

SOUND MIX

Filmmakers with a budget and robust distribution plan will want to secure the services of a post-production professional to complete the final sound mix, see *Chapter 36: The Final Sound*

Mix. But if you are planning to mix your own sound using your picture cutting software or a DAW, here are some techniques for arriving at an adequate rough mix.

ORGANIZE YOUR TRACKS

This is a bit of housekeeping best done when setting up your editing project, but if that didn't happen or tracks got out of hand during the editing process, now is the time to clean things up. The idea is to standardize the content found on audio tracks as follows: production audio, dialogue, presence, ambience, sound effects, narration, music. The number of tracks assigned to each will vary based on the type of recording (e.g. allow two tracks for two simultaneously recorded production mics, a stereo track for music, a mono track for narration, etc.). You might consider separating different interviewees onto their own individual tracks. Assign these tracks with *checkerboarding* in mind (described below).

CHECKERBOARDING

To manipulate audio clips with the most specificity and flexibility, be sure that no discrete audio clips butt up against its neighboring clips. Instead, stagger audio clips into a checkerboard pattern on alternate tracks. You can see how useful this is in manipulating overlap cuts.

CROSS-DISSOLVES

Once checkerboarded, incoming and outgoing cut points can be cleaned up so that the presence baked into each audio clip does not conspicuously enter and exit. Applying a two frame cross-dissolve to the head and tail of each clip, especially when you have done significant surgery to construct a passage of dialogue, for example, will disguise your cut points.

NOISE REDUCTION

Whether your picture editing software has a built-in tool for audio noise reduction or if you need to transition into a DAW to clean your tracks, it's well-worth doing. Because noise accompanies every signal, it's possible that you can pull out a frequency of continuous hum from a track; improving the quality of your sound and thereby helping your audience to enjoy the film without distraction.

EQUALIZATION

In performing noise reduction, you are using an *equalizer* (EQ) to reduce the amplitude of a particular frequency. EQ can also be used to help differentiate the tone of a music bed from a voiceover (allowing greater separation and clarity), improve the sound of a speaker's voice (mitigating muddy or tinny audio), or reduce the *sibilance* in a voice by "de-essing".

COMPRESSION

Compression regulates the *dynamic range* (the difference between the loudest and quietest sound levels) of your audio; creating fewer peaks and valleys in, for example, an interviewee's dialogue, and making it more present in the mix. Look to apply a compressor in your picture editing software or DAW. Adjust threshold (the decibel level where the compressor starts working), ratio (the level of reduction to apply), attack (how quickly the compressor kicks in), and release (how long the compressor is active after the level goes below the threshold). Then raise the overall level through make-up gain to compensate for the attenuation during compression.

ADJUSTING LEVELS

The overall levels of your production sound clips can be adjusted immediately upon entering post-production or after the clips have been included in a cut sequence. First, adjust audio *gain* (input level). Then, go back and tweak clip *volume* (output level) as needed. If you need to change levels within a single clip, use *rubberbanding* or *keyframing* to set fine adjustment points.

WATCH YOUR METERS

You can't rely exclusively on listening to determine if audio levels are consistent or if the levels of individual clips and tracks are properly mixed together. Use your audio levels meter, usually a *digital peak meter*, to determine good levels. Each dialogue clip should be *normalized*, or targeted at around -12 dB. Music on its own might be set at around -6 dB but when used as a bed under voiceover, should be separated by about 20 dB from the voice.

MONITORS AND TESTING

You can't rely exclusively on watching meters to determine if your mix is working. Use the best headphones and speakers you can access to monitor your sound while working, and then listen to the mix through other devices such as a tablet or TV monitor before finalizing.

COLOR CORRECTION AND GRADING

Color deeply affects the way we understand an image. It can establish a mood, suggest a time and place, direct our attention, and transmit a theme. Just like every other part of the production process, color correction and grading can be the domain of a specialist with an extensive set of skills and knowledge. The most robust color tools allow for the fine adjustment and manipulation of very particular areas of an image whose attributes can be motion tracked over the course of a shot. But don't feel overwhelmed: basic color correction tools and a critical eye can generate serviceable, even excellent results.

Before color correcting and grading a shot, look carefully and ask:

- What parts of the image are supposed to be white? Black?
- How is the contrast?
- How are the colors—is there a color cast?
- How is the saturation level? Too muted?

The object of basic color correction and grading is to mitigate color-related problems, enhance the visual appeal of your shots, maintain a consistent look from shot-to-shot, and create a “look” for your film. First, apply a color correction filter to a shot or use a standalone color grading program to manage the process. Then, call up available scopes to evaluate and monitor a shot's *luminance* (brightness) and *chrominance* (color) properties. Finally, adjust available parameters to best effect. As you work, periodically turn off and on your applied settings to keep perspective on the changes you are making and determine if your choices are working.

WAVEFORM MONITOR

Call up your editing software's *waveform monitor* (Figure 16-6) to see a representation of a shot's black and white values. If a wide range of grays are represented between blackest black and peak white, the image will be low contrast. If a narrow range of grays are represented between blackest

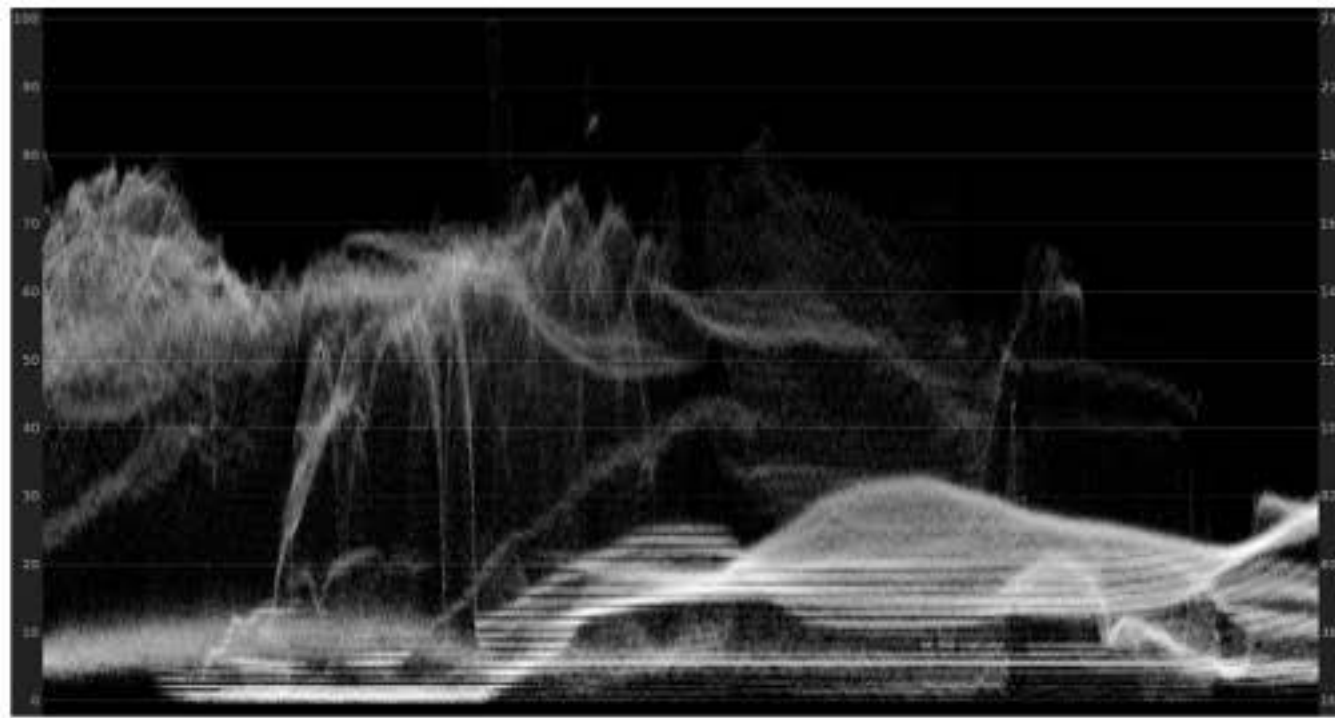


FIGURE 16-6

Representation of a shot's black and white values in editing software waveform monitor.

black and peak white, the image will be high contrast. Begin by setting black values so that shadow areas approach 0 IRE toward the bottom of the waveform and white areas approach 100 IRE toward the top of the waveform. Then adjust middle, upper, and lower midtones, which affects contrast.

RGB PARADE

The *RGB Parade* scope (Figure 16-7) displays individual waveforms representing the shot's red, green, and blue color components; indicating the color cast of its highlights, midtones, and shadows. Strive to make adjustments that distribute equal amounts of red, green, and blue across all values of the image.

VECTORSCOPE

Look to your *vectorscope* (Figure 16-8) to see the confluence of colors present in a shot and watch for changes as you adjust color values for hue and for saturation. You can set both parameters for the entire shot, or you can focus on a part of the shot, such as flesh tones, and adjust those separately.

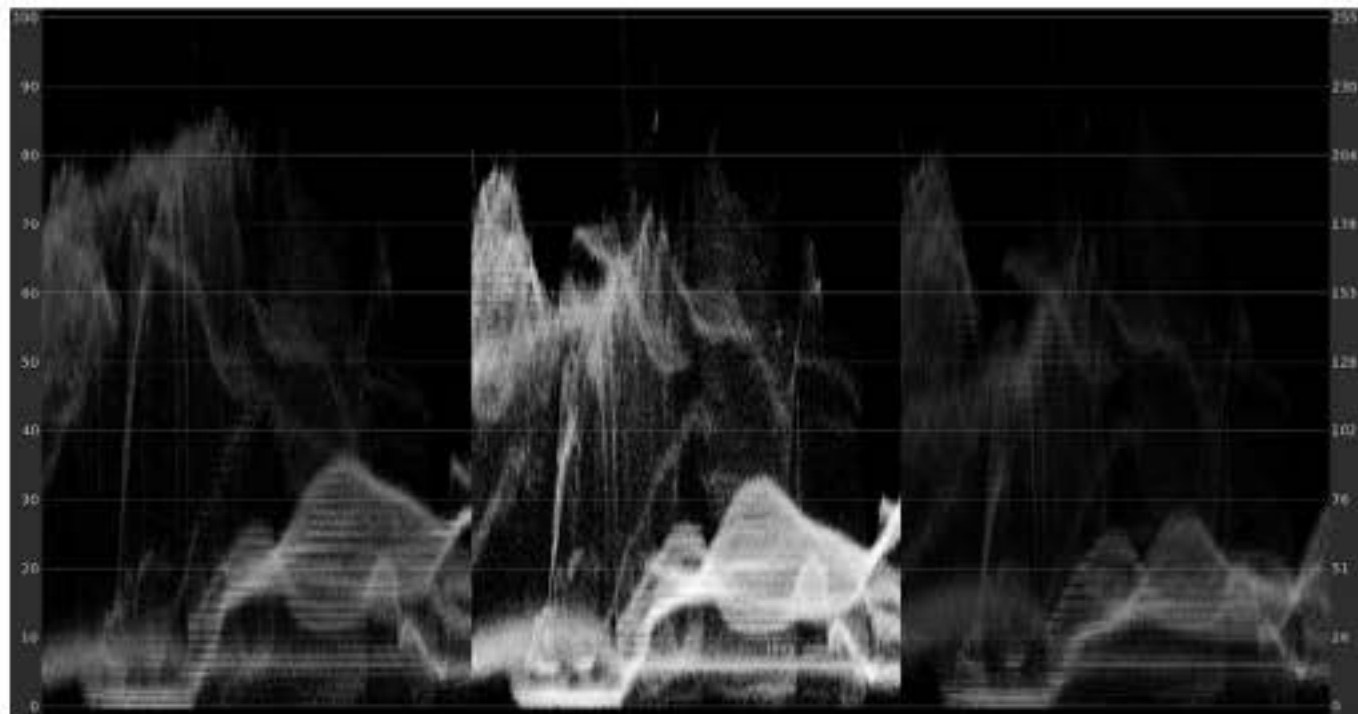


FIGURE 16-7

RGB Parade scope represents red, green and blue color components.

LUTs

Lookup Tables (LUTs) for color grading allow a formula to be applied to shots to achieve a particular “look”. A collection of LUTs may be bundled with your editing or color grading software but third party-created LUTs can be downloaded and added. Be aware that most LUTs don’t work with all types and qualities of footage, so do not expect to achieve good results just by applying a LUT at random—especially if shots are not color corrected first. Also, expect to make adjustments to LUT parameters after application.

VIGNETTE

Adding a subtle vignette around the edges of a frame focuses the audience’s eye on the subject to good effect. Try it and see.

