How To Think Like A Cinematographer

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Digital Cinema Evangelist
President, Silver Platter Productions
My Background

Multiple Award Winner: Film, TV, Video, Multimedia, Interactive and Immersive

Emmy Nominated: Producer/Director/Writer/Cameraman/Editor

Programs/ Clients include: corporate, docs, commercial, music videos, travel programs, VR commercials

Shot film, video, 3D, 4K, and VR, around the world.
How To Think Like A Cinematographer

- Plan, Plan, Plan
- Know Terminology
- Create Your Look
- Lighting & Negative Fill
- Shutter Speed
- Color Science
  - Gamma, HDR
  - Raw Vs. Log
  - Anamorphic
Are You A Cinematographer?

A *cinematographer* or director of photography is the chief over the camera and light crews working on a film, television production or other live action piece and is responsible for making artistic and technical decisions related to the image.

Wikipedia
Are You A Film Maker?

A filmmaker is an individual who is proficient in all aspects of movie making. A filmmaker writes, directs, edits and produces their films.

Urban Dictionary
Are You A Shooter?

Someone who shoots something; a gunner, an archer, etc.

Wiktionary
Are You A Videographer?

The art or practice of using a video camera.

Free Dictionary
Videographer Vs. Cinematographer

Does Anything
To Get the Shot

CAPTURES the Moment

Does Everything
To Get the Shot

CREATES the Moment
Then VS Now

Old Film School 101
• Test Your Equipment
• Determine Your Look
• Set Exposure & ISO
• Pick Lenses and Filters
• Design Your Lighting
• And NEVER EVER Move The Camera!

New Film School 101
• Why?
• Why?
• Why?
• Why?
• Why? Who Cares?
• WHAT!!?
Ah, Give Me That Shallow Depth of Field

But, is it the Film Look?
What is The Film Look?

Wider contrast ratio (Dynamic Range)
More highlight and shadow detail
Wider color gamut
Motion Blur
Strobing

American Society of Cinematographers
Creating A Look

**In Camera**
- Lighting/Filters
- Scene Files
- Shot Composition
- Color Science

**In Post**
- Raw or Log Footage
- Extensive Color Grading
- Editing
Using LUTS

VARICAM LUT LIBRARY

Add from 35 conversion LUTs and artistic looks to VariCam® cinema cameras and the AU-EVA1.

WATCH LUT LOOKS

Luts
Steps to Create a Look

- White balance
- Set exposure
- Select gamma
- Select knee
- Select matrix
- Adjust color temperature
- Adjust phase
- Adjust chroma level
- Save to SD card
Understanding Color Science: Gamma

The ratio of light input (exposure) to light output (density or voltage) as processed thru the camera system.
Gamma

Density

75 hi contrast gamma
a shorter line
less tones
steeper slope

45 normal gamma

35 flat, low contrast gamma
has more tones, a longer line.
Expose For What?
The range of luminance a camera can capture.

How much shadow and highlight detail can be reproduced before hitting pure black or pure white.

Motion Picture film has 14 stops of dynamic range.

Also referred to as latitude.
Understanding Resolution
Why Shoot in 4K Or Higher?

• Archiving

• Sharper Footage and Reduced Noise

• Crop image in post for extended zoom and stabilization
Let’s Get Silly
Why Stop at 8K?

- 16K = 15360x8640
- 32K = 30720X17280
- 48K = 46080X25920
- 64K = 61440X34560
- 128K = 122800X69120

Because over 8K you will NOT be able to see the difference. Does not define the “film look”
Who Cares About Resolution?

- Here comes HDR!
HDR

- Increased Color Volume
- Don’t crush the color

Bright colors are not washed out
**HDR** Promises darker blacks and 6-10x normal brightness for small area highlights. (No more clipped highlights!)

**HDR** provides deeper, more saturated colors even at high brightness. (Increased Color Volume)

**HDR** provides a **very** noticeable viewing experience improvement
HDR Acquisition

- 14+ stops of latitude
- Wide Color Gamut
- Log or Raw Recording
Who Shoots RAW?

NETFLIX
Wanna Grade RAW?

Raw

Basic Grade

Simon Wyndham

https://www.redsharknews.com/production/item/5725-the-eva1-s-5-7k-raw-mode-produces-astonishing-results-for-the-price#twitter
Log is Not RAW

Log, V-Log, S-Log etc. is not RAW
It is a flattened gamma curve
Requires intensive color grading in post
Smaller file sizes than RAW
But Should You Shoot Raw?

Multicam Shoot
Not Log, Not Raw

Courtesy: Art Aldrich Otek, TV
Anamorphic Format

*Anamorphic* format is the cinematography technique of shooting a widescreen picture on standard 35 mm film or other visual recording media with a non-widescreen native aspect ratio.
Anamorphic Format

- Wider Field of View
- Horizontal Lens Flares
- Oval Bokeh
- Requires New Lens

https://vimeo.com/channels/rulelearninglabseries/154340415
Resources

- American Society of Cinematographers
- Camera Manufacturer Websites
- Creativecow.net
- Cinematography Mailing List  www.cinematography.net/
- Dvxuser.com
- No film school.com
- The Filmmaker’s Blog
- www.indietips.com