Are you in the dark about gizmos, split-Es, or wall thickness? If you're an advanced high school flutist looking for a new flute, you will want to know about these and other features that are possible to have on new flutes before you go shopping. Most of these features can be added to a basic professional level flute for an additional cost of a few hundred dollars, but are worth considering.

One thing you will have to decide on is the wall thickness of the flute. Standard thicknesses are .010", .014", .016", and .018". Generally, flutes with smaller thicknesses have lighter, brighter sounds, while larger thicknesses have darker, richer sounds. The most common thicknesses are .014" and .016".

An additional feature to consider is the pitch of your instrument. Flute makers give buyers the option of having the instrument pitched at A-440, A-442, or A-444. Traditionally, orchestras tune to A-440, but the pitch standard has changed slightly over the years. Today many orchestras play at A-442, and most flutists generally have their flutes pitched at A-440 or A-442.

Another choice to make is whether to buy a C foot or a B foot. A B foot joint has one extra key beyond the C key that allows players to produce a B below the staff. Flutes with B foot joints cost a few hundred dollars extra, and low Bs are rarely called for in music.

However, low Bs do appear in advanced repertoire, and some flutists feel that the extra key helps intonation in the high register. On the other hand, some feel it makes high notes harder to produce and makes low notes flat. It also adds a bit of extra weight to the flute. Most professional flutists these days play with a B foot, and many feel that it gives a fuller, darker sound and improves the response of high F-sharp, a traditionally tricky note for flutists. Another alternative is to have a C foot with a B foot attachment. This is a removable piece with one key that allows players the option of playing with a C foot while being able to produce a low B when it is called for.

One of the most standard additional features added to flutes is the gizmo key. (That's really its name!) This key is attached to the foot joint and operates the low B key independently of the C-sharp and C keys. It is used only for high C, and makes this note speak more easily.

The D-sharp roller is another option that helps the uncomfortable fingerwork required of the pinky for the foot joint. A roller like the C and B rollers placed vertically on the outer edge of the D-sharp key eases the shift from the D-sharp key to the C-sharp, C, and B keys.

The split E mechanism improves the tone quality and intonation of high E by separating the action of the two G keys on either side of the A-flat key. A removable item called a doughnut ring performs the same function and is not as expensive. The result is that high E is better in tune and easier to produce. It also makes slurring from A to high E easier and generally makes large intervals approaching high E easier.

The C-sharp trill key improves the quality of C-sharp and improves several difficult trills including B to C-sharp, high G to A, high F-sharp to G, and high G to A-flat. A lever that controls a large C-sharp hole next to the regular trill holes is operated by the right index finger.