

Old Time Banjo / Appendix 4 How to really tune the banjo!



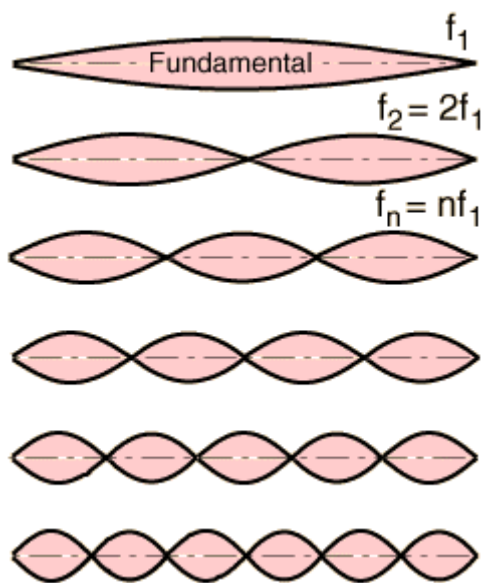
Lesson #1 of this series started out by learning to tune the banjo using the same technique that has been taught for many generations, and in many other instruction books. If you recall that far back in the book, we tuned our instrument by trying to match the string we were tuning to another string played at a particular fret. So, for example, in the Open G tuning the second string (B) was tuned to make it sound the same as the third string (G) when played at the 4th fret.

Although this method is technically accurate, the results are not always so perfect. One reason for this is the imperfect and unique nature of stringed fretted instruments. Another reason has to do with the difference between our modern “tempered” scale, and the “real” or “perfect” notes of a “just” intonation scale.

Here’s the approach I use to tuning the banjo that should result in a more accurate and pleasing sounding instrument. We’ll try this with the Open G tuning...

First of all, in the Open G tuning (g D G B D) realize there are only 3 different notes to be tuned! These three notes form the G major chord: G – B – D. Of these, the G is the root or first note, and is therefore the most important note. It’s usually the note the tune revolves around and is often the first as well as the last note played in a piece. So first find a “G” to use as a reference note to tune to from a pitch pipe, or piano, or guitar, or another banjo and tune your third (middle) string to this note. That’s our starting place.

Next, we’ll tune the short fifth string. Hey, that’s a “G” also! Only it’s an octave higher than the G string we started with. It’s the exact same note, just an octave higher. To get this higher octave G we’ll play the *harmonic* of the third string at the 12th fret. What is a harmonic? Imagine the string is a vibrating jump rope and you’re going to stop the string exactly in its middle, so each side of the string is now exactly half as long, and vibrating at exactly twice the rate it was. To play the harmonic give the open string a good pluck, then immediately *lightly* hold your index or second finger directly over the 12th fret. The note now sounds an octave higher than it did. When you do that correctly you will hear a bell like tone that is exactly the note you want the fifth string to be tuned to.



After the root or "G" note the next most important note in this trilogy (or triad as it's really called) is the fifth, in this case the "D" note. If you count up starting from "G" as the first, the fifth note you get to in this progression is "D"; that's why it's called the fifth (G – A – B – C – D). The relationship between the G and D strings is called a perfect fifth.

To start to get the first string tuned to a "perfect" D we'll have to briefly go back to our old technique of playing the third G string, this time at the 7th fret, and tuning the first string to that. When you get it close to where you think it should be

though you'll want to play the third and first strings together at the same time. Pluck them both and *listen* to what this sounds like. The interval of a perfect fifth should sound "sweet", and you should hear no offset beats (like "wah-wah-wah-wah") coming from the sound. Tune the first string until these beats completely disappear and it sounds good and sweet to you. Don't retune the middle G string though! Yes, this may take some time to hear a perfect fifth. Move the tuning of the first string up and down to practice hearing where the beats fade in and out and it sounds the sweetest.

Almost done. Now, our bass or fourth string in this tuning is also a "D". Only this time it's an octave lower than the first string. Remember, exact same note as the first string, just an octave lower. So, pluck the bass string, touch the string lightly directly over the 12th fret again to get the harmonic, then tune it until it sounds exactly the same as the first string. Try to listen for and eliminate any beats you hear until the notes are exactly the same. Remember, the first string's tuned already so don't mess with it!

Last string. This is the second string which should be tuned to a B for this tuning. The "B" which is the third note in the progression from G (G – A – B) is the next most important note after the root or first note and the fifth. Again, start to get this note by fretting the middle G string at the 4th fret. Once it's close to there you can also try to match this second string played at the 3rd fret to the first string played open. Remember though, you're only tuning this one string; don't mess with any of the others!

In reality the true note is somewhere between these two methods, but the inaccuracies of fretted string instruments and the tempered scale we use make this a bit difficult unless the instrument is perfectly constructed. So, you just have to listen! Play the third (G), second (B) and first (D) strings slowly in succession. These are the notes of a G chord. Slowly change the tuning of the second string up or down until this chord sounds good and sweet to your ears. It may take some time to hear this third interval but with practice you'll find it an easy way to go.

Some more tuning hints and reminders...

- Never turn the tuners "blind". Always pluck the string first, then turn the tuner *slowly and gently* so you can hear how far you're going.
- There are only three possibilities as to where one string's note is in relation to another string: 1) higher, 2) lower, or 3) the same! So tune in one direction only until you're sure you've gone too far. Then go slowly and methodically back in the other direction.
- It's usually easier and more accurate to tune up to the reference note, rather than down to it. So start out way below the note and try tuning up to match your reference point.
- Just tune one string at a time before moving on to the others. You can (and will) always come back later to make minor adjustments.
- For most people the higher frequency notes are easier to hear and tune to, so do those first before you tackle the lower frequency notes.