

**OFFICIAL FRAMUS
GUITAR OWNER MANUAL**

Framus

Owner manual for Framus Guitars

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GENERAL INFORMATION ABOUT FRAMUS GUITARS

Introduction

First of all we would like to thank you for choosing your new Framus instrument. With Framus guitars you will find a high level of quality workmanship and selected components combined into one amazing and timeless instrument that will provide you as a musician with outstanding expression power. Meticulous quality controls as well as a German manufacturing site create the basis to guarantee a high and consistent quality standard for your new Framus guitar. There is also a little involvement on your side in terms of wood and hardware, so keep reading if you want to give your guitar the best look possible. We will inform you then about instrument care and available setup configurations since it's not only the instrument that wants to feel good,

Philosophy

Since Framus (short for "Fränkischen Musikinstrumentenerzeugung Fred Wilfer K.G.") was first founded in 1946 a lot has happened. As a forerunner of the art of building guitars, Framus is since developing its own concepts as well as technical innovations and designs that enrich the guitar world, as we know it. Our efforts are geared towards making the individual wishes of each musician a reality. The end result is a broad assortment of guitars that allows the interested artist to create his music. We know that the requirements to manufacture instruments that as a brand feel themselves at home in many styles, are definitely high. But we proudly take the challenge. If you just take a look at the models that we call standard, you can find your instrument regardless of the style you play, be it smoking blues, glittering funk, hard rock, or jazz... once more striving for the top.

Standard models

Variety of stylistic loyalty; a wide product assortment doesn't preclude either of them. It doesn't matter if you're a Top-40 musician that plays a variety of different styles in each set in spite of his personal musical preferences, or if you're devotee to a specific style, Framus has the right choice for you. You expect standard guitars to be matured and optimized, and to have a wide range of models that go from intelligently outfitted with up to 16 different sound possibilities to stylistically purebred guitars. We take no compromises in the selection and quality of woods, workmanship, and the utilized components. What you're getting is a German-manufactured, high quality, high value musical instrument with a wide array of colors and a left-handed option with no additional cost.

Custom Shop

Who doesn't want that special something, that what you call your own, what is not seen as an object, but that what is embodied in it: your own ideas, so personal and unique like the music that will be played with that special custom-made instrument. Being able to offer this to any interested musicians is what the Framus designers and product specialists set as their mission; and the end result is an unbelievable amount of custom shop options to build that dream instrument, the one you always imagined... unique and without compromise. If that wish has never been fulfilled, it is time to pay a visit to our Framus homepage or to ask one of our product specialists. Why don't you take a look at www.framus.de?

Model overview

- Diablo Custom
- Diablo Custom, 7-string
- Diablo Pro
- Diablo Light Scotch
- Panthera Custom
- Panthera Custom, 7-string
- Panthera Pro
- Panthera Studio Custom
- Panthera Studio Custom, 7-string
- Panthera Studio Pro
- Renegade Custom
- Renegade Pro
- Spitfire Custom
- Spitfire Pro
- Tennessee Custom
- Tennessee Pro
- Mayfield Custom
- Mayfield Pro
- Camarillo Custom
- Camarillo Custom, 7-string
- Manhattan
- Monterey
- Streetwalker
- Streetwalker, 7-string
- Hollywood
- AZ-10 Single Pickup
- AZ-10 Single Pickup Blonde
- AZ-10 Koa
- AZ-10 Bubinga
- AZ-10 Makassar
- AZ-10 Shellac
- AZ-10 Dual Pickup
- AK 1974
- Morrigan Custom
- Morrigan Pro

OUTFITTING

Experience over decades actually pays off, not only production-wise, since there needs to be a basis on which to build on, as it starts with the selection of the wood we use for our Framus guitars. In terms of wood as a finite resource we're not shortsighted: you can rest assured that we do no harm to the environment whenever you buy yourself a Framus guitar. All utilized woods come from regions where strict cultivation rules and reforestation are enforced. This was made possible through decades of good contacts and a good working relationship with the lumber industry. In the end we all benefit from it.

Body woods

Flamed maple tops, selected swamp ash and mahogany bodies – almost all electric guitars are made of this proven and preferred wood combination. Framus offers many different wood combinations, be it a solid body or a thin-line construction. The exact outfitting possibilities of each model are described in the table hereafter. But before we want to give you an insight into the characteristics of all the different wood combinations and construction types:

Swamp ash or basswood guitars (solid body)

Massive swamp ash bodies are typical for rock guitars. Hard, with a coarse texture and pronounced grain, this wood has a powerful sound spectrum with pleasing warm mids and a prevailing character.

Basswood is also an option for guitars striving for that hard sound. The wood itself is soft but still tough and it has a raw midrange density. As a consequence the instruments are relatively light. The tone that this wood generates is full of low mids – not for nothing does it have that name: basswood. This combination is ideal for guitars with a radical tone, not weighing too much thus allowing for endless playing without a sore shoulder.

Swamp ash body with flamed maple top (solid body)

This is a rocking combination that creates a tone with solid substance, enough cut-through and attack. Guitars that use this combination are hard to ignore and can be used with singlecoils or humbuckers. They consist of either one-, two-, or three-piece swamp ash bodies with a glued-on two- or three-piece flamed maple top, which is normally 2 millimeters thick – a necessity since the top will be getting a specific curvature that is responsible not only for the ergonomics but also for the appealing design of a Framus guitar. In order to enhance its optical appeal, the flamed maple block is cut in half and opened like a book (also known as book matched) so that the wood grain is mirrored. Each instrument that has a top built using this procedure is unique.

Mahogany body with flamed maple top (solid body)

Mahogany is a dense and finely textured tone wood that in conjunction with a flamed maple top creates the basis for a full-bodied tone and long sustain. This combination has been used for the last 50 years on most electric guitars with a solid body, thus creating a standard for guitar construction thanks to its tonal characteristics. As far as assembly is concerned, there is no difference between this option and the previous one with swamp ash body and flamed maple top. Both have the same top wood thickness, same curvature, and same “book matching” feature.

Body with TCS™ (Tone Chamber System)

Next to their acoustic and semi-acoustic models, Framus also offers guitars with a tone chamber. The so-called TCS™ (short for Tone Chamber System) is the first step towards hollow-body construction. This system doesn't need f-holes and is used in models that are classified as solid body guitars. The body is then routed to give it a number of tone chambers, which are later covered once the top is glued on. Not visible to the outside, this design has an audible consequence: the resulting guitar tone has a quick response and a very transparent quality, and at the same time makes the guitar a little lighter, which is one of the benefits of this system.

Semi-hollow bodies (semi-acoustic guitars)

This option utilizes basically the same process as previously described in the TCS™ system. The main difference lies in the actual guitar design, namely the fact that instead of routing many chambers a complete cavity is created. The wood beneath the pickups and the bridge is not touched and the final assembly of hardware components is done just like in a solid body guitar: screwed in tightly. All Framus guitars' tops that are built like this are book matched, a 2-piece component that is, and carry f-holes. These reinforce the acoustic characteristics of such a construction design: guitar models like the Tennessee and the Hollywood are a little bit bigger body-wise, but not thicker. The end result is a more free-vibrating top, which therefore influences the resonance behavior. These guitars are acoustically much louder, sustain longer when amplified, and are warmer and bigger sounding.

Laminated bodies (semi-acoustic guitars)

Laminated woods are manufactured with flamed maple veneers using a traditional and time-consuming process to bend them into the desired shape. This manufacturing technique is specifically utilized with the semi-acoustic models Mayfield Custom and Mayfield Pro. The body is completely hollow and 2 f-holes adorn its top. In order to mount the pickups and the bridge in a way that resembles the solid body guitars, a so-called sustain block will be glued between the body and the guitar's top and will reach all the way from the neck's heel to other end of the body. The block is made of mahogany and is responsible for good sustain behavior and makes the guitar impervious to feedback. This construction method produces a powerful, full-fledged, warm tone in old tradition...Once upon a time...

Hollow-body (full-resonance guitars)

With a classic hollow-body and arched top the jazz guitars are arriving. Only proven tone woods are used in this category, just like the traditional violin construction. Massive flamed maple and massive spruce are used for the body and top respectively. The characteristic arch is obtained with the use of a wood-milling machine, after being caulked symmetrically (book matched). The sides use the same wood as the back to guarantee homogenous vibration properties in the instrument – this is the main point in full-resonating guitars. The shapes are accomplished with time consuming bending procedures. Differences between each instrument are thus ruled out. With a Framus archtop guitar you get a coherent instrument where every little detail has been taken care of in best tradition. And don't forget that the Framus custom shop also offers different wood combinations for the guitar's sides and back.

Body wood	Ash	Ash	Mahogany	Bass-wood	Flamed maple	Makassar ebony	Koa	Bubinga	Flamed maple
Top		Flamed maple	Flamed maple		Flamed maple	Spruce	Spruce	Spruce	Spruce
Diablo Custom		X							
Diablo Pro	X								
Diablo Light Scotch		X							
Panthera Custom			X						
Panthera Pro			X						
Panthera Studio Cst.			X						
Panthera Studio Pro			X						
Renegade Custom	X								
Renegade Pro	X								
Spitfire Custom		X							
Spitfire Pro		X							
Tennessee Custom			X						
Tennessee Pro			X						
Mayfield Custom					X				
Mayfield Pro					X				
Camarillo		X							
Manhattan		X							
Monterey	X								
Streetwalker				X					
Hollywood			X						
AZ 10						X	X	X	X
AK 1974					X				
Morrigan Custom				X					
Morrigan Pro				X					

Construction types	Solidbody	TCS™	Semi-acoustic (Semi-hollow)	Semi-acoustic (With sustain block)	Hollow-body
Diablo Custom	X				
Diablo Pro	X				
Diablo Light Scotch		X			
Panthera Custom	X				
Panthera Pro	X				
Panthera Studio Cst.	X				
Panthera Studio Pro	X				
Renegade Custom	X				
Renegade Pro	X				
Spitfire Custom		X			
Spitfire Pro	X				
Tennessee Custom			X		
Tennessee Pro			X		
Mayfield Custom				X	
Mayfield Pro				X	
Camarillo	X				
Manhattan		X			
Monterey	X				
Streetwalker	X				
Hollywood			X		
AZ 10	X				X
AK 1974			X		
Morrigan Custom	X				
Morrigan Pro	X				

Neck woods

Ovangkol and maple, rosewood and tiger stripe ebony are the basis for our neck construction. Depending on the model any 2 of these 4 types of woods will be used, which gives us the following combinations (a table at the end of this chapter describes the possibilities for each model):

Ovangkol neck with tiger stripe ebony fingerboard

Ovangkol is a West African hardwood with the best tonal properties. High density allows for stability and sound quality, sustain and warmth shapes its character. The outstanding sound properties of tiger stripe ebony are a result of its extreme hardness and stiffness. It gives the instrument a quick response and a finely illuminated sound picture over the whole frequency spectrum.

Ovangkol neck with rosewood fingerboard

Rosewood is basically the most used wood for fingerboards period. It differs from ebony in its density and hardness.

Although rosewood is included in the hardwood category, it is less dense, more porous and a tad softer than tiger stripe ebony. The resulting tone is obviously warmer but never sounds sharp. This combination underscores the naturally honest character of the Framus guitars that have the additional “Pro” denomination in their model names.

Maple neck with tiger stripe ebony fingerboard

It is a proven combination. Framus guitars that fall into the semi-acoustic and full-resonance categories benefit the most from a maple neck with a glued-on tiger stripe ebony fingerboard combination. The already full-sounding guitars get an additional boost in attack and high frequencies that are necessary for a balanced sound picture. The ebony fingerboard clearly underscores the tonal attributes and the high standard of these instruments.

Maple neck with rosewood fingerboard

Framus pays also tribute to this tradition, especially when it serves the purpose of enhancing the properties of the instrument. This combination is found on guitars that need that special bite and high frequency cut-through.

Maple neck with maple fingerboard / One-piece maple neck

A maple neck has a direct, pithy, open sound, in short: it sounds like a big bang; reason enough to like it, and reason enough to develop guitars that do just that. Framus is offering models with a one-piece maple neck or a maple neck with a maple fingerboard. The Framus custom shop also offers the option of a guitar with a one-piece neck among many other possibilities that will make your instrument stand out.

Neck woods	Ovangkol / Tiger stripe ebony	Ovangkol/ Rosewood	Maple / Tiger stripe ebony	Maple / Rosewood	One-piece maple neck	Maple / Maple
Diablo Custom	X					
Diablo Pro		X				
Diablo Light Scotch						X
Panthera Custom / Studio Custom	X					
Phantera Pro / Studio Pro		X				
Renegade Custom	X					
Renegade Pro		X				
Spitfire Custom (2 Varianten)				X	X	
Spitfire Pro (2 Varianten)				X	X	
Tennessee Custom	X					
Tennessee Pro		X				
Mayfield Custom			X			
Mayfield Pro				X		
Camarillo	X					
Manhattan				X		
Monterey				X		
Streetwalker				X		
Hollywood	X					
AZ 10			X			
AK 1974			X			
Morrigan Custom			X			
Morrigan Pro				X		

Fingerboard inlays/ Dots

Framus uses hand-made genuine mother-of-pearl inlays on its guitars and they are installed with much care and detail. Aside from the standard inlays being used in their current models the Framus custom shop offers a wide variety of additional motifs. Functional or just plain nice, this is one of the most popular options to create a very personal instrument for yourself. There are also block inlays available if you want to have your name or initials engraved on the last fret. More classic options are being offered as well like white or black dots.

The following table is a precise overview to see which model has what type of inlays or dots as a standard option:

Inlays	Black Dots	White Dots	Traditional	Sharkfin	YinYang
Diablo Custom			X		
Diablo Custom, 7-string					
Diablo Pro		X			
Diablo Light Scotch	X				
Panthera Pro		X			
Panthera Custom			X		
Panthera Custom, 7-string					
Panthera Studio Pro		X			
Panthera Studio Custom			X		
Panthera Studio Custom, 7-string					
Renegade Custom			X		
Renegade Pro		X			
Spitfire Custom / Maple	X				
Spitfire Pro / Maple	X				
Spitfire Custom / Rosewood		X			
Spitfire Pro / Rosewood		X			
Tennessee Custom			X		
Tennessee Pro		X			
Mayfield Custom			X		
Mayfield Pro		X			
Camarillo			X		
Camarillo, 7-string					
Manhattan					X
Monterey		X			
Streetwalker				X	
Streetwalker, 7-string					
Hollywood			X		
AZ 10			X		
AK 1974			X		
Morrigan Custom				X	
Morrigan Pro				X	

Finishes

A guitar's finish is not just the dot on the "i" but one of the most effective ways to configure your instrument, make it underscore your style, or make it completely your own creation. There are 10 different finish options available plus a wide array of colors. This allows for countless combinations in surface and colors options. To create that unique instrument with the aid of artistic freedom the Framus custom shop offers the airbrush paint method. The motifs for this are then discussed with the customer.

Natural Oil Finish (NOF)

A combination of fine oil and wax seal the natural-looking surface making the color of the wood just a tad darker without altering it.

Colored Oil Finish (COF)

Colored wood-stain from Framus' wide array of color options purify the wood's surface and enhance its grain. After the treated surface dried out it receives a thin layer satin lacquer finish that will seal the surface completely and highlight the wood's texture.

Satin Finish (SF)

Satin finish is a variation of the coloured oil finish. Instead of being colour stained, the wood receives a covering colour layer. Later the wood gets the same matte satin lacquer as with the coloured oil finish.

Exception: The Natural Satin Finish is an exclusive matte satin lacquer that maintains the wood's natural optical properties – similar to the Natural Oil Finish.

Stain High Polish Finish (STHP)

This is a high-gloss polyester lacquer. The finish is clear and the wood's grain perfectly visible. The options are one-colored or the popular sunburst finishes. Next to Framus' wide array of colors the custom shop also offers additional colors based on the RAL coding.

High Polish Finish (HP)

This is a colored high-gloss polyester lacquer. This also called "solid" finish covers the whole surface and seals it completely thus leaving no wood grain visible. Next to Framus' wide array of colors the custom shop also offers additional colors based on the RAL coding.

Polished varnish

As you can see on the Monterey model, Framus designers have enough audacity to come up with something out of the ordinary in the standard models as well as in the custom shop. This is no airbrush finish, no stickers or anything like it you might suspect. It is a high-polish finish that is the result of many polished coatings. The body of the guitar gets layer after layer of the desired colors and after the last one has dried out the surface is power sanded in different places so that the underlying color start showing creating a unique psychedelic pattern. The end result is that no guitar is alike since the sanding is done at will with no set pattern. After this the surface is covered with a high-polish clear lacquer to seal the artwork.

Colors and guitar models can be combined freely at Framus custom shop.

Shellac

The raw material for shellac is obtained from the secretion of the Asian lac insect that deposits it on the bark of certain trees after consuming its sap. This residue then undergoes a purifying process that transforms it into shellac. It is thinned in alcohol and later applied on the instrument in several coatings, a process used also on violins and expensive furniture called "French polishing". The AZ-10 model offers this finish in 2 different colors, amber and vintage violin. The neck is left untreated as it is with classical instruments.

Metal Flake

This is a variation of the high-polish finish where metal flakes are mixed with the lacquer creating a shimmering and glistening Disco effect. After applying a primer the metal flakes are then added and coated with a high-polish clear lacquer. If you want to literally "shine" on stage then this finish is the perfect choice for you.

Airbrush (Graphic)

Everything is possible with this surface treatment; the boundaries are set by your own imagination. It doesn't matter if you like single motifs or an entire piece of art, because you will be working with one of the most renowned airbrushers and your wishes will come true in a unique masterpiece.

Sandblasted finish

Woods like swamp ash have more of a coarse texture and when treated with a sandblasting technique they are purified in totally different form. This type of finish has an outcome that depends entirely on the different hardness degrees of the wood's internal rings. Pressure and friction created with the sandblasting tool will naturally erode the wood at the softer spots; this will create small dents, molds and depressions in the wood's surface resembling a relief. This treated surface then receives a natural oil finish, but the possibility for other relief colors is also available under the colored oil finish offerings.

Chrome Tone (CT)

Chrome is a surface that awakens emotions in most people, is an absolute eye catcher on stage, and is therefore seen more and more as a guitar finish option. Unfortunately the connection between chrome and wood is a rather frail one. Most chromed wood surfaces have low durability and the appearance of stains and dark spots is pretty quick and sometimes in the worst-case scenario the chrome peels or brakes off. But research continues and Framus contacted a company that specializes in galvanic connections and together with our engineers we solved the problem. The magic word is subsurface work: Only a very flat surface will bind together with chrome for a long time. The instruments have to be prepared accordingly; a special lacquer and polishing quite a few times in-between are all part of the procedure. And that is all we're giving away ...

We don't concentrate only on classic silver chrome surfaces; we also offer additional chrome colors namely silver, gold, black, blue and red. Aside from this wide and unconventional array of colors, Framus also offers two different surface treatments, one being the already known glassy option and the other one not less glassy and mirroring, but optically heavily textured therefore called "chrome ruffle".

The following table shows the available finishes on the standard Framus models:

Finishes	Body		Satin Finish	HP / STHP	Neck		HP / STHP	Standard features
	NOF	COF			NOF	COF		
Diablo Custom				X	X			
Diablo Custom, 7-string				X	X			
Diablo Pro	X	X			X			
Diablo Light Scotch*			X			X		Natural Satin Finish (tinted)
Panthera Pro	X	X			X			
Panthera Custom				X	X			
Panthera Custom, 7-string				X	X			
Panthera Studio Pro		X			X			
Panthera Studio Custom				X	X			
Panthera Studio Custom, 7-string				X	X			
Renegade Custom				X	X			
Renegade Pro	X	X			X			
Spitfire Custom*				X	X			
Spitfire Pro*	X	X			X			
Tennessee Custom				X	X			
Tennessee Pro		X			X			
Mayfield Custom				X			X	
Mayfield Pro		X				X		
Camarillo				X	X			
Camarillo, 7-string				X	X			
Manhattan				X	X			Black Stain High Polish
Monterey				X	X			"California" High Polish
Streetwalker				X	X			Black or White High Polish
Streetwalker, 7-string				X	X			Black or White High Polish
Hollywood				X	X			
AZ-10 Single Pickup AZ-10 Dual Pickup								Almond Sunburst (Stain High Polish)
AZ-10 Bubinga, AZ -10 Macassar, AZ-10 Koa, AZ-10 Blonde								Natural High Polish
AZ-10 Shellac								Amber or Vintage Violin (Shellac)
AK 1974				X		X		Cherry Sunburst Stain High Polish, Black High Polish or White High Polish
Morrigan Custom				X	X			
Morrigan Pro			X		X			silver, blue, red, black

* Lacquered maple neck

Pickups & Hardware

Good wood is important as well as a solid construction and a sound design. But this means nothing if it isn't complemented with high quality components. Pickups are responsible for the sound of the instrument; precision is an important point that reflects quality too. Nut, bridge construction and tuning machines are only going to last if they are built thoroughly and meticulously with high quality materials. Not for nothing are they responsible for good tuning.

Framus uses the best components only from the best manufacturers and also its own, which bear the Framus label.

Pickup configurations

The story begins in 1978 in Santa Barbara, California when Seymour Duncan founded his company with the same name and his ideas about electrical signal transformation into audible success started. His early-developed talent created an around the globe successful company that always meant to preserve one thing: the spirit of a Seymour Duncan. The worldwide famous first-class pickups that bear his name are installed in all Framus models with the exception of the AZ-10, and they are meant to fit each guitar according to its tonal characteristics and outfitted with diverse switching combinations.

The following table describes the pickup combination available in each standard Framus model:

PICKUPS	Neck	HB	TB	SC	SC-HB	Middle (SC)	Bridge	HB	TB	SC	HB (coil splitting)	Metal-cover
Diablo Custom	SH-R1				X	SSL-1 (RW/RP)	STB-4		X		X	-
Diablo Custom, 7-string	SSL-2			X		SSL-2 (RW/RP)	SH7-4	X			X	-
Diablo Pro	SHR-1				X	SSL-1 (RW/RP)	STB-4		X		X	-
Diablo Light Scotch	SSL-1			X		SSL-1 (RW/RP)	SH-3	X			X	-
Panthera Custom	SH-1	X					SH-4	X			-	X
Panthera Custom, 7-string	SH7-1	X					SH7-4	X			-	X
Panthera Pro	SH-1	X					SH-4	X			-	X
Panthera Studio Custom	APH-1	X				APS-1 (RW/RP)	SH-5	X			X	-
Panthera Studio Custom, 7-string	SH7-1	X				SSL-2 (RW/RP)	SH7-5	X			X	-
Panthera Studio Pro	APH-1	X				APS-1 (RW/RP)	SH-5	X			X	-
Renegade Custom	SH-1	X					SH-4	X			X	X

PICKUPS	Neck	HB	TB	SC	SC-HB	Middle (SC)	Bridge	HB	TB	SC	HB (coil splitting)	Metal-cover
Renegade Pro	SH-1	X					SH-4	X			X	X
Spitfire Custom	SSL-1			X		SSL-1 (RW/RP)	STB-4		X		X	-
Spitfire Pro	SSL-1			X		SSL-1 (RW/RP)	STB-4		X		X	-
Tennessee Custom	SH-1	X					SH-4	X			-	X
Tennessee Pro	SH-1	X					SH-4	X			-	X
Mayfield Custom	SH-2	X					SH-4	X			-	X
Mayfield Pro	SH-2	X					SH-4	X			-	X
Camarillo	SH-1	X					SH-4	X			X	X
Camarillo, 7-string	SH7-1	X					SH7-4	X			X	-
Manhattan	SSL-1			X			P-90			X	-	-
Monterey	SSL-1 (Cal. Calif. Set)			X		SSL-1 (RW/RP)	SSL-1			X	-	-
Streetwalker	SHR-1 / SSL-5	X		X			STB-PG 1		X		-	-
Streetwalker, 7-string	SH7-1	X					SH7-5	X			-	-
Hollywood	P-90			X			P-90			X	-	-
AZ 10	MEC Floating Jazz HB*	X					MEC Floating Jazz HB*	X			-	X
AK 1974	SH-1	X					SH-1	X			X	X
Morrigan Custom	SSH-DAVE MUSTAIN Set	X					SSH-DAVE MUSTAIN Set		X		X	X
Morrigan Pro	SH-6	X				SSL-6 (RW/RP)	STB-6		X		X	-

HB = Humbucker

TB = Trembucker (Humbucker with wider spacing between pole pieces)

SC = Singlecoil

SC-HB = Singlecoil in humbucker format

Bridges and Vibrato systems

Electric guitars have different demands when it comes to sound and playing techniques. That is why Framus offers not less than 10 different bridges and vibrato systems.

Basically it's possible to outfit any guitar model with a different bridge or vibrato system than the one it comes with. The Framus custom shop will gladly inform about all the available options provided that there are certain limitations in terms of construction.

Here's a list of all the available options and thereafter a table with a model overview:

- 1.) Tune-o-matic with stop tailpiece – Height adjustable fixed bridge with adjustable saddles and separate stop tailpiece assembly.
- 2.) Tune-o-matic bridge with trapeze tailpiece – Height adjustable fixed bridge with adjustable saddles and a floating trapeze tailpiece anchored to the butt end of the guitar.
- 3.) One-piece Framus bridge (String-Through-Body) – Fixed bridge with adjustable saddles and rear-mounted string ferrules. Strings are put on through the back of the guitar. Also called a string-thru bridge.
- 4.) Framus Vibrato (by Wilkinson) – 2-point system with knife-edge principle and screwed-on metal sustain block. Strings are put on from the back and through the sustain block.
- 5.) Framus Vintage Vibrato – 6-point system, functions like Framus Vibrato (by Wilkinson).
- 6.) Framus Floyd Rose licensed Vibrato system – 2-point system with knife-edge principle and screwed-on metal sustain block plus locking nut. Strings are put on from the top through the back of the saddles.
- 7.) Original Floyd Rose Vibrato system – Functions like licensed Framus Floyd Rose, with the addition of locking saddles where the ball end has to be cut off and the string inserted from above.
- 8.) Original Bigsby B7 Vibrato (USA) with roller-bridge – Aluminum Vibrato system with extra string tension bar for semi-hollow guitars. Attached to the body from the top. The string's ball end is placed onto the axle pin and then fed over a height adjustable bridge with adjustable.
- 9.) Original Bigsby B500 Vibrato (USA) with Roller-bridge – Functions like the B7, but only for solid body guitars. Available only through the Framus custom shop.
- 10.) Ebony bridge with trapeze tailpiece – Height adjustable and length compensating bridge, overlying (string tension fixes its position), for hollow-body guitars.

BRIDGES	Framus Vibrato (by Wilkinson)	Framus Vintage Vibrato	Framus Floyd Rose	Orig. Floyd Rose	Original Bigsby B7 with Roller-bridge	Tune-o-matic with Stop Tailpiece	Tune-o-matic with Trapeze Tailpiece	One-piece Framus Bridge	Height adjustable, length compensating ebony bridge with trapeze tailpiece
Diablo Custom	X								
Diablo Custom, 7-string			X						
Diablo Pro	X								
Diablo Light Scotch	X								
Panthera Custom						X			
Panthera Custom, 7-string						X			
Panthera Pro						X			
Panthera Studio Custom						X			
Panthera Studio Custom, 7-string						X			

BRIDGES	Framus Vibrato (by Wilkinson)	Framus Vintage Vibrato	Framus Floyd Rose	Orig. Floyd Rose	Original Bigsby B7 with Roller-bridge	Tune-o-matic with Stop Tailpiece	Tune-o-matic with Trapeze Tailpiece	One-piece Framus Bridge	Height adjustable, length compensating ebony bridge with trapeze tailpiece
Panthera Studio Pro						X			
Renegade Custom								X	
Renegade Pro								X	
Spitfire Custom	X								
Spitfire Pro	X								
Tennessee Custom					X*	X			
Tennessee Pro					X*	X			
Mayfield Custom						X			
Mayfield Pro						X			
Camarillo						X			
Camarillo, 7-string						X			
Manhattan	X								
Monterey		X							
Streetwalker			X						
Streetwalker, 7-string			X						
Hollywood					X*		X		
AZ 10									X
AK 1974						X			
Morrigan Custom				X					
Morrigan Pro			X						

* Optional

Tuning machines

Tuning machines are an important component of the guitar and are not to be neglected. Framus is able to offer two exclusive machine heads of its own. All "Pro" models as well as the Monterey come with smooth-running oil-based tuning machines allow problem-free use of a vibrato system. The Streetwalker and Morrigan models have these machine heads plus a locking nut that comes with the Floyd Rose vibrato system. All "Custom" models, as well as the AK-1974, the Manhattan, and the AZ-10 have Framus locking tuners. With this type of machine the strings are not wound anymore but fed through a hole at the machine head and locked with a tightening screw. If done correctly, the string will be in tune after about half a turn. Having less turns means less slippage. Guitars with locking tuners stay much better in tune, especially after changing strings, which also becomes a quicker and less time consuming procedure. The Framus custom shop also offers Schaller and Sperzel locking tuners on request.

Nut

Small part, big impact. The nut of a Framus guitar is an in-house development based on self-lubricating carbon and it's called Framus low friction nut. Glide-capable material is essential at this part of the neck, since it avoids tuning problems and unwanted noises whenever a guitar is outfitted with a vibrato system that doesn't come with a locking nut.

The headstock design is such that the string exerts the necessary amount of pressure at the nut without the need of string trees. This ensures a straight line between nut and tuning machines resulting in optimal oscillations transfer.

Locking nuts are used with Floyd Rose vibrato systems, thus making the tuning machines less essential. The involved playing techniques put a lot of stress on the strings and anchoring points of the guitar. If one normally tuned string has a pull of about 6 kilos one can only imagine the additional tension that is created when using extreme vibrato system techniques. Such stress is better absorbed with the use of a locking nut. The strings are first tuned and then locked tight with the nut blocks. Further tuning cannot be done with the tuning machines: fine tuners at the bridge are used instead.

Security locks

It happens pretty fast and the precious guitar is on the floor. Straps with no lock are mostly responsible for it and for the resulting damage on the instrument. In order to spare you going through that experience all Framus guitars now come with strap locks called "security locks" as a standard feature. The strap is not put over the pin through the hole like usual but first firmly attached to a matching counterpart, which then securely snaps into the pin on the guitar. To release the lock a button is pressed on top of the counterpart that unlatches it and the strap can be pulled out of the pin. This system is a Framus in-house design and is also available on request as a separate item.

Hardware colors

Chrome, black or gold are available as standard options. We transferred these options to the models with vibrato systems but there are certain restrictions: not all vibrato system manufacturers offer those same choices. Almost all Framus guitars come standard with chrome hardware, some models come also in gold.

If the instrument comes standard with gold hardware another color can be chosen with no additional cost depending on availability. The same goes for the Streetwalker model, where you can choose between chrome or black hardware with no additional cost. Otherwise all models that come with chrome hardware have additional cost for different hardware color. If the choice is for chrome or black hardware and the guitar comes with metal covers on its pickups, they will be nickel-plated meaning a silver surface. If your choice is gold hardware and the guitar in question comes standard with metal pickup covers, these will be also gold.

							Hard-ware color		
HARDWARE	Pickguard	Framus Machine heads	Framus Locking tuners	Security Locks	Framus Low Friction Nut	Locking Nut	Black	Chrome	Gold
Diablo Custom			X	X	X			X	
Diablo Custom, 7-string		X		X		X		X	
Diablo Pro	X	X		X	X			X	
Diablo Light Scotch			X	X	X		X		
Panthera Custom			X	X	X			X	
Panthera Custom, 7-string			X	X	X			X	
Panthera Pro		X		X	X			X	
Panthera Studio Pro			X	X	X			X	
Panthera Studio Custom			X	X	X			X	
Panthera Studio Custom, 7-string		X		X	X			X	
Renegade Custom			X	X	X			X	
Renegade Pro		X		X	X			X	
Spitfire Custom			X	X	X			X	
Spitfire Pro		X		X	X			X	
Tennessee Custom	X		X	X	X			X	
Tennessee Pro	X	X		X	X			X	
Mayfield Custom*	X		X	X	X			X	X
Mayfield Pro	X	X		X	X			X	
Camarillo			X	X	X			X	
Camarillo, 7-string			X	X	X			X	
Manhattan			X	X	X				X
Monterey		X		X	X			X	
Streetwalker		X		X		X	X		
Streetwalker, 7-string		X		X		X	X		
Hollywood	X		X	X	X			X	
AZ-10*	X		X	X	X			X	X
AK 1974			X	X	X				X
Morrigan Custom		X		X		X	X		
Morrigan Pro		X		X		X	X		

* = Different versions

Accessories / Included items

- RockBag® "Premium Line Plus" electric guitar bag (RockCase® Flightcase only for certain models)
- Framus "User Kit":
 - Framus User Manual
 - Warranty card
 - Warwick Surface Finisher (Beeswax, only in guitars with Natural Oil Finish)
 - Framus polishing cloth
 - Truss rod tool
 - Allen wrenches, 1.5 mm and 3.0 mm (only in guitars with Vibrato)
- Matching counterparts for Warwick Security Locks
- Vibrato arm for guitars with Vibrato system
- Panthera Pro und Panthera Custom: Pickguard, screws and angled mounting piece.

Strings

Gauges

6-str.: **.009"** .011" .016" .026" .036" **.046"**
7-str.: **.009"** .011" .016" .026" .036" .046" **.056"**
AZ-10: **.013"** .017" .026" .034" .044" **.054"**

Denomination

Nickel Plated Steel Strings, Custom Light
Nickel Steel Strings, Custom Light for 7-string
Flatwound Strings (Medium)

Construction

Neck joint

Basically there are three different neck constructions at Framus: Neck-through, set neck, and bolt-on, the latter having two options namely the traditional 4-screws neck joint and the Framus patented bolt-in technology. This new system developed by Framus is a combination of traditional proven methods and new fabrication technologies that result in an instrument with excellent ringing and vibration properties.

80% of all Framus guitar have this very firm and comfortable system that is geared towards the best playability. At first glance one can see two screws on the back of the guitar that create the visible portion of the neck joint. There is no uncomfortable metal plate, which already gives the notion of something else than a regular bolt-on neck. Then there are two additional screws underneath the neck-pickup, which means they are visible only when the pickup is removed. The heel is therefore a little longer than a traditional bolt-on neck joint meaning it goes deeper into the body, plus the added firmness of the 4 screws. The additional comfort, ringing characteristics, and upper-fret access that this creates makes the playability of the guitar a dream come. Such a unique construction feature you can find only in original Framus guitars.

	Bolt in	Bolt on	Set Neck	Neck through
Diablo Custom	X			
Diablo Custom, 7-string	X			
Diablo Pro	X			
Diablo Light Scotch	X			
Panthera Custom	X			
Panthera Custom, 7-string	X			
Panthera Pro	X			
Panthera Studio Pro	X			
Panthera Studio Custom	X			
Panthera Studio Custom, 7-string	X			
Renegade Custom	X			
Renegade Pro	X			
Spitfire Custom		X		
Spitfire Pro		X		
Tennessee Custom	X			
Tennessee Pro	X			
Mayfield Custom			X	
Mayfield Pro			X	
Camarillo	X			
Camarillo, 7-string	X			
Manhattan	X			
Monterey	X			
Streetwalker	X			
Streetwalker, 7-string	X			
Hollywood	X			
AZ-10			X	
AK 1974				X
Morrigan Custom	X			
Morrigan Pro	X			

Truss rod

There is probably no wood material that can hold about 6 kilos of tension from each string in a guitar's lifetime without any damage. Here's where the help of an inconspicuous element comes into play, assisting in not only the neck's stability but in the setup in general as well: the truss rod. Due to string tension, a wood neck will react and usually bend concave to the strings creating an up-bow. To make a guitar playable a minimal up-bow is required instead of a totally straight neck. For this adjustment the truss rod comes in handy.

Where most guitars in today's market have a one-way truss rod adjustment, Framus chose the better solution and offers a two-way truss rod adjustment, which allows for better neck setup regardless of string gauge. But it could happen that when a light string gauge is used, like 008 sets, the string tension is not enough to create an up-bow but instead the neck reacts and goes the other way creating a down-bow, meaning convex to the strings. This situation, which can also occur due to climatic conditions like extreme heat, cold, dryness or humidity, is certainly not a pleasant one and it makes the strings lie perfectly flat on the first couple of frets creating a buzz and maybe even not ring at all. With a two-way truss rod the necessary adjustments can be made to bring the neck back to a slight up-bow.

Frets

Accuracy and experience are crucial when it comes to frets because they are not only responsible for playability but also for clean and perfect intonation. To accomplish this with no exceptions all fretting activities from cutting the slots, inserting the frets, leveling, to polishing, are left to a machine or a human being based on the requirements. The Framus factory in Markneukirchen has so far the worldwide only working economical fretting machine, which is a second generation in-house design and can precisely install frets down to 1/1000th of a millimeter. Final setup and polishing are done manually since the eye of a trained Framus employee is irreplaceable. The end result is perfect intonation a superior playability proving once again that our concept is coherent.

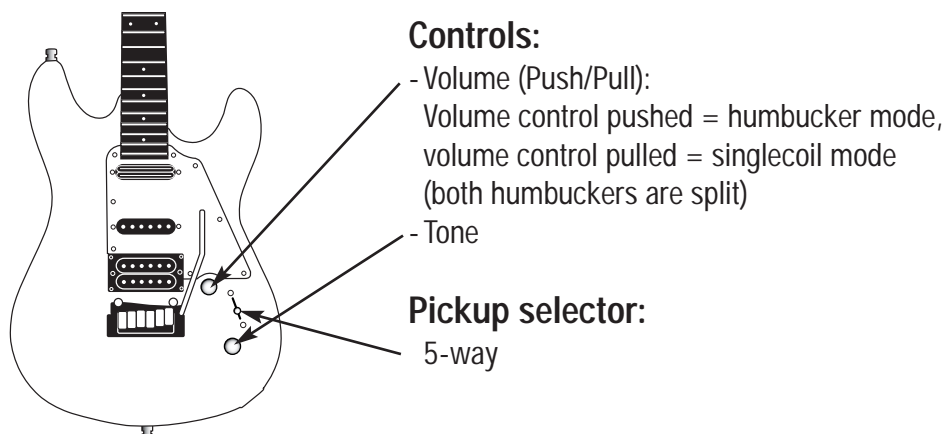
Plek

"Plek® - wir gehen der Gitarre an den Hals," which in German literally means "going for the guitar's jugular" meaning the guitar's throat/neck, is obviously a word game that only works for that language. Nonetheless it's the motto for the company A+D Gitarrentechnologie GmbH from Berlin, Germany. They specialize in combining traditional guitar-building techniques with the endless possibilities that microelectronics allow thus creating a new worldwide quality standard. Their Plek®-technology will be used by Framus as a production add-on in all their guitars starting in 2007.

What is behind Plek®? It's a new computerized procedure to enhance fret jobs and the overall setup of the guitar thus guaranteeing an optimal vibration of the string in all positions. After measuring the overall string tension the truss rod is adjusted to achieve optimal relief or up-bow. Next the frets are precisely leveled (down to 1/100th of a millimeter), then polished and finally the string action is set according to five standards: super low, low, medium, high, and extra high. . This will warrant an optimal and individually set string action. For more information visit www.plek.com.

CONTROL ELEMENTS

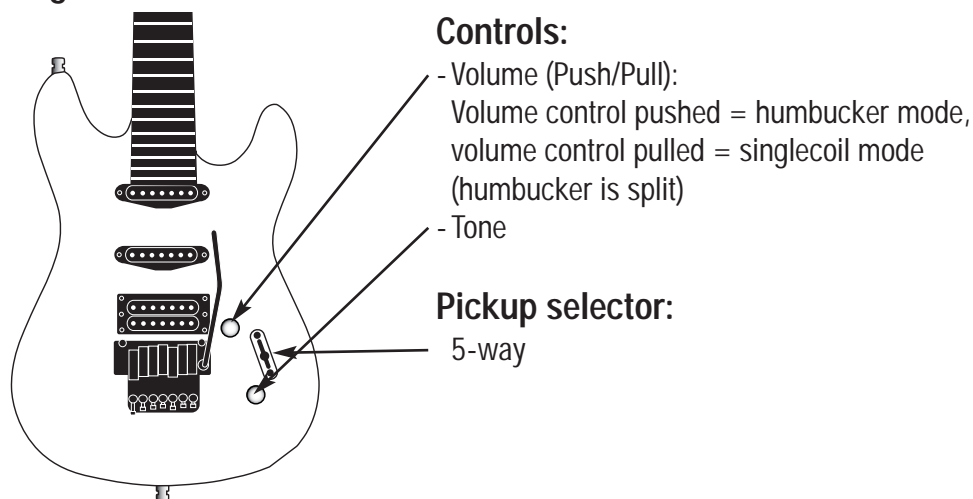
Diablo Pro Diablo Custom



Selector position	Singlecoil (Volume control pulled)		Humbucker (Volume control pushed)	
1	Neck pickup		Neck pickup	Hum-canceling
2	Neck- and Middle pickup	Hum-canceling	*	
3	Neck- and bridge pickup		Neck- and bridge pickup	Hum-canceling
4	Middle- and bridge pickup	Hum-canceling	*	
5	Bridge pickup		Bridge pickup	Hum-canceling

*Tip: In humbucker mode selecting positions 2 and 4 don't make much sense since the humbucker overpowers the singlecoil anyway and the hum-canceling function is not available because of 3 active coils.

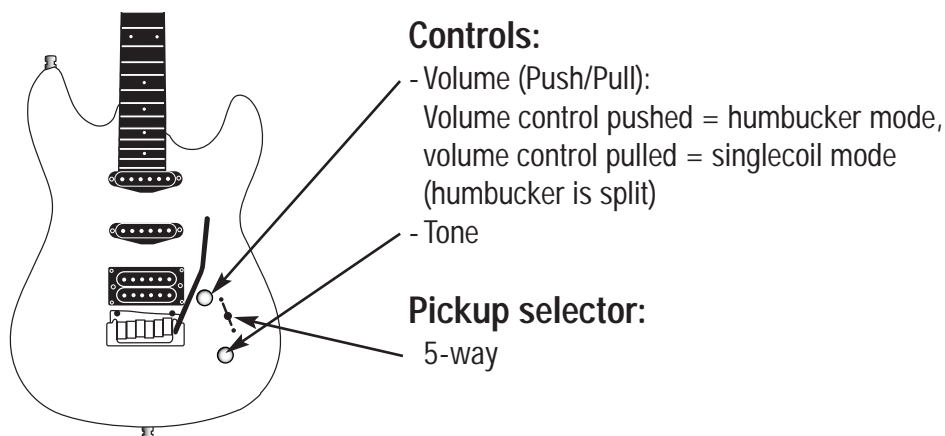
Diablo Custom, 7-string



Selector position	Singlecoil (Volume control pulled)		Humbucker (Volume control pushed)	
1	Neck pickup		Neck pickup	
2	Neck- and Middle pickup	Hum-canceling	Neck- and Middle pickup	Hum-canceling
3	Neck- and bridge pickup		*	
4	Middle- and bridge pickup	Hum-canceling	*	Hum-canceling
5	Bridge pickup		Bridge pickup	

*Tip: In humbucker mode selecting positions 3 and 4 don't make much sense since the humbucker overpowers the singlecoil anyway and the hum-canceling function is not available because of 3 active.

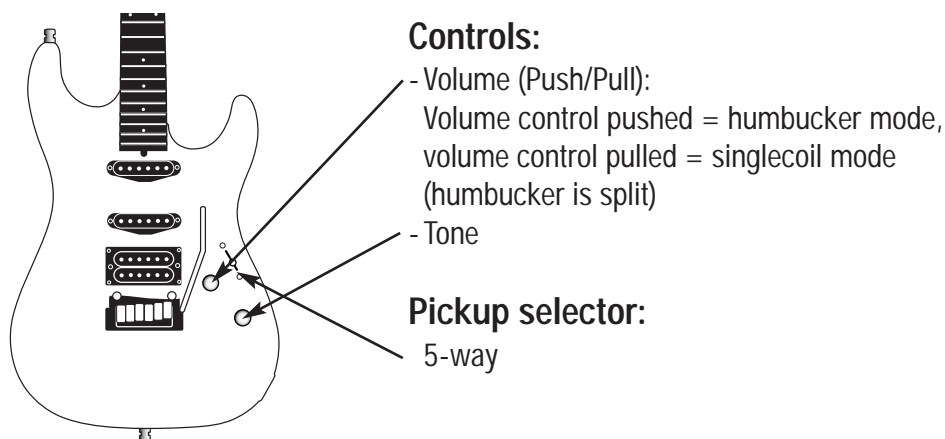
Diablo Light Scotch



Selector position	Singlecoil (Volume control pulled)		Humbucker (Volume control pushed)	
1	Neck pickup		Neck pickup	
2	Neck- and middle pickup	Hum-canceling	Neck- and middle pickup	Hum-canceling
3	Neck- and bridge pickup		*	
4	Middle- and bridge pickup	Hum-canceling	*	
5	Bridge pickup		Bridge pickup	Hum-canceling

*Tip: In humbucker mode selecting positions 3 and 4 don't make much sense since the humbucker overpowers the singlecoil anyway and the hum-canceling function is not available because of 3 active coils.

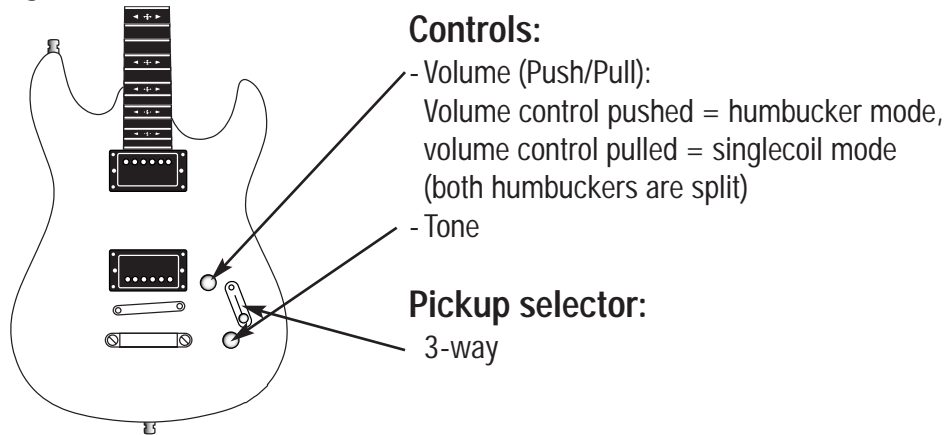
Spitfire Pro Spitfire Custom



Selector position	Singlecoil (Volume control pulled)		Humbucker (Volume control pushed)	
1	Neck pickup		Neck pickup	
2	Neck- and middle pickup	Hum-canceling	Neck- and middle pickup	Hum-canceling
3	Neck- and bridge pickup		*	
4	Middle- and bridge pickup	Hum-canceling	*	
5	Bridge pickup		Bridge pickup	Hum-canceling

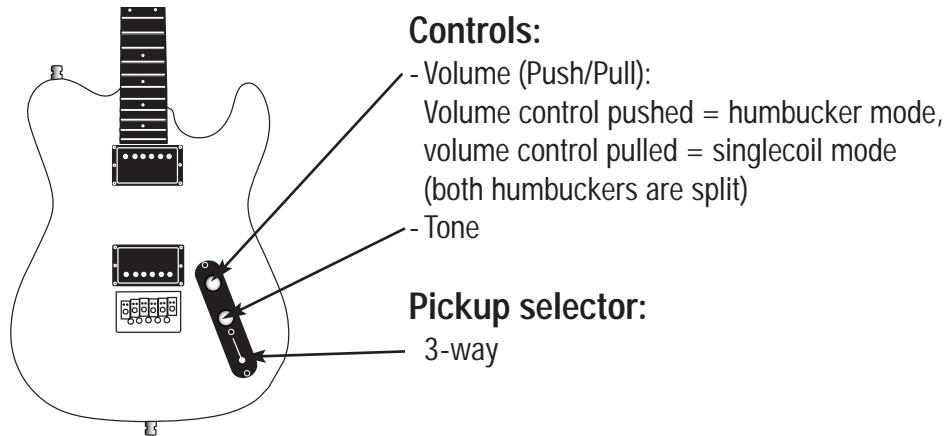
*Tip: In humbucker mode selecting positions 3 and 4 don't make much sense since the humbucker overpowers the singlecoil anyway and the hum-canceling function is not available because of 3 active coils.

Camarillo
Camarillo, 7-string



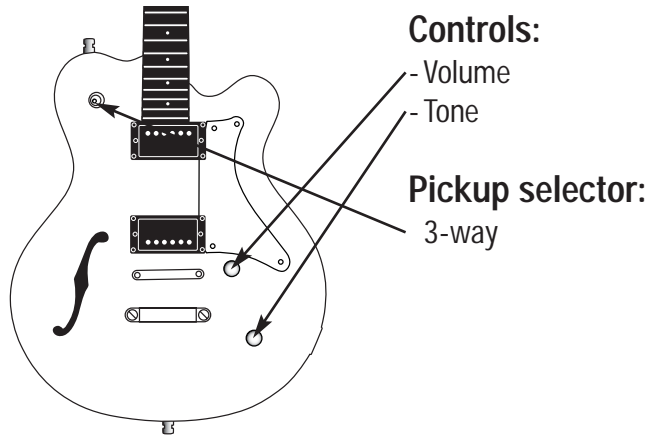
Selector position	
1	Neck pickup
2	Neck- and bridge pickup (no hum-canceling in singlecoil mode)
3	Bridge pickup

Renegade Pro
Renegade Custom



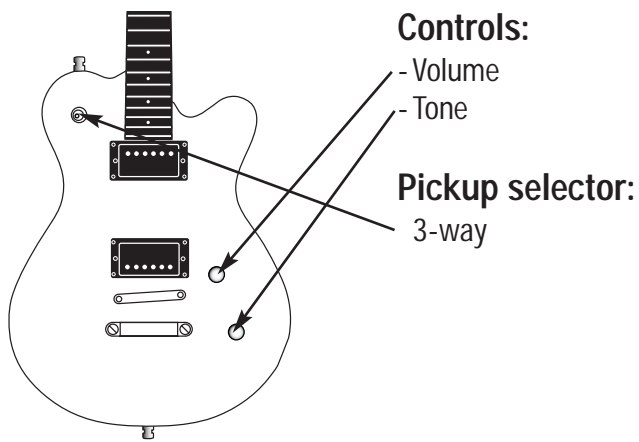
Selector position	
1	Neck pickup
2	Neck- and bridge pickup (no hum-canceling in singlecoil mode)
3	Bridge pickup

Tennessee Pro
Tennessee Custom



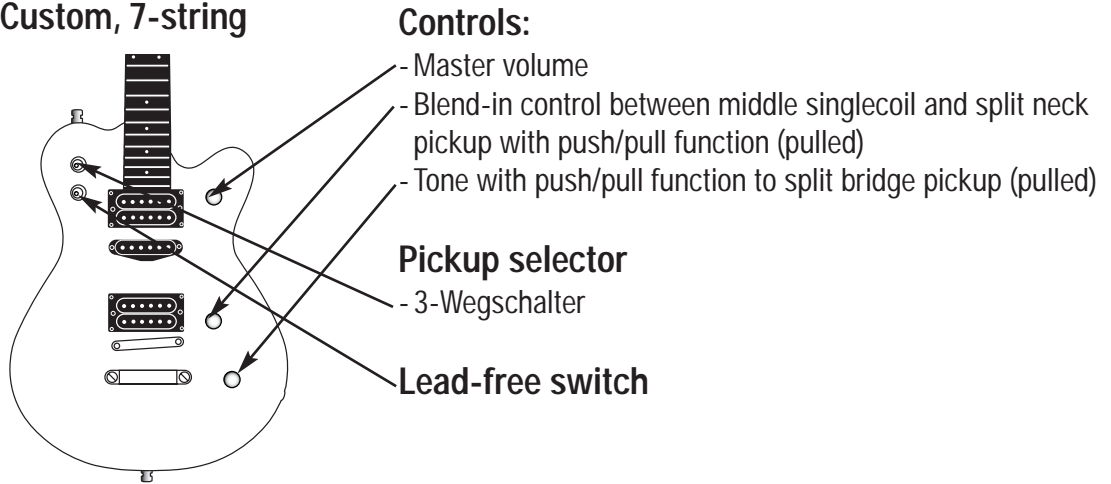
Selector position	
1	Neck pickup
2	Neck- and bridge pickup
3	Bridge pickup

Panthera Pro
Panthera Custom
Panthera Custom, 7-string



Selector position	
1	Neck pickup
2	Neck- and bridge pickup
3	Bridge pickup

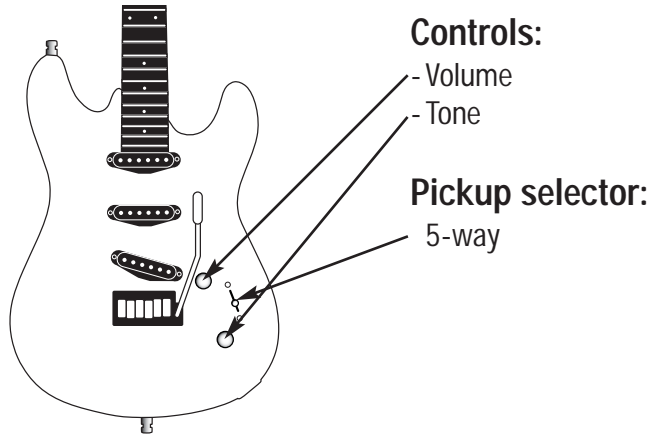
Panthera Studio Pro
Panthera Studio Custom
Panthera Studio Custom, 7-string



Selector position	
1	Neck pickup
2	Neck- and bridge pickup
3	Bridge pickup

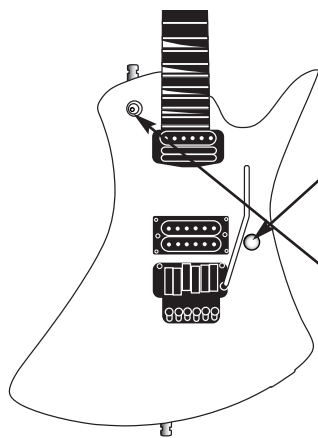
- Lead-free switch deactivates the electronics and makes a direct connection from the bridge pickup to the output jack. All other controls are bypassed

Monterey



Selector position		
1	Neck pickup	
2	Neck- and middle pickup	Hum-canceling
3	Neck- and bridge pickup	
4	Middle- and bridge pickup	Hum-canceling
5	Bridge pickup	

Streetwalker, 6-string



Controls:

Volume with push/pull function:

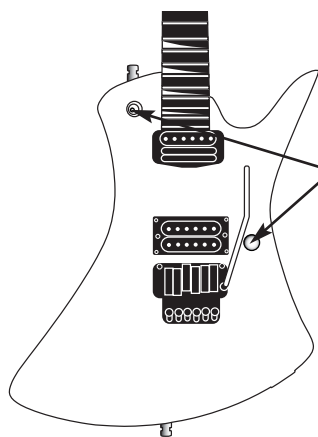
Volume control pushed = humbucker activated and neck singlecoil bypassed, volume control pulled = humbuckers are bypassed and neck singlecoil is activated (regardless of selector position)

Pickup selector:

3-way

Selector position	
1	Neck humbucker
2	Neck- and bridge humbucker
3	Bridge humbucker

Streetwalker, 7-string



Controls:

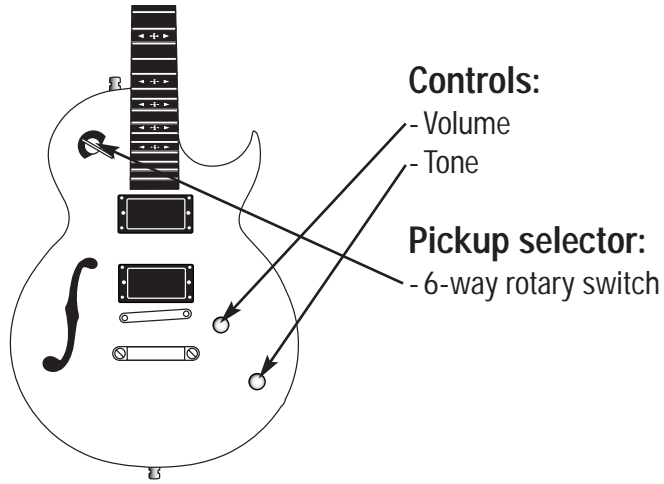
Volume

Pickup selector:

3-way

Selector position	
1	Neck pickup
2	Neck- and bridge pickup
3	Bridge pickup

AK 1974



Rotary switch position	
1	Neck- and bridge pickup
2	Neck pickup
3	Both humbuckers are split, inner coils are active
4	Bridge pickup
5	Both humbucker are split, neck outer coil and bridge inner coil are active
6	Neck- and bridge pickups are out of phase

AZ-10 Single Pickup

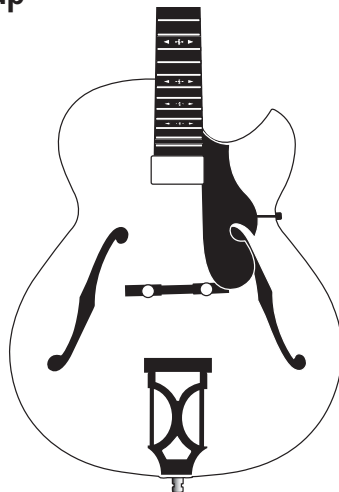
AZ-10 Blonde

AZ-10 Bubinga

AZ-10 Makassar

AZ-10 Koa

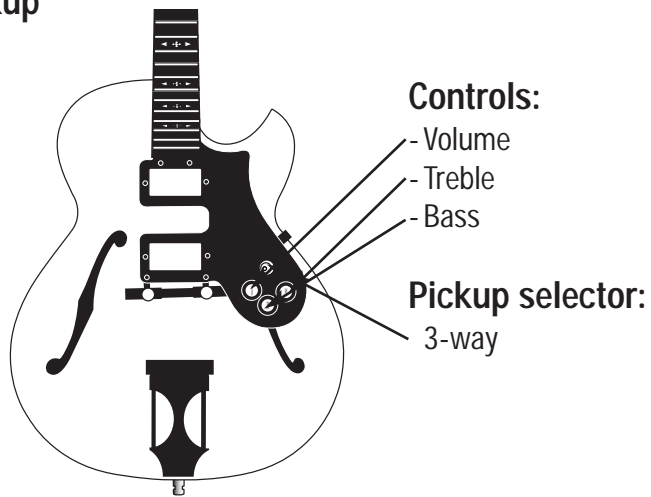
AZ-10 Shellac



Controls:

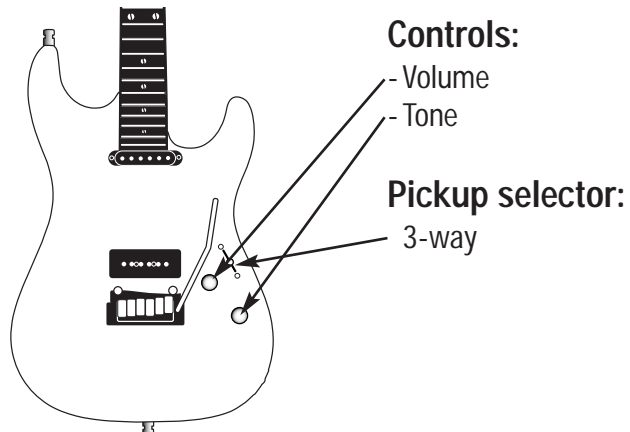
- Volume
- Tone

AZ-10 Dual Pickup



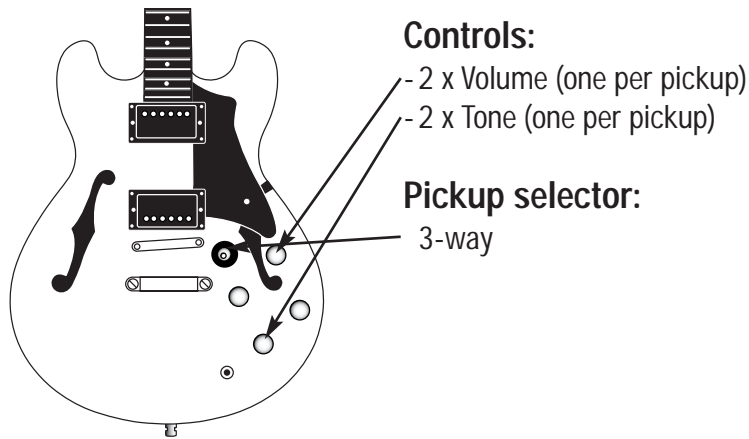
Selector position	
1	Neck pickup
2	Neck- and bridge pickup
3	Bridge pickup

Manhattan



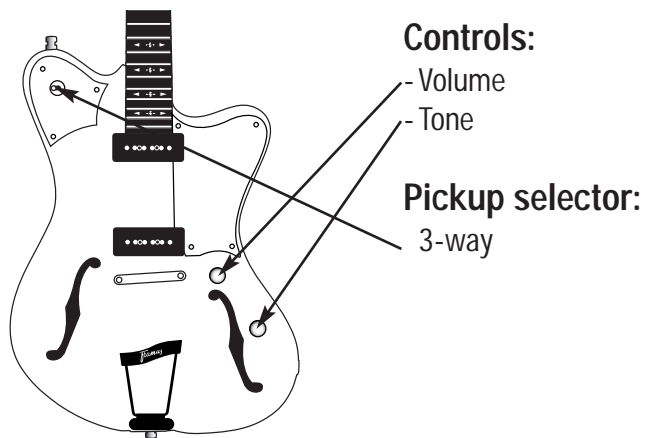
Selector position	
1	Neck pickup
2	Neck- and bridge pickup
3	Bridge pickup

**Mayfield Pro
Mayfield Custom**



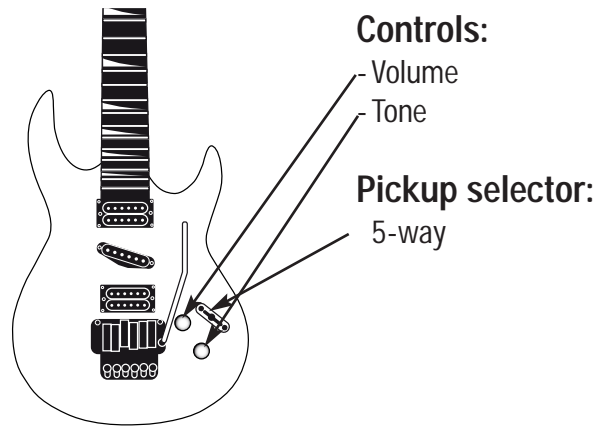
Selector position	
1	Neck pickup
2	Neck- and bridge pickup
3	Bridge pickup

Hollywood



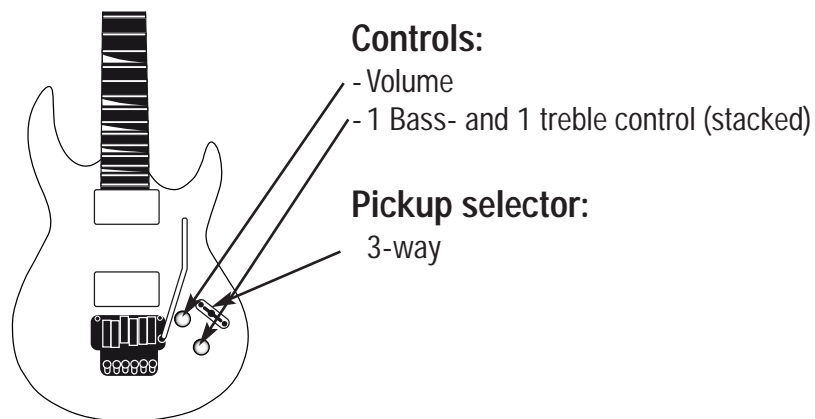
Selector position	
1	Neck pickup
2	Neck- and bridge pickup
3	Bridge pickup

Morrigan Pro



Selector position		
1	Neck pickup (humbucker)	Hum-canceling
2	Outer neck pickup coil and Middle pickup	Hum-canceling
3	Neck- and bridge pickup	Hum-canceling
4	Middle pickup and outer bridge pickup coil	Hum-canceling
5	Bridge pickup	Hum-canceling

Morrigan Custom



Selector position		
1	Neck pickup	
2	Neck- and bridge pickup	
3	Bridge pickup	

INSTRUMENT CARE AND MAINTENANCE

If you want to enjoy playing your instrument, care and maintenance is an important matter. Wood and hardware need to be maintained in order to keep their function and optical appeal. The best is always to treat the instrument with care. The maintenance and cleaning intervals depend largely on the frequency and conditions of use, thus making it more difficult to establish a set time frame for them. Checking the wood for signs of excessive use, premature aging, dryness, stains, spots and so forth is a wise thing to do anyway. To prevent this and in some cases improve the looks of the instrument please follow the recommendations mentioned hereafter.

Body wood and finish maintenance

Natural Oil Finish (NOF)

This type of finish gives the wood a layer of wax and oil. This finish is frail, fades with time and has to be redone at some point. If you see some matte spots on the body it is time to apply some beeswax, which is provided with this variant. This procedure has to be repeated quite often when the instrument is still new. Use a soft cloth and evenly apply the wax on the surface. Let it sit for a moment, which depends on the amount of wax you applied, and use another clean soft cloth to polish. The wax's effectiveness will begin to fade when it starts to appear dull. Leaving the wax unpolished overnight or for a longer time doesn't hurt either, especially if the instrument hasn't been treated for a while and shows signs of dryness or roughness.

This finish needs no doubt the most care but you're going to be rewarded with a natural-looking, nice surface, which can be restored even after years of continuous use with a little effort. This finish also allows the wax to be removed completely with some steel wool and later apply a fresh new layer. Even the use of fine sand paper to remove some scratches is possible; just don't forget to reapply the wax on that area. All in all it is a finish that can last for a long time but it surely needs some taking care of.

Colored Oil Finish (COF)

A matte and clear surface with visible wood texture and enhanced grain are the main characteristics of the colored oil finish. The wood is stained with color and a clear satin lacquer is then applied for sealing. It requires no special treatment but if dirty a wet cloth or even a non-abrasive spray cleaner will do.

High Polish Finish (HP)

A high polish finish – be it colored or clear, metallic or polished varnish (Monterrey) – is obtained through the use of a high-gloss polyester lacquer. The wood is completely covered, the surface smooth as glass, and no perceptible wood texture. Just as with the colored finish the maintenance is purely optical, so a wet cloth, a non-abrasive spray cleaner or even polish that revitalizes the glossy finish and gets rid of small scratches will do.

Chrome Tone Finish (CT)

The individualistic chrome tone finish is Framus' most time-consuming procedure in this category. The chroming of the wood requires a meticulous preparation to allow a durable binding. These surfaces are robust enough but they still need maintenance because of their mirror-like quality. The right product is available at any hardware or car accessories store and it's any average chrome polish that you would use on your own car.

If for any reason the chrome surface gets damaged, like a crack due to a fall, make sure to quickly apply superglue or any fast-drying glue to the area in question in order to stop the air from getting underneath it. Otherwise there's the risk of the chrome detaching itself from the wood.

Shellac

Shellac is a natural, from the lac insect secretions obtained resinous substance that binds with wood much better than

synthetic lacquer. The finish has therefore a less influential effect on the wood's resonating behavior. Shellac is also much more sensitive, it doesn't handle shocks very well; it is more scratch prone and softer. Therefore it is recommended to have a guitar case with good padding.

Shellac can be cleaned with regular guitar polish; use a damp cloth to wipe or cotton to rub and polish. Avoid the use of any type of solvent or abrasive cleaners, except water.

Tip: Some varnish cleaners, polishes, and fretboard oils have solvents in them, like alcohol. Always make sure to double-check the ingredients of cleaning materials you will be using! Hardware store or specialized dealers have cleaning solutions specifically made for shellac surfaces.

Neck wood care

Neck wood

For necks that have a natural oil finish please refer to the "Natural Oil Finish (NOF)" section; for necks with matte lacquer please refer to the "Colored Oil Finish (COF)" section; and for high-polished necks please refer to the "High Polish Finish" section.

The neck of a shellac finish instrument has no treatment. For its care please refer to the "Natural Oil Finish (NOF)" section.

Fingerboard

With the exception of maple fingerboards, all Framus fingerboards are not lacquered. This means we are dealing now with a very sensitive part of the instrument. Just as with the Natural Oil Finish there is special wax and oil to be used, hardware stores have plenty of offerings. Generally there are more special oil options than wax. Depending on the amount of dirt that's present, it is probably more convenient to clean the fingerboard first before applying the wax or oil. For this there are special wood-cleaning products that get rid of grease and dirt. Always make sure to follow the product's instructions. Next comes the oil, which should be applied in thin layers – the wood will absorb the amount it needs. You can watch how the oil disappears. The surface will have a matte shine when dried off, leaving sometimes little oil puddles, which means the wood has reached the saturation level it requires. Next up is the polish procedure with a soft cloth. We recommend letting the guitar sit for a while after the first polish since it always happens that a new oily spot will appear. Make sure that no oily spots are left before you restring your guitar.

Hardware cleaning

Sweat and dirt can damage the hardware's surface permanently. Please use a soft cloth to wipe off any traces of sweat or dirt after use. Hardware doesn't need additional care beyond that.

SETUP

In spite of being already set up from the factory there is a chance that additional adjustments will be necessary after some time to maintain that ideal setup. There are many factors that can influence the normal functioning of your guitar like temperature, humidity and even different string gauges. Therefore it is completely normal to have a small truss rod adjustment after the instrument reached the dealer. And there is also the demand of each individual player to have the instrument set up to his liking. Make sure to have your guitar setup the way you like it.

Truss rod

First tune up your guitar. Use an electronic tuner if possible to ensure total accuracy when adjusting the truss rod. If the

string tension on your guitar has been changed let the neck rest for 30 minutes before attempting anything. The more time the neck gets the better your chances to accomplish the adjustment on the first try. Take one finger and place on the first fret on the low E string and put another finger on the last fret. Using the string as a ruler look at the gap between the string and the top of the 8th fret and then use a gauge to measure: it should read 0.25 mm. This lightly concave curvature corresponds to the amplitude of the vibrating string. If the neck isn't concave enough the strings will be hitting the first couple of frets creating a buzzing sound. If the neck bow is too pronounced the string is too high and that leads to intonation problems. The Framus patented 2-way truss rod can adjust the neck in both directions. Turning the truss rod clockwise will make the neck convex to the strings; turning it counterclockwise will make the neck concave to the strings. In the center position there's a tolerance of a complete turn.

String action

After the neck adjustment is complete you can start adjusting the bridge. The height of each individual string follows the curvature of the fingerboard's radius. Keep this in mind when changing the string height at bridges that allow for individual string adjustments. Framus has the following factory settings for string action:

High E-string at the 12th fret: 1,5 mm

Low E-string at the 12th fret: 1,8 mm

Depending on your playing technique you can lower the string action, or if you have a strong pick attack raise it. With the one-piece bridges you can adjust the height with the small height adjustment screws. A tune-o-matic bridge with stop tailpiece will have thumbwheels on its sides. The Framus Wilkinson Vibrato has the option of individual string height adjustment with the small height adjustment screws, as well as an overall bridge height adjustment using the mounting studs.

Tip: The Framus Wilkinson Vibrato was designed as a floating bridge system; it should float parallel to the surface. If you change the string gauge make sure to adjust the spring screws accordingly: heavier strings need more spring tension therefore you should tighten the screws. You can find the springs in the back of the guitar and underneath a rectangular plastic cover.

Intonation

Set the intonation so that the harmonic at the 12th fret matches the pitch of the fretted note at the 12th fret. Use an electronic tuner or your ears. Hit the string like you would normally, and if the fretted note is higher than the harmonic the string's length has to be increased (saddle has to be pushed back away from the bridge). Use the saddle screw to move it forward or backward until the harmonic matches the fretted.

Pickup height

The pickup's distance to the strings can be adjusted according to different points of view. The closer the pickup is to the strings the louder the signal. But it also means that the pickup's magnetic field will have a stronger pull on the strings affecting their vibrating properties, which will have a negative impact on the sustain. All this also depends on the output power of the pickup (stronger magnetic field) and the type of string. Therefore is the height adjustment of the pickup a purely personal matter and depends on your personal preferences in term of finding a balance between output and sustain.

Tip: Start by adjusting the bridge pickup and then compare the volume difference between neck and bridge pickup and adjust accordingly.

Machine heads

This closed, oil-based system is maintenance-free. You can adjust the turn resistance of the tuning head with the top screw. Use a tuner if possible. The best results are achieved while tuning up and not down towards the desired pitch.



The Easy Access™ electronics compartment

The electronics compartment can be opened and closed without the need of a tool. Just loosen both plastic clips so that the cover can be removed.

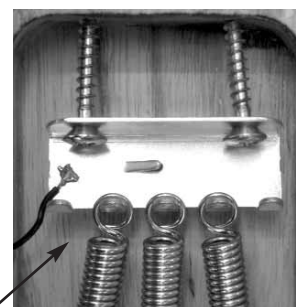


Bridge system setup

Framus Vibrato by Wilkinson

The bridge's height can be adjusted with the two anchor studs. Each individual string can be adjusted in height with the saddle's two Allen screws, allowing for a personal setup of the string's curvature against the fretboard. The intonation adjustment on this bridge can be done without loosening the string's tension by just turning the corresponding adjustment screws. The vibrato's arm is just inserted into the socket and if it appears too loose it can be tightened through the back of the guitar with the tightening screw.

The bridge is mounted as a floating system and the balance is achieved from the relationship between the strings' pull and the bridge's spring tension. A change in string gauge will most certainly require a spring tension adjustment. ---> Next page picture, picture page.

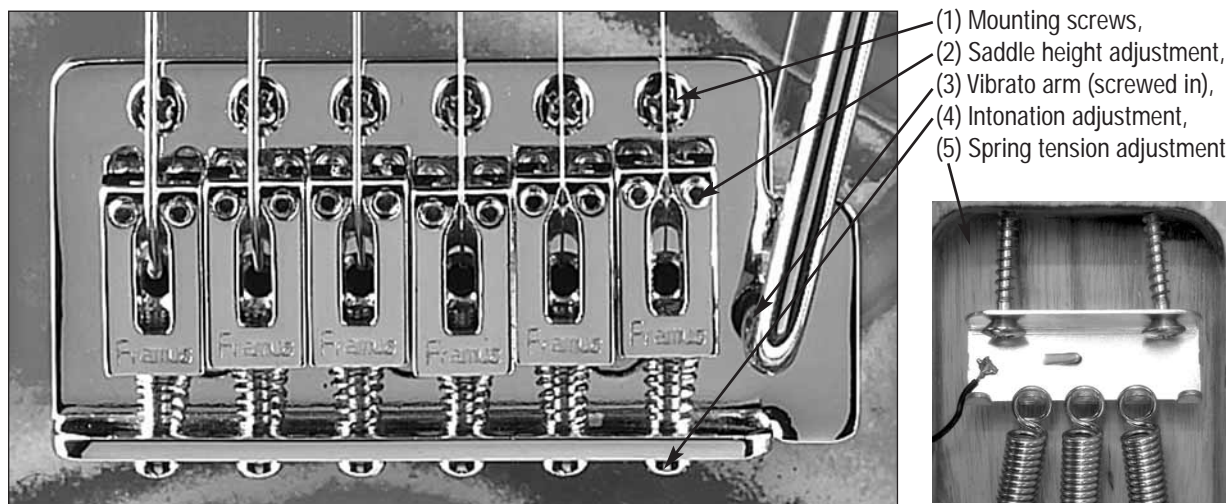


- (1) Spring tension adjustment,
- (2) Bridge height adjustment,
- (3) Individual string height adjustment,
- (4) Intonation adjustment,
- (5) Vibrato arm socket (inserted),
- (6) Vibrato arm tightening screw

Framus Vintage Vibrato

This Vibrato system is mounted onto the body with six screws. These six screws can be adjusted to determine the desired amount of bridge movement. String height can be regulated with the saddle's two adjusting screws, allowing for a personal setup of the string's curvature against the fretboard. The vibrato arm is screwed into the bridge. The intonation adjustment on this bridge can be done without loosening the string's tension by just turning the corresponding adjustment screws.

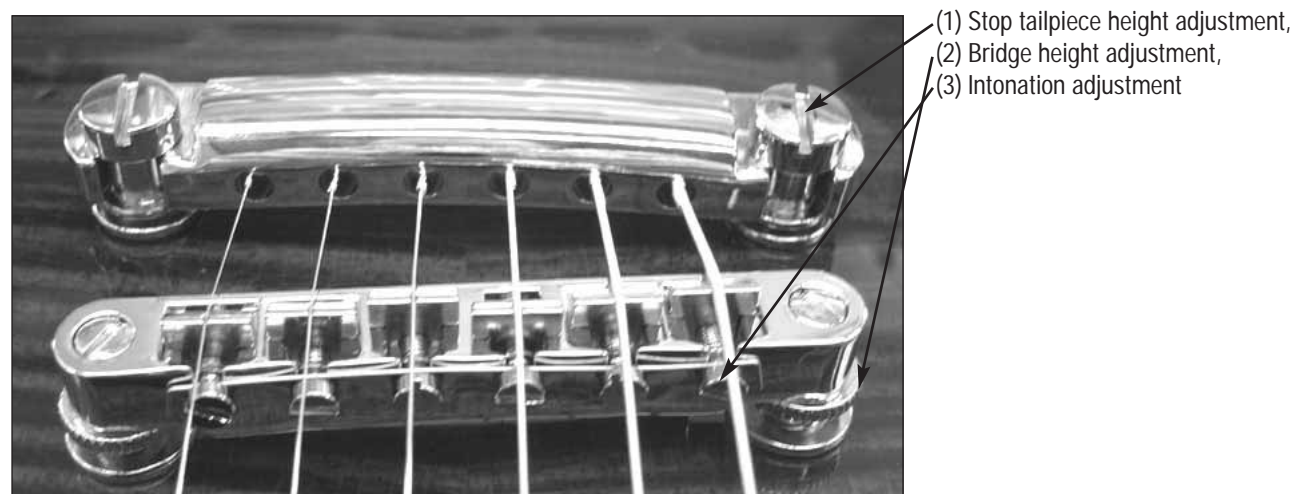
The bridge is mounted as a floating system and the balance is achieved from the relationship between the strings' pull and the bridge's spring tension. A change in string gauge will most certainly require a spring tension adjustment. ---> Next page picture.



Tune-o-matic bridge with stop tailpiece or trapeze tailpiece

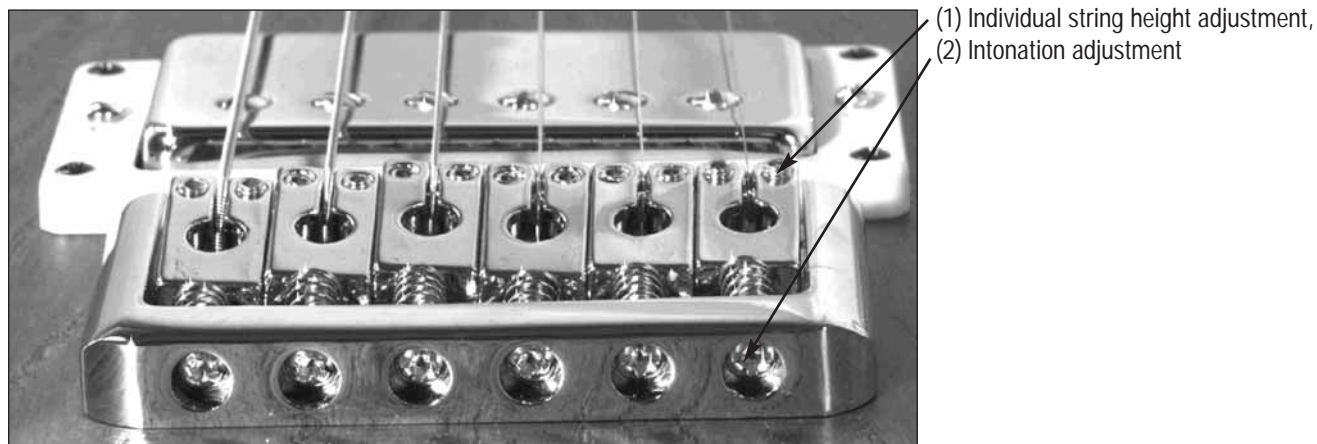
The tailpiece's height determines the amount of string pressure on the bridge. The more string angle the more pressure on the bridge, which means more sustain. If the angle is too pronounced string breakage risk is much higher. The two thumbscrews on each side of the bridge adjust its height and also the string's height. The intonation adjustment on this bridge can be done without loosening the string's tension by just turning the corresponding adjustment screws.

The tune-o-matic bridge with trapeze tailpiece works as described but without the possibility of changing the string's angle.



One-piece fixed bridge

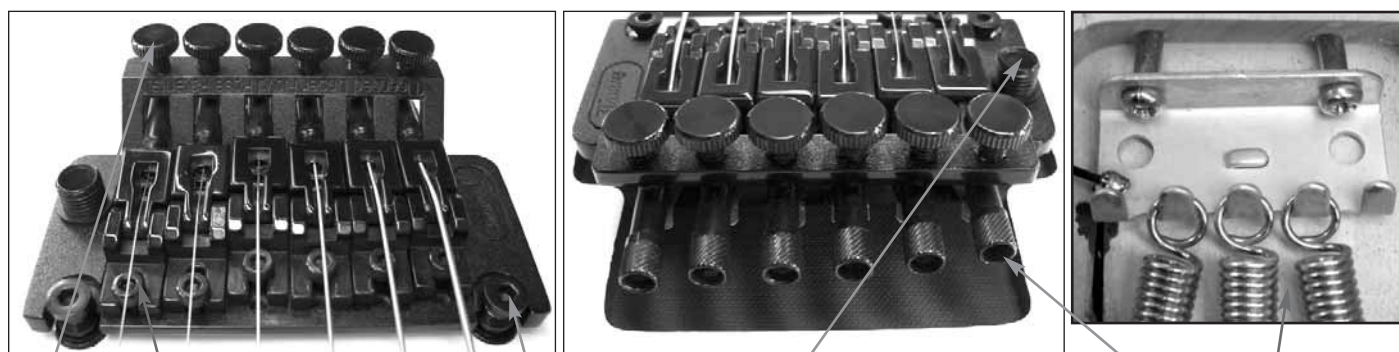
This bridge has the so-called "string-thru-body" design, which means the strings are put on through the back of the guitar. Each individual string can be adjusted in height with the saddle's two Allen screws, allowing for a personal setup of the string's curvature against the fretboard. The intonation adjustment on this bridge can be done without loosening the string's tension by just turning the corresponding adjustment screws.



Framus Floyd Rose Vibrato

In this vibrato system the strings are fed through the back of the saddle, tuned up with the machine heads and tightened with the locking nut. Further tuning can only be accomplished with the bridge fine tuners. The intonation screws are the saddle mounting screws that have two position holes that serve as starting points for all the in-between positions thereafter. The intonation adjustment procedure requires loosening of the strings. Once the saddle is moved to the correct position it has to be retightened. The height of the bridge and strings can be adjusted with the two mounting studs. The vibrato arm has a cap nut that is screwed to the bridge.

The bridge is mounted as a floating system and the balance is achieved from the relationship between the strings' pull and the bridge's spring tension. A change in string gauge will most certainly require a spring tension adjustment. ---> Next page picture.



(1) Fine tuning, (2) Intonation adjustment, (3) Bridge height adjustment, (4) Vibrato arm socket (with arm cap nut screw joint), (5) String feed, (6) String tension adjustment

Original Floyd Rose Vibrato

The Original Floyd Rose Vibrato works basically like a Framus Floyd Rose System. The main difference is in the way you put on the strings: they are tightly locked at the saddle between the little insert block and the string lock screw. To accomplish this the ball end of the string has to be cut.



- (1) Bridge height adjustment,
- (2) Intonation adjustment,
- (3) Saddles with string lock,
- (4) Vibrato arm cap nut,
- (5) Fine tuners,
- (6) String lock screw

Original Bigsby Vibrato (B7/ B500)

The Bigsby Vibrato is made of aluminum, is mounted onto the body, and comes with a string tension bar, which avoids string noise when the vibrato is used. The ball end of the string is placed on its corresponding axle pin. The string tension bar has 3 different settings. The string height adjustment is done at the tune-o-matic bridge with the two thumbscrews and the intonation is adjusted with the saddle screws. The lateral positioning of the bridge can be changed with two side screws, but first the locknuts have to be loosened and after the adjustment retightened.

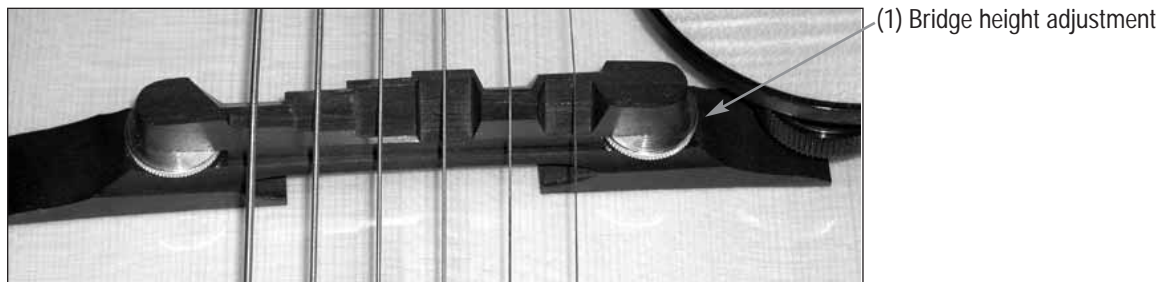


- (1) Intonation adjustment,
- (2) Adjustment screw for lateral bridge alignment,
- (3) Bridge height adjustment thumbscrews,
- (4) Ball end axle pin

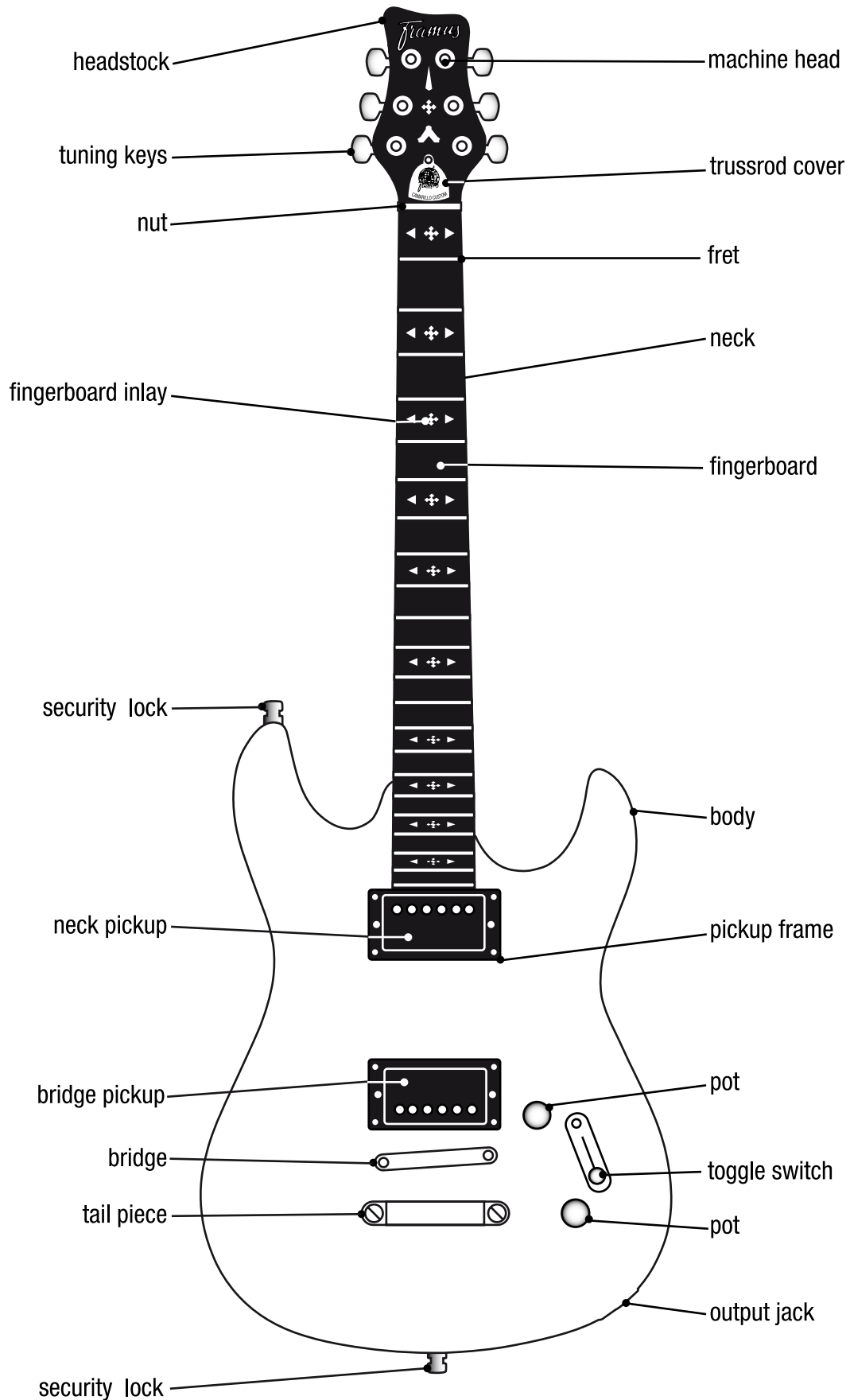
Height adjustable and length compensating ebony bridge

The bridge and string height can be adjusted using the two thumbscrews.

Tip: The bridge just sits on the surface and is being held in place by the strings' tension.



GLOSSAR



English	Description
Body	Basic guitar component
Binding	Ornamental border around the body, neck or headstock made of plastic, wood (with lacquer treatment) or mother-of-pearl
Bookmatched	Wood block is cut open in half and glued like a mirror image
Bottom, back	Bottom part of a multi-piece body
Top	Top part of a multi-piece body
Side	Curved sides between top and bottom in hollow-body guitars
Veneer	Thin layer of wood glued on top or in-between
TCS	Tone Chamber System, specific wood carving to influence ringing properties
Neck	Basic guitar component, strings run over it
Bolt-on neck	Neck joint that uses four screws from the back
Bolt-in neck	Neck joint that uses two screws from the front and two from the back
Fingerboard	Wood with frets that is glued onto the neck
Fingerboard inlay	Inlays made of mother-of-pearl or other material that mark fretting positions
Frets	Thin metal bars on the fingerboard. Pressing the string on the fret will shorten its length and produce a pitched sound
Headstock	End part of the neck with tuning machines
Matched headstock	Headstock with the same surface as the body
Nut	String rest at the headstock
Hardware	All metal components of the guitar
Bridge	String rest at the body
Tailpiece	String fixation behind the bridge
Saddle	Individual adjustable string rest at the bridge
String spacing	Gap between each string usually measured at the bridge
Scale	Length of a free-oscillating string
Intonation	String length adjustment to ensure the correct pitch at every position on the fingerboard
Vibrato	Bridge system that allows pitch modulations through controlled alteration of the string tension
Tremolo	A wavering effect on a note, either by rapid repetition of one or two pitches, also used as a synonym for vibrato bridge
Attack	Beginning of string oscillation
Sustain	Duration of string oscillation
Machine head	Used for the tuning of the string
Tuning key	Turning part of the machine heads
Truss rod	Used for adjusting the neck's relief (neck bow)
Truss rod cover	Cover for the truss rod's access
Pickguard	Plate made of wood, plastic or celluloid mounted on the body to prevent the scratching of the surface that comes from hitting the strings
Pickup	Mostly magnetic converters that transforms the string's mechanical oscillations into electrical oscillations
Singlecoil	A pickup that consists of only one coil
Humbucker	Hum-canceling pickup with two coils
Hum-canceling	Also called humbucking. It happens when two pickup coils with opposite polarity are connected together either in series or parallel thus canceling the typical 50- to 60- cycle hum that is characteristic of a singlecoil
Trembucker	Humbucker with wider string spacing
Potentiometer	Electrical component to regulate volume or tone of a sound source
Push / pull pot	Potentiometer with a switch that is activated by pulling up or pushing down
Pickup selector switch	Allows for switching between the different pickup configurations
Security lock	Locking strap fixation
Finish	Surface treatment
Natural Oil Finish	Oiled wood surface
Colored Oil Finish	Stained clear-lacquered matte surface
Stain High Polish	Stained high-polished clear-lacquered surface
High Polish	Colored high-polished surface

Wood denominations

englisch
Swamp Ash
Maple
Flamed Maple
Birdseye Maple
Quilted Maple
Rosewood
Tigerstripe Ebony
Ovangkol
Mahogany
Basswood
Koa
Macassar Ebony
Bubinga
Spruce

GENERAL SPECIFICATIONS

Electronic components	By MEC		
Scale	Bolt-in neck / AK 1974:	25.5"	648 mm
	AZ 10, Mayfield:	24,75"	628 mm
Fingerboard radius	6-string:	12"	300 mm
	7-string:	20"	500 mm
Frets	Nickel silver jumbo frets		
Neck dimensions (6-string)	Nut width:	42,00 mm	
	Width 1st fret:	52,00 mm	
	Width 12th fret:	57,00 mm	
	Thickness 1st fret:	20,50 mm	
	Thickness 12th fret:	24,50 mm	
	String spacing at bridge:	ca. 10 mm	
Neck dimensions (7-string):	Nut width:	48,00 mm	
	Width 1st fret:	61,00 mm	
	Width 12th fret:	67,00 mm	
	Thickness 1st fret:	20,50 mm	
	Thickness 12th fret:	24,50 mm	
	String spacing at bridge:	Ca. 10 mm	

Important: Technical information contained herein can be subject to change without notice!

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