

Gibson USA

OWNER'S MANUAL



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To the new Gibson owner:

Congratulations on the purchase of your new Gibson electric guitar – the world's most famous electric guitar from the leader of fretted instruments.

Please take a few minutes to acquaint yourself with the information in this booklet regarding materials, electronics, "how to," care, maintenance and more about your guitar.

And then begin enjoying a lifetime of music with your new Gibson.

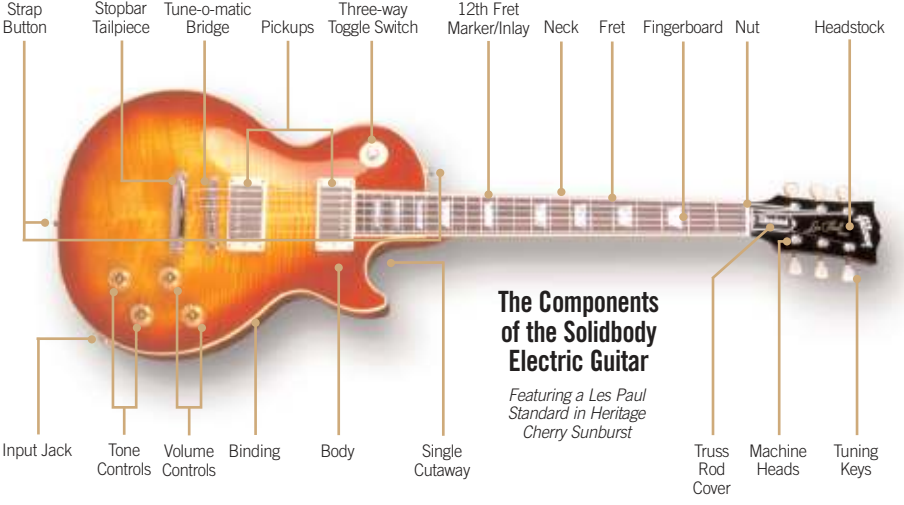
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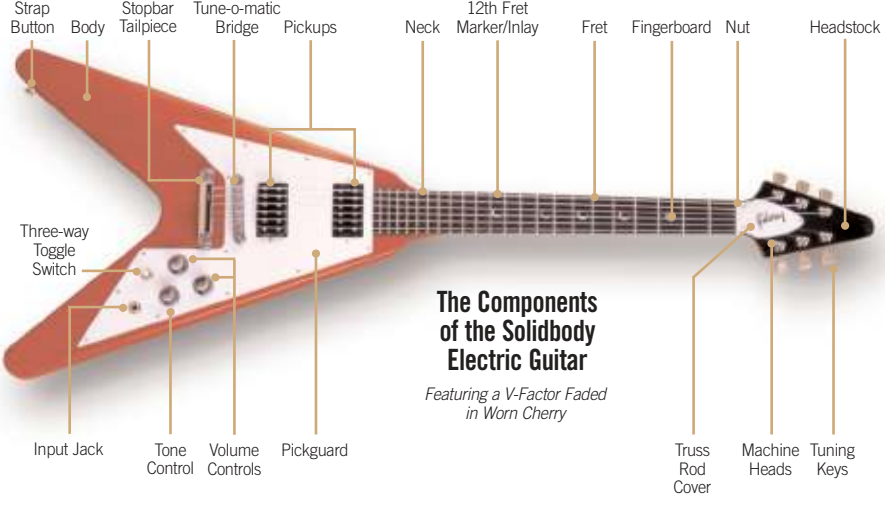
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The Components of the Solidbody Electric Guitar

Featuring a Les Paul Standard in Heritage Cherry Sunburst



The Components of the Solidbody Electric Guitar

Featuring a V-Factor Faded in Worn Cherry

Here are just a few of the Gibson innovations that have reshaped the guitar world:

1894 – First archtop guitar
1922 – First *f*-hole archtop, the L-5
1936 – First professional quality electric guitar, the ES-150
1947 – P-90 single-coil pickup introduced
1948 – First dual-pickup Gibson, the ES-300
1949 – First three-pickup electric, the ES-5
1949 – First hollowbody electric with pointed cutaway, the ES-175
1952 – First Les Paul guitar
1954 – Les Paul Custom and Les Paul Jr. introduced
1955 – Les Paul Special introduced
1957 – First humbucking pickup
1958 – Flying V and Explorer introduced

1958 – First semi-hollowbody guitar, the ES-335
1961 – SG body style introduced in the Les Paul line
1963 – Firebird guitars and Thunderbird basses introduced
1969 – Les Paul Personal and Professional with low-impedance pickups introduced
1979 – L.P. Artist with active electronics introduced
1982 – First solidbody acoustic, the Chet Atkins CE
1983 – Les Paul Studio introduced
1990 – Les Paul Classic introduced
1996 – Les Paul SmartWood introduced
1998 – Double-Cutaway Les Paul Standard introduced
2002 – Gibson Digital Guitar introduced

A BRIEF HISTORY OF GIBSON ELECTRIC GUITARS

Gibson's legendary acoustic engineer, Lloyd Loar, was experimenting with electric instruments in 1924, at the dawn of electronic amplification. However, Gibson's struggle to dominate the banjo market took precedence through the 1920s, and it wasn't until the mid-1930s that the company once again turned its attention to electric guitars. In 1935 Gibson's Walt Fuller designed a pickup that was introduced on the E-150, an aluminum-body lap steel. Early in 1936, the pickup was put in a midline archtop model and named the ES-150 – ES for Electric Spanish, 150 for the retail price of $150 for the guitar and amplifier set.

The original ES-150 bar pickup with its hexagonal housing is now known as the "Charlie Christian" pickup, because it was installed on the ES-150s and ES-250s that Christian used to establish the new concept of electric jazz guitar.

Gibson made several improvements in pickup design before World War II, although many players still consider the "Christian" pickup to be the best jazz pickup ever

made. Immediately after World War II, Gibson introduced the P-90 single-coil, with six adjustable polepieces and a black plastic cover, usually with "dog-ear" mounting extensions. The P-90 is still in production and still sets the industry standard for a single-coil pickup.

The first postwar Gibson electrics followed the prewar concept of an electric guitar as a conventional acoustic archtop with a pickup installed on the top. Gibson added a second pickup to the ES-300 in 1948 and then became the first company to offer a three-pickup model with the introduction of the ES-5 in 1949.

Although the advantages of a solidbody guitar had been known to Hawaiian steel guitarists for almost twenty years, it took the persuasive powers of Les Paul, the world's most famous guitarist in the early 1950s, to convince Gibson to make a "Spanish style" solidbody. Gibson designed the new model with a carved top, not only to give it the look of a traditional archtop – a style invented by Gibson – but also to make it difficult for other makers to copy. Les, who had been playing a homemade solidbody guitar, nicknamed The Log, since 1941, specified a maple top cap to increase sustain,

coupled with a mahogany back to lighten the weight. Les also specified the famous "goldtop" finish.

The Les Paul Model debuted in 1952. The bridge and tailpiece were upgraded when Gibson introduced the patented tune-o-matic bridge in 1954, and the original single-coil pickups were upgraded with the introduction of Gibson's patented humbuckers in 1957. Otherwise, the original Les Paul is essentially the same guitar today as it was when it was introduced.

In 1954 the growing popularity of the Les Paul Model prompted Gibson to expand the line. On the high end, the Les Paul Custom sported an ebony finish and low frets for fast action, and it immediately gained two nicknames: the Black Beauty and the Fretless Wonder. On the more affordable end, the Les Paul Jr. featured a flat "slab" top and a single pickup, and it became the best-selling Les Paul of the 1950s.

One year after the Les Paul Jr., Gibson offered a two-pickup version of the slab-body model called the Les Paul Special. The Special was further distinguished by its yellow stained "TV" finish.

The double-coil humbucking pickup, invented by Gibson engineer Seth Lover, debuted in 1957 on the Standard and Custom, introducing the sound that would shape rock and roll music in the 1960s.

In 1958, Gibson introduced more important design innovations than in any other year in the company's history. Gibson president Ted McCarty combined the look of an *f*-hole archtop with the performance of a solidbody and came up with a completely new type of guitar – the semi-hollowbody ES-335. McCarty also designed two radically modern solidbody shapes: the Flying V and Explorer.

The body of the Les Paul Jr. received a pair of rounded horns to become Gibson's first double-cutaway solidbody. And the finish color on the Les Paul Model was changed to Cherry Sunburst, which let the grain of the maple top show through. The model name was changed to Les Paul Standard, and the sunburst Standards from 1958-60 would become some of the most valuable collectibles in the guitar world. All of this happened in 1958.

The new Les Paul Jr. set in motion a complete redesign of the Les Paul line. In 1959 the Special went to the rounded-horn double-cutaway shape and was renamed the SG Special (SG for Solid Guitar). In 1960, all four models were revamped and given a new "SG" body shape, featuring a thinner, double-cutaway body with pointed horns. The Custom, Standard and Jr. retained the Les Paul designation through 1962, after which they became SG models.

Gibson's design innovation continued into the 1960s when Ted McCarty hired legendary automotive designer Ray Deitrich to design a Gibson. The result was the Firebird series, and the companion Thunderbird bass series of 1963. The Firebirds "reversed" conventional designs, with their elongated treble-side horn and treble-side tuners. They also introduced neck-through-body construction and smaller "mini-humbucking" pickups to the Gibson line.

In response to the rising demand for 1950s-style Les Pauls, the carved-top models were reintroduced in 1968. A new model, the Les Paul Deluxe, featuring mini-humbucking pickups appeared in 1969. The Special was revived in the 1970s and the Jr.

reappeared in the 1980s. The Flying V, Explorer and Firebird were also brought back into regular production, as musical styles began to catch up with these ahead-of-their-time designs.

While the original four Les Paul models continued as the foundation of the line, Gibson offered new variations, such as the Studio, Classic and Double-Cut Standard, in order to give musicians all the features they wanted in a Les Paul guitar. In the 50-plus years of the Les Paul, Gibson has offered more than 100 different variations. In 2003 Gibson honored Les Paul for his achievements as a performer, recording innovator and guitar designer by presenting him a special Artist for Eternity award.

As Gibson celebrated the 50th anniversary of the Les Paul in 2002, the company rocked the guitar world once again by introducing the first digital electric guitar. It represents the biggest advance in electric guitar design since the instrument was invented, and moreover, it serves notice that Gibson electric guitars will continue to epitomize the highest levels of Quality, Prestige and Innovation.

DESIGN AND CONSTRUCTION

Body. The solidbody guitar was invented to increase sustain, produce a brilliant tone and eliminate feedback caused by a vibrating top. These qualities are enhanced by wood with high density, such as maple. Les Paul would have preferred for his model to have had a solid maple body, but density translates to weight, and a solid maple Les Paul Model would have been exceedingly heavy. A compromise was reached, with lighter-weight mahogany used for the main part of the body and maple for the top cap. Most of the carved-top Les Pauls have the combination maple/mahogany body, while the "slab" or flat top models have a solid mahogany body. Flying V's, Explorers and Firebirds have a solid mahogany body.

Neck and Headstock. Mahogany is a time-proven material for guitar necks, and the necks of most Gibson USA models are constructed of a single piece of mahogany. The

Firebird or Thunderbird IV bass neck is made of nine-ply mahogany and walnut (or all mahogany laminates), and it extends completely through the body. Fingerboards are of ebony or rosewood.

Neck Specifications. Gibson designs its guitar necks to complement and enhance the unique characteristics of each model. Neck profiles can be "rounded '50s" or "slim '60s" (or a slight V-shape available only on the BluesHawk). Scale length (string length) is 24 3/4" on the Les Paul, X-Factor and SG models, 25 1/2" on the Chet Atkins, Americana and Hawk models and 34" on basses.

Pickups. *Humbucking (double-coil):* Most Les Pauls have double-coil humbucking pickups, which were designed to do what their name says: "buck" the hum caused by fluorescent lights, rheostats and other electrical interference. They accomplish this with two coils of wire, wound in opposite directions so that they cancel out interference. Also, they produce a powerful sound that is the foundation of rock and roll music.

Gibson produces humbuckers in a variety of subtle variations, achieved by the use of different magnets and different combinations of winding turns. In addition, some Les Pauls have humbuckers without the metal cover pieces, which results in a hotter signal. For individual model and pickup specs, please refer to Gibson's website, www.gibson.com.

P-90 (single-coil): Only a few Gibsons – some Les Paul Jr.'s, Les Paul Specials and Melody Makers – have single-coil P-90 pickups. Some have the original "dog-eared" covers; those without the "dog ears" are nicknamed "soapbar" because the original cream-colored plastic covers on the 1952 Les Paul Model resembled bars of soap. When the P-90 was introduced in 1946, it was the most powerful pickup of its kind. And it still is. Among the many examples of the P-90 sound are Carlos Santana's Les Paul Special on Santana's classic recordings, Leslie West's Les Paul Jr. with the group Mountain, and The Who's Pete Townshend with an SG Special on *Live at Leeds* and at Woodstock.

Pickup adjustments. Although the pickups on each Les Paul are set to Gibson standards at the factory, they can be adjusted. The height of the pickup can be adjusted by the two screws found at either end of the pickup, in the mounting ring. Individual string volume can be adjusted by turning the polepiece screws. Bringing the pickup or pole screw closer to the strings makes the signal stronger or "hotter."

Controls. The standard Gibson electronic configuration is two pickups, four knobs and a pickup selector switch. The four knobs provide individual tone and volume control for each pickup. Models with only three knobs provide individual volume and master tone control. Single pickup models have only two knobs – for volume and tone control – and no pickup selector.

Volume controls: The two knobs closest to the fingerboard control the volume of the pickups. The volume knob nearest the bridge controls the "front" or neck pickup; the knob nearest the edge of the guitar controls the "back" or bridge pickup.

Tone controls: The knob or knobs farthest away from the fingerboard control tone. The tone knob nearest the bridge controls the "front" or neck pickup; the knob nearest the edge of the guitar controls the "back" or bridge pickup.

The tone controls are the "treble roll off" or "cut" variety. The tonal quality of the instrument is darkened by the reduction of treble rather than the addition of bass. The tone control turned all the way counterclockwise results in maximum reduction of treble and produces the "darkest" sound. The tone control turned clockwise to its maximum position allows the pickup's full harmonic frequencies to pass through, producing the guitar's brightest sound.

Pickup selector switch: The selector switch has three positions. The position toward the neck selects only the "front" or neck pickup. The position toward the bridge of the guitar selects only the "back" or bridge pickup. The middle position engages both pickups. The tone and volume controls will only be active when the corresponding pickup is selected. On models with three pickups, the selector switch activates the front pick-

up (front position), the middle and back pickup together (middle position), and the back pickup (back position).

The Tune-o-matic Bridge. The Tune-o-matic bridge allows for adjustment in overall bridge height and individual string length. Height is adjustable up and down by means of thumb nuts under the bridge at either end. Each string saddle is adjustable forward and back with a small standard screwdriver. Action adjustment (up and down) is set at the factory to the correct height for playing comfort and for buzz-free action. Raising the bridge will result in stiffer action; lowering the bridge will result in faster action but may also result in fret buzz. Climatic or humidity changes, or changes in string gauge, may necessitate a bridge adjustment.

Any change – in bridge height, string gauge or climate – can affect the intonation and cause a guitar to play out of tune in some fret positions. When this happens, the string length needs to be adjusted, and this is accomplished by moving the individual sad-

dles forward (toward the neck) or backward (toward the tailpiece). The screw heads are on the pickup side of the bridge, although there are many Gibsons that have the screw heads facing the tailpiece. To check intonation, compare the pitch of a string that is fretted at the 12th fret against the harmonic at the 12th fret (accomplished by touching the string lightly with the left hand, without pressing it all the way to the fret). If the fretted note is higher than the harmonic, the string should be lengthened by moving the saddle toward the tailpiece until the two notes are the same. If the fretted note is lower than the harmonic, the string length should be decreased.

The tune-o-matic bridge was designed to adjust for string changes (gauge or type) and other physical changes but not for problems with intonation due to string wear. Should a string lose its intonation due to wear, we strongly recommend changing the string and not the bridge setting.

Adjustable Stopbar Tailpiece. The stopbar tailpiece may be adjusted up or down to change the downward pressure across the bridge. There is usually no need to adjust the stopbar unless the strings are moving out of the saddles, in which case the stopbar should be lowered.

CARE AND MAINTENANCE

Finish. A Gibson instrument always attracts attention, whether it is on a concert stage before thousands or on a guitar stand in a home studio. After the classic body lines of a Gibson, the finish makes the strongest impression.

Perspiration acids, heavy fingerprinting, dust and grime from on-the-job usage are unavoidable. However, a minute or two spent with Gibson's instrument care products – guitar polish, fretboard conditioners, string cleaner/lubricant and polishing cloth – will restore a finish to like-new condition.

Gibson's nitrocellulose lacquer finish not only looks great, it is also easily repairable – by a professional. Minor scratches and dings can be fixed without completely refinishing the instrument.

Keeping Your Guitar on the Road. Your Gibson is a durable instrument. It is likely to outlive you – if you take care of it. In determining whether conditions might be harmful to your guitar, the rule of thumb is, if you are comfortable, then your guitar will be comfortable. Here are some conditions to avoid.

Heat and cold: Gibson's nitrocellulose finish can expand or contract to adjust to extreme temperatures and humidities – but not to sudden changes in temperature or humidity. Just as a hot drink will crack a chilled glass, the finish of a Les Paul will crack if a guitar that has been sitting in the trunk of a car in wintertime is suddenly exposed to the warm air of a heated room. In these conditions, let the guitar warm up gradually inside the case before opening the case.

Rain: Water wipes off the instrument's finish easily, but if allowed to remain, it can cause ugly water spots in the lacquer.

Sun: Avoid direct rays of the sun on your Gibson. Direct sunlight can blister or discolor the finish.

More Things to Avoid. When using a shoulder strap for a standing playing position, check that all contact points and strap fasteners are secure.

Guitar stands with rubber supports that contain dye or plasticizers can "eat away" at the lacquer finish or leave a stain on your guitar that goes through the lacquer finish and into the wood. These stains are permanent and this sort of damage is *not* covered under your warranty. We recommend covering the rubber parts of the stand with a soft cotton cloth (such as a guitar polishing cloth) and using a guitar stand only for temporary "storage" of your instrument.

Avoid sharp blows to any part of your instrument. Be particularly alert to possible blows to the back of the headstock, machine heads (tuners) and in the neck heel area. Many headstock breaks are the result of a guitar being knocked over or dropped while it's still in the case, so do not stand the case on its end.

Should major adjustments become necessary, contact your local authorized Gibson dealer or service center.

Strings. Fresh strings are a vital part of that "new instrument" sound. When strings begin to go dead, a guitar loses its edge, and as the strings undergo further wear and tear they go "dead." Your Gibson will sound its best with new strings.

How often should you change strings? That depends on how much you play your guitar, how hard you play and also on your individual body chemistry. Some professional musicians change strings before every show in order to maintain the brightest edge on their sound. More casual players may only need to change strings every month or two. For some players, even light perspiration shortens the life of their strings. The sound of the strings is the only sure way to judge whether or not they need to be changed. And if one string needs to be changed, the others can't be far behind. To maintain tonal balance, change the whole set.

When changing strings, we recommend changing one string at a time in order to maintain tension on the neck and bridge. The pressure of the strings holds the bridge and saddles in place, and removing all the strings could necessitate a new setup.

Use high quality strings. The most obvious action you can take to maximize the life and performance of your strings is to use high quality strings. Your Gibson comes from the factory with a set of strings made by Gibson and designed exclusively for Gibsons. Although the string set from the Gibson factory is suitable for virtually any style of music, Gibson offers a variety of string styles and gauges for specialized purposes.

Install your strings correctly. Improperly installed strings can slip, which will cause your Gibson to constantly go out of tune. To correctly install strings:

1. Be certain the first winding of the string around the machine head stem (tuner post) goes over the exposed tip of the new string. The rest of the winding should then go under the exposed tip of the new string. When pressure is applied by tightening the string to pitch, a clamping action keeps the string from slipping around the machine head stem.

2. Be certain the string is wrapped around the tuner post an adequate

number of times. For unwound strings, at least five turns around the machine head stem are necessary. For wound strings, two or three turns are adequate.

What gauge strings should be used? Your Gibson guitar comes strung with "10's" – which means the high-E string is .010 inches in diameter. The low-E is .046 inches in diameter. The set is designed so that all six strings have the same amount of tension, ensuring that the action and the volume will be consistent across the entire fingerboard. Gibson offers "9's," "11's" and a variety of other gauges and compositions, all of which are balanced for consistent tension.

What brand of strings should be used? Gibson has been offering its own strings since 1907, and Gibson has more experience than any other string maker when it comes to matching strings to Gibson guitars. Gibson strings are manufactured to exacting standards to achieve the highest level of quality and performance.

A LIFETIME OF MUSIC

Your Gibson electric guitar is a lifetime investment. With proper care, it will not only maintain its value as a top quality instrument, it will also continue to pay musical dividends for generations to come.

Your investment in the world's finest electric guitar is supported by the #1 Customer Service team in the musical instrument industry. To contact a Gibson Customer Service Representative call 1.800.4GIBSON or email us at service@gibson.com.

For more information on Gibson products and accessories, please visit www.gibson.com or call 1.800.4GIBSON.



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