
BEDELL OWNER'S MANUAL

2014 – 2015

BEDELL GUITARS

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Bend, Oregon 97702

888.234.2210

Welcome to the Bedell family! You are now the steward of an extraordinary acoustic guitar, handcrafted from precious tonewoods that were harvested with the intent of sustaining our forests and honoring the surrounding communities and economies. You could've chosen any brand, but you chose a Bedell, which means you have a deep respect for the organic materials nature has supplied for your musical instrument. Naturally, you want to protect your investment and to honor the seed-to-song journey of the trees that live again in your guitar. This manual was designed to equip you with the information and tools to provide the highest level of care for your instrument and to ensure that your Bedell guitar will be your musical companion for many years to come.

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ANATOMY OF YOUR GUITAR

ANATOMY OF YOUR GUITAR

TOP

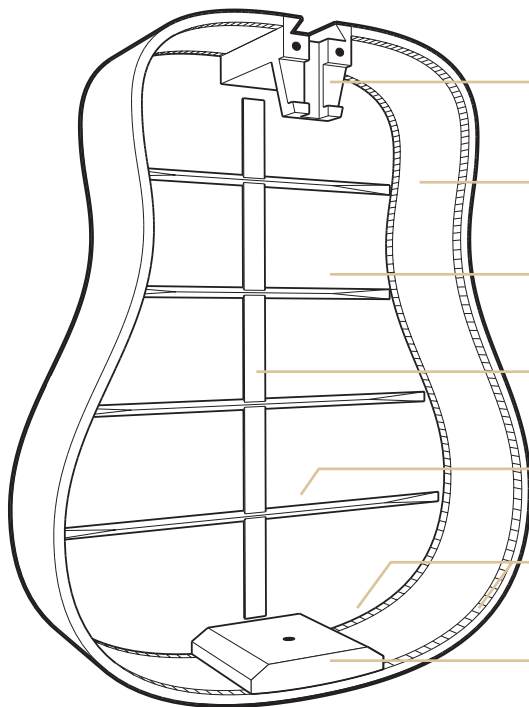
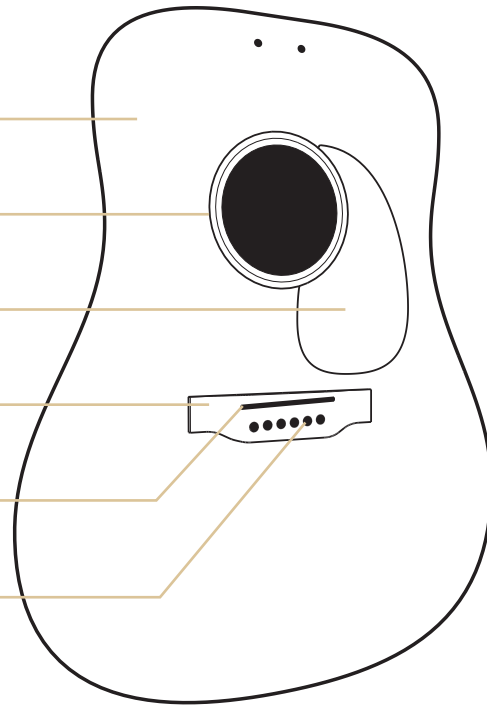
ROSETTE

PICKGUARD

BRIDGE

BRIDGE SADDLE

BRIDGE PIN



FRONT OF NECK BLOCK

RIM ASSEMBLY

BACK

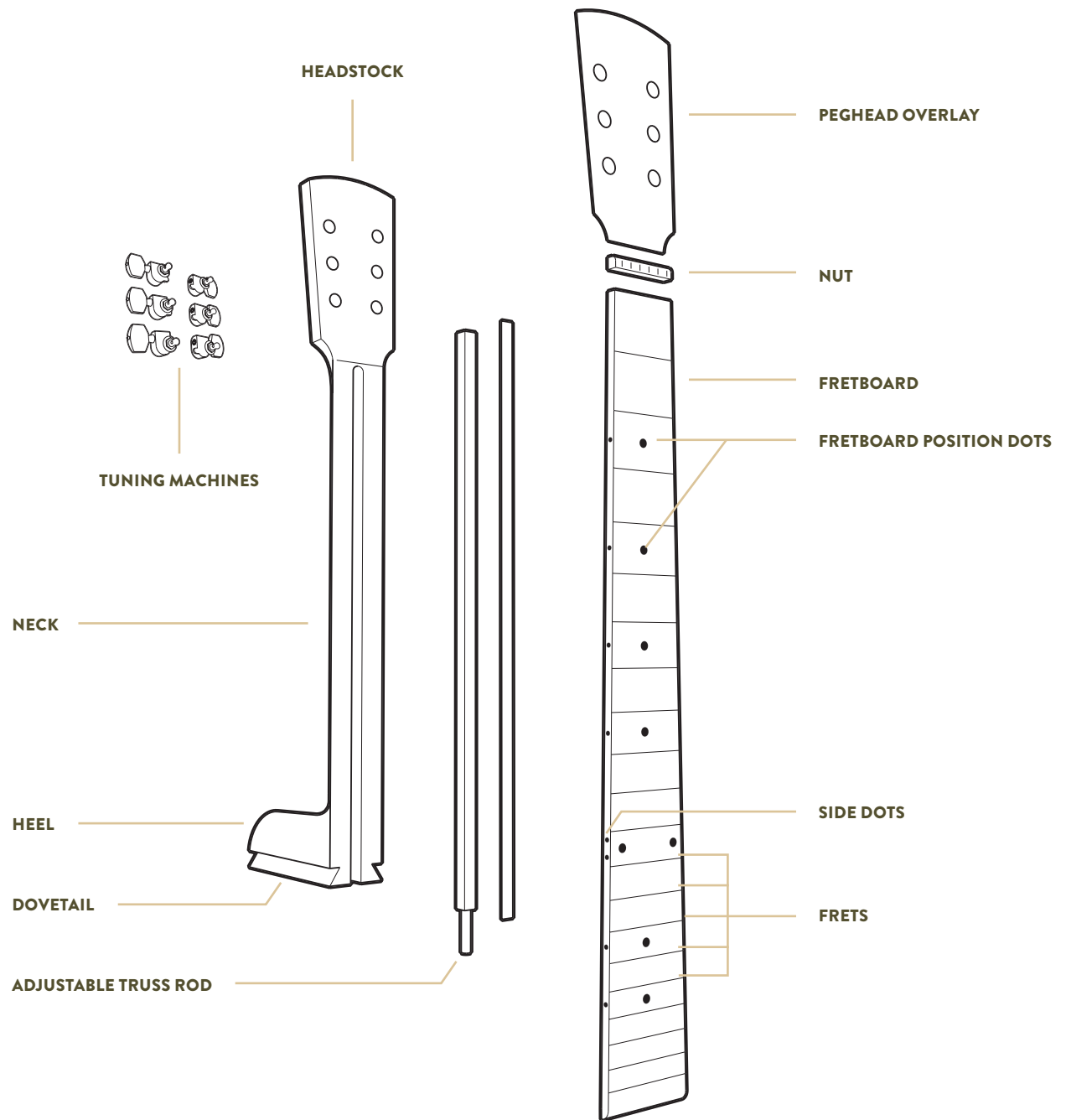
CENTER STRIP

BACK BRACE

KERFING

TAIL BLOCK

ANATOMY OF YOUR GUITAR



CARING FOR YOUR GUITAR

HUMIDITY AND TEMPERATURE



THE IMPORTANCE OF TEMPERATURE

Relative humidity (RH) is temperature-dependent. Air with 45% RH at 60° F does not have the same water content as air at 70° F with 45% RH. Stable temperature plays a key role in ensuring your Bedell guitar is humidified properly.

The trees that live again in your guitar have made an incredible journey to become a part of your world, your music, and your life. Every tree that contributed tonewood to your guitar was selectively and individually harvested, often at the end of its lifecycle (while still standing or from the forest floor, removed gently to minimize the impact on the surrounding ecosystem), or is from a collection of treasured wood harvested prior to 1991 (the year the first tree species was listed in CITES), or was reclaimed and repurposed into wood for your guitar.

Consider just one of the trees that provided the tonewoods in your guitar – for example the tree that gifted you with your soundboard: When it was living, its leaves were continually pulling water up the trunk and through the pores and fibers of the wood – much like blood moves through the veins in our bodies – and it had a moisture content of up to 200%. When it came to the end of its life and was processed into soundboard sets, moisture still moved through it, but that moisture began to evaporate, and the soundboard began to air dry and cure. At some point, your soundboard reached equilibrium where no more moisture was moving out of the pores. Generally, this equilibrium happens around six to eight percent moisture content, which can usually be maintained in a stable, consistent environment of 70 degrees Fahrenheit with 45% humidity. At equilibrium, even though the wood from the tree is no longer drawing water from the earth, the cells never forget and will draw in extra moisture if it is available, or shed extra moisture if the environment is dry.

HUMIDITY AND TEMPERATURE CONT.



TEMPERATURE

Rule of Thumb: If you're comfortable, then chances are, the temperature is right for your guitar as well.

- The ideal temperature for your guitar is around 70° F.
- Avoid exposing your guitar to temperatures below 50° F and above 90° F.
- Avoid prolonged exposure to temperatures below 60° F and above 80° F.



HUMIDITY

- The ideal relative-humidity level for your guitar is between 40% and 50%.
- Avoid exposing your guitar to excessively dry or humid climates for more than a few days.
- If you live in a dry climate, use a humidifier.
- If you live in a humid climate, invest in a de-humidifier.

Imagine a piece of bread left on the counter in a dry climate. Most bread has 30 – 40% moisture content, and left exposed it will dry up and shrink. Luckily, the wood in your guitar was cured and dried before it was lovingly crafted, but it is still sensitive to fluctuations in temperature and humidity. Much like a cracker or a scone, the wood will respond moisture – both lack and excess – and will expand or contract accordingly – swelling in a warm and humid climate, and shrinking in cold, dry environs. Rapid changes in humidity or temperature can potentially result in cracks, compromised joints and damage to your guitar's finish.

If you're playing outside and get caught in the rain, when you return indoors, gently wipe down your guitar with a soft, clean cotton cloth and let your guitar dry gradually. Never place a damp guitar near a heat source, like a fireplace. The intense heat and dryness near the fire will cause some parts of the guitar to shrink very quickly, potentially causing cracks and joint damage.

One of the best things you can do to protect the beautiful woods and the integrity of your Bedell guitar is to monitor the climate in which it lives. Purchase a small mobile hygrometer gauge to monitor the temperatures and humidity levels to which your guitar is exposed. We recommend an RH of between 40% and 50% and a stable temperature near 70° F to ensure the safest environment for your Bedell guitar.

TELLTALE SIGNS OF HUMIDIFICATION ISSUES

OVER-HUMIDIFIED	UNDER-HUMIDIFIED
Raised action	Lowered action
Sluggish tone, low volume	Fret buzzing
"Bellying" up of the top	Fret ends protruding
Lateral finish cracks	Dips in the top

When selecting an in-case humidifier, avoid designs that completely block the sound hole – they can cause over-humidification of the instrument body, while doing little to maintain proper humidity for the neck.

HUMIDITY AND TEMPERATURE CONT.



If you and your guitar spend more than a few days in an arid climate (below 40% RH), protect and stabilize your instrument with a high-quality variable-control room humidifier or an in-case guitar humidifier, such as the Oasis sound-hole humidifier. If choosing an in-case humidifier, select one containing a moisture reservoir that is suspended inside the body to release proper levels of moisture that also prevents water from actually touching your instrument. Be careful when placing your guitar near a standard room humidifier, as water may come into direct contact with your instrument, which is a poten-

tially damaging. We recommend storing your guitar in the case when not in use, and investing in a humidifier that vaporizes the moisture, to lessen the chance that any water droplets might come in contact with your instrument.

Additionally, if you visit a sweltering tropical climate make sure your guitar stays cool and isn't trapped in the hot, moist case. When humidity is high, wood expands and swells. When humidity is combined with high temperatures, your guitar's glue joints can weaken and even open slightly. If you leave your guitar in a hot, humid spot over

a period of time, even the glue under the bridge can be compromised, potentially causing the bridge to pull off. If you and your guitar live, or spend an extended amount of time, in a highly humid climate (RH levels above 50%), we suggest purchasing a variable-control dehumidifier to achieve optimal RH.

A final word about humidity and temperature levels: Avoid hanging your guitar on an outside wall. The temperature difference between the interior of the room and the wall itself can potentially damage your guitar's wood.

STORAGE AND TRAVEL

When you're not playing your Bedell, return it to its case. The case gently and evenly supports the body, neck, and head of your guitar, which helps keep everything in proper alignment. Your instrument will be happy; you'll be happy.

When it comes to car travel, treat your guitar like you'd treat a beloved pet. Never leave your Bedell in a blazing hot car, or in an unheated car during winter months. Would you transport the family dog in the trunk? Hopefully not. Never ever leave your guitar in the trunk of your car where it can be exposed to extreme temperatures; the trunk of your car is no place for your stunning and lovingly crafted Bedell guitar.

If you're flying, check your guitar at the gate if possible, so the baggage handler can hand-carry your guitar to and from the airplane, and you'll be able to keep an eye on it until you board. If this isn't an option, call the airline to see if the cabin has a storage



compartment large enough for your guitar case.

If you absolutely must check your guitar, loosen the strings slightly (about a step and a half) and place soft cotton

packing material in your case around your guitar to protect it as much as possible during its journey. When you arrive at your destination, leave your guitar in the case until it has acclimated to the new temperature.

NITROCELLULOSE LAQUER FINISH

Your Bedell guitar has a hand-applied nitrocellulose lacquer finish that maximizes the resonant qualities of your tonewoods. This thin, hard finish is more susceptible to the elements than other finishes. For instance, it requires special care when exposed to

moisture or perspiration. Additionally, one of the well-known features of a nitrocellulose finish (often referred to simply as "nitro" or "lacquer") is that it develops a patina over time – a patina that is as uniquely you as your music... a one-of-a-kind visual identity you

create by simply playing your guitar. Any imperfections caused over time add to the value of the instrument and contribute to the unique character of your instrument – making this guitar your guitar.

NITROCELLULOSE LAQUER FINISH CONT.



NITROCELLULOSE CARE 101

- Do not expose your guitar to extreme climate changes.
- Wipe down your guitar with a clean, soft, 100% cotton flannel cloth after every session.
- Avoid commercial guitar cleaners, polishes and oils.
- Don't touch up any scratches or dings (this should be done only by experienced repair specialist).
 - If you use a guitar strap, remove after use, and store separately.
 - Only use stands and wall hangers that are specifically "nitrocellulose safe," or place a clean, soft, 100% cotton cloth between your instrument and all contact points.

The best way to care for your finish – aside from avoiding drastic changes in temperature and/or humidity – is to lightly clean your guitar after each use. Your sweat may oxidize fairly quickly and can dull or destroy the finish. The same goes for the natural oils in your skin. When cleaning, you want to remove dirt, oils and sweat – but you don't want to remove the patina that develops over time. Use a soft, 100% cotton cloth to wipe down the entire instrument. Wipe the strings, too, to remove the oil left behind by your fingers; it will help the strings last longer.

We don't recommend commercial polishes or cleaners because they may contain petroleum products or solvents that will deteriorate your finish. Some may even contain abrasives, which will harm the finish and strip the hard-earned patina from your guitar.

Your finish should not require waxing or oiling either (with the exception of the fretboard; see below). Traditional oils, like tung oil, may leave a residue even when wiped clean and can seal in any grime or dirt on the surface – this residue will also build up when used repeatedly. While we do not recommend waxing, if you must wax your guitar, pure carnauba wax is the safest for your finish.

Scratches, dings and checking that develop over time are all a part of your guitar's unique fingerprint. If you feel compelled to repair the finish, take it to a repair specialist who specializes in nitro finish repair. Do not attempt to touch it up yourself.

Remember to remove your guitar strap when not in use. Some strap materials, even leather, and particularly synthetics, contain solvents that can mar the finish of your guitar. Feel free to use the strap of your choice while you play, just be sure to remove it when you're done. And don't toss the strap into the case with your guitar; store it separately.

The safest place for your guitar is in the case, but if you temporarily leave your guitar on a stand or wall hanger, make sure that these accessories are specifically designated as "nitro safe." If your accessories are not approved for contact with nitrocellulose finishes, then cover all contact points with soft, 100% cotton cloth.

FINISH CHECKING AND AGING

As a normal part of the aging process, most nitro finishes will exhibit checking and may change color or develop the sheen or patina discussed earlier. Guitar aficionados often believe these natural aesthetic changes add to the value of the instrument, as they tell the story of the instrument and the player and their journey together over the years.

Finish checking – a common, expected occurrence in fine instruments with a nitro finish – is a web or mosaic pattern of hairline cracks in the finish usually caused by sudden changes in temperature. As the wood rapidly expands or contracts, it stresses the finish and creates checking. This is common as an instrument ages, and some musicians actually seek out a checked finish in vintage instruments since it adds to the historical authenticity and well-loved, well-played feel.

Finish checking can occur after your guitar has been in very cold conditions, when it is suddenly introduced to a warm venue or room; the wood expands faster than the lacquer, and this may distress the finish. The best way to guard against checking is to avoid exposing your Bedell to extreme temperatures. If you cannot avoid exposing your guitar to an arctic chill or sweltering heat, allow the instrument to slowly acclimate to new climate conditions **before** you open the case. As always, avoid any prolonged exposure to temperatures below 60° F and above 80° F.

CARING FOR YOUR GUITAR

FRETBOARD

If your fretboard appears dry or cracked, before oiling take a humidity measurement to ensure proper humidification levels (between 40% - 50% relative humidity). If you find the environment is too dry, establish proper humidity as needed, and then follow the steps to the right.

When cleaning your instrument after play, pay special attention to your fretboard to remove the oil residue left by your fingertips. When oil and dirt build up on your fretboard, it will become a bit “gummy,” and may require occasional cleaning and oiling.

TO REMOVE FRETBOARD RESIDUE:

STEP ONE	Rub your fretboard lightly with ultra-fine (0000) steel wool.
STEP TWO	Remove any steel wool fragments.
STEP THREE	Apply mineral oil to the fretboard.
STEP FOUR	Wipe down the fretboard with a dry cotton cloth.

TUNING MACHINES

The tuning machines on your guitar will need little, if any, maintenance beyond occasional lubrication. Mark your calendar twice a year to lubricate

your open tuning gears. To do this, dab a tiny bit of petroleum jelly on the end of a toothpick and apply to the gears. Don't apply too much or it will

catch dust that will wear out the tuning machines.

STRINGS

STRING SPECS

Dreadnoughts and Jumbos: Medium (.013-.056)

1	e	.013
2	B	.017
3	G	.026
4	D	.035
5	A	.045
6	E	.056

Parlors and Orchestras: Light (.012 - .053)

1	e	.012
2	B	.016
3	G	.024
4	D	.032
5	A	.042
6	E	.053

For step-by-step directions on how to string your guitar, see page 17.

The luthiers at Bedell selected the perfect strings to compliment the body shape of your guitar. Should you desire different strings to accommodate your individual playing style, your steel-string acoustic guitar is designed for use with light- and medium-gauge strings. If you switch to lighter-gauge strings, you'll likely need to have a reputable dealer adjust the bridge saddle and neck to avoid fret buzz.

Your guitar strings will wear out. How quickly depends on how often and how long you play – and whether you wipe the strings with a cloth after each session. The oils from your fingers corrode the strings over time. How will you know when it's time? You'll notice your sound has lost its brilliance and has become a bit muffled. When this happens, replace the entire set of strings. Only replacing one will result in an unbalanced sound.



ADJUSTING YOUR ACTION

Because the solid woods in your guitar will settle and change over time as your guitar matures, the height of the strings will increase or decrease slightly. If the action is higher, your guitar will be a bit harder to play.

Likewise, if the strings are too low, they'll buzz against the frets. If either scenario should occur, and your action requires adjustment, take your guitar to a reputable guitar repair specialist to assess bridge-saddle

height and trussrod tension, since one or both may be responsible.

IF YOU ARE INEXPERIENCED, DO NOT ATTEMPT TO ADJUST THE ACTION YOURSELF.

ADJUSTING YOUR NECK



TRUSS ROD ADJUSTMENTS AND ACTION

Adjustments to truss-rod tension alter the relative straightness of the neck. While these adjustments may impact your action (or string-height), the height of the saddle is also a factor. If you suspect your neck angle may be impacting your string height, the wisest course of action is to take it to your guitar dealer or reputable repair specialist.



The trussrod in your Bedell guitar helps counteract the affect of string tension on the neck of your instrument. String tension pulls the neck forward and up, while the truss rod pulls the neck down and back. A properly adjusted truss rod equalizes the tension on the neck. Adjustment of truss rod tension changes the amount of bow in the plane of the fretboard. A properly adjusted truss rod results in a neck with a slight forward relief. If you look down the neck of your guitar and perceive a slight bow, don't assume that it that it needs to be straightened. Depending on your playing style, a slight bow can work in your favor by preventing fret buzz. Also, the neck may move slightly with changes in humidity and temperature, but may not need adjustment.

ADJUSTING YOUR NECK CONT.



TRUSS ROD BASICS

- Turn your wrench clockwise to tighten the truss rod, counterclockwise to loosen it.
- The truss rod should only be adjusted in order to establish proper neck relief and to counteract/balance the effect of string tension.
 - Do not use the truss rod adjustment feature to try to correct larger set-up issues or other problems that are not related to neck relief.
 - If you are inexperienced with this type of adjustment, consult a qualified repair technician before attempting an adjustment.

Prior to adjusting tension on your new Bedell guitar, give your instrument a couple of weeks to adjust to its new environment. **USE EXTREME CAUTION WHEN MAKING ADJUSTMENTS.**

To adjust the single-action truss rod on your Bedell guitar, use a round-tipped 5/32" Allen wrench that is at least 4" long. The adjustment nut is located inside the sound hole, toward the neck. It is very close to the top of the guitar, and directly underneath the fretboard. To access the adjustment nut, insert the wrench into the sound hole between the D and G strings (holding them apart can be helpful) and point it up toward the area described above to find the nut. Turn clockwise to tighten the truss rod, or counterclockwise to loosen it.

SET-UP SPECIFICATIONS



To check your guitar for proper action, measure at the 14th fret, from the top of the fret to the bottom of the string. Bedell specs are $\frac{3}{32}$ " on the bass side and $\frac{1}{16}$ " on the treble side. You may want to have your guitar adjusted for higher or lower action, depending on your playing style.

CHECKING YOUR NECK RELIEF

To check for proper neck relief, push down on the low E string at the 1st and 14th frets simultaneously. There should be about 0.010" of space between the bottom of the string and the top of the 6th fret – about the thickness of a business card. You may want more or less relief depending on your playing style.

ELECTRONICS



NOTE

If your model is not listed, please refer visit **bedellguitars.com** to review determine the electronics installed in your specific instrument, then download the appropriate manual at **kksound.com/support/manuals.php**.

All workshop-installed electronics packages are handcrafted and assembled in Coos Bay, Oregon by K&K Sound. For more information on your electronics package, please download the relevant owner's manual below.

REVERE: POWER MIX PURE XT	kksound.com/pdf/powermixpurext.pdf
COFFEE HOUSE: PURE MINI	kksound.com/pdf/puremini.pdf
1964: PURE MINI	kksound.com/pdf/puremini.pdf
EARTHSONG: DUOTONE	kksound.com/products/duotone.php

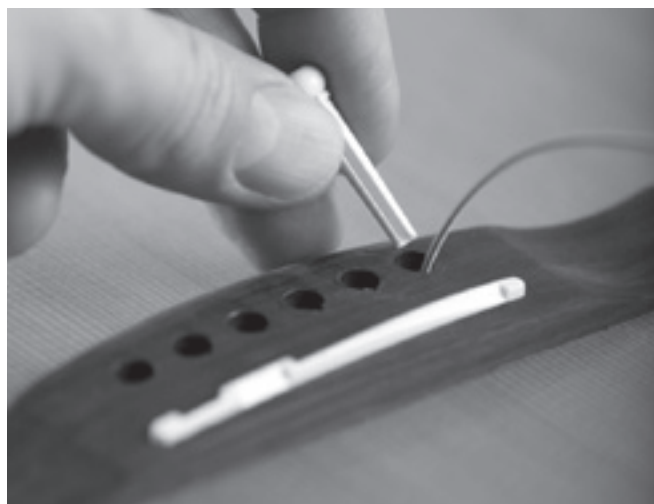
HOW TO STRING YOUR GUITAR

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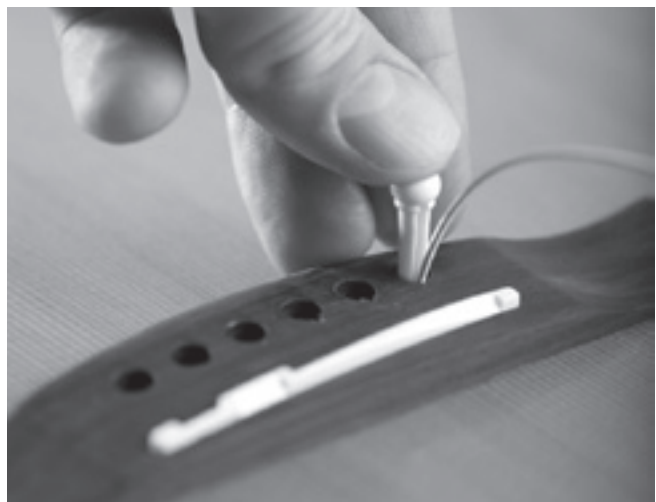
STEP ONE

Insert the first string in its bridge-pin hole. Make sure the heaviest part of the double winding is facing away from the sound hole. Pull the ball end of the string tightly against the inside of the top.



STEP TWO

Position the bridge pin so the notch is facing the string.



STEP THREE

Insert the bridge pin by pushing it firmly with your thumb.



STEP FOUR

Thread the string through the string hole near the top of the tuning machine post.

HOW TO STRING YOUR GUITAR



STEP FIVE

Wind the string half way around the tuning machine post.

NOTE: For the three treble strings, wind the string counterclockwise. For the three bass strings, wind the string clockwise.



STEP SIX

Pass the short end of the string under the longer end and then bend back the short end to prevent the string from slipping. Repeat steps 1 through 6 for all remaining strings.



STEP SEVEN

Tune your guitar. Then make sure each string winds around the tuning machine post at least one full rotation, with each winding closer to the base of the shaft than previous windings. Clip the strings flush with the top of the tuning machine post if desired.

NOTE:

For instruments equipped with an undersaddle pickup (all instruments with K&K PowerMix Pure XT), we recommend that you restring your instrument starting with the two middle strings, and work your way outward to ensure that the saddle will reseat firmly and squarely over the pickup.

TRAVEL PERMITS & WARRANTY

TRAVEL PERMITS



All Bedell tonewood is ethically and legally procured, meeting all CITES regulations and Lacey Act requirements for chain of custody. We guarantee that every USA made Bedell guitar crafted out of

wood from restricted species qualifies for the U.S. Fish and Wildlife Service Guitar Passport and can be transported for performances throughout the world. For assistance procuring a travel permit

for your Bedell guitar, please email permits@bedellguitars.com, or call our concierge service at **888.234.2210** between 8:00 a.m. and 5:00 p.m. Pacific Time.

WARRANTY

**AS THE ORIGINAL OWNER OF YOUR BEDELL GUITAR,
YOU ARE ENTITLED TO A LIMITED LIFETIME WARRANTY.**

For more details, please visit: bedellguitars.com/warranty

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