CYMATICS

The Beginner's Guide:

DJING

Learn the fundamentals of DJing and live performance.

Introduction

The music industry has evolved in countless ways over the course of the last decade. Even a few years ago, many people were solely focused on becoming the best DJ's and didn't even worry about having their own production.

In fact, hundreds to thousands of people around the world saw a decent amount of success—and some of them even went on to an international level—just by being amazing DJ's.

DJ AM is a prime example of this, as he was one of the first, highest paid DJ's to ever be booked in Las Vegas. This also helped propel electronic music in the United States to the spotlight just before it's huge mainstream boom back in 2010-2011.

This not only changed the future of the industry for the next couple of years, but thanks to advancements in technology, it also changed how the younger generations became inspired.

Back then, almost every successful DJ bought turntables at some point and starting practicing on them. Now, it's really common for the younger generations to become music producers first and DJ's second.

And, it's very likely that you are in this situation right now. You may have a couple songs under your belt, and you finally decided it's time to take a leap and start showcasing them to the world.

DJing is one of the best and most common ways producers perform their songs.

Ultimately, to become an amazing DJ, you need to get out there. You will only get so far by practicing in your bedroom, because you need to learn how to read a crowd.

But let's not try to run before we can walk.

There are a few concepts that stand true regardless of the genre and BPM you're trying to mix, and they're critical to your success as a DJ.

Introduction

These concepts are:

1. Beatmatching
2. Track Selection
3. Counting Bars / Phrases
4. EQ'ing

These are simple techniques that any serious DJ understands very well. However, it's also really important to mention that there are multiple DJing styles.

What we mean by this is simply that a Tech-House DJ will have a completely different mindset while mixing and picking tracks compared to a Dubstep DJ.

Try to get a better understanding of your style and the music you want to mix. If you're completely clueless, don't panic. You just need to find out which one will better suit you.

To do this, start by listening to DJ sets by established artists within your genre or from the style of music you're trying to mix. This will point you in the right direction, and all you need to do is ask yourself some basic questions.

Where did the DJ do the mix? Was it at a club, a podcast, a festival, pool party?
Context is EXTREMELY important.

Pro Tip: *Crowds will have certain expectations. Know where you're playing. Don't expect people to headbang to dubstep if you somehow managed to get booked at a bar or club where 95% of the bookings are house music DJ's. People go there for a reason.*

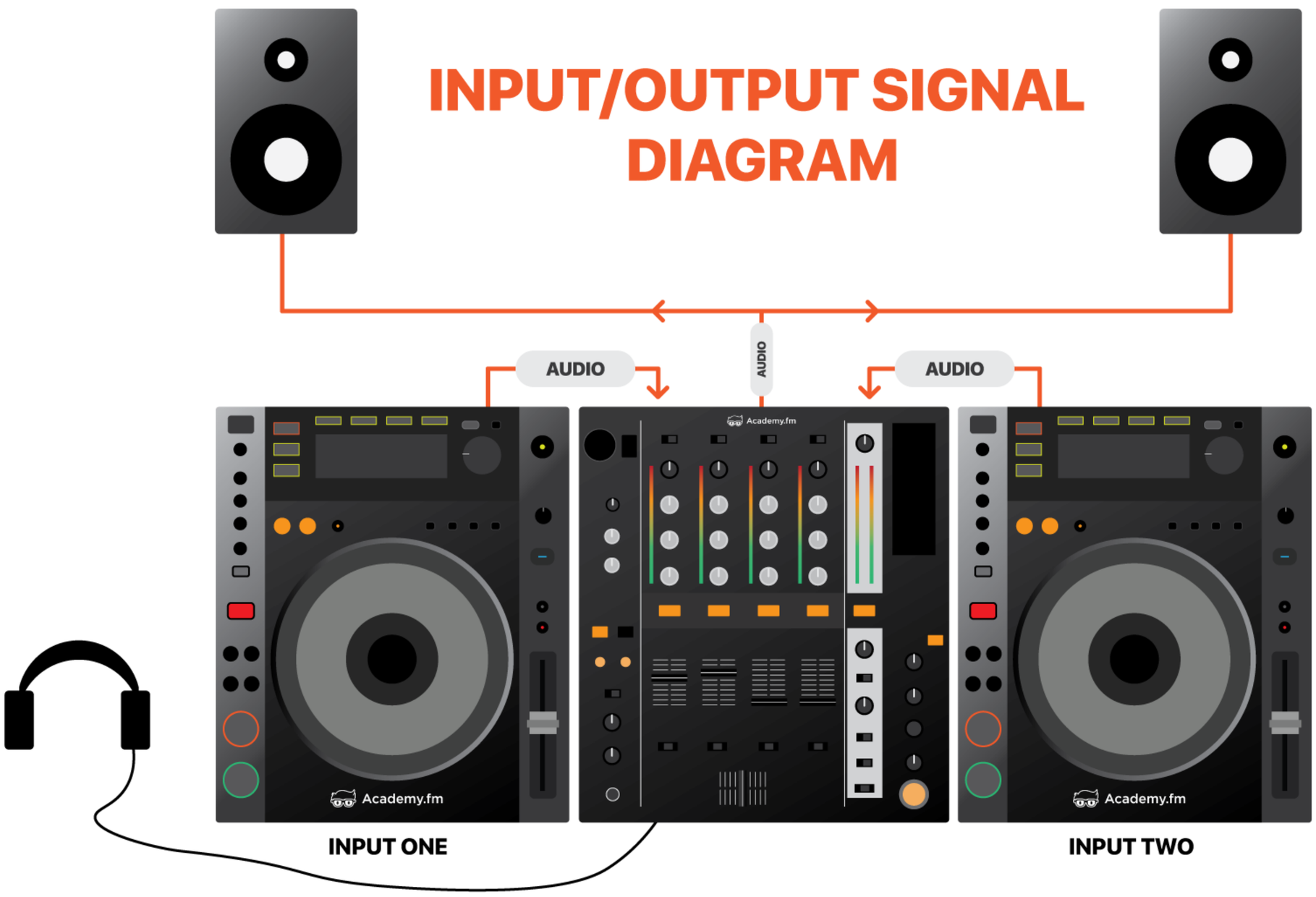
Are the tracks transitioning abruptly or smoothly?
Does it sound like multiple tracks are being played at the same time?
Does the mix start low in energy and keeps building up?

So, even though there is always something to learn from everyone, you need to be careful about what advice you're taking on based on what you're trying to achieve stylistically.

Signal Flow

Before we jump straight into the subject of beat matching, it's worth going on a really brief tangent and learning how the basic signal flow of the equipment looks like.

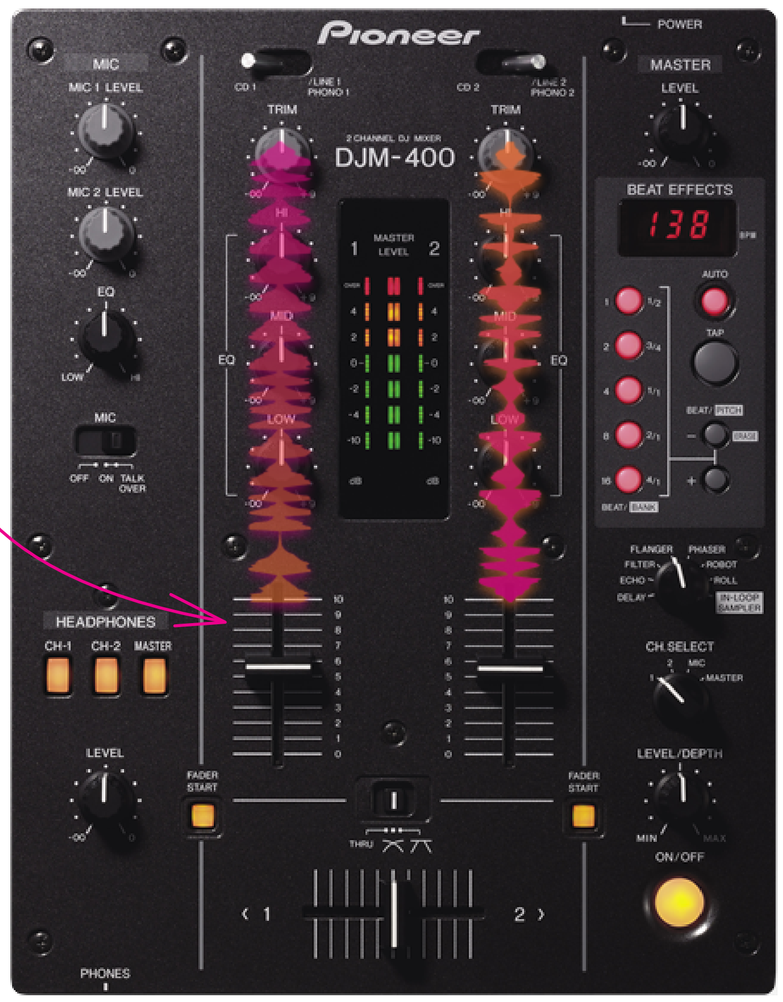
Being aware of this since the beginning will aid you in understanding some things that we will be talking about later in this book.



As you can see in the image above, **Input One** or **Track A** and **Input Two** or **Track B** are where the songs come from. These players can be either turntables, CDJ's, or even digital channels from a computer.

Then, the signals from **Track A** and **Track B** get sent straight into the mixer.

Signal Flow



Finally, the output signal or the **master output** from the mixer gets sent to the speakers. That is what the audience gets to listen.

This is a **DJM-400** two channel mixer by Pioneer, and you get to control with the faders—and in every other mixer— what goes to the **master output** from each channel with them.

So, if both faders are completely up and have songs playing at the same, you will hear all of that in the master output.

Now, you may be wondering where the headphones come into play in all of this. You can plug them into the mixer and hit the **cue button** in every individual channel to send that signal straight into your headphones.

This is a 4 channel mixer and it’s respective **cue buttons.** If all of them are turned on, you will hear all of the channels in your headphones at the same time.

Note: *Faders **DO NOT** have any direct effect on the cue buttons. If you activate any cue button, you will receive signal in your headphones, regardless if the fader is up or down. Each mixer has its own unique knob to control the volume of the cue on your headphones.*

Some advanced mixers out there, such as the **DJM-900NXS2** shown above, also have a cue button for the master output. This way you can monitor everything the audience is listening to in your headphones.

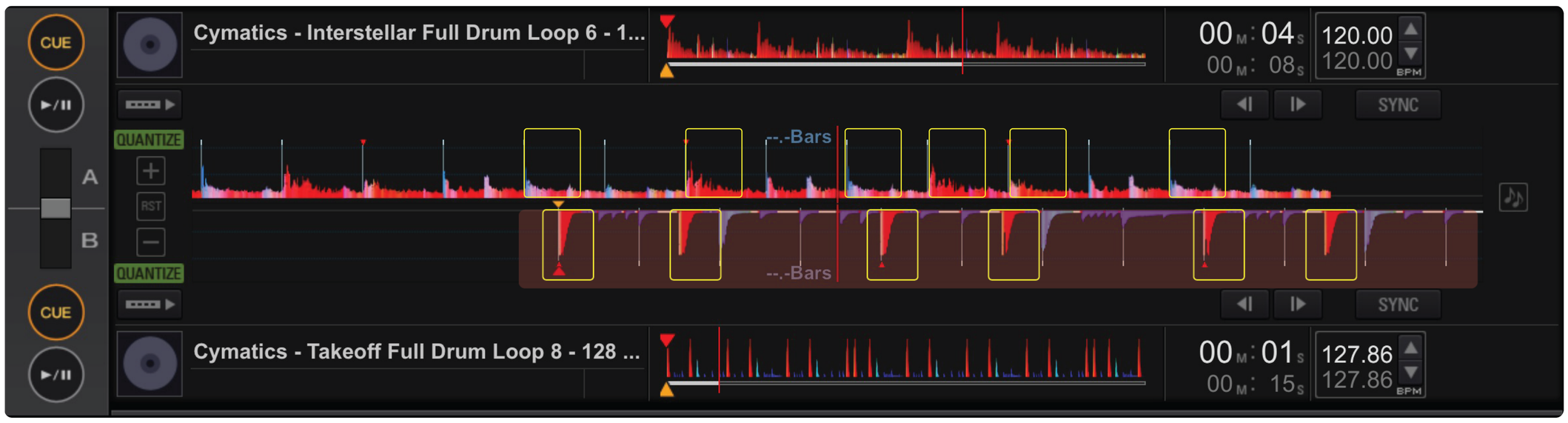
This is useful because there are some clubs and venues that do not have monitors pointing towards the DJ booth, and it’s hard to assess how everything is sounding like on the dancefloor.

Signal Flow

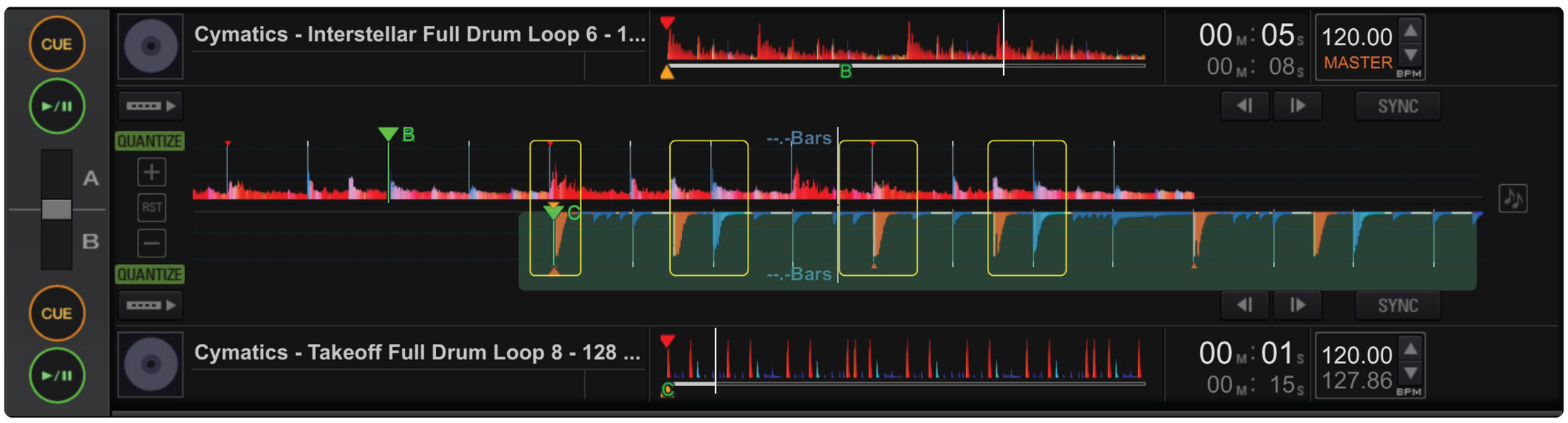
To start wrapping up this section, let's do it by saying that the basic principle of DJing is getting two tracks to play at the same speed, while in phase, at the same time.

This could be either to have them play simultaneously and and create a unique "mash up", or to fade them in and out respectively and start weaving a DJ mix.

Two tracks playing at the same speed but out of phase.

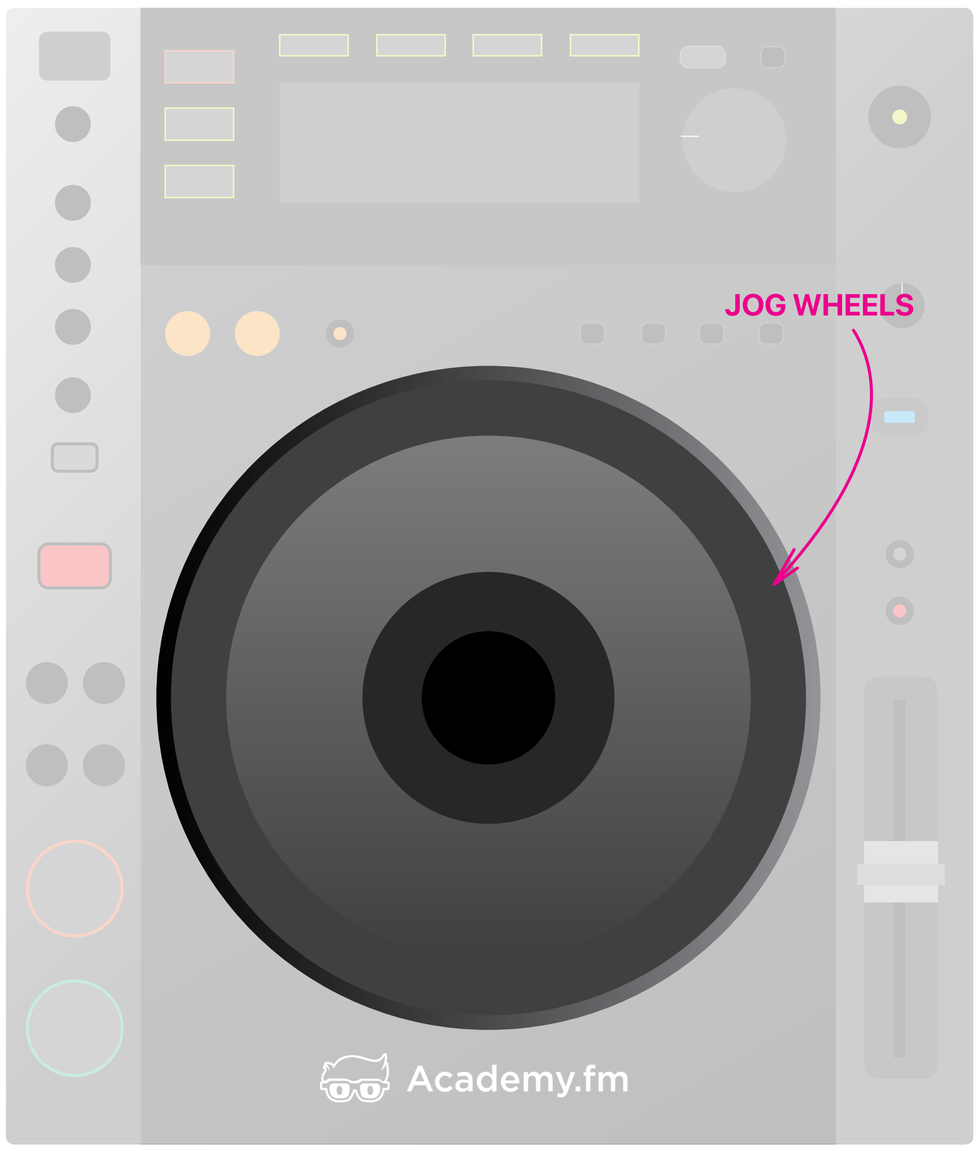


Two tracks playing at the same speed in phase



As you must have inferred by now, it is extremely important that both songs play at the same speed so they don't go out of phase. When any given amount of songs are out of phase, the beats won't line up and it will get messy really quick.

Signal Flow



But how do you adjust the phase of the track im mixing? Well, that's where the **jog wheels** come into play.

You can move the jog wheels in either direction to nudge your song forward or give it a little push backwards until you make them both line up.

Now that we know about the bigger picture of DJing, let's go a little bit more in-depth into every individual concept that you need to know about to get started as a DJ.

Beatmatching

Beatmatching is the fundamental principle of DJing regardless of the genre.

To be able to beatmatch, we need to understand the concept of tempo. Historically, tempos have been named after certain Italian words that composers would use to express "how fast" or at what speed their music should be performed at.

For example, *Andante* means "at a walking pace" and it's somewhere between 76 to 110 BPM.

Beatmatching

To start wrapping up this section, let's do it by saying that the basic principle of DJing is getting two tracks to play at the same speed, while in phase, at the same time.

This could be either to have them play simultaneously and and create a unique "mash up", or to fade them in and out respectively and start weaving a DJ mix.

Luckily for us, we don't need to use Italian words anymore since modern producers and DJ's use BPM or beats-per-minute to measure tempo. 120 BPM is straightforward and it simply means 120 beats in one minute.

Contemporary pop and dance music tracks also have steady BPM's in comparison to classical and jazz pieces which might even have both time signature and tempo changes. This actually makes a DJ's job slightly easier.

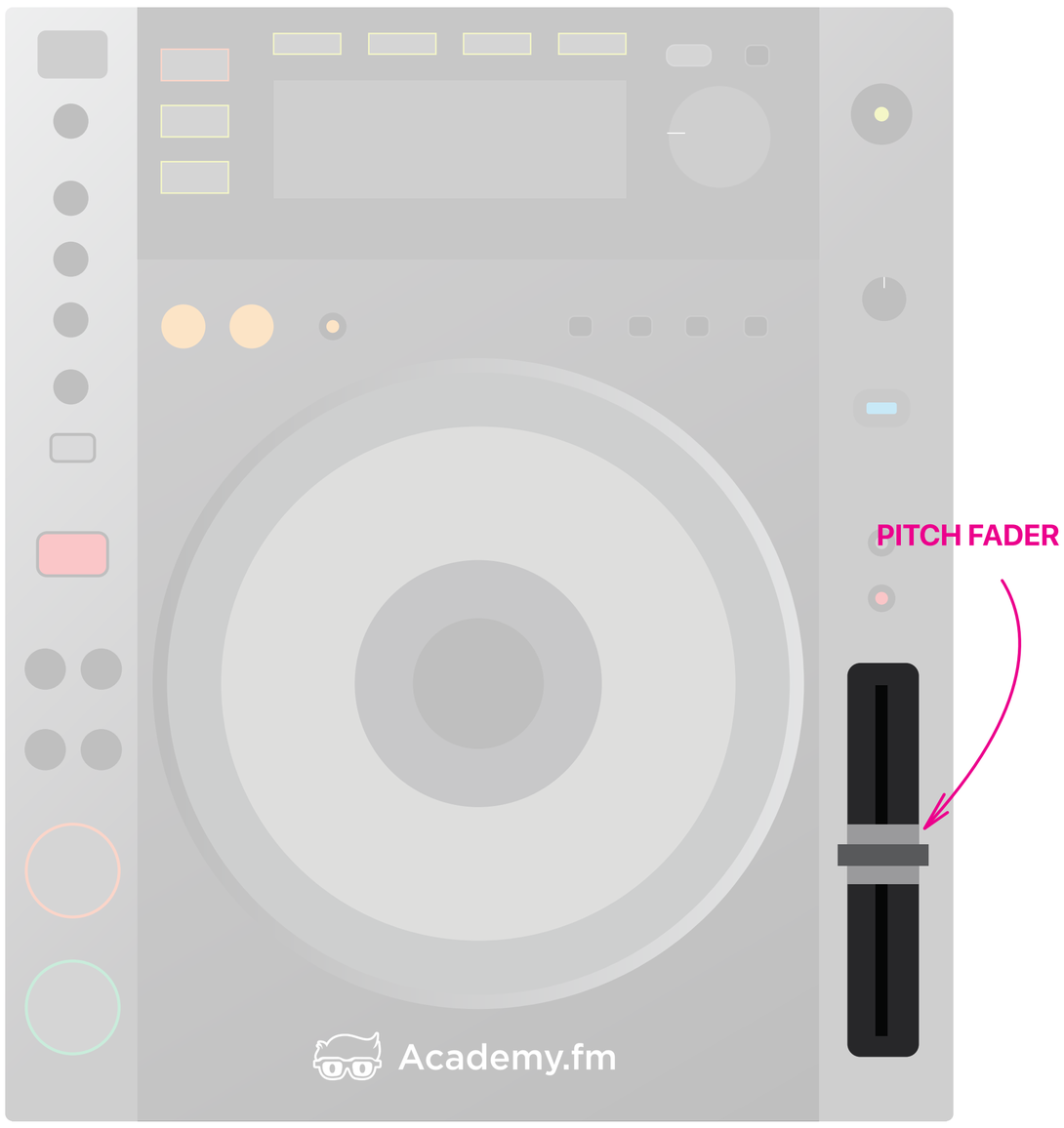
This also means that you don't have to worry too much about time signatures, as 98% of the music you will be mixing will be on common time or 4/4.

Even more complex songs like Matt Lange's "Count It" for example, which has a compound time signature, was produced in a way so that it still has a four-to-the-floor kick drum for ease of mixing.

The first step to mix two songs together is to make sure they're playing at the same speed and that the beats line up with each other.

But how do you make two songs play at the same speed if they have different BPM's?

Beatmatching



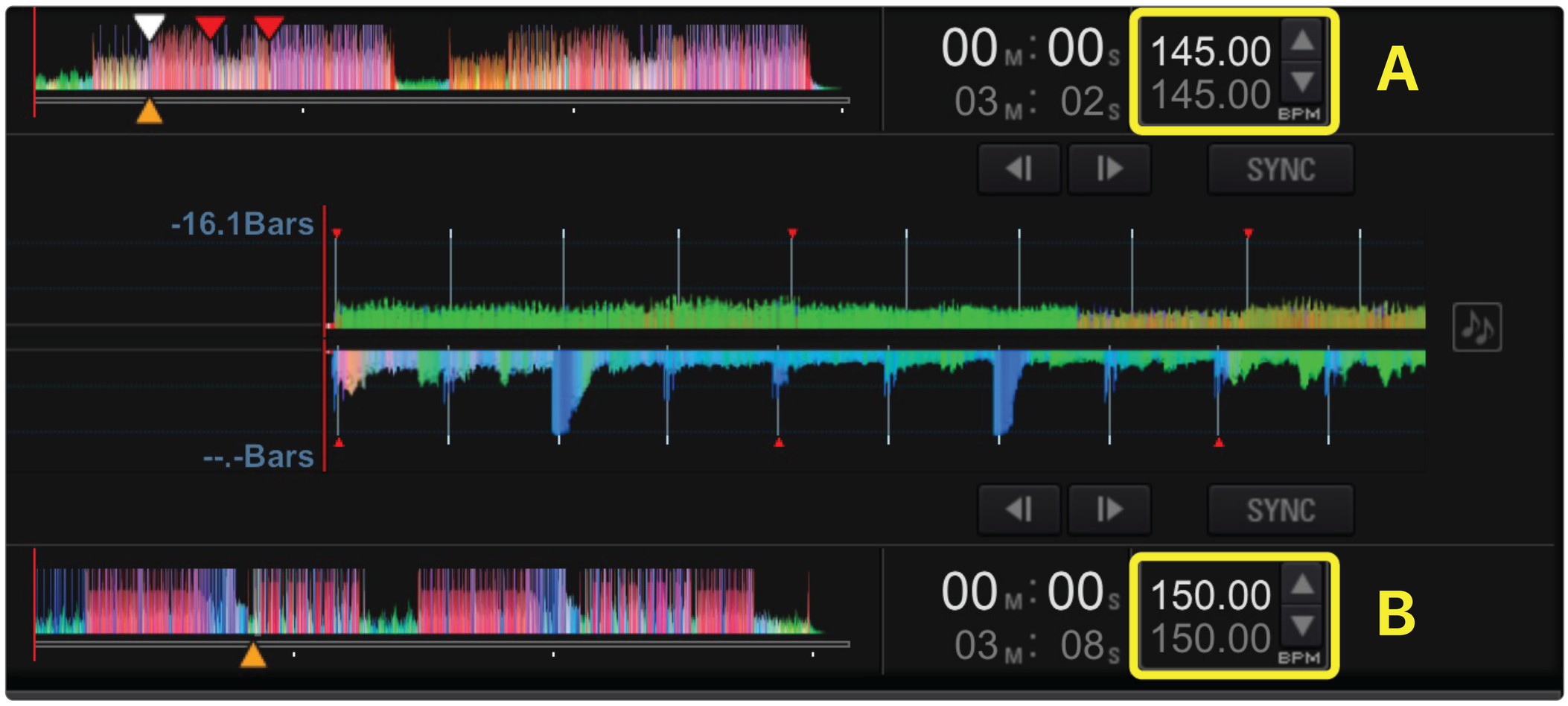
To change the BPM of a song you need to use the **pitch fader**.

You don't have to worry whether a player or controller has a pitch fader or not, because 98% of them have one. Even vinyl players like the legendary Technics 1200 have it.

Note: *Native Instruments' S8 controller doesn't have a pitch fader for example, it has a touch strip instead which serves a fairly similar function.*

This is how it's done in the old fashioned way.

So let's say you have **track A** playing at **145 BPM** and you want to mix in another track which is at **150 BPM**.



Beatmatching

There are multiple approaches to do so, and none of them are wrong. However, since we're talking about the very basics over here, the most sensible thing to do would be to move the pitch fader of track B upwards to decrease the BPM.

The goal here should be to move it just enough so that **track B** plays exactly at **145 BPM**. This way, assuming both tracks are in phase, the drum beats from both songs won't create chaos while playing at the same time.

Now, we need to give you a fair warning. We're going to talk about a very controversial subject in the following part, and we don't want to create a stance here. Our goal is to inform you and teach you how things work, and hopefully you'll come up with your own conclusion.

Moving the pitch fader upwards or downwards to match the BPM sounds easy in words, but it actually gets quite tricky.

Vinyl turntables such as the Technics 1200 **do not have** a digital screen like CDJ's, most controllers, and weren't connected to a laptop either.

All you had was a mixer, 2 vinyl players, and your records.

To beatmatch you had to do it all by ear, and it wasn't a skill that was easy to learn. You had to put in days of hard work and frustration to start getting it.

Of course, this is all assuming you had 2 records at different BPM's. If everything you owned back then was at the same BPM, things were much more simpler. All you had to worry about was making sure that the beats lined up with each other.

Beatmatching

But now we should talk about its modern counterparts, CDJ's and controllers. This type of equipment most of the time will ask of you to analyze your songs first before you're even able to play them back.

Because of this, the software will show to you the BPM in which your song is currently at. Whether it's at a digital screen the equipment has, or in your laptop.

This actually deals with a lot of the heavy work old DJ's had to worry about, and this is where the controversy lies.

Old school DJ's argument that the art of DJing has gotten lost because of technology aiding the new generation. It was definitely an art that only few managed to master; Mixing hundreds of tracks one into another almost seamlessly while making it look simple.

But technology didn't only bring that to the table, it also brought tons of effects and functionalities into the players and controllers that people couldn't have even imagined before.

It's not the gear, it's the person behind it.

A lot of the newest equipment has integrated the **dreaded sync function**. This is a simple button that will make the computer or your equipment sync your songs instantaneously.

This is where the famous saying "DJ's only hit the play button" comes from. And it's true, we can't try to make up or alter reality. A lot of DJ's are just selecting tracks, syncing them automatically with software, and hitting play at the right time.

So to recap quickly this entire section, you can beatmatch a song in the following ways:

1. By ear.
2. Watching the BPM in any screen available and adjusting the pitch fader manually.
3. Using the sync function.

Beatmatching

If you're interested in learning how to beatmatch by ear, become aware of some important issues regarding this topic, and get some tips and tricks, feel free to keep reading this section.

CLICK TO JUMP

Otherwise, jump straight to "***Arrangements, Counting Bars & Phrase Mixing***"

The most common performance setup for dance music DJ's right now is to 2-4 CDJ's. However, not everyone is at that level yet, and the majority of beginner producers/DJ's can't afford that type of equipment either. A big percentage of that group also isn't lucky enough to know someone who is willing to let them practice with their equipment.

Bottom line is, **knowing how to beatmatch by ear is still a very valuable skill.**

You never know in what kind of old or cheap equipment you might end up performing at while you're a beginner during your journey.

You might also encounter CDJ's that have a ridiculous mileage. Sometimes the pitch faders are worn out, the screens freeze, and multiple unexpected glitches happen.

Knowing how to beatmatch by ear not only can save your life, it can also help you leave a good impression on the club owners or managers.

You need to be aware that most people running venues, were or had experience DJing. Their views on this subject might differ to yours just because they're older, and you need to understand that they're not wrong either.

The truth of the matter is, no one is going to put a piece of tape on the screen either and force you to beatmatch by ear. The technology is there, and you have free will to use it.

Now we need to talk about something that a lot of old school DJ's don't like to mention, almost intentionally.

Back then, not everyone had access or enough money to buy the necessary equipment, and keep buying vinyl's at a constant basis.

Beatmatching

Most old school DJ's started with a bunch of records and kept expanding it throughout the years.

Old pitch faders were designed to have a range of **+/- 8%**, some of them also had a setting of **+/- 16%**.

But what does this mean?

Well, we learned in the previous section that we use pitch faders to alter the playback speed of a song.

If our pitch fader stayed right at the middle, at **0%**, this simply means that the song would playback at its original BPM.

With a setting of **+/-8%**, this means that whatever song you played, it could only go **8%** faster or **8%** slower.

So, if we loaded a song that has an original BPM of **119**, with the pitch fader setting at **8%**, this means that it can only be sped up or slowed down by **9.52 BPM**.

This makes beatmatching by ear a whole lot simpler.

Going back to our previous example, let's say you want to bring in a track that is originally at **122 BPM**, and the song you're currently playing is at **119 BPM**.

You don't have to do the math every single time, but by knowing this you can tell that if you move the pitch fader all the way up your song will be slowed down by roughly 10 BPM (9.76 exactly).

You only need to bring down the BPM by 3 to go down to **119**. The pitch fader is also linear, so it would be a safe bet to assume that if you move it half way up the BPM would go down by **~5 BPM**.

Half of that would be ~2.5 BPM, so this would give you a pretty solid visual ballpark image of where the pitch fader should be at.

Beatmatching

The rest comes down to a little bit of practice and fine tuning your ears.

Now that you are aware of this, we can go back to our original point. As old school DJ's amassed vinyls (and we're talking hundreds of them), it would be hard to keep track of all of the different BPM's of their records.

Old DJ's would create little cheat sheets or make notes on the vinyl's to aid themselves whenever they played them.

Those who really mastered their craft and had a certain degree of musicianship could also figure out the key of the song by ear, make a note on it, and take it one step further by doing **harmonic mixing**.

If you don't know what that is, don't panic. We'll talk a little bit about harmonic mixing later in this book.

All of this isn't new. It already existed but it was limited to the people who really took the time to master and take their craft to the next level.

To finalize this section, let's do final notes about pitch faders and beat matching.

As a general rule of thumb, **it's usually best practice to NOT alter the BPM of a song by more than +/-8%,** specially in the upper BPM ranges.

For a standard song at 128 BPM this is +/- 10.24 BPM.

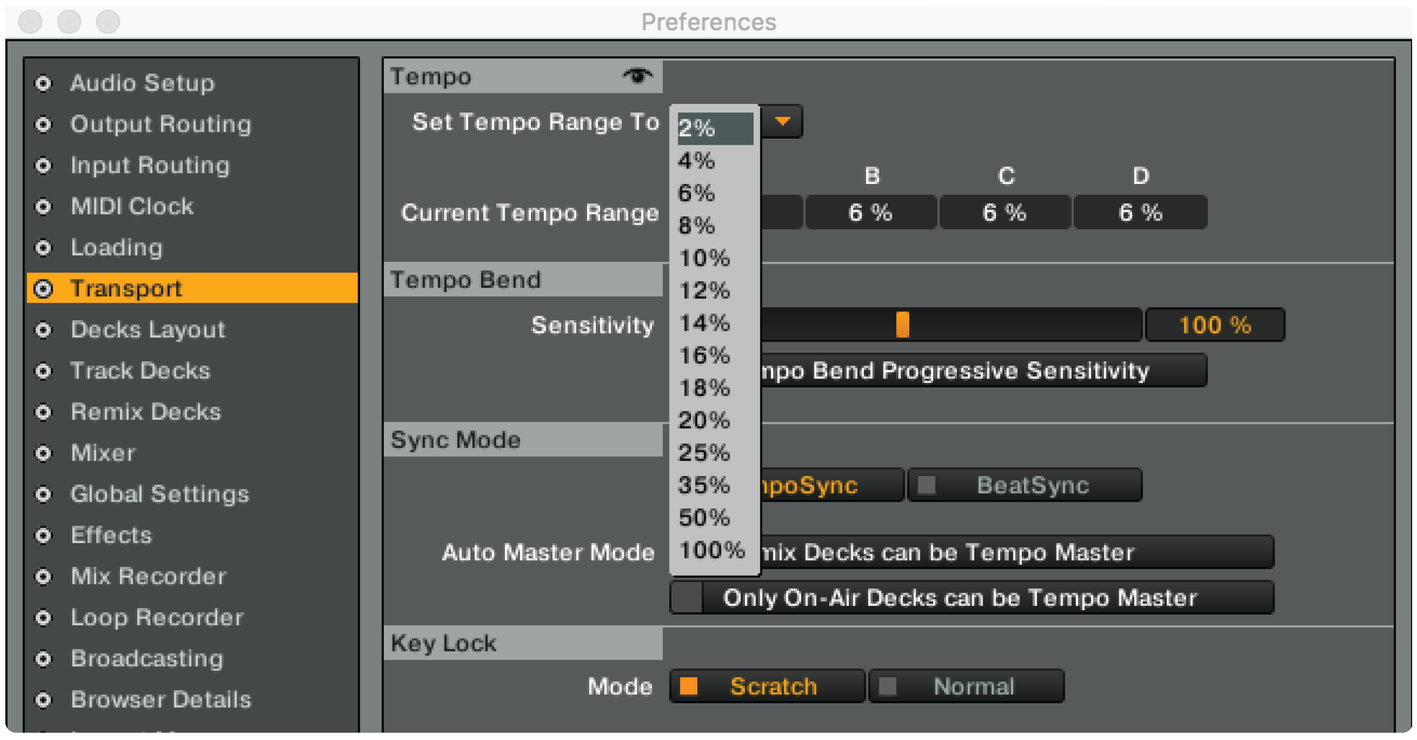
This is something that you need to listen by yourself to really understand why. So load up some songs and mess with their BPM's extremely in both directions. For example, picture any progressive house song you might like from 2012 playing at 138.24 BPM.

If you do experiment with this, it is preferred that you try this at least in a controller or in CDJ's. But if you don't own or have access to either, messing with the BPM inside your DAW should suffice.

Moving forward, one of the first things you should check, especially when you're using equipment that is not yours, is to see what's the current range of the pitch faders.

Beatmatching

Standard CDJ's Nexus 2000 have 4 settings available: 6%, 10%, 16% and "wide." Broader BPM pitch fader settings are designed for open format DJ's where they jump between multiple genres, for example hip hop and all the way to drum n' bass.



However, if you're mixing strictly house music for example—or just staying within similar genres overall, doesn't have to be strictly house music—it is recommended that you keep the pitch fader settings in either 6% or 10%, as this will make your life easier and give you way more control over the fine tuning.

Software like Traktor allows you to change the pitch fader settings in quite a drastic way, which opens up some creative opportunities for crazy tricks and mixing techniques.

Unfortunately, these techniques are outside the scope of this book.

Arrangements, Counting Bars & Phrase Mixing

Now that you have a deeper understanding of the fundamental principles of mixing two tracks together, we can talk about how to start creating seamless mixes.

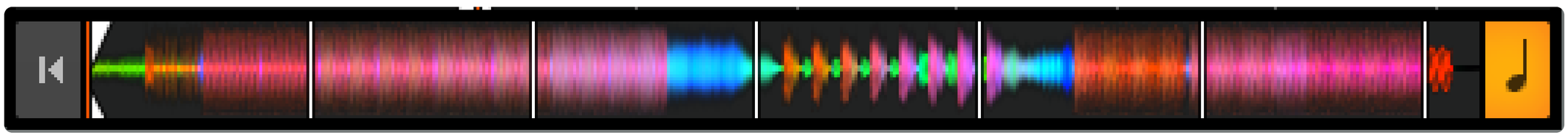
If you are a young producer that is learning how to DJ, then you are most likely familiar with the concept of **musical arrangements.**

If you aren't, worry not, as we will do a very quick breakdown.

Every song has an arrangement. The most simple and common arrangement for pop songs is having an intro, verse, chorus, verse 2, chorus 2, bridge, final chorus, and outro.

Now, in the following image you can see a deep house/tech house song which is at 123 BPM.

ZHU - Desert Woman (Original Mix)



It is incredibly easy to tell (visually), that this song has an intro, then it goes straight into its main beat section, then it slows down into a melodic beat section—the lighter pink and blue section—goes straight into a break, and builds up into the main part once again plus an outro.

Learning how to read waveforms comes with practice, but you shouldn't rely entirely on this. You should be very familiar with the tracks you're playing and know how their arrangements are laid out.

Almost every musical phrase in contemporary arrangements comes in a multiple of 4. One section can either be 4 bars, 8 bars, 16 bars, or even 32 bars. It all depends on the genre.

Some producers even do 12, 20, or 24 bars sections, and this isn't that rare to be honest, as certain genres of dance music allow for a lot of creativity within arrangements.

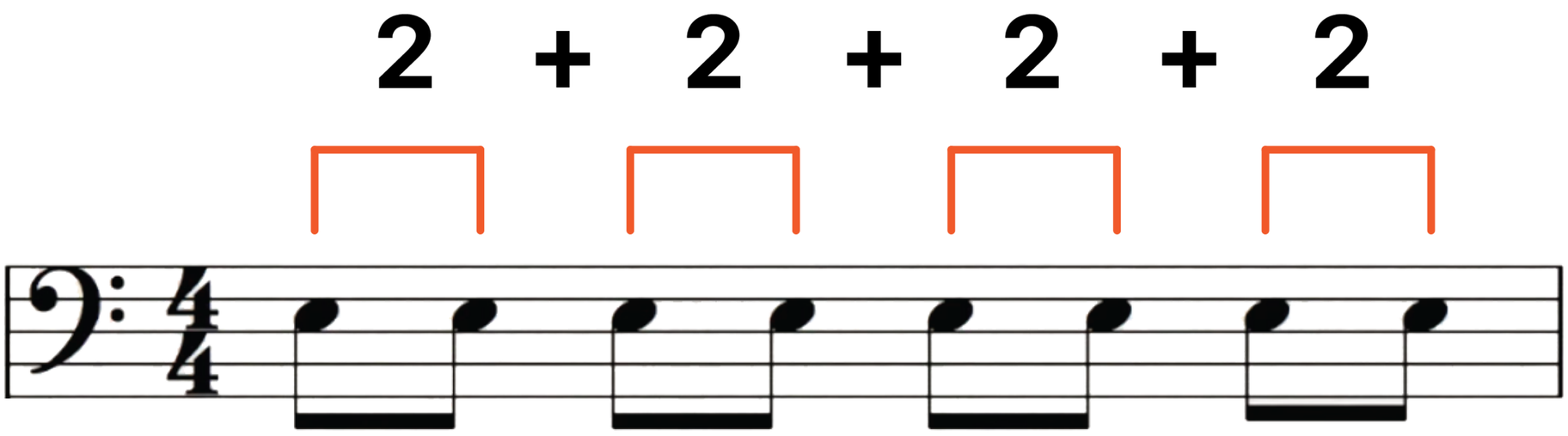
Arrangements, Counting Bars & Phrase Mixing

If you don't know what a **bar** is in music, it is simply a way to organize written music in small sections. Every song has a "regular beat" or **pulse** that you should be able to feel; A small trick to find it is to tap your foot on the floor while a song is playing.

If you do it with most pop and dance music, you should be tapping your foot while counting up to 4.

1, 2, 3, 4... **1**, 2, 3, 4... the first beat is called the **downbeat** and it's the strongest one out of all. So, 4/4 or **common** time, means that **four beats** (numerator) made out of **four quarter notes** (denominator) build a single bar.

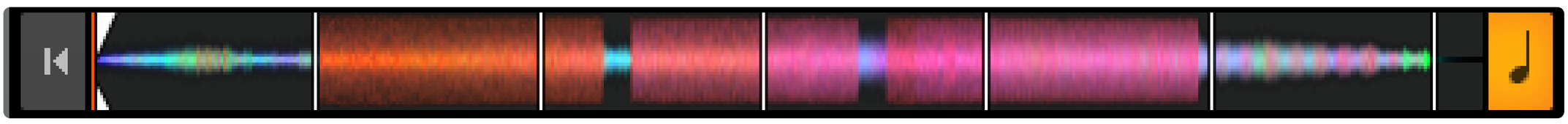
It is completely acceptable to have smaller note values as long as they add up to **four quarter notes**. This would still be considered as a bar, for example:



So, multiple bars, usually in groupings of multiples of 4, build **musical sections.**

In the following image you can see a progressive arrangement, where the intro is a little bit longer compared to most pop songs (32 bars). But once the beat drops, there are only two small 4 bar breaks and the track keeps building and going on until it hits the outro (32 bars).

Pryda - Project L.O.V.E (Original Mix)



Arrangements, Counting Bars & Phrase Mixing

You should be starting to realize by now where this is going to. To create seamless transitions and borderline flawless mixes you need to make sure that certain sections of both tracks align.

The most basic one would be aligning the **outro** of **Track A** with the intro of **Track B**. If both songs are from similar artists or within the same genre, it is highly likely that the outro will be exactly the same length as the intro.

Note: *For really progressive four to the floor genres, intros and outros are usually 32 bars. Genres where the average track length is around 3-4 minutes usually have 8 bar intros, while the larger main sections may be 16 bars.*

This way, when **Track A** finishes, **Track B** will go right into its verse, chorus, drop, or main beat section. Once again, this is genre dependant.

Once you get the hang of this basic technique, if know your songs well you can start creating more complex mixes and "arrangements" within your entire DJ mix.

For example, you could have the intro of your incoming track (**Track B**) to play right at the break of **Track A**. Then, you could start fading away **Track A** by lowering its volume gradually, or using some effects.

Ideally, and also depending on the tracks you selected, the drum beat should never stop. This is a great way to maintain energy on the dancefloor.

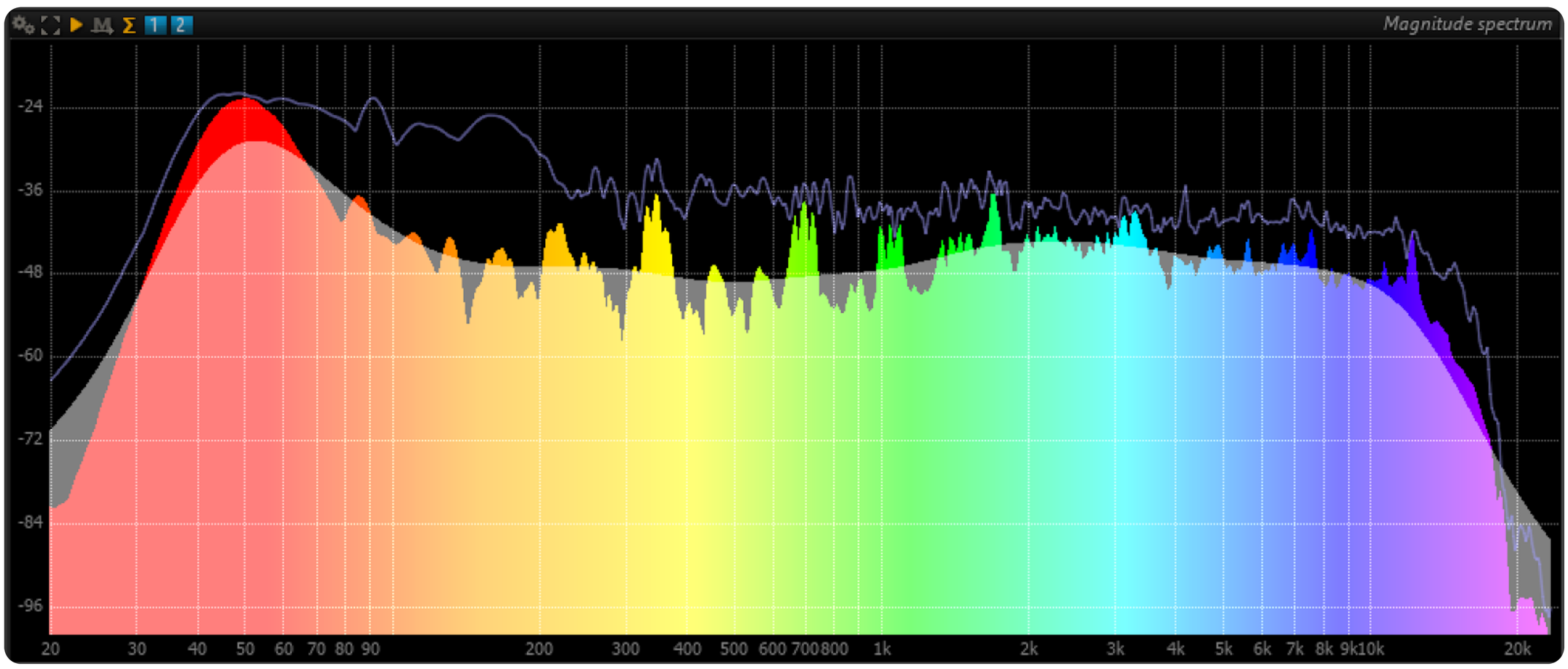
Just remember, the crowd can't be going wild 100% of the time, use your breaks wisely.

Equalizing

Learning how to use the mixer's EQ is the next step to achieve clean and flawless transitions.

If you come from a music production background, you are well aware of how tricky it can get to make your kick and bass sit together nicely. Especially when both are huge and share the spotlight throughout your song.

However, if you have no music production background, don't stress. All you need to know is that low frequencies carry a lot of power.



That huge red bump you can see in the image above is the low end on a tech house song. And this is pretty much how most modern dance music looks like through a frequency analyzer.

If you play this song at full volume in any type of DJ equipment, your meters should be pretty hot and near the red zone.

Stay away from the red zone in any type of DJ equipment.

Equalizing

Going into the red zone in any PA system in general is a completely different ballgame than redlining your small studio speakers.

This type of sound systems deals with a more power and can overheat about three times as fast as your small monitors.

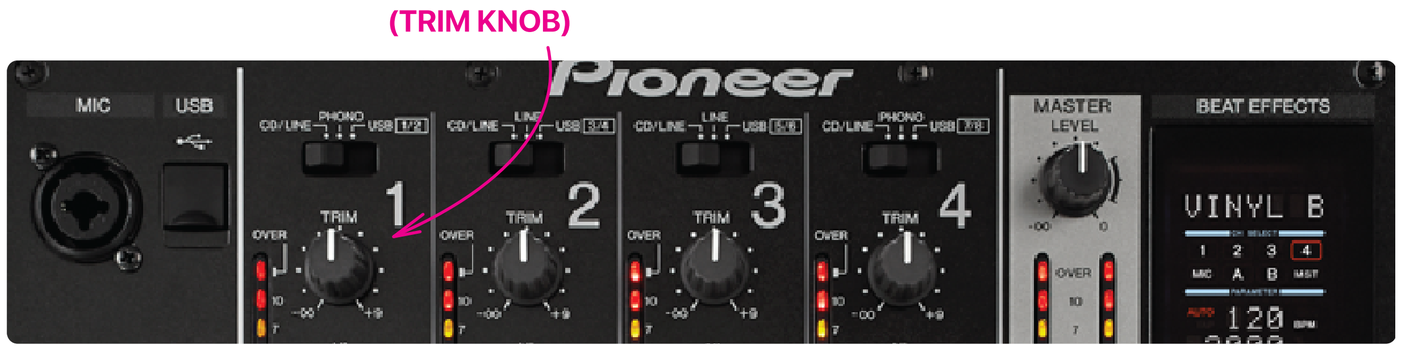
If you stay in the red zone for a prolonged amount of time there's a pretty big risk of completely blowing out the speakers. You could also severely damage them if a huge burst of energy happens that goes "beyond" the meters.

Some venues have compressors or limiters in their PA system's output to prevent performers from blowing their speakers inadvertently. But this means that they're squashing your signal pretty hard whenever you go into the red zone... and that sounds terrible.

In other words and contrary to popular belief, you don't have to redline to headline.

Whenever you're mixing mixing two tracks together, you first need to adjust your gain accordingly with the trim knob and proceed to **cut the low end** of either song. Remember, low frequencies carry the power and give a sense of weight.

Note: *Every single individual channel has a trim knob at the top which allows you to adjust the input volume on each channel. As a rule of thumb, set the gains in the channel to peak just before hitting the red zone while having your channel fader all the way up. This will be the highest gain you want to have each channel.*



Equalizing

This also applies for more advanced DJ's where they might be using 4 channels at the same time to create complex tension/release loops for the dancefloor.

It's always a **single channel** carrying the low end energy.

The rest is completely EQ'd in the low end or they have no low end frequencies present at all. Hence, no need to EQ them out to begin with.

In other words, you only have 1 small room available (your meters up to 0 dBFS in the digital domain), and it's like trying to stick both an elephant and a hippo in at the same time, it's just not physically possible.

If we go back to our previous example where we mix the **intro** of **Track B** with the outro of **Track A**, you have two choices:

1. EQ the low end from Track A from the very first moment you bring in Track B.
2. EQ the low end from Track B and wait until track A finishes to bring it back in.

There's no right or wrong answer over here, doing either will yield completely different results to the energy on the dancefloor, and this is something you need to experiment with a little bit. The effect is also different depending on how the tracks are composed/arranged.

The second reason why we need to EQ the low end out is because low frequencies are omnidirectional and our brain just struggles recognizing two sounds in the same frequency range.

Usually our brain will just pick up the one sound which is the strongest out of both, or in other words the loudest one. So in a nutshell, everything gets really muddy and this is something you want to avoid almost at all costs.

And finally, to bring everything together, even though the low end may have different fundamental frequencies across the two tracks, the amplitudes will still add up and increase the volume. This will definitely make you go into the red zone of your mixer, even if they're clashing harmonically.

Equalizing

However, they are there for a reason and they're not useless. You can use them in multiple ways. For example, sounds that are further away have way less high frequency content.

If you intend to loop something and leave it as the background for a while, you could also carve some high frequencies out with the top band EQ to help accentuate this psychoacoustic effect.

We will talk about harmonic mixing in the following section, but alternatively, you could use the mid band EQ to carve some space in a synth loop so it doesn't clash with the vocal that may live in another channel.

Being elegant and subtle with the EQ's in a mixer comes with practice. Some great advice that will help you understand how to use them better is to search for YouTube videos where any of your favorite artists might be mixing while there's a camera pointing straight at the entire setup.

This will work even better if you're a somewhat familiar with some of the songs he plays or just the genre overall, as you will be able to tell more accurately what's going on during the mix.

Track Selection

Now that you're familiar with the most important concepts of mixing tracks together, we can take it one step further and talk about track selection.

Track selection is one of the most elusive concepts for aspiring DJ's. In an industry where there is an implicit competition between artists and limited opportunities, whenever a beginner DJ gets a shot it's pretty common to see them going as hard as they can.

There is a time and place for everything. It's crucial to understand this when you're in your amateur phase.

If you have the opportunity to open for someone big, understand that you are the warm up set. Pick your tracks accordingly.

Even though you might get some friends and other people to go and support you, the majority of the audience is there to see the headliner.

You might see this as an opportunity to impress people and make a name for yourself, but trust us... the promoters, the owners of the venue, and the booking agents don't share your perspective. You will most likely leave a bad impression on them.

Your job here is to gather people into the dancefloor and make them hyped for the rest of the night.

Great warm up sets are an almost forgotten art.

On the other hand, whenever you land your first headlining show...

Make the best out of your shot and bring down the entire place!

This brings us to the matter of learning how to read crowds and pre-planning sets. They key is to keep a fine balance between satisfying the crowds expectations and giving them tracks they didn't know they wanted to hear.

Track Selection

You need to bring them into your own sonic world, your taste in music. It's all about the journey.

Pre-planning sets is not a bad thing to do, everyone does it. Think about some of the best old school DJ's that are still touring up to this day. They do not bring 1,000 vinyls with them. They pack some of the records they personally want to play, and some others to please the crowd wherever they're playing at.

This is arguably one of the best mindsets for a DJ. If you're playing a 1 hour set, bring some extra tracks. Do your homework, ask the promoter or owner of the venue what type of music their audience usually enjoys the most.

Prepare some music in that style and get people up and grooving on the dancefloor. Once you've caught their attention, start playing some of your own tracks and show them your own style.

Never stop looking every now and then at the crowd.

This is also another reason why you should bring some extra tracks, since not every song will work in every scenario. If you realize that a song is just starting to kill the vibe of the crowd, you can just mix it out on the breakdown just like we mentioned briefly on the more advanced phrase mixing techniques.

But it's also worth remembering that just because people aren't going mental, it doesn't mean that they're not enjoying your set. Especially with certain genres of music.

You can't expect people to react to really abrupt or drastic changes in genres either. If you're a dubstep DJ, don't try to get booked for a house music event, it just won't work.

This whole concept is more about playing, for example, some tech house in a venue where they're used to deep house. You could also try playing some drum and bass in a venue where dubstep is the usual. Fans are more likely to accept that and go with it.

Keep it coherent. If you're trying something new, make sure it's something within the same realm. Don't get booked for random shows for the sake of playing, because if they go wrong it can be really demoralizing.

Harmonic Mixing

Harmonic mixing is a concept that is a little bit more advanced, so we will only talk about it briefly.

Before you even try to practice this, make sure that you can beat match and get your songs to line up correctly with each other every time (phase).

When you're doing harmonic mixing, your focus should be on the key of the tracks and not on beat matching and phrase mixing. Those should be second nature by this point.

Harmonic mixing consists in mixing tracks that are the same key, songs that are a fifth up or a fourth down (key wise), or tracks that are in the relative major/minor keys of each other.

1. Mixing tracks in the same key
Track A (C major) → Track B (C major)

2. Songs that are a fifth up/fourth down from the original key.
Track A (C major) → Track B (G major or F major)

We can't do an in-depth explanation on how this works because it's outside of the scope of his book. However, if you want to understand this to a more profound level, we suggest you to study some basic music theory.

Basically, going from C major to either G major or F major works because they only have a 1 note difference between each other.

Alternatively, you could also go to D major or Bb major. Since there's only a 2 note difference it'll still be somewhat smooth. However, this is pretty much the upper limit, as changing to a key with a 3 note difference is already too much.

3. Relative minor keys
Track A (C major) → Track B (A minor)

You could also go to the relative minor key from the original track, as both scales share the exact same notes.

Harmonic Mixing

There are a few more intricacies to harmonic mixing, but this is the fundamental concept that you should be aware of.

Sometimes songs only have a beat in their intro and this does not have a negative impact if you phrase mix it correctly with some other song that it’s in a completely irrelevant key. This is another reason why it’s really important to know your own library and songs.

Most of the time you only need to worry about harmonic mixing if you’re putting together two tracks that have harmonic and melodic instruments/elements going on at the same time.

Most Common DJ Equipment in 2018

You now have a pretty solid picture of what entails being a DJ in our day and age. We have talked about some of the fundamental concepts, minus some small details that you can only learn by yourself by diving in, finding your own style, and getting real life experience.

It's worth finalizing this book by giving you some insight into some of the most common equipment that you will find out there.

CDJ Setup

The industry standard. You will see this setup in at least 80% of the world's clubs, venues, and festivals. Most DJM mixers have 4 channels, so it's pretty common to see 4 CDJ's hooked up instead of 2.

If you're into more underground genres of dance music, it's also very common to see mixers that aren't manufactured by Pioneer. Some DJ's like to make use of some of the functionalities different brands have to offer.

Most Common DJ Equipment in 2018

The Allen & Heath XONE:92 mixers are the second most common mixers you will see that CDJ's are being hooked up to, and this is a six channel mixer.

Allen & Heath XONE:92

Manufacturer Denon has also made a pretty aggressive entry into the industry recently by making partnerships with certain DJ's to perform on and promote their products.

Once you get to a certain level, clubs and venues won't let you hook up your own equipment. You will definitely need to be familiar with this type of setups, so make some new friendships and strive to get to know someone that will mentor you and let you practice in this gear.

One of the only ways that a club or venue will let you hook up your custom setup is if they are booking you to headline for the night. So really take this into consideration.

Another incredible benefit of learning how to perform in this type of setups is that you only need to carry your USB drives with you. All of which you can fit inside your pocket.

This is without even mentioning after parties. Another reason why players and mixers will never go out of fashion. Even if you develop a unique live show, you will most likely end up spinning in the after hours with a very similar set up.

Most Common DJ Equipment in 2018

DJ Controllers

DJ Controllers are way more affordable for bedroom producers and amateur DJ's. There's a plethora of controllers out there that also come with a myriad of functionalities, so we can't really list all of them.

The downside of DJ controllers is that some venues or clubs won't let you bring your own controller as we just mentioned, plus they're not that small or portable.

They can become quite annoying to be carrying around, and this is without even mentioning that most of them aren't sturdy at all. They are quite fragile, and if you don't carry them in some sort of flight case, there's a decent risk that they may get damaged somehow.

If you're interested in mixing tracks in a traditional way, having multiple creative "live" remix functionalities, or even using Stems, both of Native Instruments' Traktor S2 or S4 are incredible choices.

The Traktor S2 has a simple two channel setup that is incredible as an entry level DJ controller.

Traktor S2

Most Common DJ Equipment in 2018

On the other hand, it's big brother, the Traktor S4 comes equipped with 4 channels and has multiple added functionalities that you can check out here. Multiple high profile artists such as Mr. Carmack, Porter Robinson, and Branchez used to perform in this exact same DJ controller.

It's arguably on the low tier of the acceptable professional DJ performance equipment. If you're interested in using Traktor—because you need an iOS device or a laptop to operate both of these controllers—this is the way to go. We guarantee that you won't be disappointed.

Traktor S4

Most Common DJ Equipment in 2018

If you want to jump straight into it and start getting practice in a controller that resembles CDJ's the most, then you should opt to get a Pioneer XDJ-RX2.

It's a 2-deck, 2-channel all-in-one system that operates on its own without the need of a laptop.

Pioneer XDJ-RX2

This is as close as it gets to experiencing CDJs 2000 without actually owning them, but even this controller falls slightly short. You just can't match the real setup with any controller.

Vinyl Setups

Vinyl setups didn't get left behind or forgotten all these years. In early 2018, vinyl sales finally started surpassing digital sales. Surprising, huh?

Unfortunately, some legendary equipment for this realm stopped being manufactured unfortunately, like the Technics 1200 for example. Although it's fairly easy to get your hands in some second hand turntables, there are now newer and cheaper alternatives out there that you shouldn't disregard at all.

Most Common DJ Equipment in 2018

For scratch DJ's, the mixers are also slightly different. Some of the most common ones that you will see around nowadays are the Native Instruments' Z2, Rane's seventy-two, and Mixar's DUO MKII.

Vinyl setups usually consist of 2 channels only, unless they're being used in conjunction with two other CDJ players. This is very common within house and techno DJ's, where they only play really old records and don't have to worry about scratching or cutting mixing techniques.

2 channel simple vinyl setup.

2 vinyl - 2 digital players setup.

Final Thoughts

This is it!

We covered a vast amount of information, so don't feel stressed if you feel like you didn't grasp some of the concepts we presented in this book. Take a small break and go back if necessary.

And once you get a solid grasp of the concepts we presented in this book, you should be able to start creating simple, yet solid and coherent DJ sets.

The truth is, many DJ's out there that are already making some money out of this profession keep it simple and don't go far beyond some of these concepts. But you should always strive to be a better musician, producer, and DJ.

Just like in music production, a lot of trial and error goes into this. Study the songs you want to play, start messing with the effects on your mixer, try putting multiple songs together, and try to think about creative transition techniques... your imagination is the limit!

If you spend some time practicing and getting out there, just like you develop your own sound while producing, you'll start to realize how you like mixing songs together, transitioning, and therefore you'll develop a signature DJing style/sound.

Best of luck and happy DJing!