

PalmGuitar[®]



Model v2

6-String Electric Guitar

Owner's Manual

The world's smallest, precision electric guitar

Thank you for purchasing a PalmGuitar® v2 six-string electric guitar - the world's smallest, precision electric guitar. Designed as a guitar you can keep with you 24 hours a day / 7 days a week, the v2's sleek exterior, quick fingerboard and amazing tone hide the simple fact that this guitar is not made of wood. What's perhaps even more impressive to us is that it is not made of carbon fiber either ... more about that later.

Since the electric guitar was born, nearly all have been made of wood – a natural raw material that is plentiful and easy to shape, that also provides the tonal qualities that musicians demand. Unfortunately, wood absorbs moisture like a sponge, expanding and contracting in proportion to changes in ambient temperature and relative humidity. Normally, that's not a problem unless you travel with your guitar from one climate to another. The rapid changes in climate caused by air travel can gradually ruin a wooden guitar. Leaving your wooden guitar in the back seat of a rental car on a hot summer day can ruin it instantly.

The physical size of most guitars makes them impractical to travel with - even if you can carry guitar onto a plane, you can't play it until you land. If you do any international travel, that can be a long time. The PalmGuitar® is small enough so that you can play it in "seat A" if you want. Unlike some guitars made for travelers that have several add on pieces to make it look and feel like a normal guitar, the PalmGuitar® is ready to play right out of the case. Finding a comfortable playing position doesn't take long ... some liken it to learning to type on a laptop or smart-phone, instead of a full sized keyboard.

We first began shipping our legendary graphite instruments to customers around the globe in 2002. The graphite guitars & basses are molded with a composite process using carbon fiber reinforcement within a graphite filled epoxy matrix. Although they play and sound great, they are very expensive and simply not affordable by many guitarists. We spent years trying to develop a lower cost method that wouldn't sacrifice tone or playability. But wood seemed to be the only alternative to the costly carbon fiber graphite, and we simply refused to manufacture wooden guitars.

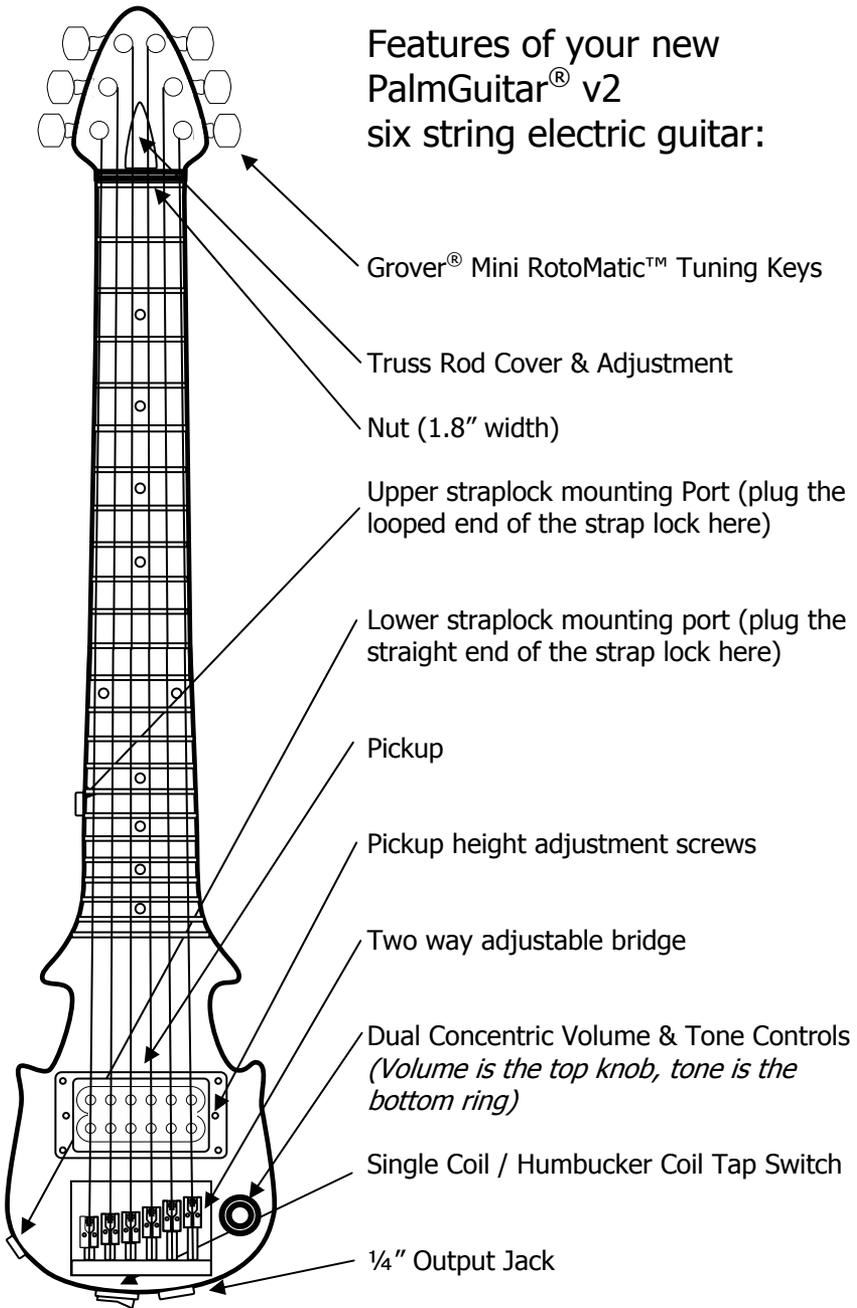
We had nearly given up on the search for new materials by 2004 when we discovered an innovative company in China that had patented a process for manufacturing "synthetic wood" – a unique urethane composite - that turns out to have astonishing tonal properties when shaped into the form of a guitar. After working with them to refine the process to suit our unique needs, we are extremely proud to unveil the PalmGuitar® v2. In addition to being inert to climate change, this new material is incredibly tough, giving the PalmGuitar® v2 better impact resistance than its graphite siblings. We hope you'll enjoy playing it as much as we have enjoyed making it a reality!

We like to brag that for a small company, we have some of the best customers in the world, and we're honored to count you among them! Thanks again for buying a PalmGuitar®!

Sincerely,

A handwritten signature in black ink that reads "Tim Richards". The signature is fluid and cursive, with a long horizontal stroke at the beginning that extends across the width of the signature.

Features of your new PalmGuitar® v2 six string electric guitar:



1. The Locking Strap – one of the most important features of your new PalmGuitar® is its locking strap. We use a strap that locks in place so that your guitar won't accidentally slip off the strap when you least expect it. You insert the plug in the "looped" end into the receptacle located on the side of the fingerboard at the 15th fret. The other end plugs into the receptacle on the lower bout of the guitar. When you push the button on the back of the strap lock plug, the tiny stainless steel balls retract, allowing you to attach and detach your strap quickly.



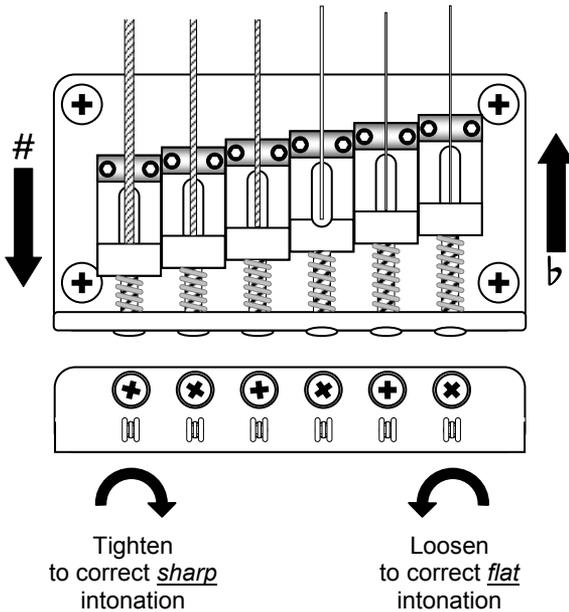
2. The Coil Tap Switch – just below the strap lock port on the lower bout of your guitar is the coil tap rocker switch. This allows you to switch back and forth between a "single coil" sound and a "humbucker" sound.



3. ¼" Output Jack - This is where you plug your guitar cord. Any good quality guitar cord will work, but we recommend that you get one with a "right angle plug" which is more comfortable when you're playing in tight quarters.

4. Strings – The PalmGuitar® was designed to use normal electric guitar strings. They are setup at the factory with the following gauge strings: .012/.016/.022/.032/.044/.052. We compensate for the lower string tension compared to a full scale instruments by using slightly heavier gauge strings. Low tension strings can be fretted "sharp", so you may want to relax some of the finger pressure you apply to the fingerboard if you experience this. As low tension strings age, they tend to lose their brilliance and ability to hold pitch faster than strings under higher tension, so it's a good idea to restring your PalmGuitar® often. Several string manufacturers make stock string sets that match, or come very close to matching the string set we specify for the v2. We hope to add some resources to our website in the near future that will help you determine how to calculate what string gauges to use on your PalmGuitar® that will best match the tension and "feel" of the strings you use on your full size guitar.

5. Truss Rod – If you remove the truss rod cover, you can easily adjust the truss rod to add or subtract "relief" from your neck. To measure how much relief the neck has, fret the low E string at the first fret, and the last fret. This is like using a straight edge against the fingerboard. If you notice a gap between the top of the 9th fret, and the bottom of the string, you can tighten the truss rod in small increments to eliminate the gap. Loosening the truss rod causes more relief. A 4mm hex wrench is enclosed to adjust the truss rod.



6. **Bridge Adjustment** – your bridge is fully adjustable, and can be used to raise or lower the *action* (string height above the frets) and adjust the string *intonation* (length). Each string is fed into one of 6 string “saddles”. The *action* is adjusted by raising or lowering the two small set screws that straddle each string. Both screws should be raised or lowered by equal amounts so that the saddle is level. The constant vibration of playing your guitar can cause these set screws to loosen. So keep your 1.5mm hex wrench handy to raise the

saddles if your strings start to “buzz.” To “ruggedize” your setup, you can apply a tiny drop of clear fingernail polish to the set screw to temporarily lock them in place.

Once you adjust the action, you may need to adjust the *intonation*. Tune all of the strings to the desired pitch. Then, fret each string at the 12th fret, and determine if the pitch is exactly one octave higher than the open tuning. If the pitch is the same, no adjustment is necessary. If the octave pitch is *sharp* compared to the open tuning pitch, the string needs to be *lengthened* slightly by *tightening* the intonation screw on the back of the bridge. Tightening the screw moves the saddle backwards, effectively lengthening the string. If the octave pitch is *flat*, you need to shorten the string by *loosening* the adjustment screw – the spring behind the saddle will push it forward.

Don't be intimidated about adjusting your bridge ... there are many reference books on the subject if you get stuck, and it's the best way to keep your PalmGuitar® set up the way the pros do.

7. **Pickup height adjustment** – there are two screws on either side of the pickup that can raise or lower the pickup - don't confuse them with the 4 screws in corners of the pickup ring that attach the ring and pickup assembly to the body. Raising or lowering the pickup can change the intensity of the output signal, just like moving a microphone closer to, or farther away from a vocal performance. If you raise the pickup *too close* to the strings, you can actually cancel some of the sustain as the magnets try to magnetically “grab” the strings. So only make small changes in pickup height until you get the exact output signal you're looking for.

8. Tuning Keys – The Grover® mini Rotomatic™ tuning keys are very low mass tuners that feature compact removable metal knobs with adjustable tension, die-cast gear housings, lifetime sealed lubrication, and 14:1 gear ratio. The small, Phillips head screw that holds the knob onto the housing can be used to adjust the tension. You can loosen the screws remove old strings and install new ones. Then, once your strings have properly stretched, you can tighten the tension screws so that tuning keys will resist accidental movement during travel.
9. Frets & Fingerboard – Your PalmGuitar® v2 uses a standard nickel silver frets on a polished Ebonite™ fingerboard. They can be dressed, or replaced by any competent guitar technician. The frets are leveled and crowned at the factory to precise standards that permit low action. We specify a factory fret height that should permit one or two leveling and crowning jobs before refretting becomes necessary. If you're not accustomed to doing your own fret work, this is something better left to a skilled technician.
10. The Nut – The nut on your PalmGuitar® v2 is 1.8" wide, slightly wider than a standard guitar nut in order to maintain the proportionality of the short scale. The distance from the nut to the first fret on a PalmGuitar® is the same as the distance from the 4th to the 5th fret of a typical 25.5" scale guitar. So we made the width of the neck at the nut equal the width of the neck of a typical 25.5" scale guitar at the 4th fret – 1.8". Replacement nuts can be fabricated from common nut stock.
11. The Finish – The PalmGuitar® v2 has an abrasion resistant polyurethane finish that can be cleaned the same way you would clean any guitar. Generally, a good clean lint-free cloth works best to wipe off any excess finger oils.
12. Tuning – The PalmGuitar® v2 is designed to be tuned to standard E-A-D-G-B-E tuning (@ A=440Hz) even though it has a short 20¼" scale length. Although you can tune your v2 to any alternative pitch you choose, you may need to increase, or decrease the gauges of individual strings to improve the results. Changing the string gauge may require that you re-intonate the bridge. We use computer models to calculate the optimum string gauge vs. pitch for our scale length, so if you need some help dialing in the right gauge for your playing style, just let us know and we'll help. While the scale length of the PalmGuitar® is designed primarily to enable its compact size, the short scale can also offer some artistic advantages over full scale instruments. The voicing of complex chords on the guitar is limited by the number of fingers you use and the distance they can reach. Ever wonder what you could play if your fingers were 20% longer? The PalmGuitar® lets you hit chords and reach intervals that you might not otherwise be able to achieve.
13. Dual concentric Volume/Tone knobs – The top knob controls the volume, and the lower ring controls the tone. Both are held to dual potentiometer shafts inside with a small set screw. If either knob comes loose, you can replace them and tighten the set screw with the 2mm hex wrench enclosed in your wrench kit.
14. The Case – your v2 comes with a custom ballistic nylon carrying case that has one lower padded pocket for the instrument, and a second pocket for your strap, cable, and other gear you need to take with you. The back of the case has a large fabric band that can be used to lash your guitar and case to the pull handle of your luggage. As we develop other styles of cases, we will make them available through your dealer, or on our website.

General Specifications

General composition: Proprietary reinforced reaction injection molded (RRIM) structural polyurethane microcellular composite and Ebonite™ fingerboard

Physical dimensions:

Overall length:	26"	(66.0 cm)
Maximum width of body:	6"	(15.2 cm)
Overall thickness:	1.8"	(4.6 cm)
Thickness of body:	1.2"	(3.0 cm)
Overall weight (less case):	3.6 lbs	(1.6 kg)

Fingerboard specifications

Fingerboard radius:	12"	(30.5 cm)
Fret type:	Nickel silver	
Number of frets:	20	
Scale length:	20.25"	(51.4 cm)
Width of neck at the nut:	1.8"	(4.6 cm)

Component specifications

Bridge specification:	Two way adjustable, top-loading
Saddle height adjustment:	1.5 mm hex wrench
Volume/tone control:	Dual concentric 500KΩ potentiometers
Tone capacitor value:	.020 mf
Magnetic pickup:	Two conductor humbucker with split
Pickup mounting:	Surface mounted pickup ring with spring suspension (adjustable)
Tone selector switch:	DPDT on-on (single coil/series humbucker)
Output jack:	¼" (recommend right angle guitar plug)
Strap-lock mechanism:	Dunlop® Straplok®
Tuning keys:	Grover® Mini Rotomatic™
Truss rod:	Headstock adjust; 4mm hex wrench
Strings:	(.012p/.016p/.022w/.032w/.044w/.052w)

***CAUTION!** Your new PalmGuitar® v2 is manufactured by an advanced polymer process – it contains no wood whatsoever. While this means that your instrument will resist moisture and temperature changes that would normally ruin a wooden guitar, it is not indestructible, nor is it waterproof. The sensitive electronic components on the inside can still become damaged if you use your PalmGuitar® to paddle your canoe.*

***MORE CAUTION!** Your new PalmGuitar® v2 is small enough that you can keep it with you all day, every day. In fact, you'll be tempted to play your guitar in places you could never play a guitar before! Please never, never, never play your PalmGuitar® when you ought to be focused on something more important, like driving your car or operating heavy machinery. We love our customers and would hate to see you get hurt or have you hurt someone else by operating your PalmGuitar® in a "no jamming zone." The most important accessory we include with every PalmGuitar® is a dose of common sense that we sincerely hope you will use! Thanks!*

PalmGuitar® v2

100% Customer Satisfaction: you'll find that the PalmGuitar® is very different from any other guitar you've owned. It does not have the same weight distribution of a normal guitar - it is so small, some players may find it slightly "top-heavy". Most customers adapt to its tiny shape immediately; others may take a few days of various playing positions in order to find a comfortable playing position. In the event you try, but find that you cannot adjust to the small scale, or weight distribution of the PalmGuitar®, or you simply decide that you don't like it for any reason at all, return it to your dealer for a full refund ... no questions asked. No guitar is perfect for everyone. We *only* want you to own a PalmGuitar® if it is perfect for *you*. Our policy is to have only dedicated fanatics as customers and we only work with dealers who share our passion for 100% customer satisfaction.

Limited Lifetime Warranty: the PalmGuitar® is guaranteed against manufacturing defects including components made by subcontractors for the lifetime of the original owner. In the event your PalmGuitar® fails due to some engineering, design, or manufacturing defect, we'll either repair it or replace it free of charge. Normal wear and tear items like strings, frets, etc., or signs of excessive wear and tear, or physical damage, are not covered by the lifetime warranty. For warranty service, please contact PalmGuitar, LLC for instructions on how to return your instrument. Be sure to include the instrument serial number, along with your shipping address and contact information. For additional Warranty information see the enclosed Warranty card ... make sure to fill it out and return it to us immediately.

Service & repair: while most skilled guitar technicians can perform set-up and routine maintenance on your PalmGuitar®, you are always welcomed to return your instrument to the factory for service or repairs. If we can estimate the costs for the repair or modification without examining the instrument, we'll issue a quotation for the work and authorize you to ship the instrument to us. If we cannot estimate the costs without examining the instrument, ship it to us and we'll issue a repair quotation for your approval prior to making the repairs.

Dealer Information:

Serial
Number:

PalmGuitar, LLC
P.O. Box 1135
Southbury, CT 06488

Telephone: 203-264-1413
Fax: 203-264-1513
eMail: info@palmguitar.com
web site: www.palmguitar.com



PalmGuitar[®]

Model v2
6 - String Electric Guitar

Limited Lifetime Warranty
&
Warranty Registration
Post Card

----- To activate your warranty, please fill out reverse side, detach at the line, and mail to PalmGuitar, LLC -----

Apply
Postage
Here

PalmGuitar[®]

PalmGuitar, LLC
P.O. Box 1135
Southbury, CT 06488

Your new PalmGuitar® v2 is warranted to be free from defects in materials and workmanship for the life of the original retail purchaser, subject to the limitations contained in this warranty. If at any time your PalmGuitar® v2 malfunctions as a result of faulty materials or workmanship, PalmGuitar, LLC will repair the defect(s) or replace the instrument, as it deems appropriate in its sole discretion. This warranty covers the cost of both labor and materials on any repair deemed necessary by our PalmGuitar, LLC for the lifetime of the original purchaser. PalmGuitar, LLC reserves the right to use materials regularly utilized at the time of repair in the event that original materials are no longer available. To obtain service under this warranty contact PalmGuitar, LLC and obtain a Return Authorization number (RA). In the unlikely event that your instrument is destroyed, lost or damaged beyond repair, while in the possession of PalmGuitar, LLC for repair, PalmGuitar, LLC will replace that instrument with one of the same or most similar style of a value not in excess of the original purchase price of your instrument.

This warranty is extended to the original retail purchaser only and may not be transferred or assigned to subsequent owners. In order to validate your warranty, and as a condition precedent to warranty coverage hereunder, you must return your warranty registration card or register on line at palmguitar.com within sixty (60) days following the original date of purchase. A copy of your sales receipt must accompany all requests for warranty coverage. This warranty gives you specific rights which may vary from state to state, and is subject to the following limitations this warranty does NOT cover:

1. Any instrument that has been altered or modified in any way or upon which the serial number has been tempered with or altered;
2. Any instrument whose warranty card has been altered or upon which false information has been given;
3. Any instrument that has been damaged due to misuse, negligence, accident, or improper operation.
4. Subjective issues of tonal characteristics;
5. Shipping damages of any kind;
6. Normal wear and tear (worn frets, worn plating, worn strings, worn finish, etc.);
6. Any instrument purchased from an unauthorized dealer;
7. Any factory installed electronics after a period of one (1) year following the original date of purchase

PalmGuitar, LLC makes no other express warranty of any kind whatsoever. All implied, warranties, including warranties of merchantability and fitness for a particular purpose, exceeding the specific provisions of this warranty are hereby disclaimed and excluded from this warranty. Some States and/or countries do not allow the exclusion of limitation of implied warranties so that the above may not apply to you. PalmGuitar, LLC shall not be liable for any special, indirect, consequential, incidental or other similar damages suffered by the purchaser or any third party, including, without limitation, damages for loss of profits or business or damages resulting from use or performance of the instrument, whether in contract or in tort, even if PalmGuitar, LLC or its authorized representative has been advised of the possibility of such damages, and PalmGuitar, LLC shall not be liable for any expenses, claims, or suits arising out of or relating to any of the foregoing.

----- To activate your warranty, please fill out below, detach at the line, and mail to PalmGuitar, LLC -----

Serial Number:

v2 Warranty Registration

Owner Information

First Name: _____ Last Name: _____

Address: _____

City: _____ State: _____ ZIP _____

Country: _____ Telephone: _____

eMail: _____

Dealer Information

Dealer Name: _____

Dealer City: _____ Dealer State: _____

Date Purchased: _____ Satisfied with Dealer Service? Yes No