

CoroWare

VRE-200-NLE User Guide

**CoroWare, Inc.
4056 148th Ave. NE
Redmond, WA 98052 USA**

United States: **1 (800) 641-CORO (2676) or (425) 818-8990**

United Kingdom: **0870 446 2676**

Europe: **+44 870 446 2676**

Fax: **1 (800) 641-2676**

CoroWare VRE-200-NLE (2010 Professional NLE Version)

Thank you for purchasing the CoroWare VRE-200. This version of the system combines the recording capabilities to capture CoroWare/Vidyo conference sessions, with a professional non-linear editor (NLE) software package capable of producing high quality SD/HD video movies tailored to your specific output requirements.

1.0 VRE-200-NLE Computer System

The computer hardware platform has been customized with the following specifications:

OPERATING SYSTEM • Genuine Windows® 7 Home Premium 64-bit
PROCESSOR • AMD Phenom™ II 925 Quad-Core Processor (SPEED • 2.80GHz)
CHIPSET • AMD 785G Chipset
MEMORY • 8GB PC3-10600 DDR3 SDRAM memory (4x2048MB)
PRIMARY OS HARD DRIVE • 1Terabyte Serial ATA hard drive
RAID HARD DRIVE • 1Terabyte: two (2x): SATA3, 500Gb, 16Mb buffer, 7200rpm
ARCHIVE HARD DRIVE • 1Terabyte SATA3 16Mb buffer, 7200rpm
OPTICAL DRIVE(S) • SuperMulti DVD Burner with LightScribe Technology
VIDEO GRAPHICS • ATI Radeon™ HD 4350 with 512MB dedicated graphics
NETWORK INTERFACE • 10/100/1000Base-T network interface
WIRELESS CONNECTIVITY • Wireless LAN 802.11a/b/g/n(19)

MONITOR • 20 inch widescreen LCD, 1600x900, 5ms, vga/dvi input

ADDITIONAL AUDIO CARD • Creative Soundblaster, PCIE, 1x slot, digital/analog I/O
ADDITIONAL HEADSET: generic headphone with microphone, analog I/O
ADDITIONAL WEBCAM: Logitech 9000 HD webcam (optional)

1.1 VRE-200-NLE Computer Software

The computer platform selected is capable of capturing, editing, and multiple encoding a CoroWare Vidyo conference. In addition the NLE software (Sony Vegas 9) includes the 'Sony DVD Architect' application if you want to produce/distribute a DVD.

SOFTWARE: Sony Vegas 9 (NLE), with DVD Architect
SOFTWARE: Microsoft Expressions Encoder
SOFTWARE: Microsoft Win9 Media Encoder

The primary capture software application is performed by the 'Microsoft Expressions Encoder'. It provides the highest quality video screen capture with the state-of-the-art compression needed to accommodate lengthy recording sessions (one hour or more).

The legacy capture software 'Microsoft Win9 Media Encoder' (deprecated June 2010) is archived on the computer, for those wishing to deploy the older version of the screen capture software. This encoder was not installed as a part of the VRE-200-NLE system,

It is strongly recommended that the VRE-200-NLE use the most current encoder version (Microsoft Expressions Encoder) to remain up to date with support, implementation and updates provided by Microsoft.

The 'Sony Vegas 9' (NLE) was chosen due to its excellent handling of all WMV codec specifications produced by the current 'Microsoft Expressions Encoder', as well as the legacy 'Microsoft Win9 Media Encoder'

The 'Sony Vegas 9' application provides a layer of additional capabilities for the production of video programs requiring alternative output video codices, text and graphic overlays, special effects, expanded audio tools, and expanding the video output parameters for television, HD-DVD and Internet distribution.

Computer manufacturer provided optional software (such as the trial anti-virus subscription application) was not installed, leaving that decision to the system's user/owner.

1.2 VRE-200-NLE Computer Hard Drive Allocations

The VRE-200-NLE computer is configured with three (3) hard drives:

- | | |
|----|---|
| OS | Primary Operating System (OS), 1Terabyte <ul style="list-style-type: none">▪ Microsoft Windows 7 operating system▪ VRE-200 subdirectory; software utilities, information and programs▪ Provides alternative storage for program and user files▪ NOTE: some programs may automatically deposit capture files, data and program files on this hard drive in the '<user>/documents' or 'program files' directory, unless specifically directed to another drive/directory location. This a standard operating feature of most windows-based applications. |
|----|---|

As a best-practice, the user should specify the application's output file (target drive/directory/file-name) to the WORK hard drive, whenever possible. This practice will aid in the general workflow of capturing and editing video output files, as well as keeping the OS hard drive clean of un-wanted files.

- | | |
|------|---|
| Work | Capture and Editing target area, Raid 0 (zero), 1Terabyte <ul style="list-style-type: none">▪ Provides fastest disk access speeds necessary for VRE-200 performance▪ Can temporarily storage several capture and in-progress NLE projects▪ IMPORTANT: To maintain optimal disk access speeds, the Raid hard drive should not be more than 50 percent (%) full at any one time. The reason is that disk access performance will start to noticeably decrease as disk usage capacity reaches 75 percent and more.▪ IMPORTANT: The Raid 0 (zero) configuration has the fastest disk access performance, but DOES NOT PROVIDE FOR DATA RECOVERY if the disk-set fails or is corrupted. |
|------|---|

As a safety precaution, copy any important data files that require a backup copy to the ARCHIVE hard drive.

- | | |
|---------|----------------------------|
| Archive | General Storage, 1Terabyte |
|---------|----------------------------|

- Provides archival and backup file storage for capture and NLE project files
- For extended archive capabilities, the user/owner should copy and/or move archival files to an external hard drive, such as a USB or FireWire hard drive of their choice.
- As with the additional storage capacities of OS hard drive, the user/owner can use this storage area as needed

These hard drives can be renamed as the user/owner's wishes. The user/owner may also modify the computer system (for example, add more hard drives) as they determine necessary for their future usage.

1.3 VRE-200-NLE Computer Component Options

Included with the base computer system:

- USB Headset with microphone. This is used to monitor the recording session as well as provide the recording engineer a way to communicate with the session participants
- HD high-quality sound card (separate from the audio component built into the motherboard). This audio card provides for advanced NLE audio options, particularly digital I/O. It is not required for capturing a video teleconference, but may be used with the Sony Vegas NLE as needed.
- USB HD web camera. This is not required for recording a video conference, and has not been installed in the base VRE-200 system. It is provided to give the user/owner a web camera option if they wish.

All video conference recordings can be successfully conducted using the USB Headset, alone. The HD soundcard and web camera are included to allow the user/owner options for future expansion.

1.4 VRE-200-NLE Computer System Summary

The VRE-200-NLE is configured to allow the user/owner the capability to capture CoroWare Vidyo conference session in excess of one hour duration. The system has been tested capturing a four (4) hour recording file without video drop-outs or hardware/software failure. Although this is an extreme test condition (4 hours of continuous recording) and not likely to occur during normal recording conditions, it does indicate that the system has such a capability.

The VRE-200-NLE provides for conference recording and for professional video editing, as two separate applications on one system platform. This is intended to provide the user/owner a future path to expand their video production goals to meet requirements specific HD, DVD and WEB based video distributions within their organization.

Initializing all hardware and software components during the system build process, that require authorization and/or registration have been made in the owner's name, wherever possible. There may be further authorization/registration requirements by the manufacturer that the owner should complete as needed.

The name brand components used in the VRE-200-NLE system (Microsoft, Logitech, Sony) can provide direct support to the owner for their registered products.

CoroWare can also provide appropriate support for hardware and application components. Please contact your CoroWare Sales Team member for more information.

2.0 VRE-200 Workflow: Video Recording and Encoding

Recording a CoroWare Vidyo conference session is the primary use of the VRE-200.

The VRE-200 uses the 'Microsoft Expressions Encoder Screen Capture' as the primary video capture application. Built into the application is a configurable screen capture utility, optimized for quality and file-size, using the Microsoft XESC codec. This capture file (XESC) is then encoded into a WMV file using the Expressions Encoder. This WMV video file can now be viewed using the Windows Media Player, edited within the Expressions Encoder application and/or imported into an external NLE application (Sony Vegas) for extended editing capabilities.

The 'Microsoft Expressions Encoder' exports a new video codec named VC1 which has a qualitatively better resolution than previous Microsoft encoder options, with major support for HD scaling, and adopted by several major movie studios as one of their preferred formats in their distribution networks.

The 'Microsoft Expressions Encoder' supercedes the 'Microsoft Win9 Media Encoder' which will no longer be actively supported by Microsoft as of June 2010. If a backwards compatibility issue occurs, such as needing to provide distribution to outdated Microsoft players/platforms (Windows 98, Windows 2000, etc), a copy of the 'Microsoft Win9 Media Encoder' is currently available, and requires the user/owner to locally install. Preliminary tests by CoroWare have shown that both encoder applications can co-exist on a Windows 7 operating system. In the event that future Windows 7 updates or service packs interfere with either application's stability or usability, it is strongly recommended that the different encoder applications be separated onto two separate computer platforms.

Before any recording can proceed make sure the USB Headset is plugged in and functioning.

The USB Headset needs to be plugged in
The USB Web Camera is NOT plugged in (not needed)

2.1 Overview of the Microsoft Expressions Screen Capture Application

These tutorial sections assume the VRE-200 user/owner has a basic knowledge of using the Windows 7 user interface, drive/file directory system, launching applications and so forth.

OVERVIEW #1 : Start the Expressions Encoder Screen Capture
(this tutorial will be using the current 'Encoder 3' version)

GOAL: Understanding the Expressions Encoder 3 Screen Capture Interface

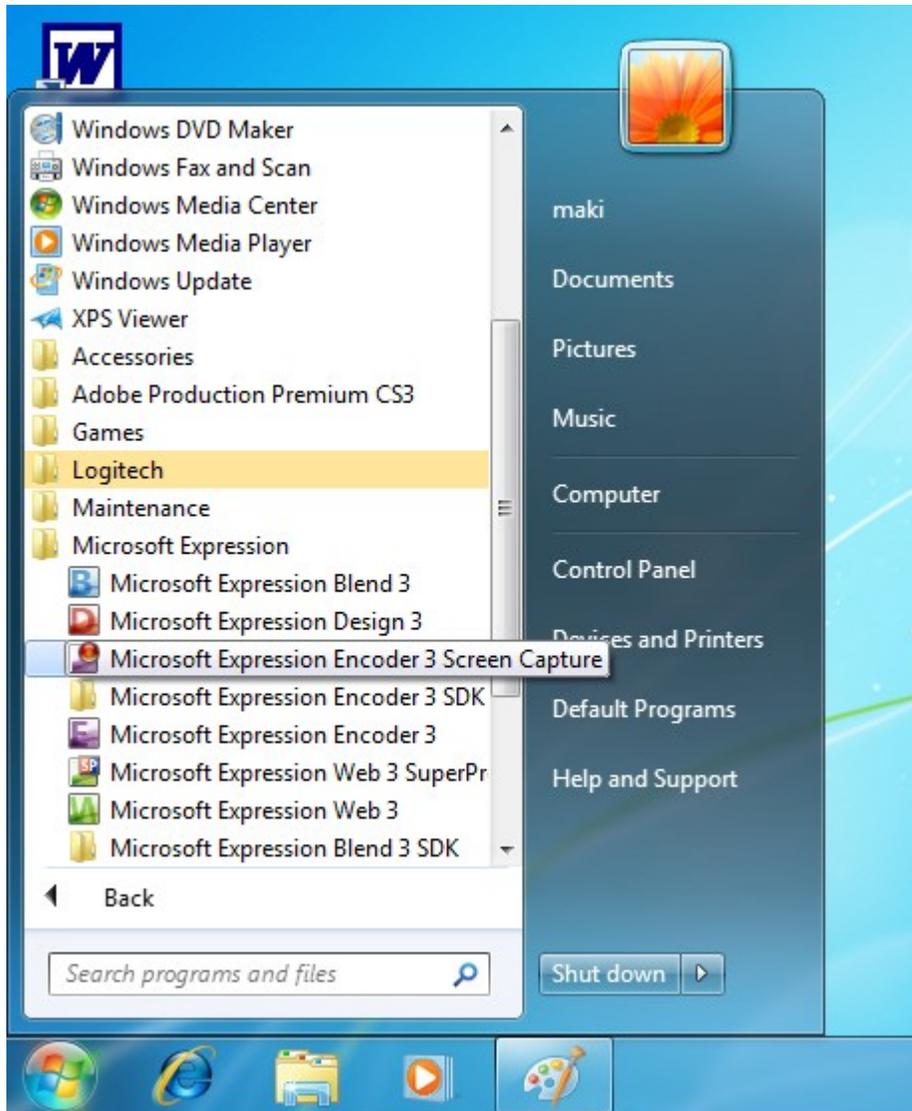
Launch the application:

<START>

<All Programs>

<Microsoft Expression>

<Microsoft Expression Encoder 3 Screen Capture>

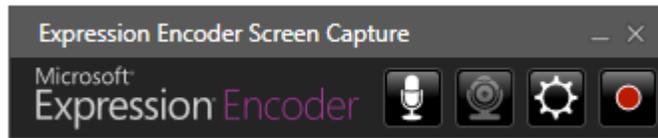


You will now see the Expression Encoder Screen Capture icon in the applications bar at the bottom of your screen:



For ease of use, a recommended practice is to create a desktop shortcut of the Screen Capture application. A similar icon will be placed on the desktop.

You will now see the following application on the desktop:



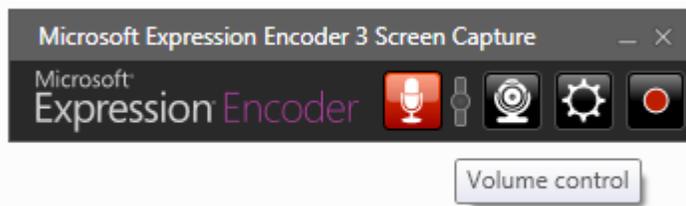
The four buttons on the encoder application are (left to right):

- Audio On/Off (Microphone via the USB Headset)
- Web Camera On/Off
- Edit Options (set recording options here)
- Start Recording

NOTE: If the associated device (audio-microphone or web-cam) is plugged in and functioning the button icon will be white. In the example above the microphone is correctly recognized, but the web-cam is grayed out, because we do not have one connected.

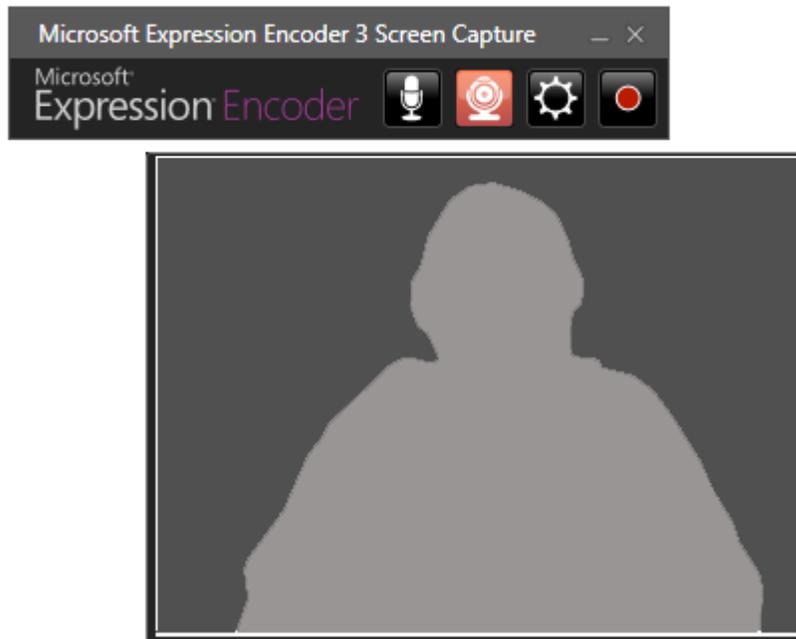
The Microphone and WebCam buttons are a push-on / push-off toggle. When they are in the ON state, they will be colored RED, as below:

AUDIO BUTTON: (click the first button from left)



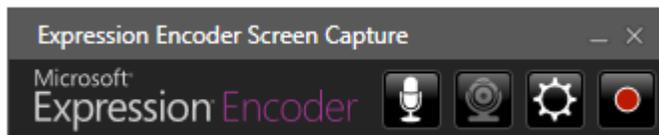
The audio-microphone reveals a small volume control (slider) when it is activated. This controls the microphone volume of the recording engineer's headset. Adjust this control to a pleasing level when communicating with other conference session attendees.

WEB CAMERA BUTTON: (click the second button from left)



If we did have a web-cam connected, a video window would appear similar to above

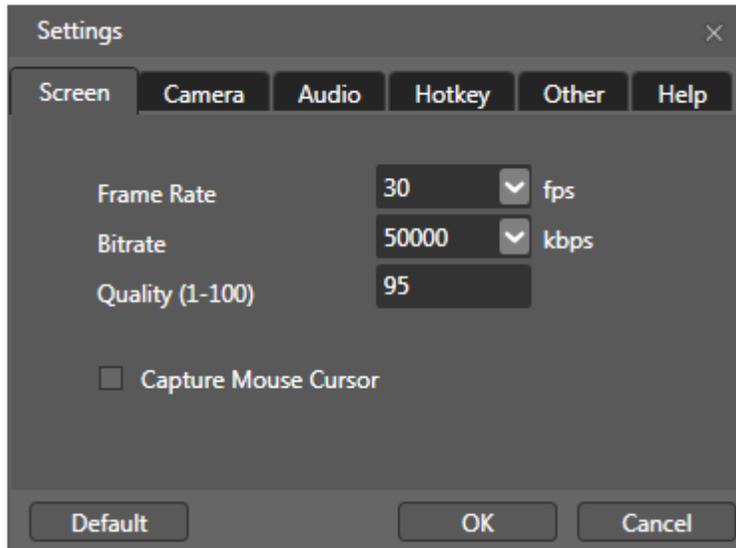
EDIT SETTING BUTTON: (click the third button from left)



Before ANY recording is started, set the correct options:

- a) make sure that you are getting the best resolution according to your requirements
- b) the application default settings at start-up may not be what you want
- c) some else before you, may have changed the settings

A tabbed dialog box will appear:



SCREEN SETTINGS:

For highest quality resolution screen capture use the following:

- Frame rate = 30 fps
 - fps = frames per second
 - This is the standard for HD 720p video
 - You can lower the frame rate and make your output files smaller
 - A lower frame rate is acceptable for video that does not have a lot of motion or action, such as a lecture from a podium using a stationary camera or static PowerPoint slides
 - Only you can determine if a frame rate lower than 30 fps is acceptable to you audience viewing and distribution

- Bitrate = 50000 kbps
 - Kbps = kilobytes per second
 - This is the highest setting available
 - A lower value will make your output files smaller
 - Generally, a value between 5000kbps and 50000kbps is acceptable
 - As with frame rate, a lower value may be acceptable. Only you can make that determination according to your audience needs and distribution requirements

- Quality = 95
 - This is the default, which works well for screen capture
 - Adjusting this value will control the quality of the resolution during playback

- Capture Mouse Cursor = not checked
 - During screen capture of a conference, you do not want the mouse cursor on the VRE-200 showing in the captured video
 - Make sure this is NOT CHECKED

The SCREEN settings are the most critical parameters, influencing the quality/resolution of the overall capture and its output file size. The VRE-200 is capable of capturing at a very high resolution, and as such, the above screen-settings may be higher than what

you need for your actual video distribution or website requirements. If you want to use settings that are closer to the range of those needed by your distribution channel, make the changes in the following order of priority:

- 1) set the Bitrate lower: depending on the size of your final out resolution, start at 2000kbps and adjust upward
- 2) set the Frame Rate lower: 15fps is considered acceptable for multimedia playback for a small format, such as 320x240 pixels. Also 25fps is a good choice and is the standard used for PAL video standard (30fps is recommended NTSC video standards)
- 3) set the Quality lower. Generally values below 75 start to show video-encoding artifacts, particularly for capturing of fast-moving or action-type screens.

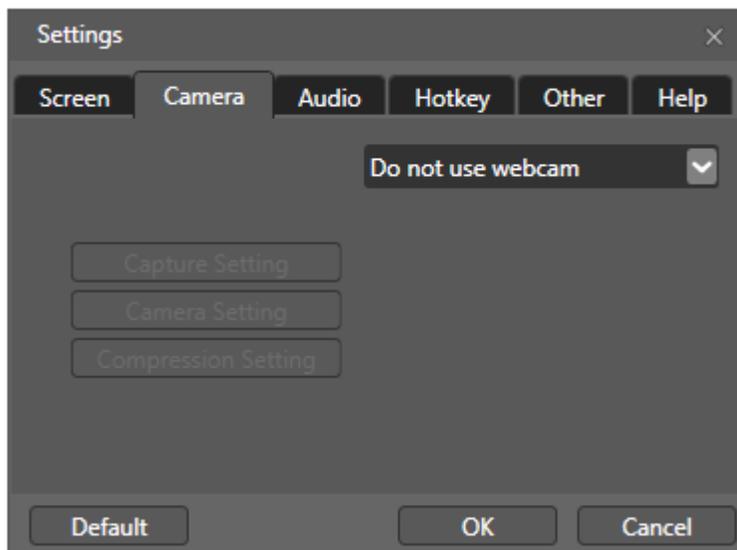
Whenever you change the SCREEN settings, conduct test recording to make sure that the quality and resolution of the output are acceptable to you and your audience.

IMPORTANT:

For HD productions, future encoding needs, and archival purposes, it is recommended that your video recordings are made at the highest, practical resolution. The goal is to maintain the highest quality in preparation for re-encoding to new platforms or changing distribution requirements or needing to re-use recordings for new projects.

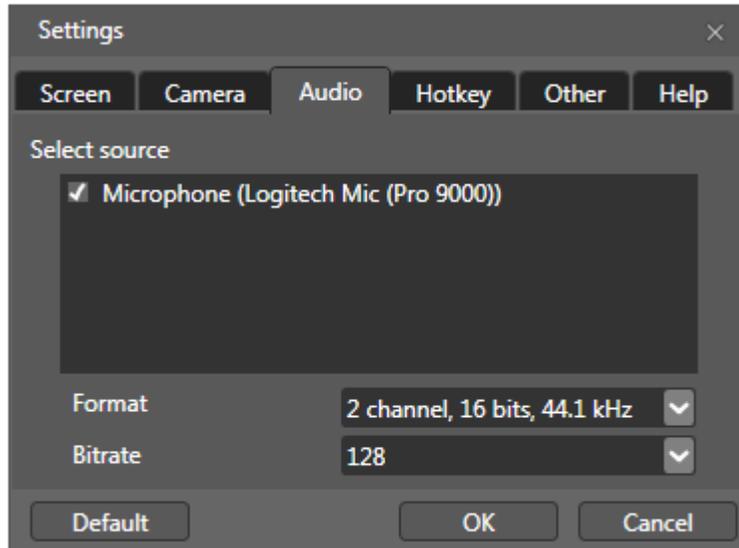
Generally speaking: Once a recording is made at a specific resolution/quality setting, that is the maximum quality the recording has to offer.

CAMERA SETTINGS:



Since the VRE-200 does not use/need a web camera as a part of its operation, this setting tab is grayed out.

AUDIO SETTINGS:



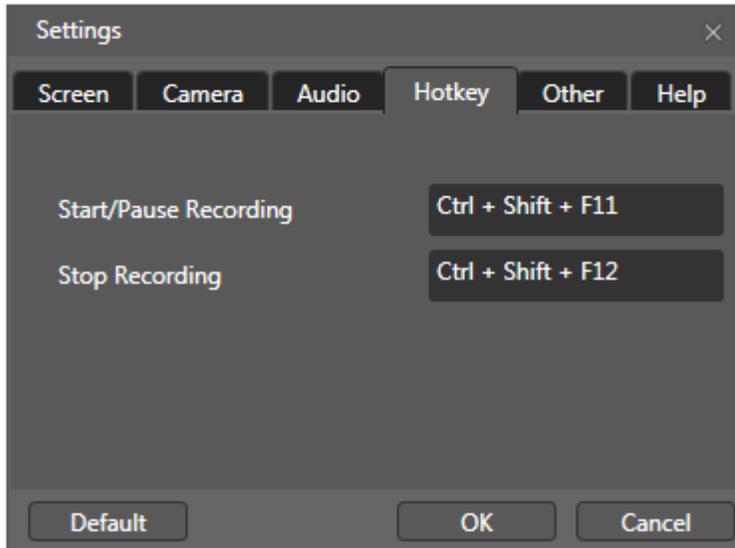
Select the appropriate microphone to use. This is used by the recording engineer, prior to and after the recording session, to communicate with participants in the conference session.

There may be more than one device to select. Make sure to select the 'Logitech Mic (Pro 9000)' which was included with the VRE-200 system.

The Format and Bitrate settings of the recording engineer's microphone are not critical because in most situations the engineers voice is not wanted in the actual session recording. The application's default values are adequate, but may not sound natural, due to compression artifacts. Increasing the values will produce better sound quality.

Since the recording engineer's microphone is not activated during the actual recording session (i.e. turned OFF), a setting similar to that in the above dialog box is acceptable, and does not impact the performance of the recording session.

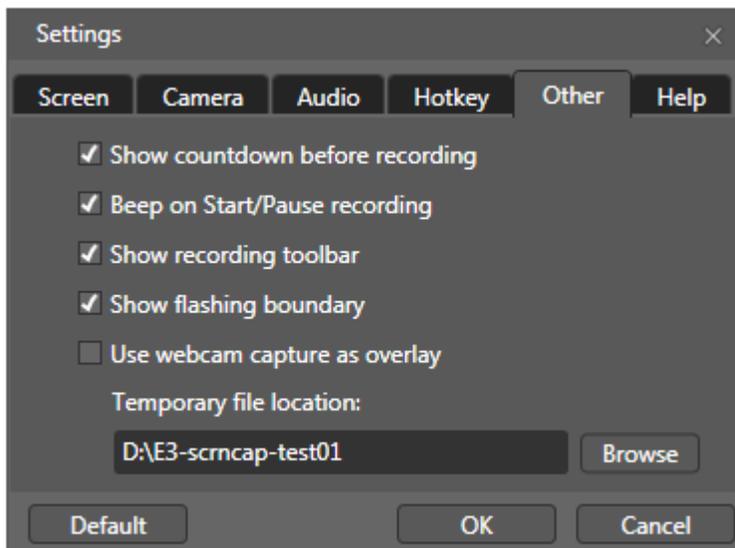
HOTKEY SETTINGS:



You can change the above short-cut keys to start/pause/stop the encoder recording state. Because more than one recording engineer will be using the VRE-200 at different time, it is highly recommended that the default value (Ctrl+Shift+F11 and Ctrl+Shift+F12) are used.

A good practice would be to place a label on the VRE-200 computer and/or keyboard with these hotkey short-cuts, to help the recording engineer remember them.

OTHER SETTINGS:

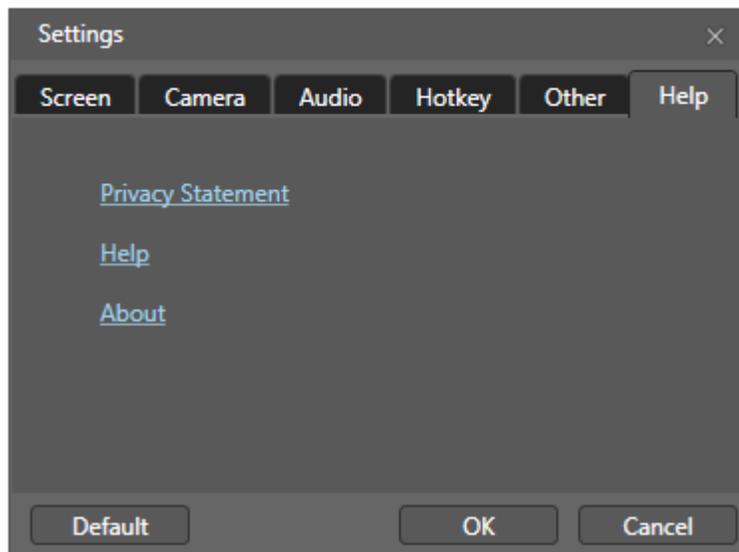


These settings are generally at the discretion of the user/owner. A recommended practice is to set the following:

- Show countdown before recording = checked = yes
- Beep on Start/Pause recording = checked = yes
- Show recording toolbar = checked = yes
- Show flashing boundary = checked = yes
- Use webcam capture as overlay = NOT CHECKED = no
- Temporary file location
 - Set this drive/directory location to the WORK/RAID hard drive
 - The WORK/RAID hard drive has the fastest disk access performance
 - The 'Browse' button will launch a windows standard file/folder dialog box
 - Make a new folder with a unique, appropriate name for the recording session
 - This location is where the encoder will write the XESC file

IMPORTANT: You do not need to create a new, individual folder dedicated to each particular recording session (a common folder location will work) BUT best practices recommends that you do. The goal is to keep all relevant files both intermediate (such as the XESC capture file) and encoded files (such as the encoded WMV files) in a single folder, per recording session, for ease of transfer, encoding, searching and archiving.

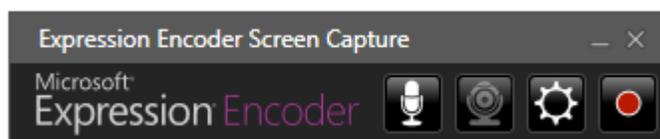
HELP SETTING:



This is the place to confirm the encoder version being used, as well as application help topics not covered by this document.

2.2 STEP #1: Recording with the Expressions Screen Capture Application

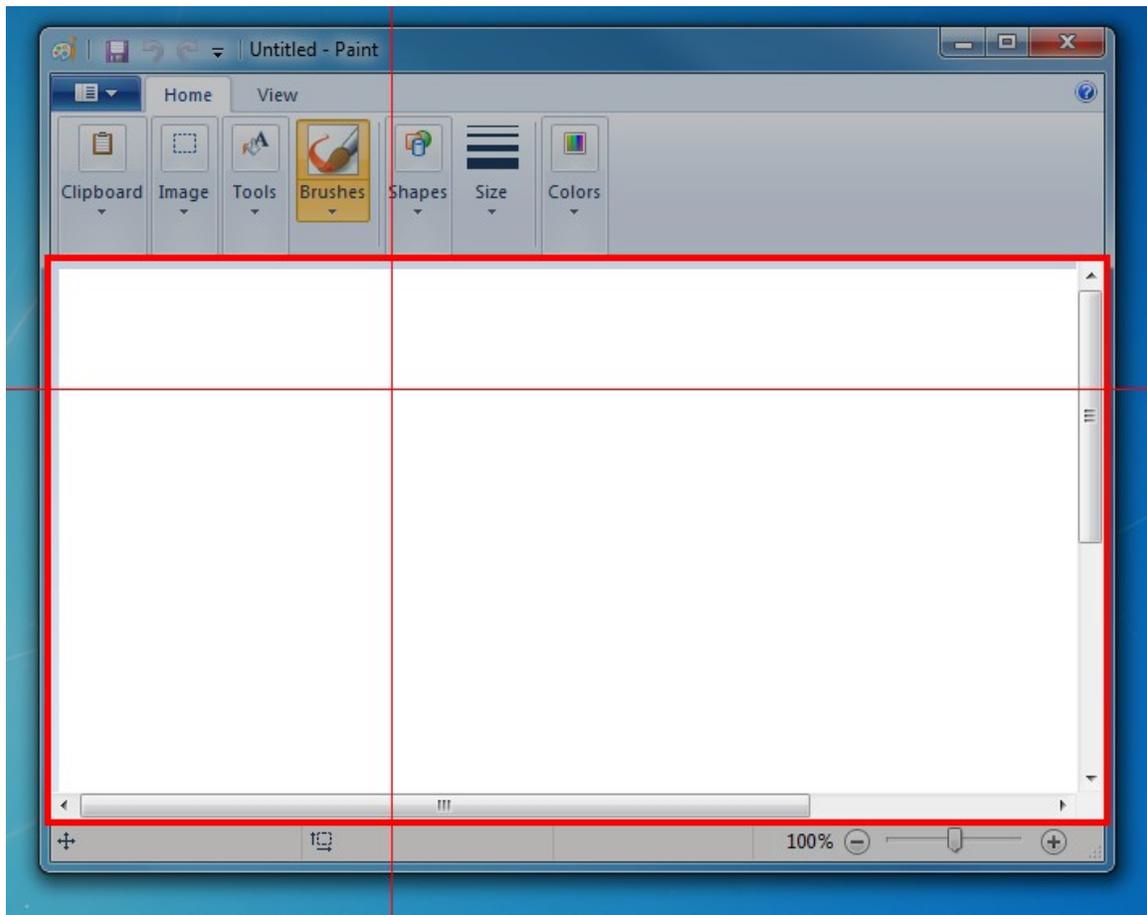
The next step, once the Screen Capture application settings have been reviewed and set, is to start the recording by clicking on the record button: (fourth button from the left) .



Performing the screen capture recording starts with the following sequence:

- 1) The portion of the computer screen for capturing is selected using a red cross-hair to target the corresponding red bounding-box. The user can use the mouse to select which portion of the screen to capture.

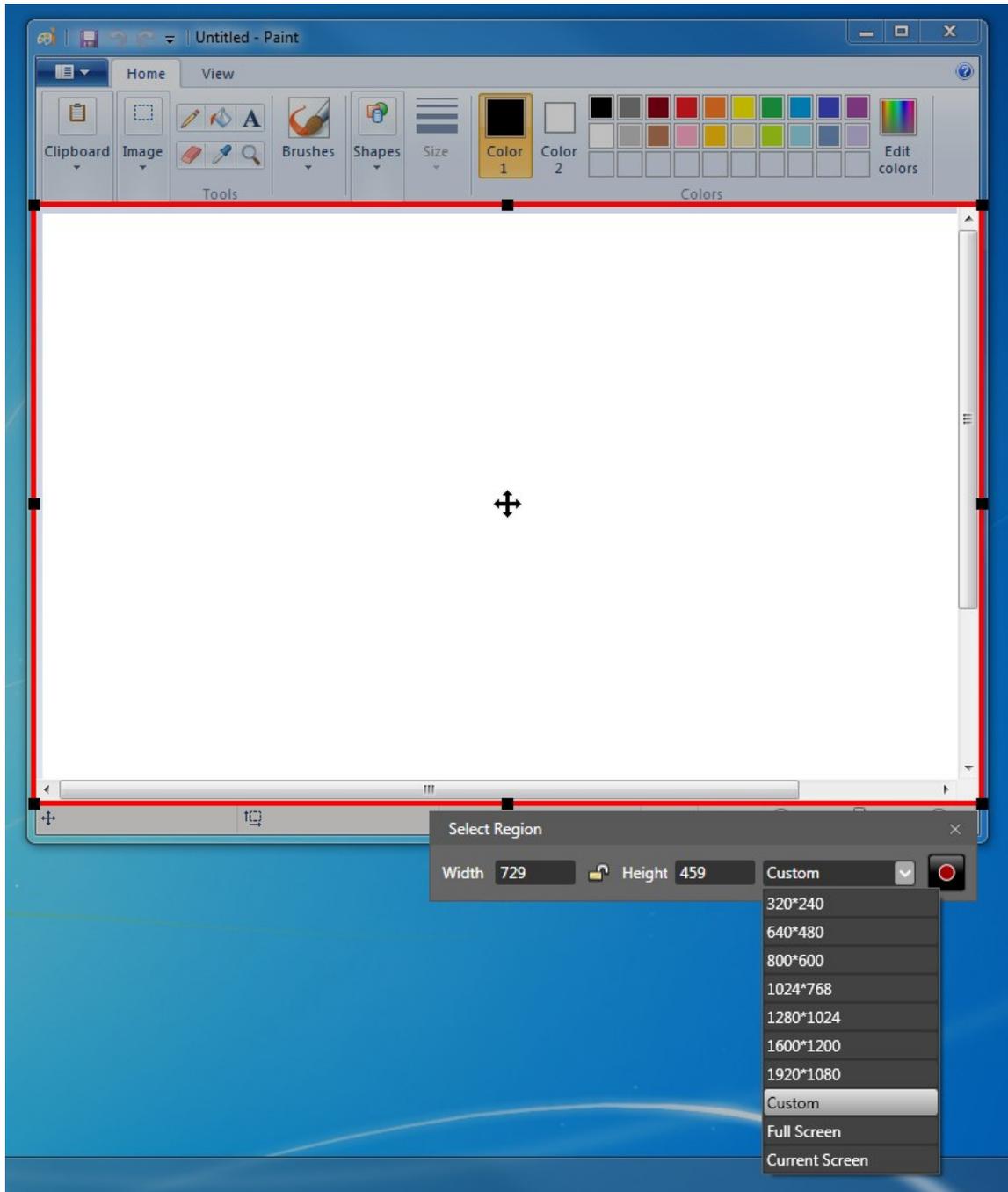
As the red cross-hair (mouse) moves around the screen, any currently visible applications, or a portion there of, are automatically surrounded by a red bounding-box



A selection is made when the user clicks the left button on the mouse.

The user can abort the record operation at any time by pressing the ESC (escape) button on the keyboard.

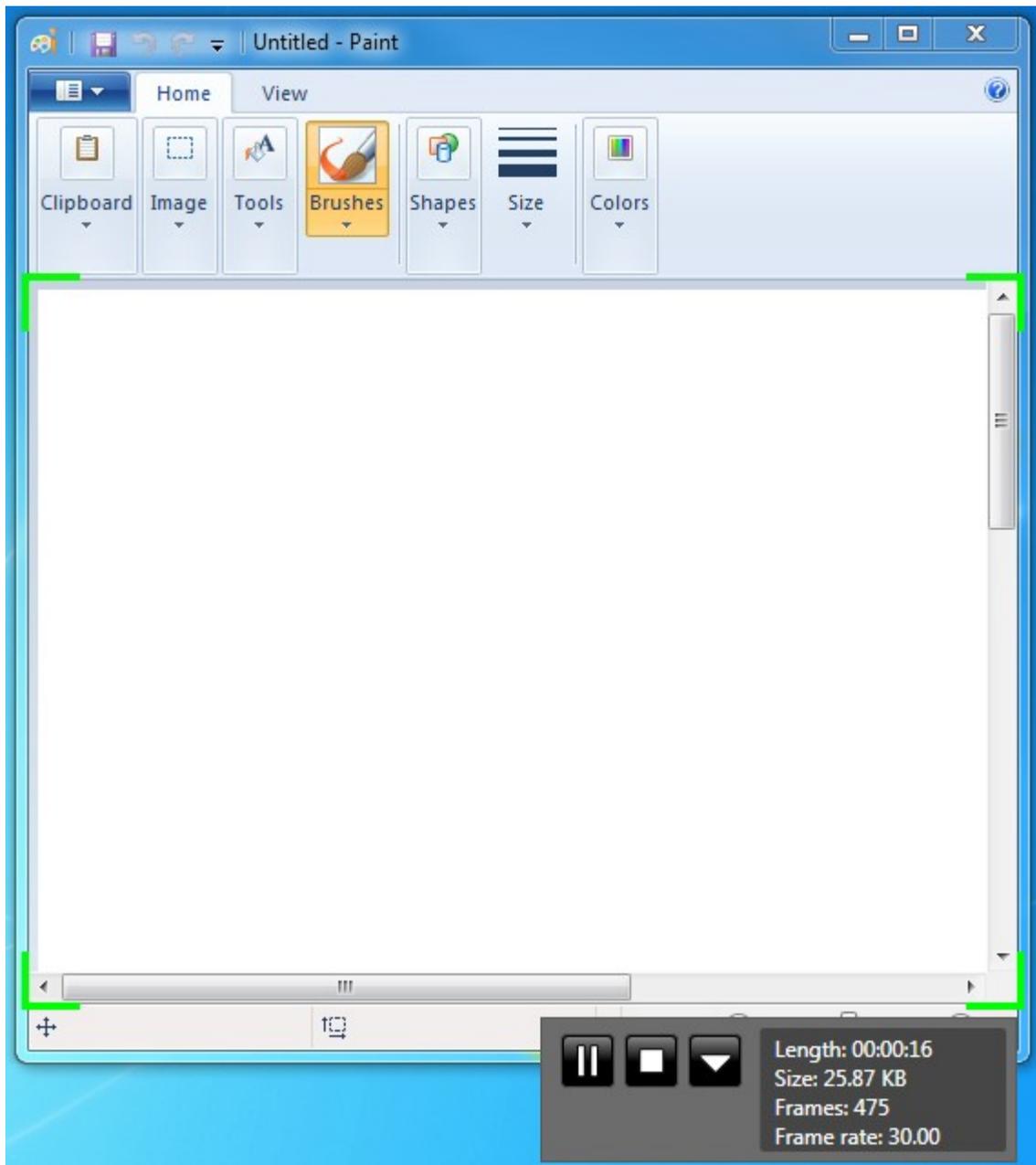
- 2) When a the screen capture area is selected the red cross-hair disappears and the screen capture dialog box appears



The user can adjust the screen capture area by

- Holding the Mouse over a black square that defines the bounding-box, holding the left mouse-button down and dragging the mouse
- Use the drop-down selector for common screen areas, Full Screen or Custom dimensions
- If 'Custom' is selected, than typing in specific numbers into the 'Width' and 'Height' data entry boxes in the 'Select Region' dialog.

To start recording, the user clicks on the Record button in the 'Select Region' dialog.



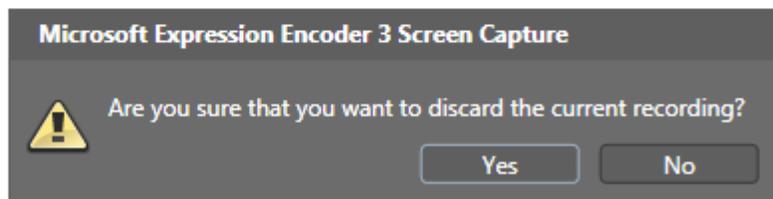
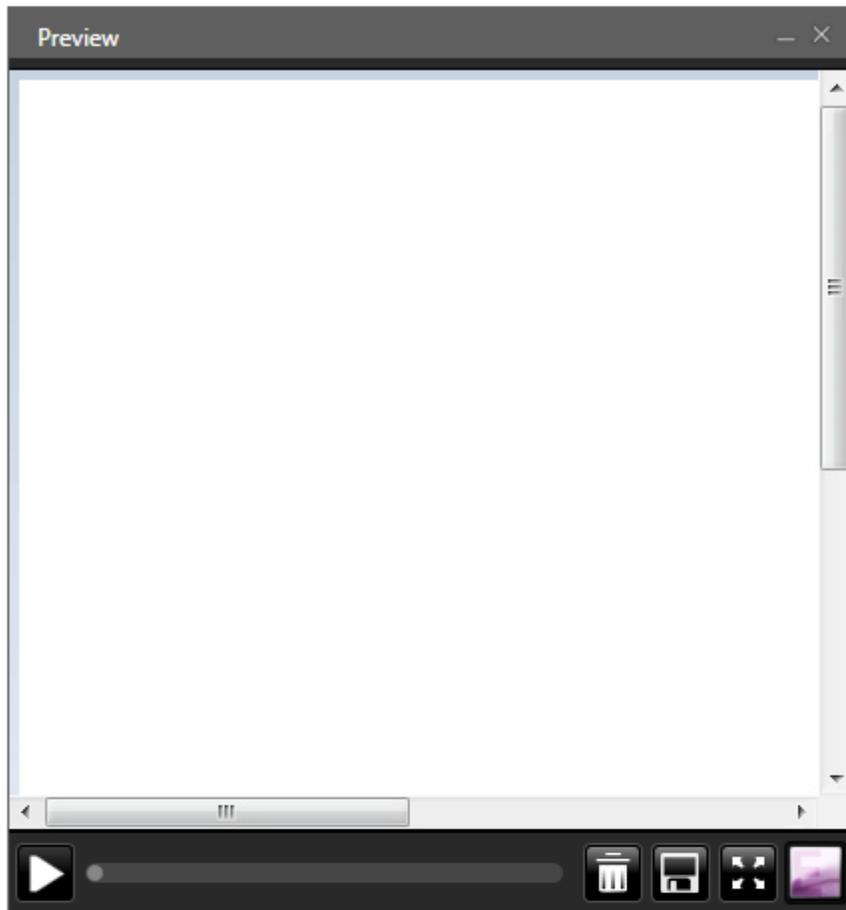
Using a large font, the screen capture program starts a countdown from three (3). When the countdown completes, the screen recording is in progress, noted by the flashing green corners of the bounding-box, and a small control panel with recording data updates as the screen capture runs.

The user stops the screen capture by either pressing Ctrl+Shift+F12 on the keyboard, or clicking the 'Stop' button on the control panel.

Alternately the user can pause and then continue the current recording session by pressing the Ctrl+Shift+F11 on the keyboard or pause/record buttons on the control panel

When the user stops the recording session a 'Preview' video player pops up so the user can review the captured video. The 'Preview' player, has a row of four (4) buttons at the bottom:

- Delete the current recording file and start another recording.
- Save the current recording file
- Enlarge the Preview play to full-screen
- Launch the Microsoft Expressions Encoder application



The above picture shows the 'Preview' player and a confirmation dialog box associated with the Delete button having been clicked.

The recording engineer can record multiple sessions and delay launching the Expressions Encoder to a later time. The encoder keeps a log of the record sessions for batch processing when it is launched.

As an indicator that one or more screen capture files are logged for encoding/conversion a new 'Encoder' button appears on the Screen capture application:



Launch Expression Encoder

Clicking the 'Encoder' button will exit the Screen Capture application and launch the Expression Encoder application, with the XESC files logged/loaded in.

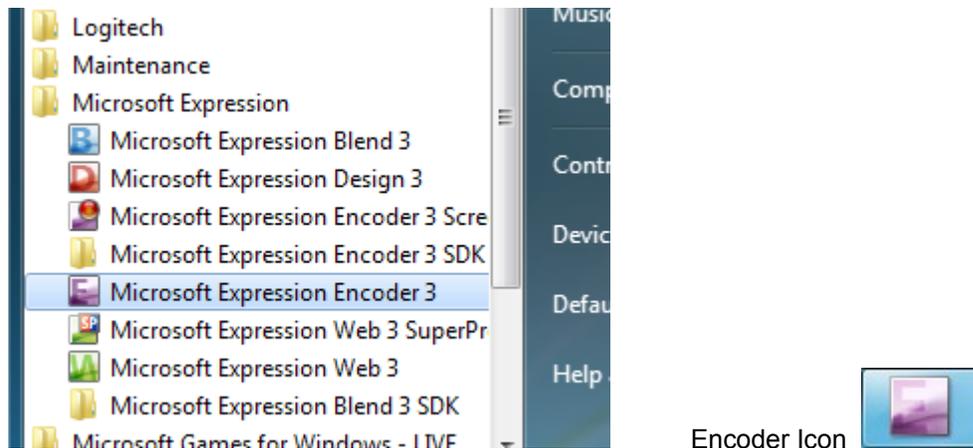
Alternately, the Screen Capture Application can be exited by clicking the 'X' at the top right corner.

The resulting screen capture file (XESC) is saved in the directory location you specified in the settings dialog, previously described.

2.3 STEP #2: Trimming the Video Capture with the Expressions Encoder Application

Now that the screen capture has completed, the next step is to trim the start and ending of the video of un-wanted video footage

Launch the Microsoft Expression encoder application, either from the START program menu or by clicking the Encoder button on the screen Capture application.



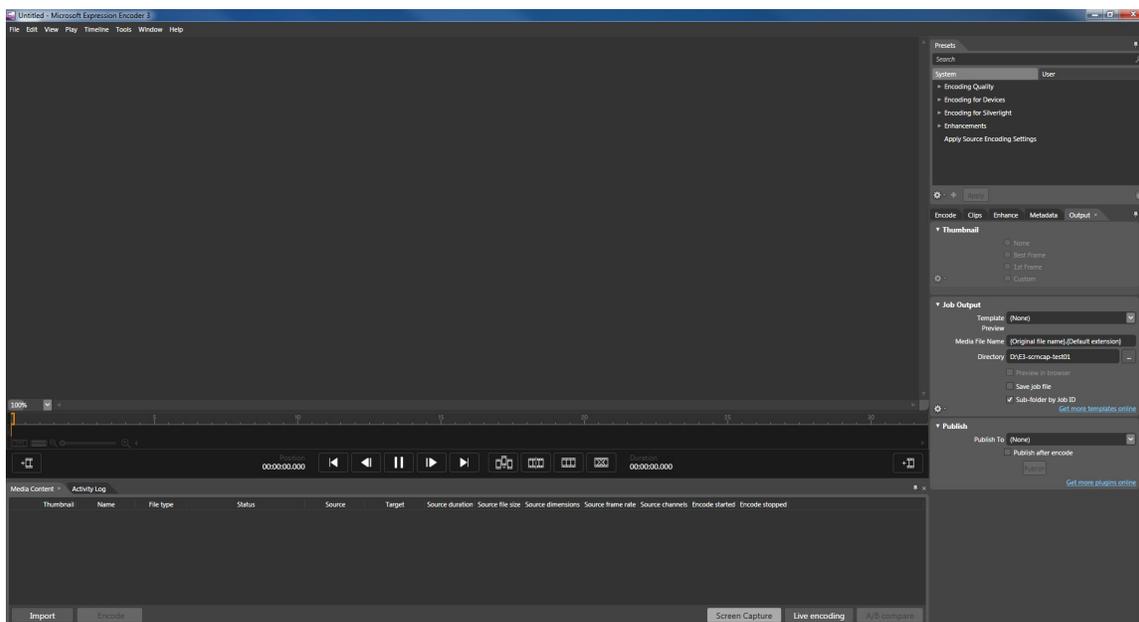
For ease of use, a recommended practice is to create a desktop shortcut of the Expression Encoder application.

A detailed description of the Expression Encoder options and features is better represented by the official Microsoft product User Guide and the Encoder's in-application Help.

This VRE-200 document will focus on a subset of the video format conversion parameters, specific to the CoroWare Vidyo conference screen recordings. The Microsoft Expression Encoder is capable of much more than what will be discussed here. Depending on your video production needs, the Expression Encoder may provide all necessary editing capabilities you need to start with.

Similar to the 'Settings' parameters discussed in the Screen Capture Application, these recommendations are an excellent starting point from which fine tuning and adjustments can be made.

A picture of the Microsoft Expression Encoder:

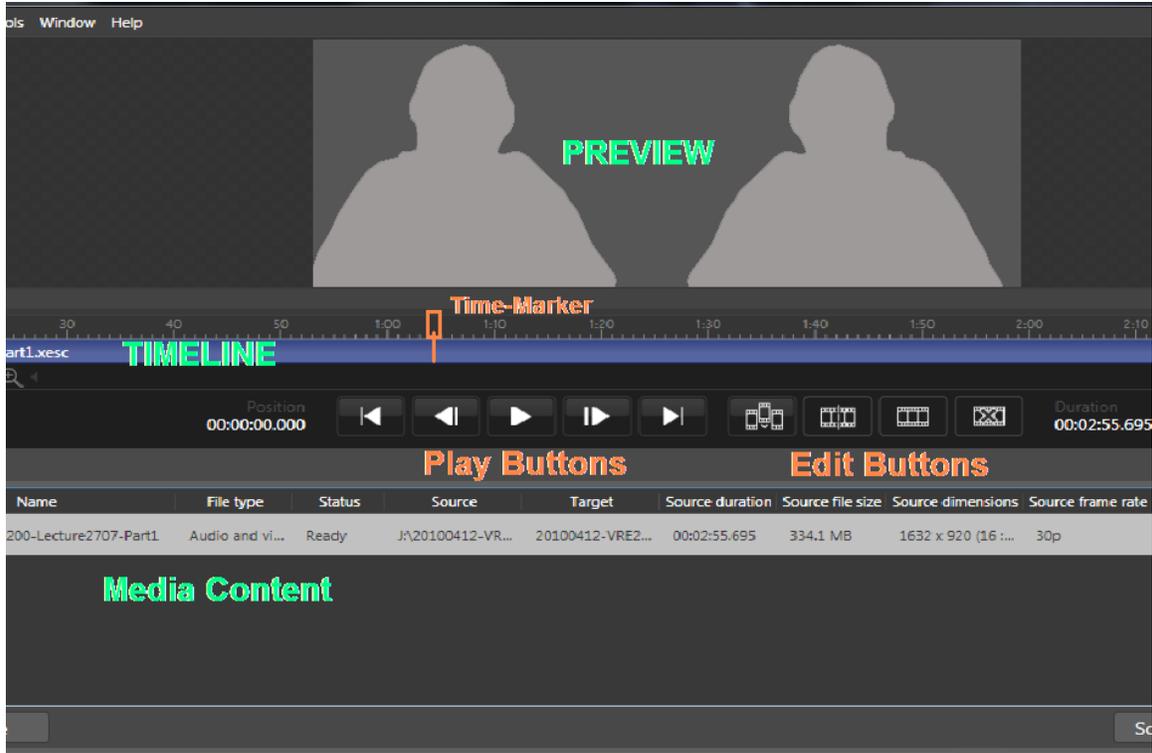


The goal of this tutorial is to import a screen capture file (XESC), trim the start and ending of the video to remove unwanted segments of the video, set some of the encoding parameters for the encoding process, and finally encode the capture into a video format (WMV) that can be played on an external Windows Media Player or edited with other NLE programs.

(STEP A) Use <File><Import> to import the XESC you want to convert (all Screen Capture files have the .xesc file extension)

The imported file will automatically be:

- Listed in the 'Media Content' tab-dialog
- Placed on the 'Timeline'
- Loaded into the 'Preview' window



Pressing the PLAY button will play the video in the Preview window. Also note the orange colored time-marker traveling from left-to-right in the TIMELINE, progressing as the video is played.

You can also mouse over and 'grab' the Time-Marker, and 'scrub' it across the TIMELINE

(STEP B) Find the TIMELINE location that you want to be the new Start point

Use the PLAY/PAUSE buttons to preview the video file; STOP at the location of the new starting point

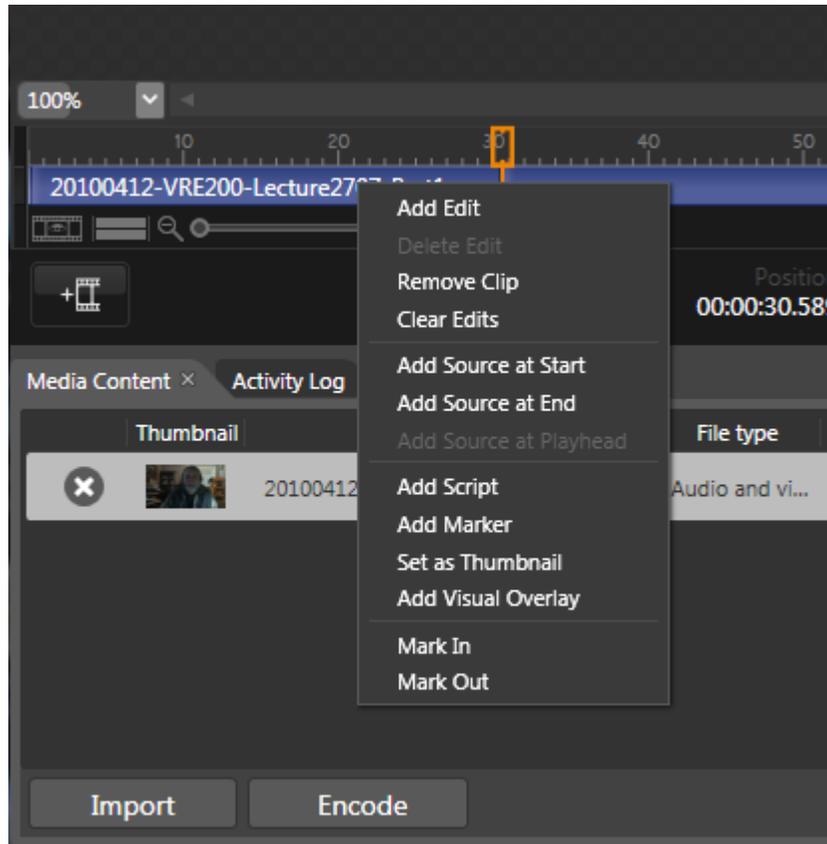
Use the mouse to grab the Time-Marker and 'scrub' (move) it to the new starting point of the video

When you have determined the new starting of the video, click the EDIT-CUT button to slice the video clip according to where the Time-Marker is located.



The video now has two sections: before the CUT and after the CUT. You need to remove the section before the CUT.

Mouse over the video clip you want to remove and right-mouse-click: a menu of options is presented. Choose the 'Remove Clip' to delete that section of the video on the TIMELINE.



The TIMELINE will automatically adjust to display the new, trimmed video.

(STEP C) Find the TIMELINE location that you want to be the new End point

Using the same CUT and delete process, locate the new ending point of your video, and trim the un-wanted clip from the end (AFTER the CUT)

At this point you have trimmed the video to the new start and ending points. Your video now has only the content you wish to use for output/encoding.

2.4 STEP #3: Setup Encoding Parameters in the Expressions Encoder Application

The Expressions Encoder can create several types of output files, according to your needs. These include Xbox, Zune, Silverlight, classic WMV, and multiple screen sizes and quality levels. Our tutorial will focus on creating a 'classic WMV' output file.

Depending on what platforms you need to distribute to, you may use these options to better target your video production needs and workflow.

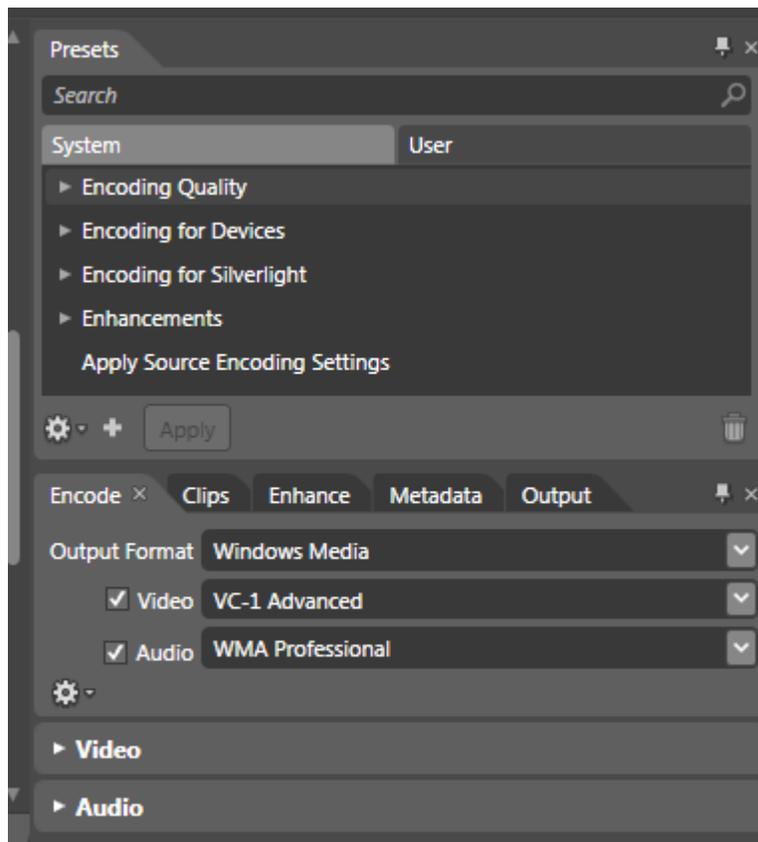
Our primary concern here is to output the video in its original resolution (screen size), in a high quality output format, and into a directory location we choose.

On the right side of the Encoder application you will see a set of cascading data entry boxes. The 'Presets' (containing both 'System' and 'User' listings) provide an easy way to encode for specific devices.

We will focus on specific dialog areas to setup parameters to create a classic WMV output file.

- Encode-Tab
- Output-Tab
- Video dialog box
- Audio dialog box

Picture of the initial, default view of the encoding parameters dialog area:



(Parameter Change #1: 'Encode')

There are four Video formats to choose from: (recommended parameter in bold)

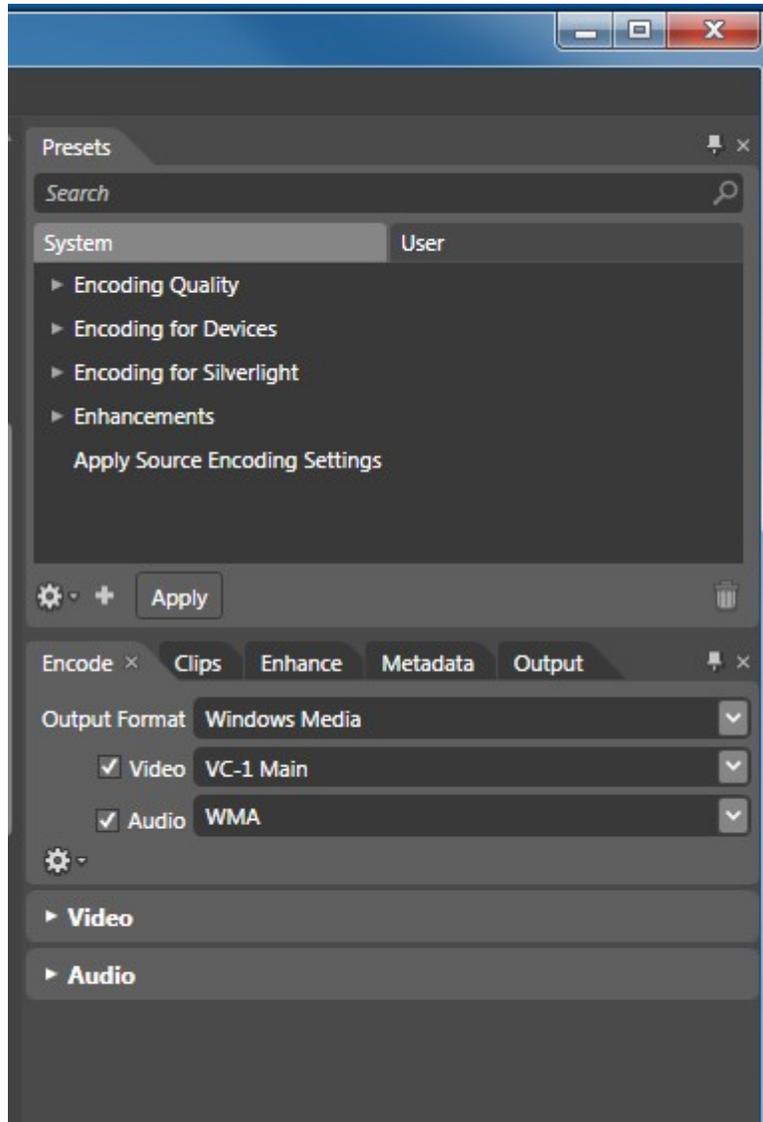
- VC-1 Advanced: best quality, requires Windows Media Player 11 or newer
- **VC-1 Main:** best quality for classic WMV format, Windows Media Player 10 or below

- VC-1 Simple: best file-size for classic WMV format, less quality
- Source: matches output format to be the same as source video format, advanced selection, not used here

There are four Audio formats to choose from: (recommended parameter in bold)

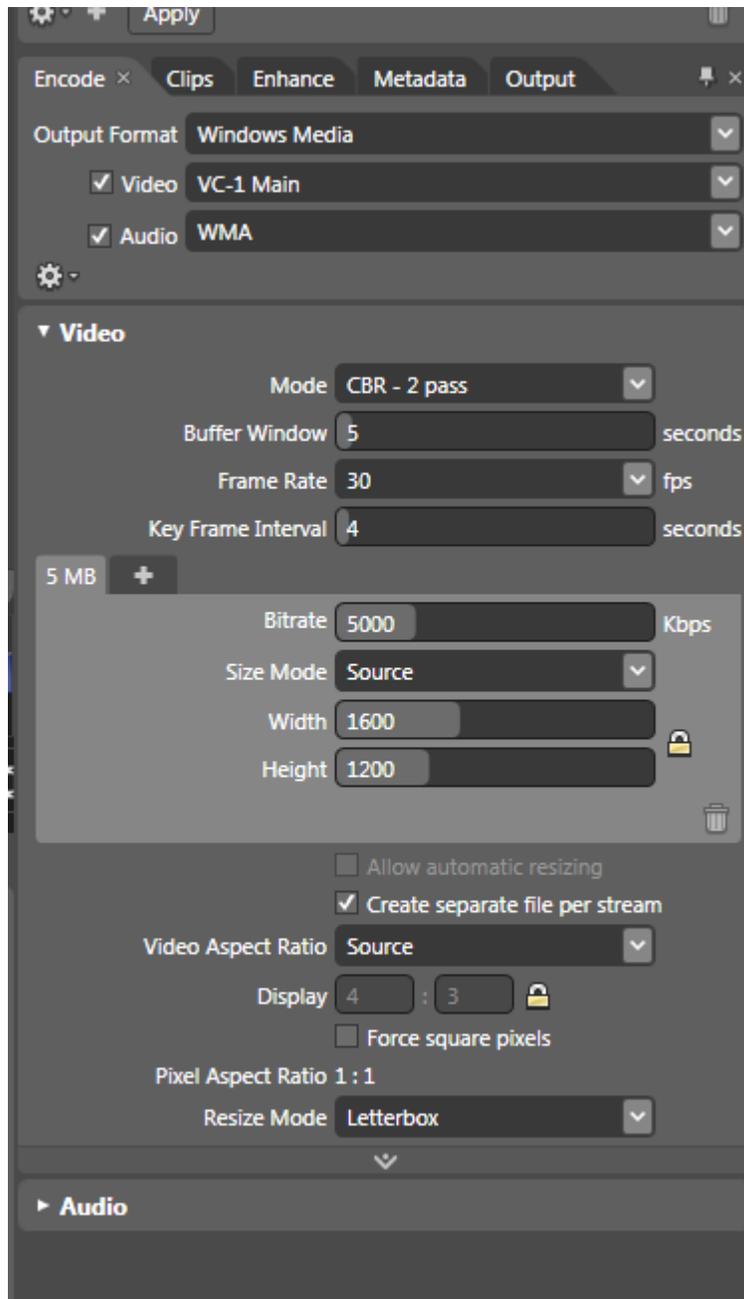
- **WMA**: best choice for classic audio quality
- WMA Professional: best choice for the VC-1 Advanced video format
- WMA Lossless: archive quality
- WMA Voice: least quality

Change the 'Encode' parameters to match the following:



(Parameter Change #2: 'Video')

Click the arrow-head on the 'Video' parameter data dialog to see it.
Change the 'Video' parameters to match the following:



The 'Mode' options are:

CBR - 1 Pass Good quality, faster encoding time

CBR - 2 Pass Best quality, slower encoding time

VBR Constrained Not used here

VBR Unconstrained Not used here

VBR Quality Best quality for VC-1 Professional

You can choose either CBR modes (1-Pass or 2-Pass). We will choose the 'CBR – 2 Pass' option.

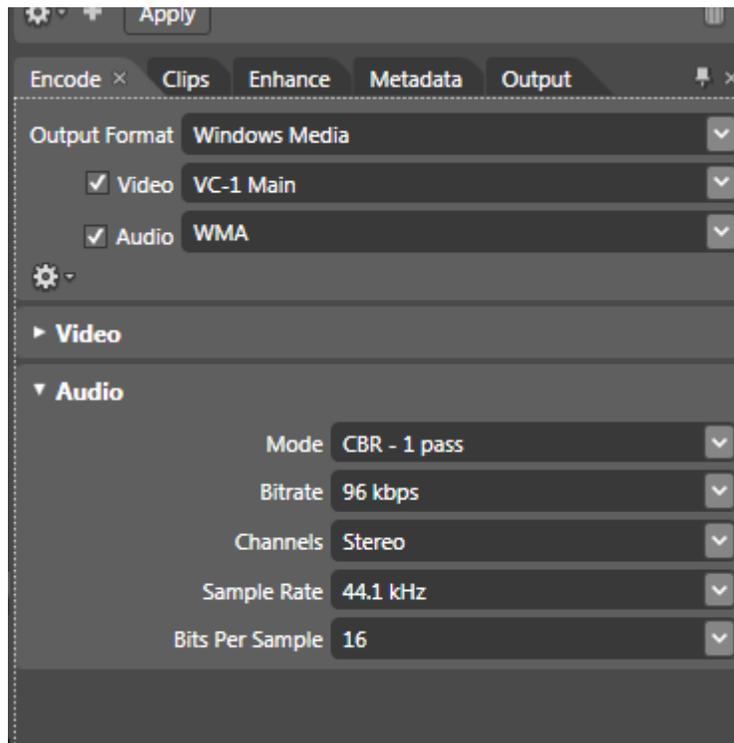
The 'Bitrate' option can be set to a value between 1000 and 5000. We chose 5000kbps for highest quality, even though the file size will be bigger. You can change 'Bitrate' according to suit your video quality and distribution needs.

Notice that next to the '5MB' tab there is a plus-sign. If you click on it more 'Bitrate' tabs appear, automatically scaling downward from the '5MB' we started with. These are acceptable choices.

The 'Size Mode' must be set to 'Source' as that is the target we want. You can chose a different size by selecting 'Size Mode' = 'Custom' and then editing the Width and Height parameters to the output size desired.

(Parameter Change #3: 'Audio')

Click the arrow-head on the 'Audio' parameter data dialog to see it. Change the 'Audio' parameters to match the following:



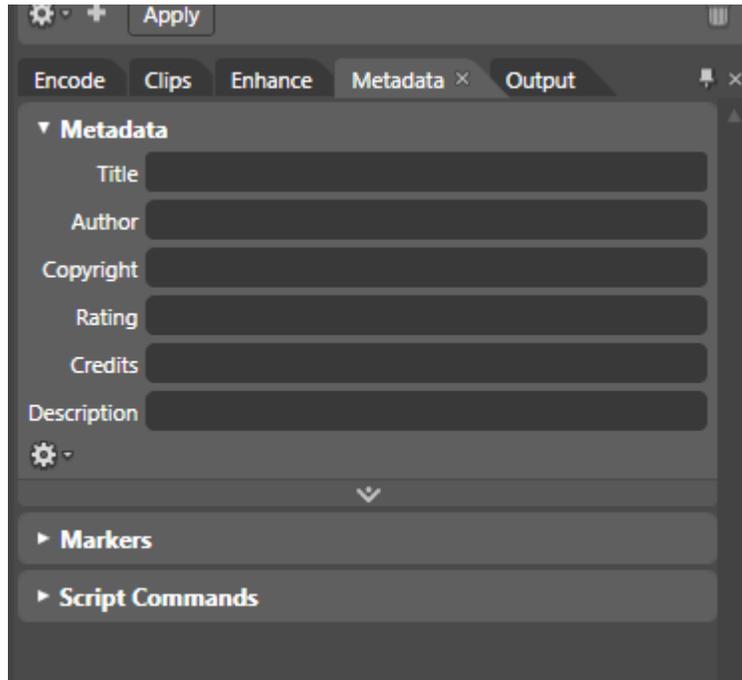
These 'Audio' settings will produce an audio quality the same as that found on a stereo CD or DVD.

(Parameter Change #4: 'Metadata' optional)

Click the tab for the 'Metadata' parameter data dialog to see it.

You can edit in any data you wish

The data will be displayed by a Windows Media Player during playback



(Parameter Change #5: 'Output')

Click the tab for the 'Output' parameter data dialog to see it.

- The 'Thumbnail' section is left in its default state: 'None'. If you wish to automatically generate a thumbnail picture from the video, you can select one of the options provided.
- The 'Job Output' section is where the WMV output file is placed. This is the area we need to edit.
- The 'Publish' option is used for streaming and specialized output applications. We will not use it for this tutorial.

When the 'Output' tab is first used, it has a place-holder for the filename, file extension, and drive/directory of the output

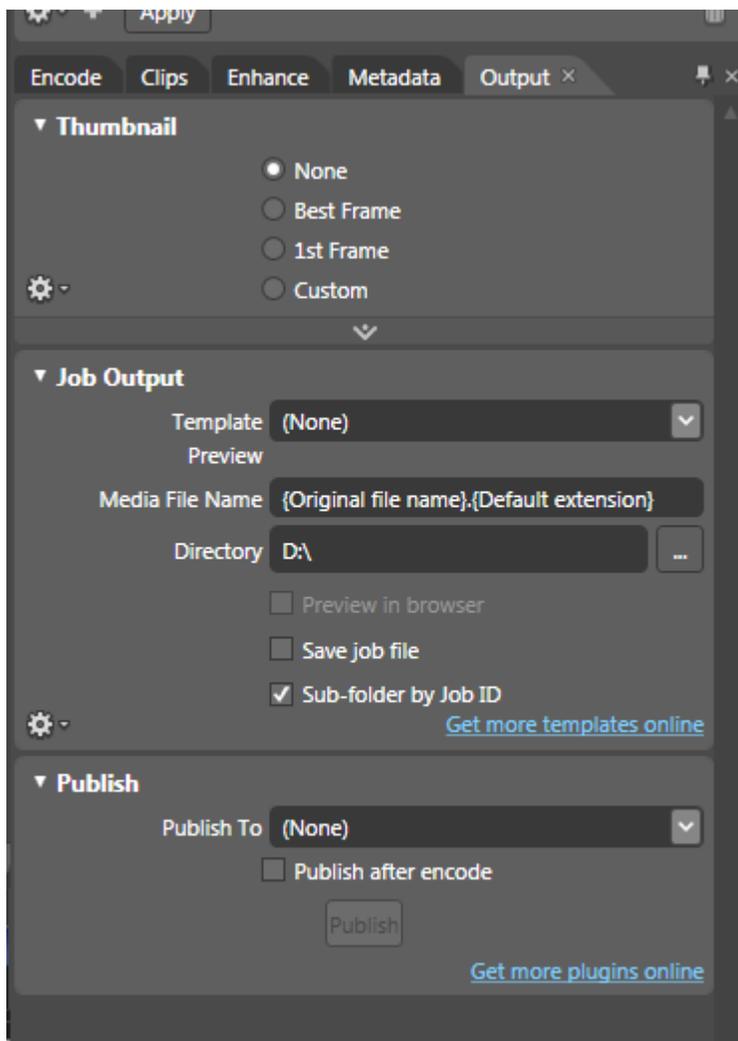
The 'Template' drop-down list is used for Microsoft Silverlight player borders (skins). If you are using Silverlight as a part of your web distribution, you can select from a number of player 'look & feel' options.

If a 'Template' is chosen, a 'Preview' window will pop-up to let you review what the player would look like.

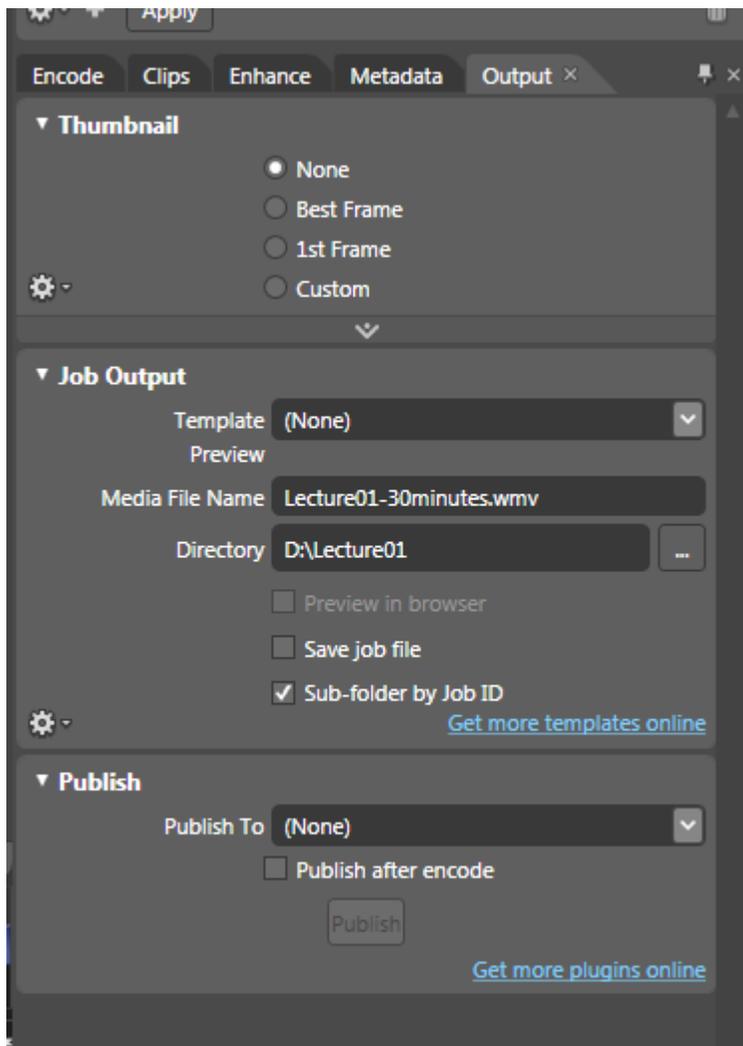
Since our tutorial is focused on creating a classic (traditional) WMV output file, the 'Template' option is set to 'none'

We will need to change the 'Media File Name' and the 'Directory' to our specific requirements.

Picture of initial state of the 'Job Output' data section



I have changed the 'Media File Name' and the 'Directory' in the example to match the output file name and directory I needed. You will do the same, using the location and name you want to use.



MAKE SURE to type in the filename WITH THE FILE EXTENSION (.wmv)

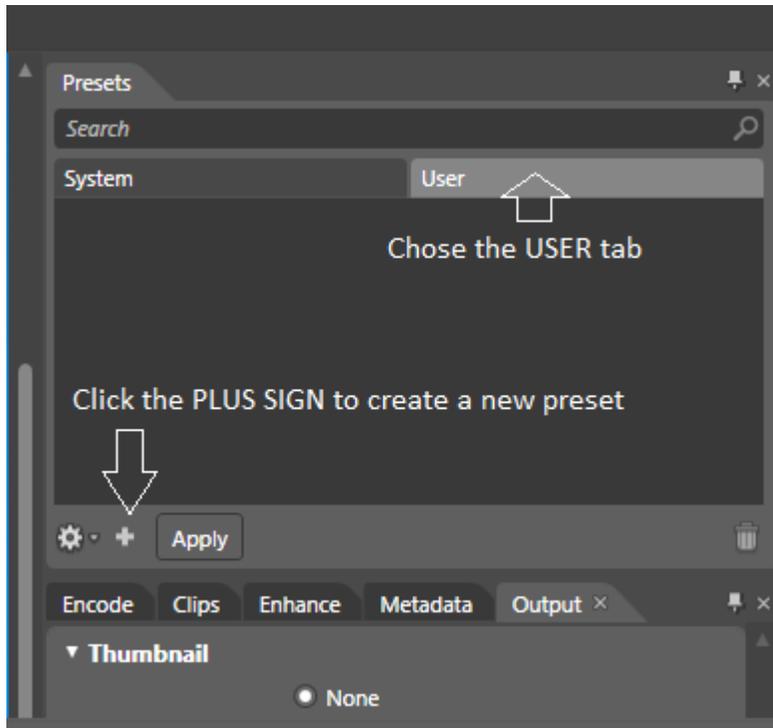
The encoder will output a file name to whatever you set, including a file with no file extension. You need to specify .WMV, so that Windows Media Players of all versions will playback the video properly. If it is left off, older Media Players will not recognize the video file.

Use the ellipse (...) at the right of the 'Directory' to popup a Windows standard 'Save To' dialog box. You can select/create the directory location here.

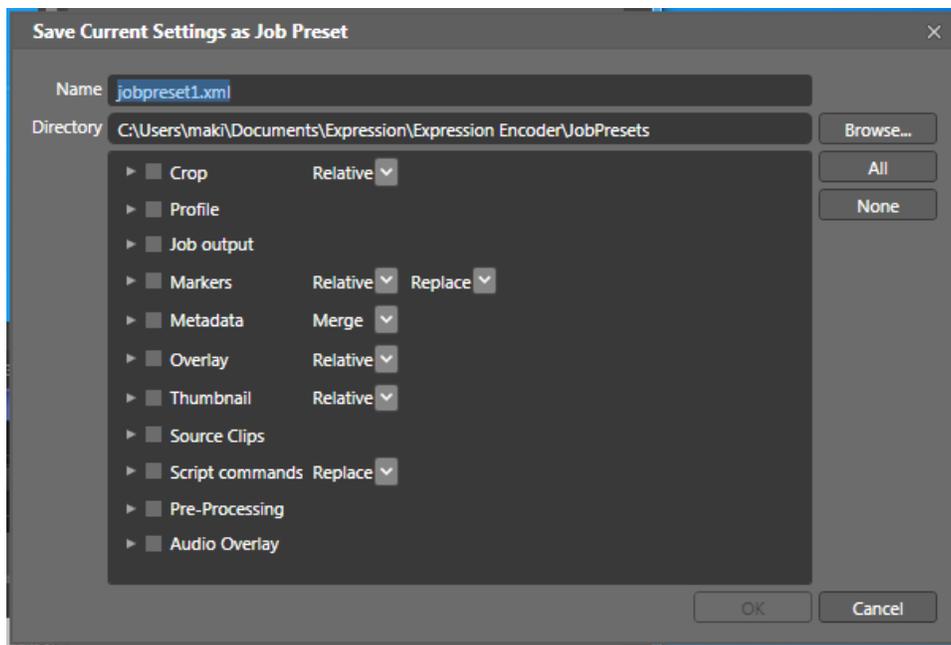
Setting the parameters needed to output a backwards compatible, classic WMV output file is completed.

An optional step of saving the new parameter settings as a User Custom Preset will save time when you need to repeat the encoding process for other screen capture footage.

Select the USER tab in the 'Presets' tabbed dialog and click the PLUS SIGN.



A dialog box pops up. Enter the 'Name' of your new preset and click OK. All the other default parameters listed in the dialog box are acceptable.

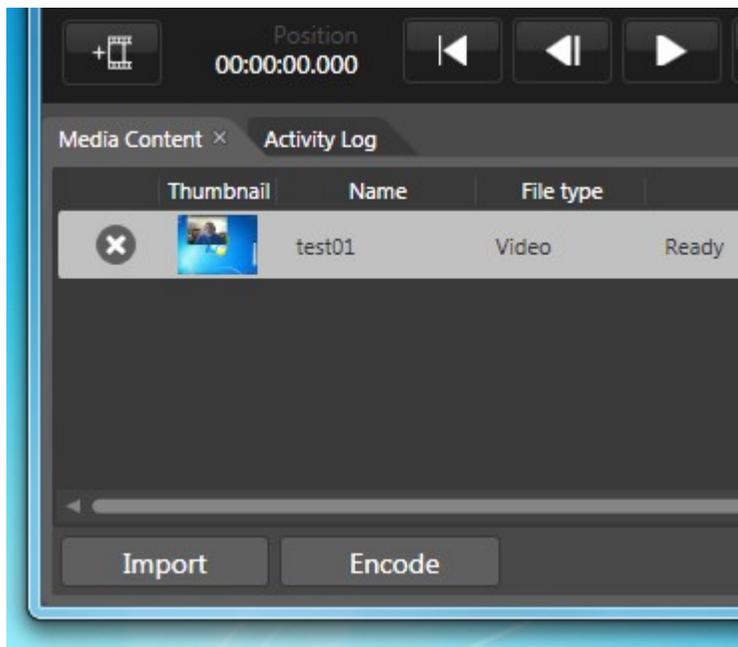


REMEMBER: you need to set the Filename and Directory in the 'Output' tab, for each new file encoding operation. This will ensure that output files goes to the correct, corresponding video project directory and the filenames match your output needs.

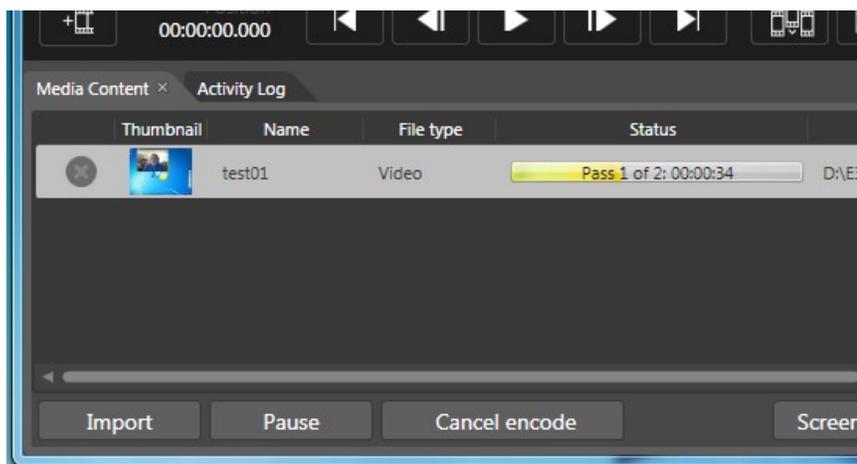
2.5 STEP #4: Encode the Screen Capture (xesc) to a WMV output

Now that the original screen capture file was imported, and the start / end points were trimmed for best content viewing, and the correct parameters for encoding the final output file (WMV), the last step is to start the encoding process.

At the bottom of the Encoder Application is the ENCODE button: click it.



You can watch the progress of the encoder in the Media Content window.



When the encoding is done, the final WMV output file is ready for distribution.

3.0 VRE-200 Workflow: Putting It All Together

Here is a 'flight checklist' to recording and producing as screen capture of a CoroWare Vidyo conference session.

Conference Recording Session:

1. Make sure that the network is connected and functional, the VRE-200 computer is on and the USB Headset is connected.
2. Give the new recording project a meaningful name, and use this name for all file and directories you create.
3. Create a new directory on the WORK:RAID hard drive which will be used by the Screen Encoder and Expression Encode to save their files
4. Start the CoroWare Vidyo conference application: Sign-in and navigate to the conference-room that you wish to record.
5. Make sure that your microphone is turned ON during preliminary conference setup, so you can communicate to the conference attendees.

NOTE: since the standard VRE-200 configuration does not have an active web camera attached, the conference attendees will not see you, but they will hear you. If you do have a web camera attached to the VRE-200, make sure that it is turned OFF

6. Start the Expressions Screen Encoder application. Review and set the recording parameters as needed
7. Start the initial recording process (click record) to select and adjust the screen capture area you need, whether it is an application window, full screen, or a custom dimension and location. **You are ready to record but do not click the next record button just yet**
8. As the recording engineer, introduce yourself, and ask all conference attendees to speak one-at-a-time. Listen to the volume level of each attendee and request that they adjust their microphone volume to a appropriate level.
9. Coordinate with the conference point-person as to when to start and when to stop the recording session. Make sure that you and the point-person have a plan-of-action in case there is an error/failure during the recording session (for example the network connection fails) or the expected conference session runs into overtime.
10. Once the conference is ready to begin, make sure that your VRE-200 microphone is turned OFF, both in the CoroWare Vidyo application and the Screen Capture application. You do not want your voice or other background sound to be a part of the recording. If there is a web camera attached to the VRE-200, make sure that it is also turned OFF in both applications
11. Start the recording session (click the screen capture record button) a minute or two prior to the official start of the conference

12. Monitor the recording session. If there is a error/failure during the recording session follow the plan-of-action appropriately (such as stop and restart, ignore and continue, etc.)
13. Monitor the recording session and note if there are long delays, demo failures, or other instances that you will want to remove from the final output version of the recorded session.
14. Once the conference has completed, end the screen capture process, and save the file in the appropriate directory and with the appropriate filename.
15. If you need to communicate to the conference point-person, turn your microphone ON and continue.
16. You can now exit the Screen Capture and Coroware Vidyo applications

Encode the Screen Capture file into a WMV output file

1. Launch the Expressions Encoder
2. Import the screen capture file (.xesc)
3. Trim the start and end points of the raw footage
4. Review and set the encoding parameter, Make sure that the filename and directory of the output file are appropriately named.
5. Start the encoding process
6. Once encoding has completed, you can exit the Expressions Encoder application
7. Copy or move the directory with the screen capture file(s) and output filer(s) to the VRE-200 Archive hard drive and any other archive or distribution locations/hard drives required
8. Copy the output file(s) to your distribution ingest location, such as to the webmaster who will place the files on your website.

As a recommended best practice,

- Make sure that the audio volume for each conference attendee is appropriately set. An otherwise good conference recording can be degraded if the audience can barely hear the audio, it is so loud that it distorts during audio playback, or the volume levels between conference attendees so different that the audience has a hard time listening to what is said.
- Keep audio echo to a minimum. This can be simply requesting the attendee producing the audio echo to adjust their microphone and speaker volumes, or activating the 'Echo Cancellation' option in the CoroWare Vidyo application.
- At some point you may be faced with a hardware, software, network or conference attendee error. Make sure that you have a contingency plan that is communicated to the conference point-person or manager. Even if it is simply to

'ignore and continue', make sure that the people responsible, managing the conference (and its recording) are fully aware and support the contingency plan

- Make sure your microphone (on the VRE-200) is turned OFF when recording
- Actively monitor the recording session. Make notes as to its runtime length, where appropriate start and end point could be, parts of the conference that may need editing and/or removal and the overall quality of the conference/recording. Do this will save time when the recording is trimmed and/or professionally edited.
- Make sure the Expression Screen Recording settings (parameters) are correct before starting the recording session.
- Record at the highest quality appropriate and SAVE these capture files in the archive. Understand that a high-quality screen capture can be re-encoded to any level of playback quality, screen size, device specific and web specific output you may need in the future.
- As a recording engineer, you are responsible for helping the conference attendees attain the best possible recording of their conference. You are their direct representative of your organization.

This concludes the VRE-200 User Guide tutorial. Thank you for your support and advice,

Please contact your CoroWare sales representative for more information, suggestions and requests.