Tuning Your Guitar
When you first start playing guitar, one of the hardest aspects is actually tuning it. I find tuning to be one of the most important things because your playing sounds so much better when your guitar is in tune. Also, when other people listen to you play, it conveys a sense that you actually know what you're doing.

There are three basic methods to tuning your guitar, the first two of which will be covered in this lesson:

1. Tune your guitar relative to itself by comparing fretted notes to open strings
2. Tune your guitar using a tuner
3. Tune your guitar relative to itself by comparing harmonics on different strings.

In addition, it's important to understand the difference between a guitar being in tune with itself (relative tuning), and being in absolute tune. There are also certain nuances of which to be aware when you are in the process of tuning your guitar.

Relative Tuning
The main thing to understand about relative tuning is that a guitar can be in tune with itself, but not necessarily be in tune with another instrument, such as a piano. The low string on a guitar (i.e. 6th string) corresponds with the note 'E', and there is an absolute, known pitch and frequency associated with this note. However, if your 6th string is not exactly this pitch, it's not a big deal unless you're going to be jamming with a piano player or someone playing an instrument that isn't easily tunable. In fact, many bands don't tune to the exact frequency of an 'E'. They just tune to an 'E' on somebody's guitar, and as long as they're in tune with other, everything sounds fine. For most beginners, it isn't particularly important to be tuned to the exact pitch of an 'E'.

Absolute Tuning
If you need your guitar to be exactly in tune with a piano or if you want to be in tune with the musical examples shown at WholeNote, then you'll need a tuner or some other device that can give a reference. Fortunately, WholeNote has provided you with an on-line tuner that you can use to be exactly in tune. This will also ensure that when you play some of the musical lesson examples, your playing will be in tune with the music playback. To access the tuner, simply click on the tuner icon located in the lower left-hand corner of your browser. When the tuner window appears, click on the string that you want to tune. The strings are arranged from lowest string to the highest string (E,A,D,G,B,E).

Moving the Tuning Peg
Your guitar will retain its tuning better if you tune up to reference notes instead of tuning down. That is to say, the string that you are tuning should initially be lower in pitch than the note that you are tuning to, and you should gradually raise the pitch until it is tune, instead of being initially higher in pitch and then lowering the pitch of the string that you are tuning until it is tune. (More on this later on in the lesson.)

Relative Tuning
As stated in page 1, relative tuning is the process of tuning a guitar to itself. To begin, you need to pick a string which will be the reference point. For a beginner, this is usually the low E string (the 6th string). Using this string, you can tune the remaining strings of your guitar to put it in relative tune. For this example, we will assume that the 6th string is your reference point, and we will systematically tune the remaining 5 strings.

   Note: If you want to be in tune with the musical examples on the site, you should tune your low E using the WholeNote tuner before proceeding with the steps shown below. To access the tuner, simply click on the tuner icon located in the lower left-hand corner of your browser. When the tuner window appears, click on the button above the left-most 'E' to hear the reference note for a low 'E'. If you are not yet comfortable tuning to a reference note in this manner, don't worry about it.

Tuning Your 5th String
You can use your 6th string to tune your 5th string. If you pluck the 6th string at the 5th fret (refer to diagram below), you will be playing the same pitch as your open 5th string. This note is an 'A'. So, to tune your 5th string:
1. Pluck the 6th string at the 5th fret.
2. Adjust the open 5th string until it has the same pitch as your fretted 6th string.

**Tuning Your 4th String**
You can use your 5th string to tune your 4th string. If you pluck the 5th string at the 5th fret (refer to diagram below), you will be playing the same pitch as your open 4th string. This note is a 'D'. So, to tune your 4th string:

1. Pluck the 5th string at the 5th fret.
2. Adjust the open 4th string until it has the same pitch as your fretted 5th string.

**Tuning Your 3rd String**
You can use your 4th string to tune your 3rd string. If you pluck the 4th string at the 5th fret (refer to diagram below), you will be playing the same pitch as your open 3rd string. This note is a 'G'. So, to tune your 3rd string:

1. Pluck the 4th string at the 5th fret.
2. Adjust the open 3rd string until it has the same pitch as your fretted 4th string.

**Tuning Your 2nd String**
For all the strings so far, the 5th fret of a string has been used to tune the string above it. The only exception to this is the 2nd string, which has the same pitch as the 4th fret of the 3rd string. This note is a 'B'. So, to tune your 2nd string:

1. Pluck the 3rd string at the 4th fret.
2. Adjust the open 2nd string until it has the same pitch as your fretted 3rd string.
Tuning Your 1st String
You can use your 2nd string to tune your 1st string. If you pluck the 2nd string at the 5th fret (refer to diagram below), you will be playing the same pitch as your open 1st string. This note is an ‘E’ (the same pitch as your 6th string, but two octave higher). So, to tune your 1st string:

1. Pluck the 4th string at the 5th fret.
2. Adjust the open 3rd string until it has the same pitch as your fretted 4th string.

Congratulations, you have tuned your guitar! At this point, I always like to play a chord that I really know well (like a ‘C’ or an ‘E’) and test how it sounds. If it sounds a little off, you may want to double-check some of the strings.

Tuning in Reverse
It’s important to understand that you don’t necessarily have to tune starting at the 6th string and working toward the 1st string. For example, your 1st string might be the note that you know is in tune, and you can use it to tune the rest of your guitar. In this case, you can use the 1st string to tune the second by playing the open 1st string, and adjusting the 2nd string until its pitch at the 5th fret matches the open 1st string. Thus, you are using the same relationship between strings but switching which note is the reference point. In the first example, we said that the 2nd string, 5th fret was our good note, and used it to tune our open 1st string. In the latter example, we said that the open 1st string was our good note, and used it to tune our 2nd string.

Review the Tuning Relationships
So, to recap, here is how the strings of your guitar can be tuned by using each string to tune the one directly above it:

Absolute Tuning
As stated in page 1, absolute tuning is the process of tuning your guitar to reference pitches that you obtain from a tuning device such as the WholeNote Tuner. The main task of tuning this way is to really be able to hear the reference pitch, to hear it clearly in your head, and to figure out whether the string you are tuning is below or above this reference pitch and adjusting the tuning peg for this string accordingly. To tune you guitar this way, try the following steps:

1. Take a deep breath (optional)
2. Launch the WholeNote Tuner by clicking on the tuner icon located in the lower left-hand corner of your browser.

3. Click on the red button above the left-most 'E' to hear the reference note for a low 'E'.

4. As it repeats, sing the note out loud. This will help you internalize the pitch.

5. Adjust the tuning peg of your 6th string until its pitch is exactly in tune with the reference note. (Note: In general, it is better to detune or loosen the pitch of your 6th string and to gradually tune up to the reference note instead of being initially above the reference note and tuning down to it.)

Congratulations, you have just tuned your 6th string! Now, following the remaining steps below to tune the rest of your guitar:

1. Take another deep breath (again, optional)
2. Click on the red button above the 'A' to hear the reference note for an 'A'.
3. Adjust the tuning peg of your 5th string until its pitch is exactly in tune with the reference note.
4. Click on the red button above the 'D' to hear the reference note for an 'D'.
5. Adjust the tuning peg of your 4th string until its pitch is exactly in tune with the reference note.
6. Click on the red button above the 'G' to hear the reference note for an 'G'.
7. Adjust the tuning peg of your 3rd string until its pitch is exactly in tune with the reference note.
8. Click on the red button above the 'B' to hear the reference note for an 'B'.
9. Adjust the tuning peg of your 2nd string until its pitch is exactly in tune with the reference note.
10. Click on the red button above the right-most 'E' to hear the reference note for a high 'E'.
11. Adjust the tuning peg of your 1st string until its pitch is exactly in tune with the reference note.

Congratulations, you have tuned your guitar! At this point, I always like to play a chord that I really know well (like a 'C' or an 'E') and test how it sounds. If it sounds a little off, you may want to double-check some of the strings.

Nuances of Tuning
As stated in the previous pages, it is better to detune or loosen the pitch of the string you are tuning and to gradually tune up to the reference note instead of being initially above the reference note and tuning down to it. The reason for this is that there is a greater chance of the string slipping in its tuning peg and going out of tune if you tune down to notes instead of up. There is no hard and fast rule regarding this, but it has been my experience that the guitar stays in tune better if you follow this practice.

New Strings
New strings have a tendency to stretch and to go out of tune more frequently. Depending upon how much you play, this stretching process can be a couple of minutes or a couple of days. One thing that you can do to speed up this process is to stretch them yourself after you put them on. Go through each string, grab it with your hand around the 12th fret and tug very firmly, pulling in the direction of the bridge. The pitch of the note should drop a few frets. Tune it back up to its correct pitch and repeat this process until tugging on it doesn't produce a drop in pitch. This process does two things:

1. It stretches the string.
2. It tightens the tuning peg's grip on the string so that it doesn't slip in the peg.

Different Types of Tuning
The notes used for tuning in this lesson were E,A,D,G,B,E. This is known as standard tuning, but you should be aware that there are many other types of tuning. Slide players often tune to open major chords such as D, G, or E. Acoustic/Folk players use alternate tunings to create interesting textures that would be impossible to play in standard tuning. Even some alternative bands use different tunings for more interesting riffs and harmony. Don't be afraid to tune your guitar in weird ways. This is a great way to expand both your playing and your composing.

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