

## CHAPTER FOURTEEN: BASS PHYSIOLOGY

Figure 14-1 identifies the main components of the electric bass. You may find slight differences in the design of your bass, but the physique remains basically identical. The goal of this chapter is to examine these parts in detail so that you will be better equipped to maintain your instrument, and also more informed when you are in the market to purchase a new or used instrument. I hope that in the process, some aspects of the bass and its construction will be demystified for you, while others that you simply took for granted will now create a sense of new awareness and awe!

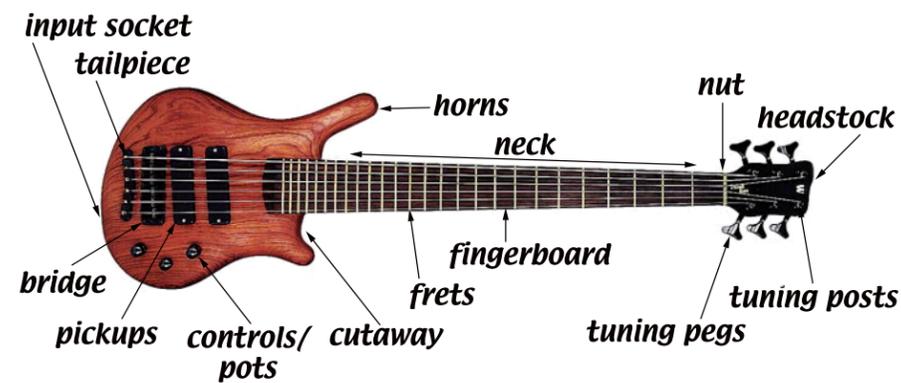


Figure 14-1: The bass guitar and its main components

Please note that in string descriptions and luthier-related terms, measurements can be made in the metric or imperial systems. An inch is symbolized by the quotation symbol (“), and millimetres are abbreviated mm. It is best to carry any of the work mentioned in this chapter in brightly lit conditions, so that you can see what you’re doing. The work area should be clear of debris so that you don’t lose screws and other items that you may remove. The work surface should be felted or of a non-scratching material. Don’t attempt any adjustments without the proper tools, and if you feel the task is beyond your ability, don’t do it! (I don’t want to receive bags of parts in the mail with letters asking for your bass to be reassembled!)

For detailed information on 6-string basses, and their physical considerations as compared to 5- and 4-string basses, please refer to Chapter 17.

### BREEDS OF ELECTRIC BASS

It can be overwhelming trying to choose a new instrument, as there are so many breeds of bass. The 4-string fretted variety is still the most common, but 5- and 6-string basses are also to be found in most major stores and are featured in all kinds of bands. Apart from the number of strings, there are fretless versions of all these as well. And when you start to consider woods, types of pickups, etc. it can

become, as I said, overwhelming! If you are a beginner, bear in mind that the “traditional” bass look and sound is still the classic 4-string fretted Fender Precision. You might be best learning on this instrument (or one of its many clones by other companies) and seeing how things develop over time.

### Number of strings

The first choice for many is 4-string or more-string?! Remember that more strings means more range and possibly less position-changing, but the choice may be intertwined with other factors such as string spacing and scale, so consider these aspects too. (I will discuss these factors below). More strings also means more strings to keep dampened from unintentional vibration, so they come with a significant technical requirement (see Chapter 17). So you need to ask yourself what kind of music you are going to be mostly playing on the bass, and what kind of sound you are trying to produce. Do some research of your mentors and idols and see what they play. If you are looking for an extended-range instrument, you may also find unusual types such as 7- or 8-string basses from time to time.

### Fretless

Playing a fretless bass guitar rather than a fretted bass obviously requires skill in intonation as you play over the fingerboard. Even playing across the strings in the same position can be challenging, as using multiple fingers on the same “fret” creates tuning discrepancies - it is almost impossible to line up fingers precisely behind each other.

The action of fretless basses is often set up lower as there is no danger of fret-buzz. It is probably more critical to choose an instrument with a straight neck and flat fingerboard than with a fretted bass.

Fretless fingerboards are sometimes marked with fret lines, and sometimes are left blank. For 4-string fretless basses I believe it’s a personal choice, but I strongly recommend fret lines on instruments with more strings. (Jaco Pastorius’ Fender was originally fretted, so he had lines remaining where the frets used to be!)

Some fretless bassists choose to get their fingerboard coated with polyurethane (an epoxy resin that creates a hard, glassy finish) in order to protect the rosewood or ebony from the abrasive action of the strings. This does change the sound significantly, in that it becomes more “trebly” and less “woody”. The fingerboard, whether coated or not, needs to contact the string cleanly in one spot, otherwise you will hear “dead spots” up and down the instrument where the *timbre* changes from a bright sound to one that is suddenly dark and non-sustained.

There are several advantages of playing a fretless instrument. One is the variety of articulations achievable by depressing the fingers of the left hand with varying pressure. The absence of frets eliminates the risk of buzz as the string partly contacts the fingerboard. The nuances of the string being fretted by flesh rather than steel (frets) make for a more lyrical sound which can be shaped during the note’s decay by subtle left-hand vibrato. Portamento (slides) can of course be applied to just about any-