

## Counting Rhythms an explanation by Wayne Toews conductor@sasktel.net

Musicians use various methods to count rhythms so that they can determine how the rhythms sound which means that they must know -

- a) where the sounds begin
- b) how long the sounds are sustained.

There are several "correct" methods for counting rhythms. All methods are based upon the performers' ability to maintain a steady, even pulse and to determine the subdivision of the beat. Most find a metronome a valuable tool in learning to maintain a steady pulse. Some people use the term *beat* to mean pulse. In this explanation, the term *pulse* refers to the instantaneous feeling or count which is indicated by a foot tap the click of a metronome or conductor's motion. The word *beat* refers to the time between the *pulses*. In other words, *pulses* are very short (the time of a click) while *beats* are longer - the time between the pulses.

Beats can be subdivided into:

- a) 2 or 4 parts. This subdivision is called *simple time*. Some also call it *straight time* or *rock time*.
  - b) 3 parts. This subdivision is called *compound time*. *Swing time* also uses beats divided into 3 parts.
- It is possible to subdivide a beat into any number of parts but subdivisions other than 2, 3 or 4 are not common.

It is also important that the performer know the number of *pulses* or beats in a group. The group of pulses is usually called a *measure* or *bar* of music. The word *metre* refers to the grouping of the pulses. The pulses are grouped by slightly emphasizing or accenting certain pulses in the group, especially the first pulse. "What is the metre?" means "How many beats are in each group?"

The metre of the music is indicated by the time signature which is placed at the beginning of the music. Following are examples of time signatures and the metre indicated by each.

	<b>Simple time</b> beats divided into 2 or 4 parts	<b>Compound time</b> beats divided into 3 parts
TWO beats per measure (duple metre)	$\frac{2}{4}$ $\frac{3}{8}$ or $\text{C}$	$\frac{6}{8}$ $\frac{6}{4}$
THREE beats per measure (triple metre)	$\frac{3}{8}$ $\frac{3}{4}$ $\frac{3}{2}$	$\frac{9}{8}$
FOUR beats per measure (quadruple metre)	$\frac{4}{4}$ or $\text{C}$	$\frac{12}{8}$
FIVE beats per measure (quintuple metre)	$\frac{5}{4}$	$\frac{15}{8}$
SIX beats per measure (sextuple metre)	$\frac{6}{8}$ $\frac{6}{4}$	

Other groupings are also possible

### Time Signatures

The time signature is a set of upper and lower numbers which represent the number of beats in a group and the type of note which represents one beat. Generally the upper number represents the number of beats in a group and the lower number is an abbreviation for the kind of note which gets one beat, called the unit of beat. Any kind of note can get one beat.

Some examples:

When there are two beats per measure the upper number is usually 2, when three beats - 3 and when four beats - 4 and so on.

When the quarter note ( $\downarrow$ ) is the unit of beat the bottom number is 4 because **4** is the abbreviation for a quarter note.

Two special signs you should know:  $\text{C}$      $\text{C}$

- The broken circle, which looks like a letter "C" is the abbreviation for  $\frac{4}{4}$  time. It is called *common time*.
- The broken circle with a vertical slash ( $\text{C}$ ) is the abbreviation for  $\frac{2}{2}$  time. It is called *alla breve* or *cut time*.

Sometimes there is confusion about the  $\frac{6}{8}$  time signature because it can be interpreted in two different ways depending upon the tempo of the music.

i) It can mean six beats per measure with the eighth note (  $\text{♪}$  ) getting one count.  
but more commonly:

ii) It means two beats per measure with the dotted quarter note (  $\text{♪.}$  ) getting one count.

**Summary of abbreviations for lower numbers in time signatures.**

- $\text{♪}$  (half note ) is abbreviated **2**
- $\text{♪}$  (quarter note ) is abbreviated **4**
- $\text{♪}$  (eighth note ) is abbreviated **8**
- $\text{♪}$  (sixteenth note ) is abbreviated **16** and so on

Notice that the abbreviations of the following notes use two numbers

- $\text{♪.}$  (dotted half note ) is abbreviated  $\frac{3}{4}$
- $\text{♪.}$  (dotted quarter note ) is abbreviated  $\frac{3}{8}$
- $\text{♪.}$  (dotted eighth note ) is abbreviated  $\frac{3}{16}$

Study the following time signatures and their possible meanings. Notice that some time signatures have two meanings depending upon the tempo (speed) of the music.

Unit of beat →	Simple Metres				Compound Metres		
	$\text{♪}$	$\text{♪}$	$\text{♪}$	$\text{♪}$	$\text{♪.}$	$\text{♪.}$	$\text{♪.}$
ONE beat per measure	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{16}$	$\frac{3}{8}$ (fast)	$\frac{3}{4}$ (fast)
TWO beats per measure		$\frac{2}{8}$	$\frac{2}{4}$	$\frac{2}{2}$ or $\text{C}$		$\frac{6}{8}$	$\frac{6}{4}$
THREE beats per measure	$\frac{3}{16}$	$\frac{3}{8}$	$\frac{3}{4}$	$\frac{3}{2}$		$\frac{9}{8}$	
FOUR beats per measure		$\frac{4}{8}$	$\frac{4}{4}$ or $\text{C}$			$\frac{12}{8}$	
FIVE beats per measure	$\frac{5}{16}$	$\frac{5}{8}$	$\frac{5}{4}$				
SIX beats per measure		$\frac{6}{8}$	$\frac{6}{4}$				
SEVEN beats per measure	$\frac{7}{16}$	$\frac{7}{8}$	$\frac{7}{4}$				

Many other time signatures are possible but most are not practical.

Notice that the choice between alternate time signatures such as  $\frac{2}{4}$  and  $\frac{2}{2}$  is left to the composer. Often there is no mathematical or practical reason for the choice. In standard practice certain time signatures are considered to be easier to read at certain tempos.

**STOP:** If you do not understand the relative values of notes,


i.e.  $\text{○} = \text{♪} \text{♪} = \text{♪} \text{♪} \text{♪} \text{♪} = \text{♪♪♪♪} \text{♪♪♪♪}$









go no further. Study the note and rest values especially their relationships in the "Hierarchy of Note Values". Look in a theory book such as on pages 2 and 3 in the *For Young Musicians, Volume 1* text and ask for an explanation.

### Counting methods


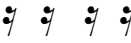
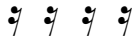
Remember: the counting method you use should sound like the rhythm by showing where the sounds begin, showing which notes are emphasized and showing how long the sound lasts.

In  $\frac{2}{4}$  time (two beats per measure where the  $\downarrow$  is the unit of beat)

HALF NOTES & RESTS		
are counted	1 --	1 --
or	1 - 2 -	1 - 2 -

QUARTER NOTES & RESTS			EIGHTH NOTES & RESTS		
					
are counted	1	2	are counted	1 +	2 +
or in slow tempos	1 +	2 +			




Be aware that the "+" is said with less emphasis than counts 1 and 2.


SIXTEENTH NOTES & RESTS		
		
are counted	1 E + A	2 E + A









The count "A" is pronounced "AH".

Be aware that the counts "E" and "A" are said with less emphasis than "+" which, in turn, is said with less emphasis than the numbers 1 and 2.

In  $\frac{6}{8}$  time -in fast tempos - (two beats per measure where the  $\downarrow$  is the unit of beat)

DOTTED HALF NOTES &		
DOTTED QUARTER RESTS		
are counted - in fast tempos	1	2
in slow tempos	1 HunDred	2 HunDred
or	1 2 3	4 5 6

Notice that the  (dotted half rest) is not used

QUARTER NOTES & RESTS			EIGHTH NOTES & RESTS		
					
are counted	1	2	are counted	1 --	2 --
or in slow tempos	1 HunDred	2 HunDred	or in slow tempos	1 HunDred	2 HunDred
	1 2 3	4 5 6		1 2 3	4 5 6

Notice that when sixteenth notes are used in  $\frac{6}{8}$  time it is best to use numbers to count each eighth note: 1 - 2 - 3 - 4 - 5 - 6. Rhythms using sixteenth notes usually are played at slower tempos when such counting is easier.

SWING TIME refers to a style of music which is written in simple time but interpreted in compound time. The values of the eighth notes change from halves to thirds. It is counted in the same way as  $\frac{6}{8}$  time.

