



THE YAMAHA GUIDE TO CHOOSING A BASS GUITAR



ALONG WITH DRUMS, BASS GUITAR rounds out and anchors the overall sound of a band. A good bass player adds flavor and depth to the rhythm. An experienced player can also contribute rich harmonies and low-end solos. Because the instrument is used in virtually all modern musical styles, talented bass players can usually find work with bands quite easily.

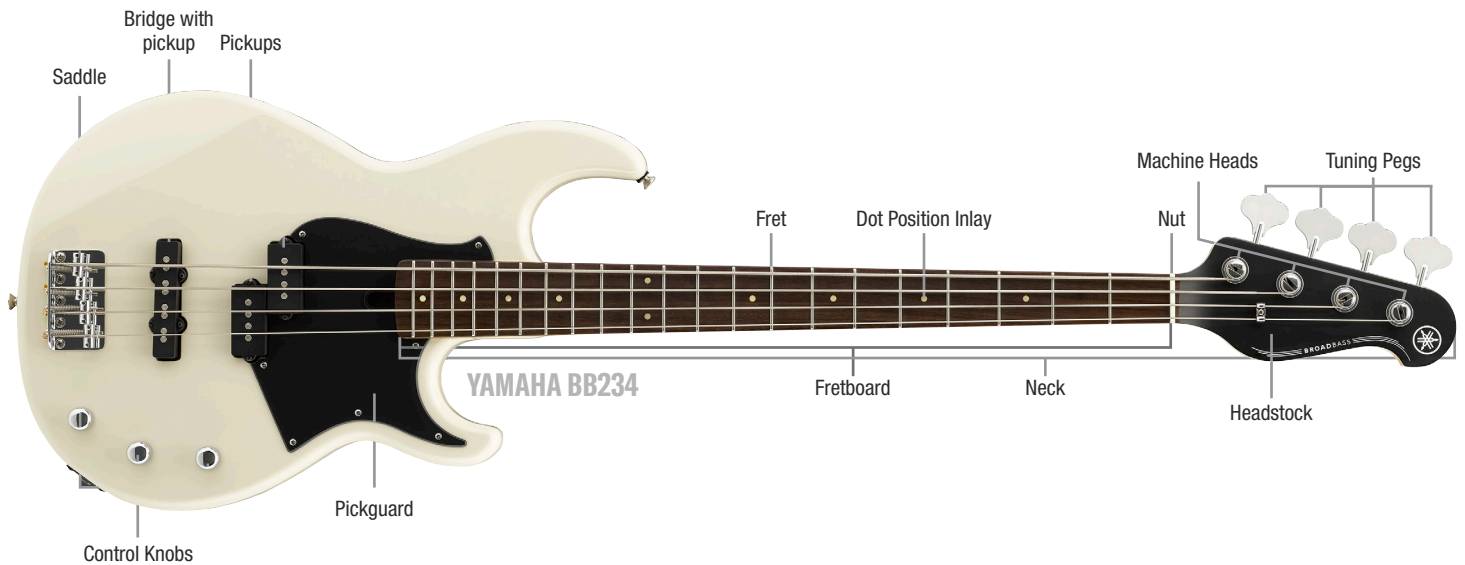
The bass is comparatively simple, straightforward and fun to learn. But before you select your first instrument, it's important to know some basics of bass.



Bass guitars vary widely in quality and price, so before you start looking, determine your budget and how you intend to use the instrument. Beginners can find a variety of good, affordable starter basses, such as the Yamaha TRBX174 and BB234. They both come from established series — the [TRBX](#) and [BB Bass](#), respectively. Yamaha has more than 50 years of experience handcrafting electric basses for players of all levels and the company's philosophy is to make a beginner's experience as positive as possible. So, although these two models feature slightly lower grade hardware and electronics than top-of-the-line options, their playability helps new bassists excel during the early stages of learning and performing.

Experienced and dedicated players may want to invest in an instrument with richer tone woods, better electronics and upgraded hardware. A higher-quality bass will sound better, feel better and serve a musician longer. At the top of the TRBX and BB lines, they'll likely find exactly what they're looking for.

It's important to have a good understanding of the parts of a bass guitar before you start shopping. Understanding how the instrument is designed and built, as well as knowing its different parts, will help you to ask the right questions and make an informed decision.



NECK COMPONENTS

The neck of a bass guitar includes the headstock, fretboard and internal truss rod that connects to the instrument's body. Necks should be strong and rigid to provide years of reliable use. For instance, the necks on Yamaha [TRBX500/600](#) series basses are made of five pieces of wood. Whichever model you choose should be similarly well-fortified if you intend to play often.

Headstock: The headstock is the wide portion at the top of the neck, where the bass strings terminate at tuning pegs. These tuning pegs — also called tuning keys, tuning machines, or tuners — adjust the tension of each string, which changes the pitch. The strings are routed down the neck by the nut, a notched strip of hard plastic or bone attached to the top of the fretboard where the headstock meets the rest of the neck.

Fretboard: The fretboard, or fingerboard, is usually a thin piece of wood, typically made from rosewood, maple or ebony. (Some basses have fretboards that are an integral part of the neck rather than a separate, glued-on layer.) All are excellent woods but can vary in quality. The best fretboards are smooth, hard and dense so that they wear slowly. Fretboards are usually arched from side to side. This arch is called the radius, referring to an imaginary circle that would be formed if the arch of the fretboard were extended to make a circle. Some bass fretboards are close to flat while others may have a radius as short as 10 inches. The shorter the radius, the more pronounced the arch of the fretboard. The fretboard is embedded with frets, which are narrow strips of metal. They divide the neck into half-step increments and determine where each note is played along the length of the neck. Most basses have 21, 22 or 24 frets. Which option you choose is a matter of personal taste.

Fretboards are either coated or uncoated. Coating helps produce a whining, trebly “fretless sound” and longer sustain, which wears much longer with round-wound strings. Uncoated fingerboards have a warmer, more natural sound.

Truss Rod: Inside the neck is a metal rod that helps prevent the neck from bending or twisting. Bass strings are thicker than guitar strings and create a lot of tension on the neck. Truss rod adjustments allow the neck to be straightened if it becomes bowed or twisted and are also used to adjust string height for optimal playability.

TYPES OF BASS NECKS

There are three kinds of necks and their names indicate how they are attached to the body:

- Bolt-On
- Set-Neck
- Thru-Body



Bolt-On: Most basses have bolt-on necks — the neck is bolted onto the body. The bolts should keep the neck stable and should not allow any up or down shifting. A solid, tight connection between the neck and the body is essential. It’s also good to have more rather than less overlap of the neck and body for greater stability, better string vibration transfer and enhanced sustain. Yamaha introduced a series of instruments that features a 5-ply maple and mahogany laminated neck in a bolt-on design that delivers a sharp attack and quick response. This durable construction is resistant to warping and twisting and adds the tight, penetrating character of maple combined with the warm tones of mahogany. Yamaha also uses a 6-bolt miter joint to attach the neck. Miter bolting holds the neck closer and tighter to the body, fusing these two separate components into one. Compared to a conventional bolt-on joint, miter bolting offers a more efficient transfer of string vibration throughout the body for improved sustain and outstanding resonance that brings every note to life. This is available on the [BB Pro](#), [BB700](#) and [BB400](#) series.



Set-Neck: Some bass guitars have set-necks where the neck is attached to the body with a mortise or dovetail joint rather than using bolts. A set-neck creates better resonance and sustain but can be more difficult to adjust.

Through-Body: Higher-end basses feature through-necks, a continuous piece of wood that goes through the body. Wings are attached to each side of through-necks to form the upper and lower parts of the body. With a through-neck, there is no joint between the neck and body that can inhibit vibration, resulting in better response and sustain. The Yamaha [BBNE2 Nathan East Signature Bass](#) uses this construction.

Top: 6-Bolt miter neck joint,
Bottom: Through-neck

NECK SHAPES

Necks come in six shapes: round, oval, flat back, “V” and asymmetrical (thinner either on the bass or treble side). Which should you choose? That depends entirely on what is comfortable for you. The shape doesn’t determine the sound of the instrument, it’s purely an ergonomic consideration. In other words, you’re going to need to hold and play several instruments to find your ideal choice.

Most jazz bass models have a “modern C-shape” neck that is usually made of maple, with maple, rosewood, or Pau Ferro fingerboards available. The neck maintains a consistent thickness and tapers in slightly as it approaches the nut. The strings are in a noticeably narrower spacing at the nut, which gives it a distinct “tapered” feel that some players say leads to easier fingering.

SCALE LENGTHS

Scale length is the distance between the nut and bridge — where the strings are anchored at the tail end of the body. The most common scale length is 34 inches. There are a few short-scale basses, which measure around 30 inches. These are a good choice for young players with small hands who may have trouble playing a standard-size instrument.

A long-scale neck usually is usually 35 inches. This extra distance gives players a few more frets and is most often used for five- and six-string basses. It also improves string tension and minimizes floppiness on the low strings.

BODY TYPES

There are two types of electric bass bodies: solid-body and hollow-body.

Solid-Body: These are the most common basses. In better instruments, solid bodies are usually made of a solid piece of wood, usually alder, maple, swamp ash, mahogany or some other wood that transfers vibration well. All Yamaha electric basses are made from either solid alder or mahogany. In lower-priced basses, the bodies may be made using laminated wood plies, softer woods, or pressed woods. There are even basses with plastic bodies.

Hollow-Body: These instruments are hollow, like an acoustic guitar, but use the same magnetic pickups as solid-body basses. Hollow-body basses are used mostly by jazz and folk players, and for quieter music that requires a more acoustic-like tone. They’re lighter but they are usually limited in the volume they can produce because they feed back more easily than solid-body basses at high volume. There are also a few semi-hollow-body basses that have a solid center block and hollow outer halves of the body. They are less prone to feedback.

Another type of hollow-body bass is the acoustic-electric. This is really an acoustic instrument usually equipped with a piezo pickup that allows it to be amplified. Most often, the pickup is located under the bridge while an onboard preamplifier allows tonal adjustments when the bass is amplified.

BRIDGES

The bass guitar's strings terminate at the bridge, where their vibrations are transmitted to the body, creating the resonance and tone that the pickups capture and amplify. The strings pass over notches, called bridge saddles, which can be moved up and down to adjust the action, or forward and back to adjust intonation. Better bridges are made of brass and are often plated with chrome or nickel silver. A bridge with more mass and weight will usually anchor the strings better and transfer more vibration from the strings to the body.

There are three different bridge types on most electric basses:

- Through-Bridge
- String-Through Body
- Bridge-and-Tailpiece Combination

On a through-bridge, the strings are threaded through the back of the bridge and over the saddles. On a string-through, the strings are fed through the body of the bass and over the saddles. A bridge-and-tailpiece combination feeds the strings through a separate tailpiece that is not connected to the saddles.

UNIQUE YAMAHA BRIDGE AND SADDLE

The Yamaha [BB Series](#) basses incorporate diagonal-body-through stringing where strings are angled at the saddle and pass through the instrument to the bridge at a 45° angle, as opposed to the traditional vertical stringing method that places more stress on the strings. Diagonal-body-through stringing significantly reduces this stress while transferring string vibration to the body reliably and efficiently. Strings can also be set to the tail end of the bridge, which comes equipped with a convertible saddle that can be adjusted to two different angles for more precise tonal shaping and feel. The rounder side of the saddle gives a slightly duller sound, while the more angled area of the saddle produces a slightly tighter sound.

The Yamaha [BB700](#) and [BB Pro](#) are equipped with the vintage plus bridge, designed with a diagonal cut at the string's contact point on the saddle to form a more stable fulcrum. This produces a clear, well-shaped sound.

Brass saddles deliver a slightly deeper low-end while steel bridge plates offer more response. All screws and springs are made from stainless steel to guard against corrosion. The [BB400](#) features a vintage-light bridge with an offset low E string.



Diagonal-body-through stringing

PICKUPS: SINGLE-COIL OR HUMBUCKER



From top: Single-coil, humbucker, split-coil

Pickups are electromagnetic devices that capture the sound created by the vibrating strings and body of the bass, converting it to an electronic signal. Most basses have two sets of pickups to provide a greater tonal range. Pickups closer to the fretboard have a smooth, low-end sound while the pickups closer to the bridge have an edgy, mid- to high-end tone. The most common types of pickups are single-coil and humbuckers, and most others are simply variations on one of these two types.

Single-Coil: Single-coil pickups were the original and they're the simplest. Each pickup has only one coil and one magnet, which creates a bright, focused sound. These pickups can be noisy, which is why humbucking pickups were developed.

Humbucking: Humbucking pickups were created to cancel the hum or noise of the single-coil. They have a fatter sound that can get muddy at higher volumes.

Split-Coil: A common variation is the split-coil pickup. It's a single-coil pickup wired to function like a humbucker. Two halves of the pickup are separated, and one side is reversed in polarity to the other. With the split-coil, you get a tone that is closer to the single-coil sound but with the quietness of the humbucker.

ELECTRONICS: PASSIVE VS. ACTIVE

The terms active and passive refer to the preamp circuitry of the bass. The preamp boosts the pickups' output and provides tone-shaping controls.

Passive: Passive preamp systems operate without any power source and have fewer controls, usually a volume knob, a tone knob and a blend control if there are two pickups. One advantage of these systems is that they don't depend on a battery that can die in the middle of a performance. Another plus is the simplicity of operation. Passive electronics have a lo-fi sound that some players prefer to the hi-fi sound of active electronics. The Yamaha BB200, BB400 and BB Pro basses have a passive tone circuit.

Active: Active basses need power, which is usually supplied by an onboard battery. The advantages of an active preamp system are stronger output and more control over tone shaping. Active basses often have separate equalization (EQ) controls that are divided into frequency bands, such as a low-, mid- and high-frequency boost/cut controls. They can also have contour switches that instantly reshape the EQ profile. Some active basses have controls that let you change the wiring of your pickups on the fly from series to parallel for dramatic tonal shifts. A coil tap switch found on some basses with active electronics deactivates one set of coils in a humbucking pickup to make it sound like a single-coil pickup. You can find this feature on the Yamaha [TRBX204](#) and models with higher numbers, as well as on the versatile [BB734a](#).

HOW MANY STRINGS?

Four-String: Most basses have four strings. Beginning players should start here. These basses are perfectly adequate for most musical styles and the necks are smaller than those on five and six-string basses, making them easier to handle, learn on and play.

Five-String: These basses add a lower B string, giving the instrument a deeper range. The neck of a five-string bass is wider than a four-string, making it a little harder to play. Five-string basses are popular with some hard rock, metal, fusion and jazz bassists.

Six-String: These instruments have an even more extended range due to their low B string and high C string. Six strings require the widest neck yet, which can be difficult for players to handle. Though challenging, they're ideal for bassists who do a lot of soloing as they widen the range and provide room for greater creativity.



FRETLESS BASSES

Standard bass guitars have fretted necks with metal frets dividing the fingerboard into half-step increments. These frets make it easy to see where each note is played on the neck. A fretless bass has a smooth neck, like an upright bass or violin. Hitting the right notes with the right intonation is challenging and not suitable for beginners. Fretless bass players rely on muscle memory and a well-trained ear. They choose the fretless bass for its smoother, warmer sound and its ability to provide glissando effects like a stand-up acoustic bass.

BASS TONEWOODS

The type of wood used in the body of a bass guitar will impact its tone and resonance. New players don't need to be too concerned with the type of wood used for their bass body but if you're looking for a specific sound, then the body wood could be an important factor.

Alder: Often used for bass guitar bodies, alder creates a very balanced tone with great clarity and a very full sound.

Agathis: A popular body wood because it is relatively inexpensive, agathis provides a balanced tone with a slight emphasis on low-mid tones that gives it a rich sound.

Ash: Several ash species are used to make bass guitar bodies. They have subtle differences but, in general, ash produces a bright, full sound like alder. Swamp Ash is popular due to its beautiful grain.

Basswood: Frequently used on less expensive instruments, basswood is a softer wood that does not resonate as much as other tone woods. Some bassists think basswood creates a flat sound while others feel the short sustain is ideal for fast, complex playing techniques.

Mahogany: A popular tone wood, mahogany produces a soft, warm tone that emphasizes the lower range and low-mid tones and creates longer sustain. It's a dense wood and will feel heavier on your shoulder than ash or agathis.

Maple: A dense wood, maple creates a well-sustained sound like mahogany. Maple produces a bright, clear tone that many musicians find valuable in a studio setting.

Many other woods are used for bass guitar bodies. High-end models may be made of exotic species such as bubinga, wenge, koa or cocobolo.

ACOUSTIC BASSES

With all the same characteristics of a six-string acoustic guitar, an acoustic bass produces sound through a resonant hollow body. This allows you to play unplugged with a full-bodied, robust sound, which is sometimes more appropriate for acoustic music. However, there are many models of acoustic-electric bass guitars, which give you the hollow-body sound of an acoustic bass with the ability to plug in to an amp for additional volume.

WHICH BASS IS RIGHT FOR ME?

Here are a few guidelines for the first-time bass buyer to consider:

- Buy the best bass guitar you can afford. A good bass will make learning easier, and you won't outgrow it as quickly.
- Choose a fretted instrument unless you are ready for a big challenge.
- Choose a short-scale bass if you're young, small or have unusually small hands.
- For simplicity's sake, choose a four-string instrument.
- Select a bass with simple controls so you can focus on the strings and not be distracted by knobs.
- Choose a bass in a color and shape that appeals to you. Its looks won't make it sound better but a cool-looking bass can motivate you to play more.

LEARN MORE

Please visit our [website](#) to see the full lineup of Yamaha electric basses. If you have any questions or would like more information on Yamaha products in worship, please visit [our worship site](#) and select Contact Us from the top menu. We look forward to hearing from you.