

CHAPTER TWO: WARMING UP

TUNING UP

The fretted electric bass is equally tempered along each string, which means the 12 semitones per octave are of equal size. This tuning system allows for rapid and acceptable-sounding changes of keys, which is required by most of the jazz, rock, and related contemporary musics for which the instrument is designed and mostly used. Intervals played across different strings, however, may reveal slight intonation problems even when the bass is considered “in tune”. This is due to a variety of reasons, including the physical condition of your bass and also acoustic phenomena which are introduced in Chapter 16, but whose details are outside of the scope of this book. You may also experience intonation variations when playing with other instruments, as they may not be using exactly the same temperament or tuning system.

There are three methods for effectively tuning your bass: with a tuner; from a reliable reference; and/or using harmonics. Regardless of the method you choose, the process should be approached slowly and carefully, so that you are tuned accurately. This approach also sets the right mood for the rest of your performance or practice. Tuning that is done hastily and as a mere formality does not give the ears and mind time to focus on the sound you create. So again, take your time during tuning.

Electronic Tuner

Using an electronic tuner for the open strings results in a good equally-tempered tuning, whereby the same notes on different strings match as the manufacturer intended. Make sure your volume is fully up when you plug into the tuner, and remember to turn the unit off afterwards. Note that for players of 5- or 6-string instruments, the low B is below the range of most tuners, and tuning the 12th-fret harmonic is necessary instead. Tuning any of the strings with 12th-fret harmonics will always yield precisely the same result as tuning the open strings, as the notes are a perfect octave higher. (See Chapter 16 for more information on harmonics.) For beginning and progressing bassists, I would suggest that this method be alternated or combined with the others so that your ears

are given a chance to be involved in the process, not just your eyes. You could also plug in your amplifier to the tuner’s output to hear the strings as you tune.

Reference Note

Tuning from a reference note involves the aural comparison of one of your strings with a reliable reference. This could be a note from the pianist or guitarist, if they’re tuned up! One possible reference is a tuning fork in E, A, D, or G. Touch it on the pickup and match the sound of the appropriate string. Listen to whether the string is lower or higher than the reference and turn the machine head accordingly. This is a skill that may take some time but is worth developing. At first you may notice a tuning discrepancy but feel unsure as to whether the note being tuned is flat or sharp compared to the reference. Listen for the oscillations in the composite sound as the two out-of-tune notes destructively interfere with each other. Take an educated guess and turn the tuning peg one direction (decreasing tension if the note seems sharp or increasing tension if it seems flat). Notice the change in speed of the oscillations - they slow down towards a zero beat as the two pitches reach equality. If the oscillations accelerate, you’re moving in the wrong direction! Once one string is matched, the others can be matched from that string in one of two ways: using harmonics (discussed below) or using fretted notes. The latter method involves matching the open reference string against a fretted version of the same note (or the same note an octave away) on the string to be tuned. For example, if you tuned your open G string, you can play that and compare the 5th-fret G on the D string. Listen for the beating phenomenon again.

Harmonics

The most popular *harmonic* method usually involves comparing the 5th-fret harmonic of one string with the 7th-fret harmonic of the string above. These should produce the same note. The untuned string is matched with the tuned one by making them *zero beat* in the same manner as discussed above. Note that the harmonic method creates slight discrepancies with *equal temperament*, because the intonation of the notes of the harmonic series differs from equally-tempered notes. (The reasons for this are discussed in Chapter 16.). What this means is that each of your