

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

Camera Setup Guide:	Blackmagic Design Gen1 Film
Based On:	BMMCC
Colour Space:	Rec709 gamma 2.4
Target Exposure:	ETTR
LUT Version:	Athena III & Pro III
LUT Release Date:	2021.02.05
Guide Version:	2021.02.05

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 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. Blackmagic Design camera with Gen1 Film colour science support.
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 Blackmagic Design Gen1 Film.

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.

	Gen1 Film
Zebras (ETTR)	95%
Dynamic Range	Film
Histogram	ON
Zebras	ON

FULL CAMERA SETUP GUIDE

Based on the camera listed on the title page of this guide. Your camera may not have all the same features so adjust as necessary.

1. Press the MENU button to enter the setup menus of the camera.
2. Depending on your camera type and firmware version, you should see at least some of the following menu tabs: Camera, Audio, Monitoring, Setup, Remote, Recording.
3. Select Camera/Recording tab, then choose your preferred codec/recording format (I recommend RAW 3:1 to allow for 1080p60 RAW recording), **Dynamic Range to FILM** and framerate as desired.
4. Set your ISO as needed for the scene and your Shutter Angle to 172.8 or 180 degrees depending on your local lighting frequency (50Hz or 60Hz).
5. The camera doesn't have auto white balance so you will need to set it manually. I recommend 5600K for sunny daylight, 5000K for cloudy, and 3200K for interior tungsten lighting situations. The good thing is, in post you have a RAW file, so you can adjust the white balance there with zero penalty before applying the LUT.
6. Select the Audio tab and adjust your levels as needed.
7. In the Monitoring/Display tab, set your HDMI overlays to ON if needed, set your Frame Guides as desired, and your **Dynamic Range to FILM**.
8. Set Focus Peaking ON and Histogram ON. Set the **Zebras ON with 95%** (this gives you a 5% safety margin from clipping).
9. In the Setup tab you can set the date and time, and format your SD card.

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:

www.LeemingLUTPro.com

HARDWARE / SOFTWARE QUIRKS AND BUGS

1. The camera doesn't have auto white balance so you will need to set it manually. I recommend 5600K for sunny daylight, 5000K for cloudy, and 3200K for interior tungsten lighting situations. The good thing is, in post you have a RAW file, so you can adjust the white balance there with zero penalty before applying the LUT, if you film your white balance card in the frame at the beginning of the shot.

ATOMOS NINJA V RECORDER SETUP

The LUTs are compatible with external monitors and recorders which use the 33x33x33 cube format.

One issue which arises with using the camera's HDMI output is that it sometimes feeds the wrong levels the device is expecting. Using the Atomos Ninja V (with firmware 10.5+) as a guide, set the Legalize function as per the table below to correct this. **Make sure you DON'T have a viewing LUT active when setting this up, otherwise your Legalize setting will be greyed out and unavailable to change.** To ensure your externally recorded clips match both on screen and in post, **have the LUTs applied and active in the Ninja V.**

	Gen1 Film
Zebras (ETTR)	100%
Log/HDR	OFF
Camera	Standard
Gamma	Rec709
Gamut	Rec709
HDR Auto	OFF
Legalize	OFF
HDMI Trigger	ON
Timecode	HDMI

DAVINCI RESOLVE CLIP ATTRIBUTES FOR ATOMOS NINJA V FOOTAGE

When importing clips into Davinci Resolve and NOT using the Legalize ON option in the recorder, there exists the ability to adjust the Data Levels of the externally recorded footage between Full and Video using Clip Attributes. The following table lists what should be set for each profile to have the LUTs work properly.

	Gen1 Film
Data Levels	Auto

GUIDE CHANGELOG

2021.02.05 Initial release.