

Metronomes

From <http://en.wikipedia.org/wiki/Metronome>

A **metronome** is any device that produces a regulated audible and/or visual [pulse](#), usually used to establish a steady [beat](#), or [tempo](#), measured in beats-per-minute (BPM) for the performance of musical compositions. It is an invaluable practice tool for musicians that goes back hundreds of years.

Most modern metronomes are [electronic](#), with a [quartz crystal](#) to maintain accuracy, comparable to those used in wristwatches. The simplest electronic metronomes have a dial or buttons to control the tempo; some can also produce a tuning note (usually [A440 hertz](#)). They range from simple credit-card sized devices to the complicated "Dr. Beat", manufactured by Boss, which can play [polyrhythms](#) and can "count aloud", using a sampled voice.

Metronome Brands, Models and Sources

There are many! Here are two I know reasonably well.

Sabine – Zipbeat 6000 – <http://www.sabine.com/sabine-music-accessories/zipbeat-6000.htm> -- This is the one I bought after Paul Hatch recommended it. It is relatively inexpensive and **works great!** I bought mine at Homestead, but I'm not sure if they still have them. Musician's Friend has them for \$24.95 – <http://tinyurl.com/ougsk>.

Boss Corporation – http://www.bosscorp.co.jp/PRODUCTS/EN/p_rhythm.html -- Boss has a broad variety of metronomes. Adam Granger uses and recommended the Dr. Beat DB-88. (This model has been replaced by the Dr. Beat DB-90.) This is a high end metronome that sells for over \$150, but for the advanced or professional player, Adam says it works wonderfully.

Sources – Homestead Pickin Parlor (<http://www.homesteadpickinparlor.com/>), Elderly Music (<http://tinyurl.com/yvfofm>), Musician's Friend (<http://tinyurl.com/ougsk>).

How to Use a Metronome

From www.ehow.com/how_8341_metronome.html

Some [music](#) requires you to play at a certain speed or tempo. By measuring the beats per minute, a metronome will help you keep time steadily without wobbling.

Instructions

- **STEP 1:** Look at the scale of numbers printed on the metronome. The numbers indicate beats per minute.
- **STEP 2:** Set the metronome at 60 (60 beats per minute) and turn it on.
- **STEP 3:** Set the speed to 120 beats per minute, twice as fast as 60.
- **STEP 4:** Start out on a low number, then gradually go higher.
- **STEP 5:** Repeat the beat of the metronome on your instrument; for instance, if you are playing the piano, hit a key on each beat.
- **STEP 6:** Read your music, [paying attention](#) to the tempo mark at the top of the page. For instance, if it says M.M.=100 (M.M. stands for Maelzel's Metronome), play the piece at a speed of 100 beats a minute. Set your metronome accordingly.
- **STEP 7:** Play your music following the pulse of the metronome.
- **STEP 8:** Turn off the metronome after you've developed a feel for the right tempo, and play the piece with the pulse in your memory.
- **STEP 9:** Try this practice with a variety of music at different speeds. You will eventually be able to memorize the right tempo for every piece you play.

Metronome speed settings

From <http://www.btinternet.com/~john.baldry/mando/metronme.html>

This is from an article on mandolins, but the principles are still the same. **This is way more technical, but it really gives a good explanation of how to use a metronome. – Tony**

Metronome speeds are often given for pieces in tablature and regular music notation.

What do these speeds mean? Well, on a traditional wind-up metronome you will see a range of speeds up to 208 beats per minute (bpm). Just set your metronome to the speed given for the tablature and play along with the beat.

Here is a lick from *The Arkansas Traveler*, complete with metronome speed:

Arkansas Traveler lick

2/4 time, 2 quarter notes (crotchet) beats to the bar

Metronome speed: quarter-note (crotchet) = 120 beats per minute



In this case the **quarter-note (crotchet)** speed is 120 beats per minute. There are two quarter-notes (crotchets) to the bar, as the lick is notated in 2/4 time. When you are playing the lick with your metronome set at 120 bpm there will therefore be two metronome beats/clicks per bar.

If you already play in a band you will know that the bass, which effectively acts as the band's metronome, usually plays **two** beats to the bar. If you practise at home with a metronome you are essentially listening for this timekeeping beat set by the bass.

A technical point

Confusion can arise because tablature/notation playback programs like [MusEdit](#) and [TablEdit](#) often use very high metronome settings, sometimes over 300 bpm. This is way off your metronome scale! Simply divide the figure by two to get the correct setting for your domestic metronome.

For example you might be told to play a fiddle tune at 240 beats per minute. Dividing this by two gives you a pretty standard figure of 120 bpm (allegro).

The reason for the inflated metronome speed entered in tab programs is that the program always measures the **quarter-note (crotchet)** speed. This is within the normal range found on a metronome if a fiddle tune, say, is notated in 2/4 time, as in the above example. However, in practice, tab writers usually find it more convenient to use **4/4** time. Here is the same lick from *The Arkansas Traveler*, played at the same speed, but notated in 4/4 time.

Arkansas Traveler lick

4/4 time, 4 quarter notes (crotchet) beats to the bar

Metronome speed: quarter-note (crotchet) = 240 beats per minute
half-note (minim) = 120 beats per minute



The quarter-note (crotchet) speed has now doubled to 240 bpm. This is because in 4/4 time there are **four** (not two) quarter-notes to the bar. **However, you should still set your own metronome to 120 bpm**, which is now the **half-note (minim) beat (two half-notes to the bar)**.

This is pretty typical of what we play in our jams. In our slow jams, we play about 70 or 80 bpm. Our intermediate to advanced jams are about 90-110 bpm. 120 bpm is moving right along – Tony

If you are now totally confused, my sincere apologies! You may find it helpful to listen to the above examples in MusEdit playback. Click to download the [4/4 example](#) of *The Arkansas Traveler* (bpm = 240 quarter notes per minute) and the [2/4 example](#) (bpm = 120 quarter-notes per minute). They should sound exactly the same.

I nearly always write bluegrass tabs in 4/4 time, and give metronome speeds in half-note (minim) beats per minute. An exception is waltz notation, which uses 3 quarter-notes (crotchets) per bar; the metronome speed is given in quarter-note (crotchet) beats. For all my tabs the metronome setting means: "Set your metronome at this speed."

Calculating metronome speeds

If you are learning a piece of music from a recording it can help to know how fast it is being played on the record. You will need a digital stopwatch and a calculator to work out the speed accurately. Here's how.

1. Play the recording, and time the beats over a selected section. You might choose the first half of a fiddle tune. For *The Arkansas Traveler* this would be 16 bars, each with 2 beats, making a total of 32 beats. The time for 32 beats might come out on your stopwatch as 16.00 seconds.
2. Divide the number of beats by the number of seconds to get the number of beats per second. In our fictitious example this is: $32/16 = 2$ beats per second.
3. Multiply beats per second by 60 to get beats per minute. E.g. $2 \times 60 = 120$ beats per minute.

This can be summarized in the formula:

Beats per minute = $(B/T) \times 60$ where B = number of beats timed and T = time in seconds

In practice you will get figures like this:

Time for 32 beats = 14.23 seconds, therefore beats per minute = $(32/14.23) \times 60 = 134.92621$. OK, lets call it 135 bpm!

To be super-accurate you can do a double check by timing the same section again and see how much variation you get. Don't forget that if you are timing, say, 32 beats you should start your watch on the beat of *one* and stop it on the beat of *thirty-three* (not *thirty-two*) to allow for the full time period for 32 beats.

You will find some variation in timing between different sections of a recording. This will usually amount to only a few beats per minute, though the greatest variation I have come across is in Flatt and Scruggs' Mercury recording of *Salty Dog*, with a range of 121 to 128 bpm. As I recall they seem to slow down a bit on the vocals, and Scruggs' banjo breaks bring it back up to speed.