

# How to Tune a Guitar

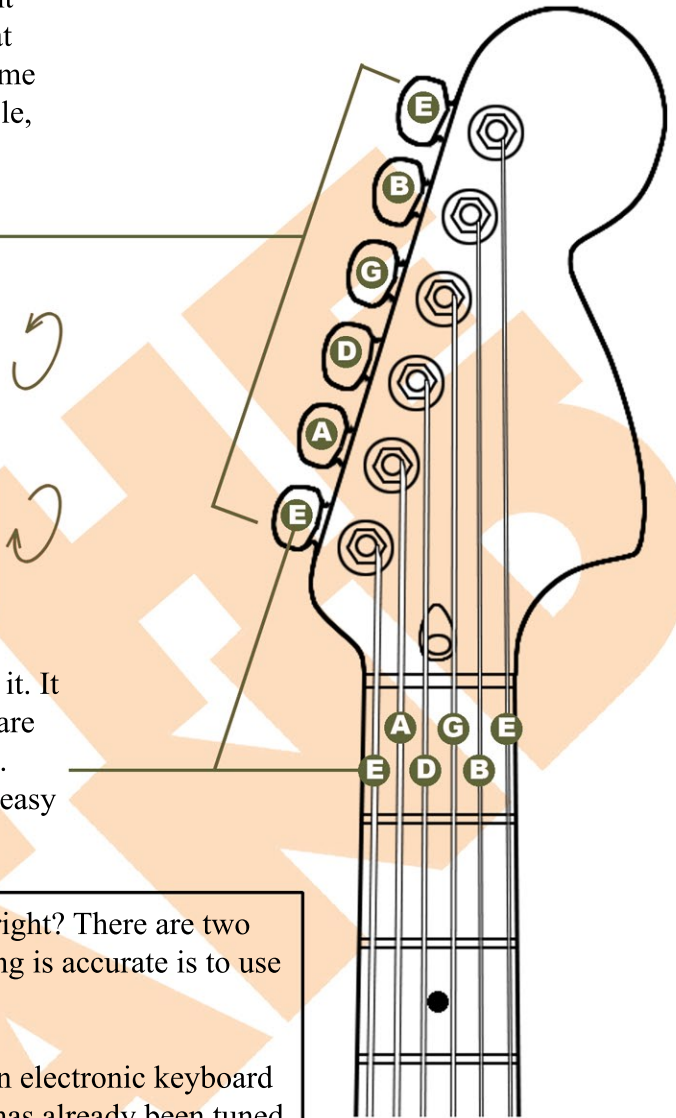
Tuning is the art of adjusting the tension on the Strings of a stringed instrument in order to achieve exact Pitches consistent with the standard Pitch of each musical Note. This ensures that each instrument can Harmonize (play multiple Notes at the same time) with itself and with the other instruments in any ensemble, assuming, of course, that *all* of the instruments are *in tune*.

Tuning is done by twisting the **Tuning Pegs**.

As long as the Strings have been attached properly, twisting each Peg to the **Left** will increase the tension on the String, making the Pitch *higher*.

Twisting each Peg to the **Right** will decrease the tension on the String, making the Pitch *lower*.

As you can see, each Tuning Peg adjusts the String nearest to it. It is very important while tuning to make sure that the Peg you are twisting is the right one for the String you are trying to adjust. While this might seem obvious, twisting the wrong Peg is an easy mistake to make and can cause Strings to break.



So how do you know when the Pitch of each String is right? There are two ways to tell, and the best method to make sure the tuning is accurate is to use both of them.

**Tuning by Ear:** Using an in-tune instrument, ideally an electronic keyboard (which is always in-tune), though a guitar or bass that has already been tuned works as well, check the Pitch of each String of your instrument against the Pitch of each Note of the instrument you know to be in tune. Play each String repeatedly and adjust the Tuning Pegs until the Pitch of each String matches the correct Pitch.

**Using a Tuner:** There are a number of different kinds of instrument Tuners, some which clip onto the instrument, some which you can plug into using an instrument cable, and others which can pick up and interpret the sound of the instrument, including phone apps. These Tuners have a visual display (see Fig. 1) which shows which Note is being played, as well as how Sharp (too high) or Flat (too low) that Note is. To use them, play each String repeatedly and adjust the Tuning Pegs until the Pitch of each String matches the Pitch shown on the display of the Tuner.\*

\*Tuners tend to be more accurate than tuning by ear, but they can sometimes malfunction. For this reason, the best method, as previously stated is to use both a Tuner and another instrument for reference to maximize accuracy.

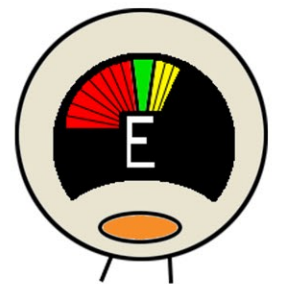


Fig. 1: This is the display of a Clip-On Tuner, indicating that the String being played is an E, but (as indicated by notches to the right of the middle) it is a little too sharp. The presence of notches to the left of the middle instead would indicate that the String is too Flat.