L e e m i n g L U T PRO

Camera Setup Guide:	Apple iPhone 15 16 Pro
Colour Space:	Rec709 gamma 2.4
Target Exposure:	ETTR
LUT Version:	Pro 4
Guide Version:	2025.01.05

INTRODUCTION

Thank you for purchasing Leeming LUT Pro™, the most accurate and professional Look Up Tables (LUTs) for your camera.

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 them 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 your camera. Anything less and I wouldn't have put my name on them!

Enjoy :)

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LICENCE

You are granted a personal licence to use Leeming LUT Pro™ on three devices. For use with more devices, please contact Visceral Psyche Films for bulk discount pricing. You may not upload the LUTs anywhere, share them with other people or incorporate them into other LUTs for derivative use (i.e. making creative LUTs using Leeming LUT Pro™ as the underlying base), whether they be for sale or not. Please respect the work that has gone into the LUTs and support those supporting you.

COMPATIBILITY

Leeming LUT Pro™ is compatible with any software or hardware device that supports a 33x33x33 cube LUT.

REQUIREMENTS

1.   iPhone 15 16 Pro or Pro Max.
2.   Spectrally neutral white or grey card, for white balancing the camera.
3.   Leeming LUT Pro 4 – Apple iPhone 15 16 Pro.
4.   Blackmagic Camera app from the App Store (free download).

NOTE: Items highlighted in yellow have an adverse effect on LUT accuracy if changed away from the recommended values in this guide.

QUICK REFERENCE OF IMPORTANT CAMERA SETTINGS

The settings below are recommended for the LUTs to work properly, in conjunction with an accurate white balance and using the ETTR zebras to show where the highlights of an image are clipping.

If you deviate from these settings, your colorimetry and luma curves won't match precisely to Rec709 and you may get other errors in your footage. You can find the details of how to set these in the next section.

	Apple Log	Normal (SDR Rec.709)
Zebras [1]	80%	95%
Color Space	Apple Log - HDR	Normal (Rec.709)
Video Compression	ProRes	HEVC
Color Space Tag	Rec.709	Rec.709

[1] See hardware/software bugs section of this guide for note about Log zebras

FULL CAMERA SETUP GUIDE

Based on the iPhone 15 Pro Max, using the Blackmagic Camera 2.2 app interface.

1.   Download and install the free Blackmagic Camera app from the App Store. This is the best way to maximise the quality of your camera footage and settings, and will be the basis of the guide.
2.   If you are planning to use an external USB-C SSD for recording (highly recommended since the file sizes are very large with ProRes), format it as exFAT, copy the Leeming LUT Pro 4 cube files to the drive, then plug it into the phone before opening the app.
3.   Open the Blackmagic Camera app. The guide is written with the phone turned to landscape orientation but the functions are all there even if you hold the phone in portrait orientation.
4.   Open the Settings – Record tab and set the Codec quality as desired (I recommend Apple ProRes of some flavour), Resolution as desired (I recommend 4K), Color Space to Apple Log – HDR, and the Timecode and Timelapse settings as desired.
5.   Switch to the Camera tab of Settings, then ensure that Lock White Balance on Record is ON. Set Shutter Measurement as desired (I recommend Angle) and the rest of the items as desired.
6.   Set Audio and Monitor options as desired.
7.   In the Media tab set Save Clips to Files, then Browse to your external SSD and select or create the folder you wish to save your clips to. If you don't have an external SSD connected, select either In-App Only or In-App and Photo Library as desired (you will need to use iTunes or your computer to download your clips from the phone through the Blackmagic Cam files section).
8.   In the LUTs tab, go to LUT Selection – Load LUT and Browse for the Leeming LUT Pro 4 files you purchased. Load them into the app, then select either Rec709 Pure or Rec709 OTF (I recommend OTF for most things), press the back button (<), then set Display LUT to ON. Set Color Space Tag to Rec.709 (this tells the app what colour space the LUT is designed for). This will give you a realtime preview of the LUT (you can turn this on or off as desired through the main app interface as well once loaded).
9.   Set your Accessories and Blackmagic Cloud settings as desired, then exit the Settings menu by clicking on the Camera icon top right of the screen.

10. Now click on the Overlays button (rectangle icon with four small brackets inside it), then the Zebras icon (circle with zebra lines inside it), and ==set your Zebra value to 80% for Apple Log or 95% if using the Normal colour profile== (I don't recommend this profile though as it turns on ugly sharpening and noise reduction).

11. Set your guides etc as desired. The last button in that menu is says LUT on it, and it should be showing ON in blue to indicate that it is active with the LUT you installed previously in Settings. This is where you can turn the LUT ON or OFF depending on whether you want to preview the image as flat Apple Log, or with my LUT applied. Note that the LUT is only a preview LUT and is NOT baked in. Now tap the Overlays button again to close the menu.

12. Set your lens, FPS, Shutter Angle as desired by tapping on each feature. ==I strongly recommend setting a fixed ISO, as Apple's log implementation is broken because it dynamically shifts the highlight clipping point as ISO changes!== Note that you can lock certain functions to prevent them from shifting during the shot. A little Padlock icon will appear when this is the case.

13. To adjust White Balance, tap on the WB section and choose either a preset, or hold a white balance card in front of the camera and tap the Auto button that appears. Once set, tap the Padlock icon at the top to lock the WB so it doesn't shift during the shot. Tap the WB area again to close the menu.

14. Set stabilisation, EV compensation as desired, then you are done with setup.

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 LUTs to your footage:

www.LeemingLUTPro.com

HARDWARE / SOFTWARE QUIRKS AND BUGS

1. ==Apple Log has a broken log implementation because it shifts the highlight clipping point depending on what ISO you have set. To get around this (and short of having a separate LUT for each possible ISO!), ensure that your footage is either shot so that nothing clips above 80% zebras, or if you use Auto ISO / ISO 160 and above, apply the LUT in post and then pull down any clipped highlights until they are either no longer clipped (if they were LUT soft-clipped), or you can see where they are cut off in a flat line (hardware clipped). Up to ISO 125 the 80% zebras clip correctly. For ISOs greater than 125 it goes up in a non-linear fashion until ISO 2000 and above, where the clipping point is 99% zebras.==

2. If you use the built-in Apple Camera app, you can ONLY record Apple Log to an external recorder. With the Blackmagic Camera app, you can record Apple Log both externally and internally (and also select different framerates and parameters).

3. For stabilisation to work as effectively as the native Apple camera app, you should set it to Extreme mode and turn the LUT preview OFF, otherwise you may experience a laggy preview image while recording.

GUIDE CHANGELOG

2025.01.05   Adjusted Normal zebras to 95% to reflect app changes.

2025.01.01   Initial release.