CERTIFIED **T**RAINING **C**URRICULUM

for the TriCaster 850 EXTREME, 850, 450 EXTREME and 450



Instructor Guide



for the TriCaster 850 EXTREME, 850, 450 EXTREME and 450

This is the Instructor Guide for the Certified Training Curriculum for the TriCaster 850 EXTREME, 850, 450 EXTREME and 450. It contains the Instructor Notes, the Video Outline, the Activities Summary, and the Answers to the Activities Mastery Questions.

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Thanks to Faraz Ahmed for hosting these video lessons. Faraz is an EMMY Award winning technical director, workflow consultant, and broadcast trainer who has worked with NewTek products for over for a decade. Faraz's training certifications include, Final Cut Pro Certified Instructor and Adobe Certified Instructor. His clients include: NBA TV, WNBA, IBM, UniVision, WSB TV, RaceTrak, BlueCross BlueShield, Chick-Fil-A, International Media Consultants, Hyundai, Pink TV, GEO TV, Sterling Ledet, University of Georgia, PlayOn! Sports, & Turner Broadcasting.

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Instructor Notes

Purpose and Audience

The Certified Training Curriculum for the TriCaster 850 EXTREME, 850, 450 EXTREME and 450 enables learners to set up and operate a TriCaster during a live production and to pass the TriCaster 850 Certification Exam.

The course is designed for professionals working in the live event production industry who are already familiar with standard video productions techniques. Students learning video production from the ground up would need other course work to supplement this curriculum, such as camera techniques, lighting, audio, scriptwriting, editing, video graphics, directing, and production.

How to Use the Curriculum

The materials that make up the curriculum consist of 11 videos, hosted by Faraz Ahmed, a set of notes for the videos, and 35 learner activities. The curriculum is modular in nature, with each module able to stand on its own and be taught in any order.

Those modules are:

Module 1: Physical Setup Module 2: Registration Module 3: Session Setup Module 4: Media Management Module 5: LiveText Module 6: Playlists and Media Players Module 7: LiveMatte and Virtual Inputs Module 8: Audio Setup Module 8: Network Inputs Module 9: Network Inputs Module 10: Streaming Module 11: Live Operation

Instructors should look through the materials and videos for the 11 modules and decide which ones, and in what order, to include in their course. The modules are given in the order an operator would do those activities for an actual live production, starting with setting up the TriCaster and ending with the "switching" of the show itself.

A typical daily lesson plan using the curriculum is given below. We take as an example setting up a LiveMatte key for use in a Virtual Input.

Introduction

The instructor discusses the importance and uses for keying in video production.

Watch Videos

The instructor shows the class sections a, b, and c from *Module 7: LiveMatte and Virtual Inputs.*

Review Video Notes

The instructor reviews the notes for that section of the videos and asks for questions.

Do Hands-on Activities

The instructor takes the learners through activities #20: LiveMatte Setup and #21: List Factors that Affect Key Quality.

Ask Mastery Questions

The instructor asks members of the class the *Questions to Test Mastery* from those activities.

Final Review

The instructor answer answers any questions the class may have and previews the next lesson.

As an alternative, the instructor could do the same material as is in the video him or herself as a demonstration in front of the class.

About the Videos

The videos consist of 11 modules with a total of 69 subsections. The total running time of all videos is 3:07:16. A list of the modules and subsections is given in the Video Outline section below, as well as at the beginning of the *Video Notes* document. Each video lists its total running time with each subsection listing its start time within that video. All times are rounded to the nearest second.

About the Video Notes

The video notes are intended as a supplement to the training videos, not to stand on their own. They are not a complete set of notes, but rather contain the ideas from the videos that call for special emphasis or which may not have been completely clear. The learner is encouraged to add their own notes based on what they find the most useful content from the videos.

About the Activities

The activities are written for an operational TriCaster 850 EXTREME[™] model. They assume the included stock NewTek content is present. To the greatest extent possible, activities are written to be possible without live camera inputs; however, since the most effective training simulates an actual live production environment, instructors are encouraged to substitute live inputs for the DDRs or still graphics whenever appropriate. A list of the activities with a brief description, the video sections they relate to, and approximate time to complete are given in the Activity Summary below and at the beginning of the *Activities* document. In the Activities Details section of the *Activities* document, each activity is broken down in to seven attributes explained below:

- *Description*: A description of what the learners do during an activity.
- *Objective*: The learning objective describes what the learners should be able to do when they have completed the activity.
- Initial Conditions: The initial state the TriCaster and content at the start of the activity. These are sometimes specified so that the TriCaster will behave a certain way while the learner interacts with the machine. For example, Activity #16 requires the Autoplay button be off at the start of the activity so that the DDR will react properly when the learners use it. Other materials necessary to conduct the activity are also listed, such as real-world scenarios or proposed production requirements.
- Steps:The main steps to take the learner through to complete the activity.These are high-level instructions for conducting the activity. Instructors
are expected to give more detailed instructions to learners during the
activity, such as the location of specific media files to be loaded in a
media player, etc.
- Things to Watch Out for: Common mistakes learners make when performing the activity. They may be specific misunderstandings about how the TriCaster operates, or they may be general misunderstandings about the live event production process. This list is not exhaustive; instructors are expected to add their own real-world experience and lessons learned to the activities.
- Questions to Test Mastery:Questions designed to test if learners have understood the
activities and/or can relate them to the real-world experience of live
production. Some questions test if the learner has taken an interest in
live production and learned more about it by their own, independent
research—outside the material covered in the videos and activities.
These are not designed as "test prep questions," even though some
questions directly relate to questions asked on the Certification Exam.
Instructors are expected to add their own real-world experience and
lessons learned by asking their own questions.
- *Time Required*: An approximate time required for *one* learner to complete the activity under the guidance of the instructor. This time will need to be adjusted if there are more learners and if they are sharing machines.

Other Resources for Learners

A number of other resources are available to aid learners. Some are listed here:

Additional training videos are available at:

http://www.youtube.com/playlist?list=PL7D5C10CF8343F8CA&feature=plcp

The TriCaster 850 User Guide can be found at:

http://www.newtek.com/support/documentation.html

Other video resources on NewTek TV are at:

http://tv.newtek.com/library.php

The TriCaster FAQ is available at:

http://www.newtek.com/support/certified/support-certif-get-certified-exam/tricaster-faq.html

Details about the Certification Exam are at:

http://www.newtek.com/support/certified/support-certif-get-certified/403-tricastercertification-get-certified-details.html

Learners can talk to experienced TriCaster operators on the NewTek Discussion Forums: http://forums.newtek.com/

Video Outline

The videos consist of 11 modules with a total of 69 subsections. The total running time of all videos is 3:07:16. Each video lists its total running time with each subsection listing its start time within that video. All times are rounded to the nearest second.

4)

1)	Module 1: Physical Setup	(total 6:57)

a) Computer Connections 0:37

b)	Video Inputs	2:20
c)	Video Output and Genlock	3:37

- d) Audio Inputs 4:45
- e) Audio Output 5:41
- f) Tally Light and eSATA 6:28

2)	Module 2: Registration		(total 6:05)
	a)	Activate Windows™	0:30
	b)	Register The TriCaster	1:05
	c)	Performing a System Restore	1:54
	d)	Software Update	3:57

3) Module 3: Session Setup (total 45:21)

a)	The Home Screen	0:31
b)	Create a Session	1:44
c)	The Session Page	5:58
d)	Interface Overview	7:18
e)	Camera Configuration	12:53
f)	Proc Amp and Scopes	15:09
g)	Switching Overview	21:23
h)	Output Configuration	24:16
i)	Record Settings	32:46
j)	Grabbing Stills	39:05
k)	Session Management	40:51

Module 4: Media Management (total 12:28)			
a)	Manually Importing Media	0:25	
b)	The Import Media Browser	3:54	
c)	Importing Media from Another Session	on 6:20	
d)	Media Drives	8:14	
e)	Exporting Media	9:44	

5)	Module 5: LiveText		(total 8:03)
	a)	Create a LiveText Project	0:21
	b)	Interface Orientation	1:06
	c)	Create Title Page	2:43
	d)	Edit Title Page	6:56

6) Module 6: Playlists and Media Players

		<u>(total 27:01)</u>
a)	Adding Media	0:28
b)	Organize Media	4:55
c)	Media Player Controls	7:31
d)	Presets	16:13
e)	Framebuffer	20:12
f)	LiveText Title Pages	21:59

7) Module 7: LiveMatte and Virtual Inputs

-		<u>(1</u>	otal 17:36)
	a)	Setting Up LiveMatte	0:29
	b)	Factors to Make a Better Key	4:08
	c)	Cropping an Input	5:14
	d)	Setting Up a Virtual Input	7:09
	e)	LiveSets	9:28
	f)	Using LiveSets	14:23
	g)	Virtual Input Framebuffer	16:07
8)	<u>Mc</u>	odule 8: Audio Setup (1	otal 14:05)
	a)	Source Types and Levels	0:25
	b)	Balance, Mono, Mute, Pan, Trir and Talk	n, Solo, 2:32
	c)	Using Solo with the Headphone	e Out 5:58
	d)	Follow	7:09
	e)	Using Follow with Grouping	8:48
	f)	Audio Outputs	10:12
	g)	Auxiliary Out	11:27
	h)	Audio Sweetening and Presets	12:47
9)	<u>Mc</u>	odule 9: Network Inputs	<u>(total 8:56)</u>
	a)	Network Setup	0:23
	b)	iVGA Setup	0:58
	2	iVCA for Mindows	2.20

c)	iVGA for Windows™	2:36
d)	iVGA for Macintosh™	5:03
e)	Connecting to iVGA	6:15
f)	Skype™ Setup	7:00

10) Module 10: Streaming		(total 10:29)
a)	Streaming Setup	0:38
b)	Start Streaming	8:58

11) <u>Mo</u>	odule 11: Live Operation	<u>(total 35:15)</u>
a)	Live Desktop Overview	0:34
b)	Switching Basics	2:14
c)	Take, Fade, and Transitions	6:13
d)	The Background Layer	10:31
e)	The Downstream Keys (DSKs)	11:28
f)	Fade to Black (FTB)	15:49
g)	Utility Delegate	16:45
h)	Transition Delegate	18:18
i)	Record, Stream, and Grab	20:30
j)	Control Surface	21:58

Activities Summary

Module 1: Physical Setup

#1: Attach Computer Connections	Mod. 1: a
Learners attach all the various computer-related connections to the TriCaster and ensure the cables hang safely and securely. If the back of the TriCaster is inaccessible, the instructor may prefer to have learners point to the appropriate connections on a photograph of the back, rather than actually attach cabling.	3 min.
#2: Attach Video Connections	Mod. 1: b, c
Learners attach all the various permutations of video input and output connections to the TriCaster and ensure the cables hang safely and securely. The connection types are both input and output for: SDI, YUV component, Y/C, composite, and HDMI. Also, learners hook up genlock and a fill and matte connection. If the back of the TriCaster is inaccessible, the instructor may prefer to have learners point to the appropriate connections on a photograph of the back, rather than actually attach cabling.	5 min.
#3: Attach Audio Connections	Mod. 1: d, e
Learners attach the various types of audio input and output connections to the TriCaster and ensure the cables hang safely and securely. The connection types are XLR, AES/EBU, and SDI embedded audio. Also, learners hook up a timecode signal and four line-level inputs to be combined with the Line Quad function. If the back of the TriCaster is inaccessible, the instructor may prefer to have learners point to the appropriate connections on a photograph of the back, rather than actually attach cabling.	5 min.
Module 2: Registration	
#4: Register a TriCaster	Mod. 2: a, b
Learners go through the registration process for a TriCaster. The instructor may prefer to simulate this process, rather than setting up an unregistered TriCaster.	10 min.
#5: Restore a TriCaster	Mod. 2: c
Learners go through the process of restoring a TriCaster. The instructor may prefer to simulate this process, rather than actually restoring a	5+ min.

machine.

#6: Update a TriCaster	Mod. 2: d
Learners go through the process of updating a TriCaster. The instructor may prefer to simulate this process, rather than actually updating a machine.	5+ min.
Module 3: Session Setup	
#7: Create and Configure a New Session Mod. 3: a, b,	, c, d, e, h, i, j
Learners create a new session, configure the inputs, set up genlock, set up timecode, set the production clocks, configure the Multiview output, configure auxiliary output, set SD analog connections, and select record settings according to provided scenarios which simulate the needs of a live production.	12 min.
#8: Adjust a Color Bar Still Using Proc Amps	Mod. 3: f
Learners adjust a set of color bars using Brightness, Contrast, Hue, and Saturation. The color bar frames being adjusted are pre-made such that one of the four controls will correct it. The activity does not cover the White Balance controls.	12 min.
#9: Session Management	Mod. 3: k
Learners back up, restore, rename, and delete a session. They start by backing up an existing session, then restore it to a different media drive if available (or the same one, if not). Then they rename the backed up session; then delete it. This process should leave the TriCaster sessions as they were before the exercise.	10 min.
Module 4: Media Management	
#10: Manually Import Media	Mod. 4: a, c
Learners manually place various types of supported media files in the proper location for a session using a Windows [™] Explorer window. Media can be taken from USB drives, removable media drives, or other sessions on the same media drive as the current session. (This is not the typical way media are imported; the main purpose of this exercise is to teach the learner how a session's directories are structured.)	3 min.

#11: Import Media Using the Media Browser	Mod. 4: b, c
Learners import various types of supported media files into a session using the Import Media Browser. Media can be taken from USB drives, removable media drives, or other sessions on the same media drive as the current session. (This is the preferred way media to import media.)	ng 3 min. Ne
#12: Install and Eject Media Drives	Mod. 4: d
Learners properly install and eject media drives in a TriCaster while its running.	3 min.
#13: Export Media	Mod. 4: e
Learners populate the Export Media window with various media to be exported, set the export parameters, and export to a specified location.	5 min.
Module 5: LiveText	
#14: Create an Editable LiveText Title Page	Mod. 5: a, b, c, d
Learners create an editable LiveText Title page using a supplied texture (some other element), create a new LiveText project, edit an already existing Title page, and use some LiveText drawing tools. This activity is only meant to give the basics of LiveText, not all its functionality. It assumes LiveText is run on the TriCaster, not an external, networked computer. (To edit the Title page in a playlist, see activity #19.)	or 10 min.
Module 6: Playlists and Media Players	
#15: Populate Playlists with Media	Mod. 6: a, b, e
Learners populate the DDRs, Stills, Titles, and Sounds playlists with appropriate media and put a still in the Framebuffer. The media files are chosen and arranged according to provided requirements which simulate those of a live production script.	10 min. e
#16: Work with a Single Media File	Mod. 6: c
Learners manipulate the controls that affect individual media files in playlist. These include the duration, transport controls, trimming and scrubbing, volume, and headroom.	7 min.
#17: Work with Media Player Controls	Mod. 6: c
Learners manipulate the controls that affect all media files in playlist. These include Single, Autoplay, Loop, playback speed, the time display, a warning colors. Single, Autoplay, and Loop are configured to meet provid	10 min. nd Jed

#18: Media Player Presets Learners create, delete, rename, export, and import media player presets. Learners experience the preset "gotcha" by intentionally interrupting Program Out by activating a DDR preset when live. **#19: Edit LiveText Title Page** Learners change the editable properties of a LiveText Title page, including font, size, bold, italics, underline, the image, and spelling. (To create Title pages, see activity #14.) Module 7: LiveMatte and Virtual Inputs #20: LiveMatte Setup Learners set up the LiveMatte keyer on an input, DDR, or other source and

requirements which simulate live production situations.

#21: List Factors that Affect Key Quality

turn on/off that key using the source monitor indicator light.

Learners list the on-set factors that affect key quality and describe how to 2 min. change them to improve key quality.

#22: Virtual Input Setup

Learners set up a Virtual Input to put a keyed person over a camera input 5 min. or still image with a picture-in-picture and an overlaid lower 3rd graphic. This does not include a virtual set, just setting up the Virtual Input.

#23: LiveSet Setup	Mod. 7: e <i>,</i> f
Learners set up a front, left, and right virtual set for a three-camera shoot such as you might find on an interview or news show. Learners switch between the Virtual Inputs while live, switch the B source while live, and use the zoom feature.	8 min.
#24: Virtual Input Presets	Mod. 6: d; 7: f

Learners create, delete, rename, export, and import Virtual Input presets. 5 min. Learners experience the preset "gotcha" by intentionally interrupting Program Out by activating presets when live.

Mod. 6: d

5 min.

Mod. 6: f

Mod. 7: a, c

5 min.

Mod. 7: b

Mod. 7: d

2 min.

Module 8: Audio Setup

#25: Basic Audio Setup and Controls	Mod. 8: a, b
Learners configure the external audio inputs, and use the Balance, Mono, Mute, Pan, Trim, and Talk controls to adjust the audio of various sources.	7 min.
#26: Check a Microphone During a Production	Mod. 8: b, c
Learners check if a microphone is operational during a live production without disturbing Program Out by using Mute, Solo, and the Headphone output.	5 min.
#27: Use Follow and Grouping	Mod. 8: d, e
Learners use the Follow and Grouping controls to set up audio follow vide and a mix-minus.	o 8 min.
#28: Audio Mixer Presets	Mod. 6: d; 8: h
Learners create, delete, rename, export, and import audio mixer presets. Learners experience the preset "gotcha" by intentionally interrupting Program Out by activating an audio mixer preset when live.	5 min.
Module 9: Network Inputs	
#29: Use a PC or Macintosh [™] as a Networked Input with iVGA Mod.	9: a, b, c, d, e, f
Learners install and run iVGA on a networked PC or Macintosh™, use that computer as a network input, and set various iVGA functions, such as Privacy and Zoom. The instructor may want to simulate learner setting up the network in Windows™.	8 min.
Module 10: Streaming	
#30: Stream to the Internet	Mod. 10: a, b
Learners set up a content delivery network (CDN) account and the streaming profiles for both a Windows Media [™] and Flash [®] push stream. They then test the stream and start an actual stream. After, they locate th saved stream on the media drive. The instructor may want learners to simulate setting up the CDN account.	8 min. e

Module 11: Live Operation

#31: Live Switching M	od. 11: a, b, c, i
Learners set and un-set the Tabs Follow Preview and the Audio Tabs Open Together preferences. They rename input monitors and buttons. They star and stop recording the Program output. They switch Program Out sources by clicking directly on the Program bus buttons, by clicking on the input monitors, and by placing sources on the Preview bus then performing a Take or transition. They load and adjust transitions.	7 min. rt
#32: Use the DSKs	Mod. 11: d, e, f
Learners bring graphics with alpha channels on and off Program Out with the DSKs. They adjust the DSK positioning controls.	5 min.
#33: Utility Bus and Transition Delegate	Mod. 11: g, h
Learners delegate the Utility bus sources, explore the different transition delegate options, and correlate the Preview monitor with the different states of the transition delegate.	7 min.
#34: Grab Frames While Live	Mod. 11: i
Learners choose a base filename, grab frames, de-interlace them when necessary, add them to the current Stills playlist, and find the saved frame on the media drive. This activity is most effective when something is playing on Program Out.	2 min. 's
#35: Operate the Control Surface	Mod. 11: j
Learners do all operations on the Control Surface that can be done with the keyboard and mouse as well as those that can only be done on the Contro Surface. This activity can be considered to have been accomplished if the learner uses a Control Surface for all the other activities in the curriculum and does the additional activities that can only be on the Control Surface.	ie 10 min. I

Answers to Activity Mastery Questions

Module 1: Physical Setup

#1: Attach Computer Connections

1. How many USB ports are there on the TriCaster?

6

2. What network connection speed does the TriCaster support?

Up to Gigabit Ethernet.

3. Why are there two power supplies and to what power sources should they be connected?

Two Power supplies for redundancy in case of as failure. Each should be connected to a separate power source if possible. Use a true sine wave power conditioner when possible.

4. What are tally lights for?

To show the on camera talent which camera is currently live program out. This is usually a small light or led on the camera that illuminates when that camera is selected on program out. Tally lights are not supplied with the TriCaster but the TriCaster does support external tally light systems.

5. Will a 450 Control Surface work on an 850?

Yes, any TriCaster running rev-4 software or better can use any control surface from NewTek.

- 6. Name at least two reasons why cabling should be hung so people won't get tangled in them.
 - a) Tripping over cables can un-plug them from the TriCaster during the production causing that source or output to disappear.
 - b) So cables will not become damaged during the live production.
 - c) For safety so that no one gets hurt by tripping over them.

#2: Attach Video Connections

1. Given various input and output scenarios, describe how the audio/video cabling is attached to the TriCaster.

SDI signals attach with a single BNC cable for audio and Video. Component signals attach with 3 BNC connectors for video only. Y/C attaches with two BNC connectors for video only. Composite video attaches with one BNC for video only.

2. Can the TriCaster output digital and analog from the same output row at the same time?

Yes, it always does.

3. Can the TriCaster output component and Y/C from the same output row at the same time?

No as these outputs use some of the same connectors.

4. Describe how a fill and matte connection is hooked up.

The fill or full color signal gets attached to an odd input such as 1,3,5,7. The even inputs can be set up to be used as the alpha for the odd inputs in groups such as 1&2, 3&4, 5&6 and 7&8. When the even inputs are configured to be used as an alpha the key or matte images is sent to the even input being used as the alpha for its corresponding odd input. The odd input is then used as the input with alpha for things like a source to a DSK.

5. What signals are on each cable of a fill and matte connection?

The fill connection is the full color signal and the key connection is the matte image in black and white which determines the alpha channel.

6. What is the purpose of genlock?

To lock the latency of all the equipment in the production workflow.

7. What is usually used to generate a genlock signal?

A Black Burst generator.

8. What are the advantages of using genlock?

Without genlock, using the TriCaster's frame sync only, the latency can drift from a half a frame to 2 frames. When genlocked, latency is locked and there is no drift.

- 9. Name at least two reasons why cabling should be hung so people won't get tangled in them.
 - a) Tripping over cables can un-plug them from the TriCaster during the production causing that source or output to disappear.

- b) So cables will not become damaged during the live production.
- c) For safety so that no one gets hurt by tripping over them.

#3: Attach Audio Connections

- How many channels of audio does the TriCaster take from an embedded SDI signal? The first four channels.
- How many channels of analog audio can be input into on TriCaster 850?
 16
- A timecode signal is connected to which connection? Audio 7a.
- 4. Name at least two reasons why cabling should be hung so people won't get tangled in them.
 - a) Tripping over cables can un-plug them from the TriCaster during the production causing that source or output to disappear.
 - b) So cables will not become damaged during the live production.
 - c) For safety so that no one gets hurt by tripping over them.

Module 2: Registration

#4: Register a TriCaster

- When does a TriCaster need to be registered? Before the first use.
- What happens if the TriCaster is not registered?
 There will be a NewTek watermark on the output.
- Where do you find the TriCaster serial number?
 On the back plate.

#5: Restore a TriCaster

- Why do you need to update the TriCaster after doing a restore? All updates will be removed on a restore.
- 2. Does any of the media from the removable media drives get erased by doing a restore?

No.

3. Name some files an operator may want to save from the C drive before doing the restore.

VSE projects, Custom Virtual Sets, ASC projects, Animation Store transitions, presets for the tabbed modules in the TriCaster.

4. What is the file path to the Virtual sets and animation store transitions that need to be backed up before doing a restore?

C:\Tricaster\effects.

5. What is the file path to the custom presets that need to be backed up before doing a restore?

```
C:\TriCaster\bin64\presets.
```

6. What's the difference between the process of starting the restore for a machine that is on the Windows[™] boot screen and one that is already at the home page?

On the Windows[™] boot screen you have the choice of Launch TriCaster or Restore TriCaster and, of course, you would choose the latter to start a restore. From the home page of the interface, you can go to Utilities on the menu ring and select

Restore TriCaster. (Note: sometimes on a cold boot you will not see the Windows^M boot screen as the monitor is still in its auto detect mode figuring out what kind of monitor you have. You will always see the Windows^M boot screen on a restart.)

#6: Update a TriCaster

1. Should Windows[™] updates be performed on the TriCaster?

No, never. The TriCaster software is written to take advantage of the precise operating system configuration at the time of shipping. Changing or updating the operating system could adversely affect TriCaster performance.

2. Should the TriCaster hardware ever be upgraded or changed?

No, never. The TriCaster software is written to take advantage of the precise hardware configuration at the time of shipping. Changing the hardware could adversely affect TriCaster performance.

3. How much time should you allow before needing to use the TriCaster for a live production when updating?

Give yourself a couple of hours for install and familiarization.

4. Is it possible for features to change or be added by doing an update?

Yes, the interface can change dramatically as can functionality. It is best to read all documentation of the new update before trying to use it.

5. Where can you find the currently installed version of the software and hardware?

In the about screen on the home screen from the utilities menu item on the menu ring.

Module 3: Session Setup

#7: Create and Configure a New Session

- How does the TriCaster name a session if the operator doesn't specify a name?
 If the session is not given a new name it will use that day's date.
- 2. How might that cause problems?

If multiple sessions are created this way within the same day, they will be that days date and sequentially numbered. This can become very confusing so specific names for sessions are recommended.

3. What kinds of devices generate fill and matte outputs?

External Character Generators and graphics devices such as a Chyron, Decco or VizRT.

4. Where is NTSC-J television broadcast?

Japan.

5. What does genlock do?

Locks the latency of all devices that are genlocked together.

6. When is it important to record time code?

When you want to be able to log events and get back to them accurately in editing. Also when doing multi-cam editing so you can easily sync clips.

7. Which record formats record time code?

MPEG-2 and MOV.

8. How can you tell external timecode is being used?

The Time Clock readout in the upper left hand corner of the main interface is blue.

- How can you tell what the resolution of the session is by looking at the live desktop?
 It is displayed with the session name along the top of the main interface.
- 10. What will happen to an analog SD output if the analog output is not configured correctly?

It can be an HD output or it can be set up to output the wrong format such as component vs. composite & Y/C.

11. What are some reasons to choose one particular record format over another?

To use the recorded output in another application that accepts specific formats. To have time code support.

#8: Adjust a Color Bar Still Using Proc Amps

- What tool shows the luminance values of a video signal? Waveform monitor.
- What tool shows the color values of a video signal? Vector scope.
- What controls are used to adjust luminance or brightness of the signal? Brightness and Contrast.
- What controls on the proc amp are used to adjust color? Hue and Saturation.
- What are the NTSC high and low specifications for Brightness values?
 Low value = 7.5 IRE High Value = 100 IRE.
- 6. How can you tell when the Hue and Saturation values are set correctly?

When looking at color bars, all the dots line up correctly in the boxes for the different colors on the vector scope.

#9: Session Management

1. What is the difference between media that is internal (or local) to the session and media that is external to the session?

Internal media was imported into the session before it was started. External content is brought in from another session's content from within the media browser or from the media browser you navigated to another location and used content from there.

2. Is media that is external to the session automatically backed up during a session backup?

No, it is an option you select from the backup requestor.

- Once a session is backed up, is it deleted from the TriCaster? No.
- 4. Sessions are restored from which page of the TriCaster interface? The Home page.
- Sessions are backed up from which page of the TriCaster interface? The Session page.

Module 4: Media Management

#10: Manually Import Media

1. Explain how the media directories for a session are structured.

When a session is created, a session drive is selected. Primary session content is stored here. The session will also be linked to any other drives selected to record video streams. Let's say D is the session drive. On it will be any CG that was created along with LiveText and SpeedEDIT projects. There will also be a media folder. In there you will find folders for clips, stills, audio. Go into clips and you will see all the sessions on that drive. Go to your session and there will be a capture, an import and possibly as saves streams folder as well as shortcuts to any other drive selected for recording. The import folder contains any content imported for use in the session. The capture folder contains any video recorded by the TriCaster during the session. The short cuts take you to any clips recorded to other drives during the session.

2. What is the difference between media that is external to the session and local (or internal) to the session?

Internal media was imported into the session before it was started. External content is brought in from another session's content from within the media browser or from the media browser you navigated to another location and used content from there.

3. What are the dangers and/or symptoms of media being placed in the wrong directory?

Not showing up in the session's media browser.

4. Which types of video clips, still images, and audio files are supported by the TriCaster?

Supported file types include:

Video — AVI, MPEG-2, MOV, AVCHD, MXF Image — JPEG, PNG32, Targa32 Audio — WAV, mp3

The Import Media module indicates which files need transcoding and which do not.

5. Are there any popular video formats not natively supported by the TriCaster?

Apple[®] PRO RES clips are not natively support but can be imported using the Import Media module and transcoded into a file format the TriCaster can use.

#11: Import Media Using the Media Browser

1. What is the difference between media that is external to the session and local (or internal) to the session?

Internal media was imported into the session before it was started. External content is brought in from another session's content from within the media browser or from the media browser you navigated to another location and used content from there.

2. What are the dangers and/or symptoms of media being placed in the wrong directory?

Not showing up in the session's media browser.

3. What determines when the operator should enable transcoding for clips when the option is available?

When Media does not play back properly when tested in the DDR.

#12: Install and Eject Media Drives

- Can you remove a non-session media drive while the TriCaster is running? Yes.
- Can you remove the session media drive while the TriCaster is running? No.
- What does is mean when a media file icon is ghosted in a playlist? The media player tried to load that file but could not find.
- About how many hours of 1080i HD video can be stored on a 2TB drive?
 50
- About how many hours of SD video can be stored on a 2TB drive?
 200
- 6. How does iso-recording affect the amount of production time that can be stored on a drive?

You can record two streams to one drive so that cuts the storage time in half since it is twice the video space.

7. What needs to be done to the media drives before shipping the TriCaster?

They need to be removed and shipped in a separate container. In shipping the weight of all the drives is too much and can damage the drive cage and the TriCaster.

#13: Export Media

- What is the reason for choosing from among the choices of Targets and Preset? To quickly and easily find a file format to use in your external application.
- 2. Name some uses for an exported file and what Target and Preset settings are right for that use.

Final Cut – Quicktime, View on iPad - mobile device – iPad

3. Is there a way to get a QuickTime file out of the media exporter with no render time?

Yes, the renderless conversion selection under the Apple® Final Cut target wraps the file to appear as an MOV with no render time.

4. If a web stream was not recorded as a streaming file, is there a way to convert the recorded MPEG file for use on the web?

Yes, the Media Exporter can convert it to Flash[®] or Flash[®] 9.

5. Can a single MPEG file be converted to multiple formats in one pass?

Yes, the clip can be cloned in the export panel, and different output parameters can be set for each instance.

Module 5: LiveText

#14: Create an Editable LiveText Title Page

- Can the internal version of LiveText that comes with the TriCaster be run and used during a live production? No.
- 2. When pages are "sent to live," where can they be found?

Once pages are created and sent to live they will be available from the media browser under that session name.

3. How do you select several items on a page and move them all as one item?

Either multiple-select the items and move them, or use the Group feature to create a group and move the group.

4. What's the difference between Send Current Page to Live and Send All Pages to Live?

Send Current Page to Live sends only the currently selected page to the live environment. Send All Pages to Live sends all the pages within that CG project to the live environment.

5. What is the difference between sending a page to the Live Desktop as a .cgxml versus a .png file?

Pages sent as .cgxml become editable Title pages; pages sent as .png become static (un-editable) graphic pages.

- Where in the LiveText interface is external content incorporated into a CG page? The FileBin tab.
- Where in the LiveText interface are foreground and background elements adjusted? The Layers tab.

Module 6: Playlists and Media Players

#15: Populate Playlists with Media

1. Why should video clips not be added to a playlist from an external USB drive?

External USB drives are not fast enough to play back HD video clips without dropping frames. Files should either be imported through media import or copied to the internal media drives before being loaded into a media player.

2. State what types of media files each of the media players can successfully play.

DDRs can play all media types including video clips, stills, titles and audio clips. The stills and titles players will load both stills and titles into either player. The sounds player will only load sound files.

- 3. If an inappropriate type of media file is added to a play list, how is that indicated? As a ghosted icon.
- 4. State the difference between content that is local (internal) to a session versus external to the session.

Internal media was imported into the session before it was started. External content is brought in from another session's content from within the media browser or from the media browser you navigated to another location and used content from there.

5. Name a potential problem with using external media in a session.

It may not get backed up with the session unless indicated to do so. It could come in from an external drive that is not fast enough to play the media.

6. How does the TriCaster handle mixing 16:9 and 4:3 media?

It letter boxes, pillar boxes or scales the video to give the best looking output. This is done transparently to the user.

- What is the indication that the TriCaster can't find a media file in a playlist? The icon is ghosted.
- 8. Describe the process of updating a Framebuffer over a network.

The framebuffer folder is accessible over the network. A person could replace the file in the folder with another file of the same name and update the framebuffer independently from the switcher.

9. Does removing a media file from a play list delete it on the hard drive?

No. Only doing a delete from the media browser and confirming the deletion will remove it from the hard drive.

Does renaming a media file in a playlist rename it on the hard drive?
 No.

#16: Work with a Single Media File

1. Why doesn't the Sound player have the Autoplay button?

Because the Autoplay button works with an input that has been selected on program. It is impossible to switch to the sounds player as it is not an input on the switcher.

2. How is setting the duration of a video clip different than setting the duration for a still or title?

The duration of a video clip is set by adjusting the in and out points. Stills and title have a context menu for setting the duration of the item.

3. Can the duration of multiple stills or titles be set at the same time?

Yes by multi-selecting the items and setting the duration of one of the selected items.

4. What do the three colors of the progress bar mean?

Green means the file has more than 10 seconds left to play. Yellow means the file has less than 10 but more than 5 seconds left to play. Red means the file has less than 5 seconds left to play.

5. Why would you want to mute a video clip or sound, rather than just moving the slider to the bottom in the audio mixer for that media player?

Because you may want to un-mute and use it at some point and already have the level set.

#17: Work with Media Player Controls

- What is the fastest and slowest that playback speed can be set to? From 400% to 25%.
- 2. Do you prefer the warning colors to be on or off?

On.

3. What are situations in which you would want the time display to count up? Down?

Count up could be used when you know you have a specific amount of time to fill and then you must be done. Count down is to see how much time the playlist has left until you need to start switching again.

4. Do the DDRs, Stills, and Titles players all have the Autoplay button?

Yes as they are all inputs on the switcher that can be put on program out. This will play the selected clip, still, or title when selected on program and stop playback and advance to the next item when switched away from.

5. How do you get a DDR to play just one clip in a list of clips when using Autoplay? Turn on the Single button.

#18: Media Player Presets

1. Is there any implication for saved presets by doing a system restore?

Yes, they are lost unless backed up from the C: drive and the replaced in the right folder after restore. That folder is C: tricasterbin64.

2. Name reasons for storing the presets in either the default location or some other location.

In the default location they will come right up when you try to load one. But this location can get over crowded so making folder for shows is a way to organize them.

3. Why does there seem to be a delay sometimes when changing presets, and how can that be prevented?

This only happens when using presets for virtual inputs where virtual sets are being used. This only happens once when first selected and then it is cached. It is recommended to cache all presets before the start of a live production.

4. Navigate to and find a saved preset.

The file is located in C:\tricaster\bin64.

5. What tabbed modules (media players) in the TriCaster have presets?

All do, including the Internal and External Audio tabs.

#19: Edit LiveText Title Page

- How would you use a new (not already installed) font in a LiveText Title page?
 It must be installed in Windows[™] and then is accessible to LiveText.
- 2. How can you tell if an image or other element on a Title page is editable in the Edit Title window?

When you roll the mouse over an editable image or other element, a yellow border is displayed around it.

3. What are the three fitting options for an image and what do they do?

Stretch causes the image to completely fill the frame. Fill Area retains the image's original aspect, cropping if necessary to fit inside the frame. Show All Image also retains the original image aspect, but fits the entire source image inside the frame (which may result in 'pillar-boxing' or 'letter-boxing').

- 4. Name the three types of CG pages you can create in LiveText. Still, Scroll and Crawl.
- If you edit a Title page which is live on Program Out, when will the changes go live?
 When you press the Enter key.
- How is the External version of LiveText brought into a TriCaster production? Through the Network Inputs.

Module 7: LiveMatte and Virtual Inputs

#20: LiveMatte Setup

1. How is the color to be removed selected in the interface?

Use the eyedropper in the LiveMatte window, left click and hold and drag over the color on the interface monitor you wish to remove.

2. What problems come from overdoing the Tolerance, Spill, and Smoothing adjustments?

Overusing Tolerance and smoothing can cause the keyed item to become transparent. Overusing spill suppression will change the color of the talent.

3. What do the three colored lights on a source monitor do?

They tell you what is enabled on that input. Green is for Live Matte being enabled. Yellow is for the proc amp being enables and Blue is for cropping being enabled.

4. What colors can LiveMatte key?

Any, but green and blue are used primarily because they are the farthest away from skin tones.

5. What inputs is LiveMatte available on in the TriCaster?

Any live input, the Network Inputs, the DDRs, stills player and titles player.

#21: List Factors that Affect Key Quality

1. Name the three factors that affect the quality of a key.

Video signal quality, lighting, and talent placement.

- 2. How can you control these factors to make a better key?
 - a) Use the best video signal quality you can.
 - b) Evenly light the green screen.
 - c) Separate the talent from the background.
- 3. List in order from best to worst the video signal formats to use to pull a LiveMatte key.

SDI is Best, then Component, then Y/C, and then composite. Y/C and Composite are only available as standard definition signals.

4. What can you do on-set to help make a better key?

Re-select the key color from within LiveMatte. Use a better camera. Adjust the lighting. Adjust tolerance and smoothing in LiveMatte.

5. What are some types of shooting situations where it might be hard to pull a good key?

Location shooting when less than optimal cameras may be used. Places where you can't control the lighting. Cramped sets which require the talent to be close to the green screen.

#22: Virtual Input Setup

- How do you make a Virtual Input transition ping pong?
 All transitions for DSKs or overlays in the Virtual Inputs automatically ping pong.
- 2. What modifications can be applied to the A, B, or overlay buses in a Virtual Input? Scale, Rotate, Position and Crop.
- 3. What are the three default speeds for a Virtual Input overlay transition? Slow (60 frames), Medium (30 frames) or Fast (15 frames).
- 4. Is it possible to use a transition speed other than the three preset speeds?Yes, click and drag with the mouse on the speed indicator to change the speed.
- Is it possible to use a live keyed input as an overlay on a Virtual Input? Yes.
- 6. When working with a Virtual Input, how many layers of graphics can you add? Three, the overlay on the Virtual Input itself and the two DSKs.
- 7. Is it possible to use a non-keyed source as an overlay?Yes, it can be scaled and positioned like a picture-in-picture effect.
- 8. Are there any types of transitions that work fine with a full-screen graphic but don't look as good on a lower 3rd?

Yes, but this may be a matter of taste.

#23: LiveSet Setup

- What main switcher channels can be used on Row A of a Virtual Input? Any of them except the Virtual Inputs.
- What bus row on a Virtual Input is usually used for the talent in a virtual set? Row A.
- 3. What type of external camera control is needed to use the zoom feature in a virtual set?

None, the feature is built in to the Virtual Inputs.

4. Is it possible to have a source on the onscreen monitor (Input B) in a virtual set, then switch to that source as a full screen view?

Yes, on the main switcher, just switch to whatever source is being used on Input B in the Virtual Input.

5. What would happen if the camera operator moved or zoomed the camera after the virtual set has been set up?

The talent would not be positioned or framed correctly in the virtual set.

6. Which attributes of the Virtual Input can be changed while that Virtual Input is live without interrupting Program Out?

The zoom preset numbers, the Overlay transition, the transition speed.

7. How can you turn on or off the ease-in/out feature of the animated zoom.

You cannot, it is always on.

8. How can you change what's on the virtual sets' in-set monitor from the main switcher?

Assign Input B of the virtual input to the FX row, then switch the FX row on the main switcher. Changing what's on the B input in the virtual set changes what's on the inset monitor.

#24: Virtual Input Presets

1. What causes the hidden presets to appear?

Move the mouse to the lower left side of the interface for the virtual input.

2. Is there any implication for saved presets by doing a system restore?

They are stored on the C drive and will be deleted. They should be backed up before the restore, then replaced after. The presets are found at C:\tricaster\bin64.

3. Name reasons for storing the presets in either the default location or some other location.

Saving them in the default location makes them come up instantly when trying to recall them. Saving to an alternate location outside of the c drive will preserve them during a restore.

4. Why does there seem to be a delay sometimes when changing presets, and how can that be prevented?

The first time you click on a preset it must set itself up and this can take a second and cause a delay on that input. Once this is done, it is cached, and then switching between presets is seamless. This caching must be done each time you enter the live production environment.

5. Navigate to and find a saved preset.

The presets are found at C:\tricaster\bin64.

- Getting to the options for renaming and import/export is done by?
 Right clicking on the preset.
- If all the presets for a Virtual Input are not visible, what action makes then visible?
 Scale the main interface by dragging the horizontal bar between the busses and the Input monitors up.

Module 8: Audio Setup

#25: Basic Audio Setup and Controls

- What is the difference between line level and mic level?
 Line level is usually an amplified signal, while mic level is usually not.
- What are some symptoms of mismatching line and mic levels?
 Overdriving or low audio levels.
- What is phantom power and when would you need to use it?
 It is used to power external microphones and some microphones require it.
- What does VU stand for? Volume Unit.
- What colors are appropriate to see on VU meters for good audio volume? In the yellow, but not touching the red.
- 6. What are some typical uses of the 3rd and 4th channels of audio for those sources that have them?

Additional languages.

7. What is the difference between the Balance and Trim controls?

The Balance control for a stereo source varies the relative level of the left and right channels. The Trim control provide an overall preliminary volume adjustment allowing you to fine tune the input level. Use Trim to bring the levels for microphone and similar sources into a useful range on the VU meter.

8. What are the sources that can be sent to the Auxiliary audio out?

DDRs, sounds player, internal sounds players as a group, solo selected sources, and groups.

9. What happens to the DDR audio channels when Auxiliary Out audio is set to Internal?

All of the internal sound generating players are sent as a group. This includes the DDRs and the sounds players. Note: the audio from DDR 1 is sent to channels 1 and 2 of the aux out and the DDR 2 audio is sent out channels 3 and 4.

10. When recording, what happens if the Master audio level gets too loud?

It clips and output is distorted. You also get a warning in the main interface that this has happened.

How many channels does the Master audio out have?
 Four.

#26: Check a Microphone During a Production

1. Give examples of other uses or equipment you might test during a live production using this process.

Tape deck, DVD players, VCR's, BlueRay players.

Does it matter what order you do these steps in?
 Yes, if you don't mute it first you might hear the test on main Program Out.

#27: Use Follow and Grouping

- When do the VU meters show in grayscale?
 When they are in Follow mode but not active at that time.
- What are some situations in which you would want to set up a mix-minus? Skype[™] Calls.
- What are some situations in which you would want to use audio follow video?
 When you want to make sure that certain audio inputs are omitted from the show while certain inputs are active.
- What is the effect of enabling Follow for any one member of a group? The whole group will act as if it is in follow mode.

#28: Audio Mixer Presets

1. Is there any implication for saved presets by doing a system restore?

They are removed. They should be backed up before a restore and then replace after the restore. Presets are found at C: tricasterbin64.

2. Name reasons for storing the presets in either the default location or some other location.

Saving them in the default location makes them come up instantly when recalling them, and they will be available to multiple sessions. Saving to an alternate location outside of the C drive will preserve them during a restore.

3. Why does there seem to be a delay sometimes when changing presets, and how can that be prevented?

The presets are cached. Load each preset once before the production begins to avoid the delay.

4. Navigate to and find a saved preset.

Presets are found at C:\tricaster\bin64.

Module 9: Network Inputs

#29: Use a PC or Macintosh™ as a Networked Input with iVGA

1. How can you tell on the networked computer that iVGA is running?

An icon of a TV with color bars scrolling across it appears in the icon tray of the interface.

2. How can you tell it is sending the interface to the TriCaster as an input?

Select the computer name from the network inputs dropdown menu and it shows up in the network inputs preview monitor.

3. Describe the process of using Apple Airplay[®] as a network input.

Make sure that the AirPlay[®] device is on the same network as the TriCaster. Play media on the iDevice. Using the menu on the iDevice select the TriCaster network input you want to send the Airplay[®] output to.

4. Describe the process of using LiveText on a networked machine.

Create the page and then with that page selected hit the live button. This is now available as CG output from the network inputs on a TriCaster that is attached to the same network.

- Describe a reason to use an audio mix-minus when using a networked computer.
 When using a Skype[™] call live during a TriCaster production.
- 6. Where on the system drive is iVGA stored?

C:\tricaster\extras.

Module 10: Streaming

#30: Stream to the Internet

1. Where is the saved stream stored by default?

On the session drive. If the session drive is D, it is store in D:\media\clips\{session name}\saved streams.

2. What determines the type stream file saved?

The encoder used to stream it. If streaming in Flash[®], you get a .flv and if streaming in Windows Media[™], you get a .wmv file.

3. Name some possible complications that can interfere with establishing a network connection?

Firewalls, domains within a network, bad cables, too many WIFI networks in one area.

4. How can you verify the TriCaster can access the Internet?

Try to go to one of the default Service provider in the list in the streaming panel and see if it comes up.

Module 11: Live Operation

#31: Live Switching

1. What are some reasons why you would want to rename source monitors or buttons?

To make it easier to run the live switcher.

2. How can you re-label the monitors on the Multiviewer?

They are renamed along with the monitors on the main switcher bus when it is renamed.

3. When a recording is stopped, what makes it immediately show up in a DDR playlist?

Selecting Add to DDR Playlist and choosing the specific DDR in the Record Configuration panel.

4. How do you change a transition already loaded in the switcher to a different transition in the same position in the transition bank?

Select the transition, then click the gear to the right of the transition area. Use the popup to select Browse, then choose a new transition.

5. How do you change the direction a transition runs?

Select the transition and click the gear to the right of the transition area. Choose Normal, Reverse, and/or Ping Pong.

6. How do you get a transition to run in one direction the first time and the reverse the next time?

Set it to Ping Pong.

7. Why is it generally a bad idea to switch Program Out by directly selecting sources on the Program bus?

Because you may not know what you are switching to because you have not previewed it yet.

- Approximately what percentage of transitions in a typical professionally produced production are Takes and Fades?
 About 99%.
- Is it generally better to perform a transition with the Auto button or the T-bar?
 The Auto button is better as it gives a uniform speed for the whole transition.

10. Give an example of a reason for reversing a transition.

You might want to fly something in and then back out again like an instant replay for sports.

11. Is it possible to use speeds for a transition other than the default slow, medium and fast speeds?

Yes, click and drag with the mouse on the speed indicator to change the speed.

#32: Use the DSKs

- Can a source with no alpha channel be used in a DSK? If yes then how?
 Yes it can be scaled and positioned as an overlay using the positioning controls.
- How can you tell the positioner is on for a DSK?
 The take button is lit up for that DSK.
- What inputs on the switcher can be used as a source for the DSKs? Any inputs except the black input and the virtual inputs.
- Can all the same transitions used to switch between the Program and Preview busses be used as DSK transitions to bring graphics on and off screen? Yes.
- Which is visible "above" the other, DSK 1 or 2?
 DSK 1 is below or under DSK 2. If DSK 1 & 2 overlap, then DSK 2 will be on top.
- Why is there no Reverse option for transition direction on the DSKs? They automatically Ping Pong.
- What variables are controllable when using the positioner for the DSK? Position, scale, rotation and crop.

#33: Utility Bus and Transition Delegate

 What is the "stacking order" of the four video layers? Background, DSK 1, DSK 2, Fade to Black. 2. Why is it called "look ahead" preview?

Because it shows exactly what you will get when the transition is executed from the T-bar or Auto button depending on how the delegates are selected.

3. Why does the Preview monitor change when the transition delegate buttons are selected/deselected?

Because it is a true "Look-ahead" preview and shows exactly what you will get when the transition is executed from the T-bar or Auto button.

4. What is the FX bus for?

As a secondary switcher bus which can be used as its own output via AUX out or as a source selector for input B on a virtual input.

5. Is there another way to set the Auxiliary Out source besides the Utility delegate?

Yes, from the output configuration tab under the output tab.

6. How do you select more than one transition delegate button using the keyboard and mouse? Using the Control Surface?

Using the interface, hold down the Ctrl key on the keyboard while selecting multiple things to delegate. On the Control Surface you can press and hold one delegate while selecting other to multi-select.

7. Can you control the DSKs without using the Transition delegates and the Auto/T-Bar?

Yes there are both interface and Control Surface controls for the DSKs independent of the T-Bar delegates.

8. How do you know if Fade to Black (FTB) is currently engaged?

The output is black or Preview is black. The FTB delegate button is selected. When attempting to do a switch on Background you get black on the output and the FTB delegate button flashes.

9. What does Fade to Black fade?

Background video, all DSKs and audio.

#34: Grab Frames While Live

1. What is video interlacing?

The splitting of video frames into fields.

2. When is de-interlacing typically used when grabbing frames?

You would set the frame grabbing to de-interlacing whenever your session is interlaced, and do not use it when the session is progressive.

3. How can you tell whether the current session is an interlaced one or not?

It will have an "i" at the end of the resolution, such as 1080i. The resolution of the current session and the current session name are found in the title bar at the top of the interface.

4. How can you tell when a session is being created whether or not it will be interlaced?

It will have an "i" at the end of the resolution such as 1080i.

5. Where are grabbed frames stored?

On the session drive. If the session drive is D, they are saved to D:\media\stills\{Session name}\captured.

 What file format are frames saved in? JPEG.

#35: Operate the Control Surface

- What type of USB cable connects the Control Surface to the TriCaster? UBS2.
- Which Media players can be controlled from the Control Surface? All of them.
- 3. What two positioner variables can be controlled at the same time when using the joystick on the Control Surface?

Scale and Position.

4. What attributes of a Virtual Input can be manipulated during a live production from the Control Surface?

Row A selection, Row B selection, virtual overlay source selection, zoom level, animate zoom, Transition speed for virtual overlay, Take and Auto for virtual overlay, Row A positioning, Row B positioning, Virtual Overlay positioning.

5. What is the process for stopping a live recording or live stream from the Control Surface?

Hold the CTRL button and press Record or Stream.

6. Can you adjust all of the attributes of a live editable Title Page using only the Control Surface with no keyboard?

No. You must have a keyboard to change text, size text, select an alternate font or stylize the text (Italic, Bold, Underline).

7. Can you control the two DSKs independently from the T-Bar/Auto button and from each other on the Control Surface?

Yes, DSK controls are to the right of the T-Bar.

8. What are some advantages of using the Control Surface when you could use the keyboard and mouse?

For someone coming from a traditional TV or live production background the control surface is a more familiar way to operate a live production than the keyboard and mouse. The control surface gives you access to controls in the interface quicker with no panels to open or menus to navigate. You can control things during a live production such as the media players even if their tab is not currently open. You can also control virtual input attributes when their tab is not open.

9. Can you operate Program bus selection, Preview bus selection, Auto, and Take functions from a keyboard with no Control Surface?

Yes, the F keys are Program, the alphanumeric numbers are Preview, Take is Enter and Auto is the Spacebar.