CalMAN Setup Guide

VideoForge 4K Video Generator

Rev. 1.1

Introduction

The AV Foundry VideoForge Digital Video Generator can be automatically controlled by the CalMAN Display Calibration Software.

CalMAN Recommended Workflows

- All available measurement and calibration workflows

VideoForge Required Firmware

- All firmware versions are acceptable

VideoForge Control Connection

- Ethernet LAN cable (straight-through or crossover cable)

VideoForge Power Up

- The power control button for the VideoForge is located in the upper right corner of the front panel. To power up the unit, momentarily press the Power button and release.
- On power up, the front panel LCD shows; **Booting**, **Booting ..**, **Booting …**, and then switches to show the unit's IP address. If the VideoForge is connected to a DHCP network router, this is the network assigned IP address. If the VideoForge is not connected to a network, this is the unit's internally assigned IP address, according to the Zero Configuration Network (Zeroconf) protocol.
- The VideoForge defaults to a 720p60 YCC-10 Rec709 format on initial power up, with the AV Foundry logo image, with outputs on SDI 3, SDI 4, and HDMI.

CalMAN Connection Procedure

To connect CalMAN 5 to the VideoForge for automatic CalMAN control:

1. Connect the VideoForge to a network router or directly to the CalMAN computer, power on the VideoForge, and note the unit's IP address on the LCD.
2. On the CalMAN Source Settings tab/click "Find Source," then select "AV Foundry; VideoForge II."
3. Enter the VideoForge IP Address.

4. Click *Connect* on the Source connect dialog.

CalMAN Source Settings Tab

Triplet Support

The VideoForge provides full RGB triplet support to provide test patterns that are compatible with 3D cube LUT calibration.

Window Size

On the Window Size drop down, select your desired pattern window size.

- Window 2%
- Window 5%
- Window 10%
- Window 18% (default)
- Window 25%
- Window 50%
- Full 100%
- Constant APL 10
- Constant APL 18
- Constant APL 25
- Constant APL 50

(NOTE: For Plasma and CRT displays, Constant APL 18 works well.)

VideoForge Custom Test Patterns

To display your own custom test patterns or images with the VideoForge:

1. Save custom test pattern or image files to a USB flash drive, in PNG or JPEG format, at the desired display resolution (e.g. 1920x1080).
2. Connect the flash drive to a VideoForge USB port.
3. Access the VideoForge control interface, as outlined in the “Manual Control Interface” section, above.
4. On the Patterns tab in the VideoForge control interface, open the Pattern drop down box. Your custom files will be listed, grouped by USB drive.
5. Select one of your custom files to display your custom image.

VideoForge 4K - Supported Formats										
Format	**YCC-8**	**YCC-10**	**RGB-8**	**RGB-10**	**SL-SDI**	**DL-SDI**	**3Ga-SDI**	**3Gb-SDI**	**QL-SDI**	**HDMI**
525 59.94 (480i)	X	X			X					X
625 50.00 (576i)	X	X			X					X
1080i 50.00	X	X	X	X	X					X
1080i 59.95	X	X	X	X	X					X
1080i 60.00	X	X	X	X	X					X
720p 50.00	X	X			X					X
720p 59.95	X	X			X					X
720p 60.00	X	X			X					X
1080p 23.98	X	X	X	X	X					X
1080p 24.00	X	X	X	X	X					X
1080p 25.00	X	X	X	X	X					X
1080p 29.97	X	X	X	X	X					X
1080p 30.00	X	X	X	X	X					X
1080p 50.00 DL	X	X	X	X		X				
1080p 59.95 DL	X	X	X	X		X				
1080p 60.00 DL	X	X	X	X		X				
1080p 50.00 3Ga	X	X	X	X			X			X
1080p 59.95 3Ga	X	X	X	X			X			X
1080p 60.00 3Ga	X	X	X	X			X			X
1080p 50.00 3Gb	X	X	X	X				X		
1080p 59.95 3Gb	X	X	X	X				X		
1080p 60.00 3Gb	X	X	X	X				X		
1080p2k 23.98	X	X	X	X		X				X
1080p2k 24.00	X	X	X	X		X				X
1080p2k 25.00	X	X	X	X		X				X
4x1920x1080p 23.98	X	X	X	X					X	
4x1920x1080p 24.00	X	X	X	X					X	
4x1920x1080p 25.00	X	X	X	X					X	
4x2048x1080p 23.98	X	X	X	X		X			X	
4x2048x1080p 24.00	X	X	X	X		X			X	
4x2048x1080p 25.00	X	X	X	X		X			X	

- **YCC-8**: YCrCb, 4:2:2, 8-bit
- **YCC-10**: YCrCb, 4:2:2, 10-bit
- **RGB-8**: RGB, 4:4:4, 8-bit
- **RGB-10**: RGB, 4:4:4, 10-bit
- **SL-SDI**: Single link SDI (mirrored outputs on SDI 3 & SDI 4)
- **DL-SDI**: Dual link SDI (output on SDI 3 / SDI 4)

- **3Ga-SDI**: Single link 3 Gb/s SDI, 3Ga standard (mirrored outputs on SDI 3 & SDI 4)
- **3Gb-SDI**: Single link 3 Gb/s SDI, 3 GB standard (mirrored outputs on SDI 3 & SDI 4)
- **QL-SDI**: Quad link 3 Gb/s SDI (SDI 1 = UL, SDI 2 = UR, SDI 3 = LL, SDI 4 = LR)

Manual Control User Interface

To manually control the VideoForge, including its output signal resolution and test pattern:

1. Connect the VideoForge either to a network or directly to a host computer with an Ethernet cable (straight through or crossover), power on the VideoForge, and note the unit's IP address on the LCD.
2. Open a computer web browser (e.g. Internet Explorer, Firefox, etc.).
3. Enter the unit's IP address into the browser's address bar and press *Enter*.
4. Select the desired VideoForge user interface tab and make desired selections.

VideoForge User Interface Tabs:

- **Output** – The Output page gives full control over the VideoForge SDI and HDMI output formats. This includes format, titling, orientation, color gating, color space, EDID, etc.
- **Video Cal** – The Video Cal page provides a convenient shortcut to select test patterns that are commonly used for video calibration procedures. The desired pattern can be selected by simply clicking on a Pattern button on the left hand side. Any pattern parameter options for the selected pattern appear in the panel to the right of the buttons.
- **Patterns** – The Patterns page provides a list of all the patterns installed on the VideoForge. Many of the test patterns also provide selection boxes to modify various parameters of the output pattern.
- **Admin** – The Admin page provides version and serial number information for the VideoForge. It also allows displays the network settings, updates the firmware, and resets the unit. Pressing the unit's Power button for an extended period also forces the VideoForge to reset and power down.

About / Contact

About Portrait Displays

Portrait Displays, Inc., since 1993, is a leading application software provider (ASP) for PC, smartphone, and tablet displays. The Portrait Displays team now includes **SpectraCal**, the world's leading provider of video display calibration software. The combined companies offer value-added, feature-rich solutions to both OEM display manufacturers and end users seeking improved accuracy and manageability of their displays.

Portrait Displays, an Intel Capital Portfolio company, is a private corporation with headquarters in Pleasanton, California, USA with representatives in Europe, Taiwan, China, Japan, and Korea.

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