
Ross Video Limited



Operator Training Guide

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Operator Training Guide

Introduction

Welcome to the comprehensive Synergy SD Operator Training Guide. This Operator Training Guide is designed to be used as a reference by Ross Video Trainer's (that's you) during Customer Operator Training, whether training occurs at a customer's site or at a Ross Video facility. Think of it as a lesson plan for you to use while training. The guide provides a training framework that is to be followed during training as well as a checklist of items to cover that will also help you monitor the progress of the training.

The guide outlines the modules and discussion points to be covered during a typical customer training session. It is not designed as a student handout (although if the person being trained would like a copy for their use during training, please feel free to copy and distribute it).

The guide provides a suggested order for training based on years of training experience. Having said that, Operator training must be tailored to the needs of the specific student. Therefore, ultimately, you may have to modify the training based on the student's knowledge and experience level.

Modules

Training has been divided into modules, each covering a specific topic. A learning goal is stated at the beginning of each module. General goals are outlined to assist you with introducing the module to your student in order that they know what they are expected to learn. From this the student will be able to compare the learning goals with their current knowledge of the topic and then aim for a higher level of understanding expressed by the goals.

Length of Time for Training

Training is purchased by the customer in one day blocks. In most instances, the modules and points for discussion in this guide can be covered in a three day period of comprehensive training. However, the student's experience, or other considerations, may extend or reduce the suggested time frames. Listen to the student and use your own judgment.

During Training

Training should consist of a carefully balanced mix of the trainer explaining the various points to the student, "hands-on" experience, as well as many problem solving exercises as necessary for the student to understand each module. It is important to allow the student enough time for practice on the

material to ensure they understand it before moving on to the next module. With adult learners, 90 percent of people retain what they are taught when they “see, hear, say and do”¹ the material.

At the start of the training session, it is a good idea to go through some basic housekeeping issues. These can include items such as how long training will last each day, when coffee and/or lunch breaks will occur, and what you expect of them. For example, you expect them to ask questions, return from breaks on time, assist each other, participate, and keep on task. In return, you should offer a list of what they expect from you (listening carefully to questions and taking the time to respond, speaking in a tone, pace, volume, and vocabulary, that your students will understand).

By the end of Synergy Operator training, students should be comfortable with the following areas:

- Basic Switcher Operation
- 3D and WARP Operation (if this option has been purchased and installed)
- External Device Control using a Synergy Production Switcher
- Advanced Switcher functions, if time permits

If the student feels more training is necessary, strongly suggest that they schedule some additional days of training with you. They can contact their local Ross Video dealer to set this up.

Final Thoughts

This guide is for you, our Ross Video Trainer. Use it to enhance the quality of your training and to ensure we have confident and educated customers using our products. Please jot down any suggestions for the Synergy switcher that come up during training and pass them on to us.

Good Luck with the training! Enjoy sharing the beauty and elegance of the Synergy Series of switchers with our customers.

¹ Knowles, M. (1990). *The Adult Learner: A neglected species (4th ed.)*. Houston, TX: Gulf Publishing Company.

Agenda for Training

The list below is an agenda that should be followed during training. Each day has been divided into modules that that can usually be covered in a single day, including hands-on practice time.

Day 1 – Switcher Basics

- Welcome and Introduction
- Synergy Production Switcher Introduction
- Switcher Basics
- The Menu System
- Transitions
- Pattern Selection
- Mattes
- MLE Keying
- Downstream Keyers
- Borders
- Memory Functions
- Preview Overlay
- Custom Controls - Basic
- Aux Buses
- Closing and Review of Day 1

Day 2 – Advanced Options

- Welcome and Review of Day 1
- Overview of Day 2
- External DSK (CDK-111A-M)
- Dual Aspectizer
- Ultimatte Insider™
- Squeeze & Tease 2D
- Squeeze & Tease 3D/WARP - The Basics
- Squeeze & Tease 3D/WARP - Advanced
- Closing and Review of Day 2

Day 3 – Remote Control

- Welcome and Review of Day 2
- Overview of Day 3
- DVE Send
- External Peripheral Devices
 - Remote Port Expander (BSS4)
 - VTR
 - Video Server
 - Audio Server
 - Robotic Camera
 - Router
 - StillStore
 - Character Generator
 - Remote Audio Mixer
 - PIP II
 - Serial Tally
 - GPI Control
 - Editor Control
 - Monitor Wall
- Closing and Review of Day 3

Day 1 – Switcher Basics

Synergy Production Switcher Introduction

Goal: To provide a brief introduction to the Synergy Production Switcher.

- Briefly mention the following Synergy panel areas:
 - Crosspoint Buses
 - Keyers
 - Global Memory System Group
 - MLE Memory System Group
 - Transition Group
 - Aux Buses
 - Pattern Control Group
 - Downstream Keyers (DSKs)
- Crosspoint Buses:
 - Programmable buttons
 - N/S LED
 - SHIFT button
 - Re-entry buttons
 - Mnemonics
- ALL-ALL reset for the Synergy panel
- ALL-ALL reset for MLE



There is no hands-on time required for this module.

Switcher Basics

Goal: To provide an overview of each area of the Synergy Switcher Control Panel from left to right across the panel and to present switcher operating procedures, rules and methods.



Due to the large amount of information to be covered, prepare to allocate enough time to adequately cover each group listed below.

- This is a walkthrough of the switcher with a brief demonstration of what each area can do. Describe the function of each of the groups of the control panel listed below and explain in detail how to use each group.
 - Multi-Level Effects (MLE) – Crosspoint Matrix and MLE Tally
 - Demonstrate how to change a Program and Preset crosspoint
 - Mnemonic Displays
 - Preview Bus Group
 - MLE Transition Area
 - Program/Preset Transition Group
 - MLE Memory Group
 - Preview Overlay Group, including:
 - Source ID
 - VTR TC
 - Safe Title
 - Center
 - Time Clock
 - Mask PV
 - Blank Button
 - Hide Overlay
 - Downstream Keyers
 - MLE Key 1 Group
 - MLE Key 2 Group
 - Fade to Black Group
 - Effects Control Group
 - Positioner Group
 - Aux (Auxiliary) Bus Group
 - Global Memory System Group
 - System Control Group
 - Pattern Control Group
 - Power Fail Indicators and Power Failure Recovery
 - SHIFT Button
 - PRG/Key SHIFT Mode
 - Flip-Flop Operation
 - Non-sync Indicators
 - Knobs
 - Re-entry
- Hands-on practice. Ask the student to perform a series of simple operations that require the use of one or more of the areas covered above.

The Menu System

Goal: To provide an explanation of the Synergy Switcher's menu system and to explain the navigation through the menus.

- HOME button
- Menu Tree concept
- Auto Follow of menu system
- UP ONE button
- MORE button
- LOCK MENU button
- F1-F6 softkeys
- Knob functions
- Using the Positioner with menus
- Keyboard operation
- Underlined item in a menu means a sub-menu is available
- Grayed out menu items
- Help Menu
- Pop-up help requires holding the button down
- Top level menu items
- Display contrast control
- Mnemonics

Transitions

Goal: To fully explain what a transition is, the types of transitions that are available in the switcher, and how to get the switcher to perform various types of transitions.

- Next Transition buttons



Note: For many operators these three buttons are very difficult. Before moving on, have the students perform several exercises until they get it perfect.

- AUTO TRANS and CUT button
- Fader arrows
- Changing auto transition rate
- Four transition types:
 - DISS
 - WIPE
 - DVE SEND
 - Squeeze & Tease wipe
- Setting a transition limit
- Using a transition limit
- Normal/Reverse/Flip flop buttons and wipes

Transitions continued

- Preset Black
- White Flash
- Overriding the Preset Black crosspoint
- Define what a key is
- Key over transition
- On Air key indicators
- ROLL VTR button
- Transition Preview:
 - Enabling the Transition Preview option in the Personality Menu
- Hands-on practice

Pattern Selection

Goal: To fully explain the patterns available to the pattern generators and how to select and modify them.

- Auto follow to pattern area
- Selecting the basic 40 patterns
- Position and size a pattern
- Pattern borders
- Pattern border matte selection
- Pattern border size
- Pattern aspect
- Pattern rotation
- Programming a user pattern button
- Using a user pattern
- Four Pattern types:
 - Classical
 - Rotary
 - Matrix
 - Special
- Pattern 1 shared between wipes and Preset Pattern key 1
- Pattern 2 used for Preset Pattern key 2
- Pattern multiplication
- Pattern Control Group delegation buttons
- Pattern reverse
- Hands-on practice

Mattes

Goal: To fully explain the use and operation of the matte generators and how to select and modify them.

- Overview
- Creating Washes:
 - Wash
 - Video
 - Noise
 - Superblack
- PST PATT
- Creating a Pattern Border Color
- Creating a Matte Fill Color
- Creating a Color Background Color

MLE Keying

Goal: To fully explain the different Synergy key types and how to use them.



Fly keys will be covered in the 2D, 3D and WARP sections. Do not go into too much detail on these in this section or you will get caught going through a lot of 3D functionality.

- Five Key types and how to select them:
 - SELF
 - AUTO SELECT
 - CHROMA KEY
 - PST PATT
 - Squeeze & Tease
- Changing crosspoints for key types
- Key crosspoint bus Key1/Key2 LEDs
- Red/Green on air indicators under Next Transition buttons
- When to use Self Key vs. Auto Select Key
- Clip/Gain for Self/Auto Select Keys
- KEY MEM button for Auto Select Keys
- Difference between shaped/unshaped Auto Select Keys
- INV button for Self/Auto Select Keys
- MATTE FILL button
- Box Mask features:
 - Box mask on/off
 - Box mask size and movement
 - Box mask invert
 - Box mask force
- Border type selection

MLE Keying continued

- Chroma Key Auto Chroma button
- All other Chroma Key controls
- Chroma Key, Key Mem
- Preset Pattern key type selection (turning off fly key)
- Preset Pattern selection (selecting a pattern)
- Preset Pattern position
- Preset Pattern size and softness
- Squeeze & Tease Key selection
- Using the Fly Key button to move Self/Auto/Chroma keys
- Cut and Auto Trans button in keyer
- CG Button in Key 2
- Key Over button in Key 1
 - Enabling the Key Over option in the Key Setup Menus
- Key transition rate
- Split Self Key
- Split Auto Select Key
- Copying vs. Swapping a Key to another Key
- DVE Copy
- Hands-on practice

Downstream Keyers

Goal: To fully explain the downstream keyers and how to use them.

- How to assign a key type to a source button
- How to assign a crosspoint to a source button
- Holding down DSK Source button shows crosspoint
- Split keys on DSK
- What happens to DSK Source buttons when ALL-ALL (reset) is done on Program MLE
- Setting up Default key type and crosspoints on DSK buttons
- Locking a DSK Source button
- Swapping DSKs
- Copying a DSK to an MLE keyer
- Copying an MLE keyer to a DSK
- DSK Drop
- Hands-on practice

Borders

Goal: To fully explain the border generator option.



If the customer has not purchased this option, provide a brief overview of what they could have if they purchased this option and then move on to the next section.

- Turning the border on/off
- Using the BORD button:
 - As a border
 - As a drop shadow (positioning)
 - Transparency on the drop shadow use
 - Changing border color
 - Using a wash for the border
- Using the SHDW button:
 - Size/ Position
 - Linked to the key
- Using the OUTL button:
 - Size/ Position
- Hands-on practice

Memory Functions

Goal: To explain how the switcher's global memory system and preview overlay operate.

- Memory banks
- Store a memory
- Using the ENTER button for stores, not for recalls
- Naming memories
- Viewing a memory's name without performing the recall from the keypad
- Recall/Store multiple MLEs in Global Memory System Group keypad
- Recall a memory
- Recall a deleted memory personality option
- Next Available Memory option
- Keys only recall
- Bus hold recalls
- Recalling a memory with a custom control
- Auto Recall personality option
- Effects Dissolve
- Effects Dissolve rate is recalled memories Auto Transition rate

Memory Functions continued

- Locking/unlocking memories
- Mem Bank cycle max personality option
- Bank 0 lit personality option
- Store mode Hold/1-time personality option
- Include DVE button and memory recalls
- Hands-on practice. Set up several exercises using the concepts above for your students to practice memory functions.

Preview Overlay

Goal: To fully explain the preview overlay features.

- Source ID:
 - Shows program/preview sources
 - Shows selected transition
 - MLE shown is based on Preview selected on panel
 - Size can be changed
 - Position can be changed
- VTR Timecode: works for VTRs, Video Servers, and Audio Servers
- Safe Title and Center:
 - Custom Safe title and center setup
 - Naming custom safe title and centers
 - Use for on screen anchors and positioning
- Time Clock:
 - Reset and Reset Time
 - Count up/down
 - Start/stop controls
 - Making custom controls of the time clock features
- Hands-on practice

Custom Controls - Basic

Goal: To explain the power of the custom control function, how to program, edit, and store video/audio sequences.

- Running a custom control
- Custom Control banks
- Recording a custom control
- Stop recording custom by pushing the corresponding Custom Control button on the panel
- Naming a custom control
- Editing a custom control
- Custom Control Pause
- Custom Control Hold
- Audio Custom Controls:
 - Audio Custom Control Bank
 - Attaching an audio source to a custom control
 - Channel on/off custom controls
 - Audio Memory Recalls
 - Audio Reset (PGM or PST)
- GPI Custom Controls
- Squeeze & Tease Menu custom controls
- Safe Title custom controls
- VTR custom controls
- Robotic Camera custom controls
- Router custom controls
- Character generator custom controls
- DVE custom controls
- PIP-II custom controls
- Monitor Wall custom controls
- Time Clock custom controls
- Automation custom controls
- Looping custom controls
- Storing/recalling custom controls to/from disk (or USB key)
- Storing/recalling individual custom controls to/from disk (or USB key)
- Relative Custom Controls and the OverDrive system
- Hands-on practice

Aux Buses

Goal: To fully explain what an auxiliary bus is and how it can be used.

- Aux Bus delegation buttons
- Aux Bus source selection
- Aux Bus crosspoints (definable vs. MLE crosspoints)
- Timed vs. untimed Aux Buses
- Remote Aux Panels (assignable and dedicated)
- Aux Bus modes (regular, follow, CDK)
- Aux Bus external device assigning
- Aux Buses in memory recalls (including DVE button)
- Aux Bus on air indicator
- Aux Bus remote panel GPI trigger
- Aux Bus Router follow (audio applications)
- Hands-on practice

Day 2 - Advanced Options

External Downstream Keyer (DSK) (CDK-111A-M)

Goal: To explain the set-up and operation of the optional external DSK card, the CDK-111.



If the customer has not purchased this option, provide a brief overview of what they could have if they purchased this option and then move on to the next section.

- Auto Transition optional DSK
- Auto Transition rates for the optional DSK
- Selecting menu for optional DSK
- Internal still/animation vs. switcher crosspoint
- Tie optional DSK into the next transition
- Mention the Image Transfer Software
- Hands-on practice. Set up several exercises for your student using the CDK option card.

Dual Aspectizer

Goal: To explain how to operate the optional Dual Aspectizer function.



If the customer has not purchased this option, provide a brief overview of what they could have if they purchased this option and then move on to the next section.

- Double pressing a crosspoint button displays the menu in the Global Memory System Group
- Menu Functionality:
 - Graphic representation
 - Aspectizer looks
 - Letterbox Superblack on/off
 - Letterbox color selection
 - 16:9 and 4:3 toggle as an override
 - Positioning
- Bus Mode:
 - Show which buses have the Dual Aspectizer
 - Work with memories
 - Same look on program bus and preset bus
 - MLE output format selectable per MLE
 - Input format still affects that input switcher wide

Dual Aspectizer continued

- Input Mode:
 - Show which inputs have it and how to assign them
 - Not affected by memories
- Downstream Mode:
 - Show how to attach it to an Aux Bus
 - Double pressing that Aux Bus gets you control
- Hands-on practice

Ultimatte Insider

Goal: To explain how to operate the optional Ultimatte Insider chroma keyer functions.



If the customer has not purchased this option, provide a brief overview of what they could have if they purchased this option and then move on to the next section.

- Assigned to a Keyer in the Synergy switcher
- Auto Chroma Key function
- Viewing the Ultimatte Alpha signal
- Inputs that can be Ultimatte Chroma Keyed
- Bus Mode for Ultimatte
- Matte Out Gain to adjust the white level of the alpha
- Black Gloss and Matte density to adjust the black level of the alpha
- Shadow Noise
- Matte size and Position
- Color Density
- Flare balances
- Flare Gates
- Veils
- Ultimatte quick recall item in personality
- Hands-on practice using the Ultimatte Insider

Squeeze & Tease 2D

Goal: To fully explain how to use the Squeeze & Tease 2D option.



If the customer has not purchased this option, provide a brief overview of what they could have if they purchased this option and then move on to the next section.

- Positioning
- Cropping
- Sizing (anchor point is upper left!)
- Flying a Key
- Doing wipes
- Give brief overview of Squeeze & Tease 3D/WARP features
- Hands-on practice

Squeeze & Tease 3D/WARP – Basics

Goal: To Show the basics on how to operate the Squeeze & Tease 3D/WARP card.



If the customer has not purchased this option or the 3D/WARP option, provide a brief overview of what they could have if they purchased this option and then move on to the next section.

- Overview on working in 3D space
- Fly Key on/off button
- Position/Crop Menu:
 - Getting a flying key on air
 - Positioning a flying key
 - Pivot point presets
 - Manually setting a pivot point.
 - Rotation
 - Cropping
 - Aspect
 - Freeze on/off
- Pre-Processor:
 - Defocus
 - Mosaic
 - Posterize
 - Colorize
 - Strobe
 - Each is independent of the other
- Borders:
 - Size
 - Inner and Outer softness
 - Style selection
 - Style selection chooses colors by default
 - Styles are made up of 1-3 colors which they *wash* together
 - Colors
 - Auto Defaults
- Lighting:
 - Use Lighting setup to turn lighting on
 - Ambient light is overall lighting
 - Intensity is the value of a light bulb
 - Lighting presets
 - Positioning the light bulb
 - Auto follow on positioning the key
 - Auto follow off and positioning the key
 - Luminance clipping

Squeeze & Tease 3D/WARP – Basics continued

- StillStore:
 - Still vs. Live selection
 - Still in use text appears in position menu as well
 - When to use field mode vs. frame mode
 - Field/Frame mode setting saved per still
 - Remove vs. Local Stills
 - Capturing a full screen still image
 - Capturing a smaller than full screen image (no alpha)
 - Capturing a key (Auto select on panel)
 - Clip and gain values for captured stills
 - Memory usage for full screen vs. smaller stills
- WARP Effects:
 - Selecting a WARP effect
 - Each WARP effect and its parameters
 - Grayed out WARP names in the Menu System
- Defaulting values:
 - Hold EFFECTS button and press the CENTER button
 - Pressing the CENTER button while in a Squeeze & Tease Menu
 - Double pressing the CENTER button
- Storing/Recalling memories with Squeeze & Tease involved
- Effects Dissolve
- Flying other key types:
 - Flying a Self Key
 - Flying an Auto Select Key
 - Flying a Chroma Key
- Hands-on practice

Squeeze & Tease 3D/WARP - Advanced

Goal: To demonstrate fluency in the advanced feature set of the Squeeze & Tease 3D/WARP card.

- Position/Crop Menu:
 - Flying two keys in the same keyer
 - Using the channel control button (F6)
 - Controlling both channels simultaneously
 - Spin vs. Rotation
 - Viewpoint and locate
 - Backside video on/off
 - Assigning video to backside video on Key bus and menu
 - Auto Flip for backside video (used for character generators primarily)
 - Layering: Auto, Intersecting, Channel 1 on top, Channel 2 on top
- Creating Objects:
 - Selecting and creating a preset object
 - Object positioning during creation
 - Object rotation during creation
 - Toggling face control (blinking face in menu)
 - Face size
 - Face cropping
 - Building an object
 - Creating an object from existing keys on screen (not using presets)
 - Object 2 only really used for single channel objects
- Object Manipulation:
 - Selecting an object
 - Object channels can be manipulated independently of objects themselves
 - Manipulate object channel position then object position
 - Manipulate object channel rotation then object rotation
- Sequence Creation:
 - Explain what a keyframe is
 - Explain interpolation of values between keyframes
 - Pressing the positioner DVE button to toggle in and out of the Sequence Menu
 - Keyframe insertion
 - Default duration for keyframes on insertion (first keyframe different from every other keyframe)
 - Changing keyframe durations
 - Inserting Keyframe happens before the selected keyframe
 - Deleting a keyframe
 - Spline types: smooth, linear, spline
 - Rotate setting: normal vs. spin
 - Overwriting a keyframe
 - Deleting a workspace
 - Saving/recalling a sequence

Squeeze & Tease WARP – Advanced continued

- Sequence Creation *continued*:
 - Non-zero duration for first keyframe
 - Inserting a hold in a sequence
 - Inserting a pause in a sequence (insert two identical keyframes with a duration between them)
 - Double pressing the PREV/NEXT buttons does a goto start and goto end
- Running Sequences:
 - Select all three trans type buttons
 - Default sequence duration
 - Overriding a sequence duration
 - Resetting an overridden sequence duration to its default (enter a duration of 0 frames)
 - Running different sequences simultaneously in Key 1 and Key 2
 - Forward / reverse / flip-flop settings for sequences
 - Forward / reverse / flip-flop are independent for Key 1 and Key 2
 - Loading a sequence using the 40 pattern control buttons
 - Loading a sequence using the 40 pattern control button does a go to start
 - Programming the 40 pattern control buttons and which sequences they load
 - Loading a sequence using the Global Memory System keypad
 - Can not run a sequence on a background
 - Sequence can be run on auto select/self and chroma keys as well
 - Memories store sequence selected in Key 1 and Key 2
- Programming custom control buttons to take you to Squeeze & Tease menus
- Wipe Creation:
 - Wipe vs. Sequence: Sequence does NOT change on air status of key. Wipe does.
 - Wipe vs. Sequence: Sequence jumps to first keyframe. Wipe runs key from its current location.
 - Wipe vs. Sequence: Sequence runs keyframes as programmed. Wipe recalculates last keyframe to get key off air.
 - Wipe modifiers: Knife Edge, Slide, Spin, Dissolve, None
 - Wipe First keyframe should be full screen with no modifiers.
 - If Wipe has a WARP, that WARP has to be selected for the first keyframe even though no WARP changes are visible.
- Running a Squeeze & Tease wipe:
 - Selecting a Squeeze & Tease wipe in the Transition Type buttons
 - Only Squeeze & Tease wipe one element (BKGD/Key 1/Key 2 at a time)
- Using re-entries to create more complicated Squeeze & Tease effects
- Resource Allocation:
 - Two DVE Channels per MLE
 - PST PATT takes one channel
 - One channel of WARP per MLE
 - Background wipe takes 1 channel of transform even if it is only doing a warp
- Hands-on practice

Day 3 – Remote Control

DVE Send

Goal: To be able to use the DVE Send feature of the Synergy switcher to its full capability.



OPTIONAL Section. Cover only if an external DVE is attached and the DVE Send option has been purchased.

- Selecting a DVE Send transition
- Selecting the DVE effect to use
- Overwriting the effect duration on the switcher panel
- Running the effect with the fader handle
- Running the effect with the AUTO TRANS button
- Normal/Reverse button for effects
- Clean Feed vs. full DVE Send effects tradeoff
- How the effect must be built on the DVE to work with DVE Send
- Hands-on practice using the DVE Send feature

External Peripheral Devices

Goal: To describe how external devices can work with your switcher and how the switcher can provide control over these devices.



If the customer is not using the interface to a particular device, move on to the next section. If the external device is present in their facility but they did not purchase the Switcher Software Option, explain how they could take advantage of the switcher control over the device.

Remote Port Expander (BSS4)

Goal: To fully explain the RS-422 Four Port Buffered Smart Switch (BSS4) option.



If the customer has not purchased this option, provide a brief overview of what they could have if they purchased this option and then move on to the next section.

- There is no operator UI for this. Mention that it exists.

VTR Remote Control

Goal: To fully explain the VTR remote control option.



If the customer has not purchased this option, provide a brief overview of what they could have if they purchased this option and then move on to the next section.

- Push VTR crosspoint to bring up control menu
- Control Menu: Stop, play, rewind, fast forward
- VTR Timecode on preview overlay
- Roll VTR button and VTRs:
 - Pre-roll time can be different per VTR
 - Roll VTR and hot punching a program bus crosspoint
 - Roll VTR and auto trans from a preset or key bus crosspoint
 - Roll VTR and fader handles
- VTR Clips:
 - Selecting a clip and the VTR port
 - Stop/play/rewind/fast forward/frame advance/frame reverse controls
 - Grab timecode feature
 - Using a VTR Clip ID vs. a VTR Clip Number
 - Recalling a VTR clip from the Control Menu
 - Recalling a VTR clip from the Global Memory System keypad
- Custom Controls and VTRs:
 - Location of VTR insert special in menu system
 - Inserting basic commands (stop/play etc.)
 - Inserting a VTR clip recall
- Hands-on practice

Video Server (VDCP) Remote Control

Goal: To fully explain the Video Server (VDCP) remote control option.



If the customer has not purchased this option, provide a brief overview of what they could have if they purchased this option and then move on to the next section.

- Press the crosspoint assigned to a VDCP device to display the Remote Control Menu
- Control menu: Stop, play, rewind, fast forward
- Server Timecode on preview overlay
- Roll VTR button and Servers:
 - Pre-roll time can be different per Server
 - Roll VTR and hot punching a program bus crosspoint
 - Roll VTR and auto trans from a preset or key bus crosspoint
 - Roll VTR and fader handles
- VTR Clips and Video Servers:
 - Selecting a clip and the Video Server port
 - Stop/play/rewind/fast forward/frame advance/frame reverse controls
 - Grab timecode feature
 - Input and outpoints
 - Recalling a Video Server VTR clip from the Control Menu
 - Recalling a Video Server VTR clip from the Global Memory System Group keypad
- Custom Controls and Video Servers:
 - Location of VTR insert special in menu system
 - Inserting basic commands (stop/play etc.)
 - Inserting a VTR clip recall
- Hands-on practice

Audio Server Remote Control

Goal: To fully explain the Audio Server (Digicart) remote control option.



If the customer has not purchased this option, provide a brief overview of what they could have if they purchased this option and then move on to the next section.

- VTR Clips and Digicart:
 - Selecting a clip and the Digicart port
 - Selecting a Digicart clip
 - Recalling a Digicart VTR clip from the Global Memory System keypad
- Custom Controls and Servers:
 - Location of Digicart insert special in menu system
 - Inserting basic commands (stop/play etc.)
 - Inserting a Digicart clip recall
- Hands-on practice

Robotic Camera Remote Control

Goal: To fully explain the robotic camera remote control option.



If the customer has not purchased this option, provide a brief overview of what they could have if they purchased this option and then move on to the next section.

- Pressing the crosspoint assigned to a Robotic Camera to display the Control Menu
- Control Menu:
 - Position/Zoom
 - Iris/Focus
 - Pedestal controls
 - Storing camera setups
 - Recalling camera setups
- Custom Controls and robotic cameras:
 - Location of Insert Remote Camera option in Custom Control Menus
 - Recall a camera custom control
 - Recall a camera shot custom control
- Hands-on practice

Router Remote Control

Goal: To fully explain the Router remote control option.



If the customer has not purchased this option, provide a brief overview of what they could have if they purchased this option and then move on to the next section.

- Push Router crosspoint to bring up control menu
- Preview Overlay will display the router name and Synergy switcher crosspoint name
- Mnemonics can display the router crosspoint names as well
- Control Menu:
 - Show *all* router inputs to switcher not just the selected crosspoint
 - Change router crosspoints from this menu
- Custom Controls and routers:
 - Adding a Source/BNC crosspoint pair to a custom control
 - Firing a Router Salvo using a custom control
- Hands-on practice

StillStore (Aprisa) Remote Control

Goal: To fully explain the Still Store remote control option.



If the customer has not purchased this option, provide a brief overview of what they could have if they purchased this option and then move on to the next section.

- Select stills using the Global Memory System Group keypad
- Hands-on practice

Character Generator Remote Control

Goal: To fully explain the Character Generator remote control option.



If the customer has not purchased this option, provide a brief overview of what they could have if they purchased this option and then move on to the next section.

- Control Menu:
 - Selecting a mode (Sequence mode vs. Manual mode)
 - Using Sequence mode:
 - Selecting a file
 - Loading a page
 - Recalling an event
 - Using Manual mode:
 - Selecting a folder
 - Recalling a page
 - Running an effect
 - Modifying text
 - Modifying an effect
 - Selecting channels
- Custom controls and character generators:
 - Selecting a sequence file
 - Selecting the next page in a sequence
 - Selecting a character generator effect file
 - Changing the text of a tag using a custom control
- Hands-on practice

Remote Audio Mixer Remote Control

Goal: To fully explain the Remote Audio Mixer control option.



If the customer has not purchased this option, provide a brief overview of what they could have if they purchased this option and then move on to the next section.

- Explain the three types of Audio Modes and the Synergy switcher:
 - Audio-Follow-Video (AFV) mode
 - Override mode
 - Editor mode
- Explain Audio Groups
- Explain Audio Transitions:
 - Explain the differences between Current audio level, Preset audio level, and Default audio level
 - Audio Only Transitions
 - Audio Levels and Pan settings
 - Demonstrate an audio transition
- Setting up an audio custom control bank:
 - Use to store audio custom controls
 - Use to put the PGM/PST MLE into Audio Mixer mode
 - Using the Audio Bank button to perform overrides on the AFV settings and perform audio only transitions
 - Set up using the Custom Control Setup Banks Menu
- Open audio channel control from a custom control:
 - Channel level control
 - Channel pan
 - Master level control
- Hold audio bank to see current/next audio on program/preset buses:
 - Override on air audio (punch program bus)
 - Override next audio (punch preset bus)
 - Audio only transitions (including limitations)
 - Demonstrate doing a voice over using this
- Custom Controls and Remote Audio Mixer control:
 - Creating an Assign Audio custom control
 - Creating a Reset Audio custom control
 - Creating an Audio All Off custom control
 - Creating an Audio Memory custom control
 - Creating Audio CH On/Off custom controls
 - Creating PGM Audio Level custom control
 - Creating PST Audio Level custom control
 - Recalling an audio board memory
- Hands-on practice

PIP II Remote Control

Goal: To fully explain the PIP II remote control option.



If the customer has not purchased this option, provide a brief overview of what they could have if they purchased this option and then move on to the next section.

- Personality on/off PIP II mem store/recall setting
- Storing a memory with PIP II enabled sends message to all PIP II devices
- Recalling a memory with PIP II enabled sends message to all PIP II devices
- Custom Controls and PIP II:
 - Device selection (all vs. selecting a specific device)
 - Recall/store/trigger commands
- Hands-on practice

Serial Tally Remote Control

Goal: To fully explain the Serial Tally remote control option.



If the customer has not purchased this option, provide a brief overview of what they could have if they purchased this option and then move on to the next section.

- There is no operator UI for this. Mention that it exists.

GPI Control

Goal: To fully explain GPI remote control.

- GPI inputs:
 - 12 GPI inputs
 - Can be wired to a button by technical staff, this allows control of switcher features away from the panel
 - Can also come from other equipment directly
 - GPI can run a custom control button
 - GPI can trigger a memory recall
 - GPI can trigger an auto trans
- GPI outputs:
 - Attaching a GPI output to a custom control
- Hands-on practice

Editor Control

Goal: To fully explain the Editor Software option.



If the customer has not purchased this option, provide a brief overview of what they could have if they purchased this option and then move on to the next section.

- Toggling the EDITOR button
- Basic differences between using 100 and 4000 protocol (1 MLE vs. several MLEs)
- Using GPIs with editors
- Using a GPI with a custom control macro for advanced features
- Toggling the GPI button
- Hands-on practice

Monitor Wall Control

Goal: To fully explain the Monitor Wall remote control.



If the customer has not purchased this option, provide a brief overview of what they could have if they purchased this option and then move on to the next section.

- Custom Controls and monitor walls:
 - Selecting a monitor wall layout
 - Changing input channels
 - Changing dynamic text
- Hands-on practice

Notes:

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