



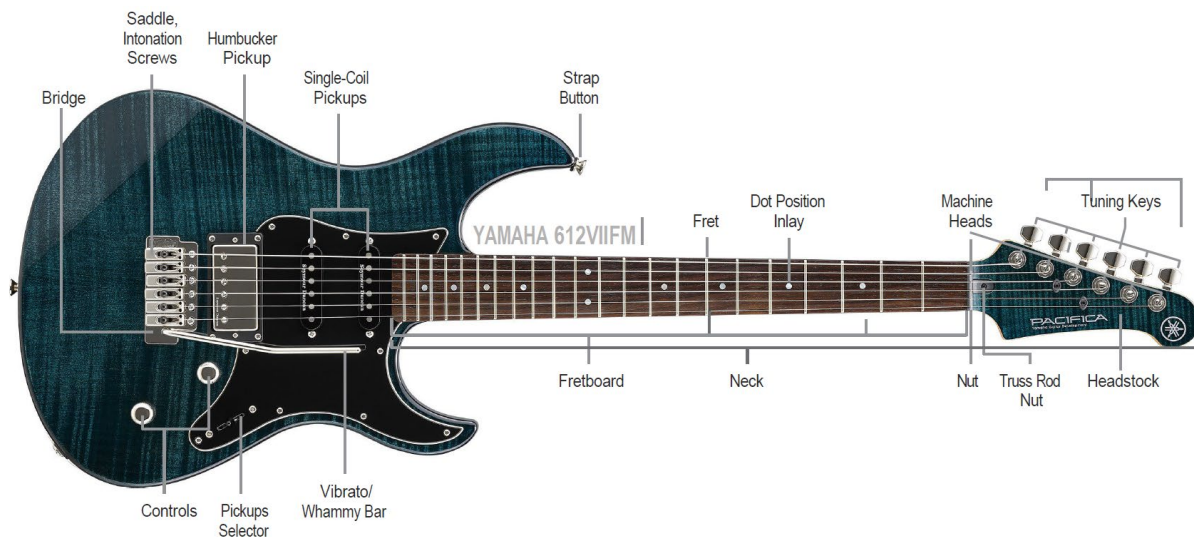
THE YAMAHA GUIDE TO CHOOSING AN ELECTRIC GUITAR



When it comes to choosing an electric guitar, there are a great number of options. Yamaha created this guide to help you understand the basic differences in electric guitars so you can make an informed decision.

HOW AN ELECTRIC GUITAR WORKS

While styles and models vary, all electric guitars work on the same general principles. A pickup mounted on the guitar's body functions as a magnetic field. When a metal string is plucked and vibrates, it generates a current. That current is transmitted by the pickup to a preamp circuit with tone controls, then through the guitar cable to the amplifier. The amplifier boosts the signal and changes it with various tone controls and effects, depending on the amp's design and capabilities. The signal is then output to a speaker, which converts it to sound waves. The type of pickup(s), tone controls, strings, playing techniques, and other factors built into the guitar's design influence the signal that is sent to the amplifier. In short, each part of the guitar affects how the guitar sounds.



ELECTRIC GUITAR BODY TYPES

There are three basic electric guitar body styles, each with its own characteristics :

Solid Body: The solid body is the most common body type and is made from a solid slab of wood. These guitars can range from a single-pickup model to an ornately figured and decorated, multi-pickup instrument with various electronic options. Although solid body guitars don't produce as much resonance as hollow-body models, the wood still has an impact on the instrument's sound. Yamaha makes a variety of solid body electric guitars including the [Pacifica](#) and [Revstar](#) series.

Hollow Body: As the name suggests, these electric guitars have bodies that are hollow, like an acoustic guitar. They produce more resonance due to their design. Hollow body guitars usually feature an archtop and are more prone to feedback. Jazz guitarists often prefer the hollow body for its full, rich tones and deep bass response. The [Yamaha SA2200](#) is a prime example of a classic hollow body guitar.

Semi-Hollow Body: Like the hollow body, the semi-hollow has more resonance than a solid body guitar. However, semi-hollow guitars are designed with a solid center wood block that adds stability and sustain. It also helps cut down on feedback. Blues and country gospel players like the warmth of the semi-hollow and the increased attack and sustain offered by the center block. Semi-hollow guitars can be great for a variety of music styles, from gospel to blues to jazz.

PICKUPS AND ELECTRONICS

In addition to the body style, pickups and electronics have the greatest effect on a guitar's sound.

Single-Coil Pickup: This original pickup design is also the most basic. A single-coil is composed of a magnet with fine wire wrapped around it that creates a magnetic field that captures the strings' vibrations and converts them into an electronic signal. Single-coil pickups tend to sound bright and crisp. They produce tones that cut through dense band sounds well, but they are prone to generating hum and can be subject to magnetic interference.



Two single-coil pickups (top) and a humbucker.

Humbucker Pickup: Designed to address hum while offering tonal characteristics beyond single-coil models, the humbucker design incorporates two single-coil pickups wound together. The polarity of the magnets is arranged opposite to each other, which helps to stop hum. Humbuckers usually have a thicker, louder, and more powerful tone compared to single-coil pickups. While they are versatile, humbuckers lend themselves to rock, heavy metal and jazz.

Piezo Pickups: This pickup style consists of crystalline sensors embedded into the saddle of an electric guitar. Piezo sensors work on mechanical vibration — not magnets — to convert sound from vibrating strings into an electric current. These pickups can be used to trigger synthesizer or digital sounds like an electronic keyboard. Most often, piezo pickups on an electric guitar are used to simulate an acoustic guitar tone. Piezo-equipped guitars often include magnetic pickups to expand their tonal versatility.

ACTIVE PICKUPS AND ELECTRONICS

Guitars can be equipped with active pickups that require batteries as an energy source and incorporate a preamp for sound-shaping. Active electronics may also include filters and equalization circuits for added sound control. Guitars with active pickups generally have a higher output than magnetic pickups and produce a cleaner, clearer sound.

PICKUP SWITCHING AND OTHER CONTROLS

Most electric guitars feature multiple pickups. There can be two or three single-coils, while others have two or three humbuckers. Others may offer a combination of single-coil and humbucker pickups, which gives players a range of tonal options. Pickup configurations are often abbreviated by referring to a single-coil with an “S” and a humbucker with an “H.” The letter configuration indicates the placement of each pickup from the neck to the bridge, so an “SSH” label means that single-coil pickups are located at the neck and middle positions and a humbucker at the bridge. The [Yamaha Pacifica 611H](#) is an example that combines different pickups to get a variety of sounds.



A pickup selector switch (right) along with volume and tone knobs.

The placement of pickups has a significant influence on the tone they generate. Pickups near the bridge sample the strings where they have the least overall motion, so the result is accentuated treble sounds or “bite.” Pickups near the center of the strings, or closer to the neck of the guitar, produce a tone with more midrange and bass sounds.

Guitars with multiple pickups have controls that allow players to choose each pickup individually as well as combinations of two or more pickups simultaneously. The controls may be rotary knobs, blade selectors or toggle switches that allow quick access to various pickup combinations while playing.

In addition to the selection of pickups, most guitars have volume and tone controls. Volume controls regulate the strength of the output signal and, depending on the amplifier being used, can control tone as well as volume. Most tone knobs control high frequencies. Many guitars have separate tone controls for each pickup, which can vary the guitar’s sound from soft, warm and mellow to very bright, raw and distorted.

Other switching options control phasing between pickups for unique effects, eliminate one coil of a humbucker or toggle the output on and off.

There are guitars that have digital technology built-in to allow players to access a variety of sounds, including acoustic, 12-string and resonator guitar tones; violin; piano; and other sounds traditional

electric guitars can't produce. Other options include emulating alternate tunings without physically adjusting the strings.

SCALE LENGTH

Scale length refers to the length of the string that vibrates, and it's measured from nut to bridge. A longer scale length offers more string tension, with a brighter shimmer and well-defined low end. A shorter scale length delivers less tension, which helps with easier string bending. Also, the shorter scale is easier for smaller hands to play and offers a generally warmer tone.

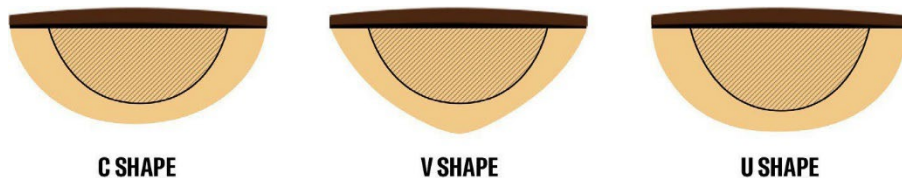
Here is a comparison of scale lengths in various electric guitars:

- Fender: 25.5 inches
- Gibson: 24.75 inches
- Most PRS (Paul Reed Smith) guitars: 25 inches
- Yamaha Pacifica Series: 25.5 inches
- Yamaha Revstar Series: 24.75 inches

NECK PROFILE AND WIDTH

The neck extends from the body and includes the fretboard and headstock where the tuners are mounted. It has a truss rod that prevents the neck from bowing and twisting, and it can be adjusted to help the guitar keep a consistent pitch. The fretboard is usually made from a thin layer of rosewood or ebony, although there are models that have maple necks and fretboards. Most fretboards have inlaid position dots or other markers, however, there are necks that have markers on the upper edge of the fretboard giving the player easy visibility.

The neck profile, or shape, is probably the most personal element of a guitar. The profile affects how your hand and fingers "fit" the neck and how easily you can move from fret to fret. From early on, acoustic guitars used a variation of a "C" shape (see illustration below). Electric guitar makers experimented with different profiles that evolved with players' preferences. Most "S"-body style guitars used a very fat "C" shape, but manufacturers are now using a more player-friendly smaller "C" shape. The Yamaha Revstar Series uses two neck shapes: The entry-level instruments have a slimmer neck and smaller fret wire, while the intermediate and advanced models have a slightly thicker neck with jumbo fret wire.



The “V” neck profile offers a less-pronounced curve at the back and is a favorite among players. A variation on the “V” is the “inverted V,” which is thicker on the bass side and thinner on the treble side.

The “U” neck is almost rectangular and is best for players with long fingers; it also has a comfortable groove down the middle.

Neck width is as much of a factor as neck shape. There are guitar makers who no longer use letters to describe neck shapes and instead refer to them as “wide-fat,” “regular-thin” and so on. Neck widths are wide, regular, or narrow; depths are classified as fat, regular or thin. This nomenclature gives a clearer description of the neck and can help when you are shopping for a guitar.

A neck’s profile and width affect the guitar’s playability and the player’s comfort when fretting. While most necks are either “C” or “U” shaped, the width of the neck in relation to the player’s hand is an important consideration. Players with smaller hands should look for narrower, shallower necks, while those with larger hands will find beefier neck profiles more comfortable.

NECK CONSTRUCTION

There are three general types of neck construction:



Bolt-On: As the name implies, this neck is bolted onto the guitar body. This is usually the most cost-effective construction. Bolt-on necks are easily replaced for repairs or customization. They offer less overall sustain and resonance than a set neck or neck-through guitar. Yamaha Pacifica Series guitars are manufactured using the bolt-on method.

Set Neck: This type of neck is set into the body of the guitar and glued in place, then clamped to the body until the glue dries. Overall, set-neck guitars create a more stable neck joint and give better sustain and resonance. However, neck repairs are more difficult. The Yamaha Revstar Series features the set neck method.

Neck-Through: This neck extends through the entire length of the guitar body, with wings or fins glued onto the sides of the body. The neck-through style gives even more stability to the neck and

more sustain and resonance when played. Neck repairs are more difficult and costly, but the increase in stability means repairs are less likely to be needed.

NECK WOODS

Whether the guitar neck is made from one piece of wood or laminated together, the wood used to make it is an important consideration. In building a balanced instrument, guitar makers look at the hardness, weight and tightness of the grain when choosing which wood to use on the neck. Here are the most popular and commonly used neck woods.

Maple: Maple is a medium-hard and medium-weight wood that keeps the guitar neck from being too heavy. When maple is used to build the neck, it is often used on the fingerboard, too.

Mahogany: Guitar makers have used mahogany as a neck material for a long time because it is slightly more flexible than maple and a bit lighter. Its distinctive dark natural color makes an attractive contrast to a maple or spruce top.

Rosewood: This tight-grained heavy wood comes in different varieties. The most popular variety, Brazilian rosewood, is now rare and expensive due to overuse and deforestation. Rosewood is often used for fingerboards because of its smooth hard surface.

Pau Ferro: This is an up-and-coming replacement for Brazilian rosewood. Its name translates to “iron wood.” Pau Ferro is heavy and non-porous, which makes it easy to finish and popular for necks and fingerboards.

Basswood: This wood’s relatively wide grain makes it “softer” than others. Both economy acoustic and high-end electric guitars use basswood. Manufacturers often coat a basswood neck with a carbon/epoxy resin to produce an extremely light and incredibly strong neck.

FRETS

Frets can influence both tone and playability and are an integral part of a guitar’s fingerboard. When a guitar has a smooth, playable neck, players can bend notes, perform hammer-ons and pull-offs, and deliver clean articulations at all positions up and down the neck. This means that the frets have been perfectly matched and properly “dressed” to give the best overall action. Manufacturers are best qualified to decide what size and thickness of fret wire matches the fingerboard of their instruments.

Most electric guitars come with 22 frets; however, if you like to play in the high register, a 24-fret neck will give you a full octave above the twelfth fret.

Intonation determines whether the notes will play in tune as you move up and down the neck. If the distance between the frets—usually above the twelfth fret—is off, the guitar will be incapable of playing in tune, which makes it useless as a recording or performance instrument.

TONEWOODS

Woods used to make the bodies of electric and acoustic guitars are referred to as tonewoods. Certain tonewoods are known for creating desirable tone and sustain, so the wood itself takes on different characteristics depending on the part of the guitar where it's being used.

Because a guitar's sound is primarily determined by the interaction of the vibrating strings and the pickup magnets, you may wonder why wood makes a difference in electric guitars. In fact, the wood used has a significant effect on the way a guitar will sound. The resonance quality of the wood determines how long the strings vibrate and the shape of their motion. Wood also allows the pickup itself to move. This combination makes wood and wood type important factors in the overall tone of the guitar. Wood choice is something that Yamaha takes very seriously, including our responsibility to the planet.

The woods listed below are the most commonly used tonewoods for electric guitars. Two guitars that use the same tonewoods might sound quite different because of other construction components.

Mahogany: A very dense, strong wood, mahogany is used in all parts of guitar manufacturing except for fretboards and bridges, which require a harder wood. A mahogany neck and back are most often found on short-scale guitars with maple tops. Another common combination is an all-mahogany body and neck, excluding the fretboard. Because mahogany is not exceptionally hard, it emphasizes the midrange and bass frequencies, creating a mellower tone. Mahogany is a very resonant wood that will enhance sustain.

Maple: The most common wood used to make guitar necks, maple is extremely hard, dense and often has attractive detailed grain patterns referred to as “figuring.” Maple produces a very bright overall tone, due to its figuring. Because of its tonal characteristics, maple is often used as a veneer or top laminate on more expensive solid-body guitars. Laminated maple is also used as a top wood in archtop guitars. Maple's hardness brings out the higher treble frequencies in a guitar's sound. It is often used for the fretboard where it adds definition to the sound.

Rosewood: The most common wood used for electric guitar fretboards, rosewood is very dense and hard. Rosewood is quite beautiful, ranging in color from almost black to variegated brown and blond. It's occasionally used in electric guitar bodies, but rosewood will make the guitar heavy.

Ebony: An extremely hard, dense wood that is used primarily on fretboards of more expensive guitars, ebony has a silky feel and is usually almost entirely black.

Ash: A common body material in solid-body guitars, ash is harder than mahogany and very resonant. It gives the sustain of the guitar a ringing quality, as well as a bright tone with a well-defined midrange. A light-colored wood with attractive grain figuring, Ash is often given a transparent finish. Swamp ash is a particularly appealing, detailed wood used on higher-end guitars.

Alder: This wood has similar tonal characteristics to ash but is less costly and not as highly figured. Alder is one of the most common body woods for solid body electric guitars. It's usually light tan in color, although it's often covered with an opaque finish.

Agathis: Like alder in appearance and tonal characteristics, though not quite as resonant, Agathis is commonly found on newer, more affordable guitars.

Nato: Also known as eastern mahogany, Nato offers a warm resonance. It is an extraordinarily strong wood and is most often used in the necks of less expensive electric guitars due to its cost-effectiveness.

FINISH

With electric guitars, the type of finish does not affect sound as much as it does on acoustic guitars. Guitar manufacturers take this into account when designing and building the instrument.

HARDWARE

Electric guitars feature hardware that has different uses. Better quality hardware can make a big difference in a guitar's tuning stability, versatility, and cost. Hardware improvements and upgrades can bring a host of benefits to the player.



Tuning Keys: Also called tuners or machine heads, these geared mechanisms, which are usually mounted on the guitar's headstock, hold the strings in place and allow tuning by adjusting string tension. Most modern tuners have enclosed, permanently lubricated mechanisms. Strings are held in place on posts that are attached to knobs, which are turned to adjust string tension. There are tuners

designed to lock in place, giving more tuning stability, which helps prevent strings from slipping. These locking tuners also make changing strings a little easier.

There are tuning systems that can be locked at the nut and bridge, which gives excellent tuning stability and keeps the strings from slipping or stretching too much while using a tremolo system.

Bridges and Tailpieces: The bridge is mounted to the lower part of the guitar body. The strings are routed over it before ending on the body or on a tailpiece. Bridges are designed to compensate for varying string lengths, gauges, and metals, ensuring that the strings stay in tune. Bridges usually allow adjustment of the string's length to bring each string into tune along the entire length of the fretboard. This process is called intonation and is an important part of setting up a guitar to get the best performance. With bridges, the strings' height can be adjusted, which affects the ease with which the strings can be fretted (pushed down) and is often referred to as the guitar's "action." There are bridges that allow players to introduce vibrato into their performance via a moving arm, which is also called a whammy bar, which moves the bridge up or down. Bridges with this function are often called tremolos.

It should be noted that calling the bridge a tremolo is incorrect because tremolo means a repeating variation in volume, not pitch. However, this incorrect terminology has been used for so long that it is now accepted.

A tremolo system that allows the player to rock the bridge back and forth to adjust the pitch of the notes being played is called a floating bridge and is a popular feature on guitars.

Beginners should avoid a locking tuning system for their first guitar because it can be tricky to adjust properly and can make even a simple string change frustrating. There are different types of bridge-tailpiece systems with the following being the most common:

Tune-o-Matic: Originally developed by Gibson in the 1950s, the Tune-o-Matic is a common design that allows individual intonation of strings and overall adjustment of string heights.



Two-point Rocking Tremolo or Fulcrum Vibrato: Features of this tremolo include individual string saddles that are adjustable for intonation and height. These rocking tremolos are mounted on a bridge that rocks on two bolts mounted on the guitar top. The bridge has a broad perpendicular

plate that extends through the guitar's body. This free-floating plate is attached to the inside of the guitar by springs that match the tension of the strings. Locking tuners, which clamp down on the strings, help keep tuning more stable.

Locking Vibrato: Often referred to as a Floyd Rose bridge after its inventor, the locking vibrato allows for individual intonation and height adjustments like the two-point rocking tremolo. It rocks on two bolts on the top of the guitar and is spring-loaded. The difference is that the locking vibrato clamps down on the strings at both the bridge and head nut. The result is rock-solid tuning, even when the vibrato arm is used radically.

Bigsby: A spring-loaded vibrato found on vintage and vintage-style guitars, the Bigsby (named after its designer Paul Bigsby) is a large, relatively heavy device that includes a rotating bar on which all the strings attach. There are players that like the vintage vibe of a Bigsby.

Six-Point Rocking Tremolo: This was the original rocking vibrato designed by Fender in the 1950s. Like the two-point tremolo, the six-point rocking tremolo is through-body, spring-loaded and allows for individual string intonation and height adjustments. There are players who feel that because this type of tremolo rocks on six screws, it gives a greater vibration transfer to the top and, hence, better resonance.



Trapeze Tailpiece: This style has a hinge-like mechanism that's shaped like a swinging trapeze. Usually found on hollow-body guitars, particularly vintage models, trapeze tailpieces attach to the tail of the guitar, freeing the top from string tension.



String-Through Body: With this vibrato, the strings are routed over the bridge saddles and through holes running from the guitar's top to the back of the instrument where they are anchored in metal ferrules. This allows for a clean look, and players feel it also enhances sustain.

WHICH GUITAR SHOULD YOU BUY?

Buying a new guitar is a personal event and your selection should be the result of a careful process.

Consider your current and desired levels of musicianship. Think about the style of music you play or aspire to play Audition more than one or two guitars to check out the neck and body shape; ask yourself which is the most comfortable to hold and play Perform the same song on different guitars (but use the same amp) in order to compare tone

Don't pick a guitar just because you think it looks cool or because it's the one your guitar hero plays. Guitars are like people; they each have a personality and you must see if you can get along together. Ultimately, you want a guitar that you can grow with; the right companion will make you a better player and happier musician.

LEARN MORE

[Visit our website to see the full lineup of Yamaha electric guitars!](#)

GLOSSARY

Abalone: The hard internal lining of the giant sea snail's shell that's used for decorative and ornamental purposes on acoustic guitars, such as fretboard and headstock inlays.

Action: The distance between the frets and the strings of an acoustic guitar.

Attack: The first sound a note makes when struck, between silence and when the note reaches maximum volume.

Archtop: A guitar with an arched top that has been carved or pressed. The bridge and tailpiece are movable.

Bakelite: Early form of plastic used in guitars from the 1930s to the 1950s. **Bigsby:** A simple, non-recessed vibrato developed by Paul Bigsby.

Binding: A protective and decorative strip of wood or plastic that's placed along the outermost edges of the top, back, neck, fingerboard and sometimes headstock. This is a cap used to seal and protect joints. Sometimes binding is incorrectly called purfling, which are inlays alongside the binding and not part of the binding.

Block Markers: Square, rectangular or shark-tooth inlays that mark fingerboard positions.

Body: The main part of the guitar where the controls, bridge and pickups are mounted. The body can be a hollow, semi-hollow or solid design.

Bolt On: Refers to an instrument that has its neck attached by bolts rather than being glued in place.

Bookmatched: Generally, most electric and archtop guitars have tops and backs that are two pieces of wood glued together to form one large panel. Bookmatched refers to the wood coming from the same tree and being one piece of wood that has been cut into consecutive slices so the grain in the panels creates mirror-image patterns.

Bout: The curved areas above and below the narrow waist of a guitar are known as bouts. The curves above the waist are called the upper bout and those below are called the lower bout.

Brace: This internal wooden support structure inside a guitar that gives the instrument integrity and affects tone quality. An “X” brace is a popular pattern used in hollow-body guitars. Other bracing patterns include “ladder,” “fan” and “scalloped.”

Bridge: On most guitars, the piece of wood that’s used to anchor the strings and transfer their vibrations to the soundboard. The bridge may sit on top of a bridge base plate or bridge plate and are adjustable by thumbwheels. Bridges come in a variety of shapes and sizes. On a solid-body electric guitar, they’re generally fixed and hold the saddle that contacts the strings. On archtop guitars, the bridge is usually held in place only by the tension of the strings and can be easily moved; it is also called a “floating” bridge.

Bridge Pins: Pins that fit into the holes on the bridge where the strings go in. Their job is to anchor the strings in place. The pins are usually made of plastic but can be made of ebony as well.

Bullet: Name given to the appearance of the truss-rod adjuster nut on the headstock.

CAP: Also called a capacitor, this common electrical device stores up an electrical charge, generally used on the tone potentiometer of electric guitars.

Celluloid: A common plastic material used on guitar pickguards, tuners and binding. This material is not exceptionally durable and deteriorates over time; vintage guitars can have issues with celluloid parts.

Center Block: A solid wood block running through the body of a semi-hollow guitar.

Checking: Cracking found in lacquer-finished guitars. Vintage guitars often have checking, which is caused by the guitar’s wood expanding and contracting with changes in temperature and humidity.

It's important to keep a constant humidity level and reasonable range of temperature to prevent checking.

Cutaway: A guitar with a contoured upper body that allows the player to reach the upper frets of the guitar more easily (called "single cut"). Guitars that have both sides cut away (called "double cut").

Dog Ear: Nickname for a P-90 style pickup with mounting ears.

Dot Neck: Guitar with simple dot inlays for the neck position markers.

F-hole: An "f"-shaped sound hole found on hollow-body and semi-acoustic guitars. Fretboard (aka Fingerboard): The playing surface of a guitar neck. Typically, a thin piece of wood that's glued onto the neck, it has thin metal strips called frets placed at intervals that divide the neck into half-step increments.

Finish: A protective coating covering the guitar, often paint or lacquer.

Fixed Bridge: Non-vibrato bridges. Flame: A characteristic of certain woods that appears to shimmer and move as light strikes it from different angles; or, a dramatic grain pattern that resembles flames. Sometimes called "flame top."

Frets: Thin metal strips placed at intervals on the fretboard to divide it into half-step increments.

Hang Tag: Small tags and cards hung on guitars in showrooms. A hang tag for a vintage guitar is generally exceedingly difficult to find.

Hard Tail: An electric guitar without a vibrato bridge.

Headstock: The uppermost part of a guitar neck, where the tuning keys are placed. Also called a "peghead."

Heel: The lowest point of the neck, where it widens to attach to the body.

Hollow-Body: An electric guitar body style with a thin body like an acoustic guitar.

Humbucker: A noise-canceling twin-coil pickup. Inlay: Designs on the fretboard, headstock or body of a guitar for purely aesthetic purposes. Typically, the inlay design is carved into the wood, then filled with one of many materials such as mother-of-pearl, metal, abalone or plastic.

Intonation: The relationship of tones on different parts of the fretboard. The note of each string on the twelfth fret should match the note of the twelfth fret harmonic on the same string. If not, the guitar's intonation should be adjusted.

Jackplate: Mounting plate for output jack. **Laminated:** As opposed to a solid piece of wood, a laminated surface is created by gluing thin plies of wood together.

Locking Nut: Bolts that lock the strings in place at the nut. **Luthier:** A woodworker who specializes in making stringed instruments. **Machine Heads:** Also known as tuners or tuning machines, machine heads allow string tension to be adjusted, changing the pitch of the strings.

Neck Block: Found inside the body at the base of the neck, the neck block gives a strong point to mount the neck to the body.

Neck Pickup: The pickup closest to the neck.

Neck Plate: A metal plate that fastens the neck to the guitar body.

Neck Press: A press that uses gentle heat and pressure to straighten a neck.

Neck Reset: Restores the correct angle between the fingerboard and bridge, and gives the correct action needed to play the guitar.

Nut: Found at the top of the fretboard, the nut serves to evenly space the strings as they approach the tuners and transfer vibrations to the neck of the guitar.

P-90: An early style single-coil pickup. **Passive:** Guitar pickups that do not require added power.

Peghead: Where the tuners are mounted; also called a "headstock."

Pickguard: A thin plate found below the sound hole that protects the guitar's top from scratches that may occur because of picking or strumming the strings. Also called a scratch-plate.

Pot: Abbreviated form of Potentiometer, which is mounted to the body of an electric guitar and commonly used to control volume and tone. The tone pot will normally have a capacitor soldered in the circuit.

Quilted: A visual characteristic of certain tonewoods that gives a wavy or folded appearance. Generally, it refers to maple and is called "maple quilting" or "maple quilted."

Refin: A refinished guitar.

Refret: Also called a “fret job,” this is the re-fretting of a guitar fretboard.

Relief: The upward arching bow in an instrument’s neck that allows the strings to move without touching the frets. A bowed or warped neck will need to be heated and pressed to restore the neck to correct relief.

Rout: A hole or cavity cut into a guitar, often in the body of the guitar.

Saddle (aka Bridge Nut): Like the nut, the saddle spaces the strings at the bridge and, along with the bridge, transfers the vibration of the strings to the top.

Scale Length: The total length of the vibrating part of a string, usually from nut to saddle or twice the distance from the nut to the twelfth fret.

Set Neck: A guitar neck that’s glued to the body. **Setup:** Guitar repair term to set “intonation” and “action.”

Single-Coil Pickup: An early pickup design with a single coil of wire wrapped around a magnet.

Soap Bar: Nickname for a P-90 style pickup that has no mounting ears. **Solid Body:** Electric guitars with a solid body.

Sound Hole: The hole in a hollow-body guitar’s top that aids in projecting the instrument’s sound.

Split Coil: A double-coil pickup wound with multiple coils that are smaller than a standard two-coil pickup where each coil works with two strings. Usually, one coil is used for the “E” and “A” strings, and one coil is used for the “D” and “G” strings. A split-coil generally has a little less hum canceling but better high frequency response.

Stop Tailpiece: Affixed to the top of the guitar to anchor the strings to the top, the stop tailpiece is sometimes called a stud tailpiece. Holes allow strings to pass through the stop tailpiece and over the bridge.

Sustain: Length of time a string vibrates.

T-Frets: Refers to the shape of the metal fret. T-frets are used in most refrets. **Tailpiece:** On instruments without bridge pins, the strings are commonly anchored to a tailpiece, which normally mounts to the end block and pulls the strings down toward the guitar top after passing across the bridge.

Thin-line: Hollow-body electric guitars.

Through-Neck: A design where the neck runs through the center of the guitar body.

Thumbwheel: A small wheel on bridges to adjust the bridge height. The top part of an adjustable bridge rests on flat wheels that can be screwed upward or downward on their post to raise or lower the bridge, adjusting the overall height of the strings in relation to the fretboard.

Trapeze Tailpiece: A hinge-like mechanism shaped like a swinging trapeze. The strings attach directly to the trapeze tailpiece, reducing string tension on the body.

Tremolo: Another term used for a vibrato or tremolo arm.

Truss Rod: A thin, internal rod, usually made of metal, which runs through the length of the neck. It's used to adjust the curve of the neck depending on the tension of the strings.

Truss Rod Cover: A plate that covers the access point of the truss rod adjuster. **Tune-o-Matic:** A bridge that sits on two thumbwheels and has six saddles, which allow individual intonation adjustment for each string.

Tuning Machines: Mechanical devices used to increase or decrease string tension. Located on the guitar headstock, tuning machines can be all inline, all individual or in two groups.

Veneer: Thin wood, laminated to a substrate, used in guitars. **Vibrato:** Bridge and/or tailpiece that can alter the pitch of strings when the vibrato arm is pressed. Also called a whammy bar.

Volute: A piece of wood installed just behind the peghead, it strengthens the neck where the headstock begins.

Waist: The narrowest part of a guitar's body.