

Audio is not one of the strong points of AE — AAA

AE is okay if just need to

edit

mix

do basic improvements to sweeten soundtrack

Read the graphic waveform of the audio — to best handle video.

Turn audio on or off for a layer with the speaker icon in the timeline's Audio/Video switches.

Layers parameters include Audio, if it has sound.

Audio

⊗ Audio Levels

▷ Waveform

Good Vibrations

Sound requires something to vibrate — vibrate the air with motion of guitar string, speaker cone, glass shattering ...

Vibrate the air —

push toward you — pull away from you —

20 to 20,000 cycles per second human

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Take longer to fluctuate up and down,^{BBB}
means the cycle represents a
lower pitch —

Spotting audio

Look for PEAKS, taller points —
Use peaks as a reference point
for visual edits and
effect keyframes —

Strong drum beats —)
Syllables in words —) **PEAKS**

Use comp and layer markers
to mark important beats in the
music — or words —

Use a null layer (NULL OBJECT)
and name it script notes or
music notes —
add markers to null layer

- ① View waveform
- ② Locate peaks visually — identify them
by listening to audio
- ③ add layer markers to describe them, to avoid
us -

④ Animate based on position of the markers with waveform display twirled up.

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What is the "Tap along" method?

i) Set CTI to start of section you want to spot -

ii) press . (period key) on numeric keypad - (see preferences > preferences for duration)

iii) press keypad's * key in time with music - to add layer markers -

Err on early side, if a marker has to be just BEFORE or AFTER the peak of the waveform you want to mark (spot).

So go just before the **PEAK** (peak)

GO BEFORE with the marker, so video is seen first.

AUDIO PANEL

has meters -

has "clip" indicators if volume was maked out -

0 means no change for Audio Levels

Recording sound —

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- intercept the vibrations in the air with a device, a microphone —
- convert them to electrical signals —
- digitize the electric signal
- sample the signal —

An instantaneous level is measured or sampled and digitized (converted into a number) —

Build up a numeric picture of the pattern of vibration —

Sample rate = speed at which the sampling occurs —

Sample rate of 48,000 times per second
Professional Digital video cam 48 kHz (Hz = Hertz = cycles per second)

Audio CD = 44,100 or 44.1 kHz

Consumer DV = 32 kHz

Professional audio = 96 kHz
or 192 kHz

L = Levels (for selected layer) ← AUDIO LEVELS
LL = See waveform ← WAVEFORM

How do you edit the Audio Levels value?

FREE

L exposes AUDIO LEVELS for the selected layer—

Q: What is main reason to edit the Audio Levels for a track?

A: To balance relative volume between multiple sound tracks—

TIP: SPOT audio with AUDIO LEVELS set artificially high to better see details of waveform—
Set final levels later—

Use . (period) on numeric keypad to preview audio. Use spacebar to preview video without AUDIO.

There is a SPEAKER icon in the preview panel— is it switched on? (For RAM preview).



Obeys your work area and Loop setting— (RAM preview)

Hold down CTRL key while ~~scrubbing~~ moving the CTI ^(FFF) to "scrub" audio.

Plays a single frame of audio for each frame you move to. To play a $\frac{1}{3}$ second loop of the audio, hold the cursor in place w/o moving —

— ($\frac{1}{3}$ second audio loop) —

View and enter Audio Levels parameters in Audio panel —
 about 10 frames if frame rate is set to 29.97 fps

Two ways

(i) as % of full-scale volume
(ii) as decibels (units of loudness)

Speed Shifts

Speed up or slow down a video that has audio attached by using

Problem:

Can change the pitch of audio.

Time Stretch or

Time Remapping —

Solution:

Use a dedicated audio processing program —

Time stretch but keep original pitch.

Mixing Audio

GGG

Interpolating between Levels KFs
in AE using power oriented decibel
scale — not normal %.

Get abrupt fade downs —

Get too gradual fade ups, then
rush to higher volume —

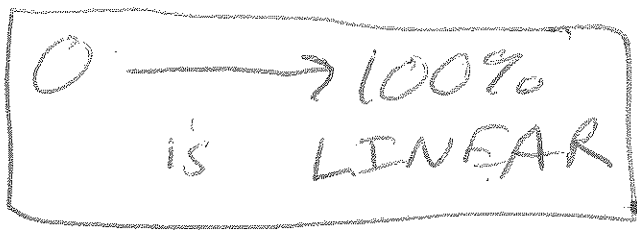
Solution:

• Stereo mixer effect is used first
to automate fades and other
temporary dips or boosts
in loudness —

• Use Levels parameter to tweak
overall level of a track —

STEREO MIXER

— works on a linear scale —



Decibels are
NOT linear!

Animation > Keyframe Assistants >

HHH

Dancing Campanile Convert audio to
Waveform — Keyframes

height of waves — how loud

up and down excursions — how tight
or close together means
higher or lower pitch

u u Type ; on keyboard to zoom in
; to single frame view —

→ To set best view of the waveform
Why? for a critical audio edit.

What RESOLUTION is used to digitize
the samples?

of bits per sample

Higher resolution means lower
quantization
distortion.

Use 16 or 24 bit resolution —

Some audio programs use 32-bit

8-bit sounds very noisy —
— avoid 8-bit

Consumer DV uses 12-bit — just ghost
of 16-bit for quality.