
A History of the Electric Guitar 1927 - 1957

Illustrated with the Henzig Guitar Collection

Luc Henzig - 11 February 2017



Guide for the exhibition:

GUITARES DE RÊVE

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Introduction

“Our hearing of colours is so precise ... Colour is a means of exerting a direct influence upon the soul. Colour is the keyboard. The eye is the hammer. The soul is the piano with its many strings. The artist is the hand that purposely sets the soul vibrating by means of this or that key. Thus it is clear that the harmony of colours can only be based upon the principle of purposefully touching the human soul.” Wassily Kandinsky!

Music as painting are two of the most widely practiced and appreciated art forms. From the prehistoric times until today both express and induce emotions on people. Emotional content is therefore a vital consideration when creating a powerful music piece or painting. Both go through a similar creation pattern including selection and editing processes. Quick sketches lay out possible groupings for the elements selected. Where for a painting using colour to evoke emotion, colour impacts on mood, temperature, light and dominance of elements and sense of place is examined, for music it is mostly about pitch, rhythm, dynamic, timber and texture.



When it comes to music there are few instruments being able to have a large expression range. In our western world the most popular are the piano, the violin and the guitar. What these instruments have in common is their versatility and expressiveness. They can whisper or shout, they can speak rhythmically, they can express emotions from anger, pain and joy. But due to the electrification the guitar can do more, it can cry, gently weep or rage against the machine.

“The guitar is a miniature orchestra in itself.” Ludwig van Beethoven

The guitar can be an efficient rhythm machine, strike us with melody lines, but above all it allows us to express the full range of emotions. And it can do all this by being

easy to learn, being portable, cheap to buy. Furthermore it is a tool to create heroes and inspire others.

Collecting guitar is a therefore a work of passion. And this passion has two sides.

On one hand guitars have to be built. The history of the guitar, the search for the holly grail of sound is a story in itself, which is rich in innovations, set backs and most importantly the work of artists creating and building the instruments. Without the passion of the guitar builders the musician would not be able to express his emotions through the instrument.

On the other hand, to make music, you have to have a musician being able to use the guitar to express his emotions through his playing. The user of the guitar gives a second life to the guitar after its birth by the builder. Certain guitars have become as famous as the musicians having used them. Due to the emotional impact of music heroes are created.

Collecting guitars is keeping both stories alive and share them with the interested public. This Collection shows therefore the evolution of electric guitar and highlights the emotional part by displaying mostly, more or less famous, artist owned guitars. Those used instruments, the everyday tools of musicians, still carry some of the emotions or magic of the music which was created using them.

At the end of the day this is a great collection of Rock 'n' Roll stories.

A little bit of history

The electric guitar is the result of many inventors and musicians working to develop, design, and popularise a louder instrument. The desire to increase the volume of the sound of the guitar emerged in the 19th century due to the evolution of the music. Initially this was tried to be achieved by using new materials and designs. The introduction of the steel strings and the arch-top design in the 19th century made this possible but proved not sufficient to amplify the sound. New ways were searched by developing alternative designs, such as the harp guitar and the resonator guitar. Especially the resonator guitar, which is still popular today in certain music genres, was a complex technical innovation to make guitars louder. Introduced in the late '20 the resonator guitar features aluminium speaker-shaped cones built into the top of the guitar and which create sound by the vibrations of the resonator cones, not of the body itself.

The industrialisation of the guitar was the work of a small group of people such as John Dopyera, the luthier who invented the resonator, George Beauchamp, a steel guitar player and inventor, Adolph Rickenbacher a Swiss-American who co-founded the Rickenbacker guitar company along with George Beauchamp and Paul Barth, Doc Kauffman a lap steel guitar engineer and inventor of the first mechanical vibrato units and Leo Fender's business partner in the K&F company, which they started in 1945 (after Kauffman left, K&F became Fender), and others. All were located in California. After those initial pioneers other inventors took the guitar to maturity in the '50, like Les Paul, Leo Fender, ...

By the 1930s the Gibson Mandolin-Guitar Mfg. Co., Ltd. in Kalamazoo, Michigan was also making one of the first commercially available hollow-body electric guitars, used and popularised by Charlie Christian.

But let's start at the beginning:

With the advent of the big band music in the '20, phonograph recordings, telephone, commercial radio and the spreading commercialisation of electrical devices the time was right for experimenting with different materials and concepts. In the early '30 George Beauchamp, working with Swiss immigrant Adolph Rickenbacher (later Rickenbacker), developed an electromagnetic pickup to amplify the sound of the guitar. This was made possible due to the use of steel strings. The vibrations of the steel strings were creating electrical fields in the pickup which is basically a coil of wire wrapped around a magnet in

which a current passes through. This electrical signal created by the vibration of the steel strings is then amplified by an external guitar amplifier driving a speaker. The result of those experimentations was the first commercial viable electric guitar produced from 1932 on: the lap-steel guitar known as "Frying Pan".



Technically developed as wood guitar, the production model was made of a hollow aluminium body. This generated some unwanted resonances and a lot of musicians put newspaper inside to get rid of those interferences. In 1935 a new model was introduced by Rickenbacher: the Electro Spanish Model B lap-steel guitar. This is considered to be the precursor to solid-body Spanish-style electric guitars. Made of Bakelite, the first synthetic plastic, it has cavities in the body which are there to reduce the weight and which are concealed by stainless-steel cavity covers. Featured also is a detachable neck and a horseshoe pickup as on the Frying Pan model.

At that time many other inventors were working on similar concepts. One other inventor lining up for inventing the electric guitar was Paul Tutmarc. It was the winter of 1930-1931, according to his son, that Tutmarc began experimenting in his basement workshop with a fellow tinkerer on a pick-up device inspired by Bell's telephone mechanism. They attached an iron blade with copper wire coiled around it to a large horseshoe shaped magnet. When placed inside Tutmarc's flat-top Spanish-style guitar and plugged into a converted radio, the magnetic device picked-up the instrument's sound, amplified it, and surprised the partners with the beautiful tone it brought forth.

Tutmarc realised the importance of the discovery, but when he was advised that their pickup design was non-patentable because the telephone companies had already patented similar devices, he put the project on hold.

One can imagine the shock then when Tutmarc took notice in August 1932 that Richenbacher started to sell electric guitars. Worse Tutmarc's erstwhile partner had apparently peddled their pickup design to Dobro, another guitar building company,, which actually filed (on April 7th, 1933) a patent application form - not for the pickup alone, but in conjunction with the overall guitar design.



Tutmarc finally went marketing his own brand of electric guitars, AudioVox, in the mid '30. He improved his old design, effectively creating the world's first slanted split-polepiece magnetic "humbucking" pickup -- a design that Dobro, National, and other firms soon began emulating.



A more traditional approach was followed by Gibson around 1936, with its ES-150 electric-acoustic guitar. This guitar, which is based on a classic acoustic arch-top guitar, was the first Spanish-style electric guitar to achieve commercial significance, thanks in part to Charlie Christian, a jazz guitar player who brought it to the forefront as a lead instrument.

Compared to the Rickenbacher's horseshoe pickup configuration with magnets directly surrounding the strings, the pickup coil and the two magnets of the ES-150 are placed below the strings. This pickup design was nicknamed the "Christian" in honour of Charlie Christian, who made this guitar popular. It was also this or similar designs which were retained by most of electric guitars builders to come.



Many other guitar manufacturers joined the hype of building electric guitars: National, Epiphone, Dobro, Supro, This is a period rich in innovations and experimentations and one can only admire the courage to create new designs. Nevertheless one has to wait until the '50 before the modern electric guitar, as we still know it today, saw the light.

By the end '30 the major two schools how to build electric guitars were established:

On one hand the traditional acoustic guitar amplified by pickups placed on the top of guitar body. This was for long years the privileged domain of Gibson until they developed also a solid body guitar: the Les Paul which became a classic.

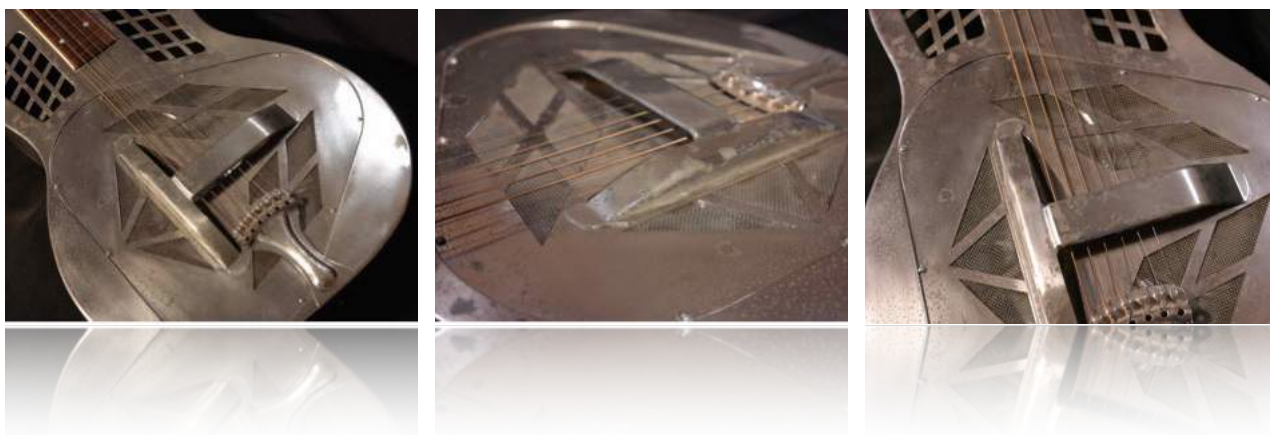


On the other hand, derived from the lap-steel guitar, the solid body guitar emerged as first mass-produced electric guitar. The approach developed by Rickenbacher with the Bakelite Spanish Electric guitar and chosen by Leo Fender to build a simple solid-body electric guitar with a screwed-on neck proved the right one to mass-produce and make popular the electric guitar. His first guitar produced in the mid '40 was still a lap-steel guitar under the brand K&F. With "Doc" Kauffman, who had worked for Rickenbacher's Electro String Instrument Corporation, Leo Fender developed a lap-steel guitar around a direct string pickup. By 1950, after Kaufmann had left, he quickly moved on under the Fender brand to develop the two most distinctive solid-body electric guitars of all times: the Telecaster and the Stratocaster.



Exhibition items

1. National, Style 1 Square-Neck Tricone Resonator Guitar, 1927



National resonator instruments introduced in 1927 were louder than conventional acoustic guitars of the era and were the first result of the research to amplify the sound of the guitar. They were very popular with Hawaiian and Blues musicians in the late 1920's and early 1930's. The resonator guitar was fundamental to the evolution of bluegrass music. The design cut through all musical boundaries, however, proving equally at home in folk, rock country, blues and jazz.

The team behind the development of the resonator guitar went on to develop the electric guitar. In 1927, John Dopyera, a Slovak immigrant, and George D. Beauchamp, a vaudeville musician and promotor, formed the National String Instrument Corporation to manufacture resonator guitars under the brand name National, adding tenor guitars, resonator mandolins and resonator ukuleles to their product line within a year. Dopyera left the company in 1929 to form with his brothers the Dobro company, producing similar instruments.

The resonator guitar was originally designed by John Dopyera to be louder than conventional acoustic guitars.

National's produced two types of resonators: The single cone and the tricone. Those instruments use very thin aluminium speaker cones, to mechanically amplify the sound of the instrument. This style of mechanical amplification was invented in the 1920's, before the advent of electric instruments.

In a tricone, the three 6" cones are set in a triangle. Two of the cones are on the bass side, and one on the treble side. Rather than a wooden biscuit bridge, there is an aluminum "T" shaped bridge that connects to the center of each of the cones. A maple wooden saddle sits atop the T-bridge. The vibration from the strings goes through the

saddle, which in turn vibrates the T-bridge, and then the three cones. The sound has farther to travel to get the cones resonating than with a single resonator guitar. Thus, that's why tricones are not as loud on the attack. However the sustain is greater, and the tone "sweeter". This is because there are three cones all vibrating together, producing more harmonics than a single resonator guitar.

Duke Akina and His Hawaiian Four now en route on world tour, are meeting with wide acclaim and demonstrating that music produced on NATIONAL String Instruments has power to charm all peoples and all classes, from peasant to royalty.

RARELY indeed have any instruments found such general and hearty acceptance by leading musicians of radio and stage as have NATIONAL Silver Hawaiian and Spanish Guitars. Each of these two types of guitar is a leader in its field; in no other instruments will be found such rare beauty of tone and astonishing power and volume. They provide the player with a perfect medium for the complete expression of his artistry; and are constructed to give years of service under the most exacting conditions.

Front View of Hawaiian Guitar Style No. 1 Price \$125.00

Spanish Guitar Style No. 1 Price \$125.00

AS indicated by the price list on the opposite page, each type of instrument (with the exception of the new Style 0) is supplied in four different designs, either plain or beautifully hand engraved. An inspection of these highly attractive NATIONAL Instruments will make it easy to understand why NATIONAL owners take such pride in their possession.

Resonator guitars had either Square neck (D) or Round neck (C) depending on how the guitar was supposed to be played. The square neck was for playing the guitar as a lap steel guitar, whereas the round neck was for the paying the guitar in conventional manner.

This very early first year production guitar, with still "patent pending" marked on the guitar, was still hand made by the Dropeyra brothers and is the 79th guitar built. The guitar features a German silver body (solid nickel alloy with nickel plating), three or "tri" resonator cones with two cones on the bass side, one cone on the treble side, T-shaped bridge cover and hand rest, hand woven grid pattern sound holes on upper body, Hawaiian square neck, 12 frets clear of the body, flat fingerboard radius, metal neck with mahogany headstock, bound single layer ebony fingerboard and a slotted peg-head.

2. National, Polychrome Triolian Resonator Mandolin, 1931 - Peter Lippincott



The resonator mandolin was developed in parallel with the resonator guitar by John Dopyera at National. A resonator mandolin is generally somewhat louder than a standard wooden mandolin, and has a different tone quality and distinctive appearance.

Though resonator guitars are often played flat in the lap steel guitar style, resonator mandolins are almost exclusively played in the conventional manner.

This mandolin belonged to Peter Lippincott, an Arkansas Living Treasure Award recipient, musician, dance caller and potter. Peter Lippincott is a singer/songwriter based in Fort Smith, AR. In addition to his own songs he performs the work of other songwriters and a wide range of traditional American material on a range of instruments.



Peter plays guitar and mandolin as well as other stringed instruments. His singing is perhaps his greatest musical strength with a rich and versatile vocal timbre; he has returned to the song writing he began as a young man, now creating new music reflective of the experiences of maturity. He is recording a CD of his original songs.

He was playing this mandolin at the time he wrote the fiddle tune "Snake River Reel" which he composed on mandolin. If you check it out on YouTube you will see that it is being played all over the world. He also wrote a contra dance of the same name which has been danced widely and published in the New England Folk Festival Association book of Dances at about the same time.

3. National, Style O Round-Neck Resonator Guitar, 1932 - Arlen Roth



National's produced two types of resonators: The single cone and the tricone. Those instruments use very thin aluminium speaker cones, to mechanically amplify the sound of the instrument. This style of mechanical amplification was invented in the 1920's, before the advent of electric instruments.

In this single resonator model the convex 9.5" diameter cone has a maple "biscuit" on top of the cone. The biscuit has a wooden maple saddle which the strings pass over, like a conventional acoustic flat top guitar. But unlike flattop acoustic guitars where the vibration of the wooden body creates the sound, in a National resonator instrument the body acts as a speaker cabinet. When the strings are played, the vibration goes through the saddle to the bridge and then vibrates the speaker cone causing it to "resonate" and amplify the sound. Because there is fairly direct transmission of vibration from the strings to the resonator, the single resonator guitar is the loudest of the resonator guitars.

The National Style O Resonator guitars were produced between 1930 to 1941. They had either Square-neck (D) or Round-neck (C). The guitar featured a single cone resonator, nickel plated body with sand blasted Hawaiian scene on back and palm trees on front and solid area on sides, round shoulder, upper F-holes, round neck, dot inlay fingerboard, bound ebony fingerboard. There were 6 different variations in the sand blasted Hawaiian scene, and 8 total Style O variations if you include body changes.

This guitar is a Style O with a C neck owned by guitarist Arlen Roth. This single resonator guitar is a brass bodied instrument nickel plated and etched with the distinctive Hawaiian palm tree design. The maple neck has an ivory bound ebony fretboard which has been restored to its old glory.



Here is what Arlen says about this guitar:

"My 1930's National Resonator guitar. I have played this on every album of mine, going all the way back to my first album in 1976. John Hammond, Jr. found this for me, and I found it in the famous Silver and Horland Music shop in NYC, not knowing I would soon LIVE in the same building the next year!"

The guitar was often played using a dime. It was the habit to put such coins through the f-holes of the resonator guitars, so that they get some nice extra resonance. This guitar has several dimes in its body and therefore has a special resonance.

4. National, Style 4 Square-Neck Tricone Resonator Guitar, 1932



The resonator guitar had only a brief period in the spotlight, from the rise of the guitar in the late 1920s to the rise of the electric guitar in the mid 1930s, but during that time the National company produced some of the most memorable guitars - in sight as well as sound - in the history of the instrument.

This tri-cones represent National's top of the line as well as the foundation upon which the company was built. Although the less expensive single-cone Duolian, Triolian and Style O models were more popular, National introduced the resonator guitar to the world in late 1927 with guitars like this, featuring a three-resonator system, a body of "German silver" and a hollow square neck designed for Hawaiian play.

Style 4 was the most expensive of the tri-cones, and it featured elaborate floral-pattern engraving with a chrysanthemum motif. This makes it not only a musical instrument but a piece of Art.

5. National, C-series Roundneck Green Duolian Resonator Guitar, 1934 - Rich Robinson



The National Duolian Resonator guitars were produced between 1930 to 1938. They had either Squareneck (D), or Roundneck (C). This is a great sounding single cone National which was produced in large quantities due to the low price at that moment in time (\$32.50 brand new). This was National's basic and least expensive resonator guitar model at the time.

This guitar, a single cone resonator with a steel body and wood neck, is a C series model owned by guitarist Rich Robinson of the Black Crowes. This was one of Rich's favorite guitars. He purchased it sometime in the early 1990s, and first used it during the recording sessions for the Black Crowes' album *The Southern Harmony and Musical Companion*. Rich loved it so much he would eventually use it on every Black Crowes's studio album thereafter – including on such songs as "Hotel Illness" and "Wiser Time".

Sometime in the mid-2000s, Rich had a pickup installed on the guitar and used it live on the last few Black Crowes' tours, including all of the sessions at Levon Helm's *Midnight Ramble* in Woodstock, New York, in 2009.

The guitar's original cone was damaged at some point during the last Black Crowes tour. Nashville's Joe Glaser of Glaser Instruments very carefully repaired the original cone to its original state. Mr. Glaser lived up to his world renowned reputation as one of the world's best luthiers and worked his magic on it, restoring it to its original glory without any issues.





In the search of louder guitars, one of the development was the modern arch-top guitar and the increase of the body size. Around the turn of the 20th century the orchestras had begun to introduce the guitar to fatten up their rhythm sections. In those early days there was no amplification. The common flat top guitar of the day did not quite provide what was needed. It was light and responsive but when played loud, became boomy and therefore the centre of sound did not hold together well.

The first arch-top design introduced by Orville Gibson in 1897 had an oval hole and was constructed with much thicker timber than a conventional flat top of that time. The top and bottom were carved like a Violin and were more suitable for the appropriate percussive centred bright sound that was required. When played hard and loud, the sound did not break up like the flat top guitar and it was still able to achieve the well centred percussive sound at loud volumes, which was required for the guitar to cut over the top of the orchestra.

To accommodate the even louder volume of sound required from a guitar for the big bands, the arch-top soon grew from a 16" to around 18" and some arch-tops featured a very large bout of around 19".

When electrification and amplification were introduced the arch-top began to shrink again to a size of around 16" for the modern electric arch-top of today.

The point of this historical information is to understand how the arch-top guitar at one time was admired for its tone and acoustic ability. Today however, it is no longer appreciated by many in quite the same way. Many modern arch-top guitars that look very traditionally attractive may sound very acceptable when plugged in, but acoustically

some of these arch-top guitars often leave a lot to be desired as an acoustic traditional arch-top instrument. It could then be said that the acoustic sound of the arch-top has slowly taken second place to the electrified sound that we hear on most Jazz recordings today.

The traditional arch-top guitars were made with floating adjustable height bridges, so that when the guitarist needed to play louder, they could simply raise the height of the strings, with the use of the bridge height adjustment and avoid fret buzz. In so doing, if it was necessary to raise the strings quite substantially, this might affect the intonation and so then, the floating bridge could be moved slightly backward or forward to correct that problem.

THE HOME OF GIBSON
The largest factory in the world devoted to the manufacture of fine fretted instruments and strings—the name “Gibson” has become an emblem of service, satisfaction, dependability and pride in ownership.

The “SUPER 400” Model
SPECIFICATION
Body Size: Super Grand Auditorium, 18½ inches wide, 21½ inches long, 4½ inches deep.
Wood: Highly figured curly hard maple neck, rims and back, finest spruce top, oval ebony fingerboard.
Finish and Decorations: Rich Cremona brown with sunburst top, rims, back and neck; de luxe binding on top, back, fingerboard and “f” holes.
Fittings: Gold engraved metal parts, special compensating tailpiece, de luxe inlays in fingerboard, beautiful finger-rest.

***£90.0.0**
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Hire Purchase Terms:
Deposit £10 0s. 0d. and 18 monthly instalments of £5 5s. 6d.

Guitars embody principle of construction that revolution of tone and volume.

FEATURES:
Wood: all-season fingerboard
Finish: Cremona on top, back and bottom, new five genuine ivoryoid slugs
Fittings: finished heads, gold finger-rest
Body Size: 21 inches
***£72**

There are few guitars as important to the history and development of Gibson as a major manufacturer of six-stringed instruments as the Super 400. It was first sold in 1934 and named for its \$400 price (many Gibson guitars were named for the sticker price during that era of the company). The model first appeared as an arch-top acoustic with no cutaway, simply named the Super 400. As it was then – and still remains today in the Super 400-CES – the Super 400 was the largest guitar the company had ever produced, with an astounding body width of 18 inches. But as Gibson has evolved over the years to adapt to the industry’s ever-changing advancements, so have its Super 400s. The earliest Super 400 models were quite similar to Gibson’s other arch-top acoustic, the L-5, and featured a hand-engraved tailpiece and hand-engraved

finger rest support, along with an “L-5 Super” truss rod cover. In 1939, the guitar underwent several changes that still remain with it today, including an enlarged upper bout, a new tailpiece similar to the one on the L-5, enlarged f-holes and a venetian cutaway option that is now a standard feature. Although the Super 400s were discontinued during the mid-1940s because of the supply shortages of WWII, Gibson reintroduced the model in 1949. And as Gibson strived to gain an upper hand in the electric guitar market in the early 1950s, the model continued to progress with the eventual introduction of the first electric version.

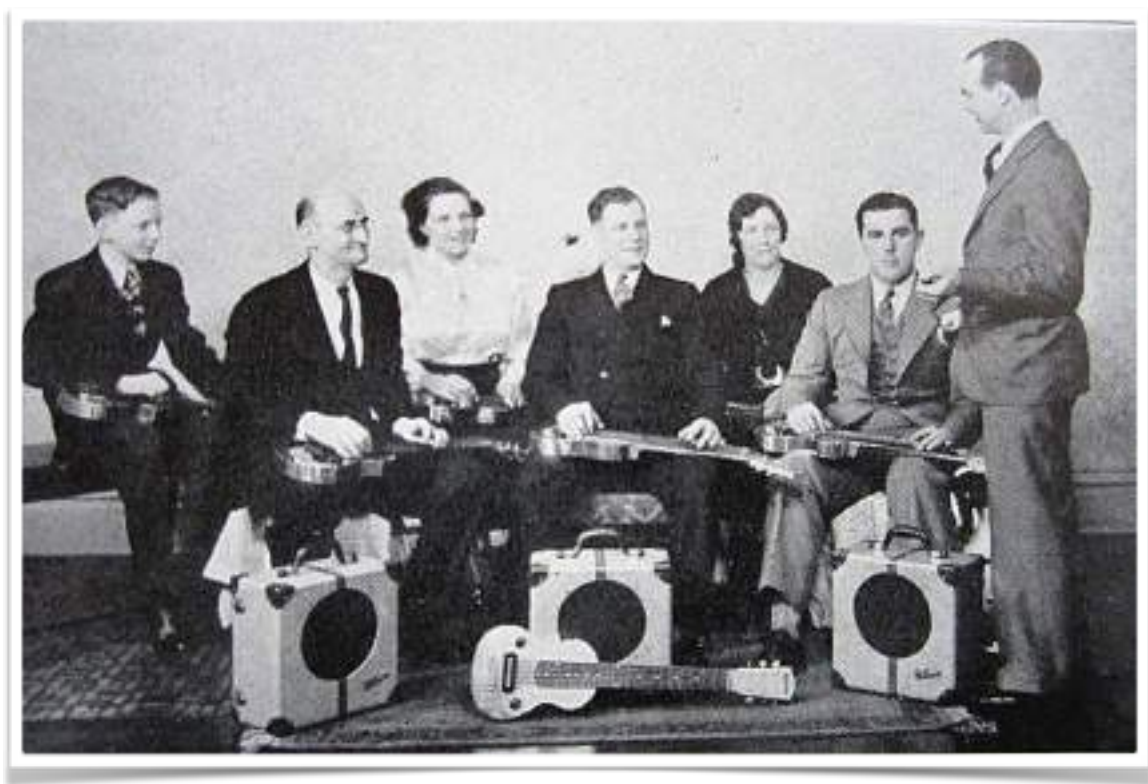
This Super 400 Gibson has been sent the 10/11/1935 to John Pariso, Gibson endorser, whose photo shows that 400 on page 24 of the AA catalog of 1939. It is indeed a 400 of 1935, but it has been completely reconditioned after the war, which was not totally unusual for Gibson at that time for high-end models. The body and neck are done in flamed maple with an ebony fingerboard. It now features a De Armond Rythm Chief 1000 pick-up.



Left to right:
MUZZY MARCELLINO
Orchestra Leader,
Hollywood
FRANCIS HENRY
Guy Lombardo
Orchestra
JOHN PARISO
Henry King Orchestra



This futuristic-looking all-metal lap steel guitar from 1935 is a major historical piece and a fine example of the Gibson company's first-ever electric guitar. The hollow cast aluminum body is fitted with Gibson's earliest bar magnet pickup - later nicknamed the "Charlie Christian" pickup. This seminal pickup - the first designed by Walter Fuller in mid-'35 - has an unbound black plastic coil form with a single metal blade pole-piece for the three bass strings and segmented blades for the treble strings.



The very advanced for 1935 circuitry features both volume and tone controls with a fancy Bakelite knob on either side of the lower bout-a feature requested by Gibson's consultant Alvino Rey. The body's shoulders are more rounded and angle into neck at a sharper angle compared to the subsequent wooden-body EH-150. The unbound ebony

fingerboard has a V-shaped end, white flush fret inlays and mother-of-pearl dot markers. This instrument has the second style of bridge, with slots to hold the strings but only two securing screws. The body, neck and headstock on the E-150 are finished in raw aluminium, no doubt influenced by the Rickenbacker Electro instruments. The original open back Grover tuners are stamped with the company logo and are nickel-plated.

This model was originally designated both the "EHG" (Electric Hawaiian Guitar) and "E-150" reflecting the original \$150.00 list price of the guitar-amp set. Gibson's records indicate that somewhere around 100 of this model were shipped from Kalamazoo from October 1935 into the beginning of 1936. The production run was very limited; Gibson quickly deduced that the metal body (which had to be outsourced) was not an advantage and switched to a wooden body built in-house.

The serial numbers on this model-apparently beginning at 100 and running up to just over 200-are a specific series impressed into the metal, and records indicate that the same instrument was sometimes shipped out to several different dealers before eventually finding a home! By any standard this is one of the rarest models in Gibson history. Not only were a very limited number originally produced, but more than a few were likely sacrificed to the WWII aluminium drives enforced from around 1942! In terms of not only Gibson history but the story of the 20th century guitar in general the E-150 is a milestone design, and marks the progress of the electric guitar from novelty to ubiquity.

The guitar was paired with Gibson amps.(see TYS electric guitar collection Gibson EH 150 guitar amplifier (Version 1), 1935).



Gibson's E-150/EH-150 amplifiers have long been regarded as the quintessential pre-WWII model, one of the most influential and recognisable amps of all time. It wasn't the first amp Gibson marketed for use with an electric guitar and it wasn't originally designed or even manufactured by Gibson. But it will forever be associated with the early days of Gibson's long-running stellar electric line.

Electric guitar pioneer and Gibson endorser Alvino Rey worked on the company's behalf in Chicago in mid 1935, along with engineer John Kutilek of Lyon & Healy, trying to develop an electric Hawaiian guitar and amp set worthy of the Gibson name. Rey had long been associated with the pre-Rickenbacher brand Electro Frying Pan and amps, which reportedly were role models for the experiments. While Gibson's first real test run of aluminium-bodied Hawaiian models in late '35 arguably showed little influence of the Chicago pickup experiments, the four-tube amps that accompanied the instruments had a definite leaning toward Alvino's personal Electro amp.

The first production wood-bodied Hawaiians of early '36 also came with this simple circuit, but by the end of the year Gibson had an improved model it could call its own. And for the next 30-plus years, they would stay at the forefront of guitar amplifier design, a fact often overshadowed by Fender's dominance in the vintage market. If nothing else, the beautiful tweed cabinets of the pre-WWII Gibsons set a new standard for design – no more plain black boxes!

But more important than cosmetics, the late-'36 Gibson EH-150 stands out as the first amp to pursue the idea of tone manipulation as opposed to merely amplifying what the guitars sent their way. Rey is credited with designing the high-frequency roll-off tone control for guitars, which Gibson introduced to the world on the aluminium Hawaiians.

The general idea was incorporated into the amp as a tone switch, to be used in conjunction with the tone pot on the guitars.

More important than that grand revelation would have to be the inclusion of an extension speaker output and matching speaker / cabinet setup, which today may also not seem like such an earth-shattering event. However, the intended application of the 1 / 4" jack was described in an early owners manual as follows: "Its use presents many new possibilities. The true Echo effect is obtained by placing the E-150 speaker and amplifier near the player and the Echo Speaker at an approximate 35-foot distance, preferably further from the audience and to either side. The slight sound-wave lag time...creates a new and beautiful effect."

A second, more practical (for the time, at least) example followed.

"When using a vocal microphone the additional loudspeaker is also desirable, permitting better and more complete coverage of the audience."

But while this use had been explored in PA system design for years, the "...beautiful effect" preceded all other "effects." The idea of intentionally altering the acoustic sound of a guitar – embellishing it – and pursuing a more pleasurable sound cannot be ignored in historical contexts, for the future of Spanish guitar had little room for dry, flat tone. Remember, electric Hawaiian guitars, which inherently produced vibrato-drenched tone, outsold electric Spanish models by as much as 10 to 1 in the pre-effects days.

The first version of the E-150 amp (1935-'36), had like all amps of the time, no control panel on the chassis. The power cable, fuse holder (round, house-fuse style on earliest models), on / off switch, pilot light, and two inputs were all secured directly to the backside of the bottom-mounted, bent-metal chassis. A black crinkle paint covered all the exposed surfaces and, like many of the amps of the time, there were no volume or tone controls.

Four tubes were laid out similar to Alvino's Rickenbacher, to the left between the power transformer and the speaker came either a glass 80 or metal 5Z4 rectifier. Twin 6F6s for the power were mounted catty-corner to the right of the speaker with a shielded 6A6 preamp in the front right corner. This triode (actually twin triodes in parallel for Class A operation, as specified in the RCA tube manual) was fed directly by the parallel inputs

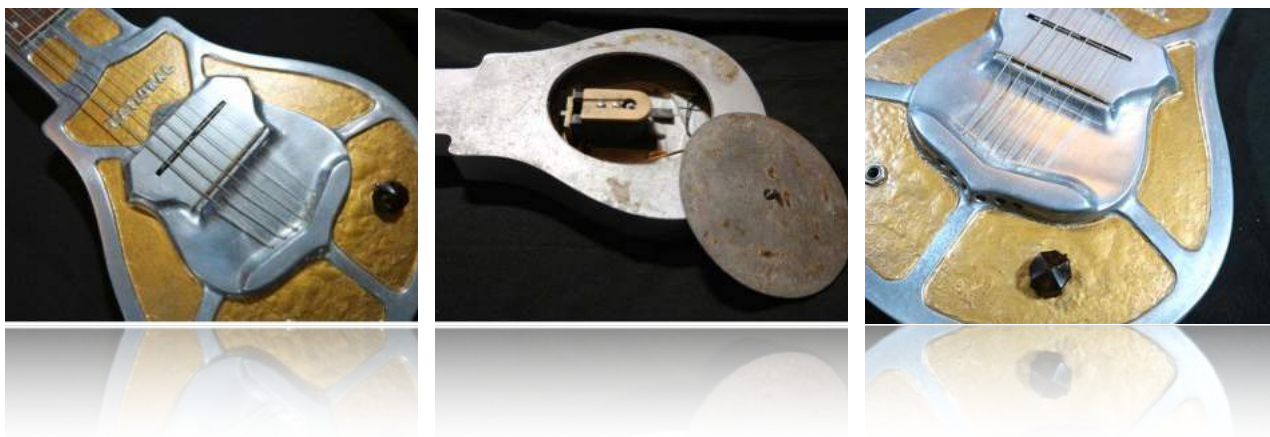
and was all she wrote in the preamp tube gain department (amplification factor of approximately 35, compared to 100 for the modern 12AX7). The paralleled plates in turn directly fed the phase inverter, with no need for coupling caps.

Like many amps of the era, phase inversion for the push/pull outputs was performed by a transformer of the center-tapped secondary type, which stepped up the voltage negligibly while providing equal but opposite signal to the power tubes.

This device was mounted to the back wall of the chassis (opposite the inputs), as were the power supply filter caps (two large boxes). Between the front and back panels were the tube sockets, with only a few resistors and caps professionally connected using binding posts, a large grounding strip, and neatly tied wires. Whoever was building these – and it wasn't the Gibson factory – knew proper assembly techniques (and could have taught Leo Fender a thing or two in his early days).

Access to the interior is a breeze, with the chassis secured to the cabinet by a single large bolt from underneath protruding through the metal topside before being capped by a fancy brass nut. Alligator cloth/paper lined the insides of the tweed-covered cabinet as neatly as plaid would line a suitcase of the era, a very pleasing touch. A small label attached to the inside surface of the removable back cover (also lined) had the serial number pencilled in. This number also shows up inside the chassis and on the magnet cover of the speaker. Utah's respected 10" field coil model, previously used by Rickenbacher, was standard.

9. National, Electric Hawaiian Lap Steel Electric Guitar, 1935



The National Electric Hawaiian Model Lap Steel Electric Guitar, also called 'Horseshoe Crab', was introduced in 1935 and made in Los Angeles, California. The guitar was finished in natural aluminium with gold paint accents finish, cast aluminium body and rosewood fingerboard. This shining Art Deco masterpiece is one of the very earliest commercially built electric guitars, and the National company's first entry into the purely electrified market. As the first Rickenbacker Electro Hawaiian guitars had been made of aluminium, so was this National-although it is much larger and more substantial feeling than the more famous "Frying Pan" it emulates. The pickup is the same blade-equipped unit with an internal horseshoe magnet used on all first National and Dobro electrics. It is mostly hidden, inserted from the back into an abstract shaped metal housing moulded into the body. The only wood element is a standard rosewood guitar fingerboard rather incongruously affixed to the square metal neck, fitted with frets never meant to be used. A "National" block letter logo is moulded to the face of the body, with decorative insets filled with gold paint all around on the face. The still-futuristic looking headstock is cut out in the center, with the six fluted-base Grover tuners fitted to the solid wings. This guitar sounds great, if brighter than many period steels and looks amazing, antique Deco and ultra-modern at the same time. If Buck Rodgers had played steel guitar, this would have been a perfect choice!. The only thing missing is the pool table felt that once covered the back of the body-it is completely gone, leaving only some minor old glue residue.

This is the first year of production; later other features were added such as height-adjustable pickup with knurled adjustment knobs, two control knobs in either the middle or lower panel and a recessed jack.

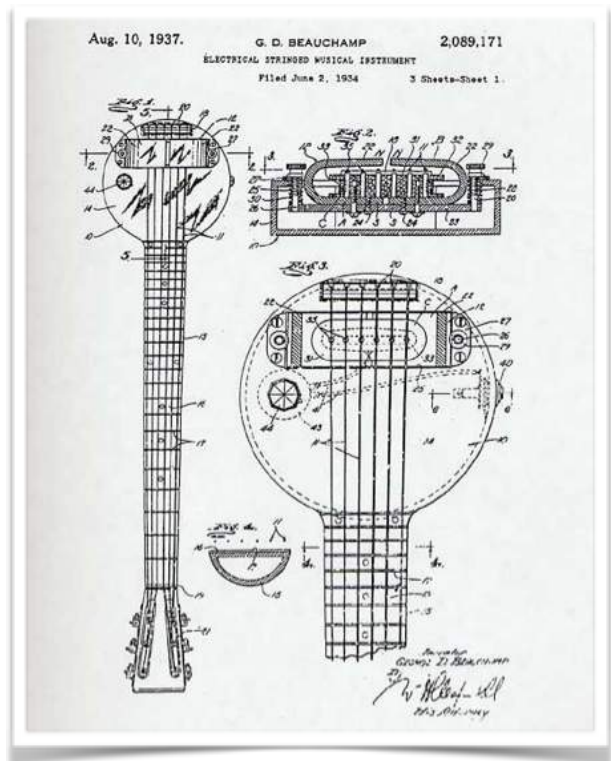


10. **Rickenbacher, A-22 Electro Hawaiian Guitar nicknamed “Frying Pan”, 1936**



The Rickenbacher A-22 Electro Hawaiian Guitar, nicknamed "Frying Pan", is one of the most historically important 20th century electric guitars. Indeed it was the first commercially successful electrified string instrument.

The guitar was designed as a lap steel as Hawaiian music and Western cowboy songs made up a significant portion of the popular guitar music at that time. George Beauchamp himself was known to perform Hawaiian style music on stage. In this way, lap steels came to play a significant role in the early development of the electric guitar.



The instrument, officially the model A-22, earned its nickname because its circular body and long neck make it resemble a frying pan. It features a full-sized guitar neck and a round body containing a pickup, a volume knob and later models also a tone control knob. The A-22 contains one single-coil, horseshoe-magnet pickup. The pickup is shielded by a two-piece cover, which mounts to the body slightly above each end of the pickup and crosses over the strings. The underside contains a plug for the amplifier cord and a cavity containing the inner-workings of the pickup.

The fingerboard is integral with the neck and has raised ridges for frets and inlaid dot markers. The entire instrument is fabricated in one piece of cast aluminium with the strings thru body, with separate chromed metal nut and saddle.

Introduced in 1932, the Frying Pan hardly looked like the invention that would enable the birth of Rock 'n' Roll some 20 years later. Two models of this guitar existed: Electro Hawaiian (Frying Pan) LapSteel A-22 and A-25. The A-22 model has a 22.5" scale length, and the A-25 model has a 25" scale length.

This guitar comes from the guitar collection of late Hughie Thomasson of The Outlaws.

The guitar was paired with Rickenbacher amps.(see TYS electric guitar collection Rickenbacher M-10).



It is common knowledge that Rickenbacher invented the electric guitar. Doing so, they had to invent the guitar amplifier as well.

Rickenbacher started making amps as long ago as 1930. After a couple of early production models they came out with the M line of amplifiers the first written evidence of which is a 1933 catalog referencing an M-10, an M-11 and an M12. These amps predate the homonymous M-XX series built in the fifties.

Hal Lindes of Dire Straits fame, an owner of an M-11: "I have heard Leo Fender used to repair Rickenbacher amps at his TV repair shop, which probably inspired and gave him the blueprint for his Fender amps."

This is a 1930s Rickenbacher M-10 Guitar Amplifier and a companion to the Rickenbacher A-22 frying pan lap steel guitar (see TYS electric guitar collection). It has a single Utah 10" speaker. The M-10 amplifier has two 6V6, one 5V4 and one metal 6N7 tubes. There are two jacks and power switch on the back. No volume/tone controls.

This amp was built in various versions and it is difficult to assess correct period of production.



By the time he died in 1994, Roy Smeck was in his nineties and many years removed from his heyday as a performer, which began in the 1920s. But known as the ‘Wizard Of The Strings’ he was still a legend to several generations of musicians, who were not only inspired by his virtuosity but also helped along by his numerous instructional books, covering everything from banjo to ukulele to several varieties of guitar.

Born in turn of the century Reading, Pennsylvania, Leroy Smeck first began to appear professionally on the vaudeville circuit. He knew he wasn’t much of a singer, so he developed his act in a different direction. He played several different stringed instruments, often using tricky styles and little added dances. It seemed to appeal to fans and by the mid-1920s he was making records and even appearing in early sound films. He was the first music video star.

He filmed “Stringed Harmony” for DeForest Phonofilm in 1923, using DeForest’s groundbreaking but poor quality sound-on-film technology. Three years later he made a film called “His Pastimes” for Vitaphone using the sound-on-disc system (which synchronised a disk with a film projector). He played Hawaiian guitar, banjo, ukulele and harmonica, and the seven-minute performance made him a star. His most impressive video came in 1933, when he appeared in a Paramount short with split screens featuring Smeck playing four instruments together, thereby laying the foundation for sound-on-sound and multi-track recording.

Smeck’s eclectic style included playing just about every stringed instrument around, including less-common ones like mandolin, lap steel guitar, and his own invention, the Vita-Uke. His repertoire encompassed every genre from jazz to country, often with a

Hawaiian influence, and as the years passed he attracted quite a following. His countless instructional books began appearing in the 1930s, and are still available even now.

In his later years Smeck slowed down in performing but continued to inspire newer artists. In 1985 his name was again front and center when a documentary titled *The Wizard Of The Strings* was nominated for an Academy Award, and even after his death he was still being honoured by several different musical Halls of Fame.

He was probably the most successful endorser of musical instruments prior to Les Paul, but his best-known models were the novelty Vita-ukes of the 1930s, a budget-line Recording King lap steel from Montgomery Ward (made by Gibson) and cheap Harmony electric Hawaiians of the '50s. He did have a pair of Gibson signature models in the mid '30s, but both were acoustic Hawaiians, introduced at a time when most Hawaiian-style players – including Smeck himself – were going electric.

Gibson would later ship lap steels directly to Smeck, presumably for his students. They were basically following the EH-150 specifications except for colour and binding style, "V" end ebony fingerboard with w/b binding, dot inlays and black peg-head binding.

This is therefore a beautiful piece with a lot of history, and it was part of the batch of special white-finished instruments provided by Gibson which Roy Smeck used with his band. According to Gibson ledgers, Roy Smeck only received two special 7-strings models; one 8 string special while the rest of his white specials were all 6-strings.

According to A.R. Duchossoir's book in which this piece is found, he writes, 'Factory records show that, between 1936-1937, a further ten EH-150's were custom-finished for the Roy Smeck School of Music. Apparently, seven of them were painted all white, like the Master's instrument...whereas three others (including two 7-strings) were done with black-painted sides and a headstock adorned with the words 'Roy Smeck' instead of the mention 'Roy Smeck Special' that is found on the all-white instruments.'

This guitar was sent to Roy Smeck on the 16 December 1936 for him to sell through his school. Apparently this one did not sell and Gibson sent it later to a pawn shop where they seemed to dump a number of odd and even experimental instruments. This one was sent there on the 10 January 1941.



13. Rickenbacker, Electro Spanish Tenor Electric Guitar, 1936



The Spanish Electric guitar was first solid body electric guitar ever made with a round neck - not a square lap steel neck. Furthermore it is played as a regular guitar and not as a lap steel. This model by Rickenbacker is often referred to as the first real solid body electric guitar. The Electro-Spanish Tenor version (there was also a 6 string version) was introduced in 1935 at the same time as the famed Bakelite "Model B" Hawaiian Guitar. The Electro Spanish was not successful and was produced in comparatively limited production for just a few years.



While all "Model B" Hawaiian six-string guitars were built with short-scale moulded Bakelite necks the Tenor guitar features a conventional neck. The neck was either in Bakelite with moulded Bakelite frets or it was a wooden neck with a rosewood fingerboard. This one has a Bakelite neck.

The guitar is a variation on the Bakelite "Model B" Hawaiian six-string guitar, with the volume and tone knobs on opposite sides of the pickup and output jack on the bass

side. The moulded body has five cavities covered by decorative metal plates and an aluminium bridge notched for four strings. The guitar has the same horseshoe magnet pickup wraps over the strings as the six-string version. The neck joins the body at the fourteenth fret, has twenty-three frets with inlaid dot markers and is bolted in by two large screws.

A particularly interesting feature of this guitar is the complete original Kauffman Vibrola tailpiece. Clayton Orr "Doc" Kauffman is one of the more unsung early electric guitar pioneers, and this invention - the earliest vibrato tailpiece - was his first major contribution to the electric guitar. The Kaufmann Vibrola was designed to create Hawaiian-style vibrato effects for Spanish guitar players, and was on the market by 1933 with Epiphone in New York boasting exclusive distribution rights. Not surprisingly, the unit proved more effective on electric guitars than acoustic arch-tops with heavy strings, and by 1936 Rickenbacker had taken over as marketers of the device. From that year onwards the few Bakelite Spanish guitars built featured the unit, even though installing it involved milling off the body's moulded integral string guide. Soon enough, Doc convinced Rickenbacker to market the motorised "Vibrola Spanish" guitar, which replaced the player's hand on the bar with an electric motor and flywheel in the body...but that's another story!

"Doc" Kauffman played his personal Vibrola Spanish guitar for some years afterwards, and interestingly the Fender Broadcaster - designed not long after Kauffman's 1944-5 partnership with Leo Fender - carries on several features of the Electro-Spanish guitar. The bolt-on neck (considered an easily replaceable part) the thru-body stringing and the bridge-mounted steel-guitar position pickup are all Electro-Spanish inspired features. The Electro-Spanish can be seen as the first progenitor of the solid-body guitars to come.

Although today perhaps primarily thought of as a museum-grade collectors piece, this Electro-Spanish Tenor Guitar is also a wonderful musical instrument, albeit an eccentric one. While the electric tenor guitar has never been particularly popular the astounding thing about this little guitar is how good it sounds. The heavy Bakelite body and horseshoe magnet pickup combine to produce an extremely powerful singing tone familiar to steel guitarists but virtually unique in a Spanish guitar.

14. PremierVox (export Rickenbacher), "Model B" Hawaiian Guitar, 1936



This is one of the rarest and most unusual electric guitars and almost certainly one of the very first electric guitars ever seen in the UK. This guitar branded Premiervox is the "Export Model" of the Rickenbacker Bakelite "Model B" Hawaiian Guitar, which is in itself is a considerable rarity.

"Model B" Hawaiian Guitars were introduced in 1933/4. They were the company's second steel guitar model after the legendary "A"-model (aka. the "Frying Pan").

As on the "Frying Pan" the guitar features an electromagnetic "Horse-shoe-magnet"-pick-up, invented by Mr. Beauchamp. The company was issued a patent on the pick-up in 1937.

This instrument was assembled in England from parts supplied by Rickenbacher from California around 1935-6. Much of the instrument is the same as its American cousin, but there are fascinating differences as well. The pickup appears to be made of Rickenbacher components but wound in England to different specifications ending up in a slightly variant English wound Rickenbacher 1 1/2 in. horseshoe pickup. The original hard-wired output cable has been replaced with a standard 1/4in. jack fitting.

The rectangular hardshell case is English, with different fittings from the American version. The metal headstock tag reads "Premiervox Electric Guitar, British Made" which is obviously not exactly the case.

15. Harmony, "Golden Jubilee" Lap Steel Guitar, 1936 - Jimmy Blakley



Harmony was an American company that, in its heydays, was the largest musical instrument manufacturer in the USA. They made many types of stringed instruments, including ukuleles, acoustic and electric guitars, and violins.

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12 D 2291—All Stage push-pull portable 5-tube, 3-stage amplifier, complete with one translating unit to fit soundhole type instrument. Jack connections for 3 translating units or 2 units and 1 microphone for voice. Shpg. wt., 34 lbs. Cash Price... **\$65.00**

12 D 2301—Adapter for "H" hole types. Shipping weight, 6 ounces. **\$1.50**

12 D 2302—Microphone for vocal amplification. Shpg. wt., 2 pounds. **\$17.50**

12 D 2300—Extra translating Unit. Shipping wt., 1 lb. Each. **\$16.50**

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These guitars have a built-in pick-up device of extreme sensitivity. Volume control, on each guitar, permits instant regulation. Amplifier is carefully engineered and well built. Artificial leather covered plywood case with ornamental grille. 3 stages of amplification with 4 modern type radio tubes. 10-in. dynamic loud speaker, 2 jack connections—2 instruments can be amplified at same time. Clear, undistorted tone is produced—volume enough to fill a huge auditorium can be diminished for enjoyable home playing. Fully licensed with American Tel. and Tel. Company, Western Electric, Elec. Research Prod., R.C.A. and affiliates. (For 110-volt, 60 cycle A.C. current only. Call your electric light company for this information.)

12 D 2292—For Hawaiian Playing—Outfit consists of Amplifier as described, Hawaiian-style, metal-cast guitar that's easy to play with long sustained tone—a true "singing" guitar. 2 3/4-inch scale. Volume control on top. Cord and jack included. Shpg. wt., 42 lbs. Cash. **\$67.50**

12 D 2055—Keratol-covered, "Kant-Krack" crushed plush lined carrying case for Hawaiian guitar. Shipping weight, 9 pounds. **\$7.95**

12 D 2105—Extra set Hawaiian style Strings. Shpg. wt., 2 oz. **.89**

12 D 2293—For Spanish Playing—Outfit consists of Amplifier, Grand Concert size Spanish model guitar with high-backed top and back. Edges celluloid bound... body finished in highly-polished shaded mahogany color. Pick-up is built in, and can be adjusted. Volume control. Cord and plug. Shpg. wt., 44 lbs. Cash. **\$67.50**

12 D 2054—Carrying case for Spanish Guitar. Shpg. wt., 10 lbs. **\$9.75**

12 D 2104—Extra set of Spanish Style Strings. Shpg. wt., 2 oz. **.88**

SteelGuitarForum.com

Harmony was founded in 1892 by Wilhelm Schultz. In 1916, Sears, Roebuck and Co. purchased it, in part to corner the ukulele market. At the time Harmony was led by Joe Kraus, who was chairman until 1940.

This lap steel guitar is one of the first generation of commercial electric guitars. Made in Chicago the semi-hollow body is assembled from stamped metal front and back halves with numerous decorative flourishes including an elaborate scroll on the headstock. That Harmony "Golden Jubilee" was sold through the Sears catalog only, for one year only, 1936. It was listed as a Supertone in the catalog and was offered with a Supertone amplifier at a total cost of \$ 67,50.

The pickup was made by Rickenbacher for Harmony. The pickup on the guitar is most interesting in that it has three coils connected in series fit into a wood block with a horse-shoe magnet.

When inspecting the guitar it appeared that one of the former owners has inscribed his name and phone number. This common practice among musicians enables them to identify the instruments belonging to them. In this case the name of Jimmy Blakley appears, suggesting that he was one of the owner of this instrument.



Jimmy and Dorothy Blakley were a husband-wife act that were making Western music for several years in the 1950s. Jimmy and Dorothy got their start on radio station KLPR in Oklahoma City, Oklahoma and later worked on several other stations before moving to Roswell, New Mexico. Jimmy played steel guitar for their group, while his wife played the piano. They were playing nightly over at Scotty's Club in Roswell, New Mexico. They had their own radio show over KSWs in Roswell for over three years, too. In addition, they had a weekly television program over KSWs-TV that aired on Thursday.



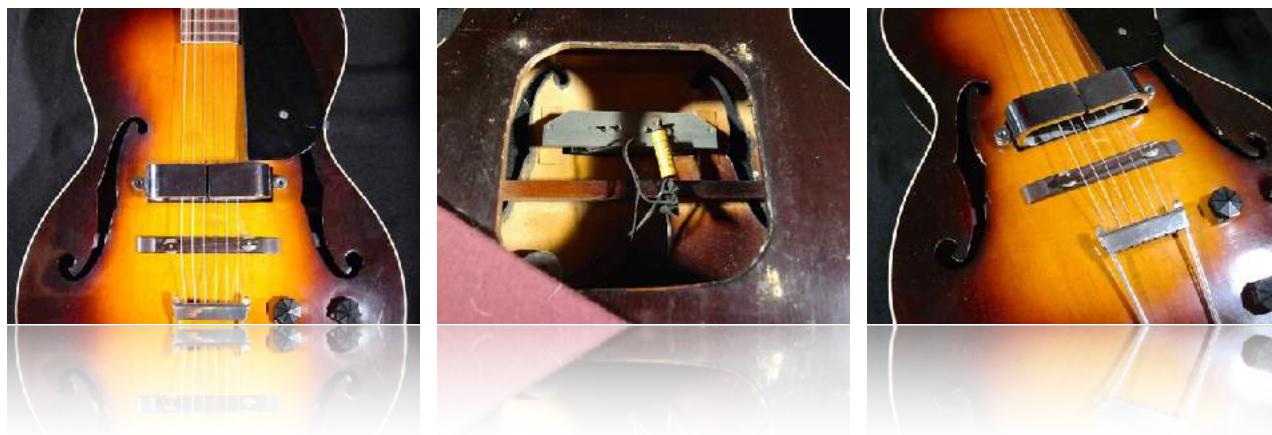
This rare 1936 Supro "Frying Pan" is an aluminium cast lap steel guitar made by National-Dobro. Supro was the budget-line for National-Dobro and this aluminium bodied model was only built from early 1936 till 1937 when it was replaced with a wood bodied model.

This is the first electric guitar under the Supro brand and there is still "Patent pending" indicated on the label.

The Dobros and Nationals were joined by the first Supro guitar versions in late 1935, even though their announcement didn't appear until a few months later in the March, 1936, *The Music Trades*. These first Supro guitars included an aluminium Hawaiian lap steel, both electric Spanish arch-top 6-string and tenor guitars, and an electric mandolin. They mark the official beginning of the Supro story.

The Supro aluminium Hawaiian lap steel was similar to Beauchamp/Electro's "Frying Pan," with a round body and guitar-like neck, very similar to the Rickbacher, but with the top carved away to allow a little more access. Given the close nature of the L.A. guitar world, it's entirely possible that all these aluminium guitars were cast at the same place. The head was three-and-three with a single cutout in the middle. The Supro had dot inlays on the fingerboard, with an alternating two/one pattern and four dots at the octave. A rectangular Supro logo plate sat between the pickup cover and the fingerboard. The pickup – the single-coil version of the Stimson design – was mounted under a raised cover (part of the casting) with a slit to reveal the bar pole-pieces. It had one volume knob on the treble side and was housed in small form-fit hardshell case. This was closest to Beauchamp's patented electro guitar design, making the Supro brand a direct descendent

of George Beauchamp. An important point to remember is that these cast aluminium guitars were made in Los Angeles.



The Electar Spanish Guitar was introduced in 1935 as the first Epiphone electric guitar and produced until about 1939. It differed from the acoustic arch-tops in having a flat back, a neck mounted flush with the body and a horizontal braced top. This heavy bracing, according to the 1937 Electar catalog, “properly supported and dampened (the top) in order to avoid after tones and acoustic feedback”.

Although Gibson had begun producing an electric Hawaiian a few months earlier, Epiphone beat Gibson to market with the electric Spanish-neck model. In contrast to Gibson, which had cautiously worked its new model into the sales stream, Epiphone called attention to the new models, giving them their own brand name: Electar. In less than two years Epiphone was fully committed to electric guitars. To develop an amplifier line, Epiphone hired a local Manhattan boy named Nat Daniel.

The arched top is laminated maple, the flat back and sides are also laminated maple single-bound in white pyralin. The one-piece mahogany neck with a scale length of 25.50 inches has a nice "V" profile and a nut width of just under 1 11/16 inches. The single-bound rosewood fretboard has 20 jumbo frets and inlaid pearl dot position markers. Headstock with gently pointed peak and metal Electar logo plate. Individual open-back Grover 'statite' tuners with oval metal buttons and slot-head screws. Large style black plastic pick-guard. Single Epiphone Model M Horseshoe Magnet pickup situated in the center of the top with two wheels for adjusting the height.

The instrument was fitted with the Model M pickup, a rather bulky horseshoe magnet pickup mounted through a rectangular access hole in the back. The hole was c. 4"x 6" and was covered with a cloth-wrapped plate screwed to the back. The pickup was

mounted to maple blocks glued to the underside of the top and projected through a hole cut in the face of the instrument in bridge position

The poles of the magnet wrapped over the strings and included two magnets under the strings. The visible part of the pickup was nickel-plated on early models; while later models featured an “oven baked, black crinkle finish”. The input jack and the black Bakelite volume and tone controls with a small pointer were mounted on the lower treble bout in a line with the strings.

Rosewood bridge on rosewood base with two height adjustment wheels and Epiphone trapeze tailpiece. The serial number 428 is stamped onto the treble top-edge of the headstock. Walter Carter about the history of the Electar Model-M Spanish Guitar:

“Electro was a competitor, to be sure, but Epi's foremost competition would come from Gibson. The Electar line was announced in November 1935, just as Gibson was testing the waters with it's first electric, a metal-body Hawaiian steel guitar. Although Rickenbacker's first offerings had been metal, metal-body guitars didn't fly under the Gibson banner, and Gibson replaced the model with a wood-body Hawaiian at the beginning of 1936. The Gibson pickup had a metal plate protruding from the coil upward the strings. The end of the plate was notched so that the three highest-pitched strings appeared to have individual pole-pieces. When Gibson put it on a standard guitar, there were initially no notches, but in later versions the area under the second string was notched. Obviously the output was not always even across the entire pickup "bar" (to the player it looked like a bar rather than a plate)... Catalogues never showed it, but most of the Epi hollow-body electrics made prior to World War II had a large padded plate on the back that could be unscrewed and removed for easy access to the electronics. Although most musicians found it unnecessary to fiddle with the pickup and controls, it was that very feature that would bring an emerging guitar star named Les Paul into the Epi camp in the 1940's. Epiphone electric guitars had another unusual feature: a metal plate noting that the instrument was made under license to Miessner Inventions, of Milburn, New Jersey. Miessner held several patents on electric keyboard instruments and claimed that all electric guitars utilised their patents. Epi complied with Miessner's licensing demands and listed 10 of Miessner's patent numbers on the metal plate attached to each instrument. Other makers fought Miessner, however, and Miessner's claims were eventually settled and dropped. In a letter to dealers dated June 29, 1937, Epi reported that sales had doubled in the last year. The overall rise in popularity of the guitar undoubtedly

contributed to the increase in sales. But part of Epi's success was based on it's image as an innovative company,, an image enhanced by the Master Pickup and a barrage of new features introduced in 1937 including the following: The Mastervoicer Tone Control, the catalogue claimed "enables the player to obtain a great variety of effects varying from a muted tone to that of the strident banjo with one turn of the knob."... Epi's "thrust rod" - obviously a play on Gibson's truss rod - was, like Gibson's, an adjustable truss rod in the neck. But unlike Gibson's, which adjusted at the headstock end of the rod, Epi's adjustment was at the body end of the neck, and it did not require removal of a truss rod cover. (Walter Carter. Epiphone The Complete Story, pp. 33 - 34.) From another Book on Epiphone:

"The Model M was introduced in 1935 as the first Epiphone electric guitar and was produced until about 1939. The body was the 14 3/4" Grand Concert size with a laminate maple pressed top, maple sides, a flat maple laminate back and a one-piece mahogany neck. The top, back and neck were bound in single-ply white pyralid. The rosewood fingerboard was inlaid with dot position markers at frets three, five, seven, nine and fifteen and a double dot at the twelfth fret. Tuners were a simple open-back design with either plastic or metal buttons. The peg-head came to a gentle point and featured the "Electar" name. The instrument was finished in a sunburst on the top and chocolate brown sides, back and neck. The tailpiece, pick-guard and adjustable bridge were the standard Epiphone design used on acoustic instruments of the time (though the pick-guard was somewhat smaller). Besides having a flat back, two other ways in which this model differed from the acoustic arch-tops of the time were that the neck was mounted flush with the body rather than elevated, and the top was horizontally braced. This heavy bracing, according to the 1936 Electar catalogue, "properly supported and dampened [the top] in order to avoid after tones and acoustic feedback." This instrument was fitted with the Model M pickup, a rather bulky horseshoe magnet pickup which was mounted through a rectangular access hole through the back. This hole was approximately 4" x 6" and was covered with [a]cloth-wrapped plated screwed to the back. The pickup was mounted to maple blocks glued to the underside of the top and projected through a hole cut in the face of the instrument in the bridge position. The poles of the magnet wrapped over the strings and included two magnets under the strings. The visible part of the magnet was nickel-plated on early models; later models featured an "oven-backed, black crinkle finished." Volume and tone controls were mounted on the lower treble bout in a line parallel to the strings. The input jack was also on the top near the edge and the control knobs, in an octagonal shape with a small pointer, were black, Bakelite. The earliest

examples from 1935 lacked the tone control, and the volume also incorporated an on/off switch... An innovative, though short-lived (less than one year) feature, was the "Rhythm Control," announced in a letter to dealers dated June 29, 1937. This consisted of a third control knob on the face of the instrument. It was said to "enable the player to execute the fastest rhythms without blurring or running together of chords."... The Electar Model M was discontinued by 1939. (Fisch & Fred. Epiphone The House of Stathopoulos. pp. 116-117).



When Epiphone entered the electric guitar market in 1935, they also launched a new series of amplifiers under the Electar name and consequently set the benchmark for others to follow. Electar was a name invented by Herb Sunshine, an Epiphone employee who played an integral role in the development of various electronics for the company. Herb made contact with a young Nat Daniel in 1934 and employed him to design the first Electar models. The amplifiers were aimed at the New York dance bands and were produced in both AC and DC versions to accommodate lower Manhattan's dual electric system at that time.

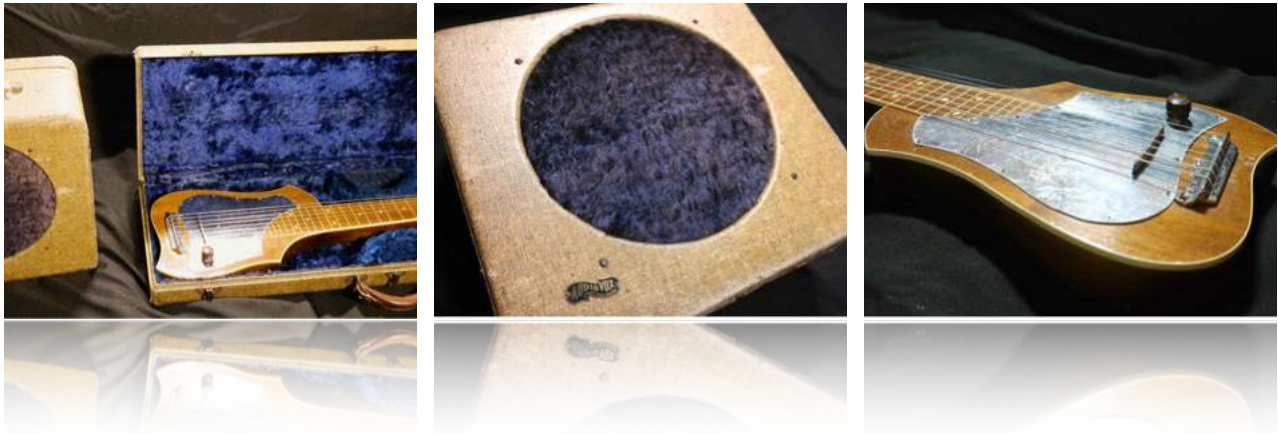
Many of the first amps were built for the lap steel market. The chassis was housed in a black leatherette cabinet that was supplied by a suitcase manufacturer and featured hinged, detachable front and back covers to protect the tube circuitry and the 8" speaker. The bottom-mounted chassis was equipped with an on/off switch, fuse, AC-DC control and two input jacks.

As the popularity of the amplifier grew, so did the options and choices available to the player. The Model C and Model M added tone and volume controls as well as 10" and 12" speakers.

1936 saw the Super AC-DC featuring the stylistic E logo. The cab was covered with Keratol, a vinyl like finish material, and had "Detacho" back and front panels.

This Electar amp is one of the first electric guitar amplifiers to have been produced, hand built by Nat Daniels, the founder of Danelectro. This is a very early amp and it does not have a volume or tone control as you would use the ones on the guitar.

19. AudioVox, Model 436 Single Steel Guitar, 1937



This AudioVox 7-String Model 436 Single Steel Guitar, c. 1937, was made in Seattle, WA, featuring a natural mahogany finish, mahogany body and neck and the original hard shell case.

Perhaps the great "lost" story in the history of electric guitars, the AudioVox brand has only recently emerged from obscurity as the legacy of one of the first pioneers of musical electrification, Paul Tutmarc. While not as well-remembered as the contemporary early Rickenbacher Electro, Vivi-Tone or National/Dobro electrics Tutmarc's AudioVox instruments were in production at the same time, and in some ways are more forward-looking than any. It has been recently proven that Tutmarc was the first to create a guitar-style electric bass, many years before Leo Fender. This early AudioVox steel was

Model 436 Single Steel Guitar
Latest type, 7 strings. The addition of the seventh string allows the playing of ALL chords, making it the ideal instrument for band or solo use. Made of beautiful black walnut with inlaid frets.

☆ **Model 236-A Amplifier**
This amplifier comprises five tubes of the following types: 1-80, 1-6SF5, 1-6N7, 2-6F6.
Tone compensated at Audio Frequencies using latest type circuit including phase inversion.
Useful Power Output—15 watts at 3% distortion with an over-all gain of 105 decibels. These amplifiers are available with from 1 to 5 input circuits allowing use of several instruments at one time. By the use of high impedance Microphones the amp. may be converted into a small public address system. Cabinet is finished in finest leatherette with cover on back. Has 12" Lansing speaker. Dimensions: 14½"x13"x7½". Weighs 17 lbs.

Model 336 Duo
This instrument is especially designed for professionals and artists. The two necks give this guitar many combinations. The DUO is supplied with Paul Tutmarc's latest invention. Automatic tuning. At the press of a button, ANOTHER TUNING!

Model 736 Bass Fiddle
This Electronic Instrument lends itself especially well to Orchestral use, giving Full Resonant Tones. Made of beautiful Black Walnut, inlaid position dots. Will take the place of 3 double basses. Compact! Length 42".

☆ **Model 936**
Powerful Amplifier—18 watts, at 3% distortion. Has heavy duty, High Fidelity, Concert Type, 12" Jensen Speaker. Supplied with Chrome chassis. Cabinet covered with Airplane Linen. Has 3 different tones. Complete with 2 inputs. Size: 13½"x17"x8".

handmade by Tutmarc's tiny firm in the mid-1930's and is a wonderful piece of electric guitar history.

Tutmarc was a Seattle player and teacher of the Hawaiian guitar who became fascinated by the concept of amplifying his instrument around 1930. With the help of another Washington resident and electronics expert, Art Stimpson, Tutmarc designed a working magnetic guitar pickup based on contemporary telephone technology. With the help of local radio expert Bob Wisner an accompanying amplifier was also created. Tutmarc soon began hand-building solid-body steel guitars using his pickup, but Stimpson favoured selling the idea to an established company. Soon enough, without consulting his partner Stimpson took the design to Dobro in Los Angeles, where it was patented as part of a proprietary guitar and became the basis for the first National and Dobro electric instruments. Tutmarc was no doubt highly displeased by this development, but continued to refine and market his own electric instruments, albeit only on a small local scale.

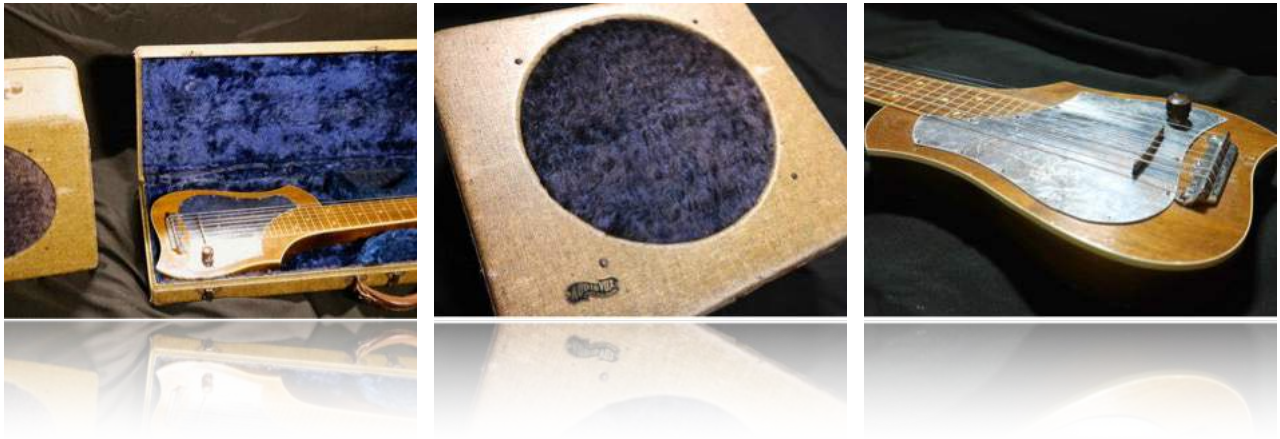


This is an early production AudioVox 7-string Steel guitar, built with the amazingly advanced-looking fluid sculptured body that superseded the octagonal shape first used in 1932-3. The earliest electric bass used this same body style. According to Tutmarc's son Bud the woodworking and finishing on these first production steels was done by another Seattle resident, Emerald Baumsgard. Tutmarc himself fitted the electronics. The body is mahogany, very nicely sculpted and finished, with a celluloid bound neck and edges and dot fret markers. The bridge and nut are metal, as is the cover-plate on the face. The bulky pickup coil is concealed underneath this, with only the blade pole-piece visible. A single volume pot with an octagonal radio-style knob is mounted on the treble side. This is a very fine sounding steel, and an extremely rare and important instrument in the early development of the electric guitar.

The guitar is complemented by an original 15W amp, the Model 236 (see TYS collection AudioVox, Model 236 Guitar Amplifier, 1937).

20.

AudioVox, Model 236 Guitar Amplifier, 1937



This is the companion amp to the AudioVox 7-String Model 436 Single Steel Guitar, c. 1937, was made in Seattle, WA, featuring a natural mahogany finish, mahogany body and neck and the original hard shell case.



This is a rare vintage 1937 first production year Rickenbacher lap steel guitar Model 59. The Model 59 lap steel was based on the Silver Model and introduced in late 1937.. This rare early version had just the one volume knob and a non-adjustable 1 1/2" pickup (Pat. Pend.). In 1938, they added a tone control to the opposite side. In 1939, they put the controls together on the audience side and made the pickup adjustable.

In the late '30s the 59 was Rickenbackers entry-level lap steel but the feel of this instrument isn't flimsy or cheap at all. These lap steels were stamped out of sheet metal but look rather luxurious with a finely textured lace-like enamel finish.



This is one of the first guitar amplifiers produced by Gibson for the commercial market.

The various changes were made over the years to the E-150 amp. In 1937 the tweed case was enlarged and rounded on the left and right top edges, eliminating the need for the top four leather corner protectors (a transition model with the new circuit and the old cabinet has been reported, but these are either really rare or prototypical). Speaker size increased to a 12" field-coil with the Gibson name on the magnet cover.

A beefed up circuit employing seven tubes featured the relatively new 6L6 beam-power variety, in metal. The 5Z3 rectifier, 6C5 driver and 6F5 microphone channel preamp remained from the earlier model, but the twin triode 6N7 was replaced with two 6C5 triodes for the instrument and microphone channels.

Power ratings were given for the first time, a respectable 15 watts.

It appears this version ran for a number of years, as the picture and basic description from the late-'37 Catalog Y also showed up in catalogs Z from late '38 and AA from late '39, plus AA supplements dated October 1, 1940, and May 20, 1941 (shown with the slant pickup on the instrument replacing the Charlie Christian-type of the earlier catalogs).

This Gibson E-150 amp was purchased by Steve Howe to partner his ES-150 guitar.

It featured an original Gibson "High Fidelity Ultra Sonic Reproducer"- a field coil 12" speaker. This was the premier amplifier of its day, as used by Charlie Christian.



Following the development of the electric guitar, National started to produce electric lap steel guitars, as the Electric Hawaiian (1935), the New Yorker (1935) and the Silvo (1937).

In 1935, the year this lap steel model was launched, there was almost no precedent for how an electric lap steel should look. Rickenbacher's aluminium model the "Frying Pan" introduced a simple industrial look which provided little charm. Gibson stuck with a traditionalist approach for their EH-150, even if their earlier models were also in cast aluminium and not in wood. The first electric model from National, the Electric Hawaiian was a cast aluminium instrument but displayed already a more distinctive design. Indeed it struck out in bold new directions inspired by the dominant fashion of the day: art deco.

The New Yorker follows this trend and became one of the classic lap steel models of the next 30 years. Named simply Electric Hawaiian it got its name in 1937: the New Yorker.

Designed by Victor Smith, the New Yorker introduced a classic stair-step body shape that has been endlessly copied (for example the Epiphone Electar Model M). Implied by the name, but never overtly referenced in advertising literature, was a similarity to the stair-step profile of the great skyscrapers of New York – particularly the Empire State Building, completed in 1931. Roman numeral fret markers inside parallelogram boxes vaguely recalled the same style of architecture, while black and white stripes accented the instrument's long dimension (or height, to carry the metaphor further). These stripes were achieved not by paint or inlay, but by a multi-layered veneer; white plastic was bonded to black plastic on top, and the black plastic was cut away to reveal the white stripes. A



PROFESSIONAL "NEW YORKER" ELECTRIC HAWAIIAN

Exquisite Brilliance — Exceptional Quality—Hawaiian Charm. Newest design dynamic pick-up unit affords sparkling string response and clear sustained ringing tone. The string balance is perfect as every string has its own individual adjustable unit.

Exclusive "Touch-tone" provides an essential to fast modern technique.

Excellent reasons why the "New Yorker" is considered a "superior" instrument—

- ★ Bell clear harmonics
- ★ Instant "Touch-Tone"
- ★ Popular 23" scale
- ★ Silent volume control
- ★ "No-Slip" back
- ★ "Ebonoid" everlast face
- ★ Third dimension fingerboard
- ★ Position marks are brightly colored by octaves
- ★ Streamlined key covers
- ★ Finest of shielded cable
- ★ Non tarnish Hand Guard
- ★ Latest dynamic unit
- ★ Super-responsiveness
- ★ Weight only 6 lbs.
- ★ Size — Style — Appeal
- ★ Unconditional guarantee

No. 70 "New Yorker" Elec. Hawaiian Guitar & Cord
\$95.00

No. 5A Case—3 ply—Basket Weave—Plush Lined
\$20.00

No. 70 "NEW YORKER" HAWAIIAN

similar technique was used to create the fretboard markers and headstock logo. The sides and back were painted black so that they blended seamlessly with the covering on top.

What was unique in this guitar was that 3 pickups were used in the guitar building. This was a very unique concept for the 1930's.

The New Yorker was the first instrument to contain more than one pickup; the first versions had three hidden underneath the fretboard, but by 1938 the bridge unit was visible under the hand rest. The other two remained hidden underneath the board around the 17th and 28th frets. Each of these pickups had two coils, enabling them to cancel out hum. From the 6th variant of the model (starting 1936) the guitar had a tone control that

wasn't a conventional potentiometer – it was a pickup selector switch, labeled “Hawaiian-Chimes-Harp”, which represented three different pickup combinations.

These early New Yorkers have a very mellow, bassy tone; the three pickup settings make surprisingly little difference.

24. National, Silvo Electric Hawaiian Lap Steel Guitar, 1938 - Arlen Roth



One of the most innovative companies of the pre-World-War-II era, National found out quickly that innovation was a double-edged sword. Just as their resonator guitars of the late 1920s made the acoustic Hawaiian guitars of Hermann Weissenborn obsolete, electric guitars of the mid 1930s – some of them made of National's own making – threatened to deal a similar fate to National's resonator guitars within a decade of their introduction.

This National Silvo guitar represents not only an effort to present a beautiful, upscale electric Hawaiian model, it also features an innovative feature designed to salvage a waning demand for National's acoustic resonator guitars.

Though the electric guitar era was barely five years old when National introduced the Silvo in 1937, this guitar would have been seen as a throwback to an earlier time. From the beginning of the electric era – Rickenbacker's cast aluminium "Frying Pan" of 1932 – electric Hawaiian guitars had been functionally, if not literally, solid-body instruments. The Silvo's fully hollow metal body was more closely related to the acoustic tri-cone resonator guitars National introduced in '27 and the single-cone, nickel-plated Style N of 1930 than to any of the electric Hawaiians on the market in the mid '30s. In fact, the Silvo body appears to be the same as that of a National Style 1 tenor guitar, so one of the reasons for the design may have been to use up surplus tenor bodies.

National was an early player in the electric-guitar market, introducing an electrified Dobro in '33. But despite the popularity of National's metal-body tri-cone and single-cone models, when it came to electrics under the National brand, the company opted for more - traditional wood-bodied instruments (furnished by other makers), in which National

installed its electronics. Consequently, the Silvo didn't look like any electric guitar – Spanish or Hawaiian – in the National lineup or anywhere else in the market.

From metal guitar bodies in the late '20s to moulded fibreglass solid-body guitars in the early '60s, National was always trying new materials. In the '30s, it was “ebonoid” – black-coloured celluloid that company literature referred to as “National's exclusive beautifier.” National used ebonoid as a substitute for ebony fingerboards (on Hawaiian models) and headstock veneers. On the Silvo, the ebonoid trim extended to the circular plate that held the bridge, pickup, and control knobs. The Roman numeral fingerboard markers, headstock logo, and the designs in the circular plate were achieved by etching through a top layer of ebonoid to reveal a light-coloured celluloid layer underneath.

The Silvo, according to catalog copy, “offers everything to a conservative buyer,” but the only conservative aspect of the model was its price. Though it looks as if it would be the top model, it was really mid-line – at \$60, it was between the flashy black-and-white New Yorker at \$75 and the plain wood-body Supro Hawaiian at \$35. It occupied middle ground in the market, as well; Gibson's EH-150 was available (without the matching amp) for \$70, and Gibson's EH-100 was \$44. Rickenbacker's Bakelite Model B was \$62.50, and their chrome-plated, stamped-steel Silver Hawaiian model was \$37.50 (these prices are for six-string models without case).

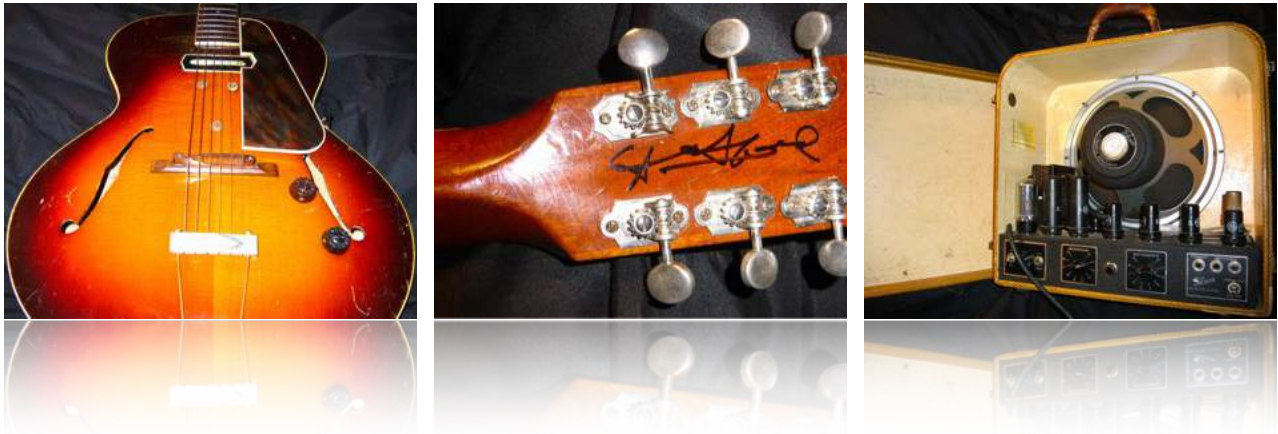
Along with the Hawaiian Silvo, National offered a metal-body tenor guitar and a metal-body mandolin fitted with the Silvo control plate. Both were priced same as the Hawaiian, \$60. Curiously, National did not offer a standard six-string Spanish-neck Silvo.

The circular plate on the body was the Silvo's most innovative feature, but ironically, it did nothing to advance the design of electric Hawaiian guitars, because it was intended for a different purpose on an entirely different guitar – to convert National's single-cone acoustic resonators to electrics. The plate fit National's single-cone models such as the Duolian, Triolian, and Style O, and National offered the unit, with the “res-o-lectric” pickup, for just that purpose. The price of \$25 included installation. In fact, National would not deliver the unit alone; the buyer had to send his guitar to the factory for installation by National technicians (National also offered to convert any of its tri-cone model to electric for the same price, but on those, the pickup would be mounted directly to the original metal cover plate).

Judging by the rarity of Silvo Hawaiian models and the even greater rarity of converted Duolians, Triolians, Style O's, etc., the innovative conversion module was a commercial failure. The inconvenience and risk of mailing a guitar to the factory for what appeared to be a simple do-it-yourself retrofit – remove and replace the cover-plate, drill a hole in the rim for the jack – was no doubt a factor. National's pickup design, which by the late '30s was falling behind those of Gibson and Epiphone, may have been a factor, too. And as the electric guitar began to gain acceptance in the market, players showed a preference for more-traditional-looking arch-top models; a converted metal-body National may have played and sounded just fine, but in the context of a Gibson ES-250 with its fancy inlays or an Epiphone Zephyr with its blond finish, a converted National looked like a hybrid from a bygone era.

The Silvo Hawaiian had a beautiful look and a reasonable price – a combination that typically meant success – but it lasted in production for only three years, from 1937 to '39. Today, it stands as one of the least successful innovations from one of the most innovative guitar companies of the pre-war years.

This guitar comes from the guitar collection of Arlen Roth, which is one of the greatest steel guitar player.



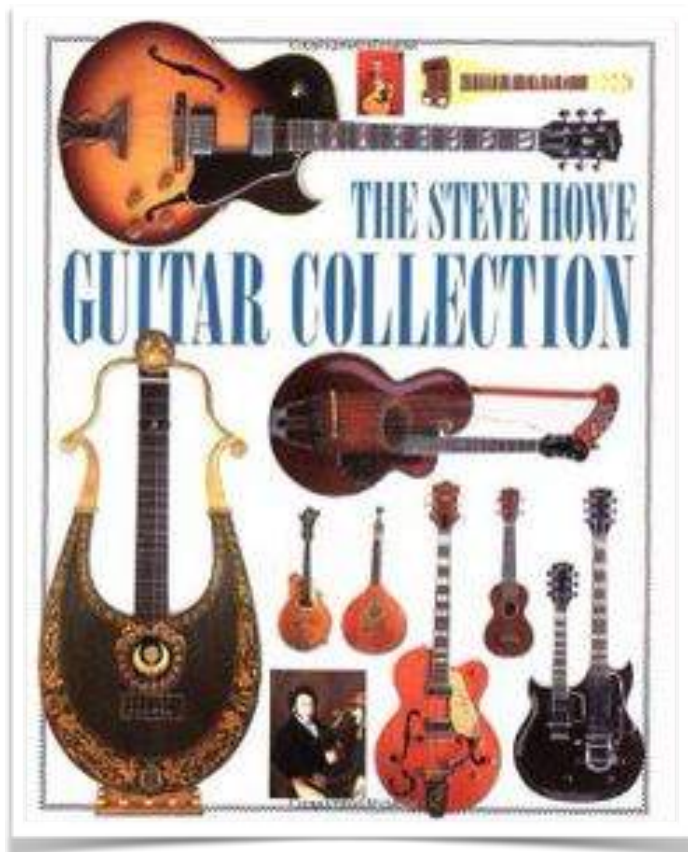
The Gibson Guitar Corporation's ES-150 guitar is generally recognised as the world's first commercially successful Spanish-style electric guitar. The ES stands for Electric Spanish, and it was designated with the number 150 because it was sold for \$150, along with an EH-150 amplifier and a cable.

After its introduction in 1936, it immediately became popular in jazz orchestras of the period. Unlike the usual acoustic guitars utilised in jazz, it was loud enough to take a more prominent position in ensembles.

Jazz guitarist Eddie Durham is usually credited with making the first electric guitar solo in 1938 with the ES-150. The most important player of the ES-150, however, was Charlie Christian. Because of his popularisation of the guitar, the instrument's distinctive single-coil pickup is known by his name. His flowing solos and warm sound revolutionised the jazz guitar and, to this day, influence countless players.

Because the instrument was never intended to be played acoustically, there is a notable difference between the ES-150 and other arch-top guitars. The inside of the solid spruce top is not carved to follow the contour of the outside, which renders it unsuitable for transforming fully the strings' energy into sound. This feature minimises the problematic feedback that plagues amplified guitars that are designed more like acoustic guitars.

This guitar was bought by Steve Howe (Yes) in 1989. The guitar is shown and commented on in the book “The Steve Howe Guitar Collection”.



Here are some comments Steve Howe makes about this guitar:

"... But when I plugged it in and played ... yeah! It delivered the lovely old jazz sound.

It has the Charlie Christian pickup, and the two old knobs look great. The way the pickup is built into the E-150 please me - the fact that it has three horrible screws on it isn't all that nice, but that's how they did it.

It really was a collecting guitar, but I wanted to be able to make that original sound. Here was the chance to get the Charlie Christian model under my belt,

so to speak, and I do like this guitar.

You almost hear Charlie Christian touching the strings, it has quite a microscopic, accurate sound, very unstylised and raw. It's the basic electric guitar, functional and without trim."

Steve Howe replaced the original beaten up scratch-plate. He also acquired at the same time a 1936 E-150 amplifier.



Following the musical trends of the time Gibson proposed also lap steel guitars. The upper price model EH-150, with EH for Electric Hawaiian, was commercialised at the same time as the ES-150.

ELECTRIC HAWAIIAN GUITAR

EH-100 MODEL

No longer is the electric Hawaiian Guitar restricted to professional players — here is a genuine Gibson instrument that costs only \$100 complete with instrument, case, amplifier with slip cover, and cord.

INSTRUMENT

- Made of northern maple
- Lustrous black ebony finish
- White ivoroid binding on top of body
- Rosewood fingerboard with 24 inlaid frets—four octaves
- Genuine pearl fingerboard inlays
- Volume control
- Body size—13 1/4" long, 9" wide and 1 1/2" deep

INSTRUMENT CASE

- Faultless construction — purple flannel lining — black imitation leather covering.

AMPLIFIER

- Sturdy imitation black leather covering with waterproof slip cover
- Four tubes, three glass and one metal
- 10 foot shielded cords with strong nickel plugs
- Replaceable fuse
- Sockets for two instruments
- Fine 10 inch speaker
- Two stages of amplification

PRICES

Complete outfit with 6 string guitar, case, amplifier and cords	\$100.00
Complete outfit with 7 string guitar, case, amplifier and cords	\$105.00
Amplifier only	\$35.00
Instrument only 16 string with cord	\$45.00
Instrument only 17 string with cord	\$45.00
Faultless case for instrument	\$10.00

TUBES FOR GIBSON AMPLIFIERS

The tubes used in Gibson amplifiers were selected after exhaustive tests for clearness, long life and steadiness—for best results, always replace tubes with the same type.

TUBES FOR EH-150, ES-150, ES-25, ES-35 and EM-15—

No. 6F5—Metal	\$1.50
No. 6N7—Metal	1.50
No. 6CS—Metal	1.10
No. 6SN—Metal	2.10
(Two 6N5 Tubes Used)	
No. 523—Glass	1.00

TUBES FOR EH-100 and ES-75—

No. 6N7—Metal	\$1.50
No. 42—Glass	1.10
(Two 42 Tubes Used)	

In 1936 a lower budget Lap Steel guitar was introduced with the EH-100 LapSteel. As with the other guitars of that period the end number indicated the retail cost of the guitar; in this case \$100. This all maple hollow guitar shaped body had a ES-100 type blade pickup with white rectangular housing and was sold with a matching amplifier.

Two distinct models existed: 6 and 7 string instruments.

EH-100 MODEL

No longer is the electric Hawaiian Guitar restricted to professional players — here is a genuine Gibson instrument that costs only \$100 complete with instrument, case, amplifier with slip cover, and cord.

INSTRUMENT

- Made of northern maple
- Lustrous black ebony finish
- White ivoroid binding on top of body
- Rosewood fingerboard with 24 inlaid frets—four octaves
- Genuine pearl fingerboard inlays
- Volume control
- Body size—13½" long, 9" wide and 1⅞" deep

INSTRUMENT CASE

- Faultless construction — purple flannel lining — black imitation leather covering.

AMPLIFIER

- Strong imitation black leather covering with waterproof slip cover
- Four tubes, three glass and one metal
- 10 foot shielded cords with strong nickel plugs
- Replaceable fuse
- Sockets for two instruments
- Fine 10 inch speaker
- Two stages of amplification

PRICES

Complete outfit with 6 string guitar, case, amplifier and cords.....	\$100.00
Complete outfit with 7 string guitar, case, amplifier and cords.....	105.00
Amplifier only	50.00
Instrument only (6 string) with cord.....	44.00
Instrument only (7 string) with cord.....	49.00
Faultless case for instrument.....	6.00

TUBES FOR GIBSON AMPLIFIERS



Following the musical “No longer is the electric Hawaiian Guitar restricted to professional players – here is a genuine Gibson instrument that costs only \$100, complete with instrument, case, amplifier with slip cover, and cord.”

So introduced in Gibson’s Catalog X of very late 1936, the EH-100 Hawaiian set cost a third less than the company’s EH-150 set, which by this point had the updated six-tube chassis and “Echo” extension speaker.

Complementing these at the lower end of the market were the small line of 100 (and later 125) instruments and their matching amplifiers.

Offered on its own at \$50, the first EH-100 amps were promoted as the mate to the new EH-100 Hawaiian guitars. Dressed in “Strong imitation black leather covering” with a white Gibson logo stencilled on the lower right corner of the face, the box housed a 10” field-coil speaker and a bottom-mounted, rear-facing chassis. Embossed lines framed the perimeter of the cabinet, with metal corner protectors on the bottom.

Like the early E-150 model, only two stages of amplification were employed, with a 6N7 twin-triode (amplification factor 35) handling the gain department (again, run in parallel for Class A operation, as specified by the RCA tube manual). Twin 42 power pentodes operating in push/pull were probably fed by a transformer phase inverter, although there are other, less-than-ideal (but cheaper) ways to achieve this function. It’s doubtful whoever was designing Gibson’s amps at the time would have chosen such a circuit for a high-fidelity amplifier (anybody have one of these black-covered models?).

Also like the first E-150 amps, the first 100s got their juice from an 80 rectifier, came fitted with two parallel inputs and had no controls in the circuit. A fuse was the only other “feature” of this bare-bones model. It’s interesting there was no tone control on the first EH-100 guitars either, though this would soon change as the last of the black-finished 100 Hawaiians had the modern two-knob arrangement.

1937-’38 (Catalog Y)

By the release of the next catalog (which were being cranked out annually during this progressive era), Gibson offered both a new look and a new circuit for the now \$110 EH-100 set (\$55 for the amp alone). The new model amp was covered in “Very handsome tan aeroplane cloth covering – this material is tough and can be washed.” Dark stripes running vertically accented the light coloured covering, as did the logo, the bottom-mounted leather corner protectors and the big brown leather handle, as seen on the EH-150 amp.

A three-stage circuit using five tubes was instituted, with the original 6N7 replaced by a 6C8 twin-triode (amplification factor 36) and a single-triode 6C5 (amplification factor 20). Again, two inputs were standard, but only one was for the instrument, with the second specified for use with a microphone. While not mentioned in the catalog, this version’s schematic shows a volume control operating on the mic input only (the AC power switch was shown built into the volume pot – turning the volume knob turned the amp on). Each channel used its own section of the 6C8 preamp tube.

Under “Tubes” in the “Electric Guitar Supplies” section of the catalog, the relatively new 6V6 beam power tubes were listed, implying a change in the output section occurred after the schematic was drawn up, but prior to the catalog’s release. This also suggests that either the first tweed 100s still used the 42 power tubes, or there were later version black-covered amps with the new five-tube circuit.

1938-’39 (Catalog Z)

A new look for ’38 featured “handsome dark brown Aeroplane cloth with harmonising yellow stripes,” and a matching logo. The pattern of the stripes was the same as previously used, only rotated 90 degrees, to the horizontal plane. Dimensions were given for the cabinet as 12” high, 14” tall and 7” deep. An enclosed back was added, as

seen on the 150s, and the leather corner protectors were replaced with metal, although these were not included in the catalog shot.

“Has six tubes and three stages of amplification with 8-watt output.” Unfortunately, the tubes were not listed (and somebody here didn’t do enough research!). Gibson made no mention of “seven (or eight) tube performance,” so it’s hard to speculate whether they used any twin triodes in the new circuit. An extra gain stage for the mic channel seems a safe bet, but as to whether a transformer was still being used for the phase inverter, as on the seven tube 150, or the function was performed by a tube, as on the ’40 EH-100, we’ll have to check and report back later.

By ’38, it was obvious to Gibson that electric Spanish guitars were a viable offering and they expanded that portion of the line to include the new ES-100. Like the EH-100 Hawaiian, the Electric Spanish model was “designed for use with the EH-100 amplifier” (the first of these guitars may have come with the earlier five-tube 100).

1939-’40 (Catalog AA)

Cosmetically, the ’39 model appears similar to the ’38, except for the number and spacing of the “harmonising” stripes. Again, the text also specified metal corners, although these were not included in the updated, retouched picture. The description of the electronics was unchanged.

Gibson provided their services to numerous wholesalers for “contract brand” instruments, e.g., Cromwell (C.M.I.) and Capital (Jenkins), who offered 100-style amps with the enclosed case. These are not to be confused with Gibson’s in-house bargain line, Kalamazoo. By the late ’30s, Gibson’s budget line had been expanded to include electrics, which allowed the company to put a better quality 100 line out and still offer a competitive line under it, as the cost of building amplifiers dropped in the second half of the decade.



In the 1930s a handful of American guitar companies invented the modern electric guitar. It's true that Rickenbacher, Gibson, National, among a few others, were making solid-body Hawaiian guitars since the early 1930s. And Rickenbacher even made a few guitars where they fitted standard necks to small Hawaiian guitar bodies, but those proved to be too difficult to play and they never caught on with players.

While primitive by today's standards, National's first electric guitar, the Electric Spanish (renamed the New Yorker three years later), must have appeared positively futuristic by 1935 standards, when it made its premiere. Nothing more than a modestly appointed, laminated maple arch-top outfitted with a rudimentary bridge pickup located near the bridge, it was nonetheless one of the first commercially available electric guitars.

In the 1930s, Valco was formed by three business partners and former owners of the National Dobro Company; Victor Smith, Al Frost, and Louis Dopyera. The company name was a combination of the three partner's first initials (V.A.L.) plus the common abbreviation for company (Co.)

Valco manufactured Spanish acoustic guitars, metal-bodied resonator guitars, electric lap steel guitars, and vacuum tube amplifiers under a variety of brand names including Supro, Airline, Oahu, and National. They also made amplifiers under contract for several other companies such as Gretsch, Harmony, and Kay. In the 1950s they began producing solid body electric guitars.

As was the case for all subsequent Valco electric hollow-bodies, the body itself was sourced out from another Chicago manufacturer; in this case, Regal. The following year, a lower-priced Supro-branded version was introduced (renamed Avalon in 1938). This

would set the pattern for Valco's multi-tiered guitar lines; National-branded instruments usually had a corresponding instrument in the lower-priced Supro line, usually differing only in cosmetic appointments and headstock shape. Subsequently Valco would contract Kay, Harmony, and Gibson to build their arch-top electric bodies, eventually introducing a proprietary bolt-on neck design and using their own necks and electronics.

By 1937 the Electric Spanish guitar's body was being manufactured by Kay and Valco were supplying their own bolt-on necks. A seldom-seen 4-string tenor guitar version was also offered. By 1939 National had introduced a fancier, short-lived two-pickup model, the Sonora. Discontinued by 1941, it was one of the earliest multi-pickup electrics available.

National's New Yorker Electric Spanish, is one of those guitars that came close to being the first modern electric guitar.



At first glance, this looks like a standard electric arch-top guitar, much like Gibson's ES-150. But if you look closely you'll see that the New Yorker has no sound-holes. National made similar guitars with f-holes but those tended to feedback at fairly low

volumes. The neck is also attached by a combination of glue and screws. (The screws are under the five pearl dots at the end of the fretboard.).

One other interesting point, this is the same model of guitar that the great blues musician Memphis Minnie used to play. This type of guitar became known as the "Memphis Minnie" model because she (a blues gal) used one of these pretty much exclusively.



K&F Manufacturing Corporation (Kauffman & Fender) was a company started by Clayton Orr "Doc" Kauffman inventor and lap steel player, who had worked for Adolph Rickenbacher's Electro String Instrument Corporation and Leo Fender a radio-repairman in 1945. K&F manufactured amplifiers and electric lap steel guitars. Kauffman left the company in February of 1946. The company then became Fender.

Completed around 1943, the first K&F guitar, a lap steel guitar, had a solid oak body and mail-ordered fingerboard, and was originally intended to be played like a Spanish guitar. But Kauffman and Fender's Direct String Pickup, based on early phonograph pickups, proved better suited to the Hawaiian style. They applied for a patent on their pickup in 1944; it was granted four years later, after Kauffman had left the company.

Fender and Kauffman, working out of a shack behind the radio-repair shop, were manufacturing amplifiers and this lap-model Hawaiian steel guitars, which were sold as sets. The earliest examples had painted finishes which were said to have been "baked" in Leo Fender's kitchen oven. Fender wanted to expand the business, taking advantage of the fact that many musical instrument companies had gone out of business during World War II, but Kauffman was worried about going into debt.

Fender told BAM magazine:

"It cost a lot of money to get into large scale production, and the 1930s depression was still fresh in Kauffman's mind, so he didn't want to get involved. He had a ranch or farm in Oklahoma, and he was afraid if we got over-extended on credit he might lose it. He thought he'd better pull out while he had a full skin."

Kauffman told much the same story to Guitar Player magazine:

"I got scared of the business.... I didn't have much faith in guitars, and I asked Leo to buy out my half of the business."

"

Fender agreed to trade Kauffman a small press punch for his share of K&F Manufacturing.

In 1946, Fender renamed the business to Fender Electric Instruments Company. That same year, he signed an agreement with Radio & Television Equipment Company (Radio-Tel) of Santa Ana, California, which had been supplying parts for his repair shop, to be sole distributor for Fender amps and guitars. Fender also turned over operation of his repair shop to Dale Hyatt, so he could concentrate on making musical instruments. By 1949, Fender amps and guitars were firmly entrenched in the country music industry.

K&F represents in this respect the beginning of Fender Guitars.



This is an early pre Fender K&F Lap Steel Guitar. There were originally only 6 of these made (the first of which is in Roy Acuff's collection at Nashville's Opryland). This fine example is believed to be of the second batch which were made in "Doc's" home kitchen. Per Leo Fender, "the first examples had no serial numbers and "Pat. Pend." stamped on the top shoe of the pickup".

It is actually one of the very earliest of Fender-made instruments, and a major historic piece of American guitar history. The K & F line of simple lap steels and amps were Leo Fender's first commercially produced musical instruments and the seed from which the entire Fender legend would grow. These steel guitars were only available locally in southern California for a very limited period between late 1945 and mid-1946,

and today are extremely rare. The standard angled slab-sided headstock was carried over into the early Fender line.

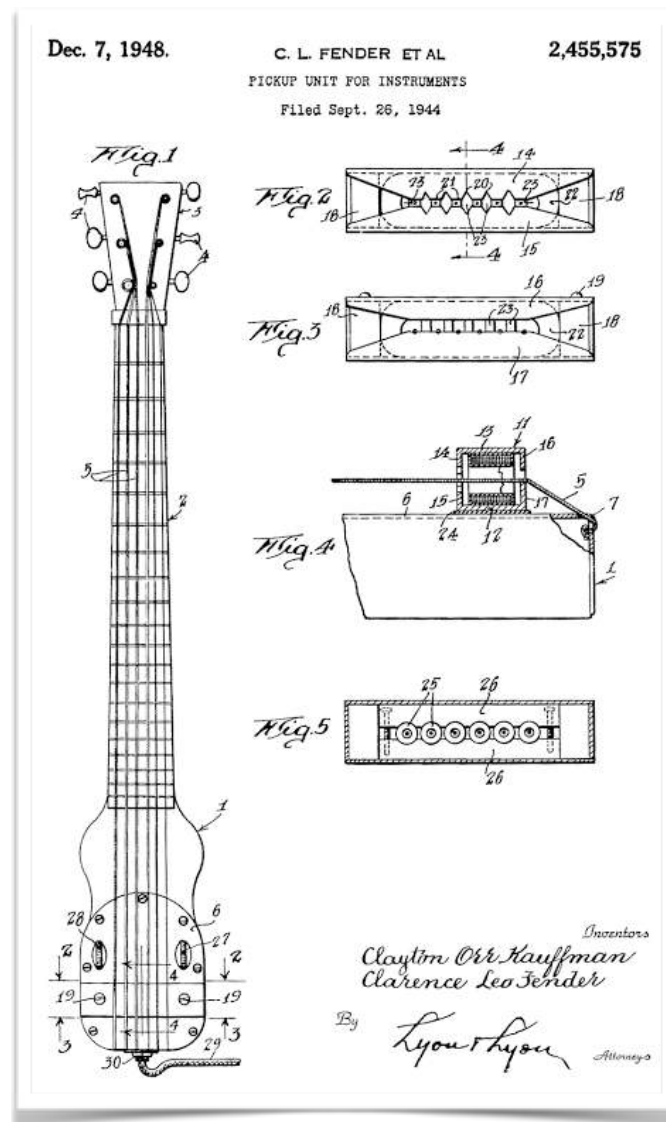
Doc Kauffman himself personally assembled and tested most of these earliest steels (reportedly by playing a tune on each completed example) and this simple, practical and still great sounding lap guitar is a testament to the talent and creative drive shared by himself and Leo Fender during their short but historic collaboration. This guitar is not only a prime example of the root of all Fender guitars, but an excellent player's instrument; a testament to the emerging brilliance of its creators.

30.

Fender, Deluxe Lap Steel Guitar, 1947



Within a year, Doc Kauffman had left in 1946 his partnership, and Leo Fender was marketing similar Lap Steels by himself as the Fender Musical Instrument Company.



This early transitional Fender is essentially a K&F steel with a Fender nameplate. The early Fender Company produced three similar lap steels, the Organ Button, the Princeton, and the Deluxe, all with string through pickups similar to the K&F.

The Deluxe has a longer body, joining the neck at the 12th fret and features volume and tone controls and a jack for the cord. It was available from 1946 to 1948.



In the late 1940s, Leo Fender began working on a practical electric Spanish guitar. His design would be simple, and the guitar would be easy to manufacture and repair. It would also be convenient and uncomplicated for the working musician to transport and maintain. Developed in 1949, Leo Fender came up with his first distinctive guitar the Esquire (which was named later Telecaster) by March 1950. This guitar is of very simple construction with a slab shape solid ash body featuring a single cutaway to allow easier access to the upper frets. The neck, a single piece of maple, was attached to the body with four screws. Initially the guitar had only a single pickup embedded into a metal bridge plate presenting the now famous and distinctive combination of bridge and pickup assembly, with a slanted pickup with individual pole pieces for each string, and three bridge saddles which allowed adjustment of string length in pairs and individual string height.

By June 1950, a two pickup version was produced adding a neck pickup encased in a metal shielding cover. Introduced in the fall of 1950, the result was the Broadcaster.

The Broadcaster was a two-pickup solid-body guitar able to reach high stage volumes with none of the feedback problems that plagued hollow-body guitars. The instrument was fitted with an easily replaced bolt-on neck that contained an adjustable truss rod (something earlier prototypes lacked). The instrument's pickups were meant to give the same bright clarity as Fender's lap steel guitars. Lastly, a 3-saddle adjustable bridge was included for better (though not perfect) intonation.

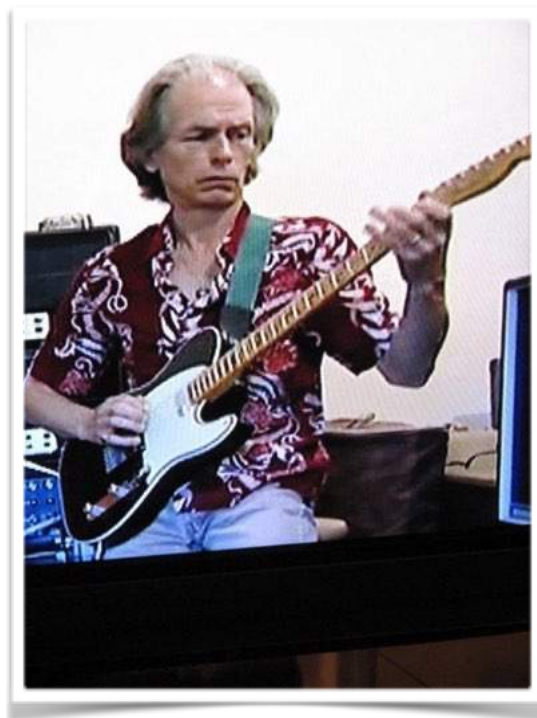
In mid-February of 1951, the Gretsch Company contacted Fender to point out that the guitar's name was very similar to its Broadkaster drum set. Gretsch requested "immediate assurance" that Fender would abandon the name. Fender complied, and the

guitar continued to be produced without a name until September of that year, when "Telecaster" began appearing on the decal. The Telecaster name continues to be used on the Broadcaster's contemporary descendants.

This 1950 Fender Broadcaster was previously owned used by guitarist Steve Howe. As can be seen it has had many changes that Steve made through the years. Steve bought the guitar from George Gruhn in the mid 1970's.

Steve used it on tour with Yes after the Tormato album and recorded it on "Pleasure Stole the Night" from the Beginnings/solo album and "Release Release" from the Tormato/Yes album and various other recordings.

The guitar is in "The Steve Howe Guitar Collection" Book, published in 1994. The book describes the changes Steve had made at that time. The guitar body had been stripped to natural, bound. and work had been done at the bridge. Steve since filled in the bridge area and re-introduced the traditional bridge plate (albeit not the original which he had trimmed). Steve confirmed that this work was undertaken by Hugh Manson, and as we agreed to a high standard. On the Yesspeak DVD (2003), Steve Howe plays this guitar in its current finish before his interview.



32. Gibson, Les Paul Goldtop, 1952 - Peter Green / Duster Bennett / Top Topham



The Les Paul model was the result of a design collaboration between Gibson Guitar Corporation and the late jazz guitarist and electronics inventor Les Paul. In 1950, with the introduction of the Fender Telecaster to the musical market, electric guitars became a public craze. In reaction, Gibson Guitar president Ted McCarty brought guitarist Les Paul into the company as a consultant. Les Paul was a respected innovator who had been experimenting with guitar design for years to benefit his own music. In fact, he had hand-built a solid-body prototype called "The Log", a design widely considered the first solid-body Spanish guitar ever built, as opposed to the "Hawaiian", or lap-steel guitar. This guitar is known as "The Log" because the solid core is a pine block whose width and depth are a little more than the width of the fretboard. Although numerous other prototypes and limited-production solid-body models by other makers have since surfaced, it is known that in 1945–1946, Les Paul had approached Gibson with "The Log" prototype, but his solid body design was rejected.

In 1951, this initial rejection became a design collaboration between the Gibson Guitar Corporation and Les Paul. It was agreed that the new Les Paul guitar was to be an expensive, well-made instrument in Gibson's tradition. Although recollections differ regarding who contributed what to the Les Paul design, it was far from a market replica of Fender models. Since the 1930s, Gibson had offered electric hollow-body guitars, such as the ES-150; at minimum, these hollow-body electric models provided a set of basic design cues to the new Gibson solid-body, including a more traditionally curved body shape than offered by competitor Fender, and a glued-in ("set-in") neck, in contrast to Fender's bolt-on neck joint design.

The significance of Les Paul's contributions to his Gibson guitar design remains controversial. The book "50 Years of the Gibson Les Paul" limits Paul's contributions to

two: advice on the trapeze tailpiece, and a preference for color (stating that Paul preferred gold as "it looks expensive", and a second choice of black because "it makes your fingers appear to move faster on the box", and "looks classy—like a tuxedo").

Additionally, Gibson's president Ted McCarty states that the Gibson Guitar Corporation merely approached Les Paul for the right to imprint the musician's name on the headstock to increase model sales, and that in 1951, Gibson showed Paul a nearly finished instrument. McCarty also claims that design discussions with Les Paul were limited to the tailpiece and the fitting of a maple cap over the mahogany body for increased density and sustain, which Les Paul had requested reversed. However, according to Gibson Guitar, this reversal would have caused the guitar to become too heavy, and Paul's request was refused. Another switch: the original Custom was to be all mahogany and the Goldtop was to have the maple cap/mahogany body. Beyond these requests, Les Paul's contributions to the guitar line bearing his name were stated to be cosmetic. For example, ever the showman, Paul had specified that the guitar be offered in a gold finish, not only for flashiness, but to emphasise the high quality of the Les Paul instrument, as well. The later-issue Les Paul models included flame maple (tiger stripe) and "quilted" maple finishes, and once again contrasted the competing Fender line's range of car-like colour finishes. Gibson was notably inconsistent with its wood choices, and some gold-tops or customs have had their finish stripped to reveal beautifully-figured wood hidden underneath.

The Les Paul guitar line was originally conceived to include two models: the regular model (nicknamed the Goldtop), and the Custom model, which offered upgraded hardware and a more formal black finish. However, advancements in pickup, body, and hardware designs allowed the Les Paul to become a long-term series of electric solid-body guitars that targeted every price-point and market level except for the complete novice guitarist. This beginner guitar market was filled by the Melody Maker model, and although the inexpensive Melody Maker did not bear the Les Paul name, its body consistently followed the design of true Les Pauls throughout each era.

The 1952 Les Paul featured two P-90 single coil pickups, and a one-piece, 'trapeze'-style bridge and tailpiece, with strings that were fitted under (instead of over) a steel stop-bar. The weight and the tonal characteristics of the Les Paul were largely due to the mahogany and maple construction: maple is a hard and quite heavy wood, but was restricted to a cap over somewhat lighter mahogany, to keep weight under control. In

addition, the early 1952 Les Pauls were never issued serial numbers, did not have bound bodies, and are considered by some as "LP Model prototypes". However, the later 1952 Les Pauls were issued serial numbers and also came with bound bodies. Interestingly, the design scheme of some of these early models varied. For instance, some of the Les Pauls of this issue were fitted with black covered P90 pickups instead of the creme coloured plastic covers that are associated with this guitar, even today. Of note, these early models, nicknamed "Goldtops", have begun to gain the interest of collectors, and subsequently, the associated nostalgic value of this instrument is increasing.

This instrument is a seminal survivor from the very roots of the Blues Movement. This particular guitar's importance is doubly reinforced by the fact that it was built in the very first year of production of Gibson's legendary Les Paul model (no serial numbers issued that year) and that it has been truly played by some of the greatest British Bluesmen: Peter Green- of John Mayall's Bluesbreakers and Fleetwood Mac fame, Tony 'Duster' Bennett - the unique 'One Man Blues Band', Top Topham - founder member of The Yardbirds. Yes, Eric Clapton did own the guitar, giving it to Peter Green but how he acquired it is lost in the banks of time - Eric simply does not remember; it probably was not so important back then - so many guitars, gigs and hard touring, one didn't make notes in diaries! However the myths and folklore that follow legends such as these link the guitar with BB King and Muddy Waters before him. It's true that BB King played a session at The London Recording Studios in 1971 with Duster and Peter playing this very Les Paul and there is one image of Muddy playing a '52 Gold Top... However, when asked by journalist Julia Ficken about his possible ownership of this guitar, BB King went on record stating, "Ma'm, I'm not sure that I can remember that far back - but why don't you hold onto that story!"



Stories aside, the provenance on this iconic instrument speaks for itself.

In a letter dated 4th February 2009, Peter Green confirmed that he remembers this guitar, stating he recollects giving this 1952 Gibson Les Paul guitar to Duster Bennett, and it was a guitar given to him by Eric Clapton. He also recalls it was not in a broken state (as previously believed) and was 'playable'. Peter states that he has no knowledge as to who the guitar belonged to prior to Eric Clapton.

In an open letter dated 31st October 2005, Top Topham states that this guitar was given to Tony 'Duster' Bennett around 1968/9* by Peter Green. Topham also states that the guitar was fitted with a replacement '70s neck after an accident to the instrument (1970. This date is stated as 1968 in Duster Bennett's authorised biography by Martin Celmins). According to Topham, the guitar was also refinished at that time. During this restoration,



the original case was mislaid. Topham confirms that he acquired the guitar (from Stella Bennett) around 1988. He sent the instrument to Graham Noden's workshops at Andy's Guitars in Denmark Street, London who fitted new Kluson tuners and designed and fitted a new bridge saddle to the trapeze unit. At some point the paintwork has been refinished to the correct color.

In January 2009 Julius Thurgood took the guitar to Graham Noden who confirmed the Topham story. In early February 2009 Julius Thurgood took the guitar to Melvyn Warren-Smith, a close friend of Duster Bennett. Warren-Smith verified that this was the Duster Bennett guitar and out of respect to Duster kindly took the catalogue photographs of the guitar.

In February 2009, Julius Thurgood took the guitar to Peter Allen at Guitar Technical Services for a full professional set-up. Correct pattern Gold Speed Knobs were fitted at the time and the pickup was found to have an intermitted problem. The pickup was sent for repair to Armstrong Rewinds where the coils were stabilised. The pickup was not rewound. Various minor electrical faults were diagnosed and rectified.

A long history for a guitar, but the most important thing is that it still sounds great!



Rex Guitars were made in the 50s by Kay and sold through Gretsch distributors. This Rex is identical to the Kay K-125 the first solid body electric guitar produced by Kay, except the cut away is pointier. It features the blade pickup also used on the hollow-body Thin Twin and its solid 'through neck' design construction is similar to Harmony's H44 Stratotone, but with a longer scale length. Kay and its main competitor, Harmony, were both Chicago based companies. Kay made its own pickups.

The K-125s were manufactured in 1952, the same year the Les Paul was introduced. The K-125 or the "Peanut" guitar, as it was called because of its peanut-shaped silhouette, was slightly crude looking but reflected that early raw Rock 'N Roll era.



Elmore James, The King of The Slide Guitar, who embodied the essence of urban Chicago Blues of the 1950's and early 60's, used a K-125! More recently it was revived by Tom Waits

Finding a K-125 is a rarity, as they were only in production in 1952.

34. Fender, Esquire, 1955 - Rich Robinson (The Black Crowes)



The original company Fender Electric Instrument Manufacturing Company, was founded in Fullerton, California, by Clarence Leonidas "Leo" Fender in 1946 following his initial venture with Kauffmann: K&F.

Developed in 1949, Leo Fender came up with his first distinctive guitar the Esquire (which was named later Telecaster) by March 1950. This guitar is of very simple construction with a slab shape solid ash body featuring a single cutaway to allow easier access to the upper frets. The neck, a single piece of maple, was attached to the body with four screws. Initially the guitar had only a single pickup embedded into a metal bridge plate presenting the now famous and distinctive combination of bridge and pickup assembly, with a slanted pickup with individual pole pieces for each string, and three bridge saddles which allowed adjustment of string length in pairs and individual string height.

By June 1950, a two pickup version was produced adding a neck pickup encased in a metal shielding cover.

The guitar went through different name versions, due to legal and commercial reasons, before Fender settled on the name Telecaster for the two pickup version and Esquire for the original one pickup version.

The flat body, the single piece of wood for the neck and the modular design of the guitar were geared to mass production. In this early stage there were many technical improvements and refinements done to produce a reliable and practical instrument. Among others were added a truss rod to increase the stability of the neck and a tone control to extend the sonic range of the guitar.

Like the Ford model T for the automotive industry the Telecaster enabled that guitars were no longer built individually. Processes such as band sawing and routing the bodies could be industrialised and made it quicker and cheaper to produce a guitar. This in its turn helped to popularise the guitar and served as a major component in the development of rock and roll and many other genres of music. Associated with this guitar are musicians like Roy Buchanan, Buck Owens, Danny Gatton, Arlen Roth, Keith Richards, Albert Lee, Bruce Springsteen, Andy Summers, John 5, ...

The Fender Esquire was the first solid body Spanish style electric guitar built by Fender in 1950. The guitar featured a single slanted pickup. Shortly after the introduction a two-pick-up version was launched under the name Broadcaster and renamed shortly after to Telecaster.

Although the Esquire was first put on the market today the Esquire is generally regarded as a variant of the Telecaster.

This white blonde Esquire guitar dates from 1955 and was one of Rich Robinson's guitars used in many concerts. The guitar is featured among others on the DVD: Chris & Rich Robinson: Brothers of a Feather - Live at the Roxy (2007).



It also appears in Vintage Guitar Magazine, June 2007 issue. In this interview Back on the Wing by Ward Meeker he speaks about this guitar:

"

"Have you (Rich Robinson) ever had any '50s Teles?

I have a '54 Esquire – its either a '54 or '55, I can't remember. I originally had a '61 and it was stolen in either Chicago or Grand Rapids. So there was a guitar shop in Hoboken – and it might have been Hoboken Guitars – but they had this '55. After I got mine stolen, I found this one and it was just f***in' great, has a baseball bat for a neck, and sounds amazing."



As a logical evolution Fender launched in 1954 a more refined guitar: the Stratocaster. The aim was to give the musician more comfort in playing the guitar. This was achieved by a new body design showing a more sleek and contoured body shape. The ash body (later also alder) presents now a double cutaway body with an extended top horn to enhance the balance of the guitar. The Fender Stratocaster was designed by Leo Fender and Freddie Tavares with involvement from musicians Rex Gallion and Bill Carson. The name was inspired by Leo Fender's business partner, Don Randall. It was intended to be reminiscent of aircraft technology, and reflect forward thinking and modern design.

Also the sonic possibilities were enhanced by three single coil pickups, with the output originally selected by a 3-way switch, later changed to a 5-way switch to allow more tonal possibilities. Adding to the sonic range of the guitar was also the anchoring of the strings on a through-body pivot bridge on the back of the guitar. This bridge was in turn anchored flat against the body by 5 springs. This was done to counter the pull of the strings in one direction and the springs in the opposite direction. By removing two of those springs musicians came up with the floating bridge allowing to modulate the pitch of the notes by using a tremolo arm.

Many players had minor modifications made to their instruments to suit his individual playing style. But no major changes occurred in the basic conception of the Stratocaster in the early years. With the take over by CBS in 1965 resulted some visible modifications with the large "CBS" headstock and (from the mid-1970s) the 3-bolt necked models (instead of the conventional 4 bolts) with the "Bullet" truss-rod and the MicroTilt adjustment system. The Fender Stratocaster had troubles to keep up with the music of the '80 and '90 and the boutique builders were better

equipped to serve the market. Fender tried to react to the emergence of the Superstrat catered to a different playing style. However, the blues-influenced artists adopted the original Fender Stratocaster as their main instrument, reviving the guitar's popularity.

Cult are also the colours used for the guitars. Fender offered a range of custom colours which were standardised in the '60, many of which were originally automobile lacquer colours from DuPont and associated with different US car brands like Cadillac, Oldsmobile,

Over the years the Stratocaster design was used as a platform to experiment with different technical enhancements to extend the sonic possibilities and the playability. Also the musicians explored the potential of the guitar and made it an icon in the history of Rock. Associated with this guitar are musicians like Jimmy Hendrix, Jeff Beck, Buddy Holly, Eric Johnson, Ritchie Blackmore, Eric Clapton, ...

Fender Stratocasters are the most popular guitars and can be found in all conditions. Here is an early production model, but as with most of those guitars played by musicians, modifications were done to adapt the instrument to the musicians' needs.

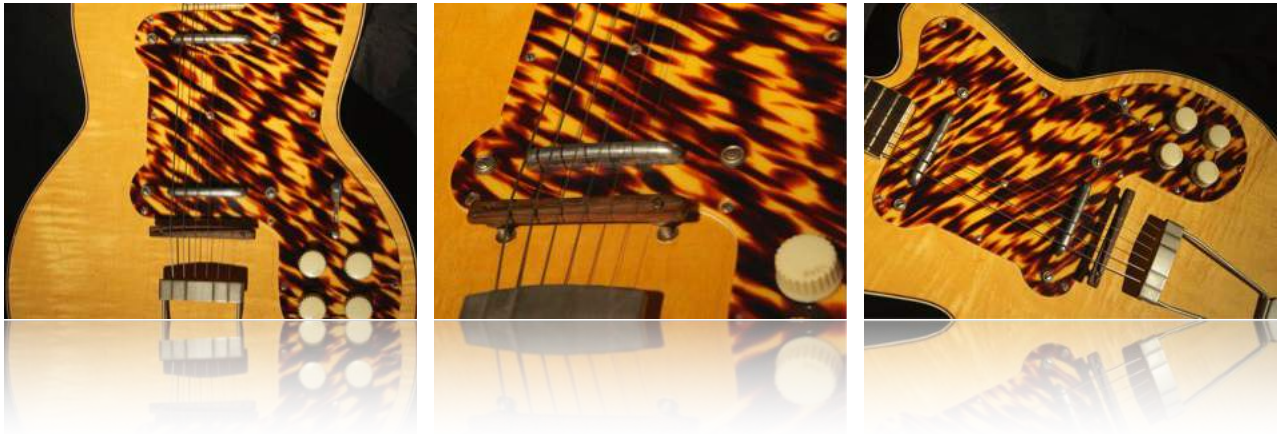
Bob Margolin, aka "Steady Rollin'" Bob Margolin, is an icon in the world of electric blues guitar and has been for well over forty years. In 1973, he joined the Muddy Waters Band and was the mainstay of that band, with Muddy, throughout the entire decade. Right around the time he joined the band, Bob was given a 1956 Strat by a friend, and he has used it as his main guitar right up to this day. Over the years, it has been played on gigs by George Harrison, Keith Richards, Muddy his own self and more, played on stage with Eric Clapton too. It has been modified over the years (finish, pickups, etc.) to suit the needs of both Margolin and his predecessors; this is not to be considered a Strat that's original to the Fender company; it is a Strat that's original to Bob Margolin, a much revered musician, one of the great blues players of the great generation.



HENZ







The Kay K-161 ThinTwin electric guitar made from 1952 to 1959, was one of the longest produced guitars by Kay Musical Instrument Company. The K161 Thin-Twin was commonly referred to as the "Jimmy Reed" guitar. Introduced not long after Gibson's Les Paul, the ThinTwin was a semi-hollow body guitar and larger than its name "thin" implied. The guitar's body was 2 3/4 inches (70 mm) deep. "ThinTwin" was a reference to the unique appearance of the dual pickups, having a very slim profile



One of the best known Kay electric guitars during the 1950s was the K-161 Thin Twin, most visibly used by blues artist Jimmy Reed. Debuting in 1952, with a single cutaway body, a distinctive tortoiseshell pick-guard, and “twin thin” blade-style pickups that gave the guitar its name. This guitar comes from the guitar collection of Arlen Roth.



Bigsby is one of the major names when it comes to speak about the history of electric guitar. If it is difficult to find today one of his few guitars built, there is a cheaper alternative.

Indeed in 1956, Magna President Art Duhammel hired Paul Bigsby to design some electric Spanish style guitars to be sold alongside the steel guitars and amplifiers in the Magnatone catalog. Bigsby and Duhammel already had a working relationship with some the Magnatone steel guitar design and consulting work, so collaboration for the new MARK series guitars was natural progression.

Electric Spanish guitars were still somewhat of a new invention by 1956. Leo Fender's first electric guitar had hit the market in 1950, and Les Paul's Gibson offering had followed in 1952. Duhammel had the right guy with Bigsby, too. Bigsby was as much of a pioneer as Leo or Les with his one-off guitars built for guys like Merle Travis and Grady Martin.

Designing the guitars was one thing, and production of them was another. Bigsby had no interest in monitoring the production of these guitars, and furthermore, by all accounts, it seems that by 1957 or so, he was completely burnt-out on building or designing electric guitars for anyone. After designing these guitars for Magna, he shifted his focus to his own company's production of the Bigsby Vibrato Arm, which was sold as a boxed unit, for individuals or manufacturers to install on their guitars. The Vibrato was a simple assembly that was made of cast and stamped steel parts, and was easily assembled. There was no finicky wood to expand, absorb moisture, and crack.

As for the Magnatone electric Spanish guitars, by all accounts, Bigsby only designed the guitars. All production details were left up to Magna. There were two guitars designed and sold in 1956 and 1957. The first guitar was the Mark III and the Mark III Deluxe, and the second guitar, which appeared in Magnatone catalogs about 1957, was the Mark IV and Mark V. Not many of either of these guitars were built, and both were offered concurrently in the 1957 catalog, with production lasting into mid to late 1957.

Major endorsements came from Bob Gibbons of the Tennessee Ernie Ford Show and Gene Davis.

The second Bigsby designed guitar that made it to Magna production was the Mark IV and V models. These were both really the same guitar except that the Mark V came a Bigsby tail piece, and the Mark IV came with a set tail piece. Materials were Honduran Mahogany and Basswood, and the mahogany neck was a set neck design like the Mark III (as opposed to a bolt-neck design). Initially, both guitars had a german carved top, but at some point, the carved top feature was dropped from the Mark V.

Major endorsements came from Bob Gibbons of the Tennessee Ernie Ford Show and Gene Davis.

Whether these guitars were built at the Magnatone facility in Inglewood, or elsewhere is unclear. The production span of 1956 through 1957 straddled the Magna ownership change of early 1957 when Duhammel and Hellman sold the company to Chilton, Buckles, and Walsh (see history). By this time, Bigsby had moved on to other projects, and the new owners were left to find a new guitar designer.

The entire body of this Mark V is shaped from a single thick solid block of wood, rear routed with chambers in the lower bout wings, and solid up the middle, and solid in the upper bout wings. Back is covered with a thin piece of wood. The neck is large-and thick. Could be

called the “baseball bat” neck. It has a long tongue going far into the body.