Scopes Field Guide

Waveform · RGB Parade · Vectorscope · Histogram — what each shows, what "good" looks like, and how to spot clipping or crushing before your eyes can lie to you.

COLOR GRADING COURSE
LEVEL 1 · FOUNDATIONS

> Your screen is uncalibrated, your room has a lamp on, and your eyes adapt to a color cast within seconds. Scopes measure the signal directly — read them, don't guess.

Waveform — *"how bright, and where?"*

SHOWS
Luminance (brightness) laid left-to-right to match the frame. Bottom line = pure black, top line = pure white.

GOOD LOOKS LIKE
Trace fills the range without slamming flat top or bottom; mid-tones (faces) sit at a sensible height.

SET IT TO
The **Y** (luminance) channel only, for a clean read.

USE FOR
Setting **exposure** and **contrast**.

RGB Parade — *"is there a cast, and where?"*

SHOWS
Three waveforms side by side — Red, Green, Blue — each channel's brightness across the frame.

GOOD LOOKS LIKE
The three columns sit at roughly matching heights throughout the range.

WATCH FOR
One channel riding high/low in a region: red high in shadows = warm shadows; blue low in highlights = yellowish whites.

USE FOR
Diagnosing and neutralizing **white balance**; matching shots.

Vectorscope — *"which colors, how saturated?"*

SHOWS
Hue as angle around the circle, saturation as distance from center. Ignores brightness entirely.

GOOD LOOKS LIKE
A balanced neutral shot sits compact near the center; black & white is a single dot dead center.

WATCH FOR
The trace ballooning past sensible limits as saturation is pushed.

USE FOR
Saturation and **skin-tone** checks (see below).

Histogram — *"how is brightness spread?"*

SHOWS
Pixel count at each brightness — black on the left, white on the right. No left-right position, just distribution.

GOOD LOOKS LIKE
Spread across the range, not bunched hard against either edge.

WATCH FOR
Bunched left = under-exposed & muddy. Bunched right = over-exposed.

USE FOR
Fast overall exposure sanity check, alongside the waveform.

Spotting damage: clipping & crushing

Crushing (shadows)
Darkest parts slam flat against the *bottom* of the waveform, nothing beneath. Detail below that point is gone for good — grading can't invent it back.

Clipping (highlights)
Brightest parts pile flat against the *top* (ceiling) of the waveform. Blown to featureless white — also unrecoverable.

Rule: check every shot for clipping/crushing **first** — the scopes catch it instantly, your eyes never could. Real broadcast black/white live at `64` and `940`, not 0/1023 — switch to "video level scopes" and add reference lines there to see exactly how much headroom is left.

The skin-tone line

A diagonal reference line on the vectorscope, pointing toward orange. Naturally-lit skin of **any** person falls along it — healthy skin is the same hue, varying only in brightness and saturation.

Rule: land skin on the line, or just **clockwise** of it. Drift the other way (counter-clockwise) and faces go green and sickly.

Turn it on via the vectorscope menu → *Show Skin Tone Indicator*. Use *Display Qualifier Focus* to probe under your cursor and watch the spot light up on every scope at once.