

L e e m i n g L U T P R O

Camera Setup Guide: Panasonic S Series

Manual Version: 20191217

INTRODUCTION

Thank you for purchasing Leeming LUT Pro™, the most accurate and professional Look Up Tables (LUTs) for the Panasonic S series cameras.

The LUTs have been carefully developed to get the maximum dynamic range and colour accuracy out of the supported profiles, giving you unparalleled Rec709 precision as well as perfect camera matching with other supported cameras in the Leeming LUT Pro™ range.

Use it in conjunction with ETTR shooting principles and you will get the highest possible quality images out of the camera every time. I am confident you will find these the most accurate LUTs for the camera. Anything less and I wouldn't have put my name on it!

Enjoy :)

Paul Leeming
Director / Writer / Cinematographer / Actor
Visceral Psyche Films
www.visceralpsyche.com

REQUIREMENTS

1. Panasonic S series camera.
2. Spectrally neutral white or grey card, for white balancing the camera (eg. the white balance side of the X-Rite Colorchecker Passport Photo is designed for this).
3. Leeming LUT Pro™ for Panasonic S series.

CAMERA SETUP

Using the Panasonic S1 firmware 1.2 with the V-Log profile activated as representative of menu structure. Your camera may not have all the same features so adjust as necessary. **Items highlighted in YELLOW have an adverse effect on LUT accuracy if changed away from the recommended values.**

1. Set the camera mode to Movie using the Top Dial and the exposure measurement type to the white square (left-most icon). Set the Focus mode dial to MF (manual focus) unless you are using an autofocus capable lens.
2. Press the MENU button to enter the camera's main menu system. Go to the first tab (the MOVIE mode icon).
3. Image Quality 1 – Set Exposure mode to M, ISO Sensitivity (Video) as required and **i.Dynamic Range OFF**. Set the Vignetting and Diffraction Compensation as required.
4. Photo Style – set the following parameters for each profile (the LUTs require these to function optimally):

	Contrast	Highlight	Shadow	Saturation	Hue	Sharpness	NR
Cinelike-D	0	0	0	-5	0	-5	-5
V-Log						0	0
Like2100(HLG)				0	0	-5	-5

5. Image Quality 2 – set Filter Settings OFF, Auto Exposure in P/A/S/M OFF.
6. Image Format – Set Rec Quality as desired. I strongly advise using 10bit for V-Log and HLG profiles as 8bit options WILL cause banding artifacts in your footage. My recommended starting profile is 4K 10bit 24p LongGOP for filmmaking. Set Rec File Format to MOV as this provides the most options. Set Luminance Level to 0-1023 (or 0-255 when using 8bit Rec Format options). This may be greyed out depending on the profile in use.
7. Focus – Set Focus Peaking ON, Focus Peaking Sensitivity +2, Display color as desired (I use green).
8. Audio – Set sound Rec Level Disp ON, then set your parameters as needed for your particular external microphone. Set Sound Output to REALTIME.
9. Monitor/Display – Set Waveform Monitor OFF (I recommend using the ZEBRAS to judge ETTR exposure clipping for the various profiles). Set HDMI Rec Output as needed for your external monitoring. I recommend using the 4:2:2 10bit output mode to maximise external video quality and Info Display OFF to provide a clean feed.
10. Others (Video) – Set Image Stabilizer as desired and Image Area of Video FULL.
11. Go to the second main menu tab (the GEAR icon).
12. Image Quality – Set ISO Increments to 1/3 EV, Extended ISO as desired.
13. Focus/Shutter 1 – Set MF Assist as desired. I recommend Press Joystick ON and MF Assist Display FULL.
14. Operation 2 – Set Video Rec Button (Remote) ON.
15. Monitor/Display 1 – Set Constant Preview ON, Histogram OFF and the rest as desired.
16. Monitor/Display 2 – Set Expo.Meter OFF and the rest as desired.
17. Monitor/Display 3 – Set Zebra Pattern to ZEBRA1 with the following parameters. Note that the zebras listed here are closest to clipping point and provide very little safety margin if showing. For more safety margin reduce each listed option by 5%.

	Zebras
Cinelike-D	105%
V-Log	95%
Like2100(HLG)	95%

18. V-Log View Assist – If you are using V-Log, place the VLT monitoring LUT from your LUT ZIP file in the root directory of your SD card, place it in Slot 1, Select V-Log View Assist, Read LUT File, select LEEMINGS.VLT, save to Set1. From there, choose LUT Select – LEEMINGS.VLT and LUT View Assist (Monitor) ON. You can optionally output the same file to your HDMI port if required but BE CAREFUL as this will bake in the LUT in a low bit depth. DO NOT use this option if you are using an external recorder! The zebras and histogram retain their pre-LUT levels so you don't need to adjust anything when using the monitoring LUT function.
19. HLG View Assist – Set Monitor to MODE1 and HDMI to AUTO.
20. Go to the third main menu tab (the SPANNER/WRENCH icon).
21. Card/File – Set your Folder / File Settings as desired (I recommend naming your files with something other than the default P100**** to help differentiate your files from other similar cameras on a multi-cam shoot). Set Double Card Slot Function as desired for your preferred operating mode.
22. Monitor/Display 1 – Set your desired parameters.
23. In/Out – Set Beep options to OFF for a quiet studio.
24. TV Connection – Set HDMI Mode (Playback) AUTO, LUT View Assist (HDMI) and HLG View Assist (HDMI) to OFF.

25. Setting – You can save your camera settings here once finished. I recommend being careful with Save to Custom Mode as switching to those modes will often save ALL settings including ISO, WB and lens f-stop etc which may not be what you want in the heat of the moment when changing settings.
26. My Menu settings – use this area to save shortcuts to your most used settings for easy access when shooting.
27. Playback Mode – Set your View Assist options as desired for playback.

CAMERA OPERATION

1. Select your desired Photo Style for shooting. **I DO NOT recommend V-Log or HLG for 8bit 4:2:0 shooting as it causes unacceptable banding due to the lack of tonal precision in 8 bits (this is NOT the fault of the LUTs).**
2. Adjust the Zebras to the relevant ETTR level for the Photo Style (see table above).
3. Custom White Balance by pressing the WB button, selecting one of the Custom slots, then aim the target square in the middle of the white balance card. Make sure the image is correctly exposed (no clipping but not too dark), then press Set to get the Custom White Balance.
4. Get used to this white balancing process, as it's the key to maximum dynamic range across the three RGB channels.
5. Using the zebras, ETTR (Expose To The Right) until you see the clipping point of the zebras, then adjust your exposure down until the zebras just disappear.

You are now ready to use Leeming LUT Pro™ with the maximum picture quality available. Be sure to visit the website to read up on how to use ETTR (Expose To The Right) principles to get the most dynamic range out of your sensor, as well as the associated Leeming LUT Pro™ LUT Installation Manual on how to apply the LUT to your footage in post-production:

www.LeemingLUTPro.com

LICENCE

You are granted a personal licence to use Leeming LUT Pro™ on two computers. For use with more computers, please contact Visceral Psyche Films for bulk discount pricing. All updates to the product are free of charge. You may not upload the LUT anywhere, share it with other people or incorporate it into other LUTs, whether they be for sale or not. Please respect the work that has gone into the LUTs and support those supporting you. Thank you!

COMPATIBILITY

Leeming LUT Pro™ is compatible with any NLE that uses a 33x33x33 .cube LUT format. It has been successfully tested with Adobe Premiere CC 2019, Davinci Resolve 16, Final Cut X, Magix Vegas 13 and others. See the website for an authoritative list.