

PICTURE; Exposure (light)

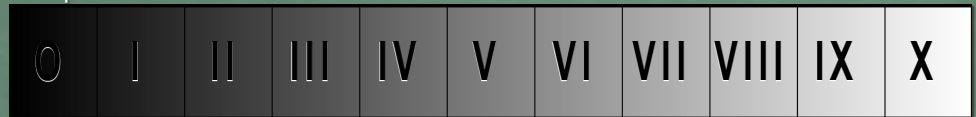
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LUMINANCE

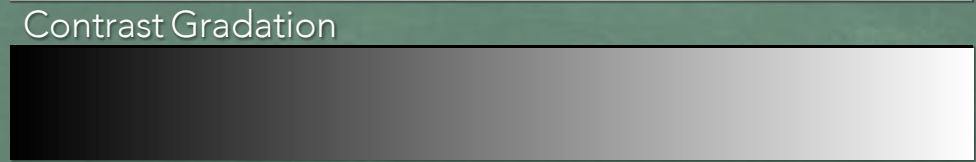
Brightness

1. Zone System

Exposure Zones



2. Contrast



3. Gray card

- Exposure Reference
- 18% Gray



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PICTURE; Exposure (light)

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LUMINANCE (LUMA)

Intensity of light. "Brightness"

1. Zone System

- eleven shades of "luminance" tonal gradation. Black to White
- zone 5 is middle gray with 18% of light reflectance (18% gray)

Zone System fun fact: Developed by Ansel Adams and Fred Archer. Ansel Adams, "Not an invention of mine; it's a codification of the principles of sensitometry, worked out by Fred Archer and myself."

2. Contrast

- separation of highlights to shadows

3. Gray Card

- 18% gray reference

PICTURE; Exposure (light)

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MEASURED

- Incident Meter
 - light falling on object



- Normal Exposure
 - F Stop (18% Gray)

- Consider Story!

SEKONIC L-358
Incident Meter: measures light falling on lumi-sphere globe
frame rate (f/s) 24

OPERATION CONFIGURE

- POWER on Ⓚ → press/hold POWER off
- SET Cine Mode
→ press/hold MODE Ⓚ → rotate Jog Wheel Ⓚ
→ boxed ambient con Ⓚ · 'F' NOT boxed Ⓚ
- SET frame rate f/s 24
→ rotate Jog Wheel Ⓚ
if boxed 'T' Ⓚ visible, rotate Jog Wheel Ⓚ Counter-Clockwise
- SET desired ISO
→ press/hold ISO 1 Ⓚ → rotate Jog Wheel Ⓚ

MEASURE LIGHT

- EXTEND lumi-sphere globe Ⓚ
- PRESS Ⓚ
- aperture F-stop for NORMAL* exposure
→ F-stop Ⓚ measured in 1/10 increments Ⓚ

BUTTON / DISPLAY

- POWER
- MODE set to Cine
- ISO 1 default ISO
- Jog Wheel toggle settings
- MEASURE measure light
- Lumi-Sphere extend/retract
- AMBIENT light
- F-stop (priority) NOT boxed
- Shutter (priority) NOT visible
- Frame Rate 24 f/s
- ISO user set ISO value
- F-stop (measured) measured
- 10th stop 10th stop increment
- F-stop (scale) measured



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MEASURED

1. Light Meter

- ▶ incident; light falling on object
"natural" tonal perception
- ▶ reflected; light reflect off object
"middle gray" tonal perception

2. Normal Exposure

- ▶ Measured F Stop of 18% Gray (Middle Gray, Zone 5)
- ▶ incident and reflect F Stop is the same
- ▶ Light Meter Measurement
 - set exposure time to 1/48 of sec. (as **set on camera**)
STEP 1 set shutter 180° (Cine Mode)
STEP 2 set frame rate 24FPS
 - set exposure ISO (as **set on camera**)
 - take incident reading
F Stop result is for Normal Exposure
 - set lens** aperture F Stop as desired

IMPORTANT Consider STORY when setting F Stop.

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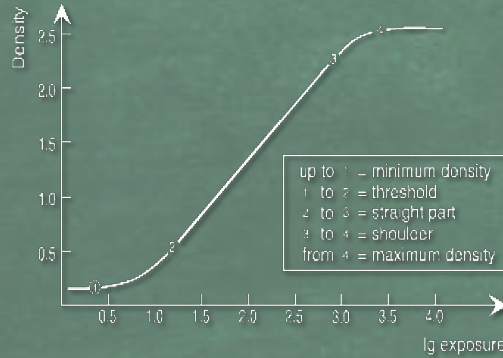
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LATITUDE

Exposure range from darkest shadow to brightest highlight and still maintain acceptable detail in shadow and in highlights.

Cinematography

- Story Theme, Mood
- Story Contrast Ratio
- Camera Latitude



S/N Ratio	GAIN	18% GRAY	ISO
41dB	6.7 Stops 30dB	5.3 Stops	ISO 20000
45dB	6.7 Stops 26dB	5.3 Stops	ISO 12800
50dB	6.7 Stops 20dB	5.3 Stops	ISO 6400
53dB	6.7 Stops 14dB	5.3 Stops	ISO 3200
54dB	6.7 Stops 8dB	5.3 Stops	ISO 1600
54dB	6.7 Stops 2.5dB	5.3 Stops	ISO 850
54dB	6.8 Stops 2dB	5.2 Stops	ISO 800
54dB	7.1 Stops 0dB	4.9 Stops	ISO 640
54dB	7.8 Stops -4dB	4.2 Stops	ISO 400
54dB	8.1 Stops -6dB	3.9 Stops	ISO 320



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LATITUDE

Range of exposure while maintaining acceptable detail in highlights and shadows.

1. Consideration

- Camera Limitation (Canon c100)
- Contrast Ration
- Cinematography of Story (Theme, Mood)

REFERENCE

NFSA; Characteristic Curve www.nfsa.gov.au/preservation/preservation-glossary/characteristic-curve

