QuVIS

QuVIS Encore™

QuVIS Encore
User Manual

QuVIS Encore
User Manual
Version #3.1
www.quvis.com

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Revision Status

Version	Revision Date	Description
1.0.3	December 2005	General updates applied (QSR 3.0.45)
1.0.1	September 2005	General updates applied
1.0.0	April 2005	Initial release of QuVIS Encore User Manual (QSR 3.0.38)

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The Purchaser must assume the risk of damage or loss in transit if shipping the Product. The Purchaser must use the original container (or a similar package affording an equal degree of protection) and pay the shipping charge. QuVIS, Inc. may replace or repair the product with either a new or reconditioned product, and the returned product becomes QuVIS, Inc.'s property.

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Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

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Finding Information

About this Manual

This user manual describes the QuVIS Encore and provides instructions for installing and operating the product.

How this Manual is Organized

This manual is organized around the tasks required to install, configure, and operate the QuVIS Encore. The following describes the chapters in this manual:

Chapter 1, Product Installation– Describes how to make rear panel connections and configure the QuVIS Encore for basic playback operations.

Chapter 2, Quick Start Procedures – Use these procedures to learn the basics of the QuVIS Encore user interface to accomplish key tasks – playing and creating play sequences using the *Show Builder*.

Chapter 3, Product Description – Provides the functional description and an overview of the QuVIS Encore user interface.

Chapter 4, Front Panel GUI Interface – Describes the front panel menu system in detail.

Chapter 5, Modifying Configuration – Describes the use of configuration files.

Chapter 6, Remote Control and Virtual Tape Operations– Describes the process of placing the QuVIS Encore under remote control and Virtual Tape editing operations.

Chapter 7, Command Line Operations – Provides a basic introduction to command line operations using the QShell interface.

Chapter 8, Installing System Software – Describes the process of installing a new system software release.

Getting More Information

In addition to the printed manual, product information is also available on the QuVIS web site - http://www.quvis.com.

Printed Manuals

All printed materials are available in the Adobe Acrobat file format (pdf) on the *QuVIS Companion CD*.

QuVIS Inc. Web site

The current user manuals and product documentation are available to download on the QuVIS Web site – http://www.quvis.com.

QuVIS Product Support

Technical assistance is available by email, the World Wide Web (Internet), or by phone or fax.

Web Technical Support

To access additional product information on the Internet; visit the product support Web page on the QuVIS Web site.

World Wide Web: http://www.quvis.com
Technical Support Email Address: support@quvis.com

Phone Support

Telephone support is available 24 hours a day, 7 days a week. Support technicians are available during normal business hours (Monday – Friday, 9am – 5pm CST). After hours phone support is available for warranty and QuCare customers. For all others additional charges may apply.

United States (785) 272-3656

Authorized Support Representative

Local product support services may be available through an authorized QuVIS Distributor. To locate a local QuVIS distributor, visit the product support web page on the QuVIS Web site.

Safety Information

Safety Precautions

To avoid injury and prevent damage to this product, review all of the safety information before using this product. Retain all safety information and operating instructions for future reference.

This unit has been engineered and manufactured to assure your personal safety. Improper use can result in potential electrical shock or fire hazard. In order not to defeat the safeguards incorporated into this product, observe the following basic rules for its installation, use and service.

Injury Precautions

WARNING!

To prevent fire or shock hazard, do not expose this product to rain or moisture.

CAUTION:

To reduce the risk of electrical shock, do not remove cover. Refer servicing to qualified service personnel.

Use Proper Power Cord

To avoid fire hazard, use only the power cord specified for this product.

Ground the Product

This recorder is equipped with a 3-blade grounding-type plug to satisfy FCC rules. If you are unable to insert the plug into the outlet contact your electrician to install a proper receptacle. Do not defeat the safety purpose of the grounded plug.

Cleaning the Product

Unplug this product from the power source before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

Do Not Operate in Wet/Damp Conditions

Do not use this product near water or in wet or damp conditions. Do not use immediately after moving from a low temperature to a high temperature as this causes condensation that may result in fire, electrical shock, or other safety hazards.

Do Not Operate Without Covers and Modules

To avoid electrical shock or fire hazard, do not operate this product with covers or modules removed.

Product Damage Precautions

CAUTION:

To avoid product damage, replace battery only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to manufacturer's instructions.

Power Source

To prevent electrical shock or fire hazard, this product should be operated only with the type of power source indicated on the label.

Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them.

To avoid electrical shock or fire hazard do not overload wall outlets, extension cords, or convenience receptacles on other equipment.

Proper Ventilation

Slots and openings in the product chassis are provided for ventilation. These ensure reliable operation of the product and prevent it from overheating. Do not block or cover these openings.

Use Electrical Surge Protection

To avoid product damage caused by electrical power surges, plug this product into an appropriately rated surge protection device.

Avoid Sources of Heat

This product should be placed more than one (1) foot away from heat sources such as radiators, heat registers, stoves, and other products (including amplifiers) that produce heat.

Connecting to Other Equipment

To avoid electric shock, this product should be turned off when making connections between this product and other equipment.

Service Safety Information

WARNING!

To avoid personal injury, do not attempt to service this product yourself. The service instructions in this document are intended for properly trained service personnel only. Refer all service to qualified personnel.

CAUTION:

To avoid electrical shock, avoid exposed connections and disconnect the main power by removing the power cord before removing protective panels or product components.

Request Product Servicing

Unplug this product from the power outlet and refer service to qualified personnel under the following conditions:

A) When the power supply cord or plug is damaged.
B) If liquid has been spilled, or objects have fallen on the product.
C) If the product has been exposed to water or wet conditions.
D) If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered in the User Manual.

E) If the product has been dropped or damaged in any way.
F) When the product exhibits a distinct change in performance – this indicates a need of service.

Recommended Equipment Location

Physical Location

This product should be mounted upright on a desk, table or in an equipment rack using the optional rack mount kit.

- When locating this product on a desk or table, do not place it on either of its sides, or upside down. Ensure that they table or desk is capable of supporting the weight of this unit (50lbs) plus the weight of any additional equipment that is located with it. The shipping case of this unit is not designed to support any external loads; do not place any equipment on top of this product.

- When mounting this product in a rack, be sure that the rack and corresponding support components are capable of supporting the weight of this unit (50lbs) plus any additional equipment that is placed in or on the rack. Placement of this unit in a rack should be such that the rack's mechanical operation (loading and unloading) does not cause the rack or this product to fall. Use only those rack mount components approved for use with this product by QuVIS, Inc.

Ambient Temperature and Airflow

The manufacturer's rated operating ambient temperature range for this product, assuming unimpeded airflow of four to eight meters/sec provided by the internal cooling fans, is 15° C to 45°C.

Failure to provide for adequate airflow into and out of this product, or operating this product outside the recommended ambient temperature range, will cause a degradation of performance.

AC Power

Proper operation of this product requires that its AC power source is capable of supplying the AC input requirements of this product. AC input requirements are listed on a label on the back of the unit next to the power entry receptacle. Failure to ensure an uninterrupted source of AC power with the necessary capacity may cause a degradation of performance.

Shielded Cables

Proper operation of this product requires properly shielded cables for fully compliant operation. The use of unshielded cabling is not recommended.

Certification and Compliances

FCC Emission Control Information

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. Changes or modifications not approved by QuVIS, Inc. can affect emission compliance and could void the user's authority to operate this equipment.

FCC Emission Limits

This device complies with Part 15 of the FCC rules. Operation is subject the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesirable operation.

CHAPTER 1 - PRODUCT INSTALLATION

Procedures in this chapter include:

IMPORTANT!

Unless you have installed a QuVIS Encore before, please take the time to read through each step thoroughly before actually connecting this product. This can help avoid errors or oversights that will prevent proper setup and operation.

Double Check the Packing List

Please take a moment to confirm that you have received all of the items listed on the packing list that accompanied the delivered unit. If any item is missing or damaged, contact QuVIS before proceeding.

Making Connections for Basic Operation

Follow the diagrams provided to setup connections for playing under local control. Other sections are provided to describe additional connection types such as networking and remote control setup.

Connection diagrams in this section include:

Serial Digital Video Input/Output Connections

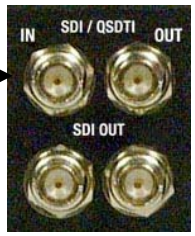
The QuVIS Encore Serial Digital Interface (SDI) connectors support both High Definition (HD-SDI) as well as Standard Definition (SD-SDI) video on the same connection, although only one video standard may be used at any one time.

For serial digital input (record and QSDTI) operations, use the BNC connector labeled IN. For serial digital output QSDTI output operations use the BNC connector labeled OUT. For serial digital video output operations (play) use either connector below the SDI OUT label.

Serial Digital (SDI) 4:2:2 Input video connections

Connect your serial digital video cable to the BNC connector labeled “A” in the *SDI IN* connector group.

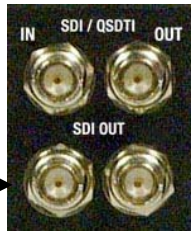
Connect SDI input cable here →



Serial Digital (SDI) 4:2:2 Output video connections

Connect your serial digital video output cable to either BNC connector in the *SDI OUT* connector group.

Connect SDI output cable here →



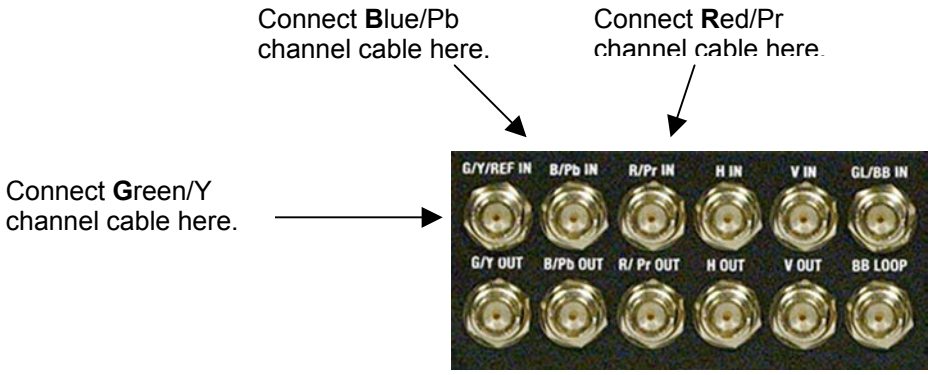
Analog Video Input/Output Connections

Analog Component video (input and output) is an option that may be added to the base configuration of the QuVIS Encore. Some analog video display applications require that sync signals be output on separate outputs (H & V). Please review your display requirements to ensure you have the appropriate analog component output cables (3-wire or 5-wire).

Note: The QuVIS Encore's Analog Component video module does not support dual-link (SMPTE 372) or Digital Cinema 2K (2048x1080) video modes.

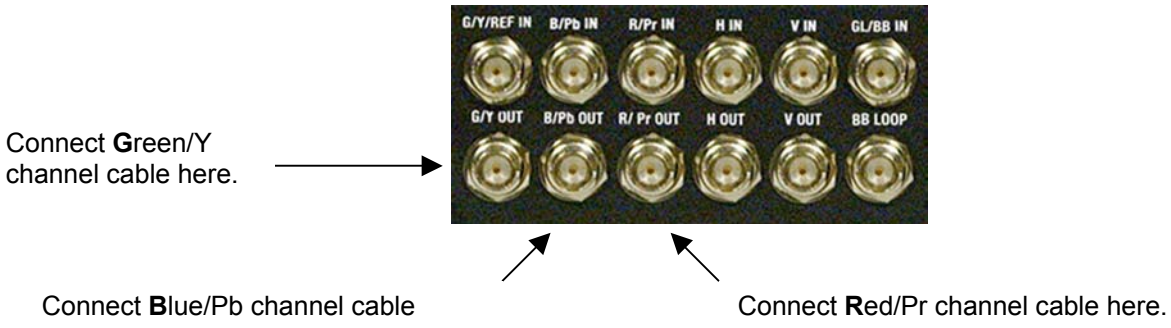
3-Wire Analog Component Input (Sync on green) connections

For standard 3-wire analog component input applications, make cable connections as follows:



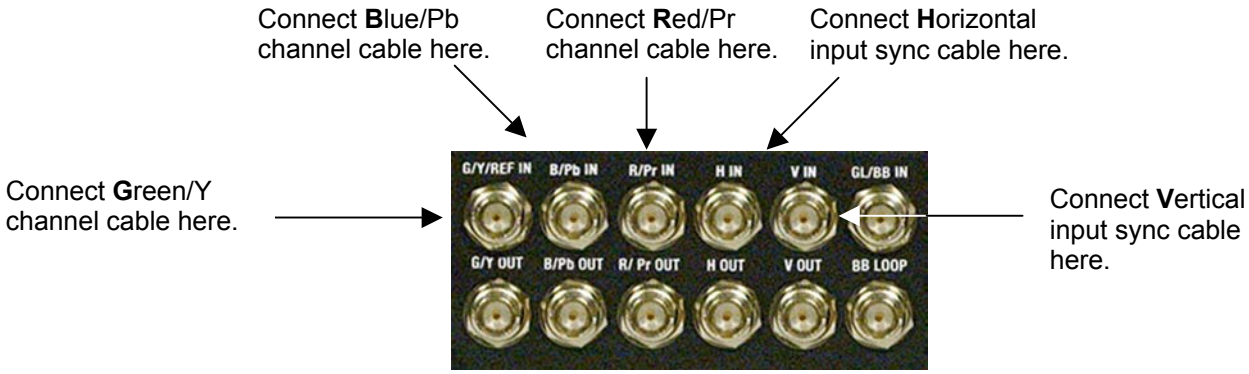
3-Wire Analog Component output (Sync on green) connections

For standard 3-wire analog component output applications, make cable connections as follows:



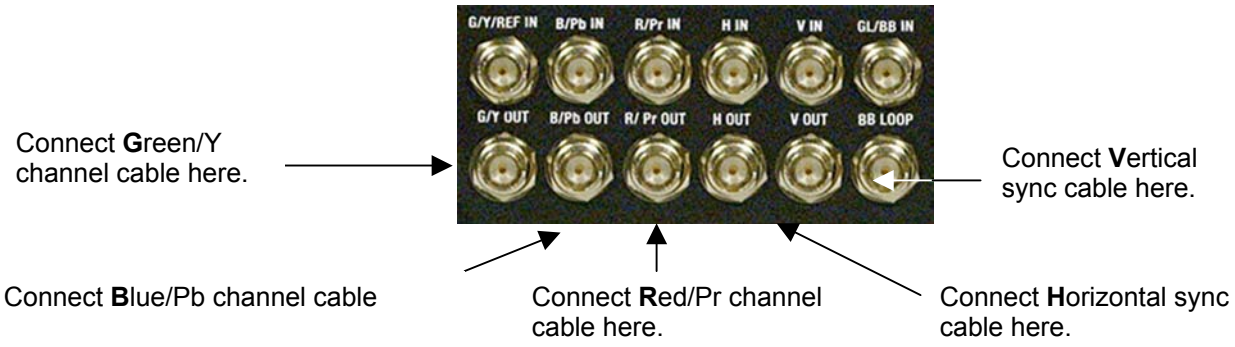
5-Wire Analog Component Input (separate sync) connections

For standard 5-wire analog component input (record) applications, make input Sync cable connections as follows:



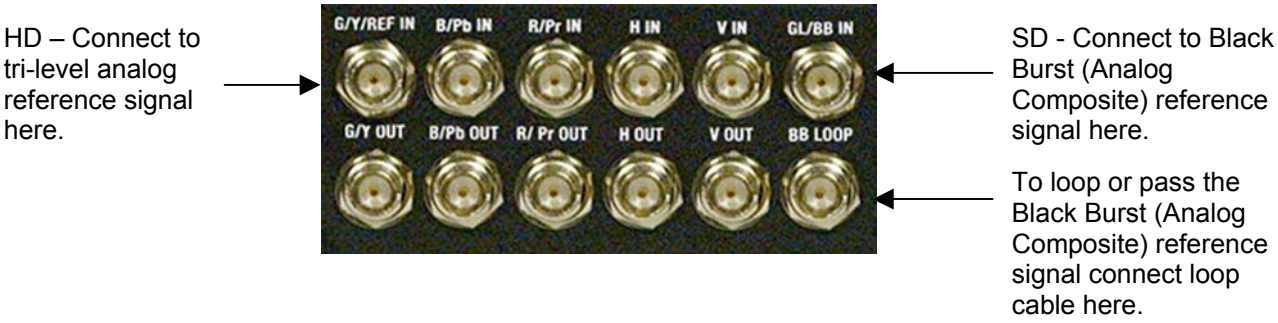
5-Wire Analog Component output (separate sync) connections

For standard 5-wire analog component output applications, make cable connections as follows:



Reference Video Connections

The optional Analog Component video module also provides connections for Analog reference video inputs (Genlock) for those applications that require video timing to be locked to a common (house) video signal. Standard definition video applications (NTSC and PAL) normally use an analog Black Burst (BB) signal for reference. HD video applications typically use analog Tri-level signal (sync on green) for video timing reference.



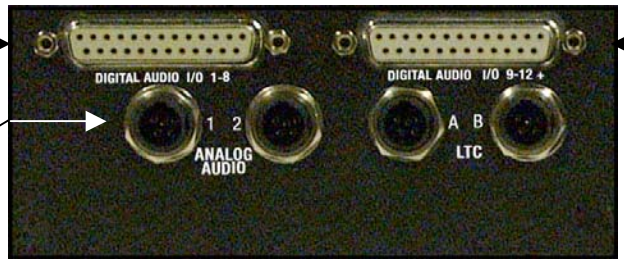
Audio Input/Output Connections

The QuVIS Encore audio support includes two analog audio channels or up to twelve channels of AES/EBU digital audio. Both analog and digital audio channels are Digital audio channels one through eight (1-8) are grouped together and channels nine through twelve (9-12) are grouped on the second digital audio connector.

The digital audio breakout cables provide a separate XLR connector for each input and output pair of digital audio.

Connect D-sub 25-pin digital audio breakout cable here for channels 1-8.

Connect analog audio cables here.



Connect digital audio breakout cable here for channels 9-12.

Powering ON and OFF

The following section describes the procedure for power on, restart and shutdown.

Turn ON Power

To turn on the QuVIS Encore, locate the front panel power button and press.

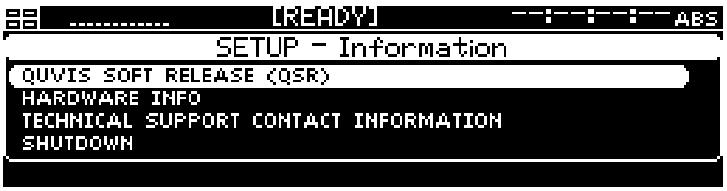
The power button is located under the front control panel near the bottom left of the machine.

Turn OFF Power (shutdown/restart)

Software shutdown

Use the following procedure to shutdown (power off) the QuVIS Encore from the front panel menu system:

1. Navigate to the **SETUP – Information** menu page.



2. Select the *Shutdown* menu choice and press the SELECT button.

3. A dialog window will be displayed to confirm your request to power down the QuVIS Encore. Press the **YES** button to continue.

Manual shutdown

To power off the QuVIS Encore manually, press and hold the power button (located underneath the front panel) for 4 seconds.

WARNING! Do not attempt to power off the QuVIS Encore manually while the system is actively performing an operation. To avoid the risk of electrical shock do not attempt to remove the power cord while the unit is powered on.

Manual restart

To restart (power reset) the QuVIS Encore manually, press and hold the first, second and fourth *Soft* buttons for 3 seconds.

Configuring for Basic PLAY Operation

There are many aspects of the factory setup that may not apply to your installation or display application. Therefore, you will want to “walk-through” the main menu screens not only to setup The QuVIS Encore for your application but also to familiarize yourself with its broad feature set.

Use the following procedures to configure the QuVIS Encore for basic playback operations under local front panel control.

For complete configuration procedures refer to Chapter 4 - Front Panel GUI Interface and Chapter 5 - Modifying Configuration.

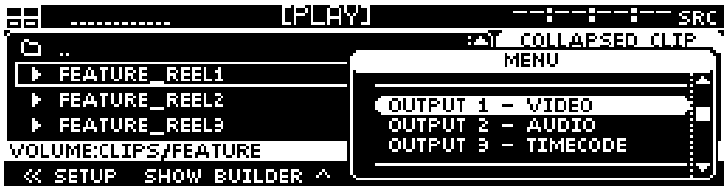
Configuration tasks:

- Select Video Output Settings
- Select Analog Video Output Settings
- Select Audio Output Settings
- Select Timecode Output Settings

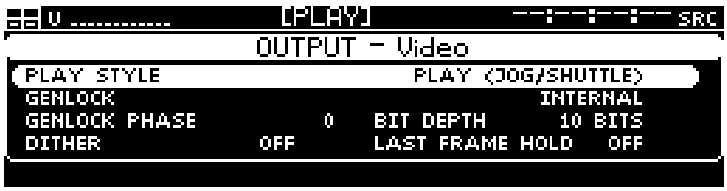
Select Video Output Settings

1. Press the MENU button to activate the menu list.

2. Select **Output – Video** and press the SELECT button.



3. Make the appropriate configuration changes on the **Output – Video** menu page.



   a. Set the **Play Style** (local control method) used for playback.

      Play Selected Item – Plays the selected item(s) one time through.

      Play Jog/Shuttle – Plays the selected item with shuttle control engaged. Frame jog is available only from the paused playback state.

Play Loop/Repeat – Play the selected item in a continuous loop.

Load Remote Control – Place the selected media file under remote serial control.

b. Set the **Genlock** source (video reference) for the QuVIS Encore.

Note: If the optional Analog Component video option is not installed, only Internal Genlock reference will be available.

c. If required, set the **Genlock Phase**.

Note: This control is used to phase-in, or delay, the analog genlock signal to compensate for signal variations. This control should only be modified by a qualified video engineer. If the optional Analog Component video option is not installed, this control will not be accessible.

d. Set the output **Bit Depth.**

Note: This control is used to match the output signal to the recording device that may only be calibrated to accept a specific signal level. For most display applications this control will not need to be modified.

e. Select output **Dither** if required.

Note: Dither adds a degree of digital-noise, or grain, to the playback. With some display devices the effect yields a more pleasing playback image. In most cases, dither should not be used when the video output is being displayed on a professional grade monitor or projection system. Dither is also not recommended when dubbing content to recording device (the added noise can make for a poorer signal). This control affects all outputs.

f. If you wish the display to hold on the last frame of video when playback is stopped, set **Frame Hold** to ON.

Select Analog Video Output Settings

Analog component video output (ACO) is an option to the base configuration of the QuVIS Encore. It is possible that not all QuVIS Encores will be configured with this option. For those units configured without an ACO, the options on this menu page will not be available.

1. Navigate to the **Output – Analog** menu page.

2. Set **Analog Colorspace** to match the requirements of the display device.

The QuVIS Encore can output analog video signals in either RGB (HV) or YUV colorspace, giving you great flexibility playing to CRT monitors, LCD monitor, plasma displays and projectors.

Note: This setting immediately affects the video output. If the setting is modified during live playback, the analog colorspace will immediately change to the new selection without needing to restart playback.

3. Set **Analog Sync** to match the requirements of the display device.

Display devices may need a specific form of sync signal to show image properly. The type of sync signal required is dependent upon the specific display device being used.

Select Audio Output Settings

1. To use the front panel headphone jack or the Analog audio channels (1 and 2) to monitor any of the digital audio channels, use the **LEFT or RIGHT Channel Mix** controls to route the digital audio channel to the appropriate analog channel.

2. Set **Master Frame Delay**.

This control is used to compensate for timing errors between video and audio normally caused by external equipment that uses frame buffers while routing or converting video or audio.

3. Set **Master Volume**.

This control is used to set the volume level for all audio channels.

4. Set **Headphone Volume**.

Use this control to set the volume level for the headphone jack beneath the front panel bezel.

Select Timecode Output Settings

Ensuring proper timecode output settings may be important for those display applications that depend upon video output timecode to trigger external events.

1. Navigate to the **Output – Timecode** menu page.

2. To specify the type of output timecode, set **LTC Out**.

3. For advanced applications involving Metadata readers use the **Metadata Out** control to specify what data is transmitted over the Metadata portion of the video signal.

   Note: Metadata is only output over HD-SDI. If the QuVIS Encore is only configured with Analog Component Output (ACO) then this setting will not route metadata over the Analog output signal.

Configuring for Basic RECORD Operation

There are many aspects of the factory setup that may not apply to your installation or application. Therefore, you will want to “walk-through” the main menu screens not only to setup the QuVIS Encore for your application but also to familiarize yourself with its broad feature set.

Use the following procedures to configure the QuVIS Encore for basic record operations under local control.

For complete configuration procedures refer to Chapter 4 - Front Panel GUI Interface and Chapter 5 - Modifying Configuration.

Configuration tasks:

- Select Video Input Settings
- Select Media Settings
- Select Audio Input Settings
- Select Advanced Input Settings

Select Video Input Settings

1. Navigate to the **RECORD - Input** menu page.

2. Make the appropriate configuration changes on this menu page.

   a. Select the image format file that matches the material you wish to record (a *format file* defines the height, width and frame rate of a recorded signal).

   b. Select the appropriate ***Input source*** according to the input format.

      Serial Digital Input (SDI) – This option is used to record either a Standard Definition or High Definition serial digital input signal.

      Analog – This option is used to record an Analog Component Video signal (YUV/YPrPb). The Analog Component hardware option must be installed before this input type may be selected.

   c. Select the ***Timecode Source***.

   d. Select the ***Destination*** (volume and directory) where recorded assets will be stored.

Select Media Settings

1. Navigate to the **RECORD - Media** menu page.

2. Make the appropriate configuration changes on this menu page.

   a. Set the ***Image Quality (SNR)*** setting for recorded material. The typical setting used in a production environment ranges from 51 – 63dB. The higher the number the higher the quality and larger the data set.

   b. The ***QuVIS Media Format*** is a compatibility switch that identifies QuVIS generational file format standards. The newest generation of QuVIS video servers (QuVIS Acuity, QuVIS Encore, QuVIS Ovation and QuVIS Cinema Player) can only record and playback QMF2 (or newer) content. The QMF2 file format is backward compatible with the QuBit ST, QuBit EL and QuBit DS.

      For additional information, see the QuVIS Media Format (QMF) in Chapter 3.

   c. Set the ***Maximum Data Rate (MDR)*** setting. MDR is used to set the upper data rate limit when recording. For additional information, see the Maximum Data Rate (MDR) section in Chapter 3.

      Note: Additional consideration must be given to the number of drives that make up the destination volume. A single-drive volume will not support data rates that exceed 30MB/sec.

Select Audio Input Settings

1. Navigate to the **RECORD – Audio** menu page.

2. Make the appropriate configuration changes on this menu page.

   a. ***Audio form*** may only be used when the *Clip form* is set to “expanded”. This control is used to define the way each channel of audio is stored, typically only done in an editing environment. Choices include:

      Audio Cluster (grouped channels) – A single file is used to store all selected audio channels.

Audio Tracks (discrete channels) – A separate file is used to store each selected channel of audio.

b. Select the ***Resolution*** of the recorded audio signal. Choices include 16, 20 and 24 bit.

c. Select the sampling ***Frequency*** of the recorded audio signal. Choices include 44.1 kHz or 48 kHz.

d. Use the ***Digital audio inputs*** and ***Analog audio inputs*** to specify which audio channels should be recorded and whether channels 1 and 2 should be analog or digital.

If channels 1 and 2 are selected to be analog channels, the ***Level*** control (on the RECORD – Advanced menu page) is used to set the level of attenuation for the analog channels.

Select Advanced Input Settings

1. Navigate to the **RECORD – Advanced** menu page.

2. This menu page provides advanced control over record input settings.

a. The ***Include metadata*** control is used to instruct the system to record data stored in the vertical interval of the incoming serial digital stream as metadata. This includes Film Ancillary Data and IRIG timecode.

b. ***Drop Frame Mode*** allows you to select the default timecode type that is built-in to the selected image format or override it with a custom setting.

c. ***Noise coring*** is an advanced setting that is used to reduce low amplitude, high frequency signals. Dither, film grain and other sources of electronic video "noise" are examples of what can be reduced using this setting.

d. The ***Level*** control is used to set the level of attenuation for the analog audio channels.

Verifying Basic Operations

Play a short clip to confirm that your connections and system setup are correct.

Refer to Chapter 2 - Quick Start Procedures for play and record procedures.

Setting Up the Ethernet Network

The factory assigned network settings for the QuVIS Encore may differ from your network-addressing scheme. Before you connect the QuVIS Encore to your network, you will need to power it on and adjust the network address settings.

This procedure guides you to relevant network settings, but does not instruct you on the specific settings required for your network. It is assumed that you understand Ethernet networks in general and your particular network needs and that you can apply that understanding to make the required settings. If you need help with these procedures, contact your network administrator.

Once the networks settings have been made and the appropriate connections made and verified, you can perform the following tasks:

- Remote system management or control using Telnet or QuVIS API calls.
- General networking tasks such as data file sharing using an FTP client.
- CGI-based clip creation/extraction (QuApps)
- Media file sharing between QuVIS video servers or networked computers.

Procedure Summary:

Configure the QuVIS Encore Network Settings

Network settings may be assigned using the front panel interface display. You will likely find it easier to configure your network settings using a PS2 keyboard that may be attached to the front panel. You will need to restart the system once the network settings have been assigned.

Network TCP/IP address settings may be manually assigned using the front panel GUI. Alternately, the QuVIS Encore can use the DHCP (Dynamic Host Configuration Protocol) network service to receive its IP addressing information (IP address, subnet mask, default gateway) from a network server. The QuVIS Encore is assigned an unused IP address from a pool of TCP/IP address maintained by the DHCP server.

DHCP provides safe, reliable, and simple TCP/IP network configuration, prevents address conflicts, and helps conserve the use of IP addresses on the network. If the QuVIS server is connected to a foreign network running DHCP, an IP address may be automatically assigned by the network without having to request an IP address from a company's IT department.

You will need to restart the system once the network settings have been assigned in order for the new settings to take affect.

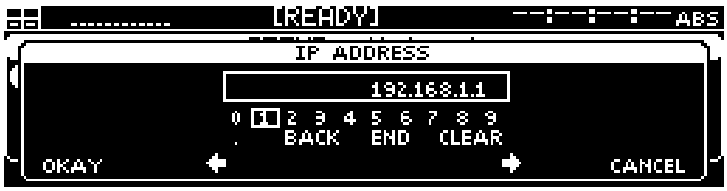
> ***TIP:*** Network settings are saved in non-volatile memory. In order to activate changes to network settings, the QuVIS Encore must be restarted. Each time a network setting is changed, a prompt is displayed asking if you would like to restart the unit now to activate the changes. If you need to change multiple settings, do not choose to restart the unit until *after* the last setting is changed.

Modifying Network Settings

1. Power on the QuVIS Encore.

2. Navigate to the **SETUP - Network** menu page.

3. To manually assign the **IP Address**, press the SELECT button to activate the input window.



Note: You will likely find it easier to configure the network settings using a PS2 keyboard that may be attached to the front panel even while the system is turned on.

4. To change the **Subnet Mask**, navigate to that menu item and press the SELECT button to activate the input window.

5. To change the **Default Gateway** setting, navigate to that menu item and press the SELECT button to activate the input window.

6. Restart the system to activate the network changes.

Connecting the Ethernet Cable

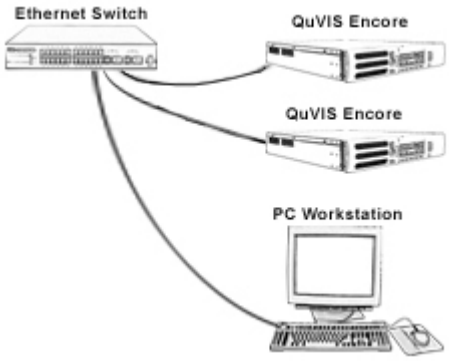
The QuVIS Encore has a built-in 1000BaseT (Gigabit) Ethernet card that is used to connect to a standard Ethernet network. The network adapter auto-senses the connection speed and is fully compatible with both 10, 100 and 1000BaseT networks. The QuVIS Encore uses the standard RJ-45 Ethernet connector that accepts either CAT 5 or 6 twisted pair Ethernet cables.

The network cable port is located on the back of the unit on the bottom board module.

Attach RJ-45 Ethernet cable here.

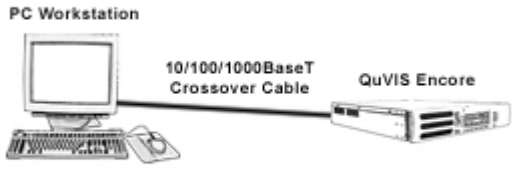
Connecting the QuVIS Encore to a network hub or switch

Use a standard *straight* Ethernet cable to connect the system to a hub or central switch.



Connecting the QuVIS Encore directly to a computer

To bypass the need for a network hub or switch, a network *crossover* cable may be used to connect a computer (or other network device) directly to the QuVIS Encore.



Note: A standard *straight* network cable will not operate as a *crossover* cable and will prevent the system from establishing communication with the connected computer. While some network adapters and switches are capable of "auto-sensing" the type of cable being used, the QuVIS Encore does *not* auto-sense and requires the appropriate cable to be used depending upon the connection.

Verify the Ethernet Connection

When the QuVIS Encore is properly connected to the network, the "green" indicator on the systems network port will light up to indicate a proper connection. The "yellow" activity lamp will also periodically illuminate if other devices are currently on the network.

Verify the Ethernet connection and presence on your network by either "pinging" the QuVIS Encore's IP address or opening a client connection using a Telnet or FTP client. If the system responds to the "ping" request or you are able to successfully establish a Telnet or FTP connection, the QuVIS Encore and the network are functioning properly.

TIP: If you are unable to successfully communicate with the QuVIS Encore, please check to verify that the network settings are appropriately assigned. Communication problems will occur if two or more devices on the network as assigned the same IP address. If the Encore's network setting are correct, and problems still exist, check the cabling as well as the network settings of the computer trying to establish the connection. If problems still exist contact your network administrator or QuVIS Customer Support for assistance.

Connecting Serial RS-422

The QuVIS Encore may be controlled using remote control devices and applications software that uses the industry standard RS-422 serial protocol. To control the system remotely using the RS-422 protocol, a RS422 cable (male) must be connected to the QuVIS Encore and the controlling device. Connect the RS-422 cable as required, and then refer to Remote Control Operations to configure the system for remote control.

Attach RS-422 serial cable here.

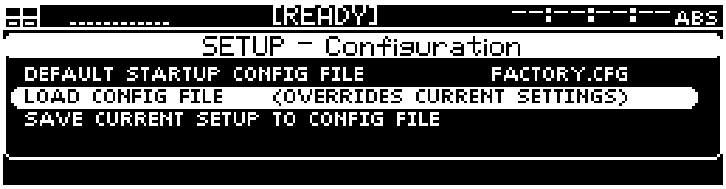
CHAPTER 2 - QUICK START PROCEDURES

Procedures in this chapter include:

Load Custom Settings from a Config File

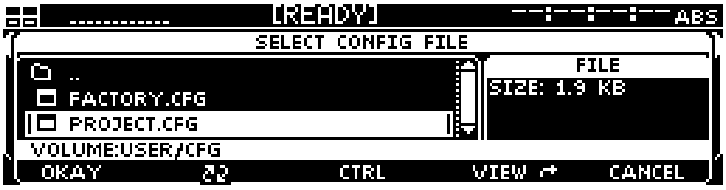
Use the following procedure to load custom settings stored in a previously saved configuration file. All settings will be applied immediately. To ensure all settings are properly set, the QuVIS Encore should not be actively playing content while a config file is being loaded. For more information on configuration files and their usage, see Chapter 5 - Modifying Configuration.

1. Navigate to the **SETUP – Config** menu page and select the *Load config file* option.

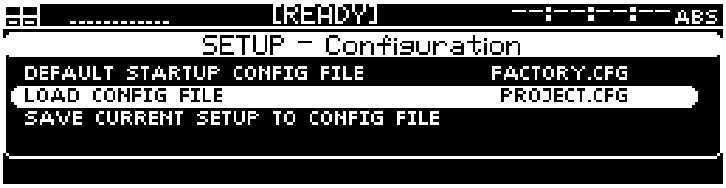


2. Press the SELECT button to activate the file selection window. The file browser path will automatically load the appropriate directory (*/user/cfg*) where all *config* files are stored.

3. Press the SELECT button to highlight the config file to be loaded. If you make a mistake, simply navigate to another file and press the SELECT button.



4. Press the *soft* button labeled *Load* to load the settings from the selected config file. The settings contained in the selected config file will now be applied.

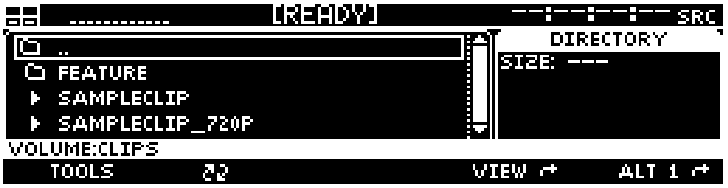


Play a Clip from the Front Panel

The procedure for playing a clip remotely using the remote “desktop” software, QuDAC, is the same as playing a clip or media file from the panel of the QuVIS Encore.

1. Navigate to the **PLAY – Browser** menu page.

2. Navigate to the file directory that contains the clip you wish to play.



Note: Directory navigation on the QuVIS Encore is similar to navigating directories on a computer. To open a directory, place the “selection box” on the directory you wish to open and press the SELECT button.

3. Select the clip(s) you wish play by placing the “selection box” on the desired clip or media file and press the SELECT button.

Note: Multi-file playback is only supported when using the “Play Selected Item” playstyle (Output – Video menu page). If you select multiple files when using the “Play Shuttle” or “Load Remote Control” playstyle, only the last file selected will be available for playback.

> ***TIP:*** If you wish to change the playstyle without navigating to the Output – Video menu page, press and hold for 3 seconds the center button (below the play icon) to activate a dialog window to change the setting.

4. To play the selected clip or media file, press the center button, just below the play icon ( ). This will cause the display to automatically switch to the **PLAY – Control** menu page in order to provide simple transport control and display playback status information.

Note: The QuVIS Encore will automatically switch to the appropriate output video format (if needed) before playback will begin.

Record a Clip from the GUI (Local record)

To record a clip from the GUI, the QuVIS Encore must first be configured to match the format settings of the source material (including video, audio and timecode). Before you begin make sure that the video, audio and LTC timecode (if required) input connections to the QuVIS Encore are properly connected to the content source.

1. Navigate to the **RECORD – Input** menu page.

2. Review the current record settings to ensure that the system is properly configured to accept the video and audio format of the source material. You may need to modify the following settings found on the specified menu pages:

a. **Image Format** (RECORD – Input)
b. **Input Source** (RECORD – Input)
c. **Digital Audio Inputs** (RECORD – Audio)
d. **Analog Audio Inputs** (RECORD – Audio)
e. **Resolution** (RECORD – Audio)
f. **Frequency** (RECORD – Audio)

3. Review the additional system systems to ensure that the Encore is properly configured to record content with the correct parameters for this specific project. Settings that should be review are as follows:

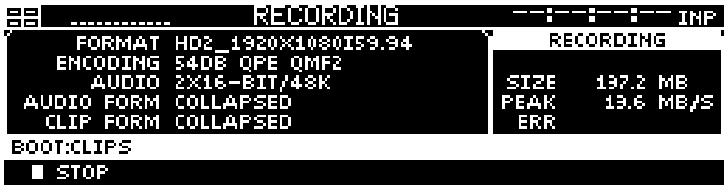
a. **Destination** (RECORD – Input)
b. **Timecode** (RECORD – Input)
c. **Image Quality** (RECORD – Media)
d. **QuVIS Media Format** (RECORD – Media)
e. **Maximum Data Rate** (RECORD – Media)
f. **Clip Form** (RECORD – Media)

> ***TIP:*** If you have already saved a *config* files that contains the settings for your project, you can load the required record settings in a single step. See Load Custom Settings from a Config File for additional details.

4. If the system has not been placed in [RECORD] mode (indicated in the dashboard), press the button labeled ● **SETUP** on the **RECORD – Control** menu page.

5. To begin recording, press the ● **RECORD** button to begin recording.

6. To stop recording, press the **STOP** button.



7. Once recording has stopped you may chose to review (play) the clip, rename it, delete the clip or accept (Keep) the recording.

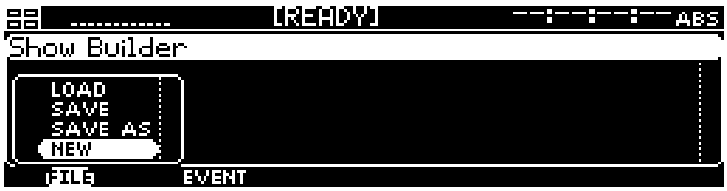
Create a Simple Script

Multiple clips of the same format and media format may be arranged into a playable list or script. The Show Builder menu page provides a simple utility for creating or editing an event sequence (script) from the front panel of the QuVIS Encore. A script is a defined sequence of events (QScript commands) that instruct the system to play various segments of media content without visual or audible interruption as if they were one seamless production.

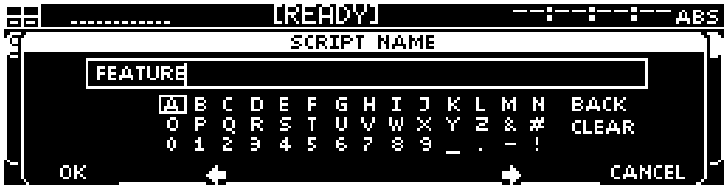
Script files may be played from the front panel by selecting the file from the **PLAY – Browser** menu page and pressing the **PLAY** button.

1. Navigate to the **PLAY – Show Builder** menu page.

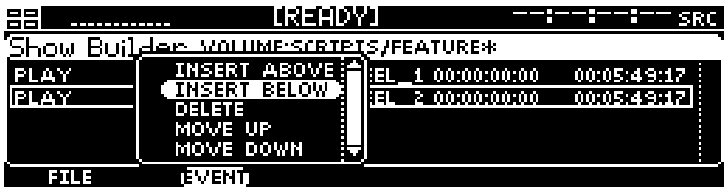
2. To create a **NEW** script, press the FILE button, select *New*, and press the SELECT button.



3. Enter the name of the new script file. Press ***OK*** to accept the filename.

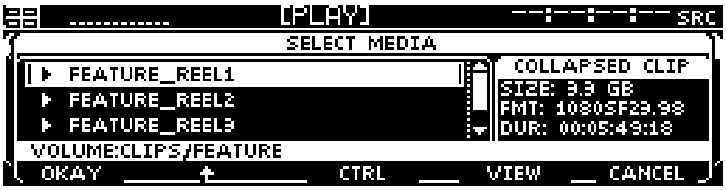


4. To add a simple play event to the script, press the *soft* EVENT button and select the *Insert Below* (or above if the event list is empty) menu option. This will place the new event on the first line of a blank script.



a. Before the event is populated on the line indicated, the event must first be defined. In this example we will select a PLAY event.

b. Once the event type has been selected (above screenshot), in this case a PLAY event, the source media file (clip) must be selected using the file browser window prompt.

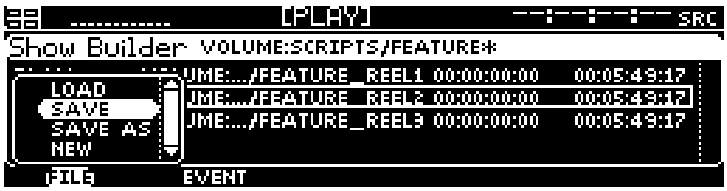


> ***TIP:*** Multiple play events may be added by using the multi-select functionality of the browser popup window. A separate *play* event will be added for each media file or clip selected within the same directory.

5. Repeat Step 2 as needed to add events to the script file.

6. To save changes to the script, press the **FILE** button and select the **SAVE** option.

> ***TIP:*** To indicate the file has not been saved, an asterisk (*) is displayed at the end of the filename in the title bar.



Basic File Management

Basic file operations may be performed directly from the front panel of the QuVIS Encore. This includes the ability to make directories as well as copy, rename and delete files. This section will cover the basic local operations.

The **PLAY – Browser** menu page provides the ability to conduct file management operations.

File Management Tasks:

- Create a New Directory
- Rename a File
- Delete a File
- Copy a File (Local)

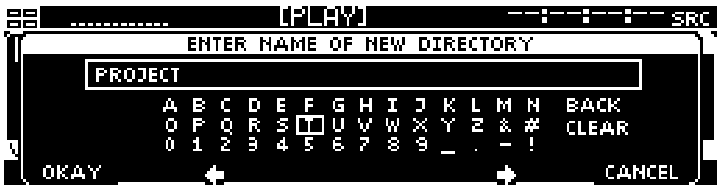
Create a New Directory

1. Navigate to the **PLAY – Browser** menu page. Using the file browser, navigate to the volume and/or directory path where you wish to create a new directory. The current path in the example below is “Volume:clips/”. The new directory will be created in this path as a subdirectory to “clips” on the “Volume:” volume.

2. Press the **File** button to activate the list of file operations.

3. To create a new directory, select the **Mkdir** operation choice from the popup window and press the SELECT button.

4. Enter the name of the new directory. When you are finished naming the new directory, press the Okay button to complete the operation.



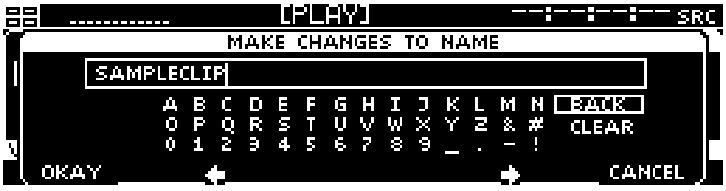
5. To complete the operation, press the **Okay** button. If you wish to cancel the operation you may either press the CANCEL button (to the right of the display) or the *soft* **Cancel** button below the display.

Rename a File

1. Select the file or directory you wish to *rename* using the SELECT button. If you wish to rename a directory, the **CTRL** selection style (ALT 2 *soft* button view) must be selected before you press the SELECT button.

2. To rename the selected file or directory, press the **File** button and select the ***Rename*** menu choice.

3. Make changes to the filename and press the **Okay** button to complete the rename operation.



> ***TIP:*** The controls for renaming the file (or directory) are located on the popup window. To remove characters (starting from the end of the file) in the filename place the selection box on the **BACK** option and press the SELECT button (each press will backspace over one character). The give the file a new name, use the **CLEAR** option to remove the entire filename.

4. Press the **Okay** button to complete the rename operation.

Delete a File

1. Select the file or directory you wish to *delete* using the SELECT button. If you wish to delete a directory, the **CTRL** selection style (ALT 2 *soft* button view) must be selected before you press the SELECT button.

Note: A directory must be empty of all files and subdirectories before it can be deleted.

2. To delete the selected file or directory, press the **File** button and select the ***Delete*** menu choice.

3. Press the **Okay** button to confirm that you wish to delete the selected file or directory.

TIP: Multiple files may be deleted in a single operation. In order to select multiple files the CTRL or SHIFT button on the ALT2 view.

Copy a File (Local)

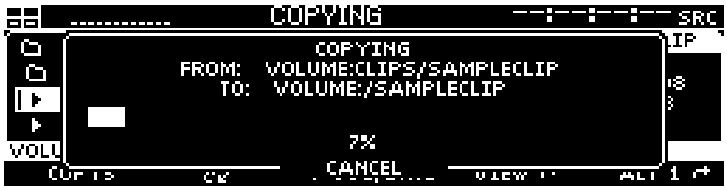
1. Select the file(s) you wish to *copy* using the SELECT button.

TIP: Multiple files may be copied in a single operation. In order to select multiple files the CTRL or SHIFT button on the ALT2 view.

2. To copy the selected file(s), press the **File** button and select the ***Copy*** menu choice.

3. Select the destination by navigating to the new directory location using the file browser popup window. The destination directory may be a directory on any of the locally mounted storage volumes.

4. Press the **Okay** button to start the copy process.



Note: To cancel the operation, press the *soft* button labeled CANCEL (bottom center). If multiple files have been selected to copy, canceling the current operation will stop all subsequent copy operations.

CHAPTER 3 - PRODUCT DESCRIPTION

Information in this chapter includes:

Product Overview

The QuVIS Encore is multi-format single channel digital video recorder. The QuVIS Encore is uniquely flexible as it capable of mastering and playing a wide variety of standard 4:2:2 video formats including 720p, 1080i, 1080sf, 1080p, NTSC and PAL at 24, 25, 30, 50 and 60 f/Fps.

Playable media is stored on hard drives, either internal or externally. As the QuVIS Encore does not record, the content must be loaded onto the system via removable drive or network copy operation. The QuVIS Encore can accept internal media drives from another system or from a QuVIS Acuity, QuVIS Encore or QuVIS Encore. The QuVIS Encore can be used to assemble Computer Graphic Images, or CGI frames, into a playable QuVIS media file using the QuClips® image encoding application.

The QuVIS Encore connects to far more types of equipment than most video players, including a wide variety of profession video equipment, computer systems and control mechanisms. With support for up to 12 channels of digital audio and both analog and serial digital input and output options, the QuVIS Encore is truly a multifunctional mastering and playback server.

The QuVIS Encore is controllable using standard serial remote control protocols including RS-232, RS-422, Odetics and LDV8000. Editing with QuVIS Virtual Tapes (VTP) enables the QuVIS Encore to emulate the editing process native to traditional VTR machines in a production environment. The Encore may also be controlled over a network using software utilities provided by QuVIS such as QShell and QuDAC or through a custom application using the robust QuVIS network API.

Storage

The QuVIS Encore is configured with two LVD SCSI buses or channels, each capable of supporting up to 14 devices including: internal SCA media drives, hot-swap removable hard drives and 8mm data tape drives. Internal media drives are used to play video and audio in real-time. Removable hard drives may also be used to archive content or to share content between similarly equipped QuVIS video servers. Tape drives (Sony AIT) may be used to create an off-line archive of content for long-term storage or to share content between units.

QuVIS internal hard drive media storage is configured to stripe data across multiple hard drives, with each drive residing on its own SCSI channel, configured as a single storage volume. For storage and bandwidth flexibility, QuVIS video servers support various drive volume widths. The number of drives in a storage volume can vary, depending upon determined bandwidth requirements, from one to two drives in a QuVIS Encore. A single-drive volume can be used to transport and share content between QuVIS video servers or to play content that is data-rate limited, either by the video format, such as NTSC or PAL, or by QuVIS data-rate controls. A single-drive volume will support a Maximum Data Rate (MDR) of 30MB per second or MDR30.

Multi-drive volumes may be used to store and playback high data-rate content such as the 4:2:2 video format 720p60. Multi-drive volumes may also be used to create very large storage volumes capable of recording many hours of HD content on a single volume. The maximum data rate multi-drive volumes can support on a QuVIS Encore is limited to 60MB per second or MDR60.

Drive order within a “non-boot” volume is not important, as volume order is determined during the formatting process. Once a volume is formatted, the user may remove the volume and place the drives back into the system or a different one in any order. The system will automatically identify which drive is the proper logical drive in the stripe sequence. This auto-sequencing feature is very useful when using hot-swap removable drives allowing the operator to concentrate on the process and not the sequence of drives that make up a volume.

Placement of a “boot” volume, volume that contains the system operating software, is important. The boot volume should always be placed in the bottom two positions of the Internal Media Bays. Removing the boot volume from the system will render the unit inoperable from a video playback standpoint. If a valid boot volume is not detected the unit will still power on but the operating system will have limited functionality and playback will be disabled.

To ensure that drive failure does not interrupt a mission critical workflow the QuVIS Encore can be attached to a highly reliable redundant external storage array, called a RAID array. RAID storage, or Redundant Array of Inexpensive Disks, can be configured such that a single drive failure will not impede the ability to play content. The QuVIS Encore can support multiple Terabytes of external storage by attaching a RAID array to one or the two available external SCSI.

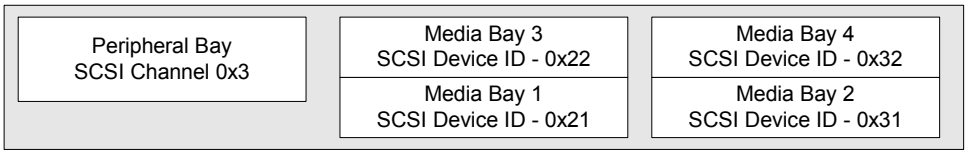
Volume Sizes

Internally, the size of a storage volume can vary depending upon the size of the drive and the number of drives in the volume. Externally, a QuVIS Encore can support even larger volume sizes, up to multiple TeraBytes (TB) of storage, using approved multi-channel drive arrays.

Internal Media Bay Storage

The current video server products from QuVIS (QuVIS Cinema Player, QuVIS Ovation, QuVIS Encore and QuVIS Acuity) offer new internal storage architecture designed to enable front panel access to internal Media storage. This new architecture allows QuVIS Media storage to be shared between these products by simply removing a volume from one machine and placing it in the Media bay of another.

The QuVIS Encore has four internal Media storage bays. Each Media bay accepts SCA (Single Connector Adapter) SCSI hard drives that are mounted on removable drive sleds. Media drives are hot-swappable meaning that they may be inserted or removed while the unit is powered on. SCSI device ID assignment is handled automatically by the system depending upon which media bay slot the drive is occupying. The following diagram lists the SCSI channel and device ID assigned to each Media bay.



Note: The default location for the primary boot volume (volume that hosts the Operating System files) is Media Bay 1 and 2.

Installing/Removing Internal Media Drives

The QuVIS Encore internal media drives are mounted on removable drive carriers or drive sleds. Hard drives mounted in the media bays are “hot-swappable” meaning that they may be inserted or removed while the unit is powered on.

WARNING! Media drives should not be removed from the system while the machine is powered on.

Removing a drive sled from a media bay
Before you remove a hard drive sled from a media bay, please ensure that the system is not currently performing a read or write operation (copy, delete, play, tape backup, etc.). Use the following procedure to remove a media drive.

1. Lift up the front control panel to expose the media bays.

2. To remove the drive sled, place your fingers in the left and right finger holes and pinch the tabs towards the center of the sled. While the tabs are held towards the center of the sled, firmly pull the sled toward you in a straight motion.

Inserting a drive sled into a media bay
Use the following procedure to insert a SCA (Single Connector Adapter) hard drive sled into a media bay.

1. Drive sleds inserted into a QuVIS Encore media bay must be placed in the horizontal position. Follow the positioning instructions on the drive sled for proper horizontal orientation.

2. Line up alignment tabs on the sides of the drive sled with the alignment channel inside the media bay. Slide the drive sled into the media bay. A small push with your finger may be needed to secure the drive sled into position.

Peripheral Bay Storage

The QuVIS Encore accepts a single 5 ¼" SCSI device in the optional internal Peripheral Bay. The Peripheral Bay may be configured with a half-height (5 ¼") removable drive assembly for transporting content between QuVIS video servers. Alternately, the Peripheral Bay may be populated with an 8mm Sony AIT tape drive for transport and archiving applications. The Peripheral Bay takes on the SCSI ID of the device that is installed in that slot.

Removable hard drive media allows the server to store all supported video formats to the same media without requiring separate virtual or physical partitions of the drives for different clip/video formats. With scaleable storage options, several hours of superior quality high definition video can be shared between servers in just a matter of minutes. With "hot-swap" removable drive support the dismounting and mounting of removable drive volumes can be done live with the system powered on.

Archiving Data

Using native software tools, data and media files can be archived to or loaded from high-capacity 8mm tape backup devices such as the Sony AIT-2/3 tape drive. A single AIT-3 tape cartridge can store up to 100GB of data or in QuVIS terms, in excess of 2 hours of HD-1080 playable media. Once data has been backed up to this archive magnetic tape media, the content can be safely stored for long-term archiving or immediate off-line retrieval.

QuVIS Media Files

Files that contain video and audio data are commonly referred to as clips or media files. There are several types of media files that can be created and played by QuVIS video servers. Determining the type of media file to use is very important. Each media file type is constructed differently in order to efficiently achieve the intended use of the content (video and/or audio).

Aside from the video and audio format of the media file, there are three settings that serve as the foundation of a media file. These settings are: QuVIS Media Format (QMF), Maximum Data Rate (MDR) and Clip Form.

QuVIS Media Format (QMF)
The QuVIS Media Format is a compatibility switch that identifies different file format standards used by QuVIS video servers. There are currently two compatibility modes: QMF1 and QMF2.

QMF1 – This QMF setting is used to identify collapsed clips (interleaved video and audio) that may be played by the first generation QuVIS video servers, the QuBit, running a QuVIS Soft Release (QSR) of 1.x.

IMPORTANT! The QuVIS Acuity, QuVIS Encore, QuVIS Ovation, and QuVIS Cinema Player do NOT support the playback or creation of QMF1 content. QMF1 content may only be played and created by previous generation QuVIS products running QSR 1.x or 2.x releases including the QuBit ST, DS and EL. This legacy clip file format has built-in controls that limit the options available for MDR, Metadata and Clip Form in order to maintain playback compatibility with older 1.x QuBits.

QMF1 clip settings
- MDR = Maximum of 30MB/sec
- Metadata = Not supported
- Clip Form = Collapsed only (interleaved video and audio)

QMF2 (default) – This default QMF setting is used to identify media files that may only be created or played on QuVIS video servers running a QSR release of 2.x or greater, including QSR 3.x. The QuVIS Cinema Player, Ovation, Encore, Acuity and QuBit product line (ST, EL and DS) natively supports this QMF setting. QMF2 supports features that are tied to specific levels of hardware (circuit cards) that are not available for 1.x QuBits.

QMF2 clip settings
- MDR = 30 and 60MB/sec supported
- Metadata = supported
- Clip Form = Collapsed and expanded

Maximum Data Rate (MDR)
MDR is used to set the upper data rate limit of a media file to 30 or 60 MB/sec. These limits are set to correspond to the bandwidth capabilities of the QuVIS video server that is recording the content or intended to play the content. A 1.x QuBit for instance can only support a maximum date rate of 30MB/sec. Current products running QSR 2.x or greater support a maximum data rate of 60MB/sec.

Aside from the product model and system software version, another important element that determines the ability to record or play MDR 60 content is the number of drives that make up a QuVIS storage volume. A single-drive volume can only support a maximum data rate of 30MB/sec. Multi-drive volumes (2 or more drives) will support MDR 60 and is capable of sustaining data rates of 60MB/sec.

Clip Form

There are two primary clip form types: collapsed and expanded. The form of the media file dictates how the video and audio assets of a media file are physically stored on disk. The other important element that is dictated by clip form is whether or not the media file can be used in an editing environment.

Collapsed – Media files that are “collapsed” have both audio and video assets interleaved together in a single file. Collapsed media files are typically used to distribute a completed project as a single playable media object.

Expanded – Media files that are “expanded” use separate files to store video and audio assets. Expanded media files that belong together share a common base name but have different file extensions to indicate the stored asset, video (.v) or audio (.a).

Expanded audio assets have additional flexibility that allows QuVIS video servers to store audio assets as either a collection of all audio channels (cluster) or as individual audio tracks (discrete channels) stored in separate files. An “audio cluster” is designated with a “.a” file extension. “Audio tracks”, stored in separate files, are designated by a “.ann” file extension where “nn” indicates the audio channel number the file was recorded on. For example, the file that contains audio recorded on channel 1 would have the file extension “.a01”.

Expanded media files are structured to enable real-time editing using a QuVIS Virtual Tape editing object. Virtual Tapes enable QuVIS video servers to emulate a traditional linear tape editing process while provide the additional flexibility of a digital workflow.

Virtual Tapes

A QuVIS Virtual Tape (or VTP) emulates a traditional pre-striped videotape (a pre-formatted tape containing video black and timecode) for editing in a post-production environment. Virtual tapes are an editable media object that may only be created and edited by a QuVIS mastering server (QuVIS Acuity, QuVIS Encore and QuBit ST). The QuBit DS may only be used to create a new VTP and “crash-record” into a Virtual Tape. All current QuVIS video servers (QSR 2.3 or greater) can be used to play Virtual Tapes. Offline clip tools, such as the *Modclip* command, may be used to create other playable media files (including collapsed clips) using a VTP file (or timeline file) as the source.

Virtual tapes lets you record and edit content directly on the QuVIS mastering server as though it contains a fixed-length, striped videotape. Unlike traditional linear tapes, the recorded edits or media assets of a VTP are stored in their entirety as clip files and the edit points are managed independently in the VTP container file.

Editing a VTP is a non-destructive process, meaning that when an edit is performed a new asset or clip is created and does not overwrite existing data. Instead of overwriting any data on the VTP, a new set of pointers within the VTP container file are created to point to the location of the new content.

A Virtual Tape consists of several elements:

Virtual Tape Media File – This media file, designated with a “.vtp” file extension, maintains the properties that defines how the VTP was formatted. These properties include: video format, tape length, audio properties (bit-depth and resolution), timecode and metadata. Additionally, this file maintains the list of video and audio edits that have been performed.

Virtual Tape directory – A VTP directory having the same name as the .vtp file, located in the same parent directory, is used to store all of the physical video and audio edits (clips) that have been recorded. The media file types that make up the individual edits are *expanded* clips.

Virtual Tape Timeline – A special timeline file, *auto.tl*, is stored in the Virtual Tape directory. This file is a compiled version of the .vtp file that allows the system to edit or play the Virtual Tape in real-time. The timeline file is automatically generated or updated by the system each time an edit is performed. This file may not be copied or backed up. If the *auto.tl* file does not exist, the system will automatically regenerate this file when the virtual tape is played or edited.

QScript Files

A QScript or script file is a special file that instructs the system how to play various segments of media files without interruption as if they were one seamless production. Script files are more than just a list of clips that are to be played in sequence. Widely used as a Digital Cinema playlist, script files are capable of specifying specific in and outpoints to be played as well as issue system commands to control external devices such as theater light-management and digital projector settings.

A script file can be played like all other media files from the front panel GUI. Unlike standard media files (clips and virtual tapes) a script file can be manually edited using a text editor or the Show Builder menu utility. For more information on creating script files from the GUI, see section PLAY – Show Builder menu page.

IMPORTANT! Script files may *not* be placed under remote serial control for editing or playback.

System Security Features

The QuVIS Encore includes system security features that allow the server to be configured with user accounts and permission levels. Security information is stored in an encrypted format and stored in manner that prevents tampering and unauthorized access to user account information.

By default, the Encore ships with its security features disabled, which allows the user to customize the system freely. However, you may wish to enable “user privileges” that are assigned to known operators (users). These privileges or security levels are used to restrict access to sensitive operations or commands based upon the users account type.

If security is enabled, the unit will power on without requiring a user login but will only support “User” level operations. This allows the system to be ready to play content immediately without requiring user login intervention.

Security Levels

Currently there are three security levels (user, technician, administrator), each allowing the operator a different degree of operator freedom. Security levels are enforced from all system interfaces (QShell, Telnet, FTP and GUI).

If system security is not enabled, default access is set to Administrator level permissions.

USER

This is the power-on default and lowest user level. This user level is essentially limited to being able to only play content. Logging out of another level leaves one in the User level. The system log is viewable by users in order to be able to report system warnings or errors.

The Play Browser starts in the SCRIPTS directory for User level access.

Supported Operations

- Browse and select Show Scripts (playlists) (PLAY – Browser menu page)
- Play content, including starting, stopping and pausing play out (PLAY – Control menu page)
- Issue a predetermined GPI (automation) signal to start, pause, or stop playback.
- View system log

TECH

This security level is for advanced users who are entrusted with content management functions including the recording or loading of new content, removing old content and show script (playlist) management.

Supported Operations

- All *User* functions
- Record content
- Content Management
- Playlist (show script) Management

ADMIN

This highest level of access or security provides access to all system functions and menus allowing an Administrator to completely manage all aspects of the systems setup including user security.

Supported Operations

- All *Technician* functions
- System setup and configuration management
- Security management

Account Management

Account management is currently available via the ACCOUNT QShell (command line) utility. The ACCOUNT command may be used to LIST users, ADD new accounts, DELETE existing accounts, ENABLE account, DISABLE account, IMPORT accounts from an existing “users” file, and turn ON|OFF the security system. For usage details for the Account command, refer to the “QShell Command Reference Manual”.

Factors that Affect Picture Quality When Recording

QuVIS video servers, including the QuVIS Encore, have several settings that affect picture quality in different ways. These can be categorized into two broad groups: **those that affect picture quality directly** (such as the SNR control) and **those that limit the picture quality possible** (controls related to data rate management, which may in turn limit picture quality).

Following are the items that affect recorded picture quality.

External Factors

Source Material
Image quality cannot be improved beyond that of the source material. The motion content, clarity and grain of the source material will have some affect on the data rate of the recorded footage.

Signal Chain
Image processing components (noise/grain reducers, video distribution amplifiers, etc.) in the signal chain itself can degrade picture quality.

Internal Factors

1. **Image Quality (RECORD – Media menu page)**
   This control has the greatest direct affect on picture quality.

   Note: Using a high SNR with a low MDR can force a situation where the failsafe is turning on too often. It's best to match the SNR setting to the source material, or set it only slightly above the SNR of the source material, to avoid the data rate reaching the MDR setting.

2. **Maximum Data Rate (RECORD – Media menu page)**
   MDR can have a moderate to more extreme effect on picture quality, based on whether it is set correctly or incorrectly for the source material and SNR. Set correctly, it will monitor and gently soften image quality only as needed for extreme peaks in the data rate. If set incorrectly this setting can cause the system to constantly turn on the data rate failsafe which can artificially lower image quality.

   Note: The data rate failsafe mechanism lowers image quality when the data rate exceeds the MDR setting. Using a high SNR and a low MDR can force a situation where the failsafe is turning on too often. It's best to match the SNR setting to the source material, or set it only slightly above the SNR of the source material.

3. **QuVIS Media Format (RECORD – Media menu page)**
   QMF selects between legacy-format clips and new clip formats with data rate cap options: MDR30 and MDR60.

4. **Destination volume capacity (RECORD – Input menu page)**
   The destination volume may contain one or two hard disk drives. A one-disk volume cannot receive data as fast as a volume with two or more drives. Recording 60p or dual-link HD-SDI content to a single-drive volume is not recommended as the system may find it necessary to soften the picture quality if the peak data rate exceeds the performance capabilities of the single hard drive.

Factors that Affect Picture Quality During Playback

QuVIS Encore Output Settings

QuVIS video servers, including the QuVIS Encore, have several settings that affect the playback picture quality in different ways. You will want to know about these to ensure the system is always set up for the highest quality output. Following are the software-controllable items that affect playback picture quality.

1. Bit Depth Compatibility (OUTPUT – Video menu page)

When playing content from a QuVIS Encore and recording it on another VTR, you may need to use the *Bit Depth* setting to match the bit depth of the output signal more closely to that of the capability of the destination VTR. When output is ***not*** rounded down in this manner, the receiving VTR's circuitry may be unable to handle the excess data and produce lower-quality recorded images as a result. Our recommendations for dubbing among common equipment are below.

Format	QuVIS Encore Bit Depth Output
HDCam	8 bit
D-5	9 bit
HDCam SRW	10 bit
10 bit SMPTE compliant	10-bit
Uncompressed HD	10-bit

2. Dither (OUTPUT – Video menu page)

When turned ON, *Dither* inserts electronically-generated noise into the picture. This may be useful for some displays where it may produce a sharper-looking image. It is not recommended for production work or output to plasma monitors, projectors or VTR's (the added noise can be misinterpreted by their circuitry and cause a degraded image). By default, *Dither* is turned off.

3. Analog Colorspace (OUTPUT – Analog menu page)

This control adjusts the output colorspace for your display device. If you connected the QuVIS Encore to a monitor, projector or VTR with a confidence monitor, and the video is excessively green or magenta-tinted, the wrong colorspace may be being used. Use this control to change the video output colorspace on the QuVIS Encore.

4. Genlock (OUTPUT – Video menu page)

When the QuVIS Encore plays back content, it can "reference" its video output signal either to a master timing source or its own internal clock. The internal clock is commonly used in situations where the QuVIS Encore is simply playing back content for a trade show, digital cinema, or boardroom presentation, and the display device is the only other equipment connected to the QuVIS Encore.

Factors External to QuVIS Encore

1. Display device signal processing values

Due to differences in digital signal handling, display devices vary in their ability to reproduce a usable picture. Digital projectors tend to display every flaw in a video signal. The same video signal that looks wonderful on your office CRT monitor may be terrible on a digital projector. High-end projectors show the signal with much greater accuracy than most monitors do.

However, even the digital circuitry in a brand name projector is not always above suspicion. The digital signal path through the projector can degrade the image, and the change in quality may range from unnoticeable to unusable. This varies not only from one brand to another, but also from one product line to another in the same brand (sometimes engineering teams work as discrete entities when designing product).

If you are having unexpected picture quality issues, first verify that you are viewing the material in the same manner (i.e., on the same make and model) that you previously used. If it is different, expect some quality differences. After that, the best solution is to check the settings for the display devices, and check the other inputs to see if a better quality picture can be obtained by running a signal into it via a different input (i.e., using HD via component RGB rather than SDI).

2. Cable quality and cable length

The quality of your cable makes a big difference. Cables of the same length but from different manufactures will exhibit different performance characteristics. Where possible, QuVIS recommends you use Belden 1694A “Brilliance” or equivalent cable for serial digital video applications.

Remember that even quality cabling is subject to principles of physics (attenuation of the carrier signal due to distance, connections, and patching equipment). For all cables, long cable runs will weaken high-frequency signals, and unshielded electrical sources (like power cables placed alongside video cable) can definitely interfere with the signal.

Video output signals can travel anywhere from 25 feet (7.6m) to 335 feet (102m) depending on the quality rating of the cable used. If you need a longer run than your cable supports, you will need to use the proper distribution amplifier to boost/equalize the signal.

3. Ambient light and screen framing

The amount of ambient light in a room has a direct bearing on the depth and clarity of the images you see. This is the reason movie theatres are nearly black inside. The more you can control the light levels in the room, the better the image.

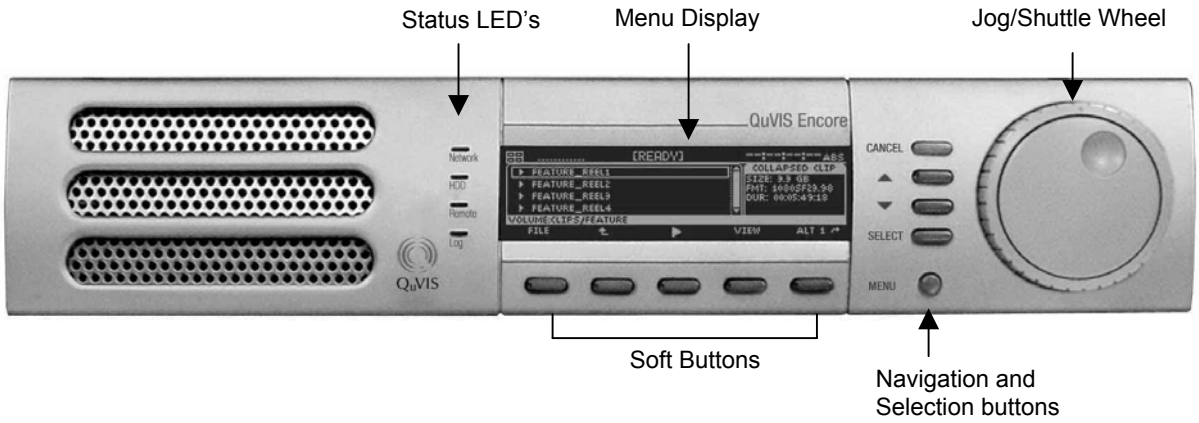
In addition, many projection screens are framed with a wide black frame. This enhances the appearance of brightness and clarity to the eye.

Control Panel Overview

The QuVIS Encore *Control Panel* provides the visual display and physical controls required for local operation. The *Control Panel* consists of three (3) main elements:

- Status LED's
- Menu Display
- Navigation and Selection Buttons
- Jog/Shuttle Wheel
- Soft Buttons

Raising the *Control Panel* exposes the peripheral bay (if populated), the internal media bays, the power button, and auxiliary connections (headphone, RS-232 Port A and PS2 keyboard connector).



Status LED's

General system status information is available from the front panel through the use of Light Emitting Diodes (LED's). Each of the four front panel LED's are assigned to monitor specific system events.

Network – When lit, this LED indicates that a network connection has been opened with the QuVIS Encore. This includes any of the following network services: Telnet, FTP, HTTP, and the network API.

HDD – This LED is used to show hard drive activity. Both read and write drive operations are indicated on this LED.

Remote – This LED will illuminate when the system is placed under remote serial control.

Log – This LED will illuminate when new unread system events have been added to the system log. This indicator has two states or colors to indicate the type of event added to the log.

> Yellow – used to indicate that an unread system message or warning is stored in the log. Warnings do not indicate a problem has occurred but rather that the potential for a problem has been reported.

Red – used to indicate the occurrence of a critical system message. This type of message means that a system failure has occurred. If the LED is illuminated red, the system log should be immediately read to determine if corrective action is needed.

Menu Display

The VFD (Vacuum Fluorescent Display) screen is used to display the Graphical User Interface or GUI used for local operational control of the QuVIS Encore. The GUI is a collection of menu screen (pages), status indicators and controls that provide access to the system settings and operational control over all front panel operations.

Navigation and Selection Buttons

The buttons to the right of the user interface display are fixed function buttons that provide the key functions needed for menu navigation, list navigation and item selection. The primary function of each button is labeled to the left of each button.

Navigation and Selection Buttons	Description
CANCEL (red)	This button is used to back out of an operation or close a popup window without applying any changes that have been made but not saved.
▲ **(UP)**	This button is used to move the selection focus object up a list of items and in certain instances change the value of a control in the positive direction. To scroll through a list of options or quickly advance a value, press and hold this button.
▼ **(DOWN)**	This button is used to move the selection focus object down a list of items and in certain instances change the value a control in the negative direction. To scroll through a list of options or quickly advance a value, press and hold this button.
SELECT (green)	This button is used to select the item that has current focus such as selecting a script file in the file browser for playback. In some instances it is also used as an *Enter* function, meaning that pressing this button will cause an action to be performed such as accepting a new value from a popup window.
MENU (blue)	This button is used to open the list of available menu pages. This button works under most circumstances but may not be available under special conditions such as when a popup window like the file browser is loaded. To reduce the number of button presses it may take to navigate through the complete list of menu pages, navigational shortcuts using this menu button are available. This shortcut method allows you to jump between menu groups and individual pages very quickly. To activate the shortcut menu list, press and hold the blue menu button. The “soft” buttons of the GUI are temporarily reassigned (while the Menu button is held) as menu

Navigation and Selection Buttons	Description
	page shortcuts.  The two outer buttons with the arrows next to the button label are used to jump to the listed menu group. In the example above, if you press the soft button labeled “<< Setup”, the SETUP menu group would be displayed. The two inner buttons (with ∧ and ∨ arrows) are used to navigate between the menu pages of the current menu group (in this case the PLAY menu group).

Jog/Shuttle Wheel

The Jog/Shuttle wheel is comprised of two separate controls that are controlled independent of each other. The outer Shuttle ring is used for variable speed playback control. The inner Jog wheel is used for frame-by-frame playback control. The GUI Dashboard will display the active function as well as the speed and direction of playback.

The Jog/Shuttle wheel is only active if the active playstyle is “Play Jog/Shuttle”.

The shuttle ring has a visible and physical center position indent or market to identify the pause or zero speed playback position.

Jogging a clip
To frame advance or JOG through a clip, use your finger to rotate the inner wheel in the desired direction (left = reverse, right=forward).

Shuttling a clip
To shuttle through a clip turn the outer ring in the desired direction from the center indent or position marker (left = reverse, right = forward). As the shuttle ring is turned the speed of playback will increase in the direction indicated. If the shuttle ring is turned back towards the center indent the speed of playback will decrease.

Soft Buttons

The buttons along the bottom of the display are *soft* buttons, meaning that their function assignment is changed in *soft*ware depending upon the active menu page. The assigned function of each button is shown directly above each button on the user interface.

Introduction to the Graphical User Interface (GUI)

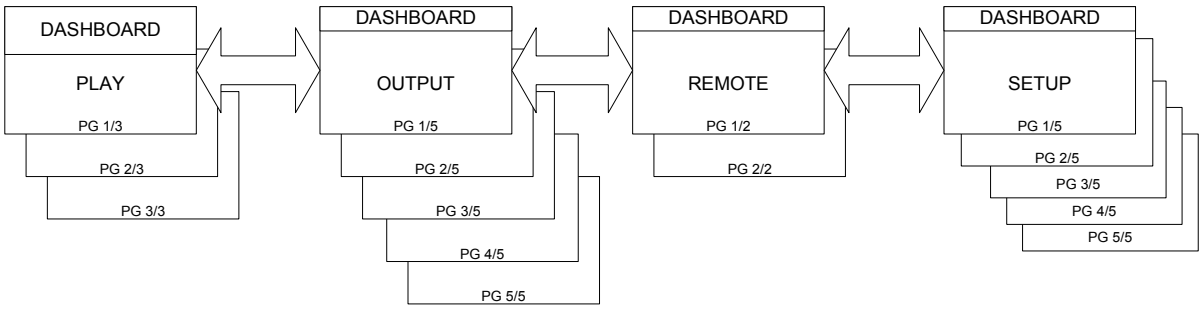
Local control of the QuVIS Encore is performed from the front panel using the Graphical User Interface or GUI. The GUI menu system is a collection of menu pages that provides a single interface to perform the basic operations needed to play content, manage files, monitor status and change the configuration of the unit.

The GUI is automatically started once the unit has completed its power on cycle. Once the GUI is loaded on the front panel display, all system services are available including local and remote control.

This section provides a description of the GUI menu system.

Overview

The front panel menu system features fast access to any of its dozen-plus screens or menu pages. Menu pages are collated into logical groups in order to place pages with similar control in close proximity of each other.



The primary setup and configuration menu pages (Record, Output, Remote and Setup) are labeled making it easy to quickly identify what menu group and page is currently active. Fast navigation between menu pages is achieved using the *soft* buttons (below the display) to advance to the next page within the group in either direction. Group navigation is achieved using the popup window activated by pressing the MENU button.

The PLAY group of menu pages is the exception as these are the menu pages that will most often be accessed and therefore are governed by a different rule set.

IMPORTANT! The exact number of menu groups and pages may change. The example given above is only an illustration of the menu navigation and layout concept. The actual number of screens will vary.

Menu Navigation

The MENU button is provided to enable navigation to any menu page from a single control. Pressing the MENU button activates a popup window that lists all of the available menu pages. A white triangle to the left of the menu page name is used to indicate which menu page is currently loaded.

Selecting a new menu page

1. Press the MENU button to activate the list of available menu pages.
2. Use the ▲ or ▼ buttons to browse the list of available menu pages.
3. Press the SELECT button to load the selected menu page.

Note: There are instances in which pressing the MENU button will *not* activate the menu list. This behavior will occur if there is currently a popup window active awaiting feedback from the operator. Please close any open window before pressing the MENU button.

Menu Navigation Shortcuts

To reduce the number of button presses it may take to navigate through the complete list of menu pages, navigational shortcuts using this menu button are available. This shortcut method allows you to jump between menu groups and individual pages very quickly. To activate the shortcut menu list, press and hold the blue menu button. The “soft” buttons of the GUI are temporarily reassigned (while the Menu button is held) as menu page shortcuts.

Menu group navigation
The two outer buttons with the arrows next to the button label are used to jump to the listed menu group. In the example above, if you press the soft button labeled “<< Setup”, the SETUP menu group would be displayed and the button would be reassigned to indicate the next menu group available in that direction.

Menu page navigation
The two inner buttons (with ∧ and ∨ arrows) are used to navigate between the menu pages of the current menu group (in this case the PLAY menu group).

Dashboard

The most important element of the front panel GUI is the *dashboard*, a strip of indicators at the top of the display that provide instant feedback about the current status of the Encore.

Dashboard Display Views

There are two dashboard views (large and small) that are displayed depending upon what menu page is currently active. The dashboard areas in both views are protected display areas meaning that any popup windows or input control will not impede the information being displayed within the dashboard.

Large Dashboard View

The large dashboard view is used on primary menu pages such as the **PLAY – Control** menu page. This large view shows all of the components of the dashboard in a large state for easy readability by the operator.

Small Dashboard View

The small dashboard view used on secondary menu group and pages (all setup menu pages) in order to provide enough room on the display to allow the operator to make changes to the configuration of the unit and still monitor the status of the machine.

Dashboard Indicators

From left to right the dashboard indicators are as follows:

1) Internal Hard Drive Indicators
    a. Each drive box maps to the drive slot that is found under the front panel
    b. Solid Box indicates a mounted drive
    c. Dash indicates a drive occupies the slot but is not currently mounted
    d. Empty Box indicates that no hard drive is detected in the Internal Drive Slot
2) Audio Meters
3) Transport Status
4) Timecode Indicator

Internal Hard Drive Indicators

The internal drive indicators are used to indicate the presence and mounted status hard drives in each of the internal media bay slots. Hard drive activity (read/write) is indicated on a LED light located to the left of the display. Each dashboard drive indicator box is mapped to the appropriate slot as according to its relative position. The top-left indicator is mapped to the top-left internal drive slot. The top-right indicator is mapped to the top-right drive slot.

Hard Drive Indicator States

There are three states of presence for internal hard drives.

 Not Present / Not Detected (Box is empty) – This states indicates that no hard drive has been detected in that drive slot.

 Drive Detected / Drive Not Mounted (White Dash) – This state indicates that a drive is present in the drive slot but that the drive is not currently mounted. This status indicator is a visual cue to the operator that the drive may be removed from the system safely.

 Drive Detected / Drive Mounted (White Box) – This state indicates that a drive is present in that drive slot and that the drive is currently part of a mounted volume. This status indicator is a visual cue to the operator that the drive may NOT safely be removed from the system.

Audio Meters

The dashboard audio meters will only show activity on each of the available channels. All 12 available channels are represented even when there is not activity on that channel.

Transport Status

The center area of the dashboard is used to display current Transport and System status states. Special “states” or modes will be shown in brackets as described below.

New transport/system states may be added in order to support content loading operations.

- **[PLAY]** Encore is in a “play” state, but not yet playing clips (i.e., vmode p).
- **[RECORD]** Encore is in a “record” ready state, but not yet recording (i.e., vmode r).
- **[READY]** Encore is in neither a “play” nor “record” state (i.e., vmode n). This may appear when performing diagnostics, for example.
- **BUSY** Encore is busy switching modes, and is not ready for GUI control.
- **RECEIVING** Encore is receiving content from a unit via Ethernet.
- **RECORDING** System is currently recording content.
- **PLAYING** Encore is playing content (at 1X speed).
- **LOOPING** Encore is looping content (at 1X speed).
- **ARMED-SYS** Encore is paused in Play mode awaiting a system time play trigger.
- **ARMED-TC** Encore is paused in Play mode awaiting a time code play trigger.
- **SENDING** Encore is sending content to another unit via Ethernet.
- **SHTL-PAUSED** Encore is paused in Shuttle mode (Play).
- **SHTL +nX** Encore is scanning Fwd (+) at “n” speed (n is a decimal).
- **SHTL -nX** Encore is scanning Rev (-) at “n” speed (n is a decimal).
- **JOG** Encore is Jog mode and virtual J/S wheel is active.
- **COPYING** Encore is currently performing a copy operation.
- **BACKUP** Encore is copying selected files to tape (reading from hard disk drives).
- **RESTORE** Encore is restoring archived files from tape (writing to hard disk drives).
- **FORMAT** Encore is formatting a tape.

Timecode Indicator

The timecode indicator displays the appropriate timecode value as content is being played or controlled. The primary (upper white) timecode indicator will follow Encore timecode controls and operation.

The primary TC indicator will default to TCV when either a virtual tape or timeline with virtual timecode is selected for playback.

The primary TC indicator will follow the *LTC output* (**OUTPUT – Timecode** menu page) control setting when in play mode and the *Timecode Source* control (**RECORD – Input** menu page) while recording. If a clip to be played back has source time code AND the *LTC out* control is set to "Original Source LTC", then SRC timecode will be displayed; otherwise ABS timecode will be displayed.

Menu Page Controls

Menu pages generally use the same type of button object to indicate what option or function has current focus. There are a couple of menu pages (**PLAY – Control**, **PLAY – Browser** and **PLAY – Show Builder**) that are not laid out in the same manner as the majority menu pages. These menu pages are considered specialty pages and are governed by their own set of “specialty rules” and may use selection objects not found on other pages.

Selection Control Types

Button Controls

Button objects are used to visually show the operator what menu page option has “selection focus”. The button look is used to let the operator know that they must press a button in order to edit the displayed value or view the information the control contains.

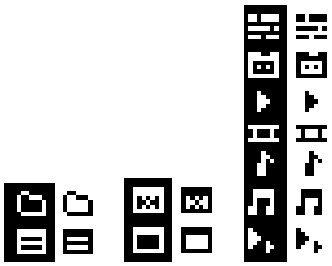
There are two button controls, full width and half width. Buttons are used to activate a popup window to display information or change the assigned value on an Environment Variable (EV). Half-width buttons are used to separate two menu options on the same line.

List Navigation Bar Control

The list navigation bar control is used on display objects (file browser, menu selection window and item lists in popup controls) that present a list of selectable items. The “scroll bar” dynamically changes size depending upon the number of items in the displayed list. The smaller the scroll bar (between the two arrows) the longer the list. The scroll bar moves up and down between the two arrows to indicate relative position within the list.

File Browser Asset Identifiers/Icons

Volumes, directories and file names in the file browser control (including the **PLAY – Browser** menu page) are preceded by an icon that visually associates that item with its intended data type and usage. The icons are shown below in their non-selected and selected (highlighted) states and are sorted into: drive structure, file identifier, and playable asset groups.



Drive Structure	File Identifier	Playable Asset
		Timeline file (.tl)
		Virtual Tape (.vtp)
		Collapsed clip (video and/or 1-12 audio tracks)
		Expanded clip, video (only)
		Expanded clip, expanded audio (single audio tracks)
Directory	Executable	Expanded clip, collapsed audio (2-12 audio tracks)
Volume	File	Script files

List Item Navigation and Selection

There are several menu objects that present a list of items or options. With the exception of file browser controls, all list objects follow the same basic rules for navigation and selection.

1. Selection focus is indicated surrounding the list item with either a white box or button.

   a. Buttons are used to indicate that by pressing the SELECT button the action is complete or the value must be changed. In the below example, if you press the SELECT button the **PLAY – Browser** menu page will load.

   b. The selection box is used to indicate that the item surrounded by the box may be *selected* for a specified operation. In the example below, the selection box is used to indicate *backspace* functionality during a rename operation. The selection box may be moved to any character in order to rename the filename. To perform the function outlined by the selection box (add character, remove character, etc.) all one needs to do is to press the green SELECT button.

2. A small right arrow to the left of a list item indicates the currently assigned or active item. Popup controls that display a list of available operations, such as the FILE menu popup on the PLAY – Browser menu page, do not use the “assigned value” indicator as the list does not contain a saved value but rather a list of system operations that may be performed.

Navigate or Scroll a List of Items

The ▲ and ▼ buttons (located to the right of the display) are used to navigate a list of items. To scroll through a list of items, press and hold the ▲ or ▼ button until the desired value is selected.

Item Selection (Button objects)

When button objects are used to show focus within a list of options, pressing the SELECT button will accept the item and complete the selection operation.

Selection Box Properties

The visible state of the white selection box changes depending upon state of the file that is currently showing as being in focus. The file that is currently in focus (surrounded by the white selection box) is either *selected* or *not selected*. The state of the file in focus in important as it changes the appearance of the “selection box” so the operator is able to easily tell what file or list item has current focus. If a file has been selected, the area around it and its text are inverted to show selection.

File Selection States

1. Single file in focus but not selected.

2. Single file selected and in focus.

3. Multiple files selected, first file selected in focus.

File Browser Directory Navigation

In order to navigate the directory structure of a storage volume, select the directory you wish to open and press the SELECT button. To navigate to a parent directory or back up the directory tree (toward the root directory) select the parent directory icon (..) listed on top of the file list and press the SELECT button.

If the file browser is at the root or lowest directory position of the current storage volume, the parent directory icon will change to the volume icon (..) to indicate that by volume list can be accessed by

pressing the SELECT while the volume icon is highlighted To navigate to the parent directory, place the selection box on the parent directory line and press the SELECT button (see picture below).

TIP: List wrap-around is a supported feature in the file browser controls. If you are at the top of file list and wish to quickly navigate to the end of the list, simply press the ▲ and you will wrap to the end of the list. List wrap works the same in the other direction as well.

Update the File Browser File List

The "refresh" soft button is used to update the listing of files within the file browser window without having to exit and return to the directory. This is useful is a file has been added by remote means such as FTP.

Refresh button

Edit Value and Toggle Buttons

Some menu-page options do not open a separate dialog window or popup but rather allow the value to changed using the ▲, ▼ and SELECT buttons.

Range Buttons

Some menu options like "Master Volume" have a large range of values that it may be set to (0 – 100%). To list all of the possible choices in a Popup list control would be very difficult to manage and impractical to navigate. For this reason the button control changes states once the SELECT button has been pressed. This gives focus to the value portion of the menu option enabling the operator to change the value using the ▲ or ▼ buttons.

***Stage 1*:** Menu option has focus but has not been selected to edit.

Stage 2: Menu option has been selected and the value may be changed using the ▲ and ▼ buttons.

If the menu option contains a large range of possible values, the behavior of the ▲ and ▼ buttons will change depending upon the how the button is pressed:

1. Pressing and releasing the ▲ or ▼ button causes the value to increment or decrement by 1.

2. Pressing and holding the ▲ or ▼ button will continue increment or decrement the value by 1 (increasing in speed) until the button is released.

Toggle Buttons

Some menu options only have 2 choices, such as ON or OFF. In this case the menu button works the same as the Range Button but only provides two choices. There is one difference however, which is that the list cycles so that if you press the ▲ or ▼ button twice, it cycles back to the starting value.

Popup Windows and Dialog Boxes

Popup windows and dialog or input boxes are used extensively throughout the GUI.

Popup Windows

These are used to present lists of available values or actions. In most cases, pressing the SELECT button will close the popup window but may open a dialog box depending upon what action was selected.

Dialog Boxes

Dialog boxes are used to prompt the user for additional input, such as specifying the location for copy operation, or to display information on the screen relevant to the last action initiated. The *soft* buttons below the display are used to complete the operation and close the dialog box. In some instances, the dialog box will close automatically once the selected operation has completed. For example, the dialog box that displays the progress of a copy operation will automatically close when operation has completed.

TIP: Pressing the red CANCEL button will close the open dialog box without any action being taken.

CHAPTER 4 - FRONT PANEL GUI INTERFACE

Information in this chapter includes details of the front panel menu system including menu groups, menu pages and system controls.

PLAY menu group

The PLAY menu group is the collection of menu pages that are most commonly used to control playback operations.

Menu pages covered in this section include:

- PLAY – Control menu page (clip playback)
- PLAY – Control menu page (script playback)
- PLAY – Browser menu page
- PLAY – Show Builder menu page
- PLAY – Advanced menu page

PLAY – Control menu page (clip playback)

This menu page provides summary information on the media file selected for playback as well as the general status of the QuVIS Encore during playback. VTR transport of the active media is controlled from this page using the four *soft* VTR buttons just below the display.

Media Window	Description
Media File	The first line below the dashboard is used to display the filename (including volume and path) of the media file currently under local playback control.
	
Format	The QuVIS format name of the media file is identified here.
SNR	Displays the signal-to-noise ratio (SNR) value that the media file was recorded at as well as the QuVIS Media Format (QMF) type.
Audio	The audio properties of the media file are displayed here. That includes the number of recorded audio channels, the sampling frequency and resolution (in bits).
Remaining Time Code Indicator	 This timecode indicator is used to display the time *Remaining* (shown in *absolute* timecode) until the end of the clip.

VTR Transport Buttons and Play Styles

The function of the *soft* VTR Transport buttons varies depending upon the play style being used during playback. For instance, FWD and REV buttons are not available while a clip or media file is being played back using the “Play Selected Item” or “Play Looped/Repeat” playstyles.

Transport Control Buttons	Description
 - **PAUSE**	The **PAUSE** button is used to halt playback of a media file (clip) without unloading the clip from playback control. The PAUSE button is available while a clip is playing and the *playstyle* is set to **Play jog/shuttle**. Press the PLAY, FWD or REV button to restart playback control, at the speed and in the direction indicated, while under shuttle playback control.
 - **EJECT**	The **EJECT** button is used to unload the active clip from playback control. The **EJECT** button is only available while clip playback is paused and the *playstyle* is set to **Play jog/shuttle**. From there playback may be resumed by pressing the PLAY button. To **EJECT** the clip while playback is paused, press the **STOP** button.
 **- STOP**	The **STOP** button is used to halt playback of a media file (clip) and unload the clip from playback control. The **STOP** button is only available when the *playstyle* is set to **Play Loop/Repeat** or **Play Selected Item**.
 - **REVERSE**	The **REVERSE** button is used to shuttle or frame-advance backwards through the clip or media file currently under Jog/Shuttle control. Each additional button press will increase playback speed in the reverse direction. While under JOG control (ALT 2 button view), each press of the REVERSE button will frame advance through the clip in the reverse direction. **Note:** If user security is enabled, JOG playback control is only available for *Tech* or *Admin* level users.
 - **PLAY**	The **PLAY** button is used to begin or resume playback (Forward 1x) of the active script.
 - **FORWARD**	The **FORWARD** button is used to shuttle or frame-advance forward through the clip or media file currently under Shuttle/Jog control. Each additional button press will increase playback speed in the forward direction. While under JOG control (ALT 2 button view), each press of the FOWARD button will frame advance through the clip in the forward direction.

Transport Control Buttons	Description
	Note: If user security is enabled, JOG playback control is only available for *Tech* or *Admin* level users.
ALT 1	This button displays the current *soft* button view. Press this button to cycle to the next view, in this case the ALT 2 button view.
 - **Previous Clip**	This button, available from the ALT 2 view, is used to jump to the beginning of the previous clip within the active script. **Note:** If user security is enabled, this function is only available to *Tech* or *Admin* level users.
 - **JOG**  - **SHUTTLE**	The **JOG** button is used to initiate frame-by-frame playback of the active script. Press this button, while playback is paused, to activate the JOG playback mode. To frame advance through the script using the **FORWARD** or **REVERSE** buttons located on the ALT 1 button view. While in JOG mode, pressing PLAY will restart playback of the script. The **SHTL** button is used to manually switch from the JOG playback mode to the default SHTL playback mode. Pressing the PALY button while in JOG will automatically switch back to SHTL mode. **Note:** If user security is enabled, JOG functionality is only available to *Tech* or *Admin* level users. The default playback mode of a script is SHTL (Forward +1x) regardless of security level.
 - **Next Clip**	This button, available from the ALT 2 view, is used to jump to the beginning of the next clip within the active script. **Note:** If user security is enabled, this function is only available to *Tech* or *Admin* level users.
ALT 2	This button displays the current *soft* button view. Press this button to cycle to the next view, in this case the ALT 1 button view.

PLAY – Control menu page (script playback)

A special **PLAY – Control** menu page view is displayed when script file has been selected for playback. This special "Timeline" view is only available during script playback. The graphical timeline displays the progress of each event, as it is being played or executed. The top-most timeline displays a fifteen second section of the script. To view the expanded timeline, press the button.

Media Window	Description
Script File Name	The second line on this view (below the dashboard) is used to display the name of the script file being played. The media file (clip) currently being played is displayed to the right of the colon (:).
Time Remaining	"Time Rem:" displays the amount of time remaining.

VTR transport buttons and play styles

Timeline-based control of the script file provides Shuttle control over all playable assets. Script playback will override any selected playstyle (except "Load Remote Control").

Transport Control Buttons	Description
 - **PAUSE**	The **PAUSE** button is used to halt playback of a media file. While in shuttle mode, pressing PLAY, REV or FWD will restart playback of the script.
 - **EJECT**	The **EJECT** button, visible only while script playback is *paused*, will unload the script from playback control. Once the active script is ejected, the system will return the user to the PLAY – Browser menu page.
 - **REVERSE**	The **REVERSE** button is used to shuttle or frame-advance backwards through the clip or media file currently under Jog/Shuttle control. Each additional button press will increase playback speed in the reverse direction. While under JOG control (ALT 2 button view), each press of the REV button will frame advance through the clip in the reverse direction.

Transport Control Buttons	Description
	Note: If user security is enabled, JOG playback control is only available for *Tech* or *Admin* level users.
 - **PLAY**	The **PLAY** button is used to begin or resume playback (Forward 1x) of the active script.
 - **FORWARD**	The **FORWARD** button is used to shuttle or frame-advance forward through the clip or media file currently under Shuttle/Jog control. Each additional button press will increase playback speed in the forward direction. While under JOG control (ALT 2 button view), each press of the FOWARD button will frame advance through the clip in the forward direction. **Note:** If user security is enabled, JOG playback control is only available for *Tech* or *Admin* level users.
	This button displays the current *soft* button view. Press this button to cycle to the next view, in this case the ALT 2 button view.
 - **Previous Clip**	This button, available from the ALT 2 view, is used to jump to the beginning of the previous clip within the active script. **Note:** If user security is enabled, this function is only available to *Tech* or *Admin* level users.
 - **JOG**  - **SHUTTLE**	The **JOG** button is used to initiate frame-by-frame playback of the active script. Press this button, while playback is paused, to activate the JOG playback mode. To frame advance through the script using the **FORWARD** or **REVERSE** buttons located on the ALT 1 button view. While in JOG mode, pressing PLAY will restart playback of the script. The **SHTL** button is used to manually switch from the JOG playback mode to the default SHTL playback mode. Pressing the PLAY button while in JOG will automatically switch back to SHTL mode. **Note:** If user security is enabled, JOG functionality is only available to *Tech* or *Admin* level users. The default playback mode of a script is SHTL (Forward +1x) regardless of security level.
 - **Next Clip**	This button, available from the ALT 2 view, is used to jump to the beginning of the next clip within the active script. **Note:** If user security is enabled, this function is only available to *Tech* or *Admin* level users.
	This button displays the current *soft* button view. Press this button to cycle to the next view, in this case the ALT 1 button view.

PLAY – Browser menu page

This menu page is used to perform file management operations as well as select the media file(s) for playback.

Functional Areas	Description
Dashboard	 The dashboard view used on this menu page is the small or compressed dashboard. From here you are still able to monitor the status of the QuVIS Encore even while the system is playing content.
File Selection Panel	 This menu panel provides a file browser to allow the operator to select a file or files for play or to perform maintenance operations on. From here, the operator can access all of the mounted volumes, directories and files on the system with the exception of the system volume which is a protected area used only for system files.
Properties Panel	 This menu panel displays the properties of the selected volume, directory of file. The “title bar” displays what type of asset is selected and the rectangular area beneath displays the general properties of that asset.
Path Bar	 The white bar displays the current working directory path including volume name.
Soft Buttons	 Labels for the *soft* buttons are located directly above the associated button on the last line of the menu page.

Soft Button Descriptions (ALT 1 - default view)

Soft buttons change function depending upon what ALT view is load. The table below describes the soft functions available when the default view (ALT 1) is loaded.

ALT 1 Soft buttons	Description
TOOLS	This button is used to activate the list of file management operations. A file must first be selected before a file operation may be performed.
	This button is used to navigate up the directory tree within the file browser on directory at a time.
	This button is used to initiate playback of the selected media file according to the active control playstyle. Once the user has pressed this button, the menu system should automatically change to the **PLAY – Control** menu page to provide transport control over the playing asset. This button may also be used as a shortcut to changing the PLAYSTYLE by pressing and holding this button for 3 seconds and selecting the appropriate entry from the popup menu. Available playstyles are as follows: *Play Selected Item* – Play item one time through and release. *Play Jog/Shuttle* – Play item with shuttle control engaged. *Play Loop/Repeat* – Play single item in a continuous loop. *Load Remote Control* – Ready the selected item for remote RS-422 control. Pressing the *soft* **PLAY** button (▶) from the **PLAY – Browser** menu page will place the Encore and the selected asset under remote control.
VIEW	This button is used to show additional properties of the selected item. Advanced properties include file encryption information.
ALT 1	This button is used to toggle the *soft* button view to show alternative button function assignments. There are currently three ALT views. Pressing this *soft* button will cycle through each button assignment view.

ALT 2 - Soft Button Assignment

From the main button view on this page, if you press the **ALT 1** button the function of the *soft* button is reassigned to an alternate set of options.

ALT 2 Soft buttons	Description
LOCAL/REMOTE	This button is used as a shortcut to toggle machine control Local or Remote. In this example LOCAL is the current state. Pressing the REMOTE button will place the Encore under remote control and light the remote LED.

ALT 2 Soft buttons	Description
SHIFT	This button is used to toggle “shift” multi-file selection for file operations and “Play Selected File” playback. The “shift” method of selecting files allows the operator to select the first file using the SELECT button and navigate to the last file they wish to select and press SELECT whereby all of the files, inclusively, between the first and last files would be selected (highlighted).
CTRL	This button is used to activate “control select”. Control-select allows the operator to individually select multiple files within the same directory for file operations such as delete, copy, rename and info.
ALT 2	This indicates what ALT button view is currently active. The “right arrow” indicates that this button will cycle back the main view, which is the ALT 1 view.

Tools Button Operations Menu

Pressing the *soft* FILE button will open up a list of file management operations that may be performed on the selected file or folder.

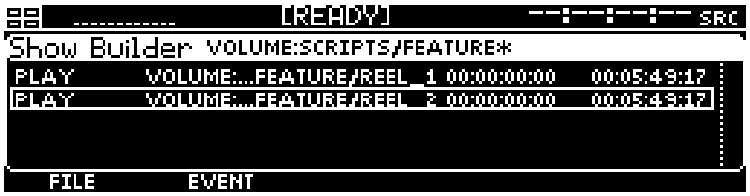
File Operation	Description
READ LOG	Opens the Log viewer. New system events and errors may be viewed in the log viewer.
LOGIN/LOGOUT	If system security is enabled, use the LOGIN option to select a user account to login into the system. If a user with Technician or Administrator level permissions, use this option to LOGOUT and return the GUI access to the default user permissions.
LOAD	This option may be used to select a “XML Load” script file to perform automated loading/copying of content. For information on how to author Load scripts refer to the document entitled **Automating Content Loading** (available on the QuVIS website).
COPY	Use this option to copy the selected file(s) to a new location (local). For details using this command, see Copy a File (Local).
RENAME	Use this option to rename the selected file or directory. For usage details, see Rename a File.
DELETE	Use the option to delete the selected file(s) or directory.
MKDIR	Enables the operator to create a new directory. The new directory will be created within the directory path the file browser page is currently set to.

PLAY – Show Builder menu page

The *Show Builder* menu page is a graphical front-end for authoring a simple script file from the front panel GUI. A *Script* is an editable text file that contains instructions to tell the system how to play various segments of similar content without interruption (as if they were one seamless production). A QuVIS script file is similar to a traditional playlist as it may be used to play a specific list of content in a specified order.

The *Show Builder* application/menu page is used to create a simple script from the front panel menu system. Authoring capabilities are somewhat limited, as the *Show Builder* does not support all of the available event types that may actually be used to create a script. For details on how to create a simple play script, see section, Create a Simple Script.

Additional details of the *QScript* file format and manual authoring requirements may be found in the QuVIS document entitled **QuVIS Show Scripting – QScript**.



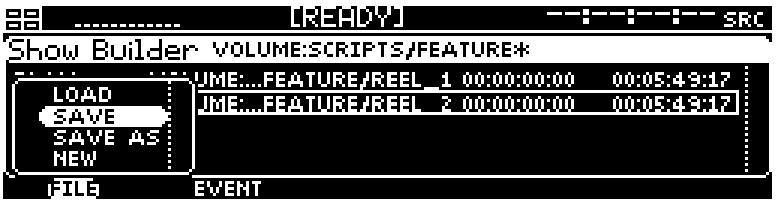
Functional Areas	Description
Title Bar	 The title bar displays the name of the script file currently being edited. The asterisk "*" next to the file name indicates that the file has not been saved with the latest changes.
Event List	 Script events are listed in this menu panel. If a previously saved script file is loaded into the Show Builder, all of the saved events will be listed in the order they are listed in the file. Comment event types are ignored and not displayed.
Soft Buttons	 Labels for the *soft* buttons are located directly above the associated button on the last "line" of the menu page.

Soft Button Descriptions

Soft Button	Description
FILE	This button is used to activate the list of file management operations. A file must first be selected before a file operation may be performed.
EVENT	This button is used to add or remove events from the script.

File Button Operations Menu

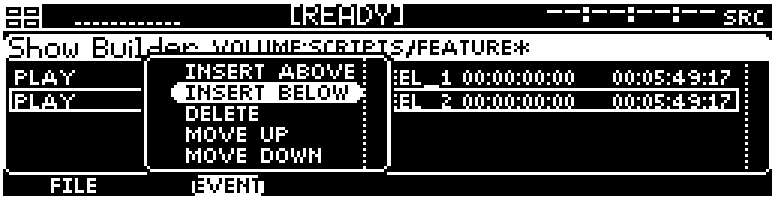
Pressing the *soft* FILE button will open up a list of file management operations that may be performed on the selected file or folder.



File Operation	Description
LOAD	Use this option to open a previously saved script file. Select the script file to be loaded from the file browser window. The default path for script files is the */scripts* directory on the primary system volume.
SAVE	Use this option to save changes to the script file.
SAVE AS	Use this option to save the current script file with a new name.
NEW	Use this option to create a new script file. Any events added to a new script file will not be saved, until the *Save* or *Save As* command is issued. **WARNING!** If you navigate away from the Show Builder menu page without saving, all changes to the script will be lost.

Event Button Operations Menu

Pressing the EVENT button will open up a list of available event operations.



Event Operation	Description
INSERT ABOVE	This option is used to insert an event above the current event (shown with the selection box). Once you have selected this option, you will need to select the *Event* type and complete the event specific requirements.
INSERT BELOW	This option is used to insert an event above the current event (shown with the selection box). Once you have selected this option, you will need to select the *Event* type and complete the event specific requirements.
DELETE	This option is used to remove the currently select event from the script. If you save the script file, the delete operation will be permanent.
MOVE UP	Use this option to change the sequence of events. This option will move the selected *event* UP one line.
MOVE DOWN	Use this option to change the sequence of events. This option will move the selected *event* DOWN one line.

Supported Event Types

Pressing the EVENT button will open up a list of available event operations.

Event Type	Description
PLAY	This event is used to PLAY a clip or media file. By default, the IN and OUT points of the PLAY event are the first and last frame of the clip. If you wish to modify the IN and OUT points of a PLAY event, you must manually edit the script file using a text editor.
PAUSE	This event is used to PAUSE playback of the script. This event may only exist between two PLAY events. Control track commands, such as a GPI event, immediately before the pause will be executed before script playback is paused. Script events immediately after the pause event will happen when playback is resumed. Pause events will only be executed if playback is moving forward at 1x. When a PAUSE event is detected during script playback, playback is paused and only video black is output. To restart playback, the system must receive either a GPI input signal or the PLAY button must be pressed on the front panel of the server (PLAY – Control menu page). If the PLAY event following the PAUSE event is of a different video format, the system will pre-load the video format just prior to the PAUSE event. To avoid video output anomalies while the system is switching video formats, you may close the projectors douser (if supported by the projector) using a TPC command right before the PAUSE event.
SCRIPT	This event enables a script file to be started by another script. This is useful for organizing a program into smaller mini-scripts that can be maintained independently yet still work together. Each mini-script can be referenced from a “master” script using this event type.
GPI	The GPI (General Purpose Interface) event, describes a signal to be generated on a particular GPI output. There are four GPI outputs that may be used to communicate to a

Event Type	Description
	variety of external equipment. Once you have selected the GPI output channel, the type of output signal must be defined. There are three GPI signal types that may be used to trigger an external event. The available signal types include: **ON** An electrical current is output on the specified GPI until the GPI is turned off or the system is restarted. **OFF** This GPI commands turns OFF any output signal that may be active on the specified GPI output. **PULSE** A timed pulse is a signal that is active (ON) for a specified duration, specified in frames. The default pulse width or duration is 10 frames. The last parameter that must be defined to complete the GPI event is to describe *at what time* the event should occur, or start to occur in the case of a timed pulse. **NOW –** used to have the GPI event start at the exact time in the script or event sequence where the GPI command is placed, usually between two PLAY events. **TIME BEFORE** – used to have the GPI event start at a time that is before this instant in the script by specifying the time difference. The starting timecode value is preceded by a minus sign "-" to indicate that the GPI will trigger earlier in time than where the GPI event is physically listed. **TIME AFTER** – used to have the GPI event start at a time that is after this instant in the script by specifying the time difference.

PLAY – Advanced menu page

This advanced panel allows you to setup a single automated play event based on several different start and stop triggers.

Play Advanced Options	Description
Auto-Play Start Trigger	This control defines the event that triggers the start of playback. Choices include incoming *LTC timecode* or *System Time* (you can check the current system time by clicking on the arrow button to the right of the lower timecode display until it shows SYS).
Start Playing At	Use this button to specify the system time or input timecode value (LTC) at which the triggered playback should begin.
Auto-Play End Trigger	This is the event that triggers the end of playback. Choices include: Disabled – Auto-play End Trigger is turned off. If the selected playstyle is set to "Play selected item", the selected clip or media file will play until the end of the clip is reached. If the playstyle is set to "Play loop/repeat" then the clip will continue to play until playback is manually stopped. To manually stop the triggered playback session, press the **STOP** button on the **PLAY – Control** menu page. Elapsed Time – Enables the system to automatically end the triggered play session once the specified elapsed time has passed, set by the "Stop playing at" button. Timecode – Enables the system to automatically end the triggered playback once the LTC timecode value, set by the "Stop playing at" button, has been received. System Time – This end trigger is used to automatically stop playback once the specified system time, set by the "Stop playing at" button, has been reached. **Note:** If the Playback End Trigger value (Elapsed Time, Timecode or System Time) is a point in time that is longer than the runtime of the selected clip, playback of the clip will stop before the End Trigger is activated.
Stop Playing At	Used to specify the time value associated with the selected "End Trigger" method. *Auto-play End Trigger* must be enabled to set the end time of the triggered play event.

How Triggered Playback Works

1. From the **Play Advanced** menu page the start and stop (optional) trigger methods must first be defined using the “”Auto-play start trigger” and “Auto-play stop trigger” controls. Secondly, the values that correspond to the start and stop triggers must be defined using the “Start playing at” and “Stop playing at” controls.

2. Select a clip or playable media (**Play - Browser** menu page) and then press **PLAY** to place the system into an armed state, awaiting the start trigger event. When the start trigger point is reached, playback will begin. If a stop trigger has been set, playback will stop once the end trigger value has occurred.

   To cancel the armed-and-waiting process press the **STOP** transport button on the **PLAY – Control** menu page, which will cancel the process and clear the trigger events. As indicated, if the operation is canceled, the trigger events will be cleared and must be reset manually if triggered playback is desired.

RECORD menu group

The RECORD menu group is the collection of menu pages that are used to configure the QuVIS Encore to record video, audio and metadata (including timecode) from an external source (Telecine, camera, VTR, etc.).

Menu pages covered in this section include:

- RECORD – Input menu page
- RECORD – Media menu page
- RECORD – Audio menu page
- RECORD – Advanced menu page
- RECORD – Control menu page

TIP: A message line is located at the bottom of each record setup menu page in order to provide visual confirmation that the selected record settings are not in conflict with each other.

If the selected settings are compatible with the systems capabilities, the message will read “(OK to record)”.

If the selected settings are not compatible with dependent settings, the message will indicate that there is a setup problem to be corrected.

RECORD – Input menu page

This menu page is used to set the primary video and system settings to be used during a record operation.

Record Video Options	Description
Image Format	Click on this button to select an image format file that matches the material you wish to record (a *format file* defines the height, width, and frame rate of a recorded signal). The popup menu allows you to sort the list of formats by type. More information can be found in the QuVIS image format files section.
Input Source	Select the appropriate **Input Source** according to the input format. Serial Digital Input (SDI) – This option is used to record either a Standard Definition or High Definition serial digital input signal. Analog – This input is used to record an Analog Component Video signal (YUV/YPrPb).
Timecode Source	Select which timecode input source should be used for recorded timecode. Choices include the *LTC* input or the *Internal* timecode clock.
Destination	Select the destination (volume and directory) where recorded assets will be stored. A volume, in QuVIS terminology, is a set of one (1) or more hard drives that effectively serves as a single storage device. **Note:** There may be limit to your ability to record high-quality, high frame rate material depending upon the number of disks that make up the destination volume. The minimum number of drives in a volume is generally determined by the *Maximum Data Rate* setting. General guidelines are as follows: MDR30 = 1 or 2-drive volume MDR60 = 2-drive volume

RECORD – Media menu page

This menu page provides advanced settings that define what video assets are to be recorded and how the recorded assets are to be structured in the resulting media file.

Record Video Adv Options	Description
Image Quality	Set the **Image Quality (SNR)** setting for recorded material. The typical setting used in a production environment ranges from 51 – 63dB. The higher the number the higher the quality and larger the data set.
QuVIS Media Format	The QuVIS Media Format (QMF) is a compatibility switch that identifies different QuVIS file format standards. Select QMF2 if the recorded media file needs to be backward compatible with the QuBit 2.x product line (QuBit ST, EL and DS running QSR 2.3 or higher). For additional information, see the QuVIS Media Format (QMF) in Chapter 3.
Maximum Data Rate	**Maximum Data Rate (MDR)** is used to set the upper data rate limit when recording. Legacy 1.x QuBits (QMF1) only supports an MDR of 30MB/sec. For additional information, see the Maximum Data Rate (MDR) section in Chapter 3. **Note:** Additional consideration must be given to the number of drives that make up the destination volume. A single-drive volume will not support data rates that exceed 30MB/sec. Although it is permissible, it is not recommended that you attempt to record to a single-drive volume if the MDR setting is set to MDR60. This may result in undesirable degradation of picture quality and may even result in some frames not being recorded.
Clip Form	This control is used to select the form of the video assets as they are recorded. Clips recorded in the QMF2 domain may either be collapsed or expanded. Collapsed – This form setting means the audio and video image data exist in an interleaved format within the clip file structure itself. All of the recorded assets are stored in a single file. Expanded – This form setting indicates that the clip exists as a number of distinct media files with a separate video track and some number of audio tracks.

RECORD – Audio menu page

This menu page is used to define the audio settings of clips that are to be recorded. These settings must match the source audio settings to ensure proper recording of clips and Virtual Tapes.

Record Audio Options	Description
Audio Form	This control defines the way each channel of audio is stored to disk when the **Clip Form** has been set to "Expanded". Audio Cluster (grouped channels) – this setting stores all audio tracks in a single audio-only media file. The resulting audio media file will inherit its filename as defined after the record operation. A special file extension ".a" is used to identify the media file as a clustered audio file. Audio Tracks (discrete channels) - this setting will store each individual audio channel or track as a separate audio-only media file. A special file extension ".axx" is used to identify the media file as a single audio track. The source audio channel number is specified in the file extension in place of *xx*. Example: Channel 10 will have a file extension of ".a10".
Resolution	Select the resolution of the recorded audio signal. Choices include 16 bit, 20 bit, and 24 bit. We recommend using either 16 bit or 24 bit.
Frequency	Select the sampling frequency of the recorded audio signal. Choices include 44.1 kHz or 48 kHz.
Digital Audio Inputs	This control is used to select which digital audio channels will be recorded. Channels 1 and 2 may either be Digital or Analog but not both. If recording from a digital audio source it is expected that all channels will be recorded from the digital source.
Analog Audio Inputs	This control is used to specify whether audio channels 1 and 2 are analog audio channels.

RECORD – Advanced menu page

This advanced panel allows you to setup a single automated record event based on several different “triggers”.

Record Advanced Options	Description
Include Metadata	Metadata is ancillary data inserted in the serial digital data stream and may or may not be present in serial digital recorded content. When metadata is present, the metadata presence indicator will illuminate. Turn this control on to record metadata from a serial digital input. The QuVIS Encore may be configured to record either standard metadata (SMPTE RP-215) or IRIG timecode data.
Drop Frame Mode	This control allows you to select either the default timecode type that is built-in to the selected image format or override the default setting. Choices include: Format Default – the timecode type (drop or non-drop frame) is determined by the selected image format and will change appropriately when the image format is changed. Non-drop – this override setting will force the system to always record non-drop frame timecode (1/1000) regardless of the timecode type defined by the selected image format. Drop – this override setting will force the system to always record drop-frame timecode (1/1001) regardless of the timecode type defined by the selected image format.
Noise Coring	Noise coring reduces low amplitude, high frequency signals. Dither, film grain, and other sources of electronic “noise” are examples of what can be reduced. The higher the setting, the more aggressively noise is reduced, resulting in “cleaner” looking pictures and lower data rates. As always, the results will vary for different types of content. Off – This is the default setting. Low – will reduce data rates by about 5% with virtually no visible picture differences. High- will reduce data rates up to 15% with subtle visual loss.
Level	If audio channel inputs 1/2 are set to analog, this control can be used to set the level of attenuation for analog signals.

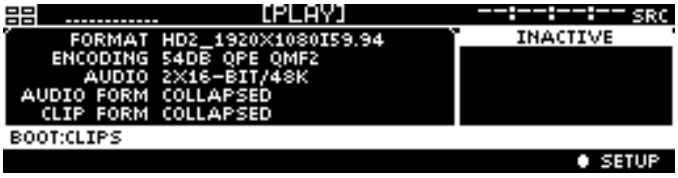
RECORD – Control menu page

This menu page is used to control record operations. The state of this menu page changes depending upon the current step of record process.

Record settings are summarized in the left window below the dashboard. The white bar below the settings summary displays the destination path where recorded content will be stored. If you wish to change a setting, you must go to the appropriate record menu page for that function and make the change there. For example, to change the destination directory where new clips are stored you must modify the ***Destination*** setting on the **RECORD – Input** menu page prior to recording.

RECORD – Control menu page (Record mode setup)

If the system is not currently in record mode (as indicated in the dashboard label [RECORD]), you must first press the "● Setup" button. If the system is setup in record mode with the current input settings, the Setup option will not be displayed.



RECORD – Control menu page (System ready to Record)

Once the system is setup to record, press the "● Record" button to begin recording.

RECORD – Control menu page (Recording a clip)

During a record operation, the right window labeled "Recording" displays statistics of the record operation. Record statistics includes the clip length in absolute timecode, file size of the clip, the peak composite data rate and any errors such as dropped frames.

To end the record operation, press the "■ STOP" button.

RECORD – Control menu page (Complete record operation)

Once recording has finished, a set of options is presented via soft buttons to complete the record operation. Here you may review the recorded clip, accept the recording, rename the clip file, or delete it.

Record Panel Options	Description
Accept	Use this button to save the clip and reset the menu page in preparation for the next record operation.
Delete	This button is active just after a clip has been recorded. If you do not wish to keep the newly recorded clip, click Delete. (You may delete this clip and other files and clips from the PLAY Browser menu page, which has other file management tools built-in.
Review	Use this button to review the just-recorded clip. Review a clip will playback the clip and return to this menu page when playback/review is completed. This can be useful for determining whether to keep the clip, or adjust settings and re-record it. To end review playback and return to post-record options, press the STOP button.
Rename	Once you have recorded a clip, click on this button to rename it (otherwise, it will keep the default name). **Note:** The system automatically assigns a default name to a newly recorded clip the moment recording begins. The naming convention is dependent upon the clock (date and time) settings of the server performing the recording. If you plan to use the default naming convention, you should ensure the clock settings are adjusted to your local time (see the **clock** command in the *QShell Command Reference Manual* for more details). The default name is derived from the current date (mmddyyyy) and the current system time (hhmmss). An underscore character is used to separate date and time elements of the filename for readability.

EDIT menu group

The EDIT menu group is the collection of menu pages that are used to create Virtual Tapes, which are to be used in an editing environment. In traditional editing the VTR tape format determines the image quality, format, the number of audio tracks available, and the tape defines how much running time you have available. These are all settings you can specify when creating a QuVIS Virtual Tape.

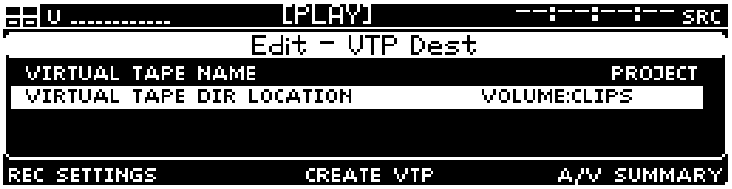
Once the virtual tape is created, you may select it for playback, place it under remote control and proceed to record clips into it just as you would to a striped videotape in a VTR. For more information on virtual tapes and editing, refer to Chapter 6 - Remote Control and Virtual Tape Operations.

Menu pages covered in this section include:

- EDIT – VTP Dest menu page
- EDIT – VTP Settings menu page
- EDIT menu group *Soft* button assignments
- Create a Virtual Tape

EDIT – VTP Dest menu page

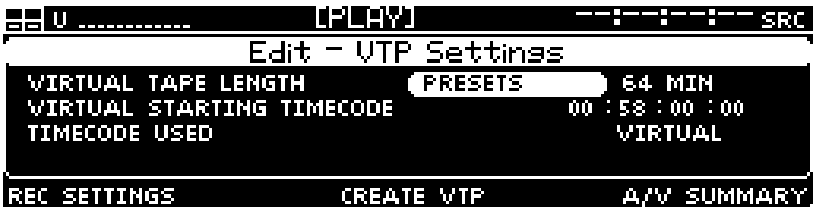
This menu page is used to define the name of the virtual tape and where the virtual tape assets will be stored.



VTP Destination Options	Description
Virtual Tape Name	Click here to enter the name for the virtual tape. This filename is used for the timeline file (.tl), the virtual tape project directory (where the individual edit files are stored) and the virtual tape file itself (.vtp).  Once you have entered the VTP name, press **OKAY** to accept.
Virtual Tape Directory	Use this control to specify at what location (volume and directory path) the virtual tape project directory and virtual tape file will be stored.  Once you have selected the destination directory path, press **OKAY** to accept.

EDIT – VTP Settings menu page

This menu page is used to define the name of the virtual tape and where the virtual tape assets will be stored.



VTP Settings Options	Description
Virtual Tape Length	This control is used to specify the length of the virtual tape. You may select a pre-defined length from the list or press the SELECT button while on the value control to enter a custom length.  
Virtual Starting Timecode	The timecode (TCV) for the entire virtual tape is automatically assigned using this control. The virtual tape is pre-striped using this starting timecode value.
Timecode Used	Use this control to specify what timecode source to use for the virtual tape. Virtual – Virtual timecode is the pre-striped timecode that is embedded into the virtual tape when it is created. This is the default timecode used during editing and playback of a virtual tape. Source - Use this option to output timecode as it is recorded from the source video.

EDIT menu group *Soft* button assignments

Soft Button Assignments	Description
REC Settings	This button is used as a navigational shortcut to the RECORD menu pages in order to modify record settings before creating a virtual tape.
Create VTP	This button is used to create a Virtual Tape project (.vtp media file and project asset directory) using the VTP settings specified on the EDIT menu pages.
A/V Summary	This button will display a window that summarizes the current Record settings (the record menu pages directly affect the virtual tape that is created on this page). Review these settings before creating the Virtual Tape to ensure that it is the correct format for your editing project.  If these settings do not match the requirements of your project, press the **MODIFY** button load the RECORD menu pages. This allows you to modify each video and audio setting before you create the Virtual Tape. You may need to navigate to more than one Record menu page to change all of the settings.

Create a Virtual Tape

The QuVIS Encore's GUI is designed to make virtual tape creation simple and efficient. Once you've created a virtual tape, you may begin dubbing footage to it either locally or remotely.

1. Navigate to the EDIT – VTP Dest menu page.

2. Before you begin to create a virtual tape, make sure that the current recording settings on are correct for the material you will be working with.

   To display a quick view of the current record settings press the *soft* button labeled **A/V Summary**.

   If you need to modify the record settings, you can quickly jump to the RECORD menu pages by pressing the *soft* button labeled **REC Settings**. Once you have made the appropriate changes return the EDIT - Dest menu page to continue VTP creation.

3. On the EDIT – VTP Dest menu page, enter the following information:

   Virtual Tape Name
   Virtual Tape Directory

4. Navigate to the EDIT – VTP Settings menu page and enter the following information:

   Virtual Tape Length
   Virtual Starting Timecode
   Timecode Used

5. When all settings are correct, press the **Create VTP** button at the bottom of the menu page. This will create the virtual tape project file (.vtp) and project directory. Now you may proceed to edit this virtual tape.

OUTPUT menu group

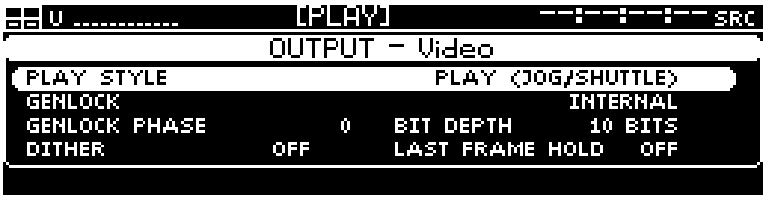
The OUTPUT menu group is the collection of menu pages that are most commonly used to control playback operations.

Menu pages covered in this section include:

- OUTPUT – Video menu page
- OUTPUT – Analog menu page
- OUTPUT – Audio menu page
- OUTPUT – Timecode menu page

OUTPUT – Video menu page

This menu page is used to configure the settings that define how the media will be controlled and look during playback.



OUTPUT - Video Options	Description
Play Style	This button is used to define how the playback of the selected media will be controlled. Options include: *Play Selected Item* – Play item one time through and release. *Play Jog/Shuttle* – Play item with shuttle control engaged. *Play Loop/Repeat* – Play single item in a continuous loop. *Load Remote Control* – Ready the selected item for remote RS-422 control. Pressing the VTR PLAY button from the PLAY – Browser menu page will place the Encore and the selected asset under remote control.
Genlock	Use to set the input source to which the Encore will lock its output playback signal. If the Encore does not have the "Genlock hardware option" installed, the only available option will be *Internal*.
Genlock Phase (Genlock option required)	This control is used to phase-in or delay the genlock signal (mainly analog) to compensate for signal variations. This is a two-stage button meaning that when the button is active the user must press the green SELECT button before they can modify the value. Once the SELECT button has been pressed the first time, the button focus is placed only on the value input area. The operation will use the ▲ and ▼ buttons to change the value of the control.
Bit Depth	This control is used to match the QuVIS Encore's output signal to recording device that may only be calibrated to accept a specific signal level. This control only affects analog video output and does not affect Serial Digital (SD and HD) outputs. **Note:** For most display applications this control will not need to be modified.
Dither	Dither adds a degree of electronically-generated noise or grain to the playback. This control affects all video outputs. Adding dither to the output may yield a more pleasing playback image with some display devices. Not recommended when editing or dubbing as the added noise can make for a poorer signal.
Frame Hold	Use this control to instruct the Encore to hold the last frame of video when the system has stopped playing.

OUTPUT – Analog menu page

This menu page defines the analog video output settings.

Note: Analog component output (ACO) is not part of the base configuration of the QuVIS Encore. It is possible that not all Encores will be configured with this option. For those units configured without an ACO, the options on this menu page will not be available.

OUTPUT - Analog Options	Description
Analog Colorspace	Use this control to change the output analog colorspace. Choices include RGB or YUV.
Analog Sync	Use this control to change the output sync signal type. Options include Bi-Level (black burst), Tri-Level and Separate H & V. **Note:** Display devices may need a specific form of sync signal to show image properly. The type of sync signal required is dependent upon the specific display device being used.

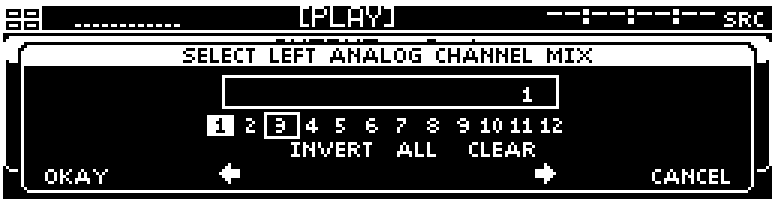
OUTPUT – Audio menu page

This menu page is used to define the output audio settings. This includes the ability to route digital channels to the one or both of the analog channels for easy confidence monitoring.

OUTPUT - Audio Options	Description
Left Channel Mix	This control allows you to route any audio channel, including digital audio channels, to the left channel of the analog/headphone output. For example, channels 1, 3, 5 and 7 can be routed to analog left and channels 2, 4, 6 and 8 can be routed to analog right so that all 8 channels may be heard as stereo output on the analog out pair or headphone jack. Alternately, all channels may be routed to a single analog channel for monitoring purposes. This does *not* affect the output of each digital audio channel.
Right Channel Mix	This control allows you to route any audio channel, including digital audio channels, to the right channel of the analog/headphone output. For example, channels 1, 3, 5 and 7 can be routed to analog left and channels 2, 4, 6 and 8 can be routed to analog right so that all 8 channels may be heard as stereo output on the analog out pair or headphone jack. Alternately, all channels may be routed to a single analog channel for monitoring purposes. This does *not* affect the output of each digital audio channel.
Master Frame Delay	This control is used to delay all audio channels by the specified number of frames to compensate for any creation or equipment routing offsets.
Master Volume	Use this control to set the volume level for all audio channels.
Headphone Volume	Use this control to set the volume for the headphone jack beneath the front bezel.

Routing Digital Audio Channels

To route a digital audio channel(s) to play back on one or both of the analog audio channels, select the appropriate “Analog Mix” (left or right) control.



Use the ▲ and ▼ buttons (to the right of the display) to navigate between lines (channel and functions).

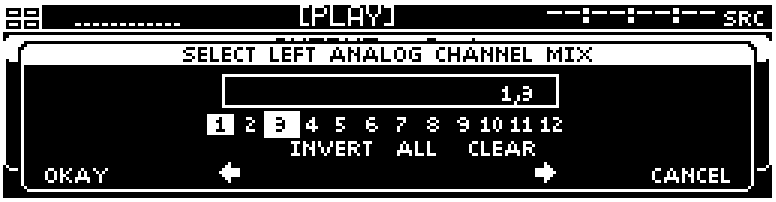
Use the LEFT/RIGHT *soft* buttons to move the selection focus box over the desired channel number or function.

To select a channel number or function that is surrounded by the selection box, press the SELECT button to the right of the display.

Channel Mix options	Description
Invert	This control will select all channels not currently selected and deselect all channels that are selected.
All	Use this option to select all available channels to be routed to the selected analog channel.
Clear	Use this option to clear all selected.

1. The Channel Routing dialog window allows the operator to select the digital channels they would like routed to the analog channel specified.

2. Move the “selection box” using the LEFT/RIGHT arrow *soft* buttons. To select or deselect an audio channel, press the SELECT button.



3. To accept the new channel routing assignments, press the *soft* button directly beneath the **Okay** label.

Adjusting Channel Volume (Master and Headphone)

The “Master Volume” and “Headphone Vol” controls are two-stage buttons. The first button press changes the “button focus” to the value area allowing the operator to use the ▲ and ▼ buttons to change the value.

Stage 1:
Button is in focus but has not been selected for change

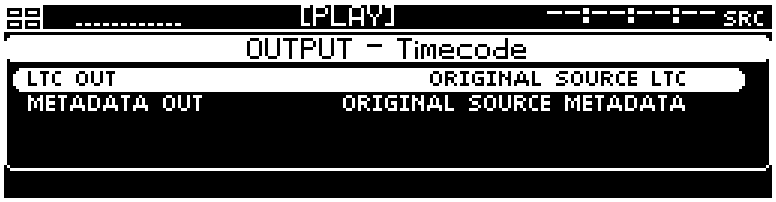
Stage 2:
Button has been selected and the volume setting may now be changed

Change the volume setting

1. Pressing and releasing the ▲ or ▼ button will increment or decrement the value by 1.
2. Press and hold the ▲ or ▼ button to automatically scroll through the value list. Release the button to stop the automatic value advance function.

OUTPUT – Timecode menu page

This menu page allows the operator to define the type of output timecode during playback.



PLAY - Timecode Options	Description
LTC Out	This button determines what form of timecode will be output during playback on the LTC output connector. Choices include: *No LTC output* – No time code output *Original Source LTC* – Time code from the original recording *Absolute starting from 0* – Start playback from 00:00:00:00
Metadata Out	This button determines what data is output in the Metadata portion of the HD SDI signal that the Encore sends out the HD SDI connector. Choices include: *Original Source Metadata* – Output the Metadata that was recorded with the clip. *Same as LTC output* – Outputs the same signal specified in the "LTC Out" setting.

REMOTE menu group

The REMOTE menu group is the collection of menu pages that contain the settings most commonly used to place the QuVIS Encore under remote control.

Menu pages covered in this section include:

- REMOTE – Control menu page
- REMOTE – Setup menu page

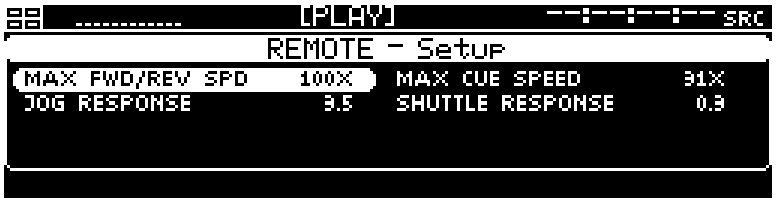
REMOTE – Control menu page

This menu page provides access to the settings required to place the QuVIS Encore under remote serial control. For additional remote control operation details, see Chapter 6 - Remote Control and Virtual Tape Operations.

REMOTE - Control Options	Description
RS-422 A Protocol	Use this control to activate/deactivate an external control protocol for the RS-422 ports (both A and B). Only one external control protocol may be active at one time, therefore this single control combines the selection of port and protocol in one gadget. This is a PLAYBACK feature only. The Encore will appear to the controlling device as a READ-ONLY tape. Options include: • None • Sony • Odetics
Odetics Clip Directory	This control defines the single Encore directory to be used while the Encore is under remote control using the Odetics protocol. By specifying this directory it allows the controlling device list and access to the clips in that directory. This is a PLAYBACK feature only.
RS-232 B Protocol	This control is used to activate/deactivate an external control protocol (LDV800) or command shell (QShell) for RS-232 Port B.

REMOTE – Setup menu page

This menu page enables the operator to customize a few of the most common ballistic controls used during serial remote control. For example, one can customize the feel and speed of the Jog response (external) as well as the shuttle and “cue up with data” serial 422 speeds. Since these settings can be saved as part of a configuration file and loaded later, this permits flexibility to support custom settings for many different user tastes.



Setup Menu Page Items	Description
Max Fwd/Rev Spd	This control allows you to set the maximum shuttle speed when under remote RS-422 control. It will not affect shuttle speeds used for local playback from the GUI.
Max Cue Speed	This control allows you to fine tune the maximum cue speed when under remote RS-422 control. It will not affect local playback operations.
Jog Response	This control lets you adjust the responsiveness to jog commands sent by an external RS-422 controller. It will not affect local GUI jog control.
Shuttle Response	This control lets you adjust the responsiveness to shuttle commands sent by an external RS-422 controller. It will not affect local GUI shuttle control.

SETUP menu group

The SETUP group is the collection of menu pages that provide control over the Encore's system settings.

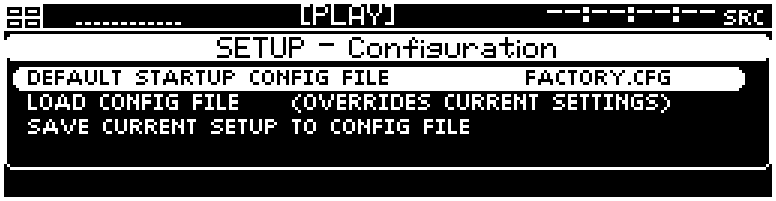
Menu pages covered in this section include:

- SETUP – Config menu page
- SETUP – Network menu page
- SETUP – Serial menu page
- SETUP – Display menu page
- SETUP – Information menu page
- SETUP – GPI In menu page
- SETUP – GPI Out menu page

SETUP – Config menu page

This menu page shall enable one to save all current menu settings or load a previous setup from an Encore Configuration File. Everything that appears on the GUI that can be selected or modified will be saved with exception of the Ethernet settings – as those are saved in NVM.

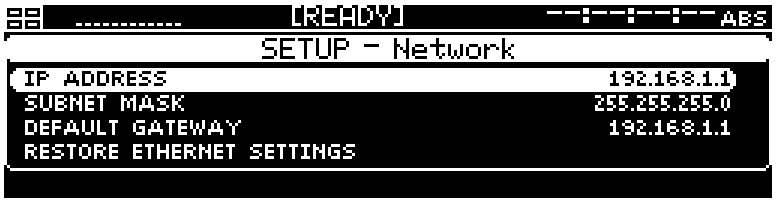
The GUI setup settings will be saved to a file located in the */user/cfg* directory with a file extension of .CFG. The system contains an undeletable write-protected configuration file called **Factory.cfg** that may be used to restore the system settings to their default factory values. See Chapter 5 - Modifying Configuration for details on using configuration files.



Configuration Menu Page Items	Description
Default Startup Config File	This control sets the default configuration file to be used by the system software at startup. When the system starts, it looks for this file and loads the settings specified within the file. If the specified config file cannot be loaded, the factory defaults will be loaded.
Load Config File	This control is used to load a previously saved configuration file. The popup file browser will automatically set the current working directory to the location of the configuration, the *user/cfg* directory.
Save Current Settings to Config File	This control is used to save the current settings to a configuration file. All configuration files saved by the user will be stored in the /user/cfg directory on the primary system volume.

SETUP – Network menu page

This menu page enables the operator to change the system's network address settings. Before making changes, make sure that the IP address you are about to use is a unique address. Duplicate IP addresses will cause communication problems on your network. If you have any question regarding network address assignment, contact you network administrator.



Network Menu Page Items	Description
IP Address	This control is used to assign a unique TCP/IP network address. The IP address is the primary setting needed for communicating with a QuVIS Encore over a TCP/IP network. The system must be restarted in order for the network to recognize that a change has occurred. The factory default IP address setting is 192.168.1.1.
Subnet Mask	This control is used to set the network TCP/IP subnet mask. For further assistance contact your network administrator. The factory default subnet mask is 255.255.255.0.
Default Gateway	This control is used to set the TCP/IP network default gateway address. The default gateway tells the system where to route IP data not destined for the same IP network. The factory default gateway is 192.168.1.1 (the same as its factory IP address).
Restore Ethernet Settings	If a change has been made to the network addresses, from the front panel, this button may be used to return the network values to the original settings that were active the last time the system was powered on. This button may only be used provided that the system has not been reset since the changes were made.

Making Changes to IP Address, Subnet Mask or Default Gateway Settings

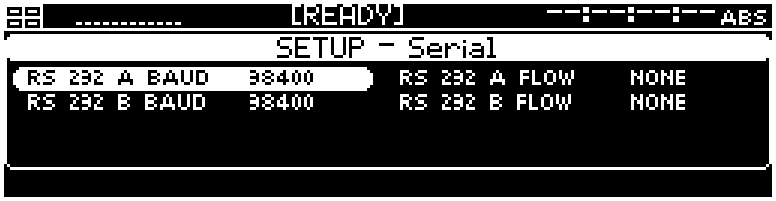
To make changes to a network setting, press the SELECT button to activate the appropriate dialog window. Once the change dialog window has opened the appropriate network setting may be changed.

Note: Use the ▲ and ▼ buttons to navigate between lines on this input window. The LEFT and RIGHT *soft* buttons are used to navigate between the choices on the active line.

SETUP – Serial menu page

This menu page is used to modify the communication settings for the two RS-232 serial ports. These settings affect the communication ability of serial “terminal” programs and the LDV8000 control protocol (Port B only). The serial settings of the QuVIS Encore and the connected PC must match in order for communication between the two to function properly.

IMPORTANT! While it is not specifically listed, the Data Bits, Parity and Stop Bits settings for both RS-232 serial ports on the QuVIS Encore are fixed at 8N1, which is the most common setting for this type of serial port.



Serial Menu Page Items	Description
RS-232 A Baud	Use this control to set the baud rate (rate of serial communication) for the RS-232 A port.
RS-232 A Flow	This control changes how the flow of data is controlled between two serial devices on this serial port. Flow control is also referred to as “handshaking”. **Note:** The system supports both software (Xon/Xoff) and hardware handshaking (Hardware). Handshaking may also be set to *None* (Off).
RS-232 B Baud	Use this control to set the baud rate (rate of serial communication) for the RS-232 A port.
RS-232 B Flow	This control changes how the flow of data is controlled between two serial devices on this serial port. Flow control is also referred to as “handshaking”.

Location of Encore RS-232 Serial Ports

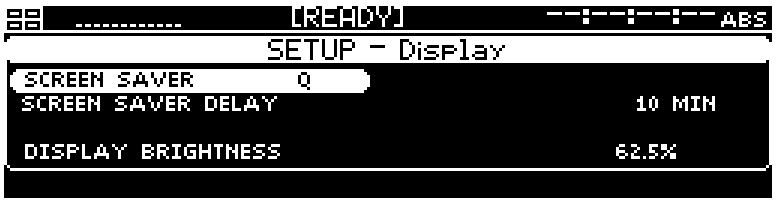
The system has two RS-232 serial ports on the unit. The physical connectors are male D-sub 9-pin or DB-9.

RS-232 Port A (Primary) – This connector is located in the front of the QuVIS Encore on the bottom edge of the front bezel underneath the adjustable front control panel.

RS-232 Port B (Secondary) – This connector is located on the back panel of the QuVIS Encore.

SETUP – Display menu page

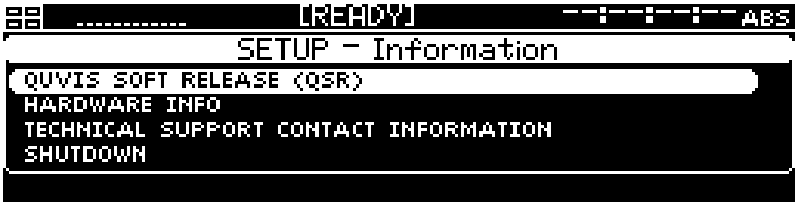
This menu page allows the operator to customize the display settings including the brightness of the VFD as well as the screen saver options. The use of the screen saver is recommended in order to prevent burn-in on the display.



Display Page Menu Item	Description
Screen Saver Type	Use this to select the type of screen saver to be used.
Screen Saver Delay	This sets the amount of delay or time of inactivity before the screen saver starts. Delay options are from 0-60 minutes or Off.
Display Brightness	Use this control to set the brightness or intensity of the GUI display.

SETUP – Information menu page

This menu page provides access to a variety of important information including the software and hardware version numbers and support contact information. Additionally, the QuVIS Encore may be safely powered off or power reset from this menu page.



Menu Item	Description
QuVIS Soft Release (QSR)	Displays the version information for the currently installed software release.
Hardware Info	Displays the list of currently installed hardware, including optional circuit cards, and their revision number.
Technical Support Contact Information	Displays important contact information including telephone numbers and website address for obtaining product support assistance.
Shutdown	Use this option to instruct the system to power down.

SETUP – GPI In menu page

This menu page allows the operator to program the behavior of the server when it receives a GPI (General Purpose Interface) signal on the specified GPI input channel. The QuVIS Cinema Player has 4 available GPI input channels.

WARNING!
If GPI events are used with play scripts (QScripts) then you must ensure that the GPI settings defined on this menu page do not use the same GPI channel resources as defined within the script file.

GPI In Page Menu Item	Description
GPI 1	Use this control to set up a system action for this GPI input channel.
GPI 2	Use this control to set up a system action for this GPI input channel.
GPI 3	Use this control to set up a system action for this GPI input channel.
GPI 4	Use this control to set up a system action for this GPI input channel.

GPI Input Options

When a signal is received, the system will perform the operation defined for that channel. There are 4 system options that may be assigned to a GPI input channel. They are as follows:

None – No action is defined for that GPI input channel. If a signal is received, the system will not perform any operation.

Stop – This GPI action will instruct the system to stop and pause playback. Playback may be restarted while the media file or clip is paused by issuing a play command.

Stop All – This GPI action will instruct the system to stop playback and reset the position of the media file or clip back to the beginning.

Play – This GPI action will instruct the system to start playback of the currently selected media file. The file must be selected on the active menu page must be PLAY – Browser.

SETUP – GPI Out menu page

This menu page allows the operator to program the server to output a GPI signal on the specified channel when a conditional event is encountered. Depending upon the configuration of the QuVIS Cinema Player, up to 10 output GPI channels may be available.

WARNING!
If GPI events are used with play scripts (QScripts) then you must ensure that the GPI settings defined on this menu page do not use the same GPI channel resources as defined within the script file.

GPI Out Page Menu Item	Description
GPI 1	Use this control to instruct the system to output a GPI signal on this channel when the specified condition is met.
GPI 2	Use this control to instruct the system to output a GPI signal on this channel when the specified condition is met.
GPI 3	Use this control to instruct the system to output a GPI signal on this channel when the specified condition is met.
GPI 4	Use this control to instruct the system to output a GPI signal on this channel when the specified condition is met.
GPI 5-10	Use this control to instruct the system to output a GPI signal on this channel when the specified condition is met.

GPI Output Options

This GPI mechanism enables you to generate a GPI output signal on a specific GPI channel when the specified system event is detected. The GPI signal will remain on while the event (such as the unit playing a clip) is active.

None – No action is defined for this GPI output channel.

Fault – When the system detects a “fault” condition, a GPI output signal will be generated on the specified output channel. This allows the server to signal an external controller or monitoring equipment that a system fault has occurred.

Playing – Once playback of a media file or clip has begun, the system will output a GPI signal on the specified channel. This allows the server to report its playback status with external control equipment.

CHAPTER 5 - MODIFYING CONFIGURATION

Information in this chapter includes:

Configuring QuVIS Encore Overview

When you change a setting on the GUI, it remains intact until the system is restarted, after which it will restore the previous setting. The QuVIS Encore uses configuration (*config*) files to retain settings between sessions. A custom group of settings may be automatically applied each time the system is powered on by assigning a default startup config file. Refer to Set the Default Startup Config File for more details.

Configuration files provide the flexibility to store multiple groups of custom configuration settings that may be quickly loaded for specialized applications. You can save any number of uniquely named custom config files. By loading a custom config file you can modify all of the menu page settings at once according to the values in the file. Refer to sections Save Current Settings to a Config File and Load Custom Settings from a Config File for more details.

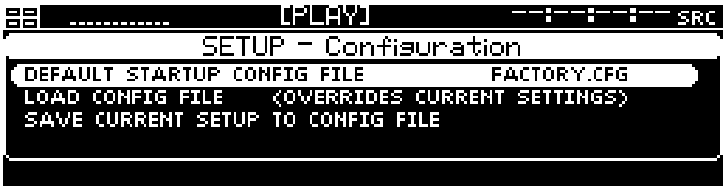
Set the Default Startup Config File

The QuVIS Encore can be set to load a specific set of custom settings from a configuration file each time the unit is powered on. If you do not set the default startup config file, the system will load factory settings as defined in the read-only *factory.cfg* config file. All configuration files are stored in the *user/cfg* directory on the primary system volume. Use the following procedure to set the default configuration file to be loaded at startup.

Note: To set the default startup config file, a custom config file must have been previously created.

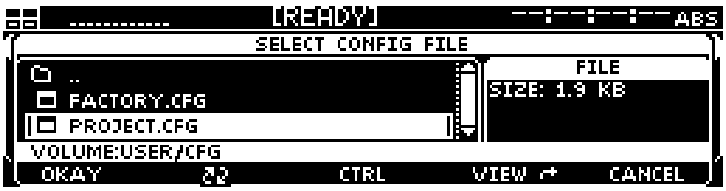
TIP: If the same settings are to be used by multiple systems, you may save a custom config file on one machine and then copy it to the other systems. You must however, set the *default startup config file* on each QuVIS Encore separately.

1. Navigate to the **SETUP – Config** menu page and select the *Default startup config file* option.



2. Press the SELECT button to activate the file selection window. The file browser path will automatically set to the appropriate directory where all *config* files are stored.

3. Press the SELECT button to highlight the file to be used as the default startup config file. If you make a mistake, simply navigate to another file and press the SELECT button.



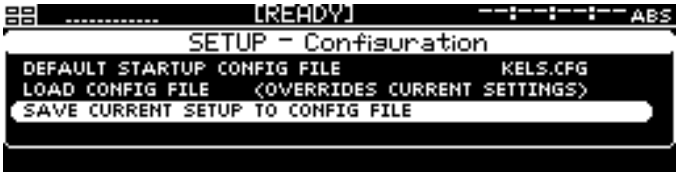
4. Press the *soft* button labeled *Select* to assign the selected (highlighted) file as the *default startup config file*.

   Note: The settings in the *default startup config file* do not become active until the system restarted.

Save Current Settings to a Config File

Use the following procedure to save the current system settings to a configuration file. You can overwrite an existing file with the current settings by enter the same name as the existing file. The *config* file is always saved in the */user/cfg* directory.

1. Navigate to the **SETUP – Config** menu page and select the *Save current setup to config file* option.



2. Press the SELECT button to activate the file-naming window. Enter the name you wish to assign to the config file.

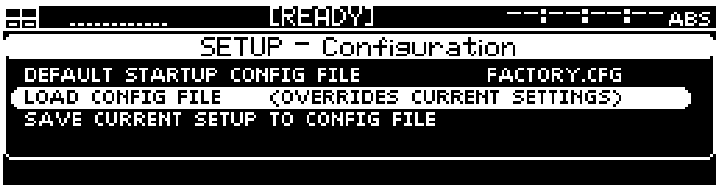
3. Press the *soft* button labeled *Save* to store the current settings to the named file.

   Note: If you provide a name that is already being used, you will be warned that you are about to overwrite an existing file.

Load Custom Settings from a Config File

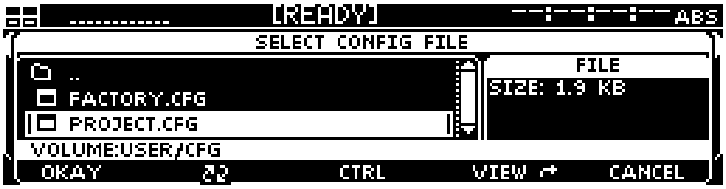
Use the following procedure to load custom settings stored in a previously saved configuration file. All settings will be applied immediately. To ensure all settings are properly set, the system should not be actively playing content while a config file is being loaded.

1. Navigate to the **SETUP – Config** menu page and select the *Load config file* option.



2. Press the SELECT button to activate the file selection window. The file browser path will automatically set to the appropriate directory where all *config* files are stored.

3. Press the SELECT button to highlight the config file to be loaded. If you make a mistake, simply navigate to another file and press the SELECT button.



4. Press the *soft* button labeled ***Okay*** to load the settings from the selected config file.

Restore Factory Settings

To restore the factory settings, perform the Load Custom Settings from a Config File procedure selecting the *factory.cfg* file as the file to be loaded in step 3. Alternately, you may also set the *factory.cfg* config file as the Set the Default Startup Config File using the procedure outlined in that section as well.

CHAPTER 6 - REMOTE CONTROL AND VIRTUAL TAPE OPERATIONS

Information in this chapter includes:

About Remote Control Protocol Support

You can use remote control devices and applications software that use industry-standard serial protocols to remotely control the QuVIS Encore. The QuVIS Encore supports three standard serial protocols:

Protocol	Control Port
Sony 9-pin (BVW-75)	RS422 A
Odetics	RS422 A
LDV8000	RS232 B

To enable remote control protocol support for the QuVIS Encore, you must first select the serial protocol to be used and then enable “remote control”. See the Configuring Remote Control section for detailed setup instructions.

Supported QuVIS Media Types

The following is a complete list of QuVIS media files that may be controlled remotely using a serial protocol.

Media File Type	**Level of Control**
All clips	Play and Direct-to-Disk Record
Virtual Tape (.vtp)	Play and Edit (local and remote)
Timeline (.tl)	Play only

Note: Scripts files may not be placed under remote serial protocol control.

Configuring Remote Control

To place the QuVIS Encore under remote serial control, use the following steps.

Requirements

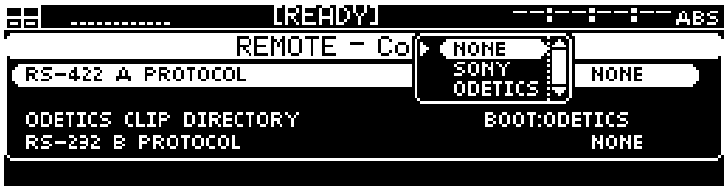
- Serial device or edit controller supporting either Sony or Odetics serial protocol, connected to the Encore via 9-pin serial cable (wired straight-through).

Sony and Odetics protocol (RS-422)

Select the RS-422 A Protocol

1. Navigate to the **REMOTE – Control** menu page.

2. Select the RS-422 serial protocol to be used by pressing the SELECT button to activate list of available protocols. Once the proper protocol option has been selected from the list, press the SELECT button to complete the selection.



Note: If you select the Odetics protocol, you must also complete **step 3** to assign the directory to be used by the Odetics protocol.

3. **(Odetics protocol only)** The Odetics protocol allows the operator to select from a list of available clips remotely. All of the clips that reside in the directory specified by the *Odetics Clips Directory* setting are made available to the Odetics controller for playback.

IMPORTANT! Make sure that all of the clips in the *Odetics Clips Directory* are the same format and frame rate. Failure to do so may produce video playback or communication errors.

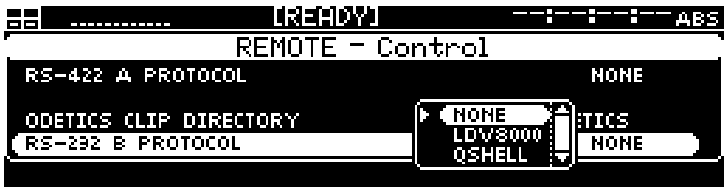
LDV8000 Protocol (RS232 B)

LDV8000 is a RS232 serial protocol for controlling laser disc players. The QuVIS Encore may be controlled using this protocol. The 9-pin RS232 port B connector is located at the rear of the Encore.

Select the RS-232 B Protocol

1. To use the LDV8000 laser disc protocol, navigate to the **REMOTE – Control** menu page.

2. Press the SELECT button to activate list of available RS-232 protocols. Select *LDV8000* from the popup list.



3. Press the SELECT button to complete the protocol selection.

Starting Remote Control for Playback Operations

The process model for placing the QuVIS Encore under remote control is similar to that of a VTR. The basic concept is that you open a communication channel between the Encore and the serial controller by activating *REMOTE* control. As the system actually mimics most VTR's functions, the QuVIS Encore is not able to play unless a media file has first been "loaded" for playback. The same is true for a VTR, if you have not loaded a tape, the VTR cannot play.

The process for starting "remote control" is the same for all serial protocols even though they may be active on a different serial port.

Activate Remote Control

Remote control may be turned *ON* from the front panel GUI using two different methods. The first method is to turn on remote control by pressing the *soft* ***Remote*** button found on the **PLAY – Browser** menu page using the **Alt 2** *soft* button view. The second method allows you to bypass the need to directly turn on remote control by using the playstyle "*Load Remote Control"* (**PLAY – Video** menu page) to automatically place the QuVIS Encore under remote control when playback is initiated. For documentation purposes, method one is outlined below.

To place the QuVIS Encore under remote serial control for playback operation:

1. Navigate to the **PLAY – Browser** menu page.

2. Press the *soft* button (middle) labeled **Local** to activate REMOTE control (shown above).

Note: While serial communication has been established between the QuVIS Encore and the serial controller, the system is not yet ready to play until a media asset has been "loaded".

Loading Media Assets for Remote Control

To complete the remote control setup process, you must "load" a media file for playback.

1. Navigate to the **PLAY – Browser** menu page.

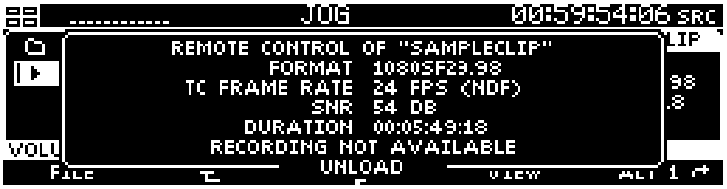
2. Press the SELECT button to highlight/select the media file or clip you wish to place under remote control.

Note: Even if you are using the *Odetics* protocol you need only to select a single file. Once the file or clip has been loaded, the Odetics controller is presented with a list of available clips in the directory specified by the *Odetics Clips Directory* setting.

3. To "load" the selected clip or media file, press the ▶ LOAD REM (play) button. Playback of the "loaded" media file on the Encore may now be controlled using the remote serial controller.

Remote Control Status

Once the selected media file has been placed under remote serial control a status window is displayed on the GUI to indicate that the QuVIS Encore is under *remote* control. Additionally, the **Remote** LED, to the left of the display, is lit to also indicate the unit is being controlled remotely.



Starting Remote Control for Record Operations

The QuVIS Encore supports remotely controlled direct-to-disk record operations, also known as crash record. The setup requirements for remotely controlled direct-to-disk record operations are different than loading media files for playback or virtual tapes for editing.

To control direct-to-disk record operations via edit controller, *Record* settings must be first be configured to match the requirements of the project (i.e. video format, number of audio channels, etc.). To review record setup procedures refer to section Configuring for Basic RECORD Operation.

To remotely control direct-to-disk record operations using a RS-422 edit controller, the Encore's remote control settings must be configured, see section Configuring Remote Control. Once the record and remote control settings have been properly configured, the Encore is ready to perform direct-to-disk record operations.

Notes:
A direct-to-disk record operation is terminated when the STOP command is issued from the remote edit controller. Direct-to-disk record operations are session events; meaning that each time the RECORD and subsequent STOP command is issued a separate media file or clip is created.

The resulting media file is named according to clip naming rule defined for the unit. The default-naming format applied to newly recorded media files is MonthDayYear_HourMinuteSecond. The file naming convention applied to direct-to-disk recorded clips may be customized by modifying the RECORD Environment Variable "ClipNameRule".

> Example: If a clip were recorded on July 1, 2005 at 12:00:00pm the resulting file would be named *070105_120000*.

Activate Remote Control

To activate remote control for direct-to-disk record operations use the following procedure:

1. Navigate to the **PLAY – Browser** menu page.

2. Press the *soft* button (middle) labeled **Local** to activate REMOTE control (shown above).

   Serial communication between the RS-422 controller and the QuVIS Encore is now active.

Perform Remote Direct-to-Disk Record (Crash Record) Operations

1. To perform a direct-to-disk recording (crash record) from an edit controller, the Encore must first be setup for remote control as discussed in the previous section labeled Activate Remote Control.

2. To begin recording, press the **RECORD** button on the controller or press the **RECORD** and **PLAY** at the same time depending upon how the controller is setup.

   Note: If the Encore is already setup in Record mode, recording will begin immediately. If the Encore is not in a record ready state, indicated on the GUI dashboard with the label [Record], the system will switch to record mode before content is recorded. This may result in a record delay of a couple of seconds. If possible, the source content should include several seconds of black or appropriate leader content (such as color bars) to ensure that the Encore records all of the desired content.

3. To stop recording, press the **STOP** button on the controller.

   When the recording is stopped the session is closed and the resulting clip file is saved using the default naming convention discussed in the previous section.

4. To record additional clips, repeat steps 2 and 3.

Virtual Tape Overview

A QuVIS Virtual Tape (or VTP) emulates a traditional pre-striped or blacked videotape (a pre-formatted tape containing video black and timecode) for remote controlled editing in a post-production environment. Virtual tapes enable you to record and edit content in the same process that is used to edit content on fixed-length, striped videotape.

The Virtual Tape architecture provides additional editing functionality not found on VTR's. For example, the VTP may be edited using a *Local Insert Edit* feature from the front panel GUI or may be remotely edited via an serial (RS-422) edit controller, merged with another VTP (without duplicating assets) or synchronize audio and video tracks by sliding the audio to lineup with a video sync point via the *VTPMerge* QShell utility. Additional features such as the ability to collapse the VTP into an interleaved clip form (collapsed clip) for distribution or sharing the VTP and its assets with other QuVIS video servers using removable media or server-to-server high-speed transfer methods including network copy using Gigabit Ethernet.

Virtual Tapes perform non-destructive edits, meaning that when an edit is performed a new asset is created and does not overwrite existing data. Instead of overwriting any data on the VTP, a new set of pointers within the VTP project file (.vtp) point to the location of the new content without destroying the existing data. This functionality, coupled with VTP versioning tools (using QuRemote) allows multiple versions of the VTP to exist without requiring the physical duplication of content or assets.

Creation of a Virtual Tape (VTP)

Image quality and the video format are determined by the VTR tape format in a traditional post facility. The tape cassette defines how much running time you have available. But with QuVIS video servers, these are all *settings* you can specify that define a *virtual tape*.

Once a virtual tape is created, you may select it and play it just as if it were a blacked videotape of that length. Until clips are dubbed (recorded) into the VTP, no space on the servers drive volume has been used. The VTP is a "blank tape" containing only electronically generated black video and timecode, awaiting content.

Edit a Virtual Tape

A Virtual Tape is edited in a manner similar to editing a videotape: using an editor controller you dub segments into the virtual tape just as you would dub video segments to a tape deck. Currently, you cannot use pre-existing clips in a virtual tape; they must be dubbed (recorded) into the virtual tape through an edit session.

Contents of a Virtual Tape

A Virtual Tape consists of four main elements: VTP file (.vtp), a project directory having the same name as the VTP file, a timeline file and media asset files.

Virtual Tape File – The virtual tape file (.vtp) contains the settings or clip properties (image format, SNR, audio form, etc.) of the virtual tape and the list of edits (inpoints and outpoints) and their media file assets (stored in the project directory) that have been made to the Timeline.

Project Directory – The VTP project directory is used to store all video and audio media file that are created each time an edit is performed.

Timeline File – The VTP timeline file (auto.tl), stored in the project directory, is a compiled system file that is automatically generated or updated each time the virtual tape is edited or played. The timeline file is similar to the virtual tape file but has been compiled and optimized to provide the system with a low-level view of the virtual tape timeline required for fast access and edit execution.

Note: The auto.tl file is only used by the local video server and may not moved or copied to another directory location. If the auto.tl timeline file does not exist within the VTP project directory, the system will automatically generate a new one.

Media Asset Files – Each time an insert or assemble edit (video and/or audio) is performed on a Virtual Tape a media asset file or clip is created and stored within the VTP project directory. The virtual tape keeps track of the placement of these files on the project timeline.

Virtual tape clips are always of the QMF2/expanded variety, meaning that each clip is stored as a set of *related assets*. For example, if you create a VTP name Project and record a clip with four tracks of clustered audio, the directory structure would look like the afterward (sample names only):

```
Clips (dir)                          Parent directory
           Project.vtp               Virtual tape file
           Project (dir)             Virtual tape project directory
                 Auto.tl             System binary timeline file
                 Edit_112304_123047.v First video clip asset
                 Edit_112304_123047.a Audio cluster file
```

```
Clips (dir)                          Parent directory
           Project.vtp               Virtual tape file
           Project (dir)             Virtual tape project directory
                 Auto.tl             System binary timeline file
                 Edit_112304_123047.v First video clip asset
                 Edit_112304_123047.a01 Recorded audio track(s)
                 Edit_112304_123047.a02 Recorded audio track(s)
                 Edit_112304_123047.a03 Recorded audio track(s)
                 Edit_112304_123047.a04 Recorded audio track(s)
```

Virtual Tape Properties

- The *format* of the VTP (including image size, frame rate, SNR, MDR, QMF, audio sampling and audio form) is determined by the AV record settings (defined on the **RECORD** menu pages) when the virtual tape is created.

  The edit controller controls the settings for individual edits. This includes the edit decisions for audio and video in and out points for each edit.

- The only audio settings that apply to virtual tapes are *bit depth* and *sample rate*. The number of audio channels (tracks) does not apply because VTP's always have the maximum 12 channels available to them at all times. In most cases, the number of audio channels supported by the editor controller determines the number of audio channels that may be recorded into a virtual tape.

  Unlike a collapsed clip, a virtual tape does not have a fixed number of audio tracks (channels). This is the reason why the EDIT menu page does not show the number of audio channels for a VTP. The number of audio tracks dubbed from the source material to a virtual tape may change on an edit-by-edit basis, as the video editor chooses. Therefore, VTP's always have anywhere from 0 – 12 audio channels at any time. It is up to the editor to determine which tracks receive audio, and how audio is routed, during the editing process. Audio received on a specific channel during editing will play out on the same channel for playback.

- Virtual tapes run for the exact length of time specified when they are created. Unlike videotapes that typically run slightly longer than their stated length, virtual tapes do not contain any "padding". If your projects tend to run long, it may be advisable to create a longer virtual tape than you think you'll need.

- Editing virtual tapes can create "leftover" clips.

  During the course of creating and editing a virtual tape you may decide to dub over an existing segment that was previously recorded. This results in partial or total clips that remain the Virtual Tape directory but which are not used in the final project. With videotape, recording over a section of the tape replaces the previous footage. With a virtual tape, you are simply recording a new clip into the VTP directory, and the VTP project file (.vtp) is keeping track of the fact that it replaces a previous clip that belonged there. The system does not automatically remove unused segments, so you may wish to keep an eye on your disk usage if you make many changes. Also, while unused segments do take up space on the disk array (volume), they do not take up time on the virtual timeline since they are not an active part of the virtual tape project.

- When you play a .vtp file from the GUI, you are in effect playing the virtual tape project (with all edits that have been performed up to that point).

- Select a video asset (a ".v" file) in a virtual tape directory and press PLAY to play the clip without its original audio tracks. Playing the video asset will only play the video.

- Select an audio asset (a ".a" or ".a0x" file) in a virtual tape directory and press PLAY to play that audio file separately from its video and audio siblings (the other file belonging to the same asset group).

Create a Virtual Tape

The QuVIS Encore's GUI is designed to make virtual tape creation simple and efficient. Once you've created a virtual tape, you may begin dubbing footage to it either locally or remotely.

1. Navigate to the EDIT – VTP Dest menu page.

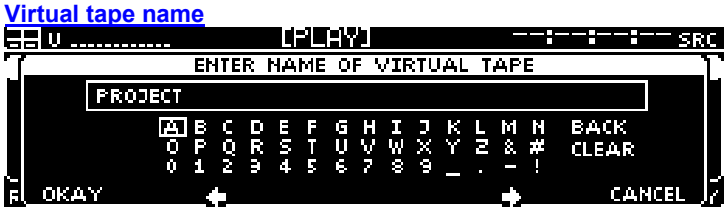
2. Before you begin to create a virtual tape, make sure that the current recording settings on are correct for the material you will be working with.

To display a quick view of the current record settings press the *soft* button labeled **A/V Summary**.

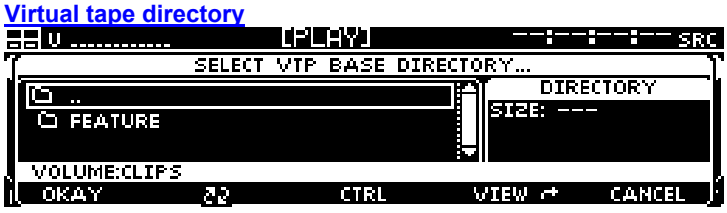
If you need to modify the record settings, you can quickly jump to the RECORD menu pages by pressing the *soft* button labeled **REC Settings**. Once you have made the appropriate changes return the EDIT – VTP Dest menu page to continue VTP creation.

3. On the EDIT – VTP Dest menu page, enter the following information:

Virtual tape name

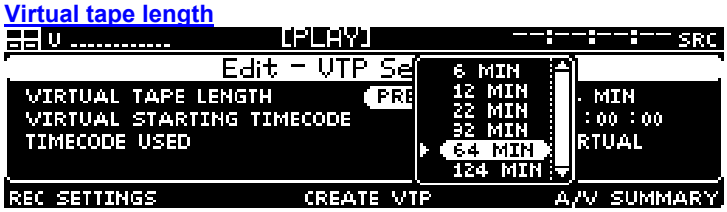


Virtual tape directory

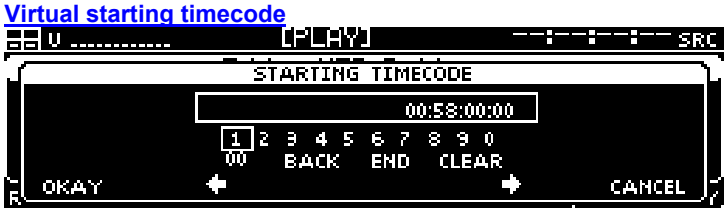


4. Navigate to the EDIT – VTP Settings menu page and enter the following information:

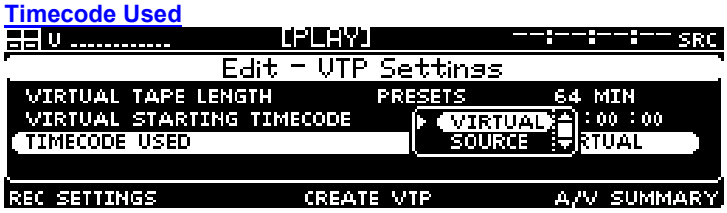
Virtual tape length



Virtual starting timecode



Timecode Used



5. When all settings are correct, press the **Create VTP** button at the bottom of the menu page. This will create the virtual tape project file (.vtp) and project directory. Now you may proceed to edit this virtual tape.

Edit a Virtual Tape

To remotely edit a virtual tape, follow the steps below.

Requirements

- QuVIS Encore with one or more virtual tapes already created
- Edit controller supporting the Sony 9-pin serial protocol, connected to the Encore via RS-422 cable.
- Video and audio input/output connections

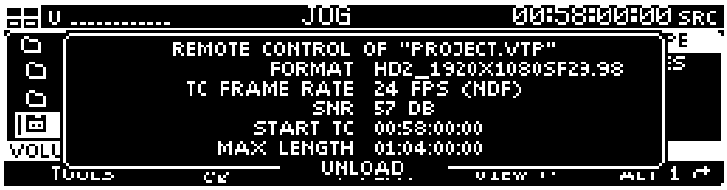
1. Navigate to the **REMOTE - Control** menu page and turn on the RS-422 *Sony* serial protocol.

2. Navigate to the PLAY – Browser menu page and switch to the ALT2 *soft* button view. To activate remote control, press the REMOTE button.

Note: This will also change the control playstyle to **Load (Remote Control)**.

3. Switch the *soft* button view back to ALT1. Navigate the directory structure and select the virtual tape file (.vtp) you wish to edit.

4. Press the *soft* **PLAY** button on the front panel. A message box will appear indicating that the selected virtual tape is under remote control.



The QuVIS Encore and the virtual tape are now under the remote control of your edit controller.

Insert Edit into a Virtual Tape from the GUI

This feature enables one to locally record (edit) into a Virtual Tape (VTP) from the front panel GUI in a process similar to locally recording on a VTR.

Requirements

- Virtual Tape
- Video and/or audio source and appropriate connections

1. From the **PLAY – Browser menu** page, select the virtual tape file (.vtp).
2. Change the playstyle to *Play Jog/Shuttle* and begin playback by pressing the *soft* PLAY button.
3. Using the Jog/Shuttle wheel and transport buttons, locate the TCV timecode inpoint (inclusive) for the record session and PAUSE on that position.
4. Navigate to the **RECORD – Control** menu page. Press the **SETUP** button to arm the system for an insert edit. The transport status on the dashboard will change to [VTP – INSERT] to indicate that the system is in a VTR insert record wait state.
5. Once the system is armed for the local insert edit, final changes to the record settings, such as selecting the number of audio channels to be recorded, may be made if needed.
6. Press **RECORD** to begin recording onto the virtual tape.
7. Press the **STOP** button to end the insert edit. Once recording has stopped, the system will automatically place the virtual tape under Jog/Shuttle play control at the end of the recording that was just made. The newly recorded assets are now available for playback.
8. If additional recordings are required, repeat steps 3 – 7.

Merge Virtual Tapes (QShell)

The edits of two Virtual Tapes may be combined to create a “superset” VTP using the QShell command line utility, *VTPMerge*. *VTPMerge* enables one to edit video and audio in separate workflows and then combine them later into a single Virtual Tape.

A third virtual tape file (.vtp) is created as a result of the merge process. The “superset” VTP file points to the location of the assets of the source virtual tapes but does not duplicate their assets. Deleting either the source VTP’s or their respective assets will corrupt the “superset” virtual tape.

Requirements

- Two virtual tapes with the exact same settings (length, video format, etc.)

Recommendation

If the two virtual tapes were edited on different servers, all of the assets of both virtual tapes should be located in the same parent directory on the same volume. This might require that at least one virtual tape file (.vtp) and its project directory will need to be copied to the same parent directory of the other virtual tape.

If the virtual tape containing audio edits are transferred from another server using a removable drive and if those assets are not copied to the same parent location of the virtual tape containing the video edits, anytime the removable drive is removed, the “superset” VTP becomes inoperable. Storing the assets of both virtual tapes in the same parent directory will help maintain the integrity of the “superset” VTP.

Merge Virtual Tapes

These steps assume that the source virtual tapes and their assets (project directory and media files) are located in the same parent directory.

1. Open a QShell command line session (RS-232 serial or Telnet).

2. Change the working directory to the parent directory containing both source Virtual Tape files (.vtp).

   Example: Volume:>*cd project/vtp*

3. To create a Merged Virtual Tape use the following command template:

   VTPMerge <source VTP> [<source VTP>] <destination VTP>

   Example:

   Volume:project/vtp>*vtpmerge source1.vtp source2.vtp superset.vtp*

   Note: If the destination file already exists, this tool will fail unless the **–replace** option is specified. For more details, see *VTPMerge* command usage in the **QShell Command Reference Manual**.

Virtual Tapes – Sync'ing Audio and Video (QShell)

The *VTPMerge* utility may also be used to synchronize audio to video. Audio timing may be adjusted within a single virtual tape file or may be done while merging two virtual tapes. In either case, the result is a new virtual tape file. If the timing is not quite right, the operation may be performed as many times as needed without creating multiple copies of the project asset files.

Adjust Audio Timing (Single VTP)

To adjust the timing of all audio events in a VTP (but leave video events intact), specify just one source vtp.

VTPMerge <source VTP> <destination VTP> <Avsync vTC aTC>

Example:
Volume:project>*vtpmerge source.vtp new.vtp AVSync 01:00:05:00 01:00:08:12.00*

In this example, the audio events beginning at 1 hour, 8 seconds and 12 frames are moved to a new position on the virtual tape – 1hour, 5 seconds.

Adjust Audio Timing (Multiple VTPs)

To adjust the timing or placement of merged audio assets on the virtual tape timeline, specify both source virtual tape files and use the *AVSync* parameter to identify the appropriate audio adjustment. The first virtual tape file should be the video source VTP and the second source virtual tape file should be the audio source for the merge operation.

VTPMerge <source VTP> <source2 VTP> <destination VTP> <AVSynce vTC aTC>

Example:
Volume:project>*vtpmerge video.vtp audio.vtp av_new.vtp AVSync 01:00:05:00 01:00:08:12.00*

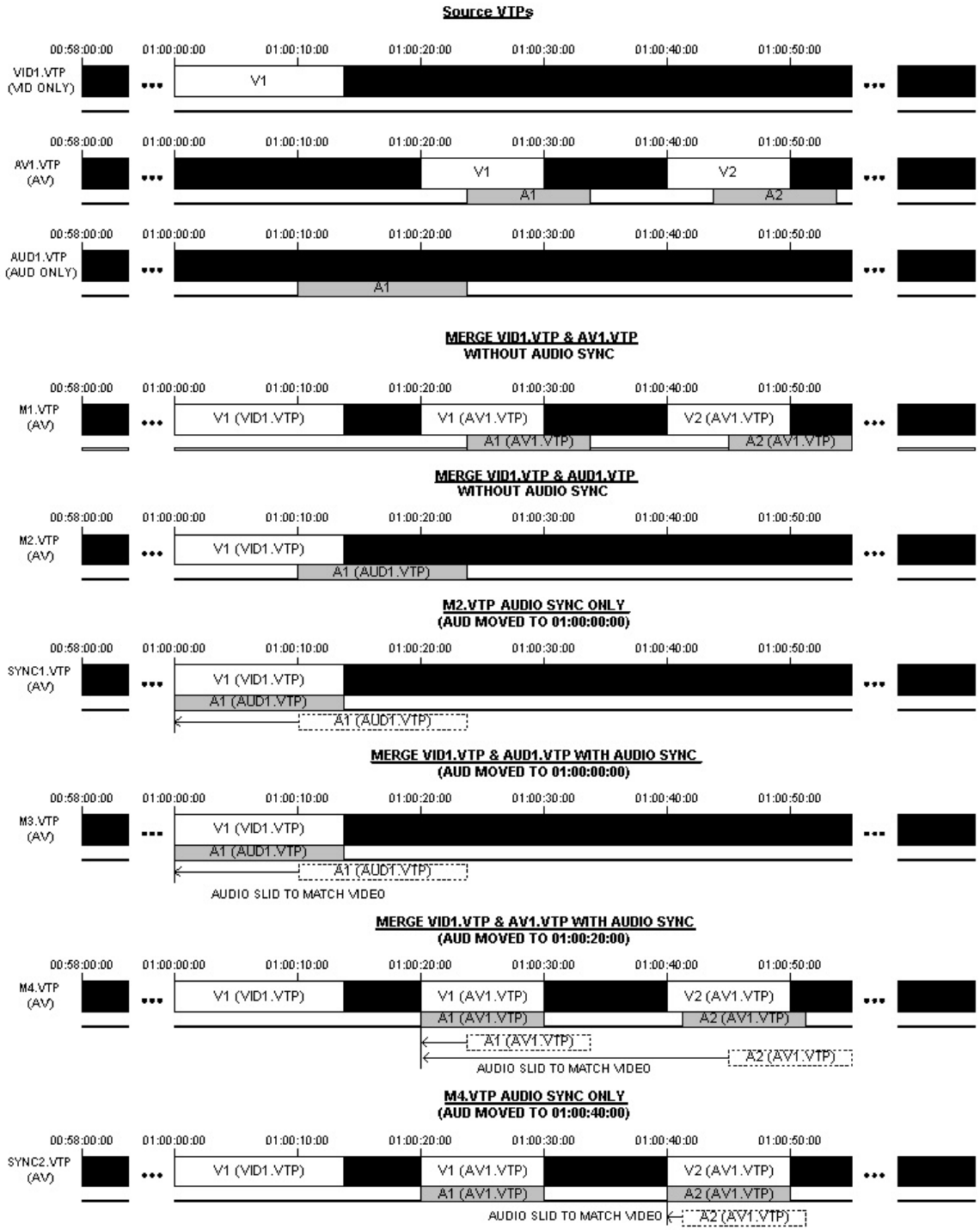
In this example, the incoming audio edits (from audio.vtp) will be placed on the virtual tape at 1 hour, 5 seconds instead of their original position (within the audio.vtp file) of 1 hour, 8 seconds and 12 frames.

VTPMerge Notes

- The TC specified for an AVSync operation is the virtual tape timecode (vTC) value.
- The .xx notation for fractional frame time is only valid for audio timecode (this is sub-frame access) and may be omitted if no fractional time is required (.00 is assumed).
- If the destination virtual tape exists, the operation will fail unless the **–replace** option is specified.
- It is permissible (although not recommended) to specify one of the source VTP files as the destination VTP.

Graphical *VTPMerge* Examples

The following is a graphical depiction of both virtual tape merging and audio synchronization operations. The timeline represents a timecode-based section of the virtual tape.



CHAPTER 7 – COMMAND LINE OPERATIONS

Information in this chapter includes:

QShell Overview

QShell is the command line interface or shell that may be used to communicate with and control the Encore using a PC, edit or show controller. This command interface is a powerful tool used for diagnostics and advanced functions that are not available from the front panel menu system.

The QShell interface is always available on RS232 port A (9-pin connector) located on the front of the Encore to the right of the power button. To communicate with RS-232 devices, you will need a RS-232 “null modem” serial cable.

Alternately, a QShell session may also be remotely loaded or accessed using a Telnet terminal program on a PC. In this case, only network connectivity between the PC and the Encore is required.

Command History

The QShell maintains a 20-line history buffer. By using the keyboard up/down arrow keys, you can browse through the past 20 commands that have been entered on the command line.

For this feature to work, the ANSI terminal must send sequences in response to keyboard up/down arrow keys. Typically this requires VT-100 terminal emulation.

TIP: Use the **TAB** key to complete paths and file names. While typing in a file name, type in the first couple of characters and then press the TAB key. If there are multiple files with the same prefix, keep pressing the TAB key until the desired file is auto-completed.

Command Types

There are three general types of commands that may be executed from the command line interface: internal commands, software modules and batch files.

System commands - Allow you to perform built-in functions like copying a file or listing the contents of a directory. Available internal commands are listed when you use the *help* command. The *help* command does not list executable software modules or batch files.

Software modules – Software modules are actually small utility programs that can be run from the command line. System software modules are located in the *sys/mod* directory. You do not need to include the .mod file extension when invoking one of these commands. Available software modules and their usage is covered in Appendix C.

Batch Files- Batch files are text files with a “.bat” file extension. Generally these files are placed in the *user/bat* directory. Batch files may contain any command that you would use at the QShell, including internal commands, software modules and other batch files. Additionally, batch files may be executed from the front panel menu system for custom applications.

Note: RS-232 and RS-422 serial connections are not used to transfer data between the QuVIS Encore and your computer or network; they are used for remote control of the Encore only. An Ethernet connection is required used for data transfers operations.

QShell via Serial Connection

1. Connect one end of the 9-pin null modem cable to serial port A and the other connector to the serial port on your computer. Serial port A is located on the front of the QuVIS Encore to the right of the power button.

2. Start the terminal application on the PC. On a Windows® computer, HyperTerminal is installed as part of the operating system and is a good choice.

3. If this is your first time connecting to a QuVIS Encore or other QuVIS video server via the serial port, you will likely need to create a connection profile for the terminal application.

   The settings of the terminal program must match the serial settings of the QuVIS Encore. If you are unsure of the current setting, navigate to the **SETUP – Serial** menu page to review the settings.

   The factory default settings for the RS-232 serial port A are as follows:

   - Baud (bits per second) – 38400
   - Data bits – 8
   - Parity – None
   - Stop bits – 1
   - Flow control – None

4. If everything is connected and configured properly, you can access the QShell command line by pressing the ENTER (on PC) button. This will display a system prompt allowing you to enter commands.

   Example command prompt:

   ```
   Volume:>
   ```

QShell via Telnet Connection (Advanced)

Before you can establish a Telnet session, you will need to know the IP address of the QuVIS Encore you wish to connect to. This section assumes that networking between the QuVIS Encore and the PC has been properly configured and established.

1. Start your Telnet client and start a new connection.
2. Provide the QuVIS Encore's IP address in the method required by the Telnet client software.
3. If the connection is successful, a remote QShell session will be opened and a command prompt will be displayed ready to accept commands.

QShell Basics

When controlling the QuVIS Encore from a shell interface, it's helpful to be able to "ask" what your available choices are when you cannot recall them. The QShell command line interface has several levels of built-in help, as described below. For additional information on command usage, see the document entitled **QShell Command Reference Manual**.

How to Get Simple Command Help

At the command prompt, type *help* and press Enter. The system will display all available commands, like this:

```
Volume:>help
   Assign            Info              Queue             Stop
   Auth              Jog               QQdownload        Temp
   CD                List              QQupload          TimeCode
   Clock             Log               Record            Timeline
   ClipTC            Login             Recover           Type
   Comment           Logout            RecStat           Unmount
   Config            Mirror            Ren               VarSpeed
   Copy              MkDir             RenVol            Ver
   Del               Mount             SerCtrl           Volutil
   Dir               Net               Set               Wait
   Encrypt           Path              Shell             WhatIs
   Exit              Play              Show              Which
   GetTC             PlayScript        Shuttle
   ?                 Print             Stat
   Help              PWD               StopClip

Volume:>
```

How to Get Detailed Command Help

Enter most any command name and QShell will display a template of how that command may be used, as well as any options.

```
Volume:>play
Usage: Play <name> [[<inpoint>] <frames>] [<options>]
Options: LOOP, QUEUE, ASYNC, SYNC, SHUTTLE, NOAUDIO, STATS,
         HOLD, AUTOMODE, AUTOTRACK, SPEED x/x
         TrigLTC|TrigInt <hh:mm:ss:ff>
         TrigSys <hh:mm:ss>
         SrcTC, AbsTC, AbsTC+<hh:mm:ss:ff>
```

Note: For some commands, such as *dir* or *stat*, which may be invoked with or without command line options, this will execute the command itself.

QShell Advanced Operations

Detailed information on QShell command usage can be found in the **QShell Command Reference Manual**.

CHAPTER 8 - INSTALLING SYSTEM SOFTWARE

Information included in this chapter:

QuVIS Soft Release (QSR) Overview

QuVIS periodically publishes software updates, called a QuVIS Soft Release (QSR), which may update the target QuVIS product with new features, enhancements or bug fixes. There are three types of software releases: Major, Point and Flash. Licensing for a Major software release may need to be purchased before the software update may be installed. Optional hardware upgrades may also be required in order to gain access to all of the new features introduced in the new release.

Major Soft Release

This type of soft or software release will include new features and/or functionality. An updated Software License is required before the new release may be installed. QuVIS products currently enrolled in QuCare are automatically eligible for free major software release upgrades and license.

A hardware upgrade(s) may be necessary to gain access to some of the new features. Those features that are hardware dependent will not be fully accessible until an appropriate hardware upgrade has been completed. Other features or functionality not dependent upon new hardware will continue to work as expected.

Point Soft Release

A Point QSR release is a maintenance update to the current software release version and will provide bug fixes and occasionally minor new features or enhancements. A point release is notated by a third value in the version number (QSR 3.1.x).

Flash Soft Release

A Flash release is an update to the embedded system software that controls the startup and loading of the operating system (OS) of the QuVIS Encore.

IMPORTANT! QuVIS Soft Releases (QSR's) are specific to QuVIS video server models. For instance, a QuVIS Acuity software release may not be loaded on a QuVIS Encore video server.

Installing New System Software

1. Obtain the QSR software from Customer Support or download the QSR file(s) from the QuVIS *Support* section of our website (http://www.quvis.com/).

2. Use an FTP program to transfer the update files to the *release* directory on the QuVIS Encore's primary system volume.

3. Open a serial or telnet shell, cd (change directory) to the */release* directory. To install the update type:

   `Getrls newfilename (use the actual file name in place of newfilename).`

4. Restart the system and test the new release to ensure compatibility.

   > ***TIP:*** You may reset the Encore by typing the *RESET* command from QShell.

5. Once the new software release has been successfully installed and the server's power reset, it is recommended that you save a new config file with your system preferences as new settings may have been added to the new software release. For more details on saving system settings from the front panel GUI, see Chapter 5 - Modifying Configuration.

Troubleshooting

To protect you from installing software that can corrupt your installation and data, QuVIS update software has a built-in failsafe feature. If you inadvertently install a software update that is not supported by your hardware or product model, the QuVIS Encore will refuse to play. The QuVIS Encore will also refuse to install the software update if the system is not properly licensed for that particular release. Contact technical support for assistance in restoring the correct software release.

Restoring a Previous Software Release

If for any reason the update contains a bug, or you suspect that a feature is not working correctly following an update, it is easy to restore the previously loaded software release.

1. Open a QShell session via serial or Telnet.

2. Rename the current *sys* directory to *sys_unload* (or some other unused directory name).

3. Then rename the *old_sys* directory to *sys*.

4. Reboot the system.

   > ***TIP:*** From QShell you can issue the *ver rls* command to display the version number of the currently installed system software. You can also view this information on the **SETUP – Information** menu page.

QuVIS Encore Video Formats v3.1

	Active Image Format	Frame Rate	Interlaced (I), Progressive (p), Segmented Progressive (sf)	Format File Name	Standard SMPTE/VESA	Aspect Ratio	Pixel Rate (MHz)	Video Interfaces					Record Parameters Active & Vert.		Format File Short Name
								Digital In	Digital Out	Analog In*	Analog Out**	Sync Type	X	Y	
Windowed	1280x1026	24	P	hd2w_1280x1026p24	274M Window		74.25	Ser	Ser	NO	YES	Tri-level, Ext H&V	1280	1026	w1026p24
	1280x1026	23.98	sF	hd2w_1280x1026sF23.98	274M Window		74.175	Ser	Ser	NO	YES	Tri-level, Ext H&V	1280	1026	w1026sF23.98
Video 4:2:2	720 x 486 (NTSC)	29.97	I	sd1_720x486i59.95	259M/CCIR601	4:3	13.5	Ser	Ser	NO	YES	Bi-level	720	508	NTSC
	720 x 576 (PAL)	25	I	sd1_720x576i50	259M/CCIR601	4:3	13.5	Ser	Ser	NO	YES	Bi-level	720	608	PAL
	1280x720	60	P	hd2_1280x720p60	296M-1	16:9	74.25	Ser	Ser	NO	YES	Tri-level, Ext H&V	1280	740	720p60
	1280x720	59.94	P	hd2_1280x720p59.94	296M-2	16:9	74.175	Ser	Ser	NO	YES	Tri-level, Ext H&V	1280	740	720p59.94
	1920x1035	60	I	hd2_1920x1035i60	260M-1	16:9	74.25	Ser	Ser	NO	YES	Tri-level, Ext H&V	1920	1036	1035i60
	1920x1035	59.94	I	hd2_1920x1035i59.94	260M-2	16:9	74.175	Ser	Ser	NO	YES	Tri-level, Ext H&V	1920	1036	1035i59.94
	1920x1080	60	I	hd2_1920x1080i60	274M-4	16:9	74.25	Ser	Ser	NO	YES	Tri-level, Ext H&V	1920	1108	1080i60
	1920x1080	59.94	I	hd2_1920x1080i59.94	274M-5	16:9	74.175	Ser	Ser	NO	YES	Tri-level, Ext H&V	1920	1108	1080i59.94
	1920x1080	50	I	hd2_1920x1080i50	274M-6	16:9	74.25	Ser	Ser	NO	YES	Tri-level, Ext H&V	1920	1108	1080i50
	1920x1080	30	P	hd2_1920x1080p30	274M-7	16:9	74.25	Ser	Ser	Reference only		Tri-level, Ext H&V	1920	1108	1080p30
	1920x1080	29.97	P	hd2_1920x1080p29.97	274M-8	16:9	74.175	Ser	Ser	Reference only		Tri-level, Ext H&V	1920	1108	1080p29.97
	1920x1080	25	P	hd2_1920x1080p25	274M-9	16:9	74.25	Ser	Ser	Reference only		Tri-level, Ext H&V	1920	1108	1080p25
	1920x1080	24	P	hd2_1920x1080p24	274M-10	16:9	74.25	Ser	Ser	Reference only		Tri-level, Ext H&V	1920	1108	1080p24
	1920x1080	23.98	P	hd2_1920x1080p23.98	274M-11	16:9	74.175	Ser	Ser	Reference only		Tri-level, Ext H&V	1920	1108	1080p23.98
	1920x1080	30	sF	hd2_1920x1080sF30	274M-12	16:9	74.25	Ser	Ser	NO	YES	Tri-level, Ext H&V	1920	1108	1080sF30
	1920x1080	29.97	sF	hd2_1920x1080sF29.97	274M-13	16:9	74.175	Ser	Ser	NO	YES	Tri-level, Ext H&V	1920	1108	1080sF29.97
	1920x1080	25	sF	hd2_1920x1080sF25	274M-14	16:9	74.25	Ser	Ser	NO	YES	Tri-level, Ext H&V	1920	1108	1080sF25
	1920x1080	24	sF	hd2_1920x1080sF24	274M-15	16:9	74.25	Ser	Ser	NO	YES	Tri-level, Ext H&V	1920	1108	1080sF24
	1920x1080	23.98	sF	hd2_1920x1080sF23.98	274M-16	16:9	74.175	Ser	Ser	NO	YES	Tri-level, Ext H&V	1920	1108	1080sF23.98
	2048x1080	59.94	I	hd2_2048X1080I59.94	DCinema		74.175	Ser	Ser	NO	NO		2048	1108	DCi59.94
	2048x1080	24	P	hd2_2048x0180p24	DCinema		74.25	Ser	Ser	NO	NO		2048	1108	2048p24
	2048x1080	23.98	sF	hd2_2048X1080sF23.98	DCinema		74.175	Ser	Ser	NO	NO		2048	1108	DCsF23.98
	2048x1080	24	sF	hd2_2048x1080sF24	DCinema		74.25	Ser	Ser	NO	NO		2048	1108	DCsF24
	2048x1080	25	sF	hd2_2048X1080sF25	DCinema		75.25	Ser	Ser	NO	NO		2048	1108	DCsF25
	2048x1080	30	sF	hd2_2048X1080sF30	DCinema		75.25	Ser	Ser	NO	NO		2048	1108	DCsF30

Reference Only = SMPTE recommends using these mode signals as serial digital only, or as analog sync reference only.

QuVIS Encore™ Back Panel

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