EDM PRODUCTION

DEEP DIVE

DRUM TUNING GUIDE

KEY OF C

Hz	Note	Hz	Note
32.7 Hz	C_1	261.6 Hz	C_4
49.0 Hz	G_1	392.0 Hz	G_4
65.4 Hz	C_2	523.3 Hz	C_5
98.0 Hz	G_2	784.0 Hz	G_5
130.8 Hz	C_3	1.05 kHz	C_6

KEY OF C#/D♭

Hz	Note	Hz	Note
34.7 Hz	$C^\sharp_1/D^\flat_1$	277.2 Hz	$C^\sharp_4/D^\flat_4$
51.9 Hz	$G^\sharp_1/A^\flat_1$	415.3 Hz	$G^\sharp_4/A^\flat_4$
69.3 Hz	$C^\sharp_2/D^\flat_2$	554.4 Hz	$C^\sharp_5/D^\flat_5$
103.8 Hz	$G^\sharp_2/A^\flat_2$	830.6 Hz	$G^\sharp_5/A^\flat_5$
138.6 Hz	$C^\sharp_3/D^\flat_3$	1.11 kHz	$C^\sharp_6/D^\flat_6$

KEY OF D

Hz	Note	Hz	Note
36.7 Hz	D_1	293.7 Hz	D_4
55.0 Hz	A_1	440.0 Hz	A_4
73.4 Hz	D_2	587.3 Hz	D_5
110.0 Hz	A_2	880.0 Hz	A_5
146.8 Hz	D_3	1.17 kHz	D_6

KEY OF D#/E♭

Hz	Note	Hz	Note
38.9 Hz	$D^\sharp_1/E^\flat_1$	311.1 Hz	$D^\sharp_4/E^\flat_4$
58.3 Hz	$A^\sharp_1/B^\flat_1$	466.1 Hz	$A^\sharp_4/B^\flat_4$
77.8 Hz	$D^\sharp_2/E^\flat_2$	622.3 Hz	$D^\sharp_5/E^\flat_5$
116.5 Hz	$A^\sharp_2/B^\flat_2$	932.3 Hz	$A^\sharp_5/B^\flat_5$
155.6 Hz	$D^\sharp_3/E^\flat_3$	1.24 kHz	$D^\sharp_6/E^\flat_6$

KEY OF E

Hz	Note	Hz	Note
41.2 Hz	E_1	329.6 Hz	E_4
61.7 Hz	B_1	493.9 Hz	B_4
82.4 Hz	E_2	659.3 Hz	E_5
123.5 Hz	B_2	987.8 Hz	B_5
164.8 Hz	E_3	1.32 kHz	E_6

KEY OF F

Hz	Note	Hz	Note
43.7 Hz	F_1	349.2 Hz	F_4
65.4 Hz	C_2	523.3 Hz	C_5
87.3 Hz	F_2	698.5 Hz	F_5
130.8 Hz	C_3	1.05 kHz	C_6
174.6 Hz	F_3	1.40 kHz	F_6

KEY OF F#/G♭

Hz	Note	Hz	Note
46.3 Hz	$F^\sharp_1/G^\flat_1$	370.0 Hz	$F^\sharp_4/G^\flat_4$
69.3 Hz	$C^\sharp_2/D^\flat_2$	554.4 Hz	$C^\sharp_5/D^\flat_5$
92.5 Hz	$F^\sharp_2/G^\flat_2$	740.0 Hz	$F^\sharp_5/G^\flat_5$
138.6 Hz	$C^\sharp_3/D^\flat_3$	1.11 kHz	$C^\sharp_6/D^\flat_6$
185 Hz	$F^\sharp_3/G^\flat_3$	1.48 kHz	$F^\sharp_6/G^\flat_6$

KEY OF G

Hz	Note	Hz	Note
49.0 Hz	G_1	392.0 Hz	G_4
73.4 Hz	D_2	587.3 Hz	D_5
98.0 Hz	G_2	784.0 Hz	G_5
146.8 Hz	D_3	1.17 kHz	D_6
196.0 Hz	G_3	1.57 kHz	G_6

KEY OF G#/A♭

Hz	Note	Hz	Note
26.0 Hz	$G^\sharp_0/A^\flat_0$	207.7 Hz	$G^\sharp_3/A^\flat_3$
38.9 Hz	$D^\sharp_1/E^\flat_1$	311.1 Hz	$D^\sharp_4/E^\flat_4$
51.9 Hz	$G^\sharp_1/A^\flat_1$	415.3 Hz	$G^\sharp_4/A^\flat_4$
77.8 Hz	$D^\sharp_2/E^\flat_2$	622.3 Hz	$D^\sharp_5/E^\flat_5$
103.8 Hz	$G^\sharp_2/A^\flat_2$	830.6 Hz	$G^\sharp_5/A^\flat_5$

KEY OF A

Hz	Note	Hz	Note
27.5 Hz	A_0	220.0 Hz	A_3
41.2 Hz	E_1	329.6 Hz	E_4
55.0 Hz	A_1	440.0 Hz	A_4
82.4 Hz	E_2	659.3 Hz	E_5
110.0 Hz	A_2	880.0 Hz	A_5

KEY OF A#/B♭

Hz	Note	Hz	Note
29.1 Hz	$A^\sharp_0/B^\flat_0$	233.1 Hz	$A^\sharp_3/B^\flat_3$
43.7 Hz	F_1	349.2 Hz	F_4
58.3 Hz	$A^\sharp_1/B^\flat_1$	466.2 Hz	$A^\sharp_4/B^\flat_4$
87.3 Hz	F_2	698.5 Hz	F_5
116.5 Hz	$A^\sharp_2/B^\flat_2$	932.3 Hz	$A^\sharp_5/B^\flat_5$

KEY OF B

Hz	Note	Hz	Note
30.9 Hz	B_0	246.9 Hz	B_3
46.3 Hz	$F^\sharp_1/G^\flat_1$	370.0 Hz	$F^\sharp_4/G^\flat_4$
61.7 Hz	B_1	493.9 Hz	B_4
92.5 Hz	$F^\sharp_2/G^\flat_2$	740.0 Hz	$F^\sharp_5/G^\flat_5$
123.5 Hz	B_2	987.8 Hz	B_5

TRY DIFFERENT STARTING POINTS

We've just covered 4 ways to find **inspiration** and get a track off the ground. Now, try laying out the foundation for 4 new tracks, and start each one with a **different focus** in mind:

- Melody
- MIDI Pack
- Sample
- Sounds from ANA 2

Once you've chosen your favorite, **share it** on Instagram with the hashtag **#inspirationEMPDD** and make sure to tag **@slatedigital** so we can share them!

BUILDING A FOUNDATION

Now that you've seen what the foundation for a track looks like, **try laying out a foundation** for a track in under 30 minutes. **Set a timer** for yourself and try to get through the entire foundation in this amount of time. It will force you to keep moving quickly and to not get caught up in any of the details that can wait until later.

Focus on keeping the musical inspiration flowing and capturing all the ideas you have during this amount of time. Try this exercise **any time you feel yourself getting stuck** on things early in the production process, it will help keep you focused on moving fast and getting ideas out.

USE EVERY TIP IN ONE BUILD

Using all of the following techniques explained in the video lesson, construct a build that creates **as much tension as possible**. Experiment with the different techniques to see how you can create the most effective build possible in one of your tracks:

- Add an edgier sound
- Add a constant high string or pad track
- Use rhythmic acceleration on your drums or synth tracks
- Automate multiple effects over the course of the build
- Add a drum fill at the end of the build
- Create dynamic contrast by starting the build softer than the verse
- Use reverse FX
- Use an atonal sound from ANA 2

Show us your build by sharing it on Instagram with the hashtag **#buildEMPDD** and tag **@slatedigital** so that we can repost some of our favorites!

MIXING UP THE GROOVE

Varying your drums and groove is important to make your track **sound more professional**. As an exercise, take a recent track you've produced and see how many times the same 8 bar loop repeats in your drums.

Using the techniques explained in the video, **keep varying your drums** so that the same 8 bar loop never repeats exactly the same way in the song. This can be achieved through:

- Adding subtle layers that provide a sense of motion to the drums
- Adding unique fills
- Dropping a kick or snare at strategic points in the song to vary the groove

This exercise will **force you to think** about different ways you can vary your drums, so remember what techniques work well for you and reuse them in future projects!

SOUND SELECTION FROM SCRATCH

Download the practice session **"SD_EDM_Production_Challenge_05"** from Slate Academy. You will see a short clip with all INIT patches loaded on ANA 2. Find, tweak, and balance these synths to **create the best sounding track possible** while using all of the tracks and without editing any of the MIDI.*

The challenge will be to find complimentary sounds that work well together, and to **use the techniques** explained in the video in order to avoid muddy sounds.

*Note that many of the MIDI tracks are duplicates - this is intended to help you

HYPING UP YOUR TRACKS

Hyping up the right tracks in your project is an **important skill** for electronic music producers. Using the techniques outlined in the video lesson, find 5 unique tracks that could be hyped up to make your entire track sound better.

Then, **compare before and after** adding these hype techniques to hear how much more exciting and interesting your mix became.

CLEANING UP A MIX

Professional tracks are rarely muddy or unclear, even though they often use **a lot of different sounds**.

Download the practice session file **"SD_EDM_Production_Challenge_07"** and listen to the session as is. **Identify the core problems** with the session and use the techniques explained in the video to clean it up and make it sound more professional.

When you're done, **share your results** with us on Instagram by tagging **@slatedigital** and using the hashtag **#clarityEMPDD**.

LISTENING PARTY

Playing your music for friends, mentors, and trusted ears is always a good idea. **Find someone** to play your music for (who can ideally be in the same room with you) and pay attention to these key points:

- At what points during the track do you **feel less confident** about it? Note these areas so you can go back to fix them later.
- Note the parts of the track that elicit an especially **positive reaction** from your friend. Take note of why they liked these parts and do it again in future tracks.
- Pay attention to sections where you or your listener starts to **"drift off"** - it probably means you need to make them more interesting with another melody, layer, or section.

We can't wait to hear your finished tracks! Share them with us on Instagram by tagging **@slatedigital** and using the hashtag **#finishedEMPDD** so we can share them!

INTRODUCTION

Welcome to the Electronic Music Production Deep Dive. No matter what genre of electronic music you produce - you're about to learn a ton of tips, tricks, and production methods that will help you create better music and have more fun doing it.

We're going deep on the topics that don't usually get enough attention - these are the topics that are actually going to make the biggest difference in your music. We'll go over different ways to get inspired, how to use arrangement to invoke a reaction in your listeners, tips for all different types of tracks like drums, basses, synths, and how to stand out with your own unique sound design.

In under 60 minutes of videos, you're going to get all of this knowledge and more, allowing you to produce more impactful music and have more fun doing it.

Be sure to download the additional content to get the most out of this course:

- Slate Digital EDM Sample Pack with 500+ Samples, including some amazing drum one-shots and loops, vocal chops, melodies, MIDI Files, and more

- 2 Full Pro Sessions for your DAW

Remember, this course is going to give you a baseline foundation to start from. We're giving you tips on workflow, mindset, and production that are going to set you up for success - and possibly give you an entirely new perspective on music production. But it's up to your own creativity and exploration to make the most out of this course.

In this PDF, you'll find **PRODUCTION CHALLENGES** designed to stretch your imagination and take you out of your comfort zone, which is going to make you a more well-rounded producer. We highly recommend you take the time to complete these challenges if you want to get the most out of this course.

Once you master and internalize the concepts in this course, you'll be able to explore your creativity and produce even better tracks. Let's dive in.

FINDING INSPIRATION

The blank DAW... we've all seen it countless times. We have to get started somewhere. There are tons of ways to get started on a new track - and there's no right way to start.

All of these approaches might seem obvious, but more likely than not, you've probably stuck with just one or two methods that come natural to you. But what tends to happen is you get used to your approach and things start feeling stale after a while, and you lose your inspiration. This is why things like writers block or "beat block" can happen.

One of the best ways to keep it fresh is to mix up your approach.

Starting with a Drum Groove can help you get into a vibe quickly. Even if you just use a simple groove that you plan to replace later, this can help get things started, and it's more inspiring than just a simple click track.

WAYS TO START A NEW TRACK

START WITH A MELODY

This melody-first approach is helpful especially if you're writing a pop style song where the melody is a critical part of the song. You'll probably end up with a catchier, more melodic track if you start with writing a melody.

START WITH A SAMPLE

This is especially useful if you're not sure where to start. By bringing in a sample and chopping it up a bit on the grid, you can quickly find inspiration and start moving in the right direction.

START WITH A MIDI PACK

This is a great way to quickly get a new type of progression down, even if you don't play keys. And like sampling, it often leads to something you wouldn't necessarily think of if you were playing or drawing it in from scratch.

START WITH A SYNTH SOUND

Pulling up a synth like ANA 2 and auditioning sounds can be a great way to spark an idea for a track, especially with tools like Chord Memory Device and the built-in Apreggiator. Check out the Slate Academy ANA 2 Masterclass to learn more about how to make the most of these features.

FOUNDATION-FIRST APPROACH

If you've ever gotten stuck on a track, or if you've got a ton of unfinished material sitting on your hard drive right now, then this is for you.

A lot of times, we get stuck in the relatively early stages of producing a track. This tip will keep the inspiration flowing so that you never get stuck during the critical first stage of production. It's called the Foundation-First Approach.

Think of it like if you were to make a cartoon. First, you're probably going to sketch an outline of the cartoon with pencil. You're not going to draw the head, then color it in, then finish it off completely, and then start drawing the rest of the body. You need a full foundational sketch first, then you'll go back through and touch it up, add color, and make it pretty.

Same idea here. By laying down just the foundation for the track, you're not concerned about finishing each section before you move on. Just add what you can think of in the moment to keep the momentum going. As soon as you feel stuck on a section and don't know what to add next, just move on to the next section. Keep doing this until you have the skeleton of an entire track laid out.

This is helpful for a couple reasons:

1. It keeps you in a creative headspace, which is really important for the early phase of production. As soon as you let your head take over and you start thinking about technical mixing things, sound design, or you start forcing parts, you're out of the creative headspace. There's a time for that type of work, but not when you're laying out the foundation.

2. You'll be able to get a really clear idea of what is needed to finish a track. By laying down the foundation, you're setting some guidelines for yourself. Now, you can work within them. That doesn't mean we can't add a section or change something around if we want to later, but having this structure is really helpful because now we can focus on making each section the absolute best it can be.

MAIN SECTIONS EXPLAINED

Let's talk about traditional song structure - there are a few main sections that almost always appear in every genre:

Verses, Builds, and Drops.

Of course there are other sections that appear from time to time, like Intros or Mixing sections, Bridges, Interludes, etc.

But in terms of the core of a song, we're going to focus on just those first three. Because each of these sections has an important purpose.

VERSE = INITIAL GROOVE

Verses usually set the initial groove of your track. They're typically a lower energy part of your track, and they set the baseline for the listener. The purpose here is to get your listener into the groove.

BUILD = TENSION

The Builds have one function: to create tension. Sometimes you'll want to create a ton of tension and have a long, slow build up that starts with nothing and leads to the drop. Other times it might just be a subtle build that grows out of the verse, but either way you're always trying to create tension with the build.

DROP = RELEASE

After you create all that tension with the build, you have to release it. The drop is usually the most exciting part of the song. And it's where we take all that tension that's been building up since the song started, and we release it.

This may seem obvious, but it's really important to recognize these main sections of a song and the role that they play. We want our listeners to enjoy the track, and this is how people most enjoy experiencing music. We like tension and resolution.

SECRETS TO EFFECTIVE BUILDS - CREATE TENSION

Let's talk about the build. Because the goal here is to do one thing: create tension.

We know this is the secret to having an effective build, but let's get right into some ways we can actually achieve that.

SOUND SELECTION

Switch up your sound selection here to be a bit more edgy, it's going to perk up the ears of the listener. And the part we play is just as important - we might want to start lower and let it get higher and higher as the build goes on. This will create tension.

HIGH CONSTANT PADS

We can also add high constant strings or pads to the build in order to add excitement. Anything in the high frequencies is going to perk up your ears a bit, especially with a long whole note.

RHYTHMIC ACCELERATION

The drums are really important in most builds too. Typically, there isn't a lot of kick in these parts, and the drums focus more on the snares and snare builds. Experiment and try new things here.

We can also add rhythmic tension by speeding up the drums every bar or two. Start with quarter notes, then eighth notes, then sixteenth notes, etc. This works great on drums, but can also work with percussive synth parts or audio samples as well.

AUTOMATE EFFECTS

Automating effects is a tried-and-true method for creating contrast and motion, which results in tension. Filters, reverbs, and distortions are popular effects to automate.

DYNAMIC CONTRAST

If you're coming out of a verse with a decent amount of energy, sometimes you actually need to drop the energy down before building it back up. By creating more contrast, you'll get more tension.

FX AND FILLS

Using reverse FX and fills at the end of your build will let the listener know that something big is about to happen in the drop.

ATONAL SOUNDS

Atonal Sounds are sounds that don't have a precise tone that is in the key of the song. Your ear naturally just wants to get back to the notes that go well together. The more atonal, the more tension we'll create.

SECRETS TO EFFECTIVE DROPS - RELEASE TENSION

We've just created all this tension with our build up, and now we need to release it with the drop.

The secret to an effective drop is to have a proportionate release to the amount of tension you built up so far in the song. If you have a really chill verse and just a little bit of a build up, having a massively aggressive drop might feel out of place for the track.

On the other hand, if you spend 16 bars getting the listener ready for the most insane drop, and then disappoint them with too chill a drop, it's going to feel weak.

Here's some specific tips for how to make a memorable, effective drop:

DON'T FORGET DYNAMICS!

Use Dynamics to your advantage. Just because the drop releases the energy that's been built up doesn't mean it needs to be a wall of sound. You should still use dynamics in your drops to keep them musical.

You can do this by adding space between chord hits, and fill that space with drum fills or other synth fills.

Dropping the kick out for a bar in the middle of the drop to build the anticipation and switch it up, creating that dynamic contrast we're looking for to keep it interesting.

USE NEW SOUNDS AND RHYTHMS

Surprising your listeners with new sounds, new rhythms, and new textures is also very powerful for drops. Adding a new Saw Synth for just the drop will be a new sound in this track, and it'll add to the excitement. You can try using new snare sounds, kick layers, or even basses.

MAKE A MEMORABLE MELODY

Melody can be a really powerful tool for your drop. It's why in almost every genre of music, the chorus part is the most catchy and memorable part of a song. A good catchy melody will stick with your listeners. Experiment with different melodies until you get one that works for the track.

Be in tune with your non-producer ears and try to listen as your audience will. One way to achieve this is to take a break from your track. Then, come back after a few days or even a couple weeks, and when the drop feels memorable and exciting to you as a listener, you've achieved your goal.

DRUM / GROOVE TIPS

Drums are super important for setting the groove and feel of a track. Here are some pro tips for producing effective electronic drums:

SAMPLE SELECTION IS KEY

If you're working on a track and aren't into the way your drums sound, the single most important thing to do is focus on your sample selection. Choose better samples that get you closer to what you want your track to sound like.

Even the greatest samples won't work for every track, it might take experimentation to find the perfect kick, snare, hat, or loops for a particular track, so don't be afraid to swap some out and try something new.

LAYERS ON LAYERS ON LAYERS

One tip for getting more interesting drums is to layer them. This means two different samples playing the same part, blending together to make a more unique sound.

Try to find complimentary samples that work together well and add a new dimension to the sound. Kicks, Snares, and Toms are popular parts to layer.

GIVE YOUR DRUMS SOME HUMAN FEEL

Use SWING to give your drums groove. It works really well with 4-on-the-floor beats, but it can work almost anywhere. It doesn't need to be a lot of swing, just a few percent can add a nice human touch.

Along those lines, you can play around with the placement of your drums on the grid to get unique feels. Slide your kicks , snares, and hats around a little for a more human groove.

AVOID TOO MUCH REPETITION

One thing that can make your drums sound somewhat amateur is if they're too repetitive. Vary things up from section to section, add layers to make the sounds evolve with the track. Add fills every 8 or 16 bars. Try dropping a snare or kick right before a new section. These are all things you can do to vary your drums and make them sound more exciting.

TUNE YOUR DRUMS

Tuning your drums is also something that can make your tracks more cohesive. In order to tune your drums, they don't have to be perfectly in tune with the key of your song. But you them generally close, especially your Kick, and sometimes your Snare.

Play them through a spectrum analyzer and see where the fundamental, or biggest peak is on the analyzer. Then, use the Drum Tuning Reference Guide in this PDF to find what frequencies are in tune based on the key of your song. Use a pitch shifter, frequency shifter, or even swap out a more in-tune sample.

This is a very minor detail but it can really help you productions sound tighter and more cohesive.

LOW END TIPS

Good low end is a key part of all electronic music. So we're going to break down what makes up "low end" and give you some actionable tips for how to work with it.

There are two main areas of low end that are important to get right. The Sub, which is everything from about 20 Hz to 100 Hz. And the Body, which is everything from 100Hz to about 250 Hz. These are not hard-and-fast numbers, but give you a general idea.

There are a lot of instruments that might fall in one or both of these areas. Kicks, basses, synths, even some vocals. So it's important to keep this area clear of everything that isn't supposed to be there.
This means when you're arranging your music, be aware of how each element is affecting the low end. Don't over-crowd your low end with too many bass parts or percussive elements. Keep it simple and clean and you'll have much better results.

KEEP THE SUB AREA CLEAN

The Sub area should be pretty much filled out with only a **BASS** and **KICK DRUM**. Everything else that doesn't absolutely need to be there should be filtered out with a high pass filter. This is going to make it much cleaner and easier to mix.

SIDECHAIN COMPRESSION ON YOUR BASS

Even with just these two elements - kick and sub bass - they can be hard to keep clear in the sub frequencies.

So the next major trick is to use sidechain compression to duck your sub bass every time your kick hits. Add a compressor to your bass track, set the sidechain up in your DAW to listen to our Kick track, and then set your compressor settings to achieve an appropriate amount of ducking.

If you want to learn more about exactly what all these controls do, check out the **SLATE ACADEMY ULTIMATE GUIDE TO COMPRESSION** where we go over everything in super detail.

NOT ENOUGH BASS? TOO MUCH BASS? START WITH LEVELS

If you have too much low end, or not enough low end in your mix, always start by revisiting the level of the tracks that are filling out these frequencies. Try adjusting levels before diving into EQ, compression, or other mixing tricks - chances are you can fix the issue much better with a slight fader adjustment.

CLEAN UP WITH EQ

If you're still having trouble even after adjusting levels, then it's time to use an EQ curve on individual tracks.

First, identify the problem: "I have too much sub". Then, mute tracks until the problem goes away to identify the problem track. Then add an EQ to it and cut some of the sub frequencies to make it tighter in the mix.

HIGH PASS FILTER EVERYTHING

Use high pass filters on almost everything. Even on tracks that are supposed to fill out the low end, it's a good idea to put a high pass filter around 20-30 Hz on your basses to prevent extra rumble that you don't need in the track. Even on your mix bus, it's not a bad idea to roll off around 20 Hz to prevent unwanted sub frequency buildup.

TRY THE KHS MULTIPASS MULTI-BAND LIMITER TRICK

One final tip you can try to get a massive low end is to use a multi-band limiter on your mix bus. Load Kilohearts Multipass and load up a limiter in the low band, and adjust the band to be up to about 100 Hz or so (fine tune it based on your track, after you dial in the limiter settings).

Then, set the limiter by pulling the threshold down just a little bit, and turning up the Input to drive the limiter. This is going to smoothen and fatten up the low end, and it's a great trick for getting massive lows.

SYNTHS, PADS, AND MELODIES

Synth parts are really important to filling out your track, and oftentimes they play a crucial role in playing melodic parts for your track, as well as filling out the harmony or chords. Here's some tips to make them the best they can be in your track:

LET THEM EVOLVE

As with everything in your track, you want to make sure that your synths evolve over time. You can do this by adding new sounds as your track progresses. Sometimes adding something only in the second verse will make that verse special and keep it interesting for the listener.

MANY SOUNDS, FEW MUSICAL PARTS

Depending on the genre, you might have anywhere from 4 to more than 20+ different synth sounds in a single song. But that doesn't mean they're each playing that many different parts. A lot of times, layering the same part with different sounds can create the perfect amount of energy for the track without muddying it up. It's also great for evolving the sounds so that the parts don't get sterile.

SYNTH LAYERING TIPS

Try layering multiple synths playing the same parts to create new, unique synth sounds. You can also layer parts in octaves to make them bigger.

When it comes to synths, just like with drums, if you're not happy with how a track is sounding but you like the musical parts, always start with swapping out the sounds. This is going to have the biggest impact on your track, and you need to get the sounds right if you want the track to feel good.

Sometimes this means trying entirely different patches. Other times, it might mean tweaking an existing patch.

We show you some fast and easy ways to do this in the **SLATE ACADEMY CRASH COURSE TO SOUND DESIGN**, and you can learn all of the ins and outs of synthesis so that you can use any synthesizer with ease in the **ULTIMATE GUIDE TO SYNTHESIZERS** on Slate Academy.

TIPS FOR VOCAL CHOPS

When it comes to vocals and vocal chops, there are a few things to keep in mind in order to make them stand out in your beat.

Since Vocal Chops are usually the melody for your track, it's important to make sure they are clear and not competing with too many other parts.

If you have trouble getting your vocal chops clear in the mix, try this: Mute different elements and keep your ear focused on the melody. If you mute something in your track, and all the sudden the melody sounds clearer, easier to hear, or just more open, then chances are you need to fix that element you just muted. Try turning it down or removing it from the mix.

MIXING TIPS FOR VOCAL CHOPS

You can use a lot of compression for vocal chops, even more than you'd normally use on a vocal. The FG-116 VMR Module is a great compressor for this.

The next tip for working with vocal chops is to add lots of width and depth using Reverb and Delay. Lustrous Plates sounds really nice, as well as Repeater on Ping Pong mode. [Play]

Then, finally, add one more round of processing after the reverb and delay to tie it all together. Use Infinity EQ to shape the overall tone using a highpass filter and some high boost. Then, add some dynamics processing with Multipass using the Dynamics Sweetener preset in the Slate Digital folder.

GETTING MORE PRO SOUNDS

If you're listening to your tracks and they're not as exciting as your pro reference tracks, then try out these tips for getting more exciting tracks:

ADD MORE "EXCITING FREQUENCIES"

The "exciting frequencies" are the ones that our ears are more sensitive to. Upper mid and high frequencies make things sound exciting and lively. If there aren't enough of these frequencies in a track, the track will sound "dull and distant".

If your track feels dull and distant, try looking for the tracks in your production that are supposed to add this sizzle and excitement and boost them in level. **HI-HATS, PERCUSSION, CYMBALS, FX, HIGH SYNTHS** - these are all typically used to add excitement, so boost these in level and you'll hear your track get much more exciting. Or if you're just outright missing these elements, look for ways to incorporate them tastefully.

DIRTY UP YOUR SOUNDS WITH VIRTUAL ANALOG TOOLS

Look for ways you can dirty up your sounds. Sometimes, too clean can make tracks sound amateur. Pros use saturation, filtering, and distortion all the time to make tracks fatter and more exciting to the listener.

Virtual Analog tools are amazing for this purpose, try using them to get these fat saturated tones. **VIRTUAL TAPE MACHINES** and **VIRTUAL MIX RACK** are especially useful here.

You can also filter sounds for a more lofi aesthetic. Add a lowpass filter to shave off some of those super high frequencies to make it sound a little more lofi and dirty.

GET MORE EXTREME SOUNDS

Here's a trick for getting extreme sounds - pull up **KILOHEARTS MULTIPASS** and play with the **DYNAMICS MODULE**. There are two presets especially good at this in the Slate Digital folder: **DYNAMICS SWEETENER**, and **DYNAMICS SUB FATTENER**. Just use the Macros to add high excitement to tracks that need it. Or Sub fattener for basses and kicks.

Don't be afraid to dirty up your sounds a bit. Use distortion, saturation, and virtual analog tools to make your tracks more interesting and less "perfect". And hype them up if your production isn't exciting enough. Make the lows louder and deeper with the Dynamics Sub Fattener preset, and the highs more pronounced with the Dynamics Sweetener preset.

ACHIEVING CLARITY, EVEN WITH A LOT OF SOUNDS

There is a very fine line between a clear, full track and a muddy mix. But with these tips, you'll know exactly how to toe that line and get huge sounding tracks without sounding muddy:

THE MOST IMPORTANT PHRASE TO REMEMBER

There's a single phrase to remember here. And if you remember this phrase and use it when you're producing, you'll end up with cleaner, fuller tracks.

"ONLY HAVE PARTS THAT FILL A SPACE, NOT THAT COVER UP ANOTHER PART OR TAKE AWAY FROM ANOTHER PART."

Look for the spaces and holes in your arrangement, and fill them. If there are two parts that are taking up the same space in the arrangement, try to clean them up or choose which one is better.

4 TIPS TO CREATE MORE SPACE

Here's 4 things you can do in this situation:

LEVEL

Create separation with Level. Turn up the more important parts, and turn down the less important parts. This creates hierarchy for the listener and helps clean up your track.

PANNING

Create separation with Panning. This works when you've got two tracks taking up the same space but you want to keep them. Try panning one a little left, the other a little right and it'll help create some separation and clarity. Be aware that if your mix is heard in mono, this isn't going to help, so don't rely on Panning too heavily.

DEPTH

Create separation with Depth. Similar to level, adding a bit more reverb to parts that should sound "far away" will help create that separation and make your track sound cleaner. Add a little reverb - not so much that it adds to the mud, but just enough to give the perception of a farther away sound.

EQ

Create separation with EQ. Carve out frequencies that you don't need in order to clean up your parts. This is a good practice to do no matter what as it will result in cleaner tracks. But especially if you're trying to fit a lot into a part.

Remember - it's important to think about your individual tracks in terms of **MUSICAL PARTS**. You don't want to have too many musical parts going on at once or it will be jumbled and confusing for your listener. You usually only want one focal point at any moment in a song. The rest is just supporting that and shouldn't get in the way.

WHEN IS A TRACK FINISHED?

One of the most important questions a producer has to answer at some point on every single track is: when is it finished?

And this is a tricky question almost every time. But here are a couple of tips on how you can answer that question for yourself.

LISTENING PARTY!

The first tip is to play the song for some trusted friends or colleagues. As you're playing it for them, pay attention to their reaction and also how you feel about different sections of the song. Sometimes, knowing that someone else is listening to the song will heighten your critical senses and you'll notice a few things that can be improved.

On the contrary, you might realize that the song is finished after playing it for others, based on their reaction and how you felt about listening back.

TAKE A BREAK

Another tip is to give yourself a break from the track for a couple of weeks. Try not to open it up or listen to it, and move on to other tracks. Then, after you've forgotten about all of the tiny details and intricacies of the song, come back with fresh ears and give it a listen. This will be very telling of whether the track is finished.

In both of these cases, it's a gut call, and it's your artistic choice as to when the song is finished. These tips simply help you reset and check your gut to help you make a decision.