

Synergy 100 Quick Reference v16.10-S100



GENERAL OPERATION

The Synergy 100 digital production switcher was designed to be easy to use and its basic operation will be very familiar to industry professionals. This quick reference is designed to help users rapidly take advantage of the Synergy 100's powerful advanced features.

NOTE: Bold, upper case, such as **ASPECT**, in this Quick Reference Guide refers to a *button* while bold, lower case, such as **Aspect**, refers to a *knob*.

BUTTON COLORS AND DISPLAYS

The Effects Control, System Control, and Mattes groups of the panel are shared several ways. The four-letter MODE text above or next to the **SEL** button shows that group's current function.

Buttons may be three colors:

- **RED** – video input is on air
- **ORANGE** – function is active or video is selected
- **GREEN** – Effects Control or System Control group is delegated to that button's function.

Lights on the panel flash to indicate that an extended function is active in an area of the panel that can also be single-function.

TRANS LIMIT

To set an auto transition limit:

- Move fader off limit to desired position
- Press **TRANS LIMIT**, return fader to previous limit
- Press **TRANS LIMIT** to turn it on, and **AUTO TRANS** to perform transition
- To turn off, press **TRANS LIMIT** again

SWITCHER KEYERS AND BUSES

The switcher has 3 keyers and 8 internal buses each with full access to all 16 inputs, which may be video or key.

Input Selection:

- The rightmost or leftmost button of each bus may be assigned to become a **SHIFT** button
- Hold **SHIFT**, then another button on the bus to access shifted inputs

Aux Bus Control:

- In the Effects Control group, press and hold **SEL** until “**AUX#**” appears
- Use pattern buttons to select Aux Bus
- Select sources on Key and PST Bus crosspoints

Keyer Sources:

- Press any button in the Effects Keyer group to delegate the Key Bus row to the current Effects Keyer
- Press any button in the Downstream Keyer group to delegate the Key Bus row to the DSK
- KEY1, KEY2, or DSK to left of Key Bus lights to show the current key bus delegation
- Hold **SELF KEY** or **AUTO SELECT**, press a source on Key Bus to select a split key fill
- Hold **CHAR GEN1** or **CHAR GEN2**, press a source on Key Bus to program a favorite auto select key (character generator, still store, etc.) in the Downstream Keyer group

Copy/Swap Keys:

- Hold key type button, press **KEY2** in the Effects Keyer group to copy a key
- Hold **KEY2** in the Effects Keyer group, press **KEY1** in the Transition group to swap a key

MASKING KEYS

Each keyer has a dedicated box mask generator.

- Press **MASK** to enable the mask generator and delegate the Effects Control group

Masking Controls:

Positioner	moves the mask box
Positioner-twist	shrink/expand box
ASPECT	turn aspect control on/off
Aspect	adjust box aspect ratio
REV/LEARN	mask invert
CNTR/EFF D	default mask

SOFTWARE RESET

To perform a software reset:

- Hold **CNTR/EFF D** in the Effects Control group and press **SEL** in the System Control group. Note the *reset icons* beside the buttons.

WIPE AND EFFECTS

Standard Wipes:

- Press **WIPE**, Effects Control group now delegated
- Press **PATTERN[0-9]** to select standard wipe

S&T Wipes (option):

- Press **DVE**, Effects Control group now delegated
- Press **PATTERN[0-9]** to choose S&T wipe

NOTE: For complete details on the operation of S&T 3D wipes, refer to the *Squeeze & Tease 3D/WARP Owner's Guide*.

User Wipes:

You may have 20 user wipes – 10 each for **WIPE** and **DVE** effects type.

- Press **WIPE** or **DVE** – the Effects Control group now delegated
- Double press **PATTERN[0-9]** to enable user wipe
- **PATTERN[0-9]** flashing = user wipe selected
- **WIPE** only: Press **100** to change wipe class (from 0 - 3)
- **WIPE** and **DVE**: Press **10** and **1** to select desired user wipe

Wipe Classes:

0. Classic wipes	2. Matrix wipes
1. Rotary wipes	3. Special wipes

Positioner:

The positioner is always on. Press the **CNTR/EFF D** button to center effects.

CHROMA KEYS

Auto Chroma Key:

- Double press **CHROMA KEY** (cross hairs appear on preview)
- Use **Positioner** to select backing color
- Press **SEL** in System Control group
- “Tweak” settings further if desired

Basic Controls:

Adjust the following in the Effects Keyer group:

Hue/Transp	chroma key hue
Gain	chroma key gain
Clip	chroma key clip

Extended Controls:

Hold **CHROMA KEY** while adjusting the following in the Mattes group:

Hue	reject (hue selectivity)
Sat	edge spill suppression

MEMORY STORES AND RECALLS

There are 100 memories (10 banks of 10) numbered 00 through 99.

- Press **MEM** in the Effects Control group to delegate the Effects Control and System Control groups
- Press **REV/LEARN** to enter memory store mode
- Press **10** to select the bank, and **1** to select the memory location
- Press **SEL** in the System Control group to complete the store or recall operation
- During recall operations, press **CNTR/EFF D** in Effects Control group to perform Effects Dissolves between memories

Quick Store / Recall:

- Press **MEM**
- Press **REV/LEARN** (if storing)
- Press **PATTERN[0-9]** to do an immediate store/recall from the current memory bank

DISK or USB STORES AND RECALLS

You can store memories, installation, 3D wipes, and personality data to a floppy disk or USB key:

- Insert a 1.44MB PC-formatted floppy in the drive OR a USB key into the USB port
- Press **MENU**
- Select **Disk > Store** or **Recall**
- Select appropriate item to store or recall

EDITOR / AUDIO / SERIAL TALLIES (options)

To set Editor options:

- Press **MENU**
- Select **Effects > Editor > On**

To set **MENU** button as an editor controller:

- Press **MENU**
- Select **Personality > Menu Bttn**
- Select **Menu-Edit** or **Edit-Menu**

To set up communication with Editor/Audio/Serial Tally device:

- Select **Communication > Port**
- Select **Type** and **Device**
- If available, select **Baud** rate and **Parity** type
- Select **Protocol** type
- Select all other parameters associated with the chosen device.

SQUEEZE & TEASE BOX (option)

To create a basic squeeze back:

- Press **PST PATT**
- **FLY KEY** automatically turns on

Basic Controls:

ROTATE*	position on/rotate off
Positioner	position/rotate X & Y
Positioner-twist	resize/rotate Z
ASPECT	aspect ratio on/off
Aspect	aspect ratio
Border	border width
Soft	border softness
CNTR/EFF D	full screen, defaulted

***NOTE:** rotation only available on S&T 3D. For full details, refer to the *Squeeze & Tease 3D/WARP Owner's Guide*.

S&T Box Border Matte:

- Press **PST PATT** to delegate matte controls
- Use **Hue/Sat/Lum** to adjust box border color

Cropping a S&T Box:

- Press **MASK** to delegate Effects Control group to adjust cropping
- Move **Positioner** up/down for top edge crop, and left/right for left edge crop.
- Press **REV/LEARN** button. Move **Positioner** up/down for bottom edge crop, and left/right for right edge crop.

ULTIMATTE INSIDER (option)

To create an Ultimatte effect:

- Press **KEY1** or **KEY2** in the Transition Control group
- Select a key source on the Key bus
- Press **CHROMA KEY** (cross hairs appear on preview)
- NOTE:** If you change the key source after selecting key type, you must double press **CHROMA KEY** to activate the crosshairs.
- Use **Positioner** to select backing color
- Press **SEL** in System Control group
- “Tweak” settings further if desired

Ultimatte Insider Basic Controls:

Adjust the following in the Effects Keyer group:

Hue/Transp	matte gain
Gain	black gloss
Clip	matte density

Extended Controls:

Hold **CHROMA KEY** while adjusting the following in the Mattes group:

Hue	flare gate 1
Sat	flare gate 2
Lum	gray balance

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Synergy 100 Menus *v16.10-S100*



Main Menu - Synergy 100 vX.XX-SS100

0. Effects	5. Disk
1. Inputs	6. Personality
2. Outputs	7. Options
3. GPIs	8. S&T 3D
4. Communication	9. Default

MENU	100	10	1	SEL
Exit	Previous	Down	Up	Accept

Effects				
0.	Editor	On		
1.	GPis	Off		
2.	Center	Off		
3.	SafeTitle	Off		
4.	Menu Bkgd	On		

MENU	100	10	1	SEL
Exit	Previous	Down	Up	Accept

<u>Outputs</u>				
0. Aspect	4:3	5. Fld Dom	Field1	
1. Ref Dly	300			
2. Clean	BeforeKeys			
3. Ancillary data				
4. RemAuxPrg	Off			
MENU	100	10	1	SEL
Exit	Previous	Down	Up	Accept

Communication														
0. Port	Editor	5. Protocol	RS232											
1. Type	Editor	6. Input	None											
2. Device	GVG4000	7. Monitor												
3. Baud	38400	8. Option	None											
4. Parity	Odd	9. Reserved												
<table border="1"> <thead> <tr> <th>MENU</th> <th>100</th> <th>10</th> <th>1</th> <th>SEL</th> </tr> </thead> <tbody> <tr> <td>Exit</td> <td>Previous</td> <td>Down</td> <td>Up</td> <td>Accept</td> </tr> </tbody> </table>					MENU	100	10	1	SEL	Exit	Previous	Down	Up	Accept
MENU	100	10	1	SEL										
Exit	Previous	Down	Up	Accept										

Personality - Synergy 100				
0. Trans PV	On	5. GPIO Mode Disabled		
1. DSK Drop	Manual	6. Show Knob 0		
2. SleepTime	10 min	7. Audio Cut	On	
3. Menu Btn	Menu Only			
4. AutoRcall	On			
MENU	100	10	1	SEL
Exit	Previous	Down	Up	Accept

Sequence	Key 1
0. Load/Save Sequence	5. Overwrite Keyframe
1. Previous Keyframe	6. Delete Keyframe
2. Next Keyframe	7. Delete Workspace
3. Insert Keyframe	8. Wipe Modifier
4. Duration	9. Hold Off
	EMPTY

FLOATING BORDER GENERATOR (option)

You can only assign a border to one key (Key 1, Key 2, or DSK) at a time.

- Press and hold the selected key type button.
- Double press a border type (**BORD**, **SHDW**, or **OUTL**) button.
- When **BORD**, **SHDW**, or **OUTL** is selected, DSK is automatically selected in the Mattes group.

Border Controls:

BORD	around key, movable
SHDW	extrude, anchored
OUTL	key fill off, movable
Positioner	position H & V
Positioner-twist	shrink/expand
Soft	border softness
Border	border transparency

Inputs

- 0. Inputs
- 1. Panel
- 2. Tally
- 3. Audio

MENU	100	10	1	SEL
Exit	Previous	Down	Up	Accept

Ancillary data				
0. Field (line)	odd (1)		even (264)	
1. Mode	Pass		Strip	
2. Image starts at	odd (20)		even (283)	
SSSSS SSSSF SSSSS SSSS				S
5	10	15	20	HB
268	273	278	283	
MENU	100	10	1	SEL
Exit	Previous	Down	Up	Accept

Communication				
0. Port	Periph2	5. Protocol	RS232	
1. Type	Audio	6. Input	None	
2. Device	Ya01V96	7. Monitor		
3. Baud	38400	8. Option	Converter	
4. Parity	Odd	9. Converter	MIDIlator	
MENU	100	10	1	SEL
Exit	Previous	Down	Up	Accept

Options S/N:F422342234				
0. Software Options		5. Panel ID 4100-2		
1. Opt Card Ultimate		6. Frame ID 4216-4		
2. S&T DVE 3D				
3. Border Yes				
4. Tallies 16				
MENU	100	10	1	SEL
Exit	Previous	Down	Up	Accept

Preprocessor		1	01	02	Key 1
0.	Defocus	Off			
1.	Mosaic	Off			
2.	Posterize	Off			
3.	Colorize	Off			
4.	Strobe	Off			

Use positioner or Hue, Sat, Lum to modify

Inputs				
0. Input	BNC 1	5. Aud Chan1	Chan 1	
1. Type	Off	6. Aud Chan2	Chan 2	
2. AutoKey	Black			
3. Reserved				
4. Shaped	No			
MENU	100	10	1	SEL
Exit	Previous	Down	Up	Accept

GPis

- 0. Frame GPis
- 1. Remote GPis
- 2. GPI Outputs

MENU	100	10	1	SEL
Exit	Previous	Down	Up	Accept

Communication				
0. Port	Periph2	5. Protocol	RS232	
1. Type	Ser. Tally	6. Input	None	
2. Device	Contrib	7. Monitor		
3. Baud	38400	8. Option	Rate	
4. Parity	Odd	9. Rate	24	
MENU	100	10	1	SEL
Exit	Previous	Down	Up	Accept

Software Options - S/N:F422342234

0. Add	A6F8
1. Editor	On
2. DVE	Off
3. Audio	On
4. Ser Tal	On

MENU	100	10	1	SEL
Exit	Previous	Down	Up	Accept

Lighting 1 01 02 Key 1

0. Lighting Setup None

1. Position

2. Presets

3. Auto Follow Off

4. Luminance Clipping

Use positioner or Hue, Sat, Lum to modify

CALIBRATION AND DIAGNOSTICS

- Press the three **SEL** buttons in the pattern area simultaneously to enter Panel Diagnostics. For details, see Appendix C, *Synergy 100 Installation Guide*.
- Hold the **SEL** buttons in Mattes and System Control groups, and press **ROTATE** in Effects Control to enter Calibration mode. Refer to your *Synergy 100 Installation Guide*, for details.

Panel				
0. Button	1			
1. Input	Black			
MENU	100	10	1	SEL
Exit	Previous	Down	Up	Accept

Frame GPIs				
0. Input				GPI 1
1. Function				Cut
2. Area				FTB
3. Polarity				Low
4. Type				Edge

MENU	100	10	1	SEL
Exit	Previous	Down	Up	Accept

Disk
0. Recall
1. Store

MENU 100 10 1 SEL
Exit Previous Down Up Accept

S&T 3D				
0. Position/Crop				5. Object Builder
1. Border				6. StillStore
2. Sequence				7. Warp
3. Preprocessor				
4. Lighting				
MENU	100	10	1	SEL
Exit	Previous	Down	Up	Accept

Object Builder

0. Modify Object 1
1. Modify Object 2
2. Object Presets
3. Modify Preset Obj.
4. Create Preset Obj.

ENTERING INSTALLATION MENUS

Press **MENU** to view the installation menus (in blue on this page) over the preview output.

Menu Navigation Controls:

MENU	enter/exit menus
SEL	accept change
BACK (100)	go back
DOWN (10)	next
UP (1)	previous
Aspect	scroll through list

Tally				
0. Tally	Frame 1			
1. Input	BNC 1			
2. Type	On Air			
MENU	100	10	1	SEL
Exit	Previous	Down	Up	Accept

Remote GPIs				
0. Rem Panel		1		
1. GPI Input		1		
2. Aux Bus		3		
3. BNC		1		
4. Type/Edge		Low Override		
MENU	100	10	1	SEL
Exit	Previous	Down	Up	Accept

<u>Recall</u> *0. Recall All 5. Recall Indiv 3D Wipe *1. Recall Memories *2. Recall Personality 3. Recall Installation 4. Recall 3D Wipes				
MENU	100	10	1	SEL
Exit	Previous	Down	Up	Accept

Position/Crop		1	01	02	Key 1
0. Position	5. Crop Horizontal				
1. Rotation	6. Crop Vertical				
2. Pivot Preset	7. Transp. Off				
3. Pivot Position	8. Freeze Off				
4. Aspect Off	9. Adv. Positioning				

Use positioner or Hue, Sat, Lum to modify

StillStore		1	Key 1
0. StillStore	Off		
1. Mode	Frame		
2. Capture Still		Still: 10000001	
3. Name Still		10000002	
4. Delete Still		10000003	
5. Delete All Stills			

Chan 1:
Using Live Video

Audio

0. Channel Chan 1

1. Level 75%

2. Groups

MENU 100 10 1 SEL

Exit Previous Down Up Accept

GPI Outputs				
0. Output	GPI 1			
1. Type	Edge			
2. Polarity	Low			
3. BNC	None			

MENU	100	10	1	SEL
Exit	Previous	Down	Up	Accept

Store				
0.	Store All	5.	Store Indiv 3D Wipe	
1.	Store Memories	6.	Store All Pre V12	
2.	Store Personality			
3.	Store Installation			
4.	Store 3D Wipes			
MENU	100	10	1	SEL
Exit	Previous	Down	Up	Accept

The screenshot shows a software window with a 'Border' menu. The menu is open, displaying a list of options: 0. Size, 1. Textures, 2. Corners, 3. Color, 4. Auto Default, and Off. The 'Off' option is highlighted. The window title bar shows '1 01 02 Key 1'. Below the menu, there is a text prompt: 'Use positioner or Hue, Sat, Lum to modify'.

Warp

Key 1

0. Warp List WARP Off

Warp: WARP Off

Use positioner or Hue, Sat, Lum to modify