

Mixing & Mastering Terminology

Aliasing:

A type of distortion caused during the a/d conversion process. When an analog signal contains frequencies higher than half the sampling rate, audible anomalies and harmonics not present in the original signal may be unintentionally created (see Nyquist Theorem). If this occurs, record your signal again using a sufficient sample rate such as 44.1kHz or better.

Attack:

How quickly a particular sound reaches its peak amplitude. If a sound is said to lack attack, it may be difficult to hear against other sounds or not relate the sense of importance or rhythm properly. See transients for more.

Balanced:

Having a pleasing amount of lows compared to mids and high frequencies. 2) Having a pleasing mix of instrument levels in a song 3) Having a fairly equal amplitude in the left and right channels.

Balls:

The depth and thickness of a sound. If a mix or element of the mix is said to lack balls, try increasing the low and/or low-mid frequency energy.

Blend:

When two signals mix together to form one sound or to give the sound of one sound source or one performance.

Bottom:

The bass frequencies, the low end, the booty.

Bright:

When a signal contains an uneven surplus of high-frequencies. This is not necessarily a bad thing. If a mix needs to be brighter, increase the highs.

Clipping:

A type of distortion that results from peaks of an audio signal attempting to rise above the limits of the amplifier circuit. Clips created using analog tubes, tape, and certain solid-state gear can have a subtle often desirable "soft clipping" effect. Clipping that originates in the digital domain is generally less desirable because of "hard clipping", sometimes described as "harsh". To avoid clipping, capture, sample, or record with sufficient headroom on your pre-fader input meter.

Clean:

1) When a sound is free from all distortion types 2) When a sound is unprocessed or contains no effects

Crisp:

Describes a clean easy to hear high midrange sound. It can be good or bad depending on the context.

Dark:

An adjective used to describe usually vintage tones. It is often used in place of such terms as “colored”.

Dynamic range:

The sound level range between the noise floor and peak amplitude of a sound or system. If your mix is said to lack dynamic range, it may be over limited or compressed. Use your ears and meters while adjusting your levels to achieve the desired dynamics. This is usually calculated using the decibels scale. Modern radio mixes usually have between 2-8 dBFS of dynamic range.

Dry:

Usually means without reverberation, or without some other time-based effect. If a mix or element in a mix is referred to as “too dry” perhaps experiment with increasing the amount of reverb or add subtle delay.

Fat:

When a sound has a full but controlled amount of low frequencies; more than normal (often achieved by use of compression or delay).

Fidelity:

The recording or reproduction quality compared to the original sound source. Usually divided between low-fi or hi-fi recordings.

Flat:

1) A musical note that is lower than intended. 2) Reasonably even frequency response for a given sound or audio system

Flutter:

1) High-frequency variations in pitch of a recorded waveform due to fast speed variations from mixing processors.

Full:

When a sound or mix contains all the necessary frequencies, especially the low frequencies.

Gain:

1) A control found at the input of a channel used to set the initial level of a sound before any effect processing. 2) An increase in audio signal strength, usually measured in dB.

Lead:

The musical element that plays the melody of the song can refer to an instrument or the vocal.

Masking:

When louder sounds make it difficult or impossible to hear softer sounds similar in frequency.

Midrange:

The middle frequencies where the ear is naturally most sensitive. These audio frequencies range widely from about 250 Hz through 6000 Hz.

Muddy:

When a sound is unbalanced and contains a low end muffled tone lacking highs and mids. If this occurs rebalance the sounds or mix until there is more clarity and definition in the mid and less boom in the lows. Also try dialing back busy effects.

Phase Distortion:

A change in the sound because of a shift in phase between 2 or more signals being combined in a mix.

Phasing:

1) Undesirable change in sound often due to processing latency 2) An intentional creative effects sound created by variable phase shift of an audio signal mixed with the direct signal.

Pumping (Breathing):

The noticeable noise of a compressor or limiter changing volume as it operates. If this is not desirable, adjust your attack and release settings as needed.

Rumble:

Low-frequency noise often caused by ground issues or capturing air-conditioning, traffic, or other bleed from unintended vibrational sound sources. If this occurs, use a HPF or capture the recording again under better conditions.

Saturation:

The point at which a signal has reached its maximum ability to capture frequencies from a sound source.

Separation:

Term used to describe the clarity of a desired signal compared to the clarity of other signals. If a sound is said to lack separation, try panning, saturation, etc.

Sibilance:

Energy from a voice centered between 5-7kHz caused by pronouncing “s”, “sh” or “ch” sounds too aggressively.

Smooth:

Generally this adjective refers to a piece of gear or processor that achieves subtle but necessary results. When used to describe a compressor it is the opposite of aggressive.

Thin Sound:

A quality of sound not having all frequencies balanced; especially a lack of low frequencies.

Timbre:

The unique sonic finger print of an instrument or sound, even though the other instrument may be playing the same pitch. (Example: an acoustic guitar can play an E chord and so can an electric guitar)

Tinny:

An adjective to describe a sound with too many highs and mids and not enough lows.

Transient:

The high-energy peak at the beginning of a waveform. Percussion instruments typically have more defined transients where as bowed string instruments have less transient information.

Wet:

A signal that includes reverberation, ambience, or other time-based effects processing.

Warm:

An adjective to describe when a sound has pleasing low to low mid frequencies. Tubes and tape recorders are associated with warmth because of their ability to add harmonic distortion when pushed to their limits.