An Introduction to *The Simple Rhythmatician* by David Newell

Rhythmatician (*rith-ma-TISH-un*) -- an expert in the mathematics of musical rhythm --

The Simple Rhythmatician is essentially a music theory book, but one with a very narrow focus and a unique format. No part of the book deals with clefs, note names, key signatures, scales, intervals, and the like. The focus of the book is entirely on rhythm. The book is a *rhythm theory book*, but one with a significant difference. *This is a theory book that students play.*



• Students *read* rhythm theory, and they demonstrate their cognitive understandings as they complete worksheets and *write* both melodic and rhythmic compositions. But unlike other music theory books, this one goes a step beyond reading and writing. Young band students using this particular book also pick up their instruments and they *play* the theory as they are learning it. *The theory comes alive through sound*. This unison band method approach allows all of the students to immediately *put theory into practice*. Generally speaking, students learn what they *do* more profoundly than they learn what they read and write. The learning is in the doing.

The following topics are summarized in this Introduction. For a more thorough discussion, see the *Annotated Conductor Score* to *The Simple Rhythmatician* (Kjos Ed. W38F).

A Message from David Newell	2			
A Unique, New Approach to Teaching Rhythm				
Introducing The Simple Rhythmatician				
to Students	3			
When to Begin the Book	3			
Musical Materials in <i>The Simple Rhythmatician</i>	4			
Two Foundational Principles	4			
Curriculum Integration and Student Worksheets	5			
The Simple Rhythmatician and				
The National Standards	5			
Whole Notes	6			
Half Notes	6			
Students Become Independent Learners	7			
The Mathematics: Keeping it Simple	8			
Quarter, Eighth, and Sixteenth Notes				

The Rhythmatician Chant
Dotted Notes
Step on the Dot 10
The Whole Note System 10
A New Meaning for the Bottom Numbers of
Simple Time Signatures 11
An Objection to This New Definition 12
A Study to Validate the Theory 12
Teaching the Traditional Definition of the
Bottom Number 12
The Top Numbers of Time Signatures 13
The Annotated Conductor Score
Teaching Rhythm: New Strategies and Techniques
<i>for Success</i>

Dear Colleagues,

Rhythm: How can something so simple be so difficult to teach? For the first decade of my thirty-year career spent teaching instrumental music in the public schools, that was the question uppermost on my mind. I had graduated from college thinking that I might someday become a fairly good teacher, but I soon discovered that I apparently had little ability to teach my students to understand rhythm. Despite everything I tried, the end result was mostly frustration and failure. But I did not give up and agree with those who told me that rhythm was just "one of those things that the students will someday come to understand." I believed then, as I believe now, that when our students do not understand something we are trying to teach them, it is because we have not yet figured out how to present it. Eventually, with a subtle and simple shift in theoretical emphasis on my part, I discovered that even my very youngest students were easily able to acquire a complete understanding of rhythm theory and that they actually agreed with me -- rhythm is simple!

During the first part of my career, I based all of my rhythm teaching on the concept of **the onecount note**. That seemed to me to be a perfectly reasonable and logical approach. After all, the bottom number of the time signature identifies the one-count note and, using that as the starting point, a system of rhythmic understanding is constructed. But there is a problem. Beginning in the lower elementary grades, the one-count note that the students experience is invariably **the quarter note**. During those early years, students are concrete thinkers. They become convinced that our system of rhythmic notation is based exclusively on 4/4 time. Quarter notes are one count, half notes are two counts, and whole notes are four counts -- no exceptions. And when they later join our band programs, they continue to be exposed to only four-count whole notes for a considerably long period of time.

It was when I tried to introduce cut time to my students that the problem manifested itself in a very significant way. Over a period of several years, they had become *programmed* into believing that the only *true* whole note was the four-count whole note. To them, cut time's two-count whole note was simply *wrong*. The majority of them disliked cut time with a passion. I came to realize that I was going to have to *de-program* them. I immediately shifted my instructional emphasis away from the relatively unimportant one-count note to the all-important whole note, and the results were nothing short of amazing. This "de-programming" regimen, as set down on the pages of this book, enabled my students to understand that the whole note is a concept, not a specific number. The rest was relatively easy.

If I were to give this book a subtitle, it would be *The Simple Rhythmatician: The Whole Note System*. I trust that the concepts expressed here will stimulate your thinking about teaching rhythm, and will help your students come to realize that rhythm is indeed simple.

My best to you and your students.

Louisel David Newell

A Unique, New Approach to Teaching Rhythm

This book is unlike any you have ever seen. Students using *The Simple Rhythmatician* are introduced to rhythm theory in a highly revolutionary and innovative way, in language that students readily understand. From the very first pages of the book, students are forced to think about and solve their own rhythm problems. Concepts are sequentially introduced as students are developmentally able to process them. Students are not expected to make sense of explanations about things like time signatures until long after they have played in several time signatures. The fourth etude in the book has students actually playing in cut time, something that most adults think is very difficult for young students to understand. However, because neither their teachers nor their book informs them that they are playing in cut time, the students think nothing of it. They play the study perfectly, without reservation or confusion. The actual time signature for cut time is not shown in the book until page 44. By that time the students have played numerous pieces in cut time and, because they have already *done it*, they easily *understand it*. The explanation follows the experience. Finally, the meaning of the numbers in time signatures is given a revolutionary new definition from the centuries old traditional one. This new take on time signatures enables students to fully comprehend the basic nature of the entire system of rhythmic notation. It lays the foundation that helps students to feel rhythmically competent rather than rhythmically confused. These new concepts are very easy and natural for students to understand and accept, but they do require adults who are willing to adopt some new ways of thinking about rhythm and how to teach it.

Introducing The Simple Rhythmatician to Students

The Simple Rhythmatician is not intended to teach students how to play rhythms. Instead, its purpose is to help students understand the rhythms they can already play. For this reason, the book should not be started until the students are competent in the performance of eighth notes in 2/4, 3/4, and 4/4 time. The book is not a stand-alone band method. It is a supplementary Rhythm Theory Book, suitable for use in conjunction with all published band methods. Spending as little as two minutes a lesson in this book enables students to progress faster in their regular method books and in their band literature, because they understand what they are doing rhythmically. It is time well spent.

Students of any age are ready to begin *The Simple Rhythmatician* when they are secure in the performance of eighth notes in 2/4, 3/4, and 4/4 time.

When to Begin the Book

In many situations, it can be assumed that the required mastery of eighth notes will occur sometime during the first year of instrumental study. Adding this book to the students' lesson materials in the middle of the year can have **a positive motivational effect** on students. In many situations there seems to be somewhat of a letdown in student enthusiasm after the first few months of instrumental study. Playing an instrument is not all fun and games -- it's hard work. A new book in midyear can be a real "pick-me-up." It signals to both students and parents that progress is being made. The students are already into their second books!

Because of scheduling, student age, and other important factors, some programs may choose to start this book in the second or third year of band. The book can be an exciting and different way to begin a school year -- something new and intriguing and different. A new year, a new book with new ideas. But the best thing about the book? It is a theory book without the stigma that many young people associate with the word "theory." This is a theory book that you play! We would all do well to remember that our students joined band to play their instruments. The playing aspect of this book helps to make the "theory pill" go down more smoothly.

Musical Materials In The Simple Rhythmatician

All of the materials in *The Simple Rhythmatician* have been purposely made extremely easy. Any students who have completed the eighth note units in their primary lesson books ought to be able to sight-read every etude, round, and song in the book so far as notes, fingerings, key signatures and the like are concerned. In the part books, the Clarinet/Lower Register book does not venture over the break. Clarinetists who have mastered the break can use the Tenor Saxophone/Clarinet-Upper Register book. The only keys used in the book are Concerts $B \downarrow$ and $E \downarrow$. There are no dynamic markings, special articulations, tempo indications, or other non-rhythmic "distractions." Slurs are not used in order to avoid any possibility of confusion with ties. The intent is obvious -- to allow students to focus all of their attention on understanding the rhythmic materials that are presented.

Although the melodic materials are not what most people would call "exciting," students will not be bored by them for several reasons:

- As mentioned before, during a typical class period, *The Simple Rhythmatician* should be used for no more than two or three minutes. Even the youngest of students can stay focused on an activity for that small amount of time without becoming bored.
- While playing these songs and etudes, students will be required to do their own thinking about the rhythmic elements of what they are playing and, contrary to what some people seem to believe, students actually do love to think!
- The book contains songs that many of the students will have previously encountered in their regular method books, but the chances are good that the versions in this book will be in a different meter. Not only will the students enjoy playing some of their old favorite songs again, but they will also learn an important lesson as they come to the realization that there are numerous ways to write the same sounds.
- After various etudes in the book are learned separately, there are numerous opportunities to combine them into duets and trios. In many of these instances, the different parts of the duet or trio are in different meters, once again helping students to become rhythmically independent and flexible. In addition, many of the etudes can be performed as rounds.

Two Foundational Principles

In order to achieve maximum success using this book, there are two conditions that need to be met. If at any time students are not successfully learning this material, one or both of these principles has been violated.

Foundational Principle No.1 Students must be given the luxury of being able to concentrate on only *one thing at a time*. <u>Foundational Principle No. 2</u> Students must be given the time necessary to *master* that one thing before being moved on to the next.

For these reasons, *The Simple Rhythmatician* is organized into separate and discreet units of study, which allow students to concentrate first on whole notes, then half notes, then quarter notes, and so forth. Teachers are urged not to move on to the next unit until they are certain that the students understand the one just covered. The learnings are cumulative. Students who do not understand the current unit will likely have difficulty with the next.

Curriculum Integration and Student Worksheets

When educators think about curriculum integration and the music teacher, they unfortunately often wonder what the music teacher can do to help students learn other content. What clever song can the music teacher have his or her students sing to help them learn the names of the individual states of The United States? In this scenario, the music teacher becomes *the means* to reach a social studies end. From music education's standpoint, this thinking is backwards. Music is not in the curriculum to serve the needs of the other disciplines. Although it is undeniably true that such a song will help the students learn the names of the states, it needs to be the social studies teacher using the song to that end. When it is felt that it will help, the social studies teacher ought to use music as a means to reach his or her social studies goals.

There are abundant opportunities for curriculum integration for band directors using this book. The text materials throughout the student book test reading comprehension. The worksheets that are scattered throughout the book ask students to use complete sentences when answering certain questions. But the greatest opportunity for curriculum integration is in the content area of *mathematics*, and from the standpoint of the music educator, this is curriculum integration the right way round. *The music teacher is using math as a means to teach music!*

Teachers are highly encouraged to make full use of the worksheets in *The Simple Rhythmatician*. It is recommended that they be assigned as homework and that they be corrected, providing students feedback for their efforts. Answer keys are provided in the score to make this task extremely quick and efficient.

- Writing helps students to cement learnings into long-term memory. Some students learn best by writing.
- Many parents will be less inclined to think of band as a "frill" or an "entertainment" and more as a serious academic subject when they see that their children are occasionally getting written homework assignments in band.
- Completed worksheets can be shared with classroom teachers and with administrators to demonstrate that band directors are involved with general education through curriculum integration.

Student worksheets appear on the following pages in the Student Book:

Writing Whole Notes and Whole Rests	4
Compose Your Own Whole Note Song	5
Writing Half Notes	8
Compose Your Own Half Note Song	9
Musical Math Worksheet	11
Writing Quarter Notes and Quarter Rests	16
Compose Your Own Quarter Note/Rest Song	17
Musical Math Worksheet	19
Writing Eighth Notes and Eighth Rests	23

Beaming Groups of Eighth Notes 24	4
Musical Math Worksheet 2	7
Writing Sixteenth Notes and Rests	0
Musical Math Worksheet	1
The Mathematics of Dotted Notes	2
Musical Math Worksheet	5
Writing Exercise: Dotted Notes	9
Write In the Top Numbers of Time Signatures 4	3
Write Your Own Rhythm Compositions 44	6

The Simple Rhythmatician and The National Standards

The Simple Rhythmatician gives teachers several opportunities to address **Content Standard No. 4 of the** *National Standards for Arts Education* – "Students compose short pieces within specified guidelines…" This is one of the National Standards not easily addressed in band situations. See pages 5, 9, 17, and 46 in the Student Book.

Whole Notes

(Pages 2-5 in the Student Book)

The objective of the whole note unit is for students to *learn through performance that whole notes are not four counts!* Although it is unlikely that any teacher has ever told them that whole notes are always four counts, that is unfortunately what their experience has taught them, and experience is the most profound of all teachers. Most likely, all of the whole notes they have ever known have been four counts, and so that is what they have learned and locked into their memories. They must experience other kinds of whole notes — the sooner, the better.

The book's first three etudes have the students performing seven-count, then one-count, followed by five-count whole notes. In the fourth etude, the students perform two-count whole notes, meaning that they are actually playing in cut time. They don't know it, and they don't need to know it at this time. They are simply and effortlessly experiencing cut time in the most natural way possible. They are just doing it, no words necessary. They are certainly not confused or upset. They are most likely thinking to themselves, "*If whole notes can be seven counts and one count and five counts, of course they can be two counts!*" On page 5, the students compose their own whole note melody, in which the whole notes are two counts. In this first unit of the book, students not only play in cut time, but they compose in cut time as well, long before they ever hear the term "cut time."

Students *experience through performance* whole notes that have many different values. This use of highly unusual whole note durations has somewhat of a *shock value* on students and helps them to forever remember that music's whole note does not exclusively represent the number four. Most students will not soon forget the day they played seven-count whole notes in your class. The occasional student who may ask, "Can whole notes really be seven counts?" can be told that they definitely do exist, but most likely only in this book. If no student brings it up, it is probably best left unsaid. Music students need to start *thinking outside the 4/4 box* in which they have unwittingly become trapped. Playing seven-count whole notes will help to open their minds to the fact that note symbols do not have default durational values attached to them. This is critical to their understanding of the system of rhythmic notation. The variable-count whole note must be experienced, rather than just talked about. **Students learn what they do much more profoundly than they learn what we tell them!** Telling is not teaching. Experience is the essence of education.

Half Notes

(Pages 6-11 in the Student Book)

The Half Note Unit is one of the more important ones in The Simple Rhythmatician. The introduction to half notes is one of the more important units in *The Simple Rhythmatician*. What students learn now sets a very important tone for the remainder of the book. In this unit students learn that everything about half notes is logical and simple and makes sense. They see that they can easily figure things out for themselves. It is here that they begin their individual journeys toward rhythmic independence.

By far the most important learning that students take from this unit is the idea that *it is their job to figure out how long half notes are!* This is most likely the only music instruction book ever written that, when introducing half notes, does not tell the students how long they are. The duration of half notes is not a fact to be memorized, but is instead something that the students are expected to calculate on their own. It is their job, not their teachers'. Such students, when encountering rhythmic difficulties later on in their musical studies, will be much more inclined to think, "Let's see, I can figure this out," rather than the more common, "I'm going to have to ask my teacher how this goes."

Students Become Independent Learners

On page 6, the book defines the half note as the note whose value is one-half that of the whole note. Simply stated, that is why it was named "the *half* note." To even the youngest of students, that seems perfectly logical. Throughout the entire unit, **students are given only the values of the whole notes**. They must figure out the half note values on their own. Neither their teacher nor their book tells them how long they are.

The first etude in the unit, No. 15 on page 6, informs students that the whole notes are six counts. Students who, on their own, figure out that the half notes will have to be three counts each in the etude, have demonstrated a complete and logical understanding of *half-note-ness*. As they work their way through the remainder of the half note unit, they are forced to calculate similar examples, like the following:

- $\sqrt{}$ When whole notes are *twelve* counts, half notes are *six*.
- $\sqrt{}$ When whole notes are *ten* counts, half notes are *five*.
- $\sqrt{}$ When whole notes are *eight* counts, half notes are *four*.
- $\sqrt{}$ When whole notes are *four* counts, half notes are *two*.
- $\sqrt{}$ When whole notes are *two* counts, half notes are *one*.

Students are never given the value of half notes. They are completely capable of figuring that out for themselves! The responsibility for determining rhythmic facts is where it belongs -- on the students.

Without realizing it, students have already gained an implicit, unspoken understanding of the fundamental principle of cut time. Cut time occurs when the whole notes are two counts. How simple!

It is vitally important that *teachers never tell their students how long half notes are*. The only values that students need to know are the durations of the whole notes. This forces them to become independent learners so far as half notes are concerned. Instilling this kind of an attitude in students now results in students who become rhythmically independent thinkers later.

The fact that the process of discovering the durations of half notes is so logical and simple and easy goes a long way toward debunking the idea that musical rhythm is something mysterious that students will *someday* come to understand. Students who give half notes three counts because the whole notes are six counts in a certain etude have a complete and logical understanding of how rhythm works, even though they will never see a six-count whole note in "real" music. However, these same students will also not be at all confused, upset, or concerned when they are later introduced to "real" music in which whole notes are two counts! When the time comes to formally introduce them to cut time, they will need only to be shown that the symbol ¢ stands for the fact that whole notes are two counts. With that simple explanation of cut time, the students will easily sight-read through the cut time section of their books with complete understanding of why the half notes are one count. It's simply because the whole notes are two counts.

The only math skill required of students is the ability to calculate the fraction 1/2, which is traditionally the first fraction that students ever encounter in their lives -- "you may have half a cookie." It is the easiest of all fractions. It is the first fraction that math teachers use when introducing the concept of fractions to their students. For many years students have dealt with the concept of one-half of something, and because they have experienced it, they understand it very well. For them the calculation is extremely simple, and they are very good at it. This, then, becomes the foundation of a healthy student attitude about rhythm. This *"I can do it myself"* attitude that they begin to develop here forms the foundation of a positive feeling of self-esteem about rhythm. Students who do well at any subject become self-motivated to continue learning that subject. Rhythm becomes one of the favorite parts of the students' musical studies. All human beings enjoy feeling competent.

The Mathematics: Keeping it Simple

The unit on **quarter notes** would lead us to logically conclude that the students now need to become involved with the fraction one-fourth (1/4). After all, that is the derivation of the name quarter note. The quarter note is one-fourth the value of the whole note. This, however, demands a more sophisticated mathematical calculation and leads to even further complications when eighth and sixteenth notes are introduced. In order to keep the required mathematical calculations as simple and manageable as possible, *The Simple Rhythmatician* instead describes the quarter note as being *one-half* of a half note. By using this mathematical model throughout the book, students are able to concentrate on **one simple math calculation** -- **the fraction of one-half**. Keeping rhythmic concepts as simple as possible is one of the main goals of this book and is one of the reasons the book has been entitled "*The Simple Rhythmatician*."

$\sqrt{}$ Quarter notes are defined as being *one-half* the value of half notes.

(Pages 12-19 in the Student Book)

$\sqrt{}$ Eighth notes are defined as being *one-half* the value of quarter notes.

(Pages 20-27 in the Student Book)

Sixteenth notes are defined as being *one-half* the value of eighth notes.

(Pages 28-31 in the Student Book)

A visual on page 28 helps the students to grasp the entire picture. Everything is simply divided into halves.

1 Whole —	1							
2 Halves —	1		2					
4 Quarters —	1		2	2	3	3	4	4
8 Eighths —	1	2	3	4	5	6	7	8
16 Sixteenths —	1 2	3 4	5 6	7 8	9 10	11 12	13 14	15 16

An accompanying visual progresses from purely mathematical concepts to practical musical applications .

If $\mathbf{o} = 80$	If $\mathbf{o} = 40$	If $\mathbf{o} = 16$	If $\mathbf{o} = 8$
and $\mathbf{o} = 40$	and $\mathbf{o} = 20$	and $\mathbf{o} = 8$	and $\mathbf{o} = 4$
and $\bullet = 20$	and $\bullet = 10$	and $\bullet = 4$	and $\bullet = 2$
and $J' = 10$	and $r = 5$	and $\mathbf{J} = 2$	and $\mathbf{a}^{\prime} = 1$
then $h = 5$	then $r = 2\frac{1}{2}$	then $\mathbf{J} = 1$	then $\mathbf{a}^{\prime} = \frac{1}{2}$

Purely Mathematical Concepts

Practical Musical Applications

The Rhythmatician Chant A Highly Recommended Classroom Procedure

Beginning with the quarter note unit on page 12 of the Student Book, it is recommended that teachers institute a classroom procedure we call *The Rhythmatician Chant*. If students are to gain a complete understanding of the entire system of rhythmic notation, they must know the natural sequence of note symbols -- that is *whole, half, quarter, eighth, sixteenth.* They must be able to recite this sequence as effortlessly as they recite the alphabet. They will most easily learn the order of this *Family of Notes* sequence in the same way they learned the alphabet -- through consistent repetition. To begin this process of memorizing the words "whole, half, quarter, eighth, sixteenth," we strongly recommend that the class *rhythmically recite aloud* chants such as the following before playing the etudes in the quarter note unit.



Not only will this chanting begin to get the sound of *"whole, half, quarter"* into the students' ears, but it will help any students who might be confused about the math.

As eighths and sixteenths are introduced, the chants need to be extended to include them also. See pages 21 and 29 in the Student Book.

Dotted Notes



Traditionally we introduce dotted notes to students by saying something like this: "A dot after a note adds half the value of the note to the note." That is verbally confusing to the vast majority of young students. In this book, we introduce dotted notes graphically and mathematically first. Then, when we are certain that they understand the concept, we apply it to music beginning on page 33.

When a dot is placed after any note, the note becomes *longer by one-half*. For example, a dot after a four count note *adds* two counts to the note, because half of four is two. $4 \cdot = 6$ Four plus half of four equals six.

More examples of this "*dot*• *math*" follow. Be sure that you understand this before going on. The dots after the numbers are adding one-half.

$$8 \bullet = 12$$
 $20 \bullet = 30$ $6 \bullet = 9$ $1 \bullet = 1\frac{1}{2}$

Neil A. Kjos Music Company, Publisher • www.Kjos.com

9

NN0738B

Dotted notes can be unnecessarily confusing for some students, but they need not be. The basic math skill required continues to be simple. Students need only to be able to calculate the value of one-half of something, and by this page in the book, they are experts at that. To this point, however, they have been consistently making numbers get *smaller and smaller by half* -- whole note value, half-of-that, half-of-that, and so forth. Now they must go in the opposite direction and make numbers *larger by one-half*. Students must understand that *the math is no more difficult*. They continue to calculate one-half of something. They simply need to apply the answer in a different way. *Adding* a dot to a note *adds* value to the note.

Step on the Dot

(Pages 36-39 in the Student Book)

One of the consistently problematic rhythmic figures for young students to master is the dotted quarter/eighth note combination in the time signatures of 2/4, 3/4, and 4/4 time. A proven successful solution to this problem is suggested on page 36. It does require, however, that students tap their feet. Students in classes in which foot tapping is not advocated are encouraged to ask their teacher what they should do instead. Those students are advised to always follow their teachers' advice.

By this page in the book, students already know that when the whole note is four counts, the dotted quarter note is one-and-a-half counts. When tapping the foot to a steady beat, the dot falls on a down-tap. For that reason, we say that **the dot is stepped on**. On page 36, the students see it graphically as:

The eighth note that follows is a perfect fit for the next upbeat.

The students are informed that the eighth note cannot be played until *after* the dot has been stepped on. The students are asked to concentrate on the dots, and then play the eighth notes on the upbeats. The dotted quarter notes are two taps but only one-and-a-half counts. This information is followed by a full page of familiar "Step on the Dot" songs (page 37).

Next is a page of dotted half/quarter note combinations in cut time: "Step on More Dots" (page 38).

The Whole Note System

The philosophical basis of this new way of looking at rhythm is *the supremacy of the whole note*. Absolutely everything about our system of rhythmic notation is derived from and dependent upon the whole note. As the whole note goes, so goes the system.

• The whole note is the genesis of all of the **note symbols** themselves. Not all notes have stems, or are filled in, or have flags or beams, but all of the basic notes retain the original oval shape of the whole note from which they descended. "In the beginning was the whole note...."



• All **note names** are derived from their relationship to the whole note. Students are shown that, when the notes are referred to by their "full names," the individual members of the *family of notes* all have the same last name.

------half of a whole note -----quarter of a whole note -----eighth of a whole note ------ sixteenth of a whole note

In 4/4 time the quarter note is traditionally *identified* as the note that receives one count, but that identification does not *cause* the note to be one count. The quarter note is one count because the whole note is four counts. That is the only way the name "quarter note" makes any sense. **In all cases, in all simple time signatures, the whole note determines the value of the quarter note, as well as all other notes**. All note values are derived from the value of the whole note.

The whole note is the key that unlocks the mystery of rhythmic notation for students.

A New Meaning for the Bottom Numbers of Simple Time Signatures

Getting young students to understand the meanings of the numbers in time signatures is very often a frustrating exercise for teachers and students alike. The first time signature taught invariably has a bottom number of 4. After a lengthy explanation of the difference between the top and bottom numbers which, in many cases are the same number (4/4), even those students who understand all the verbiage are perplexed. Since they already "*know*" that quarter notes are one count anyway, why go through all those confusing steps? To most students, being taught to interpret the numbers in time signatures is just so much time-consuming "teacher babble." It's the kind of thing that gives the term "music theory" such a bad connotation in students' minds. It seems irrelevant to them, having little or nothing to do with their performance. Simply shifting the theoretical emphasis away from the one-count note to the whole note yields impressive results.

Excerpt of Part Books, p. 40

Of the two numbers in time signatures, it is the bottom number that is the most important one, because *the bottom number indicates how long the whole note is!* It is that simple.

- The time signature of $\frac{2}{4}$ is the way composers tell us that $\circ = 4$
- The time signature of $\frac{3}{2}$ is the way composers tell us that $\bigcirc = 2$
- The time signature of $\frac{8}{8}$ is the way composers tell us that $\bigcirc = 8$

You have probably been taught that the bottom number of the time signature stands for *the kind of note that gets one count*. That is absolutely true, but it is probably not as easy to understand or remember as this new meaning. All you really need to know is that the bottom number of the time signature tells you how long the whole note is. That's all there is to it.

An Objection to This New Definition

"Wait a minute. You're asking me to teach my students that in 2/4, there are 2 counts in a measure and a whole note is 4 counts. But in 2/4, there is no such thing as a whole note!"

There has to be a whole note. The very term "half note" verifies the existence of the whole note. If it were not so, we would be forced to ask "half of what?" **Without the whole note we have no system of rhythmic notation**.

Students easily understand the following explanation: The composer who writes a piece of music in 2/4 is basically saying to the performers: "I am putting two counts worth of notes in every measure in this piece, based on a whole note value of four. Although you won't see the symbol of a whole note anywhere in the piece, all of the notes that you do see are based on a whole note value of four." The whole note must always exist, whether seen or not, because from its value, all other note values are derived.

A Study to Validate the Theory

An informal study involving 172 students in grades four through seven was conducted by four teachers to test comprehension of this new way of looking at the bottom numbers of simple time signatures. Eighty-nine students were taught the traditional meaning of the bottom number -- "the bottom number indicates the kind of note that receives one count." Eighty-three students were given the experimental treatment -- "the bottom number indicates the value of the whole note." A pencil and paper post-test on time signatures revealed the following results:

- 7% of the traditional group scored a perfect paper on the post-test.
- 52% of the experimental group scored a perfect paper on the post-test!

A full report of this study appears in the *Annotated Conductor Score* to *The Simple Rhythmatician.* Kjos W38F (pp. 117-122) **How is this possible?** How could the students in the experimental group learn this material in such a superior fashion? In our view, the dramatic difference in student comprehension can be attributed to the fact that the new definition of the bottom number goes to the very heart of the system -- the whole note. Knowing the value of the whole note is infinitely more important than identifying the kind of note that gets one count. And how hard is it for students to find the value of the whole note? It sits innocently on the page in front of them. It's the bottom number of the time signature. This new definition is impressively easier to teach and to learn.

Teaching the Traditional Definition of the Bottom Number

Students who are introduced to the concept that the bottom number of the time signature indicates the value of the whole note, and who are given the opportunity to actually play whole notes of many different values, have a thorough and complete understanding of the basic structure of rhythmic notation. However, in order to function in the musical world, they will eventually need to know the traditional definition associated with the bottom number as well. When it comes time for students to understand the meanings of the numbers in *compound* time signatures, for example, they will need to know that the bottom number of the time signature stands for a kind of a note. We are not in any way suggesting that the traditional definition be replaced, just *deferred* until students can better comprehend it. The significant advantage of our new definition is that it speaks a language that the very youngest of students can understand. It starts them on the road to rhythmic competence with a feeling of confidence.

NN0738B

The Top Numbers of Time Signatures

The Simple Rhythmatician advocates the traditional definition of the top numbers of time signatures -- they indicate the number of counts per full measure. However, in the belief that **thinking students** become more interested and involved in the learning process, the book introduces students to the top number by having them figure out and write in the top numbers for themselves, thereby validating their understanding of the concept (see page 43).

The Annotated Conductor Score

Because *The Simple Rhythmatician's* unique ideas are not only new to students but to teachers as well, the *Conductor Score* (*W38F*) contains a **large amount of textual material** to aid teachers as they lead students through the process. Units are preceded by introductory materials, reminding teachers of the objectives of the unit. Unit summaries detail what the students should have learned as a result of their study. At the beginning of every etude in the book that does not have a traditional time signature, the conducting pattern is indicated in the score.



Neil A. Kjos Music Company, Publisher • www.Kjos.com

NN0738B

14

(Score annotation relative to Etude No. 75 on preceding page).

Students are not aware of it, but Etude Number 75 is written in simple 5/8 meter. It is important that students become familiar with the sound and feel of meters containing an odd number of beats per measure. This exposure can and should start earlier in the students' experience than it traditionally does.

Feeling an odd number of beats per measure does not come easily to many students. Humans are basically *duple* beings -- left and right, down and up, inhale and exhale, work and play, night and day, hot and cold, and so forth. They prefer measures with an *even* number of beats in them. In order to force the phrases to end with a feeling of evenness, some students will want to put a sixth count in measures 2, 4, and 8.

After this etude is learned, it might be a good one to review fairly often, so that this feeling of *five-ness* becomes a part of the students' rhythmic repertoire.

On those occasions when etudes in the book are combined and can be played as duets and/or trios, simple concert scores are provided for the teacher. Notice that these particular etudes are from the page on which the students are required to write in the top numbers of the time signatures themselves (page 43).

Three different duets can be performed by combining numbers 128/129, 128/130, 129/130. All three numbers can also be performed as a trio. Complete time signatures are not printed in the student books. The students will have written in the top numbers themselves.



David Newell has taught instrumental music for thirty years in the public schools of Berea, Ohio. Although he has had experience at both the elementary and secondary levels, his area of concentration has been middle school and junior high school band. In addition, Mr. Newell has taught in the Music Education Department at Baldwin-Wallace College for fifteen years.

In 1979, Mr. Newell received the Martha Holden Jennings Foundation's "Master Teacher" Award for Excellence in the Classroom. This award provided him the opportunity to spend one semester pursuing educational enrichment activities of his own choosing. He also received the Alumni Achievement Award from Baldwin-Wallace College in 1987.

David Newell earned his Bachelor of Music Education and Master of Arts in Education degrees from Baldwin-Wallace College and has taken postgraduate courses at Akron, Cleveland State, Kent State, and Northwestern Universities.



The Simple Rhythmatician can be used in conjunction with any band method.

Available for: Flute/Oboe (W38C) Clarinet-Lower Register/Bass Clarinet/Trumpet/Baritone T.C. (W38B) Alto Clarinet (W38CLE) Alto Saxophone/Baritone Saxophone (W38XE) Tenor Saxophone/Clarinet-Upper Register (W38XB) French Horn (W38HF) Trombone/Baritone B.C./Bassoon (W38BC) Tuba (W38BS) Mallet Percussion (W38MP) Conductor Score (W38F)

Other Books by David Newell

Bach and Before for Band (W34) Bach and Before for Strings (110) Classic Christmas Carols for Band (W36) Classic Christmas Carols for Choir (V90, V91, V92) Teaching Rhythm: New Strategies and Techniques for Success (W54)

All of David Newell's books are available from your favorite music store. To find a music store near you, or for more information, please visit **www.Kjos.com** or call (800) 797-5567.

Teaching Rhythm New Strategies and Techniques for Success by David Newell

This one-of-a-kind, comprehensive textbook on teaching rhythm takes a unique, visionary, in-depth look at how teachers teach rhythm and how learners learn it. It consists of five major sections:

• **PART ONE** presents a logical, student-centered, five-step *Rhythm Learning Sequence* for introducing students to the performance of rhythms, from sound to sight.



- PART THREE discusses Counting Systems and their effective uses in the classroom.
- **PART FOUR** takes a comprehensive look at *Compound Meter* and the ease with which it can be taught and learned.
- PART FIVE suggests a unique and creative way to introduce students to Irregular and Mixed Meters.

What others have said about Teaching Rhythm: New Strategies and Techniques for Success

"David Newell has produced an impressive book that all music teachers need to read. Mr. Newell has made a lifelong study of teaching rhythm to young students. His suggestions and insights are invaluable at any level. His chapters on *Teaching Compound Meter* and *Introducing Students to Irregular Meter* are especially good."

John W. Knight, Ph.D. Professor of Conducting and Music Education Oberlin College

"David Newell has done a remarkable job in presenting his system of rhythm education. His writing is extremely defined with personal experience backing up all the instructional techniques. All of the graphics support the text. Most impressive are the illustrations and complete instructional sequences. This publication will be a tremendous contribution to our profession."

Edward S. Lisk Author, Clinician, Conductor

"David Newell's textbook on teaching strategies for pulse, meter, and rhythm is a superlative resource for the music educator. The text is a thorough, creative, and effective treatise on teaching strategies for the single most important musical concept. He presents thoughtful concepts that challenge conventional practice in a convincing fashion. Without question, he substantiates his proposed methodology and makes the reader rethink his/her positions on teaching strategies. David's well-written document uses the perfect balance between formal and practical styles. This is a textbook that I will encourage all of my students to read. Bravo to you, David, for writing one of the best books on teaching music."

> Joseph Manfredo Music Education Division University of Illinois at Urbana-Champaign

