide describes the different types of events.

LST ADC100 is also supported as of software version 8.0.

Below is a simple example of a playlist entry with a short description on the right side.

/08:00:00 Music	[First Segment of the programming]
Mus00001	[Code of the first material]
+Com00047	[Command #1 to the first material]
+Com00031	[Command #2 to the first material]
[00:01:00:00] Live Ch1	[Live material from 1 hour]
+Com00047	[Command #1 to the live material]

Event types:

There are four different types of events: segments, material files, commands and live materials.

- Start of segment
- Material file
- Commands
- Live material

Start of segment:

Indicates the start of a segment. The system works with segments so blocks can be created to separate the material files. For example a block may be created for Ads and another for Music Videos.

Syntax:

/08:00:00|Music

Start with a slash / and next to it you have to put the start of the segment in time format

HH:MM:SS. Then enter | followed by the name of the segment.

Short Syntax:

(S-Syntax= /time to start|Name of the segment).

Material file:

The material files are clearly the most important part of the PGM. To place a material file into the PGM, the MaterialCode must be written from the video. If the video is in the server, the MaterialCode may be viewed from the Library window or the Playout window. The PGM may be created even if the material file to be played has not been imported yet. For more information about how to import metadata please refer to Appendix F of this manual.

Syntax:

Mus00001

Note that only the material code is used. The MaterialCode must be <= 50 Characters. Only letters and numbers are allowed. No other characters, including spaces, may be used. In this example the MaterialCode is Mus00001.

Short Syntax:

(S-Syntax= *MaterialCode*<=50 characters).

Commands

Indicate the different commands associated with a material file. There are different types of commands, Twitter, Chargen or GPI. The commands must be located in the server to be created with the programming and always work with the previous MaterialFile in the PGM. You can have several commands associated with one MaterialFile, fox example one command to load a Chargen after hh:mm:ss time, another to change the Chargen project after xx:xx:xx time and finally another command to complete a Fadeout of the actual Chargen project.

Syntax:

+Com00047

Commands must start with the plus sign + followed by the material code for the command . The MaterialCode must be <= 50 Characters. Only letters and numbers are allowed. No other characters, including spaces, may be used. In this example the MaterialCode was Com00047.

Short Syntax:

(S-Syntax= +*MaterialCode*<=50 characters).

Live material

Live material indicates that the system must switch to the live input and start to play. For correct operation channel 1 must be assigned as a live input.

Syntax:

|00:01:00:00| |Live Ch1

The duration must be specified for the live input between the | | bars. An additional | must be added, followed by the name of the Live material. The name is only for reference as it does not affect the Live material.

Short Syntax:

(S-Syntax= |*Length of live material*| |*Name of the live material*).

Notes:

- The material code may be numbers and letters with a max of 50 characters. Only letters and numbers are allowed. No other characters, including spaces, may be used.
- If you have any problem or issues, please contact technical support at support@360systems.com.

Warning:

The name of the .txt file to be imported to the Programming folder from the watch folder must be in the following format:

PGM_20130222.txt (Syntax= PGM_*Date the programming is for*.txt) Date format=>
YYYYMMDD.

If a different name is used that does not match the above settings, the programming will not be imported by the server.

How to import:

When the file is complete there are three ways to import the file to the server:

Through server user interface:

The first option is to import directly from the server by using the Programming window. For more information please refer to Section 4.2.10 of this manual.

Through Remote Workstation:

The second option is to have a Remote Workstation module on the same network and import using the Programming window.

Importing Files:

The watch folder is a FTP service that can import playlists, media or subtitles. For information on the FTP service please refer to Section 6 of this manual.

Sample File:

This is a sample of a playlist file.

```
/12:00:00|News  
Mus00001  
+Com00047  
+Com00031  
|00:01:30:00| |Live Ch1  
Cod00065  
Mus00000  
+Com00047  
+Com00031  
/16:00:00|Movies  
Mov00004  
+Com00048  
Mov00006  
+Com00050  
Mov00008  
+Com00052  
Mov000010  
+Com00060  
/20:00:00|After News  
|00:01:00:00| |Live Ch2  
Mov00005  
+Com00031  
Cod00066
```



Appendix I Emergency Alert System Support (Preliminary Info)

EAS support is not currently offered pending further tests and qualification by the FCC.