

AI-03841 Cakewalk Effects

Owner	© Rigel Arcayan
Tags	Project
Created time	May 20, 2026 11:50 PM

I'm now learning sound shaping in Cakewalk Sonar with Spotify player connected via VB audio. I'm able to create some nice EQ settings and satisfied but I want to learn more. I was listening to my Baseus ear buds with the same music and was satisfied with the sound shape, is the goal of DAW EQ effects to make it similar to a headphone quality listening where every component of the audio is clear and distinct?

Expand my knowledge of most common fx such as eq, delay, reverb, compressors. Explain first and then give me some good workable starting point.

That clarity and separation you're hearing in your earbuds—where you can pinpoint the bass line, the crispness of the snare, and the vocals sitting perfectly on top—is absolutely a massive part of the goal.

However, there is a slight difference in intent. Consumer headphones use built-in hardware tuning (and often software tricks) to create a flattering, "finished" sound. When you use a Digital Audio Workstation (DAW) like Cakewalk, your goal is to *create* that finished balance yourself, or shape the audio to fit a specific space. You aren't just making it sound good on one pair of headphones; you're shaping it so it sounds clear, distinct, and balanced on *any* system.

Let's break down the four foundational tools of sound shaping—EQ, Dynamics, and Time-based effects—and look at how to actually use them.

1. Equalization (EQ)

If audio is a canvas, EQ is the color palette. It allows you to adjust the volume of specific frequencies so instruments don't crowd each other. The goal here is **separation**. If two instruments share the exact same frequency space (like a thick

acoustic guitar and a vocal), they blur together. EQ cuts away the mud and boosts the clarity.

Workable Starting Points

- **The Golden Rule (HPF):** Put a **High-Pass Filter (HPF)** on almost every non-bass track (vocals, guitars, keyboards). Cut everything below $80\text{ Hz} - 100\text{ Hz}$. This instantly cleans up low-end rumble and gives your bass and kick drum room to breathe.
- **The Mud Zone ($200\text{ Hz} - 500\text{ Hz}$):** This is where "boxiness" lives. If a track sounds muffled or muddy, apply a narrow cut of $2 - 3\text{ dB}$ in this range.
- **The Clarity Boost ($2\text{ kHz} - 5\text{ kHz}$):** This is where the human ear is incredibly sensitive. A subtle, wide boost here can bring a vocal or lead instrument "forward" so it cuts through the mix.

2. Compressors (Dynamics)

A compressor is essentially an automatic volume knob. It tames the loudest peaks of an audio signal and brings up the quietest parts, narrowing the **dynamic range**. This makes the audio sound consistent, punchy, and "locked into place" so it doesn't jump out or get buried.

Key Terms to Know

- **Threshold:** The volume level where the compressor starts working.
- **Ratio:** How much the volume is turned down once it crosses the threshold (e.g., 4:1 means for every 4dB over, only 1dB gets through).
- **Attack/Release:** How fast the compressor clamps down, and how fast it lets go.

Workable Starting Points

- **For Vocals / Smooth Instruments:**
 - **Ratio:** 3:1
 - **Attack:** Medium (~20ms) to let the initial consonant through.

- **Release:** Smooth (~100ms).
- **Threshold:** Adjust until your gain reduction meter shows around \$3 - 5\text{ dB}\$ of squeezing on the loudest parts.
- **For Punchy Drums / Percussion:**
 - **Ratio:** 4:1
 - **Attack:** Slow (~30ms) to let the initial "smack" of the drum through before compressing.
 - **Release:** Fast (~50ms) so the compressor resets before the next hit.

3. Reverb (Space)

Reverb simulates the acoustic characteristics of a physical space (a room, a hall, a plate, or a massive cavern). In a dry DAW environment, sounds can feel flat and two-dimensional. Reverb adds **depth**, pushing a sound backward in the virtual space and blending it into the environment.

Workable Starting Points

- **The "Pocket" Space (Room Reverb):** To make instruments feel like they belong in the same room without sounding washed out, use a Short Room or Studio preset.
 - **Decay Time:** \$0.6 - 1.2\text{ seconds}\$.
 - **Mix/Wet Control:** Keep it low (\$5\% - 15\%\$) if using it directly on the track. You want to feel it missing when turned off, rather than hearing it prominently when turned on.
- **The Vocal Blend (Plate Reverb):** Plate reverbs are bright and smooth, perfect for making vocals sound lush.
 - **Decay Time:** \$1.8 - 2.5\text{ seconds}\$.
 - **Pre-delay:** Set this to \$20 - 40\text{ ms}\$\$. This small delay lets the dry vocal finish speaking before the reverb starts, keeping the words clear.

4. Delay (Time & Dimension)

Delay takes the audio signal and repeats it after a set amount of time (an echo). While reverb creates a dense cloud of space, delay creates distinct repeats. It's an incredible tool for adding dimension and excitement without muddying up the mix the way heavy reverb can.

Workable Starting Points

- **The "Slapback" (Classic Depth):** Great for guitars and vocals to create instant width without an obvious echo.
 - **Time:** 80 - 140 ms (not synced to the project tempo).
 - **Feedback:** 0% (only one single repeat).
 - **Mix:** 15% - 20%.
- **The Modern Echo (Tempo-Synced):**
 - **Time:** Set to 1/4 note or 1/8 note, and turn on "Host Sync" in Sonar so it locks to your music's tempo.
 - **Feedback:** 10% - 20% (for 3 to 4 fading repeats).
 - **High-Cut Filter:** Most delays have a built-in filter. Turn it down to roll off everything above 3 kHz on the echoes. This makes the repeats sound darker, ensuring they stay behind the main sound instead of fighting it.

A Good Habit to Start Building

When exploring these effects in Sonar, try using **Send/Return tracks (Aux Busses)** for your Reverb and Delay instead of dropping them directly onto the channel's FX rack.

By routing a small amount of multiple tracks into one single Reverb Bus set to 100% Wet, you place all your instruments into the exact same "virtual room." This naturally creates the cohesive, distinct, and high-quality listening experience you noticed in your earbuds.

That is a very good stage to be in—your ears are starting to connect with what the knobs actually do. Since you already have Spotify routed through VB Audio into Cakewalk, you are effectively turning Cakewalk into a live mastering/sound-design lab. That is one of the fastest ways to train your ears.

The key idea:

EQ shapes tone

Compression shapes dynamics

Reverb shapes space

Delay shapes time

Everything else is mostly a variation or combination of those four.

1. EQ (Equalization) — “Tone Sculpting”

Think of EQ like adjusting lighting in photography. You are changing which frequencies stand out.

(Not because EQ is linear, but because you’re reshaping a curve of frequencies.)

What EQ Does

- Makes sounds warmer
- Brighter
- Cleaner
- More forward
- Less muddy
- Less harsh

Main Frequency Zones

Frequency	What You Hear
20–60 Hz	Deep sub bass, rumble
60–120 Hz	Punch/kick bass
120–250 Hz	Warmth, fullness
250–500 Hz	Muddy/boxy zone
500 Hz–2 kHz	Core musical body
2–5 kHz	Presence, attack
5–8 kHz	Clarity/detail

8–16 kHz	Air/sparkle
----------	-------------

What Problems Sound Like

Muddy sound

Too much:

200–400 Hz

Fix:

Cut 2–4 dB.

Harsh or fatiguing

Too much:

2–5 kHz

Fix:

Small dip.

Dull / blanket over speaker

Too little:

8–12 kHz

Fix:

Tiny high shelf boost.

Boomy bass

Too much:

80–150 Hz

Fix:

Reduce slightly.

Good Spotify Playback Starting EQ

For enjoyable music listening:

Gentle Smile Curve

- +2 dB at **70 Hz**
- -2 dB around **300 Hz**
- +2 dB around **10 kHz**

Why?

- Adds bass weight
- Removes muddiness
- Adds sparkle

Keep it subtle.

Rule:

Big EQ = exciting for 10 minutes

Small EQ = enjoyable for 4 hours

For long listening sessions, ± 2 to 3 dB is usually enough.

2. Compression — “Volume Control With Intelligence”

Compression confuses beginners because it is invisible.

You don't hear compression.

You hear:

- punch
- consistency
- loudness
- smoothness

What Compressor Does

Imagine someone riding the volume knob:

When audio gets too loud:

compressor turns it down automatically

Then quiet parts feel louder.

Result:

More even sound.

The 5 Main Controls

1. Threshold

“When should compression start?”

Example:

Threshold = -20 dB

Anything louder than -20 gets compressed.

2. Ratio

“How hard should it compress?”

Ratio	Meaning
2:1	Gentle
4:1	Medium
8:1	Strong
20:1	Limiter territory

For Spotify playback:

1.5:1–2:1

3. Attack

“How fast compression starts”

Fast attack:

- smooth
- less punch

Slow attack:

- more punch

- more dynamics

4. Release

“How quickly it lets go”

Too fast:

- pumping

Too slow:

- lifeless

5. Makeup Gain

Raise volume after compression.

Good Starting Compressor for Spotify

Try this in Cakewalk:

Gentle Glue Compression

- Ratio: **1.5:1**
- Threshold: lower until you see only **1–3 dB reduction**
- Attack: **20–40 ms**
- Release: **100–200 ms**
- Makeup gain: slight

Result:

- smoother
- fuller
- less volume jumping

This is excellent for Spotify.

Avoid Beginner Mistake

Too much compression causes:

- flat sound

- fatigue
- loss of excitement

If music sounds "smaller," back off.

3. Reverb — "Creating Space"

Reverb = reflections in a room.

Without reverb:

sound feels:

dry

With reverb:

sound feels:

inside a space

Could be:

- room
- studio
- hall
- cathedral

Reverb Parameters

Pre-delay

Delay before reflections begin.

Small:

intimate.

Long:

more cinematic.

Decay Time

How long tail lasts.

Setting	Feel
0.5 sec	Tight
1–2 sec	Natural
3–5 sec	Large hall

Wet/Dry Mix

Most important control.

For playback:

Keep tiny.

Spotify Listening Start

Try:

- Room reverb
- Decay: **0.8–1.2 sec**
- Wet mix: **5–10%**

Very subtle.

Goal:

You should miss it when bypassed.

Not obviously hear it.

Beginner Mistake

Too much reverb = fake hi-fi

Initially sounds impressive.

After 20 minutes:

muddy and tiring.

4. Delay — “Echo / Time FX”

Delay repeats sound.

Simple concept:

Repeat after time interval

Delay Types

Slapback

One quick repeat.

Adds thickness.

Short delay

Creates width.

Long delay

Echo effect.

Ping-pong

Moves left/right.

Delay for Music Playback?

Very subtle.

Try:

Stereo Widening Trick

- Delay L/R:
10–20 ms
- Feedback:
0–5%
- Mix:
5–10%

Makes playback feel wider.

But:

Too much = phase weirdness.

5. Saturation — “Analog Warmth”

Often overlooked.

Adds harmonic richness.

Makes sound:

- warmer
- thicker
- smoother

Like vintage analog gear.

In Cakewalk:

Use very lightly.

Drive:

5–10%

6. Limiter — “Safety Ceiling”

Final protection.

Stops clipping.

Good for Spotify chain.

Settings:

Output ceiling:

-1 dB

Very little gain reduction.

A GREAT Beginner Signal Chain

For Spotify Playback in Cakewalk:

Transparent / Hi-Fi Chain

VB Audio → EQ → Compressor → Saturation → Limiter → Speakers

Order matters.

Why?

1. EQ first = clean problem areas
2. Compressor smooths
3. Saturation sweetens
4. Limiter protects

Avoid reverb for everyday playback at first.

Master EQ + compression first.

Your First 5 Ear Training Exercises

1. Learn Frequency Recognition

Boost then cut.

Take EQ:

boost **300 Hz +8 dB**

Hear mud.

Then cut.

Repeat.

Do this for:

100 Hz

300 Hz

1 kHz

3 kHz

10 kHz

You'll train your ears quickly.

2. Compression Listening

Toggle compressor on/off.

Listen for:

- smoother vocal

- controlled peaks
- fuller body

Not loudness.

3. Reverb Exercise

Set absurd amount first:

30% wet.

Then reduce to:

5%.

You'll learn subtlety.

4. Delay Exercise

Try:

15 ms stereo delay.

Notice width.

Then bypass.

5. Compare Quietly

Louder sounds better psychologically.

Always volume-match.

Good Starting Presets To Build Yourself

Warm Listening

- Slight bass boost
- Gentle high cut
- Tiny compression

Good for long sessions.

Clarity Mode

- Cut 250 Hz

- Small 3–5 kHz boost
- Tiny air boost

Good for podcasts/vocals.

Cinematic

- Slight sub bass
- wider stereo
- tiny room reverb

Good for movies.

Late Night Listening

- Slight bass boost
- softer highs
- gentle compression

Better at low volume.

The biggest jump in learning comes when you stop asking:

“What setting is best?”

and start asking:

“What problem am I trying to solve?”

For example:

- muddy → EQ cut
- inconsistent volume → compressor
- dry/narrow → reverb or delay
- sterile → saturation
- clipping → limiter

Since you already have **Cakewalk + VB Audio + FBQ3102 + TS115A**, the next step is learning **what each plugin sounds like in isolation**. Spend one week with only EQ, then one week with compression. Your ear development accelerates fast that way.