CINEMATIC SECRETS

EQ & TONE SHAPING

115 Tips & Tricks

VOL. 1

Cinematic Secrets: EQ & Tone Shaping — Vol 1

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EQ Mindset and Approach

1. Don't EQ for the sake of EQ — if it sounds good, leave it alone

Example. On the free-track mix, the Ferrum free hits were already heavily processed. No EQ was added. The Valhalla Supermassive-fed ping was low-cut because it had unnecessary low rumble. Swells running Replika and Raum were checked, judged fine, and left untouched. The call is per-element: touch what needs work, leave what's already sitting right.

2. Pick a library that already fits the role before reaching for EQ

How. Before inserting any EQ to reshape a sound, swap to a library that already has the character you need. CSS reads dark, mellow, open. Audio Imperia Jaeger reads bitey, hybrid, in-your-face — built to sit on top of synths and drums. Spitfire Chamber Strings reads smaller, more classical, more muted. Pick by role, not by default habit.

Why. Reshaping a wrong library with EQ is slower than loading the right one from the start. In production or TV work where you might deliver 80+ tracks in a day, every minute saved on per-sound massaging compounds. The better the source, the less EQ you need.

3. Use EQ to clean up, not to shape — 90% of your moves should be cuts

How. Default to cuts. Boosts are rare. Work like a sculptor chiseling away from a stone block rather than adding material to it.

Why. EQ is the second step, not the first. Roughly 80% of what reads as good EQing happens at the arrangement stage — deciding which instrument owns which frequency range so groups don't step on each other. If the arrangement stacks three instruments into the same range, no amount of plugin work will fix it cleanly. Once the arrangement gives each element a role, the EQ's job is just to clear what doesn't belong — not to invent tone that isn't there.

4. Keep real EQ moves to 2–4 dB max — big boosts in demos are teaching exaggerations

Watching someone push +10 dB on a tutorial is for hearing what the band does. That's not the setting that ships.

How. On the API-style smiley curve the working moves are roughly +2 dB at 10 kHz, a −2 dB dip around 400 Hz, and +2 dB at 100–200 Hz for body on cellos. Subtle shapes, not dramatic ones.

5. Make small EQ moves on many channels, not drastic ones on a few

How. Keep individual moves subtle on each track — a small dip in the boxy range, nothing aggressive. The dramatic change shows up after you've done the same quiet move across 4-7 layered instruments and listen to the sum.

Why. A single subtle cut on one channel barely registers. The cumulative effect of the same cut across 4-7 layers is much larger than any single aggressive move could be. General EQ philosophy: rarely alter the signal significantly — tame it or remove what you don't need.

Mistake. If you're learning, exaggerate the moves first so you can hear what each band actually does. Then dial back to subtle levels for real mixes. Shipping the exaggerated cuts is what scoops out body.

6. To emphasize a frequency, cut its neighbors instead of boosting it

The rule is 'rather cut than boost' - and this is how you turn that rule into a way of adding presence.

How. To emphasize 4,500 Hz, reduce 3,500 Hz and 5,500 Hz around it. The target area rises relative to its neighbors with no boost on the band itself. Same approach for broad shapes: to add more low end, don't push 90 Hz with a steep curve - broadly boost the entire low-end range. Narrow surgical cuts stay for offending frequencies and build-ups; musical shaping works in broad strokes. Horns are one of the exceptions where a genuine high boost is fine.

Why. Boosting a narrow band adds energy and phase disturbance on that band. Cutting the surroundings gets you the same perceived emphasis with less aggressive signal change - and with fewer resonant artifacts that stack across dozens of layered instruments.

7. Cut the mids next to a low drum to make it feel bassier

How. Instead of boosting the bass on a low drum, cut the mid frequencies sitting next to it. You're not adding low end — you're removing competition from the band above it.

Why. It's a psychoacoustic move. Nothing changes physically down low, but the listener's attention shifts to what's still there, which makes the low end feel bigger.

8. Use a low-pass to push a sound further back

How. Reach for a high-cut / low-pass filter when you want an element to sit further away from the listener. The same filter also doubles for taming harsh signals.

Why. Less high end reads as more distant because the sound turns muffled and reduced — that's the cue our ears use to place something in the depth field of a mix.

Tools Setup and Technique

9. Use the stock Cubase or Logic EQ — it handles 90% of the job

Why. Under the hood a clean digital EQ is a clean digital EQ. The Cubase and Logic stock EQs are doing the same math as the paid options for 90% — maybe 96% — of cuts and boosts. You don't need Pro-Q to take 2 dB off 400 Hz. Where paid plugins like Pro-Q earn their place is in workflow and specific features — brick-wall slopes, better visual feedback, solo on individual bands — not in sounding different on a standard cut.

10. Reach for FabFilter Pro-Q when you need surgical, non-coloring EQ

Stock DAW EQs handle 90%+ of the work. For the paid pick, Pro-Q is the one.

How. Use Pro-Q when you want clean frequency moves without any added character. It's extremely lightweight on CPU, so you can drop it on every track without the template grinding. It also has a brick-wall slope option — useful on hard high-cuts and low-cuts where stock EQs (Steinberg's, for instance) don't go steep enough. If you'd rather subscribe, Slate's Infinity EQ uses a very similar interface and workflow.

Why. Non-coloring means it changes only the volume of the frequency ranges you're targeting — no saturation, no harmonic distortion sneaking in. That's what you want when you're chiseling away a problem frequency and don't want the EQ itself adding artifacts to a clean source.

11. Reach for an API-style EQ when you need big musical moves on brass and strings

A Pro-Q can draw the same curve, but when you're pushing serious boosts to carve brass out of a dense orchestral mix, the analog-style API takes the hit without falling apart.

How. On a brass channel buried under short strings, cut the lower-mid honkiness first, optionally clean the lows, then boost the high end around 7 kHz — roughly +6 dB on an API-style EQ works well. On the strings sitting alongside the brass, only about +2 dB at the top on both high and low strings. Slate Fresh Air will get you a similar top-end lift for free, but it's easy to overdo.

Why. On solo'd brass the boost may sound thin, but in context the strings fill the lower range and the brass finally cuts through with clarity and punch. That's why the check has to happen in the mix, not on the solo'd channel — the EQ move is tuned to the gap the strings leave, not to how the brass sounds alone.

Example. On a cue where short strings covered a broad range including scratchy high overtones, the brass sat muddy in the lower mids. Cutting the honkiness on the brass and adding roughly +6 dB around 7 kHz on an API-style EQ separated the two sections without raising the brass fader.

12. Treat AI EQ tools as a starting point, not a verdict

How. With Sonible Smart EQ or iZotope Neutron, pick the source type, let it propose a curve, then dial in how much of the suggestion to apply. Accept the high end move and leave the lows alone if that's what the mix needs. Same idea with Ozone on the master bus.

Mistake. The risk is handing the decision to the plugin. These tools have gotten much better over the last five or six years, but they're most useful once you already know what you're trying to do. If you're early and you let the AI drive, you won't catch when its suggestion is wrong for the cue.

13. Insert an empty EQ on every instrument track in your template

How. Drop an EQ instance on every instrument track when you build the template, even tracks you haven't used yet. When you later hit a frequency problem mid-cue, the slot is already there — open it, dial the move, move on. No stopping to insert a plugin while you're in the flow of fixing something.

14. Drop the Pro-Q display scale to 12 dB so small moves read correctly

How. Change the Pro-Q display scale from the default 30 dB down to 12 dB (or 6 dB for very fine work). A 2 dB move looks like a noticeable bend on the 12 dB scale but almost invisible at 30 dB — and on strings most of the useful cuts and pushes live in that 2-3 dB range.

15. Engage Pro-Q auto-gain when you push frequencies up

How. Turn on Pro-Q's auto-gain so the output matches the input. The plugin compensates for the volume bump a boost would otherwise add.

16. Verify a Pro-Q low cut is actually doing something

How. Confirm the band isn't in bypass. Click the speaker icon on the low-cut band to solo it and hear just what's being affected. Push the cutoff way up deliberately — if you still hear nothing change, the plugin isn't processing. Then read the display: the lighter gray area is the original signal, the darker area is post-EQ. From afar the original signal stays visible, so it's easy to misread the graph.

Why. A low cut's audible effect depends on the source's low-end content, not just where you set the cutoff. On a string-low stem where the content starts around 45 Hz, a cut at 45 Hz removes almost nothing. On a piano track, the cut often only becomes audible around 150-200 Hz. Silence from the plugin doesn't mean it's broken — it often means there's no low-end there to remove.

17. Compensate EQ boosts at the plugin output so levels stay matched

How. Note the input level going into the EQ. Apply the boost. Pull the EQ's output gain down by the same amount you just added so the level leaving the plugin equals the level entering it. Timbre changes; gain stays consistent for the next stage.

18. Find offending frequencies by boosting a narrow bell and sweeping

How. Create a high-Q bell with a significant boost — several dB. Slide it through the spectrum from low to high while the audio plays. Listen for the spot that hurts the most in the ear — resonant, honky, shrill, or just offensive. Once you've found it, invert the boost into a cut at that frequency and narrow or widen the Q to taste. In Pro-Q, solo the band while sweeping so you're only listening to the affected range; engage the output gain compensation option so the loud boost doesn't inflate perceived volume while you're hunting.

Example. On a string library, solo the band and sweep — cooler libraries like Cinematic Studio Strings place the honky spot a bit below 300 Hz, while brighter ones like LA Scoring Strings or Hollywood Orchestra Strings sit higher, around 350 to 400 Hz. Sweep first, then cut where it's meanest.

19. Use Pro-Q dynamic bands for lower-mid problem fixes

How. In Pro-Q, drag the outer ring next to the band gain to turn a band into a dynamic band. A second curve appears under the node, and a yellow line wiggles to show gain reduction. Threshold controls how easily the reduction triggers — high threshold rarely moves, low threshold moves often, all the way down behaves like a fixed cut.

Why. A static cut in the 350-650 Hz nasal range removes body permanently. A dynamic band only reduces when the signal exceeds threshold, so the instrument keeps its weight when the problem frequency isn't peaking. Use the fixed curve for general aesthetic across the whole signal; use the dynamic band for frequencies that only occasionally stick out — often tied to the root note of the cue ringing too hard on one instrument.

Example. On a cello, a dynamic EQ on the root-note frequency dips the low end only when it gets too heavy. On long strings, a dynamic band tames the nasal range. On tuba, a dynamic cut at 150 Hz handles the root-note dip. A fixed and dynamic band can be combined on the same range — a general dip plus a dynamic one on top for when the range still goes overboard.

20. Spot low-brass wobble by holding one note and watching the analyzer

How. Hold a single sustained note with no mod-wheel movement and watch the low-end on a frequency display. If the low band visibly fluctuates in volume on that steady note, you've got oscillation. Treat it with a dynamic EQ on the low band — the yellow line reacts to the wobble and flattens it. A multiband compressor on the low band does the same job by shrinking the low band's dynamic range.

Why. The wobble is barely audible by ear but matters downstream. A bus compressor without low-end exclusion will react to those false volume bumps and pump on the phantom movement. Flatten the low band first and compression downstream behaves more consistently.

Example. Metropolis Ark (Orchestral Tools) and Musical Sampling low brass are the named culprits. Apply the same treatment to low strings and low brass that are sampled.

21. Automate a notch on/off for a one-note frequency spike

How. Insert an EQ on the stem. Find the offending frequency on the analyzer — a one-note whistle usually shows as a clear spike. Drop a narrow cut on it. Automate the band's bypass so the cut engages only for that one note, then turns back off for the rest of the cue. Dynamic EQ on the same frequency works too if you prefer that route.

Example. In a suspense cue with a viola carrying the melody, one note at the start had a whistle overtone clearly visible as a spike on the analyzer. A static notch with automated on/off handled it; the rest of the viola line kept its body intact.

22. Duplicate and split the track instead of automating EQ across sections

How. When the same patch needs different EQ in different parts of the cue, duplicate the track. Keep the original EQ on the first half. Move the notes from the denser section onto the duplicate and give that copy its own more aggressive EQ chain — heavy cut through the lower mids, keep the high-end energy, add about +1 dB of make-up gain to compensate for what the cut took out.

Why. Automating EQ moves across sections works but it's fragile — you're juggling parameter changes mid-cue and the transition is never quite clean. Two tracks with two static EQ chains are easier to maintain, easier to tweak, and there's no automation curve to rebuild if the arrangement shifts.

Example. Consider a case where the same short strings patch sits clean in an earlier section but muddy in a later one once low synth, pluck, and foghorn layers pile on top. Duplicating the strings track and giving the later-section copy an aggressive lower-mid cut fixes it without touching the earlier section — especially noticeable once an octave layer comes in.

23. Use Q-Link to A/B EQ on/off across multiple drum channels at once

When four or more drum layers all carry heavy low end, you have to hear the cleanup in context, not one channel at a time.

How. Q-Link in Cubase lets you toggle EQ bypass across selected drum channels simultaneously so you can A/B the combined cleanup against the unprocessed stack. Strip the low end from the upper-range layers, preserve it where it's actually useful — layers like the JXL mixes inside Spitfire Audio Hans Zimmer Percussion Professional, or Tommee Profitt Percussion drums, are typical keepers. A typical specific address to clean is something like 170 Hz rumble on one drum.

24. Split a wide-range section into a Low and High channel so each can be EQ'd separately

How. When a woodwind ensemble (or any wide-range section) covers too big a register for one low cut, duplicate the channel — even if it's the same instrument — and name them 'Woodwind Low' and 'Woodwind High'. Route the low parts to one, the high parts to the other. Now you can cut much more aggressively on the High channel, removing low-end content it has no business carrying, while the Low channel keeps the weight it needs.

Why. A single low cut set for the lowest instrument in the ensemble leaves the higher instruments with low-end information that's doing nothing useful. Splitting low from high is the general strategy: different ranges want different EQ treatment, and one channel can't serve both.

25. Put EQ on the group channel when several similar tracks share it

How. If all your violins feed one violins group, don't put the same EQ on each violin track. Put it on the group so they're treated together with one instance.

26. Do major EQ moves on the stems, not the master bus

How. Distribute your main EQ moves across the individual stems — EQ the strings bus, the brass bus, and so on. You can even copy the same EQ instance across them if the move is broad. The sum of your stems should already arrive at the master sounding close to the finished version. The master bus then only handles the last bit of polish and final volume.

Why. If the heavy lifting lives on the master, the master sounds clear and exciting while the sum of the stems sounds dull. Clients deliver stems and full mix to editors; the editor jumps between the two inside the same cue. Two different sonic footprints means two different mixes, and the editor has to fight them. Muddiness works the same way — address it at the instrument and stem level, not by layering a master-chain fix on top.

Mistake. Stacking the big EQ curve on the master bus alone. The mix sounds great in isolation, but the stems your client receives have none of that treatment and arrive dull compared to what you approved.

27. Boost and attenuate the same Pultec low band at once

The Pultec trick lives on the group bus, not on the master and not on individual instruments.

How. Pick a low-band frequency — 20, 30, 60 or 100 Hz on the Pultec — then push boost and attenuation at the same time. Standard orchestral group bus starting point: low band at 30 Hz, boost around 3.5, attenuation around 2, high band at 10 kHz, boost 3.5, attenuation 2, bandwidth around 7. Always attenuate less than you boost so the effect stays audible. On a master bus mixing pass the same trick works at 60 Hz.

Why. On paper the two shapes should cancel. They don't. The analog circuit — transistors, transformers, the whole path being modeled — produces a broad musical curve where the lows lift and cut at the same time, plus subtle saturation. Boosting 30 Hz lifts a wide region around it, not a narrow spike, which is why it adds weight without muddying.

Mistake. Pushing the 10 kHz high band too hard gets harsh fast. Don't go over 4 or 5 on the boost. And save this for groups — it doesn't deliver the same result on individual instruments.

Example. Standard long/short strings group bus: 30 Hz low band with simultaneous boost and attenuation, 10 kHz high band with the same trick. On the string bus in a separate session the numbers run hotter — low boost 7–8, attenuation around 5 at 30 Hz, high band at 10 kHz with Q around 6–7 — and still sounds musical because of the wide region the boost affects.

28. Put a Pultec on orchestral group buses: 30 Hz / 10 kHz, boost ~3.5, attenuate ~2

After individual instruments are EQed, the Pultec does the broad-stroke polishing on group buses — long strings, short strings, brass. Demonstrated on the UAD Pultec EQP-1A.

How. Low band at 30 Hz: boost around 3.5, attenuation around 2. High band at 10 kHz: boost around 3.5, attenuation 2 (selector kept at 10 when boosting 10 kHz). Bandwidth around 7. Boost and attenuate the same frequency simultaneously — the curves don't cancel; they produce a broad musical shape with subtle saturation from the analog modeling.

Why. Pultec sits on groups, not individual channels, because the enrichment doesn't do much on a single instrument — it's designed to color the sum. A common template approach keeps only a limiter on the master bus, with all Pultec work happening on groups.

Mistake. Don't go over 4 or 5 on boost — usually stay around 3.5. Pushing 10 kHz too hard becomes harsh quickly.

29. Put an EQ after the distortion to remove the low end it puts back

How. On a pluck already high-cut and sent into distortion, the distortion introduced low content that wasn't there before. The fix is a second EQ downstream of the distortion, pulling out the unwanted low end that the distortion stage added.

Why. A low cut in front of the distortion only cleans what enters the box. Distortion puts low content back in on its own, so the unwanted low end is only reachable after the distortion stage.

30. Use Soothe 2 as a subtle final polish, auditioned with Delta

How. Insert Soothe 2 on the master or a stem. Browse presets as starting points. Hit the Delta button to hear only what the plugin is removing — that's how you verify it's pulling the right frequencies. Keep Mix and Depth conservative; one workflow used a preset with Mix near the default 69% and Depth kept gentle.

Why. Soothe 2 acts like many dynamic multibands working at once, deciding which bands to reduce across the listening range. It pulls extraneous resonances the ear registers as fatigue — frequencies you don't consciously name but feel. Because the reductions compound across layers, the effect is often very subtle on any single pass.

Mistake. Cranking Mix and Depth too far takes out too much and the track sounds worse. One source also flagged that Soothe is best on individual stems rather than a full stereo file, while another uses it routinely on the final stereo master — treat placement as a case-by-case call, not a fixed rule.

Example. On a viola, auditioning with Delta engaged reveals the nasally part of the instrument being removed — that Delta check is what confirms Soothe is pulling the right frequencies.

Low Cuts and Low-End Carving

31. Low-cut every instrument that isn't supposed to own the low end

This is the most-used EQ move across virtually every instrument in a cinematic template.

How. Low-cut between 40 Hz and 150 Hz on every instrument that isn't responsible for the low range. In a trailer track, typical settings land between 50 Hz and 150 Hz. In orchestral or hybrid orchestral, the instruments reserved for the low end are the low booms, sub synths, and similar dedicated sub elements - plus tuba, celli, and basses when they're carrying that role. If a sub synth is present, even the low strings get cut to make room for it. To dial the cut: bring the low-cut up until you start to hear the lows disappear, then move it back a little. That's the setting. The lazy baseline is to set the cut at the lowest possible note of the instrument - not the lowest note it actually plays in the cue. Apply the same kind of cut on buses (woodwind bus, brass bus) for general control, then dive into individual channels if rumble persists.

Why. The low end of a signal carries the highest amount of energy in the spectrum. Every instrument recorded in a hall contains low-end rumble that isn't needed for its perceived sound. Stacking that rumble across 30 or 40 tracks builds an uncontrollable mud layer, and a master bus compressor then reacts much more aggressively to all that stacked low end even though it isn't perceptually as loud as what it's masking. Pull the rumble off per-track and the compressor reacts to the actual sound material instead of to irrelevant low-end energy.

Mistake. Cutting 3-4 dB at 300-400 Hz on the master bus to fix the mud. That's not advisable as a default - you lose body, warmth, and useful information about which instruments are in the track. The fix belongs on the individual instruments, not on the master.

Example. On tuba and French horn the decision is arrangement-dependent. Tuba providing warm chords under a flute solo - keep its low frequencies; don't strip its character. French horn taking a lead role over strings - cut more aggressively so it stands out with bite and aggression.

32. Set low cuts between 50 Hz and 120 Hz, instrument by instrument

How. Identify the lowest note the instrument actually plays in your cue — not the lowest note the instrument can play. Place the low cut node below that and sweep it slowly upward until you hear the cut start to affect the sound. Back off a hair. That's the setting. For violins whose part sits well above 200 Hz, the cut can sit higher than 120 Hz; for celli doubling basses, it stays at the low end of the range.

Why. Sampled patches of even high instruments carry low-end rumble that's barely audible on one channel but stacks across hundreds of tracks, stealing headroom from the instruments that are supposed to own the bass register. The bass range holds the most energy in the spectrum, so every instrument not tasked with low end needs to step out of the way.

Mistake. Dialing every low cut to the lowest note the instrument can play instead of the lowest note it plays in your arrangement. The filter ends up well below the actual content and the rumble stays in.

33. Dial the low cut from the lowest note you actually wrote

How. Find the lowest note actually being played in your arrangement — not the lowest note the instrument can play. Place the low cut there, then slowly move the cutoff up the spectrum until you start to hear it affect the sound. Back off slightly. That's your setting. Cut frequencies typically land between 50 Hz and 120 Hz depending on the instrument, and sometimes higher (violins where your written range never goes below a certain point). For slope: 6 dB/oct when you want to retain some low end, 12 dB/oct for mid-ground instruments like celli that are partly low-end, 18 dB/oct as the default for instruments that have no role in the low end, 24 dB/oct for specific unwanted boom. 30 or 36 dB/oct is barely different from 18 audibly and rarely needed.

Why. Even high-pitched instruments carry low-end junk that the ear can miss but the spectrum catches. A sampled violin patch contains rumble well below its lowest open string at roughly 196 Hz. Across hundreds of patches in a cue, that rumble stacks and steals from the instruments that are actually supposed to own the low end.

34. Set low cuts conservatively low when the patch could be reused in lower cues

Applies to patches like a Pacific Ensemble Strings whisper-sustains patch where a given cue only plays high soft notes.

Why. If you tailor the low cut tightly to the cue you're working on, the same patch in a lower-register cue will get its body chopped off. Setting the cut well below 100 Hz keeps the patch usable across its general range. Toggling EQ on/off on a held high chord can reveal an audible honk entering when the EQ is off — same boxiness range — which confirms a cut is needed, just not an aggressive one.

35. Pick the low-cut slope by the instrument's role in the low end

How. Use 6 dB/oct when you want to retain some low end and blend the cut into the arrangement. 12 dB/oct for mid-ground instruments like celli that are partly low-end instruments themselves — don't cut them too hard. 18 dB/oct as the default for instruments that have no role in the low end. 24 dB/oct when there's a specific unwanted boom you're targeting. Past 30 or 36 dB/oct the audible difference vs 18 is negligible, and Pro-Q's brick-wall option isn't really musical.

Why. The difference between 6 and 12 — or 6 and 18 — is significant. These are the values that actually change the character of the cut, which is why they're the ones you end up working with most.

Example. Cleaning celli: EQ on the channel, find the lowest note actually played in your cue (not the C0 the instrument can play), place a 12 dB/oct cut, move the cutoff up until you hear it affect the sound, back off. If a specific resonance is booming, add a steeper 24 dB/oct notch there.

36. Default low-cut slope: 12 or 18 dB/oct — save 48 for when you need it

How. Start at 12 or 18 dB/octave for standard low cuts. Keep 48 dB/octave in reserve for cases that actually need it. And remember that even a 35 Hz low cut continues to attenuate up to roughly 130 Hz depending on the slope — the cutoff isn't the only place affected.

37. Dedicate one or two instruments to the sub-50 Hz range and filter everyone else

How. Pick the two instruments that own the low end — a low-string patch and a sub-synth, for instance. Leave their low end untouched. On everything else in the arrangement, high-pass out the sub-50 Hz content.

Why. Sample libraries ship with wide frequency content by default, and most of them carry low end they don't need to carry. If every instrument keeps its sub-50 Hz energy, it all stacks into the same window and the low end turns to mush. Deciding upfront which one or two

instruments own the sub takes pressure off corrective EQ later — about 90% of the mix is already done through arrangement and sound choice, not through fixing it with EQ afterward.

38. Pick one element to own 60–80 Hz and cut the others there

How. Map where each low-end element peaks. Decide which one carries the main low-end role — usually the pulses or sub-bass. Cut the others in the 60–80 Hz region to clear the way. The element you chose as the anchor stays untouched so it thumps through.

Why. When two or three elements all peak inside the same narrow band, they stack into a muddy blur instead of one clean low end. Even if each one sounds fine soloed, the sum fights itself. The cut on the secondary sources isn't about making them sound better alone — it's about making the anchor audible in the mix.

Example. In one reviewed cue, sub-bass pulse #1 peaked near 60 Hz, pulse #2 near 70 Hz, and the low strings near 80 Hz. Stacked, they created a low-end muddy mess. Cutting the low strings in the 60–80 Hz region let the pulses thump through; the strings stayed out of their way.

39. Flag percussion-and-strings low-end overlap even when it sounds okay

Why. Low end is hard to control once multiple elements sit in the same range. Even when the result isn't critical — percussion and strings low-end overlap can read as 'not a problem, but worth watching' — it's still the area most likely to go wrong later, so flag it rather than assume it's fine.

40. Push 40–50 Hz on drums to land a climactic hit

How. When the drums in a climactic section lack impact, add a small boost in the very sub range — 40–50 Hz — to bring the punch across the finish line. Small push, not an overhaul of the mix.

41. Set a Pultec-style EQ boost to 30 Hz for a musical low-end curve

How. Set the boost frequency to 30 Hz on a Pultec-style EQ. The point isn't the 30 Hz itself — it's the curve the Pultec's boost-and-attenuation interaction creates above that point. The analog circuit emulation also adds a touch of saturation. That shape is hard to replicate exactly with a regular EQ.

Why. An EQ can only push what's already in the signal. If the low end isn't there, no amount of boost creates it. A subharmonic generator (Waves Lo-Air, Slate Digital Infinity Bass named in the source) synthesizes new low-frequency content that wasn't in the signal — so given full freedom, a subharmonic generator beats a Pultec here because it can produce frequencies that simply aren't present in the source. The Pultec trick is what you reach for when you want that curve shape and some saturation character.