L e e m i n g L U T PRO

Camera Setup Guide:	DJI Mavic 3
Based On:	DJI Mavic 3 (firmware 01.00.0500)
Colour Space:	Rec709 gamma 2.4
Target Exposure:	ETTR
LUT Version:	Athena III & Pro III
LUT Release Date:	2022.03.16
Guide Version:	2022.03.16

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 :)

Paul Leeming
Director / Writer / Cinematographer / Actor
Visceral Psyche Films
www.visceralpsyche.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. 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. For a full list, please see the website.

REQUIREMENTS

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

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.

	Normal (includes Explorer)	D-Log
Histogram	OFF	ON
Overexposure Warning (Zebras)	ON	OFF
Color Display Assist	N/A	OFF

FULL CAMERA SETUP GUIDE

Based on the Mavic 3, using the DJI Fly phone app interface. Your camera may not have all the same features so adjust as necessary.

1. Plug your phone or tablet into your remote controller and start the DJI Fly app, then press the Connect Aircraft button.
2. First tap on the film strip icon above the red Record button on screen on the right hand side, and select Video Mode, then exit.
3. Tap on the three dots top right of screen to enter the Menus.
4. Safety – set your max altitude and distance as well the Auto RTH (Return to Home) Altitude. You can also calibrate your gimbal and compass here, as well as unlocking Geo Zones etc. I recommend setting Signal Lost to Return To Home (make sure your RTH Altitude considers local heights of objects to avoid the drone crashing into them when on autopilot!). Set APAS to ON unless you are confident you won't run into obstacles! Set Auxiliary LED to Auto (the downward facing LED).
5. Control – Choose your flight mode etc and Units as desired. Set Allow Upward Gimbal Rotation ON to give you more flexibility in shot tilting.
6. Camera – Set Format as desired (MP4 or MOV), Color to D-Log (10bit 4:2:0) or Normal (8bit 4:2:0) and Coding Format as desired (if you have the Cine version of the Mavic 3 I recommend ProRes which gives you 10bit 4:2:2, otherwise for the normal Mavic 3 I recommend H.265 as it is more efficient for the same bitrate, unless your computer can't handle it). When in Normal mode you can choose between VBR and CBR for Video Bitrate. Set Video Subtitles (provides a data stream of camera and drone position etc for post in a separate SRT file next to the movie file) as desired. Note that if you shoot with the Explorer Mode (the zoom lens) you only get Normal mode at 4K or 1080p and 30fps (29.97fps).
7. Turn Histogram ON for D-Log and Overexposure Warning ON for Normal (but OFF for D-Log as it will give an underexposed image). If using Manual Focus, set your Peaking Level as desired. Turn Color Display Assist OFF when using D-Log as it gives a non-ETTR image result which will lead to underexposed shots when using Leeming LUT Pro. Use the Histogram to assess exposure and note that clipping point for D-Log is at the first bar in from the right (roughly at the 80% brightness line).

8.	==Set White Balance to Manual and adjust to the correct Kelvin value==. If you hold a white balance card in front of the drone when switching from Auto to Manual, the first custom value will be very close to neutral, so this is my recommended method for consistency and avoiding any colour shift during flight. ==You will need to tweak the white balance in post BEFORE applying the LUT, so I recommend shooting a few seconds of your white balance card before takeoff in the light you expect when flying, for best accuracy in post==.

9.	Set Storage to SD Card and Format it here if needed.

10.	You can use Cache When Recording with your selected size, to record a low quality backup to your phone or tablet if desired.

11.	Transmission – Set as needed for your region to avoid interference.

12.	About – Set your drone's name if needed. You can also check for firmware updates in this screen, to ensure you have the latest versions.

13.	Exit the Menus by tapping outside the settings box.

14.	Tap on the film strip icon above the Record button to bring up the Camera functions.

15.	==Choose Video==, then ==Normal mode (this is NOT the Color Mode, this is the type of video recording being shot, eg Normal, Slo-motion etc)==, then choose your desired resolution and framerate. I recommend 5.1K at 24fps for cinema work, but you can choose for higher framerates and combinations if desired. In post you can then re-time your footage to your project framerate for slomo effects.

16.	Tap on the little Auto camera icon bottom right of the screen to switch it to PRO mode (manual adjustment). Here you can set your ISO, white balance, iris and shutter speed manually for greater control over your exposure. ==In Explorer Mode you can't adjust anything manually. The only way to adjust exposure is by using the EV slider to reduce or increase the exposure==.

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 in post-production:

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www.LeemingLUTPro.com

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HARDWARE / SOFTWARE QUIRKS AND BUGS

1.	You can tap on a subject on the screen to have the camera focus on that subject. You can also drag a box around a subject to enable Active Track.

2.	==The Normal profile is only 8bit whereas D-Log is 10bit==, so I do NOT recommend shooting Normal and only using the associated LUT to fix the image if you shot in that mode by accident.

3.	==In D-Log the Color Display Assist gives a false sense of the image exposure==, leaving a lot of dynamic range on the table. ==Turn it OFF and use the Histogram's first bar in from the right (roughly the 80% brightness line) as the clipping point==. Keep your exposure just below that (don't have a long line riding up that 80% line) and you should get good ETTR shots with lots of dynamic range.

GUIDE CHANGELOG

2022.03.16		Initial release.