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# The Story of G&L

## The First Ten Years of Guitars by Leo Fender



MUSIC SALES, INC.

## **The Story of G&L — The First Ten Years of Guitars by Leo Fender.**

In 1980 Leo Fender, the father of the modern electric guitar and bass, formed G&L Musical Products. Dale Hyatt, who has worked with Leo since 1946, became his partner in G&L Music Sales. Their purpose was to create an innovative line of solid body guitars and basses — the best instruments and designs possible. Leo worked in his lab at the factory testing, designing, and creating. Dale's title was vice president of sales; he handled all the marketing and along with Leo, much of the product development. Another long-time associate, George Fullerton added his skills as a craftsman and former executive for the original Fender company.

Today G&L has helped shape modern music for over ten years. Thousands of guitarists around the world proudly own and play G&L's — Guitars by Leo...The Real Ones. Leo and Dale believe that their new guitars are the best they have ever made. But who was more likely to top Leo Fender than Leo Fender? This man has created a legacy few could hope to match. His inventions have included the Telecaster, Stratocaster, and Precision electric bass guitar. In addition, Leo Fender pioneered the development of electric guitar amplifiers such as the highly respected Fender Bassman and Twin Reverb.

Leo Fender, who turned eighty last August, takes pride in his early work. Nevertheless, he has made a career out of pushing the past aside and moving into the future. Leo has always followed two unspoken rules. First, if it's broken, fix it. Second, if it's not broken, make it better. The Fender Telecaster made the early solid bodies from Rickenbacker and Bigsby obsolete. Leo's Stratocaster took the Tele's place with many players. Now Leo, Dale, and their team of industry veterans have created the next generation of solid bodies. How did it happen?

Rather than imitate his old guitars, Leo made a clean break from the past in the 1970s with his Music Man guitars and basses. While still associated with that company, he made plans for a wider array of guitars and basses with even more advanced features. The instrument line Leo envisioned suited every music style and every player's needs, going far beyond what the original Fender company had done and well past what Music Man wanted to market.

### **G&L — New, Different, and Better Guitars by Leo**

The essence of Leo's new G&L guitars was an entirely new pickup design that signaled a big step into the future. Up to 1980 Leo had always used nonadjustable Alnico pole pieces. Obviously he had always used them with great success. Some players considered Leo's pickups from the 1950s among the finest ever made. To purists, any deviation away from those designs was walking away from a sure winner. But to Leo, who's never been glued to the past, the new design offered many advantages.

The new pickups used in G&L guitars followed the patented Magnetic Field Design; they used ceramic bar magnets and fully adjustable soft iron pole pieces. In Leo's new design the ceramic magnet's bottom surface sat under the coil, away from the strings. For that reason the bottom surface of the magnet had virtually no influence on the magnetic field near the string. The soft iron pole pieces resting on the top surface of the bar magnet (the opposite magnetic pole) gathered and transferred magnetic pull up towards the strings. The entire length of the new pole piece had one polarity without the dead spots found in an Alnico pole.

As proven in independent tests, Leo's new coils had more output per number of wire turns than his old Alnico pickups. G&L pickups used about half as much wire per coil and therefore had less capacitance and more highs. One benefit was that Leo could effectively tune the pickups — change the tone content — by adding different value capacitors to the tone control circuit. Without a doubt, the new pickup had a new sound that could be adjusted to meet all applications from country to heavy metal.

Since 1980 Leo has made many different variations of single coil and dual-coil humbucking pickups with ceramic magnets. He has tested guitars for thousands of hours, experimenting with every imaginable combination and configuration of pole pieces, windings, and dimensions. Leo uses his ear rather than a spectrum analyzer or other high-tech apparatus. Although he maintains no comprehensive, written record of his work, he rarely discovers something by mere accident. From his years of experience, he knows exactly where he wants to go. Finally, Leo Fender feels that he has created the sound he has tried to achieve since starting to wind pickups before World War II.

Besides Leo's obsession with pickup designs, when Leo, Dale, and George started G&L, they were seeking more sustain in a guitar. Leo designed the G&L non-vibrato guitar and bass bridges using several features intended to give instruments maximum sustain. The basic bridge assemblies were die-cast out of heavy metal, and each underside had a boss or protrusion that set against the end grain of the wood body like an anchor. Thus the string tension pulled through the bridge and transferred to the body.

The strings on the guitars and basses loaded through the bridge and had individual height adjustments and individual length adjustments. Here's where the design got very clever. After the player had set the action and intonation, there was another adjustment screw that compressed the individual nickel-plated saddles against each other. In effect the six saddles compressed together acted as one, eliminating sustain-cutting lateral vibration.

The guys at G&L and the musicians testing the guitars wanted to get more sustain from the vibrato guitars, too. Except in the 1970s when he didn't make a vibrato, Leo has always been in the forefront of vibrato designs. Many players recognize the Stratocaster's 1954 vibrato as one of the most significant breakthroughs in guitar history. Leo developed the G&L vibrato in 1980, starting where the Strat's design had ended. The new unit had two pivot points instead of six. Moreover, the bridge pieces were heavier to increase sustain.

Yet as the 1980s progressed, Leo and Dale noticed that locking nuts and vibratos with fine tuners had become popular and useful. First, Leo invented and patented the Locktight String Retainer, an improved device for locking the strings at the nut. Then he went to work perfecting his own fine tuning vibrato, while in the meantime some mid-1980s G&L's used Kahlers. In 1989 Leo started manufacturing a new patent pending unit called the Leo Fender w/Fine Tuners. Among other advances, this smart, compact design does away with energy-absorbing roller bridges.

Leo's detachable necks widely introduced in 1950 changed guitar manufacturing. What about G&L's new neck designs? The early G&L guitars had one piece maple necks with the truss rod installed through the back. Like the early Fender and Music Man necks, these necks had a dark "skunk stripe" down the back. Now G&L makes a neck by cutting a piece of maple into two, installing the truss rod, and then gluing the pieces back together. So the newer G&L necks have no skunk stripes. Leo's new neck construction

helps prevent warping and twisting tendencies in the maple. Another real advantage in the new necks is a much higher yield in manufacturing. In other words, now G&L wastes less wood, cutting costs to the consumer.

In the last decade, G&L has improved another important feature at the heart of the neck's design. Leo calls it the Precision-Tilt (P-T) neck adjustment. He created a neck tilt adjustment in the late 1960s, but poor manufacturing standards at the CBS-Fender factory defeated the design. Early 1970s three-bolt Strat necks moved around in the neck slots, causing trouble for many players. Leo tightened up the design at G&L, in part, by custom fitting each neck and body. The P-T neck adjustment allows low string action, all easily accomplished without removing the neck or installing shims.

### G&L in the late 1980s

Leo, Dale, and the talented people working around them have always considered the needs of musicians first. Things didn't change in the 1980s. G&L maintained an ongoing, informal evaluation program with musicians, just like Fender did in the 1940s and '50s with Bob Wills and the Texas Playboys, guitar virtuoso Jimmy Bryant, and steel wizard Noel Boggs. For all their new guitars and basses, Leo, Dale, and George carefully considered many opinions and comparisons, including side by side tests with original pre-CBS guitars. Several times Leo has pitted black pickguard Teles and old maple neck Strats against prototype G&L's. Compared with an old Tele, the inventor once said that his new ASAT guitar was "a beautiful shower of brilliance." Compared with the Strats, his new vibrato guitars can "burn rubber around the moon." Leo's observations are always short and to the point.

Leo's painstaking work takes hours, days, and weeks. Sometimes developing a new product like his new vibrato has taken months. For the five string L-5000 bass, it took years. The process points to Leo and Dale's quest for perfection and a desire to create something for everyone. G&L has produced an astonishing number of guitar models and variations, from the early F-100 to the new Comanche. There have been almost as many basses. In 1989 G&L offered at least nine different production model guitars and seven production model basses, each available with several options.

Leo has put almost every aspect of G&L guitars through relentless tests, even parts that other guitar makers now take for granted like tuners and strings. The patent office has granted him at least twenty-four patents in the last fifteen years. And the patented ideas are just the most visible part of Leo's work. Of course, not all these ideas have been as successful as others. During his Music Man days, Leo had started to use active electronic preamps in both guitars and basses. G&L gradually stopped using active circuits in guitars because most players didn't need the treble boost. However, the active preamps worked well in basses and are still in production.

The saga of G&L's active electronics pointed to what Dale first noticed while running the sales office: many players still wanted a more traditional style guitar. Says Dale: "I convinced Leo that we shouldn't spend so much time reinventing the wheel. It's round, and people like it that way." So in mid 1985 Leo and Dale started getting back to some well established basics, like the Telecaster-shaped body. They started with Dale's idea, the G&L Broadcaster complete with Leo's signature in the neck pocket. Dale's thinking led to many other improvements at G&L, including the Skyhawk's new look.

The Broadcaster had a limited production due to disputes over the name, but the ASAT model soon followed. The name, suggested to Dale by Guitar Player Magazine columnist Richard Smith, comes from the Air Force's anti-satellite missile. Some like to think the acronym stands for "After the Strat, After the Tele." G&L made the ASAT, like the Broadcaster, available in several combinations, with or without vibrato. The ASAT has inspired quite a few former Tele players to switch to G&L.

The ASAT Classic, shown for the first time at the 1990 Winter NAMM show in Anaheim, California, goes back even further in capturing the spirit of Leo's first guitars. Perhaps Leo has even jumped onto the nostalgia bandstand in a small way. Yet he leaves no doubt that the guitars he makes today are the guitars he would have made had he never sold the original Fender company. Leo designed the ASAT Classic pickups, complete with adjustable poles and ceramic magnets, to be interchangeable with any Tele-style guitar. Except for the six bridges, the bridge plate and control panel resemble the original Tele design. Everyone at G&L thinks that this guitar represents the full circle of evolution, a combination of the best old and new ideas.

Leo stepped back to his roots for the ASAT and ASAT Classic. But that didn't stop him from jumping head first into the 1990s with another new model called the Comanche. This guitar incorporates the latest awesome version of the G&L pickup, the new "Z" single coil humbucker. Each unit has two coils with three poles per coil. With three pickup selector switches and three switches that split the treble and bass coils of each unit, the Comanche has over forty different pickup/coil combinations. The Comanche also has Leo's new vibrato with fine tuners.

As the ASAT Classic and Comanche show, Leo Fender and Dale Hyatt still have a mission. Despite all their accomplishments, they're still trying to create the best electric instruments possible. Even if their old guitars aren't broken, they're still trying to make them better. The motivation is selfless. Leo could easily afford a leisurely retirement in Palm Springs or Maui. But he's not ready to retire.

Dale Hyatt still works six days a week, sometimes twelve hours a day. He's taken just nine days of vacation in the last ten years and expects to be just as busy in the 1990s. Working hand in hand with Leo and the factory, Dale's goal is to continue making the guitars players want. Dale manages the sales force, handles all the advertising, and represents G&L at trade shows near and far. Furthermore, he's busy helping improve manufacturing and quality control on all levels. If the past tells us anything about the future, we can expect to see great guitars from G&L for many years to come.