UNDERSTANDING DRUM SETUP & RHYTHM DESIGN

TIPS AND TRICKS & MORE

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learn. produce. perform

By Jeremy Leaird-Koch

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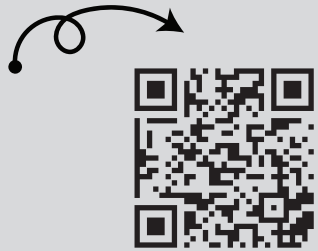


CHAPTER 1:

What Is Rhythm?

1.1 Rhythm is Already Inside You

Rhythm isn't something you learn - it's something you already do. Your heart beats in a rhythm - on average, 60 to 100 beats per minute, or BPM. You walk in a rhythm: left-right, left-right. You breathe in a rhythm - in and out, in and out. When these internal rhythms are slow, you feel more relaxed, and when they speed up you feel more excited.

Put your hand on your chest. Feel that? Thump... thump... thump... That's a rhythm. Your body has been making music since before you were born.

Outside of your body, rhythm is everywhere. A ticking clock, a car's turn signal, a dripping faucet, footsteps, a bouncing ball. All these are rhythms: a repeating pattern in time.
Next time you're in a car that turns on its turn signal, pay attention to how fast or slow it is. Does it remind you of any songs you know? If so, it's because of a special pulse called tempo that every song has.

1.2 Pulse: The Steady Beat Underneath Everything

Every piece of music has a pulse - a steady (usually) unchanging beat that runs under everything like a heartbeat. It's the thing you tap your foot to, or bob your head to. Individual sounds may come and go, but the pulse keeps going.

Stomp your foot at a steady pace. Not fast, not slow. That's a pulse. Now keep stomping and try to clap at the same time. Got it? Now try clapping BETWEEN the stomps. The stomps stay the same - that's the foundation of a beat we mean by pulse.

1.3 - Fast and Slow Pulses

A pulse can be fast or slow. A resting heartbeat has a slow pulse. A hummingbird's wings have a very fast pulse. Music works in the same way - some songs have a slow pulse, others have a fast one.

Stomp slowly, like you're a sleepy giant. Then stomp quickly, like you're running from a dinosaur. Keep the stomps steady, at the same time apart from each other, but try long periods between them and short periods between them.

The speed of the pulse is called **tempo**. We'll get deeper into tempo later, but for now just know: pulse can be any speed.

CHALLENGE:
Rhythm Detective

Sit quietly for 2 minutes and listen. How many rhythms can you find around you? The ticking of a clock, the hum of a refrigerator, a bird singing the same pattern over and over, your own breathing. Write down every rhythm you notice. Make a note next to each: which ones are fast and which are slow?

CHALLENGE:
Body Beat

Using ONLY your body (stomping, clapping, snapping, patting your legs), create a repeating rhythm. It should loop - when it ends, it starts again naturally. Try to keep it going for at least 30 seconds without changing it. Congratulations: you just made your first pattern!

CHAPTER 2:

Counting Time

2.1 - Beats Come in Groups

When you first listen to music, the beats aren't just an endless stream - they cluster together into groups, and the FIRST beat of each group feels heavier or stronger. This grouping is how musicians organize time.

Try clapping steadily, like we stomped before, and count 1-2-3-4, 1-2-3-4. Make the "1" louder. Feel how the "1" is like a reset, a fresh start? That group of beats (1 through 4) is called a bar, or measure. It's one chunk of musical time. We'll be referring to it as simply a "bar" from here on out.

EXAMPLES
OF COUNT HERE

2.2 - Counting in Fours (4/4 Time)

The most common grouping in music is four beats per bar. It's called 4/4 time, and it covers the vast majority of pop, rock, hip-hop, electronic, and dance music. Think of it as the "default setting" of music when it comes to timing.

Let's take a look at what 4/4 means:

*The 4/4 time signature on its own, and as it appears in music notation. The "C" is for common time, which is

the same as 4/4. It's so common they made a special symbol for it!

The top number tells you how many beats are in each group. The bottom number tells you what kind of note gets one beat (that's a music theory detail you don't need to worry about right now). So 4/4 just means: four beats per bar.

Let's try it out for ourselves. Stomp at a regular pace again, but this time add a clap on the 2nd and 4th stomp. Stomp, clap, stomp, clap. This may start to feel familiar, and that's because it's the skeleton of thousands of songs!

On your drum machine, 16 steps = four bars' worth of beats. It's one bar divided into smaller slices. We'll get to that in Chapter 4.

EXAMPLES
OF 4/4 MUSIC HERE

2.3 - Counting in Threes (3/4 Time)

Not all music counts in fours. Some music groups beats in threes: 1-2-3, 1-2-3. This is ¾ time, and it has a swaying, rocking, spinning feeling. Like a waltz or a merry go round.

Try counting 1-2-3, 1-2-3 while swaying your body left on the first 1, and right on the second one, then back to left on the next one, and back to right on the one after that. Keep counting and swaying. It should feel like rocking in a boat. Compared to 4/4, four feels like marching. Three feels like dancing in circles.

EXAMPLES
OF ¾ MUSIC HERE

2.4 - The In-Between Feel (6/8 Time)

6/8 is six beats grouped in two groups of three. It feels like two big swaying beats, but each big beat is divided into three. It's bouncier than 4/4, more rolling than ¾. Think of it like a galloping horse: Da-da-da Da-da-da.

Imagine that horse galloping, ba-da-DUM ba-da-DUM. That's 6/8 - two groups of three, but with weight on the first and fourth beat. It feels like rocking between two points.

EXAMPLES
OF 6/8 MUSIC HERE

This is a slightly more advanced concept, so don't worry if you don't get it at first! It's more of a "cool one to know about" for right now.

2.5 - Why Does This Matter for Drum Patterns?

Time signatures determine the grid your pattern lives on. 4/4 gives you that driving, marching, head-nodding grid. ¾ gives you a circular, swaying grid. Knowing which one you're in tells you where the strong beats fall, and THAT tells you where to put your most important drum sounds.

In the next few chapters we'll mostly work in 4/4 because it's the most common and the easiest place to start, but everything you learn applies to other time signatures too.

CHAPTER 3:

The Drum Family

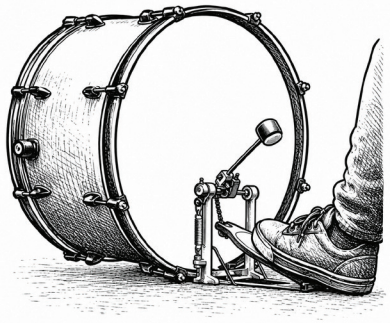
3.1 - Drums and Characters

The way you're probably most familiar with the sounds of drums is through a drum kit: a collection of certain types of drums that all play a part in making the beats we associate with all kinds of music. In this chapter we'll learn about the different types of drums, what they do, and why they're important.

You can think of a drum kit (or the sounds on a drum machine) as a cast of characters in a movie. Each one has a personality, a voice, and a specific job. Some are loud and demanding, some are subtle and supportive. Together they tell a story.

3.2 - The Kick Drum (The Heartbeat)

What it sounds like: Deep, heavy, thumpy. Like a giant's footsteps or a bass speaker in a passing car. You feel it in your chest more than you hear it in your ears. A beater hits a big resonant chamber that initially goes "BUMP" and then you feel the chamber go "BOOMa".



Real-world comparisons: A heartbeat. A fist pounding a table. The thud of a heavy door closing. A basketball hitting the ground.

Musical role: The foundation. The kick anchors everything to the ground. It establishes the pulse more than any other sound. When people nod their head to the music or bounce in their seat, they're usually following the kick.

In electronic music: Often the loudest and most prominent sound. Electronic kick drums can range from soft and pillowy to sharp and punchy to massive and booming.

KICK DRUM
SOUND EXAMPLES
HERE

3.3 - The Snare Drum (The Crack)

What it sounds like: Sharp, bright, cutting. Like snapping a stick in half, or a loud handclap with an extra sizzle. The player strikes the drum with a stick which makes a sharp "CRACK". The round chamber of the drum makes the body ("OOMPH") of the sound, not as big as the kick but still powerful. Finally, the bottom of the drum has metal that "SIZZLES" as the body vibrates.

Real-world comparisons: Breaking a thin piece of wood. A whip crack. Snapping your fingers really loud (but amplified 100x).

Musical Role: The counterpoint to the kick. If the kick is the "push", the snare is the "pull". Together they create the back-and-forth that makes a beat feel like a conversation. The snare typically lands on the "backbeats" - beats 2 and 4 in 4/4 time.

In electronic music: Ranges from tight and clicky to huge and reverb-drenched (reverb is like the big echo you hear in a large space when you make a sound). Sometimes the snare is replaced by a rimshot or a clap.

SNARE DRUM
SOUND EXAMPLES
HERE

3.4 - The Hi-Hat (The Timekeeper)

What it sounds like: Bright, shimmery, metallic. Like shaking a jar of coins, or rain tapping on a tin roof. A hi-hat is two pieces of metal sitting on top of one another. The player has a pedal that can open the hi-hat or close

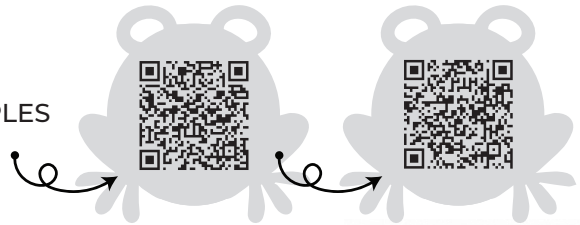
it. Closed, it's tight and clicky. Open, it's washy and sustained, but you can clamp that wash down by closing the hi-hat again.

Real-world comparisons: A sprinkler going tsss-tssss-tsss. Shaking a salt-shaker. Whispering "tick-tick-tick".

Musical Role: The timekeeper. While the kick and snare give you the big landmarks (beats 1,2,3,4) the hi-hat fills in the spaces between them. It creates forward momentum and energy. More hi-hats = more energy. Fewer hi-hats = more space.

In electronic music: Often the most rhythmically active sound. Closed and open hi-hat patterns are a huge part of what gives a beat its "feel".

HI-HAT
SOUND EXAMPLES
HERE



3.5 - The Clap (The Crowd)

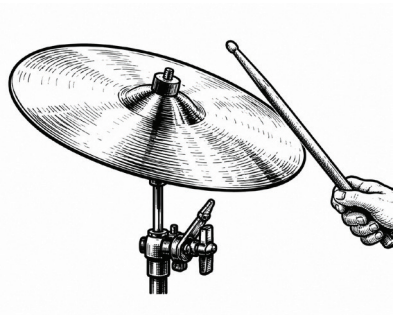
What it sounds like: Exactly what it sounds like - hands clapping! It can be small and tight, or layered and processed to sound bigger, like a stadium of people clapping in unison.

Musical Role: Often used alongside or in place of the snare. It adds a human organic feel.

In electronic music: Doubles the snare for extra impact or used in place of the snare for a more human feel on the backbeat.

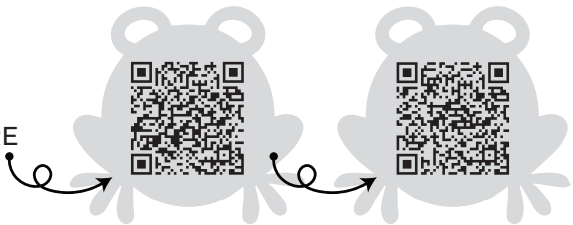
CLAP SOUND
EXAMPLES HERE

3.6 - Cymbals (The Crash, the Ride, and the Splash)



What they sound like: Cymbals are big metal discs that ring, shimmer, and sustain. Unlike the hi-hat (which is two small cymbals clamped together), these cymbals hang freely and sing when you hit them. Each type has a different personality.
The Crash: Loud, explosive, dramatic. Like smashing a metal tray and letting the

AUDIO
EXAMPLES HERE

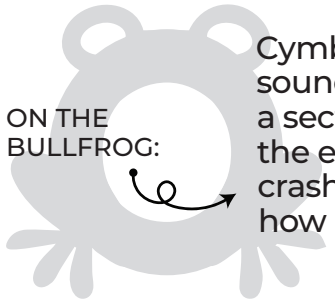


sound wash over the room. A crash cymbal marks a moment - the top of a chorus, the end of a fill, a big transition. It's an exclamation point. You don't use it every beat; you save it for when you mean it.
The Ride: Steady, shimmering, sustained. Where the hi-hat is tight and clicky, the ride is open and wash-y. Drummers "ride" on it - playing a continuous pattern that gives the music a smooth, flowing feel. The ride can replace the hi-hat entirely for sections that need more air and space. Hit the bell (the raised dome in the center) for a piercing "ping" that cuts through everything.

The Splash: Small, quick, bright. Like a miniature crash that decays fast. Think of the sound of tossing a coin into a metal bowl. Splashes are used for accents and quick punctuation marks - less dramatic than a crash but more metallic than a hi-hat.

Real-world comparisons: A crash cymbal is a metal pot lid dropped on a tile floor. A ride is dragging a spoon along a fence railing. A splash is a quick tap on a wind chime.

Musical role: Cymbals add metallic color and drama to a drum pattern. The ride provides an alternative "timekeeper" voice to the hi-hat (with more sustain and shimmer). The crash signals structural moments - it tells the listener "something just changed." In electronic music, cymbals appear as samples that can be filtered, reversed, or chopped. A reversed crash (one that builds from silence to a peak) is one of the most common transition effects in modern production.



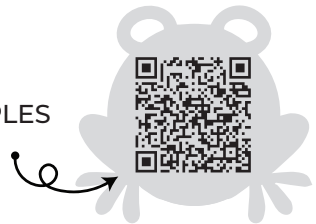
Cymbal samples live alongside your hi-hat sounds. Try swapping a hi-hat for a ride on a section of your pattern and notice how the energy changes. Then try dropping a crash on beat 1 of a new section - hear how it announces the change?

3.7 - Toms, Percussion, and Extras

Toms: Melodic drums with a definite pitch. Like knocking on different-sized boxes or bottles filled with different amounts of water. The player hits the drum (which looks a lot like a snare, but different sizes and without the SIZZLE), which produces an initial soft CRACK, followed by a "DUUM" sound. The DUUM pitch is determined by the size of the tom drum. Used for fills, transitions, and adding melody to drum patterns.

Percussion: Everything else - shakers, cowbells, rimshots, woodblocks, tambourines, congas. These are the spices. A little goes a long way! Each adds a specific texture or cultural flavor.

PERCUSSION SOUND EXAMPLES HERE



3.8 - How They Work Together

In most patterns, each sound has a frequency range and a role. The kick lives in the low end (the rumble). The snare lives in the mid range (the snap). The hi-hat lives in the high-end (the sizzle). The natural separation means they don't fight each other for space. They stack like layers of a cake.

3.9 - The Conversation Between Kick and Snare

The most important rhythmic relationship in all of popular music is the conversation between kick and snare. Where you place these two sounds relative to each other determines more about how a beat feels than any other choice you'll make.

When the kick and snare alternate evenly (kick on 1 & 3, snare on 2 & 4), you get stability - a march, a head-nod.

When the kick shifts to an unexpected position but the snare stays put, you get tension and groove. When both move, you get chaos or complexity.

This conversation is the engine of every genre we'll explore later. Hip-hop makes the kick lazy and late. House makes it rigid and relentless. Rock makes it aggressive and loud. The snare and kick are always talking - the question is: what are they saying?

Now that you know the cast, it's time to give them a script! Next chapter: we build a pattern.

SOUND EXAMPLES HERE

CHAPTER 4:

Building Your First Pattern

4.1 - 16 Steps = One Bar

1 □□□ 2 □□□ 3 □□□ 4 □□□

In 4/4 time with 16 steps, each of the 4 beats is divided into 4 smaller slices. Steps 1-4 = beat 1. Steps 5-8 = beat 2. 9-12 = beat 3 and 13-16 = beat 4. The first step of each group (1, 5, 9, 13) is the downbeat of that beat. The first step of the 2nd and 4th groups (5 and 13) are the backbeats we mentioned earlier.

Another way to think of it is like a sentence, where 1, 5, 9, 13 are the important words, and the ones in between are little connecting words.

4.2 - Start With the Kick (The Foundation)

It's never a bad idea to start from the ground up, and as we established in the last chapter, that's the kick drum. That will give us that steady, low-end pulse.

Place a kick on beat 1 and beat 3 (steps 1 and 9).

1 □□□ 2 □□□ 3 □□□ 4 □□□
1 □□□ | □□□ 9 □□□ | □□□

Hit play. Hear that? BOOM... BOOM... BOOM... BOOM... It's simple, It's steady. It's the heartbeat of your pattern. Everything else is going to build on top of this. We chose these beats (1 and 3, or steps 1 and 9 on your drum machine) because these are the strongest beats in 4/4 time.

The kick claims them because it's the heaviest sound.

AUDIO EXAMPLE HERE

4.3 - Add the Snare (The Conversation)

Put the snare on beats 2 and 4 (steps 5 and 13). This is the backbeat. The kick and snare now alternate: boom-CRACK-boom-CRACK. This call-and-response is the foundation of almost all Western music. It's so popular there's even a song about it!

1	2	3	4
1	5	9	13
BOOM	CLAP	BOOM	CLAP

CHARLI XCX BOOM CLAP CHORUS

Why beat 2 and 4? Because they're the backbeats - the response to the kick's statement. Together, kick on beats 1 & 3 (steps 1 and 9) and snare on 2 & 4 (steps 5 and 13) creates the most fundamental rhythm in popular music.

AUDIO EXAMPLE HERE

4.4 - Add the Hi-Hat (The Energy)

The hi-hat fills in the gaps and sets the energy level. Hi-hat on every step (16th notes) = high energy. Every other step (8th notes) = moderate energy. Every 4th step (quarter notes) = minimal energy. HOWEVER, if you take those every 4th step hi-hats and put them between the kick and the snare steps, right in between, you actually get MORE energy than if they were on the 1, 2, 3 and 4.

An off-beat hi-hat pattern:

	3		7		11		15	

Try all of the combinations we mentioned above, starting with the hi-hats on the downbeats and backbeats:

1	2	3	4
1	5	9	13

Listen to how it feels. Get a sense of the energy level. Then try adding the in between 8th notes:

1	x	2	x	3	x	4	x
1	3	5	7	9	11	13	15

Feel how there's more energy now? That's because we're filling in more steps with our high-energy

sound. Once you've got a feel for that, fill in EVERY step with a hi-hat. Now we're really high energy!

AUDIO EXAMPLE HERE

Now that we've made our first beat, there's all kinds of small adjustments we could make that will have a big effect on the beat. Let's try some:

First, try moving ONE of the kicks to a different step. Just one! How does that feel?

Try putting a kick on every downbeat step, and nowhere else. This is called a "four on the floor" kick drum pattern and is the basis for countless forms of electronic dance music, and even some rock and pop music.
Start with ALL steps turned on for the kick. It should sound like a machine gun. Now remove one step at a time and listen for each removal. At what point does it start to feel like music? Keep removing. When does it start to feel too little? The sweet spot is somewhere in between. The spaces in rhythm are just as important as the sounds.

What happens if you break the "rules"? Put the SNARE on beats 1 and 3, and the KICK on beats 2 and 4 - the opposite of normal. How does it feel? Weird? Interesting? Some genres actually do this! Rules are starting points, not prisons.

4.5 - Add the Percussion (The Spice)

We made a beat using only 3-4 tracks, depending on if you used an open hi-hat on a track different from a closed hi-hat. It's that simple to get a good beat going. Before we end this chapter, let's play around with percussion.

On tracks 5 and 6, pick any sample from banks C or E. Place them on whatever step you want. How do the different sounds complement our main beat? Notice how sounds closer to the kick drum can sometimes interfere with the kick, or work with it. High sounds can interfere with the snare, or work with it. It's all about balance, what steps you use, and what sounds you choose, but YOU get to choose. It's your beat, after all.

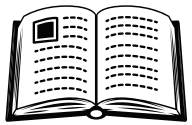
AUDIO EXAMPLE HERE

CHAPTER 5:

Accents and Feeling

5.1 - Not Every Hit Is the Same

When a real drummer plays, some hits are hard and some are soft. This variation is called dynamics. On a drum machine, we control this with velocity — how "hard" each step hits. It's the difference between a robot and a human playing the same pattern. Not that there's anything wrong with being a robot! Robots are cool. But there's a time and a place, and in this chapter we're going to learn to make our beats more human.



Try this. Knock on a table. Now knock HARD. Same table, same knuckles, totally different sound and feeling. That difference in force is dynamics, and a hit that's louder/stronger than others is called an accent.

5.2 - Accents and Ghost Notes

Accents: Steps with higher-than-normal velocity. They're the emphasized words in the sentence. In hi-hat patterns, accenting beats 1, 2, 3, 4 while keeping the in-between steps softer creates a natural "breathing" pattern.

Ghost notes: Very quiet notes tucked between louder ones. You barely hear them, but you feel them. They're like whispering between sentences. Remove them and something feels missing, even though you can't quite explain what.

AUDIO EXAMPLE HERE

5.3 - Where to Put Accents

The most natural place for accents is on the downbeats (steps 1, 5, 9, 13) - this reinforces the pulse. But you can also accent off-beats for a surprising, funky feel.

Take our every step hi-hat pattern from Chapter 4. If you don't have that pattern, remake it really quick: kick on steps 1 and 9, snare or clap on steps 5 and 13, and a hi-hat on every step.

Put an accent on steps 1, 5, 9, and 13 by pressing the accent button and pressing those steps until they're brighter than the other steps. Hear how the pattern breathes now? The accented hits are the inhale, the unaccented hits are the exhale. Then try accenting only the off-beats (steps 3, 7, 11, and 15). Totally different energy! The pattern pushes forward instead of settling back.

CHALLENGE:
The Accent Wave

Take your hi-hat pattern (every step). Add accents to steps 1, 5, 9, and 13 only. Hear the breathing? Now try accenting every OTHER step instead (1, 3, 5, 7, 9, 11, 13, 15). Different groove! Now try accenting just one unexpected step - like step 11. Feel how that one accent changes everything?

CHALLENGE:
Accent Detective

Play one of your favorite songs and clap along. Notice which hits feel STRONGER than others. Where are the accents? Are they on the beats you expect, or are there surprises? Being able to hear accents in other people's music will make your own patterns better.

CHAPTER 6:

Patterns that Move and Breathe

6.1 - The Expected and the Unexpected (Syncopation)

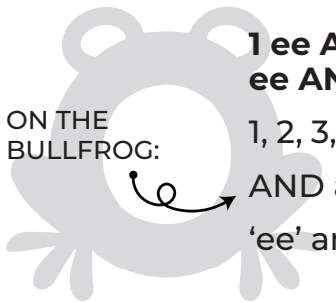
Your brain predicts where sounds will land based on the pulse. When a sound arrives where expected, it feels stable. When it arrives BETWEEN expected beats, it creates a little jolt of surprise. That's **syncopation**, and it's what makes music funky.

Remember the kick on beats 1 and 3? Your brain expects it there. But what if you ALSO put a kick right BEFORE beat 3 — on the 'and' of beat 2? Your brain goes 'wait, that was early!' That surprise is **syncopation**. It's what makes you go 'oooh' when you hear a great beat.

You can divide our 1, 2, 3, 4 main beats into 1 and 2 and 3 and 4 and. That's counting the main beats and the **off-beats** between them. We've experimented with **off-beats** already when we put accents on steps 3, 7, 11, and 15.

But we can go even further. On the Bullfrog, we have even more steps between **off-beats**: 2, 4, 6, 8, 10, 12, 14, and 16. These are called **weak-beats** and the bigger the sound you put on those, the bigger the feeling of **syncopation**.

If you wanted to count all of the steps on the Bullfrog, in 4/4 time, it would go like this:



ON THE BULLFROG:

1 ee AND uh 2 ee AND uh 3 ee AND uh 4 ee AND uh

1, 2, 3, 4 are the **strong beats**

AND are the **off-beats**

'ee' and 'uh' are the **weak beats**

6.2 - Swing and Shuffle (The Bounce)

Swing makes the weak beat notes arrive slightly late, creating a bouncy, shuffling feel instead of a rigid, mechanical one. It's the difference between marching and grooving.

For example, there are two ways to say 'tick-tock': Straight = tick-tock-tick-tock (perfectly even). Swung = tick....tock-tick....tock (the 'tock' leans back lazily). Same sounds, but the second one makes you bob your head.

On the Bullfrog Drums, you can apply shuffle in different amounts to each track, giving you the ability to really get weird with timings. This is actually really important for certain genres of music!

6.3 - Fills (The Drumroll Moment)

A fill is a short burst of activity that signals a transition - like the drumroll before a big announcement. It breaks the repeating pattern momentarily to create anticipation.
Let's say your pattern has been looping steadily: boom-crack-boom-crack. But right at the end, you throw in a flurry: ba-da-da-da-BOOM! That's a fill. It says 'something's about to happen!' Fills usually happen in the last 2 or 4 steps of a pattern. They can be things like rapid snare rolls, tom cascades (high to low), hi-hat buildups, a dramatic silence before the loop restarts.

Music usually plays out in groupings of 2, 4, and 8. The Bullfrog Drums gives you 4 possible bars to work with. Try making a steady beat on all four bars, but at the end of the last bar (bar 4) add a fill!

6.4 - The Power of Space

One of the biggest beginner mistakes is adding too many sounds and steps. The best patterns often feel like they're missing something - but that missing something is what makes them groove. It also leaves space for whatever other musicians or instruments might be playing with you, most importantly: the bassist.

When your head keeps nodding even though the pattern feels simple - that's the sweet spot. Trust the space. Not every sound needs to be on every step. When the kick plays, maybe the hi-hat takes a breath. When the snare cracks, maybe everything else goes quiet for a moment. These gaps create clarity and let each sound be heard.

CHALLENGE:
The Surprise Move

Take your basic beat and move ONE kick to an off-beat position (any step that isn't 1, 5, 9, or 13). Just one! Listen to how much that single change affects the groove. Try different off-beat positions. Which ones sound funky? Which ones sound weird in a GOOD way?

CHALLENGE:
Build the Roller Coaster

Create a 16-step pattern that builds tension for 12 steps and releases on steps 13–16. Use at least three tension tools: adding sounds, increasing velocity, adding more steps. The release should feel like an exhale.
Advanced: Try the opposite - start busy and gradually strip things away. Where does the tension go?

CHALLENGE:
The Drum Fill Factory

Practice three different fill styles in the last 4 steps of your pattern:
The Roll - snare on every step, getting louder.
The Cascade - toms going from high to low pitch.
The Cliff - build everything up, then leave step 16 completely empty. Which one sounds best with your pattern?

CHALLENGE:
The Mute Game

Build the busiest, most chaotic pattern you can. Everything on. Now mute ONE sound at a time (hold mute and press the track you want to mute). After each mute, listen. At what point does it start sounding BETTER? Keep muting until you're down to two sounds. That stripped-down version might be your strongest pattern.

CHAPTER 7:

Genre Map

Now that you understand how drum patterns work, let's see how real music uses them. Think of genres like different cuisines - they use the same ingredients (kick, snare, hi-hat) but in different recipes.

7.1 - The Head-Nodder (Hip Hop)

Tempo: 80–95 BPM (slow, heavy, deliberate)

Signature moves: Heavy, booming kick often with syncopated placement. Snare on 2 and 4, sometimes with ghost notes. Hi-hats with lots of velocity variation - chattering, rapid, expressive. Shuffle is often present. The overall feel is weight and groove.

Character: This beat swaggers. It doesn't rush. The kick hits like a slow-motion stomp and the hi-hats do all the talking in between.

Pattern:

Kick on 1, 7, and 11, 16 (Shuffle at 25%)

Snare on 5 and 13 (Shuffle at 25%)

Hi-hat (closed) on 1, 3, 5, 7, 9, 10, 11, 13, and 15 (Shuffle at 25%)

Try experimenting with different kick and hi-hat placements.

Try adding percussion with different levels of syncopation and shuffle to another track.

7.2 - The Dance Floor (House/Electronic)

Tempo: 120–130 BPM (steady, propulsive)

Signature moves: Four-on-the-floor kick (kick on EVERY main beat: 1, 2, 3, 4). Off-beat hi-hats. Clap on 2 and 4. Minimal but hypnotic. The repetition IS the point - it's designed to put you in a trance-like groove.

Character: This beat is a train. Once it starts, it doesn't stop. That relentless kick-kick-kick-kick grabs you and pulls you onto the dance floor.

Kick on 1, 5, 9, 13

Snare on 5 and 13

Hi-hat (closed or open) on off-beats - 3, 7, 11, 15

There are an immense number of variations on this beat. Adding shuffle pushes it towards the house genre. A straight version is more techno and electro. You can add ride cymbals on every 8th note for more splash, or a small, quiet shaker or hi-hat to every step for extra energy. Here are some things you could try:

- Changing your snare for a clap
- Changing between a big snare or a small snare
- Changing between open and closed hi-hat for the off-beat
- Adding more syncopation to the weak beats with different types of samples
- Adding and removing shuffle
- Make all the sounds weird and see how that feels!

House music is generally a little slower and almost always has shuffle. Techno music can be faster and have no shuffle, but more aggression and syncopation.

7.3 - The Machine (Techno)

Tempo: 128–140 BPM (relentless, hypnotic, industrial)

Signature moves: Like house, the kick is four-on-the- floor - but harder, sharper, and more aggressive. The snare or clap lands on 2 and 4, but it's often a clap layered with a short, punchy snare for a dry, industrial crack. Hi-hats run in 16th notes with a driving, mechanical energy - no swing, no shuffle, just precision.

What sets techno apart is what happens on top: a ride cymbal or crash rides the off-beats or every 8th note, adding a metallic shimmer that gives the pattern its hypnotic, industrial edge. The ride doesn't just keep time - it adds a layer of texture that makes the whole thing feel bigger and more immersive. Think of the cymbals as the ceiling of the beat: the kick is the floor, the snare is the walls, and the ride is the open sky above.

Character: This beat is a factory. It pounds and it doesn't

care if you're ready. The kick is a piston, the clap is a spark, the hi-hat is the conveyor belt, and the ride cymbal is the hum of the whole room vibrating. It's darker and heavier than house - less about joy on the dance floor and more about losing yourself in the machine.

Kick on 1, 5, 9, 13

Snare on 5 and 13

Clap on 5 and 13

Hi-hat on every step (16th notes)

Ride cymbal on 1, 3, 5, 7, 9, 11, 13, 15

Try accenting the ride on 3, 7, 11, 15 to give the offbeats a stronger feel and make the beat pulse. You can also take this beat further by using a dark percussion sound to accent an offbeat (just 1) and another to call and respond with it on another step somewhere. Leave space between them, this is about call and response, letting "the machine" speak.

7.4 - The Power Driver (Rock)

Tempo: 100–140 BPM (driving, loud, full of swagger).

Signature moves: Snare on 2 and 4. Kick isn't just sitting on 1 and 3 - it pushes into the gaps, hitting on the "and" of 2 or doubling up before the snare to create momentum. The hi-hat isn't on every single step - it opens and closes, rides on certain beats, and leaves space. Think of the drums in Song 2 by Blur: the kick rumbles and shoves, the snare cracks, and the hi-hat breathes. Fills are big, crashing, and dramatic.

Character: This beat has weight. The kick doesn't just keep time - it shoves. It lands between the cracks, pushes you forward, and the snare hits back like a fist on a table. The hi-hat opens up when it needs to breathe and clamps shut when it's time to drive.

Kick on 1, 9, 13

Snare on 5 and 13

Hi-hat (closed) all 8th notes EXCEPT 1 of them. Try 1, 3, 5, 7, 9, 11, 13

Hi-hat (open) on whatever 8th note you didn't put a closed hi-hat on, in this case 15

For variation, using the same number of kick steps and always leaving one on the first step, move the other kick steps around and see how it feels. Also try moving where the open hi-hat goes, remembering to move the closed hi-hat off that step and move it to fill in any holes left by the open hi-hat.

7.5 - The Blitz (Punk)

Tempo: 130 - 180 BPM (fast, frantic, barely in control).

Signature moves: Speed is the whole point. The snare

lands on the offbeats - the “ands” - which makes everything feel like it’s tumbling forward out of control. Kick hammers on the downbeats. Hi-hat rides hard on every eighth note. Everything is at maximum velocity, no ghost notes, no dynamics - just full blast. Classic hardcore punk drumming is a sprint: think of the Ramones, Black Flag, or Minor Threat. The pattern is simple but at 180 BPM, simple becomes intense.

Character: This beat is a fight. It doesn’t groove - it attacks. The snare on the offbeats makes it feel like the whole thing could fly apart at any second, and the speed turns a simple pattern into something that hits you in the chest.

Kick on 1, 5, 9, 12, 16

Snare on the off-beats: 3, 7, 11, 15

Hi-hat (closed) all 8th notes: 1, 3, 5, 7, 9, 11, 13, 15

Bonus: turn up drive on all sounds to give it a crunchy aggressive sound. Experiment with different snare and hi-hat sounds. Try replacing the hi-hat with a ride or crash cymbal.

7.6 - The Roller (Drum and Bass)

Tempo: 165–175 BPM (fast, but it doesn’t feel frantic - it rolls).

Signature moves: The kick and snare play a syncopated, broken pattern - the kick lands on 1 but then darts off to unexpected spots, and the snare cracks somewhere around beat 3 but not always exactly on it. The hi-hats are rapid and constant, giving the pattern its “rolling” feel. What makes DnB different from punk at similar tempos is the swing: the beat breathes and bounces instead of just hammering. Ghost notes on the snare add texture between the main hits. It’s fast but funky.

Character: This beat is fast but smooth - like a skateboard rolling downhill. The kick and snare dodge around each other instead of landing on the obvious beats, and the hi-hats keep everything flowing. It sounds complicated, but once you feel the groove, your head just nods. A lot of drum and bass beats mimic the feel of classic beats from old soul and funk records.

Kick on 1, 11

Snare (main) on 5, 13

Snare (ghost) on 8, 10, 16*

Hi-hat on every 8th note: 1, 3, 5, 7, 9, 11, 13, 15

Experiment with making your hi-hat smaller (turning down decay and volume) and bigger (the opposite). Find where it sounds good to you. This beat shouldn’t feel too busy.

* You can make a “ghost note” snare by choosing the same snare sound you used for your main on a new track. Turn the volume and decay down, so it’s quiet and smaller than your main snare.

7.7 - The Robot (Electro)

Tempo: 110–130 BPM
(machine-tight, mechanical, funky).

Signature moves: Built around a syncopated 808-style kick (think deep and strong) that doesn’t just sit on the downbeats - it darts around, often hitting on 1, the “and” of 2, and somewhere before 4. Clap or snare locks in on 2 and 4, hard and dry. Hi-hats run in crisp 16th notes, sometimes with an open hat on the “and” of a beat for that classic electro swing. Every hit feels quantized and precise - no ghost notes, no human slop.

Character: This beat sounds like a robot dancing. Everything is locked to the grid - no wobble, no swing - but the kick pattern is sneaky and syncopated, so it still makes you want to move. It’s the sound of drum machines pretending to be human and failing in the coolest way possible.

Kick on 1, 2, 7, 10, 11
Snare (main) on 5, 13
Hi-hat on every step

Just like with our rock beat, experiment with more / different kick patterns. Also try adding an open hi-hat, and wherever you put it, make sure to take the closed hi-hat away. Open hi-hats go great on the 8th note before a strong beat or a backbeat.

7.8 - The Bounce (Reggaeton/Dancehall)

Tempo: 90–100 BPM.

Signature moves: The “dembow” rhythm: kick and snare interlock in a specific syncopated pattern that creates an irresistible bounce. Hi-hats are often simple. The rhythm itself is the hook.

Character: This beat bounces. There’s a specific rhythm (the dembow) that’s been behind thousands of songs. Once you hear it, you’ll recognize it everywhere.

Kick on the quarter notes: 1, 5, 9, 13
Snare on 4, 7, 12, 15
Hi-hat on the quarter notes: 1, 5, 9, 13

Once you’ve got the main beat down you can pick a new track and experiment with some “signature sounds” for your beat. Put a step down on 1 and 9 and pick a sound from anywhere in the E bank of samples. Play around with sample selection till you find one you like.
To add the ultimate spice, on another track pick any

sound from the C bank and try putting down a highly syncopated step pattern. Start with 3, 4, 7, 8, 10, 12, 13, 15, and 16. Experiment with sound choice and pattern till you get something you like!

7.9 - The Explorer (Experimental/Your Own Thing)

Signature moves: No rules. Odd step counts, unexpected combinations, weird tempos. This is the playground chapter.

Character: Forget the recipes. What happens if the snare goes on beat 1 and the kick on beat 4? What if the tempo is 200? What if every step has a different velocity? This is where you find sounds nobody has ever heard.

CHALLENGE:
Genre Hop

Build one pattern for each genre above. Spend about 5 minutes on each. Play them back to back. Which one was the most fun to make? Which sounds the best? They don't have to be perfect - they're sketches!

CHALLENGE:
The Genre Blender

Pick TWO genres and smash them together. Hip-hop tempo with house four-on-the-floor? Rock energy with reggaeton bounce? There are no wrong answers - only weird ones (and weird is good).

CHALLENGE:
Copy the Pro

Pick a song you love and try to recreate its drum pattern. It won't sound exactly the same (different sounds, different tools), but nail the RHYTHM. Where's the kick? Where's the snare? What are the hi-hats doing? Copying is one of the best ways to learn - every pattern you study teaches you something you can use in your own music.

CHAPTER 8:

Making it Yours

8.1 - Rules Are Training Wheels

Everything in this manual - kick on 1, snare on the backbeat, hi-hats filling in - those are training wheels, not laws. Now that you understand WHY they work (pulse, contrast, energy, space), you can break them any time you want. The best patterns come from knowing the rules AND knowing when to throw them away.

Start from a blank pattern with no plan, no recipe, no genre in mind. Just start placing sounds and listen. Your ears are the best guide you have. If it sounds good to YOU, it IS good. That's the only rule.

If you ever feel lost in making beats, think about music you love and how it approaches it. You're not copying, you're having a conversation with music, a conversation that's been happening for hundreds of years. It's exciting to be part of that. Let your creativity flow.

8.2 - What Comes Next

It may seem scary to now have the entire world of beats at your door, waiting for you to discover them, but it's a wonderful exciting place to be. You're at the beginning of an adventure that could last your whole lifetime. Music is magic. Let's see what other doors you could open.

Door 1: Go deeper on sound design. Every drum sound on the machine can be changed - pitch, decay, tone, noise, snap. So far you've mostly used the presets. The next step is learning to sculpt your own kicks, snares, and hats

from scratch. Now you can make sounds nobody else has.

Door 2: Explore the deeper features of your machine. Take a look at the Bullfrog Drums. There are parts we haven't touched yet: probability, parameter locks, looping, filters, synthesizer sequencing, recording samples. So much to explore! The manual has more pages, and so does the machine.

Door 3: Chain patterns into songs. Up to now every pattern has been a 16-step loop. A real song has sections: intro, verse, chorus, breakdown, drop. Try making a full verse by chaining together patterns. Think of home patterns (A) and variation patterns (B, C, D). One format you can try is A, B, A, C, A, B, A, D, where each letter is one bar.

Door 4: Play with other people. Drum machines are great solo toys but they're even better as the foundation for a band. You can sync the Bullfrog Drums to other instruments (a friend's synth, a guitar with a looper, a piano), you can jam with a drummer, or be the rhythm section for a singer. This machine is an invitation to play with others. Everyone needs beats!

Door 5: Record your music and share it. Your beats don't have to stay in the Bullfrog Drums. Record into a phone, a laptop, a DAW, a tape recorder, or just a voice memo. There is a lot of satisfaction in having a collection of your own tracks to come back to. Send a beat to a friend - maybe they can add to it!

Door 6: Perform live. This might be the scariest and most exciting door. Start small: play a beat for a parent, a sibling, a friend at school. Work up to playing at a talent show, a birthday party, a family gathering. This is entirely optional: lots of producers never leave the studio, but it can be a wonderful way to share what you do and build community around music.

Door 7: Learn from the music you love. Now that you've learned the basics, it's time to be a drum detective. Listen to your favorite songs and try to figure out what the drums are doing.

Where's the kick? Where's the snare? Is the hi-hat on every step or every other step? What's the tempo? Then try to recreate it on the Bullfrog Drums. This turns every song on your playlist into a lesson.

Door 8: Invent something nobody has heard. The final door and the most important one. Every genre in chapter 7 was invented by someone who broke the rules of what came before. Hip-hop, house, jungle, dubstep - all started with kids in bedrooms messing around with machines. Your next beat could be the start of something new, and it could be yours to create.

CHALLENGE:
The 5-Minute Beat

Set a timer for 5 minutes. Start from empty. Build the best pattern you can before time runs out. When the timer goes off - stop. No tweaking. Whatever you made IS the beat. This exercise builds confidence and teaches you to trust your instincts.

Do this every day for a week. You'll be shocked how fast you improve.

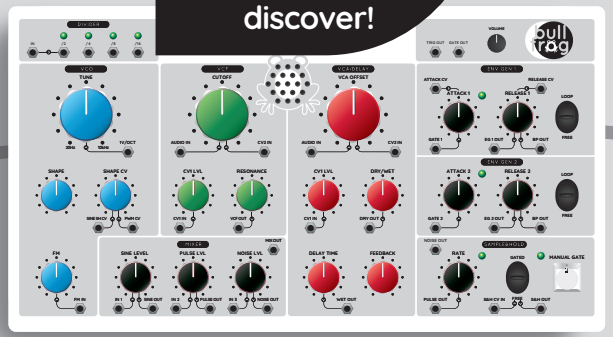
CHALLENGE:
The Soundtrack

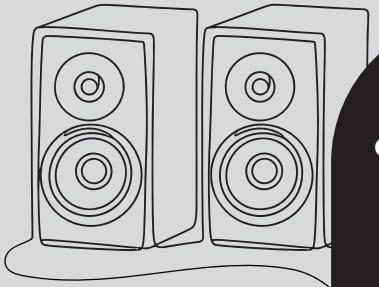
Think of a scene: a car chase, a rainy afternoon, a haunted house, a birthday party, floating in space. Now build a drum pattern that FITS that scene. What tempo? What sounds? How busy or sparse? Don't think - feel.

Learn. Produce. Perform.

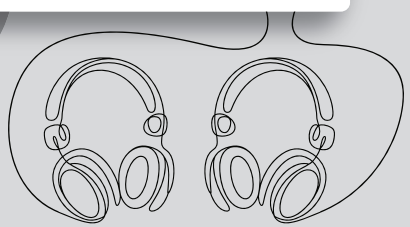
with Bullfrog instruments!

Learn modular synthesis and sound design, make melodies and noise, experiment and discover!





Mix your sounds, add effects, share your music and turn up volume!



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