

# GAIN STAGING TERMS & TOOLS

## TERMS

1. Signal: the sound we hear (microphone, guitar, electronic synth, DJ set, etc)
2. Signal Flow: a linear process of signal through devices
3. Signal Path: the entire chain of devices a signal passes through
4. Noise Floor: the level of noise that is NOT the sound we want (background noise, wind noise, crowd noise, circuit hum, etc)
5. Signal to Noise Ratio: comparison of the sound we want compared to noise floor
6. Distortion: bad sound from an overloaded circuit (Ex. car scraping inside a tunnel)
7. Clipping: a waveform that gets distorted and has its peaks clipped off (Ex. ocean wave crashes on the beach)
8. Peaking: a signal that is hitting the peak level of a circuit and beginning to get clipped off and sound distorted
9. Headroom: how much available space there is in a circuit or digital audio file (Ex. Doorway)
10. Gain: the level of signal coming INTO or THROUGH a circuit
11. Gain Staging: the process of measuring and adjusting the level of a signal along every place in the signal path to get a LOUD and CLEAR mix.

## TOOLS

- Input Meters
  - Peak, RMS, VU
  - Measurement device for signal going through a channel
- Peak Level Indicator
  - LED
  - Measurement device for signal coming OUT of a channel
- Audio Effects — devices for changing Gain
  - Input Trim Knob
  - Compressor Makeup Gain
  - EQ Gain
  - Limiter
- Track Output Volume Fader
  - “the fader”
  - Controls OUTPUT level of a sound from a channel or mixing board
- Amp Power Level
  - Controls output level to the speakers / headphones