

# THE BLADE FEATURE GUIDE



## ADVANCED CONCEPTS BY GARY LEVINSON, SWITZERLAND

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**BLADE SALES GUIDE**  
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### Blade – Since 1987

The decision to create Blade guitars was made in 1985. By 1986 the idea of a line of guitars built on the concept of “Classic Design, Creative Technology” was being refined the features needed to make the line unique were determined. January 1987 a manufacturing alliance was made to bring the highest integrity in build with the most innovative developments. By October 1987 the first instruments were shown at the music show in Tokyo and the Frankfurt Musikmesse 1988 heralded the launch into Europe.

The Blade line has been designed to meet the needs of the vintage-thinking player while adding much

more flexibility in sound and playability. When I speak of vintage needs I mean having the feel of “an old friend” instead of a new guitar lacking personality.

Blade was born in the repair shop. It was the result of more than 20 years of solving the problems that guitarists brought me. Every piece of technology was developed to meet a specific need that the musicians had expressed to me. This is the reason why Blade has been one of the most successful new guitar lines to be launched in recent years. With about 30'000 instruments sold worldwide since 1987 Blade has proven its ability to meet the needs of the musicians.

### Why a Blade Features Guide?

The Blade line of guitars offers many features not found on any other guitars. The unique selling points represented by this attention to detail offer a number of advantages over those products offered by competing lines.

In my travels around the world I have seen the importance of understanding what makes Blade so special. It is actually a very simply thing:

#### **Blade features Features!**

From the proprietary preamps to the unique Falcon Tremolo, Blade delivers better solutions to the musician's needs. Every detail has been considered and engineered to perfectly fulfill its purpose.

Blade has always been known for beautiful finishes – but the beauty is much more than “skin deep.”

I hope this guide will be valuable to you and welcome any further comments you can give me on how to improve it.



## Styles Change, Style Doesn't: First Ad Still Rings True

That was the title of the first Blade ad. It was accompanied by my infamous "sitting-in-air" picture and became synonymous with the Blade launch. We did a lot of work and sent out a lot of press releases. Dave Burrluck, then with International Musician and Recording World, once said in 1998, "If I had a pound for every press release I'd received on this product I'd probably be able to buy it!"

Many years and many guitars later I am still trying to keep the same style in Blade product development. Ultimately I am a tool maker. The only true goal of a luthier can be to build the best possible tool for practicing musicians. The justification of this is that the better the guitar performs, the less the musician notices he is playing it. One of the greatest compliments I received was in a test report from France - "The Blade is so comfortable that you can concentrate completely on your music." Now that is a great tool - and my style of product.

## Classic Design - Creative Technology

I have often been asked why I chose such a classic design as a vehicle for the many Blade proprietary technology.

The offset double cutaway represents the most popular guitar of all time. Whether as straight "Strat®-Style" or modified version such as the Ibanez Stevie Vai or Hamer Chaparral, it accounts for the majority of the

world electric guitar sales. While there have been a number of changes made to the modified versions, the three single coil mounted guitar has been the object of more downgrading than upgrading over the years. Most copies have been more interested in contemporary appearance or price points than in sound and playability.

Blade was originally conceived to bring this style guitar from its 1950's roots to the needs of today's musician. The features are designed to keep "Vintage sound" and "Vintage feel" while expanding these ideas to meet the technical and acoustic needs of both today's and tomorrow's players.

**"While most companies grind out clones, a few pioneering souls dedicate themselves to building instruments for the next decade. Take Gary Levinson, one of the world's truly innovative electric guitar designers..."**

**Guitar Player, USA**

## Who is Gary Levinson?

Gary Levinson began repairing guitars in 1964. He used his acquired skill to help finance his university studies and received his degree in Physics while studying at the University of Illinois. During this period he carried out repairs for many of the professionals who played at the University venues. These included Leo Kottke, REO Speedwagon, Dan Fogelberg, The Flock and many others.

In 1971 he came to Basle, Switzerland on a scholarship that lead to a further degree in Geology.

Utilizing his background in applied and natural sciences, Levinson approaches guitar building from an analytical standpoint. Inherent resonant frequencies of woods, innovative electronics and the tonal effect of

hardware designs are important factors in his concept development. Equally as important is the role of "metaphysics" - or magic. Exhaustive research goes into those elusive components that make a great guitar feel and sound right to a player.

In 1977 he opened his workshop in Switzerland. Early in 1982 he set the groundwork for the Blade guitar line with a series of prototypes utilizing innovative pickup systems and the position-determined-profile neck. January 1987 the alliance was forged with manufacturing partners to launch the Blade program on a worldwide scale. By 1990 Blade had become the best selling custom high-end guitar in Europe and received endorsements from many of the world's finest players.

## What was the original engineering goal behind the development of the RH4 Classic?

True "Strat® Sound" relies on the use of three single coils. No other combination gives exactly the same tonal character. Nonetheless, often a fatter sound with more output, such as that of a humbucker, is desired for solid overdrive sounds. New technology was needed to expand the tonal boundaries of single coil pickups without losing the original "twang."

The weight and fulcrum construction of the original "synchronized" tremolos enhanced a different frequency spectrum than floating tremolos such as Floyd Rose, Wilkinson or other contemporary tremolo systems. Floating tremolos suspend the tremolo plate on two bolts above the body in balance between the tension of the tremolo springs and the strings. This type of system demands more weight to avoid the loss of sustain and this fattens the sound as in the case of the Floyd Rose. The disadvantage is that this reduces the tonal transparency that original instrument was known for. A further disadvantage of floating tremolos is that they will often vibrate with the strings reducing sustain and clarity when played hard.

Floating tremolo systems don't express the tonal characteristics of the construction materials (the woods used) as well as a flat mounted system because of the reduced contact with the body.

Many guitarists would prefer not to have large, heavy constructions mounted on their instruments but still would like a tremolo that doesn't bother them with tuning problems. The use of

locking nuts demands fine tuners, increasing the size of the unit. String changes demand a tool to remove the strings and the guitarist can spend up to 20 minutes changing a string. The normal buying customer does not have roadies to do this kind of work and needs a guitar that he can take care of easily. A well functioning tremolo without fine tuners or locking nut needed to be designed.

If you break a string most floating system immediately go out of tune. Locking systems to stabilize floating tremolos have proven to be extremely unstable. Blade needed a tremolo that



Engineering discussion in the Levinson Custom Shop with Gary Levinson and Mike Koch.

would stay in tune if a string breaks as well as to allow deep bends against open strings (such as pedal steel bends) without the open strings going out of tune. If you bend against open strings on a floating system the other strings go out of tune as you increase the tension of the bent string.

Uptrem techniques are essential to today's playing styles. The tremolo needed this capability.

The feel of the instrument should appeal as much as possible to ALL guitarists - whether pop or blues, jazz or heavy.

While the original RH4 CLASSIC was a "Strat®-Style" instrument, the Blade should have a distinctive look about it.

After over 30 years associated with repair work also I wanted an instrument that was user and service friendly.

All of the most desired sounds

should be easily accessible on a single instrument.

These were the factors behind the developments in the Blade. All of the input ultimately came from what the musicians wanted to play - not what we wanted to build.

# Exclusive Blade Features

Blade exhibits a large number of features not found on any other instruments. Every part of each instrument has been examined and designed to insure optimal operation. Result: better sound and better playability. These exclusive features can be grouped into four categories: 1) headstock features, 2) neck features, 3) electronic features and 4) tremolo (bridge) features.

*"..this is the axe with the cutting edge. Ah! So that's why they called it the Blade!"*

Tom Oakes  
Metal Hammer  
England

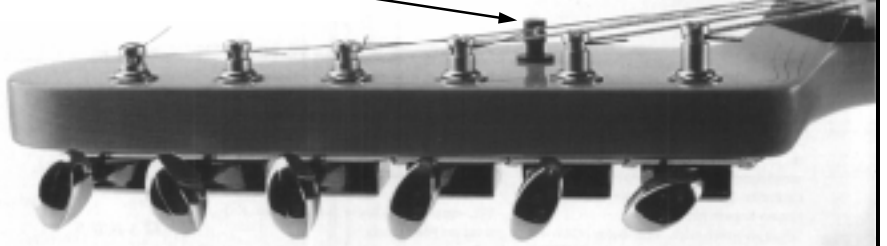
## Headstock Features

Friction to string movement at the nut can represent a major tuning problem at the headstock. Having chosen not to use fine tuners on the tremolo or a locking nut assembly, the headstock hardware had to be optimized to guarantee the necessary performance. The use of a self-lubricating nut provides a slip-

those guitarists who are into extreme use of the tremolo. There are also a number of Teflon sprays available (usually at automotive supply stores) that can drastically reduce friction at the nut and help tuning stability.

Two major detuning problems originate at the machinehead.

### Adjustable Tension Guide

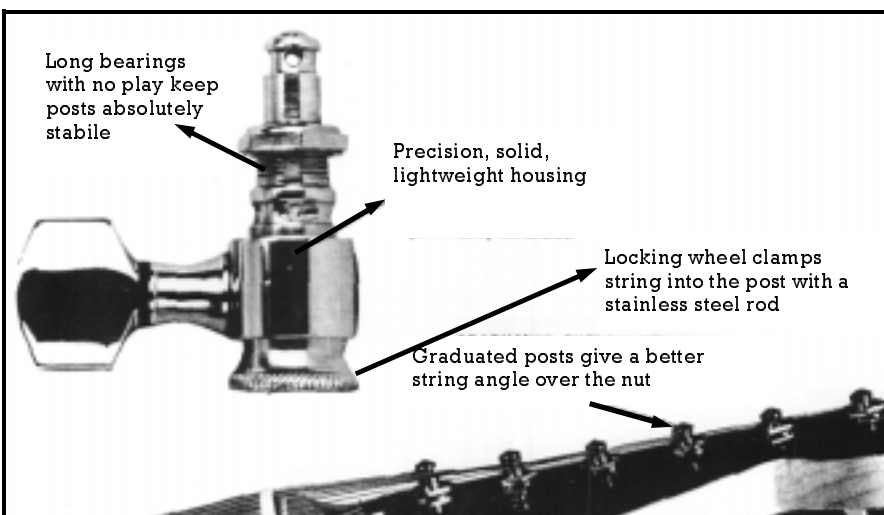


Graduated (staggered) posts on the Texas Vintage HAPM tuners

pery and hard surface to keep the strings from cutting in and catching. Metal nuts (like brass) can cause more string rattle, they sound different for open strings and are generally no longer popular. Rubbing normal pencil lead in the nut slots occasionally can further reduce friction and this is recommended for

The first results from the instability of the string post mounting in the housing and the second is caused by the string windings around the machinehead posts. Using Sperzel Trimloks solves both of these problems. The construction of most machineheads allows the posts to sway (move laterally) when string tension is drastically altered as during tremolo use. The post hangs loosely in the housing by their connection to the gear. The mounting nut and washer do limit lateral movement but not nearly as effectively as Sperzel's patented housing construction. Any movement of the post can cause detuning. For this reason Sperzel Trimloks were chosen for the RH4 Classic.

Strings are usually wrapped 2-4 times around the machinehead post to keep them from slipping.



# Exclusive Blade Features

Any movement in these windings will cause detuning. Again here, the change in string tension during tremolo exaggerates this problem. Because of the locking mechanism in the Sperzel Trimlok or the Levinson/Gotoh Magnum Lock only a half turn is necessary to secure the strings, thereby eliminating this problem. Even under the most extreme use, the small amount of string on the post always returns to its original position.



The asymmetric shape of the Adjustable Tension Guide compensates for tension differences between the E1 and B2 strings

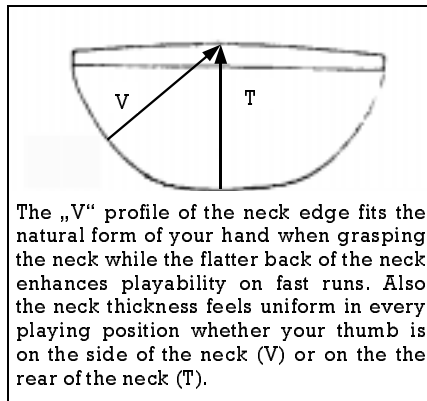
The use of string trees or tension guides at the headstock presents another point of friction. Their purpose is to provide enough pressure of the string on the nut to insure a clean attack. Staggered posts as used on the Sperzel or custom Levinson machineheads were designed to eliminate the need for these on the D and G strings. In order to insure optimal response on the E1 and B2 strings the unique Adjustable Tension Guide was created. This feature is only available on Blade guitars. It is spring loaded and height adjustable. This allows tension adjustment to compensate for the difference between various string gauges. Further, its asymmetric shape gives slight more pressure to the E1 string than the B2 (see illustration). This results in maximum sustain and minimum friction eliminating most detuning problems.

**"Collectively, these features (the electronics, tremolo, e-z access rod, etc.) combine to produce a guitar which is a master of visual understatement, whose potential can only be realized by playing it. Get ready for a treat." Jerry Uwins for Kerrang Magazine, ENGLAND**

## Neck Features

The fingerboard radius is 320 mm or 12.5 inches. This is the same as used on a Gibson Les Paul® and allows deep note bends without choking (the note dies as you bend it upwards).

The Position-Determined-Profile Neck: The repair shop is an excellent place to test reactions to neck profiles – and that is what I did for many years. The most popular neck became definable through the input of many musicians – it is somewhat V-shaped along the edges and flatter in the back. The V is slightly stronger



The „V“ profile of the neck edge fits the natural form of your hand when grasping the neck while the flatter back of the neck enhances playability on fast runs. Also the neck thickness feels uniform in every playing position whether your thumb is on the side of the neck (V) or on the the rear of the neck (T).

in the area of the first five frets. The result is that the neck feels uniform no matter what hand position is used from "throttling" (with the thumb over the edge to fret the E6 string) the neck to a classical thumb-in-the-back position.

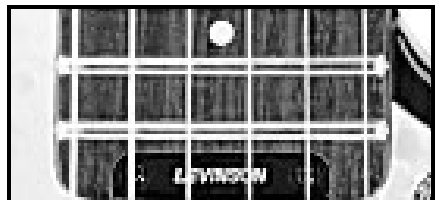
A guitarist feels the thickness of the neck as the distance between his thumb and playing fingers.

The "V" profile along the edge of the neck blends perfectly into the flatter back to keep the feeling uniform in all playing positions. In the illustration this can be seen as the distance "V" being the same as the neck thickness, or distance "T."

The jumbo frets on most models are high enough for deep bends but low enough not to bother fast runs. This fretwire corresponds to the Dunlop 6120 type.

The Texas Vintage uses a smaller fret more associated with the late 50's and early 60's instruments.

Any repairman will appreciate the E-Z Access neck rod . It is no longer necessary to remove the neck to make adjustments for bow or warp. Further, if the guitarist wants to install a locking nut tremolo system for a Floyd type tremolo on his Blade it can



E-Z Access Neck Rod: Remove the two screws and adjust your neck. No need to remove the neck – or even the strings.

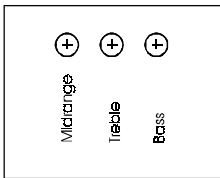
be mounted without problems – there is no neck rod in the way at the headstock. Additionally, this construction does not weaken the area between the neck and the headstock with an adjustable system.

# Exclusive Blade Features

## Variable Spectrum Control

Featured on the Classic and California Series

Every guitarist has at one point wished he could roll a Strat® and a Les Paul® into one guitar. The clarity and transparency of a Strat are irreplaceable for rhythm and clear lead sounds but lacks the guts of a Les Paul® in overdrive mode due to the nature of single coil pickups. This dilemma lead everyone to put a humbucker in the bridge position. Great - but the classic middle position sound of the bridge and middle single coil was lost. Attempts to use split coil humbuckers don't supply a completely convincing alternative. Further, the overdrive sound is limited to the bridge pickup.



Trim pots are accessible on the rear of the instrument to allow you to set your VSC sounds.

Due to the conservative nature of most guitarists and the desire for easy to use controls in live performance situations the use of multiple control preamps, conglomerations of mini switches and knobs and complicated active devices were not generally accepted by the buying public of guitar players. The Variable

## Electronic Features

Spectrum Control was designed to give the guitarist maximum tonal flexibility with a minimum on controls (one additional mini-switch). The use of presets allows the musician to fine tune the Blade to his specific musical needs and the type of amplification equipment used.

### Gain Boost

Featured on the Texas Special and

Durango Deluxe.

The Gain Boost delivers up to 15 dB of linear gain when activated. The amount of gain is controlled by the trimpot accessible on the rear of the instrument. This Blade exclusive gives the musician two major advantages. Using the full potential of the boost allows you to drive a clean channel into crunch. You can set your distortion channel for power chords

## VARIABLE SPECTRUM CONTROL (VSC) SAMPLE SOUNDS

Sound	Midrange	Treble	Bass	Mini Switch Position	Pickup
Maximum drive, thick and creamy		NF	NF	down	all
Fat and round		NF	NF	down	all
Super clean, funky, great for rhythm chops	NF			up	all
Hollow humbucker dark and warm	NF			up	middle neck
Bell-like, chickin' pickin' character	NF			up	all
Jazzy, great dark sound		NF	NF	down (close tone control)	neck
The classic single coil character	NF	NF	NF	middle	all

Gain :            Midrange: 0 to 14 dB  
                       Treble:     -4 to +12 dB  
                       Bass:      -4 to +12 dB

# Exclusive Blade Features

and drive it higher for single note solos. This effectively turns a two channel amplifier into four discreet channels.

A second advantage is that when the Gain Boost is activated, the lower impedance signal reduces cable loss. This allows the use of longer cables with a brighter sound even at low gain levels.

## Magnum Boost

**Featured on the Texas Vintage and Durango Magnum**

The Magnum Boost was developed to offer “dial-in” boost capabilities while enhancing tonal response. The Magnum Boost is switched on when you tap the switch-loaded tone pot (see the Texas Vintage specification sheet). The amount of gain is controlled by using this pot as you would a normal volume pot. Additional to the gain enhancement, the midrange is slightly boosted to the rest of the signal while the highs are rolled off. This gives a “sweet” tone to the

instrument – a slightly warmer and fatter sound.

## Battery Life and Bypasses

Many guitars worry about active electronics because they think that they might lose classic tone or find themselves at a concert with a dead battery – and a dead guitar. Not so with Blade.

Blade electronics deliver exceptionally long battery life by using low drain chips. There are guitarists that have had the batteries in their instruments over three years although it is advisable to change it once a year. The battery only runs when the cable is plugged into the guitar.

If the guitar player leaves the guitar plugged over an extended period of time and arrives at his gig with a dead battery – no problem. ALL Blade preamps have a passive bypass that goes around the electronics and directly out. Using the bypass will always deliver classic tone – with or without the battery.

## A Word About Pickups

All Blade guitars are designed as a complete unit to insure perfect harmony between the construction materials, hardware, electronics and pickups. For this reason Levinson has always designed pickups to fit Blade guitars. The present lineup includes the following pickups.

VS-1 single coil: Clear highs and warm mids

57's single coil: Twangy, vintage style with great top end..

V-3 humcanceller: Pure single coil tone with absolutely no noise. The attack is more direct than a true single coil.

LH-55 humbucker: Classic tonal response with slightly more output.

HD-4 humbucker: Medium- high output and enhanced midrange response.

## The Falcon Tremolo System: Exclusive to Blade guitars

**Featured on the RH4 Classic and the California Custom**

The Falcon Tremolo represents a major breakthrough in tremolo technology. Thirteen years after it's conception it remains a uniquely successful product.

Roller-mounted saddles keep the strings from cutting into the saddles and catching. The rollers are mounted with close toler-

ance to avoid lost of sustain.

The screw holes in the baseplate have been ground to a knife-edge on the bottom side of the plate. This knife-edge rests in a notch in the mounting screws allowing the tremolo a smooth feeling fulcrum action free from any vertical slippage along the screw. Both the baseplate and the screws are hardened steel to minimize wear.

The tremolo sits flat on the top of the instrument with several ad-

vantages:

- Better attack and sustain as a result of a better translation of vibrational energy from the strings to the body.

- No more detuning problems caused by hand damping.

- No detuning if the string breaks.

- No detuning during open string/bent note combinations as with some pedal steel techniques.

Uptrem techniques are allowed using the Falcon's patented double block system. This is a major

## Tremolo (Bridge) Features

## Exclusive Blade Features Continued: Tremolo Features

plus. Instead of having to suspend the unit as with floating tremolos, the advantages mentioned above can be exploited by having the tremolo flat mounted on the instrument while still allowing upbend. In contrast to floating tremolos, the string height does not change during upbend since the strings are pulled into the body without changing the position of the baseplate. Many floating units lay the string onto the frets and pickups when you upbend due to the change in baseplate angle.

There are guitarists that prefer a lighter feel to the tremolo than is normally stock on the Falcon.



This presents NO PROBLEM. The tension can be adjusted by relaxing the spring tension on the back of the instrument. This can be relaxed up to the point of allowing the back of the tremolo

baseplate to be slightly suspended with hampering the function of the unit. Several of the advantages previously mentioned will obviously be negated by this, but it is nonetheless possible. The Falcon Tremolo System will accommodate almost every guitarist's needs and preferences.

There is a tension adjustment screw behind the tremolo arm allowing the guitarist the option of a loose arm that falls away of stiffer set up that will stay in the position he chooses. The stainless steel tremolo arm is custom made to assume the perfect position under the musician's hand.

*Visit us on the web!*  
[www.bladeguitars.com](http://www.bladeguitars.com)

### The Blade FEATURE

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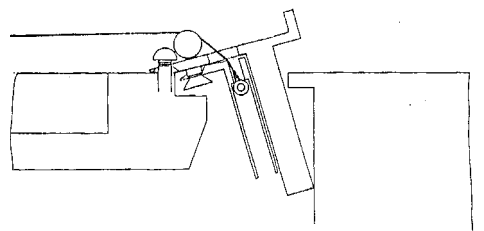
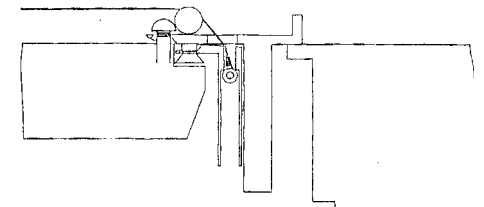
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## Blade - The Cutting Edge of Innovation

The Falcon tremolo started as a simple idea on a drawing. The same is true of the Adjustable Tension Guide, the VSC and many of the other Blade exclusive features. All the ideas for the first R4 Classic had already been put together when I realized there was still no name for the project. I wanted a name that would be easy to remember and easy to pronounce in most languages - and still say what I and my team were trying to accomplish.

A name that would cut to the core of the many innovations we had developed. What better name than BLADE to symbolize the cutting edge of technology. It is, in fact, a cut above the rest.



Original Falcon Drawing

