

PARKER GUITARS | A REVOLUTION IN PRECISION AND SOUND

FLY HANDBOOK

The first thing you notice is how they look. A little weird. Strangely geometric. With parallel horns that reach up like arms, that want to play you right back. And they do. Because the moment you pick up a Parker guitar, you'll feel its sculpted recesses embrace your torso while its featherweight body gives you effortless access to every note. And when we say "every note", we mean every note—From visceral, in-your-face electric tones to the warm, juicy harmonies of acoustic. They're all here, in one guitar. The entire spectrum of jaw-dropping, impassioned sounds, just waiting to be transformed into music. Your music. One moment you're playing blistering electric grind. The next—thick, meaty, strum-heavy acoustic. And the next, the two voices are wailing simultaneously, crunching notes that were in your head before you even knew how to spell the word riff. What is this beast? It doesn't look like any other guitar ever made. It doesn't feel like any other guitar ever made. And there's no other guitar—period—that can turn sound into seduction like a Parker guitar.



TABLE OF CONTENTS

- Evolution of the Parker Fly
- Features
- Operation
 - Plugging In
 - Cords and Controls
 - Replacing Battery
- Maintenance
 - Cleaning and Polishing
 - Fret Care
- Adjustments
 - Balancing Piezo / Magnetic Output
 - Adjusting Bridge Height (Action)
 - Vibrato Bridge
 - Non-Vibrato Bridge
 - Adjusting Truss Rod
 - Setting Intonation
 - Changing Strings
 - Changing String Gauge
 - Using Sperzel Tuners
- Trem Bridge
 - Dynamic Mechanics (description, physics)
 - Step-stop
 - Balance Wheel
 - Vibrato Bar
 - Spring
 - Changing Springs
- Troubleshooting
 - No Sound
 - Buzzing
 - Ground Loops
 - Distorted Piezos
 - Weak or Distorted Sound
- — Won't Stay in Tune

EVOLUTION OF THE FLY

For forty-five years, guitar builders and technicians have re-combined the features of available instruments in countless ways, trying to serve the changing needs of guitarists. The uses and limitations of the new combinations have been fully explored by now. As different as they seem, solid-body and hollow-body guitars both create sound the same way. Both guitars are mechanical devices made of wood and other materials, designed to respond to a string's vibration. The only real difference is the mode of amplification. One uses pickups, circuitry and speakers; the other uses a wooden membrane to move the air.

The character of both acoustic and electric guitars is determined by their materials and proportions.

Knowing this, we set out to create the most versatile, responsive, and dependable instrument possible. In the end, what emerged was the unique instrument that you now own. Our search has led us down many new paths in hopes of achieving a harmonious balance between the magic soulfulness of wood, which can suffer from problems such as warping and cracking, and more stable modern materials, which typically sound cold and clinical. Think of our lightweight tonewood and exoskeleton of high-modulus carbon and glass fiber as a new kind of wood. This patented structure allows us to sculpt a beautiful, lightweight guitar, optimized for its ability to respond to the strings' vibrations. We have developed other innovative features, as well. Our patented stainless steel no-tang frets bonded to a laminated fingerboard, greatly increase fret life. There is also a new lightweight truss rod made of tool-steel, and a flat spring vibrato system designed to work with the Fly's built-in piezo-electric bridge pickups.

Finally, we operate in a facility filled with custom tooling to support the manufacture of these new components and instruments. We're using the latest computer-aided manufacturing equipment combined with an especially high proportion of hand work. We're building these instruments to tolerances, never before held in our industry. Isn't it great that all of our attempts to make every instrument exactly the same, result in guitars that each have their own personality and character?



FEATURES

Congratulations on purchasing the most advanced, hand-crafted, precision-built guitar ever made.

Some of the features are:

- Stereo / Mono Capability
- Smart-Switching Jack Sensor
- Fishman Piezo Electric Transducers
- Composite-Wrapped Tone Woods
- Seasonally Stable Neck
- DiMarzio or Seymour Duncan Pickups with Coil Splitting
- Sperzel Brand Locking Tuners
- Long-Lasting Stainless Steel Frets
- Custom Parker Bridge
- Ultra-Lightweight

PLUGGING AND PLAYING

Cords (stereo / mono)

Fly models, **Nylon Fly** and **Bronze Fly**, are active guitars with mono output. Just plug in a standard cord and play. Remember, your Fly is equipped with a battery, so be sure to unplug the cord from the guitar when not in use to prolong battery life. The Fly Standard model (non-piezo) is passive with mono output. No battery is required.

Fly models, **Deluxe**, **Classic**, **Hardtail**, **Artist**, **Supreme**, **Jazz**, **Single Two**, and **Mojo**, have active piezo and magnetic pickups, which are designed to work with either the stereo guitar cord shipped with the guitar or a standard guitar cord (mono). The onboard smart-jack circuit can tell the difference and automatically mixes the signal according to the type of cord that is plugged into the guitar. This allows you to route the pickups two different ways.

With a **standard guitar cord** in use, a mixed piezo and magnetic mono signal is carried to one amplifier.

With the stereo cord in use, the guitar output is split into stereo with the piezo signal going to one amplifier and the magnetic signal going to another amplifier. The stereo cord that is provided with the guitar allows you to send the signals to two different amplifiers.

To get the most acoustic sound from the piezo pickups, use a hi-fidelity system, such as a PA, acoustic guitar amp, keyboard amp, or home stereo.

Controls

Your guitar has two separate systems for creation of sound: the piezo-electric transducers (acoustic bridge saddles) and the magnetic pickups (conventional guitar pickups). You can use them separately or together.

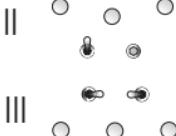
Here's how:

Pickup system selection (piezo and/or magnetic)



Switch Positions:

- I. Only piezo pickups activated
- II. Piezo and magnetic pickups activated
- III. Only magnetic pickups activated



Your magnetic pickup system is only activated if you've chosen either II or III above. This system consists of two humbucker pickups with a coil tap. You can use these pickups separately or together in six possible combinations.

Here's how:

Magnetic pickup selection

With Push-Pull Tone Knob DOWN

- A. Neck humbucker pickup
- B. Bridge and neck humbucker pickups
- C. Bridge humbucker pickup

With Push-Pull Tone Knob UP

- A. Neck single coil pickup (split coil)
- B. Bridge and neck single coils wired in parallel
- C. Bridge single coil pickup (split coil)

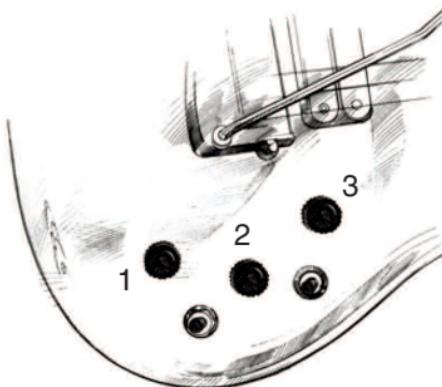
Both systems have volume knobs:

The magnetic pickup volume is controlled by knob 3.

The magnetic circuit also has a treble-cut tone knob on knob 2.

The piezo volume is controlled by knob 1.

Push-pull knob 2 to control magnetic coil splitting.



To get the most acoustic sound from the piezo pickups, use a hi-fidelity system, such as a PA, acoustic guitar amp, keyboard amp, or home stereo.

Battery

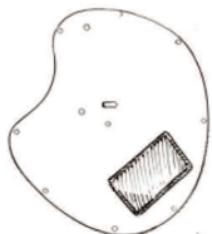
The battery is there to provide power to the on-board piezo preamp and the internal mixer. This unique mixer circuit uses sophisticated voltage-doubling synthesis circuitry, that gives you twice the clean headroom, compared to common on-board electronics. This circuit enables the Fly to blend the magnetic pickups with the active piezos, expanding the range of tonal options.

The battery has a useful life of approximately 300 hours. It's turned on when a cord is plugged into the guitar. To extend battery life, please remember to remove the plug when you're not playing your guitar.

When the battery is low, a distorted output signal or a high-pitched whistle will serve as an audio reminder to change the battery.

Replacing the Battery

The 9-Volt battery slides into a compartment on the back plate of the guitar. To replace the battery, open the battery box door. Remove the old battery and insert the new battery. Be sure to match the battery's positive terminal with that of the battery box. Close the battery box door.



MAINTENANCE

As with all fine musical instruments, a little care and maintenance go a long way toward preserving your investment.

Cleaning and Polishing

If you're just trying to remove fingerprints or dust, use a soft guitar-polishing cloth. To remove fine scratches or clean heavy dirt, use a non-abrasive guitar polish and follow the manufacturer's directions. Please use products designed only for guitars, as some polishes contain abrasives that can scratch the finish.

Fret Care

Our patented frets and fretboard system consists of hardened stainless steel frets bonded to a glass and carbon fiber fretboard. It is very important to keep the fretboard clean. Not doing so can result in corrosion. You can clean the fretboard with warm water on a soft cloth making sure to remove any dirt or sweat that may have built up around the frets. Parker Guitars does not recommend using oils, waxes, or solvents on the fretboard. Using such products can damage the frets and will void the warranty.

Fret service performed otherwise will void the warranty.

ADJUSTMENTS

Parker designed the Fly guitar to be easy to adjust. If you're unfamiliar with making these adjustments, we suggest that you take your instrument to your favorite guitar technician.

Balancing Piezo / Magnetic Output

Your guitar is equipped with a piezo output control. We set this control at the factory, so that the full volume outputs of the piezo and magnetic systems are equal. Since string gauges and pickup height affect the output of the magnetic pickups, you may want to change the relative levels of the two systems by adjusting the piezo output.

To do this, remove the back plate, and adjust the small knob mounted on the circuit board. This trim pot controls the output (gain) of the piezo pickup.

Exercise caution when removing the back plate, as the lead wires from the battery to the circuit board can become disconnected.

Adjusting Bridge Height (Action)

Your Fly has been shipped with a very low playing action, which still allows a wide dynamic range of .070" on the bass side and .050" on the treble side. Playing action is the measurement of the gap between the top of the twelfth fret and the bottom of the string when fretting at the first fret.

If you lower your action even further, be aware that some buzzing may occur. Due to the sensitivity of our Fishman Piezo electronics, the resonance of our composite construction and the hardness of the stainless steel frets, all of which lead to Parker's superior harmonic overtone expression, string buzz will be more apparent on your guitar.

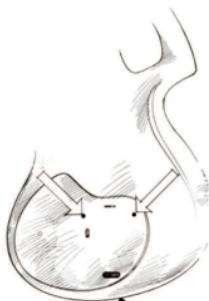
Action adjustment is always done by raising and lowering the bridge, never by adjusting the truss rod.

BRIDGE

The Fly's bridge is designed and made exclusively by Parker. The radius of the bridge exactly matches that of the neck, creating a solid mounting for the piezo saddles. This enhances the tone and sustain. Action adjustments are made by moving the entire bridge up or down or by adjusting screws on the back of the guitar. However, the number and placement of these screws depends upon whether you have a vibrato bridge or a non-vibrato bridge. If you're unfamiliar with adjusting action, we suggest that you take your instrument to your favorite guitar technician.

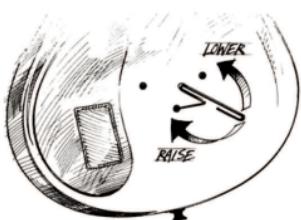
Vibrato Bridge

Action is adjusted by turning the two hex-head screws on the back of the guitar. Using the L-shaped 5/32 Allen wrench supplied with your guitar, turn the screws clockwise to lower the bridge, and counterclockwise to raise it. To make a large adjustment, alternate between the two screws. Do not turn them more than a turn at a time.



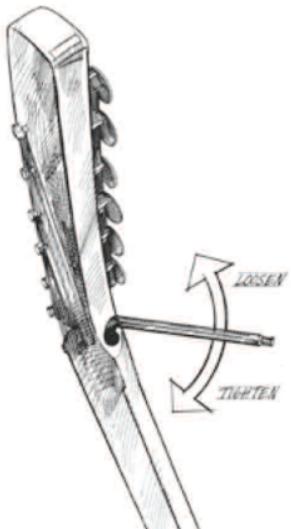
Non-Vibrato Bridge

Action is adjusted by turning the three screws in the back of the guitar. Using the T-handle 3/32 Allen wrench supplied with your guitar, turn the screws clockwise to raise the bridge, and counterclockwise to lower it. To make a large adjustment, be sure to keep the bridge level. To do this, alternate between the three screws, turning them no more than a turn at a time.



Adjusting the Truss Rod

The truss rod is easily accessible, via the hole located on the bottom edge of the headstock. To adjust the rod, use the Torx wrench supplied with your guitar. Turn it clockwise to tighten the rod, and counterclockwise to loosen it. Be aware that the rod adjustment is very sensitive, one-sixth turn yields a lot of movement. For example, changing from .009" to .010" string gauge will require as little as a 1/4 turn clockwise of the truss rod.

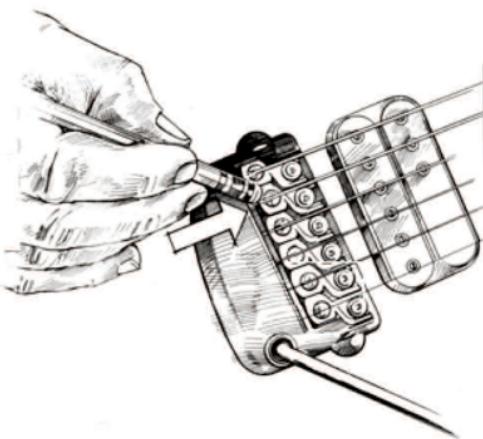


If you're unfamiliar with adjusting a truss rod, we strongly suggest that you take your instrument to your favorite guitar technician. Misadjusting the truss rod can cause irreparable damage to your instrument.

Setting Intonation

To set the string length or intonation, loosen the screw that clamps the bridge saddle in place with the supplied T-handles 3/32 Allen wrench. If the string plays sharp, slide the saddle back to make the string longer. If it plays flat, slide it forward. Re-tighten the saddle screw. The piezo-electric elements in the bridge are delicate, so be careful. The eraser end of a pencil is a safe tool for sliding the saddles.

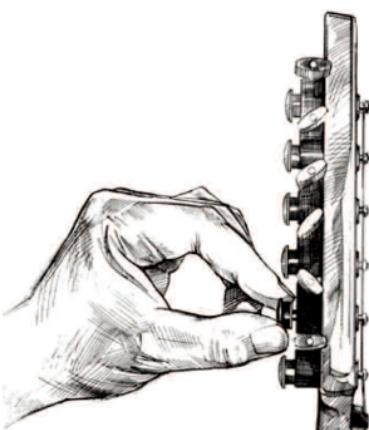
Intonation is affected by changing string gauge, truss rod adjustment, action height, or how hard you press the strings.



Using Sperzel Locking Tuners

Virtually the only part of your Fly guitar that isn't made by, or especially for us, is the tuners. We proudly use Sperzel tuners, designed and manufactured in the USA, because they combine excellent quality, a patented string locking system, and minimal weight. Sperzel's patented string clamp eliminates tying and multiple string wraps, greatly improving tuning stability.

To remove a string, detune the guitar and loosen the knurled knob at the back of the tuner. Stop loosening when you feel some resistance. Before restringing, turn each tuner until the hole in the capstan is parallel with the string path. Feed the string through, pull out the slack, tighten the clamp knob, and tune up. Do not over tighten.



Adjusting the Pickup Height

DIMARZIO PICKUPS

Each DiMarzio humbucking pickup is secured to the body by two hex-head screws. On the coil, closer to the bridge, the mounting screw is the screw under the B string. On the coil, closer to the neck, the mounting screw is the screw under the A string. Turn the screws clockwise to tighten and counterclockwise to loosen.

To adjust pickup height, unscrew both pickup mounting screws. Raise or lower your pickup to the desired position with your fingers. Retighten both pickup mounting screws flush with top of pickup. Do not over tighten.

SEYMOUR DUNCAN PICKUPS

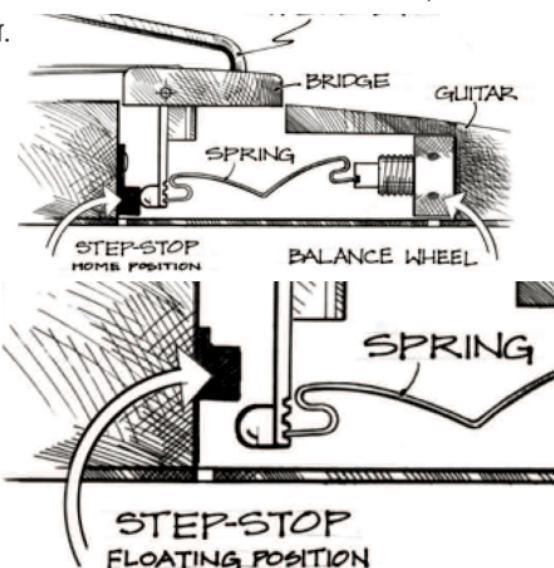
Each Seymour Duncan pickup is secured to the body by two slotted screws. These mounting screws are located under the E strings on the outside coils. Turn the screws clockwise to tighten and counterclockwise to loosen. To adjust pickup height, unscrew both pickup mounting screws. Raise or lower your pickup to the desired position with your fingers. Retighten both pickup mounting screws flush with top of pickup. Do not over tighten pickup mounting screws flush with top of pickup.

VIBRATO

IMPORTANT! Always tune your guitar with the step-stop in the DOWN position (i.e. with the step-stop in the HOME position). Don't ever tune it with the step-stop in the UP position. Most problems that are encountered with this vibrato system are caused by tuning the guitar when the bridge is not in the HOME position. It is also very important to use a spring matched to the string size in use.

Our vibrato system offers all the options and flexibility, a guitarist could want. The two controls known as the step-stop and the balance wheel are used to select from the three modes of operation; balanced, bend down only, or fixed.

One tool is needed to adjust the step-stop and the balance wheel, in order to select one of the three modes. This tool is the 1/8" diameter, 5" long chrome bar.



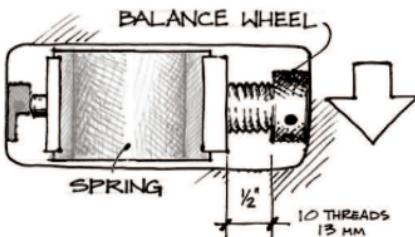
STEP-STOP

This two-position rotary switch is located between the height adjustment screws, through a slot in the back cover plate. Use the supplied step-stop/slide wheel wrench to adjust the step-stop. These two positions are:



BALANCE WHEEL

The wheel is located inside the guitar and is accessed through a slot in the back plate near the butt end of the guitar. Its job is to adjust the amount of pressure the spring exerts on the bridge to fight the string tension.



IMPORTANT! Always tune your guitar in the **FIXED** or **BEND DOWN** mode. Any problems that you may encounter with this vibrato system are most likely caused by tuning the guitar when the bridge is not **H O M E**.

VIBRATO SET-UP

Do Not Over Tighten.

If you break a string in BALANCED mode, use an alternate tuning, change string gauge, move the step-stop, and adjust truss rod or action. Then you will need to recheck to see that the bridge is level (i.e. that the top of the bridge is aligned with the strings... the HOME position).

If you are worried that the bridge is not in the HOME position:

Look at the top of bridge, is it aligned with strings? Peer into the slot in the backplate. Is the step-stop touching the bridge pin? Push on the heel of the bridge to see if it is firmly touching the step-stop or is it bumping it. Look to see if there is excess tension on the spring. Insert the tremolo bar and with it pointing towards the headstock, try to lift it up. If it moves and the step-stop is in the HOME position, the spring needs to be tightened or changed to accommodate different string gauge.

General Design and Function:

The bridge pivots on ball bearings. The guitar strings pull the back of the bridge up toward the headstock. The tremolo spring pushes against the bridge to level it out.

The two forces match the tremolo when it is balanced and it can be used to bend down or pull up. If the spring is exerting more force on the bridge, the tremolo is in FIXED position and the bridge will stay put when left-hand string bending is employed. If the force of the spring is slightly more than the string tension and the step-stop is in the HOME position, the bridge is in BEND DOWN only mode.

- **The Bridge Pivots on Ball Bearings.**
- **Bridge Needs to be Balanced at all Times.**

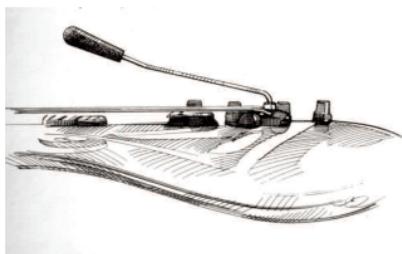
THERE ARE 3 WAYS TO DO THIS:

The following things can affect your bridge being level in the HOME location; breaking a string in balanced mode, alternate tuning, changing string gauge, moving the step-stop, or truss rod or action adjustments.

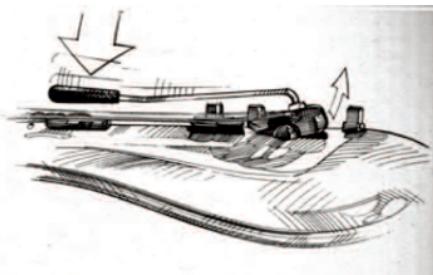
There is only one position for the bridge to be in no matter which of the three modes you choose. It must be "level" with the strings in the HOME location whether the step-stop is engaged or not. The correct scale length location and intonation depend on this.

The guitar strings pull the back of the bridge up toward the headstock.
The tremolo spring pushes against the bridge.

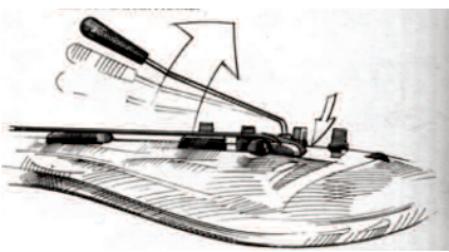
THE 3 MODES OF TREMOLO OPERATION



1 FIXED



2 BEND DOWN ONLY



3 BALANCED OR FLOATING MODE

VIBRATO BAR

The vibrato bar is made from 3/16" stainless steel rod. The vibrato bar rotates in the bridge. A set screw located next to the high E string in the bridge may be adjusted to allow the vibrato bar to rotate more or less freely.

SPRING

Instead of the customary coiled springs on the back of a traditional vibrato, the Fly's vibrato uses a unique spring that is compact enough to fit into the Fly's thin body.

The springs are manufactured in a variety of sizes to accommodate different string gauges. The spring must be strong enough to balance the string tension, when the vibrato is used in the BALANCED mode.

Each spring is marked with a number corresponding to the smallest of your strings (i.e. a "9" spring must use a .009"—.042" string set).

Since, Parker Fly Deluxe guitars are factory shipped with .009"—.042" D'Addario strings, they are equipped with a "9" spring installed.

An extra .010" spring has been provided to accommodate a string gauge change. If you wish to use .011" or .012" gauge strings, you will need a bigger spring. To purchase additional springs from Parker Guitars, please contact U.S. Music Corp. at 1-800-877-6863.

CHANGING STRING GAUGE

When changing to heavier gauge strings, the following adjustments will be required. If you are unfamiliar with replacing the tremolo spring to match string gauge, filing the nut slots wider, adjusting the truss rod, and resetting the action, we **strongly** suggest that you take your instrument to your favorite guitar technician.

CHANGING SPRINGS

STEP 1

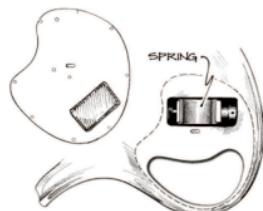
Remove the back plate. **Exercise caution when removing the back plate, as the lead wires from the battery to the circuit board can become disconnected.**

Confirm that the spring number and the string gauge match.

For example:

Spring number 9 for .009 – .042 strings

Spring number 10 for .010 – .046 strings



STEP 2

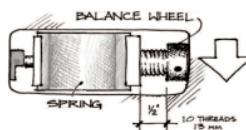
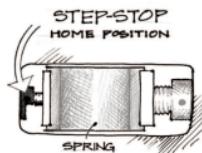
Move the step-stop down into the HOME position.

STEP 3

Tighten the spring against the step-stop with the balance wheel until about ten threads are showing (approximately 1/2" or 13mm).

STEP 4

Tune your Parker guitar to pitch.



STEP 5

IMPORTANT

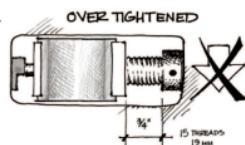
Make sure the spring block is still touching the step-stop while the strings are in tune.

(If necessary, tighten the balance wheel until the spring block is touching the step-stop and retune. Repeat as necessary, but do not over-tighten.)

— WARNING —

Do Not Over Tighten Spring

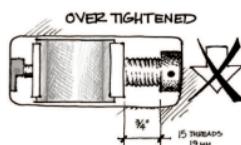
Over tightening the spring may cause permanent damage to your Parker Fly. If you can see 15 threads or 3/4" (19mm) the spring may be over tightened.



Repeat steps 1 through 5 checking the following:

- Does the string gauge match the spring number? (Note: alternate tunings may change spring performance).
- Is the step-stop in the HOME position?
- If the spring is still over tightened, replace it with a stronger spring.

Only tighten the spring against the step-stop when the step-stop is "down" in the HOME position.

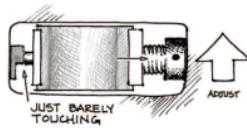


The step-stop "up" position is only for BALANCED mode use.

Do not proceed, unless the strings are in tune and the step-stop is in the HOME or BEND DOWN position.

STEP 6

With the strings in tune, relax the spring tension with the balance wheel, only until the spring block just barely touches the step-stop.



STEP 7

Choose one of these three setups:

BALANCED – for bending up and down.



Go to STEP 8

BEND DOWN – for bending down only.



Go to STEP 9

FIXED – for non-vibrato playing. Also, use this setting for changing strings and setting action and intonation.



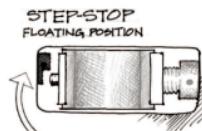
Go to STEP 10.



STEP 8

Balanced Mode

For **BALANCED** mode, follow STEPS 1 through 6. Then, move the step-stop up.

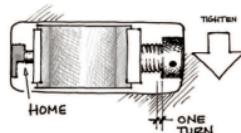


Testing the Bend Down Clearance of the Spring.

- Follow **STEPS 1** through **8** to get the spring into the BALANCED mode.
- Push down on the vibrato bar, until the low E string goes slack, but the A string still has some tension.
- The spring should have a slight clearance with the guitar body.

Testing the Bend Up Mode

- Follow **STEPS 1** through **8** to get the spring into the BALANCED mode.
- Pull up on the vibrato bar.
- The spring will remain quiet and will not rattle.
- If the spring rattles or falls out, replace it with a more supple spring.



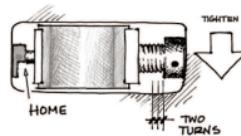
STEP 9

Bend Down Mode

For bend down mode, follow **STEPS 1** through **6**. Then, tighten the balance wheel one revolution.

Testing the Bend Down Clearance of the Spring

- Follow **STEPS 1** through **8** to get the spring into the BALANCED mode
- Push down on the vibrato bar, until the low E string goes slack, but the A string still has some tension.
- The spring should have a slight clearance from the guitar body.



STEP 10

Fixed Mode

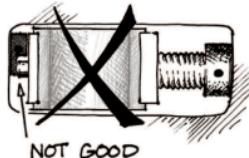
For FIXED mode, follow **STEPS 1** through **6**. Then tighten the balance wheel two revolutions.

Note: With the FIXED mode selected, the bridge will still bend down, although it will have more resistance.

Do Not Over Tighten the Spring.

— Warning —

Over tightening the spring may cause permanent damage to your Parker Fly. If you can see 15 threads of 3/4" (19mm), the spring may be over tightened. Repeat **STEPS 1** through **5** checking the following.



- Does the string gauge match the spring number? (Note: Alternate tunings may change spring performance.)
- Is the step-stop in the HOME position?
- If the spring is still over tightened, replace it with a stronger spring.

Use Home Position

Only tighten the spring against the step-stop, when the step-stop is "down" in the HOME position

The Step-Stop "up" position is only for BALANCED mode use.

TROUBLESHOOTING

- **No Sound**
 - Check battery
 - Check 3-way magnetic / piezo switch, and volume pots
- **Weak or Distorted Sound**
 - Check battery
- **Won't Stay In Tune**
 - Improperly set up vibrato
 - Bridge not in the HOME position
 - Spring size not matched to string gauge
 - Balance wheel out of adjustment
 - Larger strings installed without filing the nut
 - Intonation not set
- **Buzzing**
 - Low action
 - Dead strings
 - Improper adjustment of truss rod
- **Alternate Tunings and Special Strings**
 - Alternate tunings affect spring strength.
 - String sizes
 - Special string sets (round wound, heavy bottom, etc.)
- **Ground Loops**

Sometimes when using two amps, there may be a loud hum when the guitar is plugged into the second amp. This hum is caused by a ground loop. This ground loop isn't the fault of the guitar (or the amps for that matter), but a result of well-intentioned electrical safety codes. Ground loops can lurk wherever two pieces of electronic equipment are connected.

There is only one safe way to rid yourself of pesky ground loops. Use a direct box with a ground lift to isolate the two amps. Plug the magnetic end of the stereo cord into one amp, and the piezo end into the direct box. Plug the direct box's output into a balanced input on the second amp.

Eliminating Piezo Distortion

The piezo system has a far greater treble response than normal magnetic pickups. Some amps will have no trouble with the additional high frequency output, but others will distort. If you are getting distortion, you may want to decrease the gain of the piezo pickup. The way to do this is to lower the piezo volume (see Balancing piezo / Magnetic output), and /or roll off the treble on the amp.

Supplied Tools

3/32 T-handle hex wrench

5/32 hex wrench

T-27 torx wrench

Step-stop/fly wheel wrench

Stereo cable

.10 flat spring

Tremolo arm



Parker
GUITARS®

PARKER GUITARS 444 EAST COURTLAND STREET MUNDELEIN, IL 60060 WWW.PARKERGUITARS.COM