



Scale Length—How Does It Affect Your Sound?

One very significant factor affecting the tone of your bass is scale length—the vibrating portion of a string, from the bridge saddle to the nut. For many years the industry standard for electric bass was 34" scale, and the majority of four-stringed instruments still conform to this. But when five- and six-string basses became popular, manufacturers experimented with longer string lengths to increase the clarity of the low B string. If you have ever looked inside a piano, you'll notice that the bass strings are longer, while the treble strings get progressively shorter. Essentially, the lower the note you want to produce, the longer the string needs to be to maximize the fundamental tone. The industry standard for five-string basses has gradually shifted to a 35" scale—that extra inch adds just enough tension to give the low B string better tone, feel, and articulation. Some custom builders are making instruments with 36" scale, and yet on the other end of the spectrum, you also have short-scale (30") and medium scale (32") instruments on the market. This raises an important question: what set of strings will fit my bass?





SLIDING SCALE

The first thing you need to determine is the scale of your instrument. Start by measuring the distance between the bridge and the nut—that is your effective scale length. This distance varies from one manufacturer to another. For example: a Fender™ four- or five-string bass is 34", but in contrast, Lakland™ makes their *four*-string basses 34" scale, while the same model in a five-string version is 35". MTD™ American-made instruments are all 35" scale – even the four-strings. Gibson™ makes basses with a variety of scale lengths: the EB™ series have a 30.5" scale, while Thunderbirds™, Rippers™, Grabbers™, RDs™, and Les Paul™ Signature sport a 34.5" scale. The moral of the story is: make sure you measure the distance between the nut and the bridge!

TAKE IT TO THE BRIDGE

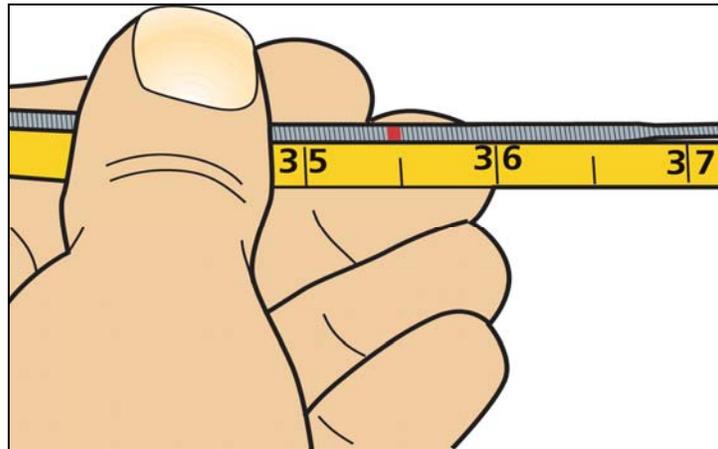
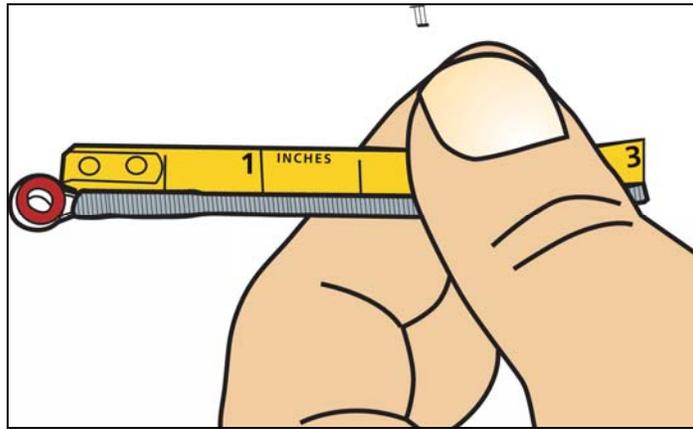
Another important factor that affects your string length is bridge design. Is your bass strung through the bridge or through the body? When the strings are mounted through the body, there are two variables. The ball end of the string rests in a metal cup called a *ferrule*, which prevents the metal ball end from contacting the wood of the bass body. Some instrument makers (like Carvin™ for example) use a deep-set ferrule, so the ball end is as close to the top of the instrument as possible. This adds virtually nothing to the total string length (but it does give you increased down-force on the bridge saddle for better contact with bridge mounted piezo pickups.) Other instruments, like Fender™ American Standard and Deluxe models, use a shallow ferrule, which places the ball end closer to the back of the instrument. This can add between 1" to 1.25" to the total string length, depending on the thickness of the body. Ferrule depth can affect whether a tapered or non-tapered B string will work on your bass, or if the silk wrapping at the end of the string will cross over the nut.

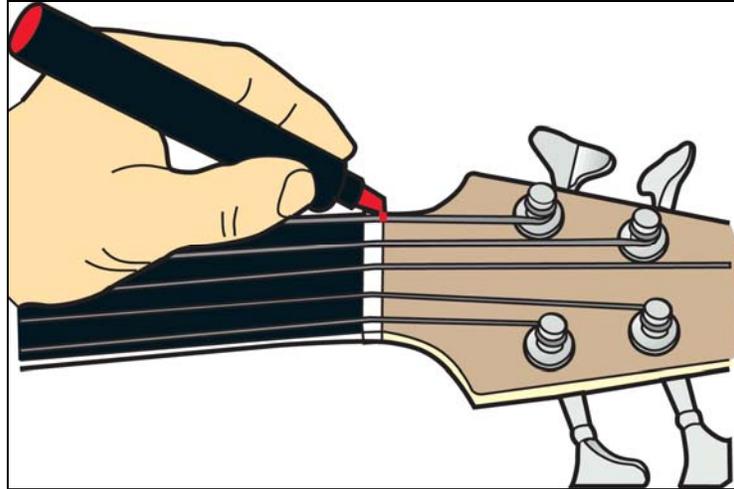
Another type of bridge is the floating bridge/tailpiece design which anchors the strings at a point toward the butt-end of the instrument, while the bridge is a separate unit closer to the neck. Warwick™ uses this design, as do many older instruments. One advantage of this setup is the ability to have a longer total string length (which increases tension and clarity of fundamental) while maintaining a 34" scale (or shorter) effective scale length.



MEASURE IT!

As you can see, there is more to figuring out string length than meets the eye, however—the most accurate way to determine your total string length is to mark the lowest pitched string on your bass (while installed) at the nut with a marker. Take the string off the bass and measure from the inner edge of the ball end to the mark you just made. Record this length and compare to the chart below to find the proper string length for your bass.





Length	String Scale Required
Up to 32"	D'Addario Short
32" to 34"	D'Addario Medium
34" to 36"	D'Addario Long
36" to 38"	D'Addario Super Long

EARTH TO BASS STATION™

Once you've determined the scale length of your bass, you can choose from a wide variety of gauges and wrap-wire materials to find the perfect set for your musical purpose. If you play five- or six-string bass, you have even more options available to you at D'Addario's Bass Station™. The Bass Station allows you to pick your preferred four-string set and custom-select your B or C strings. Prefer a ProSteel™ non-tapered .130 B below a set of XL™ Nickel Rounds? It's yours! Do you want to try a slightly heavier C string? You can buy one separately to try, and one of your old standbys just in case. The Bass Station revolutionizes buying strings by making all of D'Addario's many options open to you.