

The Book of Rhythm
by
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AUTHOR'S NOTE

Rhythm, a tree of many branches with roots in nature, mathematics, language, philosophy, religion, and science, is a primitive, basic component of life. Long before our entry into the world, from our first heartbeats deep within the womb, rhythm connects us all. With this thought, I put pen to paper and set out to create a book that would be both instantly accessible to the new musician and a massive, diverse resource for the seasoned pro. Ideally, I wanted to create a universal rhythm book. This is the result.

The Book of Rhythm (BoR) is a high-speed conduit to your creativity, functioning as a vast archive, reference, and workbook. Writing it has been a continuous tightrope walk of balancing information for beginner, intermediate, and advanced musicians. Casting the widest net possible, without watering down the information or making it too complex, has been one of the goals from the start.

While the BoR is not a traditional instruction book and perhaps not the first place a complete beginner should start, it is written with both beginners and professionals in mind. The rhythms inside are pragmatic, organized, and applicable to endless musical scenarios. This is due in part to the sheer number of rhythmic patterns and the concepts outlined within, allowing users to transform the information into something of their own.

A few things to keep in mind:

- Play each rhythm slowly, as written, repeating over and over until comfortable.
- Listen. Actively. Make sure your ears are engaged.
- Speed is never the goal in the beginning.
- Count out loud when learning a new rhythm.
- Be patient.
- Once you have a phrase memorized, practice with eyes closed to truly “see.”
- Strive for quality rather than quantity. One well-played idea can have more impact on your musical growth than many poorly executed ones.
- Once the ear understands what it is hearing, the body will soon follow.
- Be disciplined on your instrument.
- Most information about rhythm is revealed in slow, repetitive practice.
- Fall in love with the process - the path. You'll gain more knowledge, joy, and fun, while actually getting to your goal faster.

INTRODUCTION

What you have in your hands right now is not just a collection of exercises and patterns, but rather something alchemical and universal.

On the surface, *The Book of Rhythm* is an organized collection of 5,096 different rhythmic combinations, but as you continue reading, you're going to find a treasure trove of musical possibility, creativity, and inspiration. The main purpose of this introduction is to show you, the reader, a few ways to use the material in this book and hopefully inspire numerous interpretations of your own.

The first 238 rhythms of the book, which is every combination derived from the 3, 4, 5, 6, and 7-beat groupings, can be read by anyone who can count to 7. I wrote these first 238 rhythms using only 8th notes and 8th-note rests. You either play or you don't. Binary reading. On or off. Writing the 3 through 7-beat rhythms in this manner was done with the intent of giving anyone interested immediate access to a substantial library of rhythms.

With this in mind, I composed the book using only the 8th note , quarter note , and dotted quarter note , along with their corresponding rests (, , ). If you are already familiar with these notations, you can open to any page, pick a rhythm, and start creating. The BoR is not a conventional music primer and does not have to be read in a linear fashion. It does build progressively, however, so if you are new to reading music, I recommend starting from the beginning and taking more of a linear path initially.

A few things to remember and try:

- Tap out a straight pulse with one limb (try 8th notes or quarter notes) while playing a rhythm from the book with another limb. This will help you understand the relationship of the notated rhythm to your chosen pulse and allow for more precise note placement. Work with a metronome to further your precision.
- Try playing one rhythm as many ways as possible (utilizing accents, stickings/fingerings, dynamics, re-voicing, etc.). Use the suggestions in the book, but more importantly try to create your own approaches.
- If you're going to add any ornamentation to a rhythm such as accents, stickings, re-voicing, etc., start by adding one variable at a time, playing each new addition to the phrase repeatedly to engage the ears and build muscle memory.
- When you start to combine rhythms, pick two at first, playing two to four repetitions of each rhythm back to back initially. Once you're comfortable with transitioning between the two longer phrases, experiment with shorter and mixed phrase lengths.
- Play each rhythm with a straight or swung feel or even somewhere in between.
- Try interpreting the rests as notes. Assign one pitch to play on the rests and another pitch for the notated rhythm. The rests can also be thought of as another space for sound, since each rest or cluster of rests has a specific rhythmic duration.
- Even though this is primarily a rhythm book, it can also inspire ideas about melody and harmony.

RHYTHMIC COMBINATIONS AND PERMUTATIONS

Now, let's explore what I mean by rhythmic combinations and permutations since these concepts are foundational to the overall structure of this book. I think this is best illustrated by using the example:

A B C
A C B
B A C
B C A
C A B
C B A

If we start off with three different components or symbols (in this case we're using letters), there are a finite number of ways to rearrange, shuffle, or move those letters around. Look carefully at the example above, and now imagine A = a certain rhythm, say a quarter note, and then B = another rhythm, say two 8th notes, and C = a quarter-note rest. Suddenly, from one simple rhythmic phrase we are able to quickly make five more phrases by using the mathematical concepts of combinations and permutations. One rhythmic phrase becomes six different rhythmic phrases when we use this simple "shuffling around" idea. I used this exact concept to create all of the rhythms in this book.

Let's see what substituting our letters for their assigned rhythms looks like:

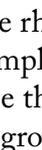
If, for example,

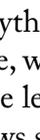
A = one quarter note = 

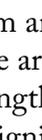
B = two 8th notes = 

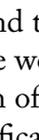
C = one quarter-note rest = 

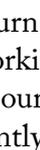
Then:

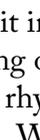
A B C = 

A C B = 

B A C = 

B C A = 

C A B = 

C B A = 

What we've seen so far is that you can take one rhythm and turn it into many others by shuffling the beats of that rhythm around. In the ABC example, we are working on a 3-beat phrase (if we say that each letter represents one beat). As we increase the length of our rhythmic phrases by increasing the number of beats, the number of combinations grows significantly. We have seen that with a 3-beat phrase there are 6 total combinations. When we have a 4-beat phrase, there are 14 different combinations; when we have a 5-beat phrase, 30 different rhythmic combinations; with 6 beats there are 62, and so on. By the time we get to a 12-beat phrase, we have 4,094 combinations for that beat grouping alone!

JAZZ COMPING

I started thinking that if I collected and organized all of those 4,094 12-beat rhythms, that I could create a jazz-comping bible of sorts, since one way to think of a 12-beat phrase is as a bar of 8th-note triplets in 4/4 time. If we then realize that the 9-beat groupings can be thought of as a measure of 8th-note triplets in 3/4 time and that we can swing *any* rhythm in the book, we end up with a comprehensive and thorough jazz-comping manual. This, along with the 12/8 rhythms' applications to African music and the 3 against 4 polyrhythm, drove me to collect and organize this monolithic beat grouping.

THE RELATIVITY OF RHYTHM

All rhythm is relative, meaning that as long as the relationship of the notes to each other stays unchanged within the phrase, we can transpose those notes to whichever subdivision suits our particular need. If we don't lock ourselves into the time signature a rhythm is written in, we can easily transfer that phrase to all kinds of different musical contexts. For example, if we have a 3-beat phrase written with three quarter notes, can we not say that they could also be thought of as three 8th notes or three 16th notes, or even three half or 32nd notes, 64th notes, etc.? Or one set of quarter, half, 8th, or 16th-note triplets? Could the phrase of 3/4 time not also be thought of as 3/2 time, 3/8 time, or 3/16 time? As long as we keep the relationship of the notes to each other the same within the phrase, we can transpose and re-contextualize that rhythm for multiple purposes.

By transposing a phrase to a different subdivision than it was initially written in, we are in turn changing that rhythm's relationship to whatever we deem "the beat." We can call this process rhythmic transposition. Let's get a clearer picture of what this means with the graphic below:



As we can see, a half-note triplet takes up four full beats (the quarter notes on the bottom of the staff being the beat in this example), three quarter notes take up three beats, a quarter-note triplet takes up two beats, an eighth-note triplet takes up one beat, and lastly a sixteenth-note triplet takes up half a beat. In this example, the relationship of the notes to each other within the three-note groupings never changes. Whether we call it a half-note triplet or a sixteenth-note triplet, the three notes in the grouping remain equidistant, thus allowing us to transpose the rhythm. What does change, as illustrated in the example above, is the relationship of the three-note grouping to the beat.

The time signatures for the rhythmic combinations should be thought of representationally, rather than literally, to facilitate various interpretations.

REVOICING AND COMBINING RHYTHMS

Now let's explore what happens if we take these rhythmic combinations and start to re-voice them onto different surfaces or pitches or if we start to combine multiple rhythms for longer phrases. The number of variations you can discover when arranging these rhythms just between two pitches, two instruments, two drums, etc., is fertile ground for years of experimentation. Think of the endless number of phrases you can create by combining different rhythms. You will also be able to make phrases in virtually any time signature when you combine rhythms from different beat groupings.

Using the ABC example from earlier in the introduction, imagine if each rhythmic phrase in this book were assigned a different letter and how many different ways you could shuffle those 5,096 different letters around. The possibilities seem limitless. There are no stickings (or fingerings if you're on a keyed instrument), accents, etc., notated in these rhythms, to encourage your own interpretations and personal sense of phrasing. How many different stickings/fingerings and accent patterns can you come up with? For those instrumentalists who play with two limbs or more (or multiple instruments playing together), you can also start to layer these rhythms one on top of the other. One limb plays rhythm 1 and the other limb plays rhythm 2 simultaneously. Think of how many combinations of layered rhythms you can derive from 5,096!

Now let's take a 3-beat phrase. From what we've learned before, we know that without changing any of the pitches of the notes, we have 6 different rhythmic combinations possible. But the moment we start to distribute those notes onto different surfaces of the drum set, or different keys on the piano or saxophone, different notes on trumpet, guitar, harp, clarinet, bass, etc., the possibilities increase dramatically, going into the hundreds, then thousands, and eventually millions as we add more beats to the measure or phrase.

Mathematically speaking, we begin to enter the world of permutations. Let's look at the chart below to get a better idea of what this means:

Number of Beats	Number of Combinations	Number of Permutations
3	6	6
4	14	24
5	30	120
6	62	720
7	126	5,040
8	254	40,320
9	510	362,880
12	4,094	479,001,600

CONCLUSION

This is where some of the magic lies within these pages. There is much more than meets the eye if we just know how to look. Since each measure of this book can be thought of and used in multiple ways (because of rhythmic transposition and other concepts), we have much more than the original 5,096 rhythms. There are many layers and levels to this book and many paths of interpretation. What I outline here in this introduction are only a few of them. For other interpretations and methods of counting, please refer to the Creative Usage Appendix at the end of this book.

Thanks so much for picking it up and taking the Time.

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Oneonta, NY

NOTE FOR DRUMMERS

Any of the various interpretations, including Alan Dawson's, of the classic drum books *Syncopation* by Ted Reed and *Stick Control* by George Stone, can be applied to the BoR as well. If you're unfamiliar with these two books, I suggest purchasing them. If you're unfamiliar with Alan Dawson, his methods, and why he's important, I suggest doing a little research and purchasing a copy of John Ramsay's *The Drummer's Vocabulary as taught by Alan Dawson*.

1 out of 3

1

2

3

The first section, titled "1 out of 3", is written in 3/8 time. It consists of three staves, each starting with a bass clef. The first staff is labeled "1" and contains a quarter note on the first beat, followed by rests on the second and third beats. The second staff is labeled "2" and contains rests on the first and second beats, followed by a quarter note on the third beat. The third staff is labeled "3" and contains rests on the first and second beats, followed by a quarter note on the third beat. The time signature 3/8 is indicated at the beginning of the first staff.

2 out of 3

4

5

6

The second section, titled "2 out of 3", is also in 3/8 time and consists of three staves. The first staff is labeled "4" and contains a beamed eighth-note pair on the first beat, followed by a quarter note on the second beat and a rest on the third beat. The second staff is labeled "5" and contains a rest on the first beat, followed by a beamed eighth-note pair on the second beat and a quarter note on the third beat. The third staff is labeled "6" and contains a beamed eighth-note pair on the first beat, a rest on the second beat, and a quarter note on the third beat. The time signature 3/8 is indicated at the beginning of the first staff.