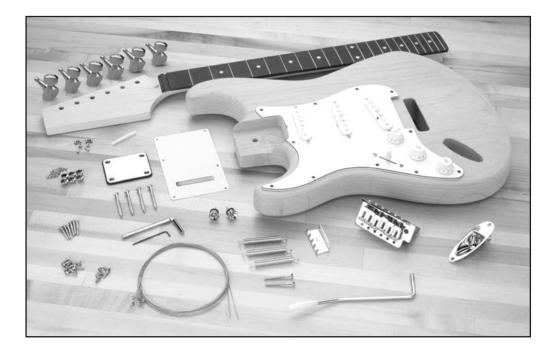


# **MODEL T24830 LEFT-HANDED ELECTRIC GUITAR INSTRUCTION MANUAL**

(For models manufactured since 9/12)



COPYRIGHT © OCTOBER, 2012 BY GRIZZLY INDUSTRIAL, INC. WARNING: NO PORTION OF THIS MANUAL MAY BE REPRODUCED IN ANY SHAPE OR FORM WITHOUT THE WRITTEN APPROVAL OF GRIZZLY INDUSTRIAL, INC. #MM15363 PRINTED IN JAPAN

### **Table of Contents**

SECTION 1: SAFETY	1
SECTION 2: INTRODUCTION Manual Contact Info	2
SECTION 3: PARTS INVENTORY	-
SECTION 4: ASSEMBLY Sanding Body   Sanding Neck Masking Tape Areas   Masking Tape Areas Painting/Finishing   Mounting Tuners Mounting Neck   Positioning Pick Guard Positioning Pick Guard   Tremolo Bridge 1   Strap Button 1   Audio Jack 1   Winding Strings 1   Mounting Pick Guard 1   Mounting Back Plate 1	5566789012234
SECTION 5: SET UP   1     General   1     Neck Adjustment   1     String Height   1     Pick Up Height   1     Tremolo Arm   1     Tuning   1     SECTION 6: REFERENCE INFO   1	5 5 7 7 8
Accessories	

# **SECTION 1: SAFETY**

# **A**WARNING

Always wear safety glasses or goggles when operating equipment. Everyday glasses or reading glasses are not safety glasses. Be certain the safety glasses you wear meet the appropriate standards of the American National Standards Institute (ANSI).

Because there are various ways to cut and join wood, you can make substitutions for the methods stated in this plan. We try to suggest the easiest methods possible. However, only you know your skills with each piece of machinery. Never compromise your safety by using a cutting method with which you are not comfortable. Instead, find an alternative approach that will yield the same result.

### **A**WARNING

These instructions assume that you are intimately familiar with the safe operation and use of woodworking machinery and woodworking tools, and that you understand the techniques used to build this project. If you do not qualify for both of these criteria, **STOP building this project for your own safety.** Read and understand the owners manual for the machinery you intend to use, take a woodworking class or visit your local library for more information. Woodworking machinery and tools are inherently dangerous because they use sharp edges that can cause serious personal injury including amputation and death. Do not underestimate the ability of these tools and machinery to cause injury. Never operate any tool without all guards in place and always wear approved safety glasses. For your own safety, please heed this warning.



# **SECTION 2: INTRODUCTION**

### Manual

We are proud to offer the Model T24830 Left-Handed Electric Guitar Kit. This kit is part of a growing Grizzly family of fine woodworking products. When assembled according to the guidelines set forth in this manual, you can expect years of enjoyment from this guitar.

We are pleased to provide this manual with the Model T24830. It was written to guide you through assembly, review safety considerations, and cover general information. It represents our effort to produce the best documentation possible.

If you have any comments regarding this manual, please write to us at the address below:

Grizzly Industrial, Inc. <sup>c</sup>/<sub>0</sub> Technical Documentation P.O. Box 2069 Bellingham, WA 98227-2069

# 

There is potential danger when operating woodworking machinery. Accidents are frequently caused by lack of familiarity or failure to pay attention. Use any machines with respect and caution to decrease the risk of operator injury. If normal safety precautions are overlooked or ignored, serious personal injury may occur.

# 

No list of safety guidelines can be complete. Every shop environment is different. Always consider safety first, as it applies to your individual working conditions. Use tools and any machinery with caution and respect. Failure to do so could result in serious personal injury, damage to equipment, or poor work results.

### **Contact Info**

Most importantly, we stand behind our products. If you have any questions or parts requests, please call or write us at the location listed below.

> Grizzly Industrial, Inc. 1203 Lycoming Mall Circle Muncy, PA 17756 Phone: (570) 546-9663 Fax: (800) 438-5901 E-Mail: techsupport@grizzly.com Web Site: http://www.grizzly.com

The specifications, drawings, and photographs illustrated in this manual represent the Model T24830 as supplied when the manual was prepared. However, owing to Grizzly's policy of continuous improvement, changes may be made at any time with no obligation on the part of Grizzly. For your convenience, we always keep current Grizzly manuals available on our website at www.grizzly.com.

### NOTICE

WE STRONGLY RECOMMEND that you read books, review industry trade magazines, or get formal training before beginning any projects. Regardless of the content in this section, Grizzly Industrial will not be held liable for accidents caused by lack of training.

# **SECTION 3: PARTS INVENTORY**

Qty

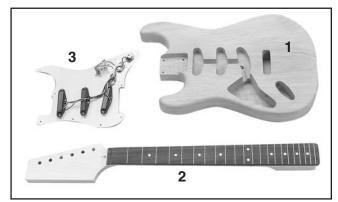
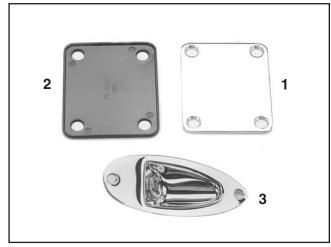


Figure 1. Boxed components.

#### **Boxed Components**

- Guitar Body .....1 1.
- Guitar Neck ......1 2.
- 3. Pickguard.....1





#### Bag 1

- Qtv Silver Neckplate ......1 1. 2. Black Neckplate Setter ...... 1
- 3. Audio Output Jack.....1

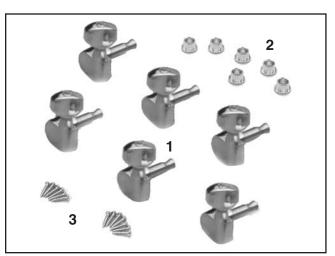


Figure 3. Bag 2 components.

#### Bag 2

- Qty 1. Tuning Machines ......6
- Bushings......6 2.
- 3. #1 x <sup>5</sup>/<sub>32</sub>" Phillips Head Screws...... 12

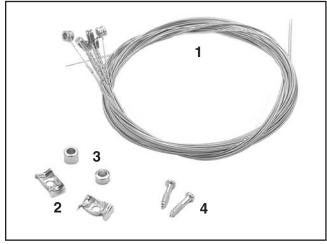


Figure 4. Bag 3 components.

### Bag 3

- 1. String Set.....1
- String Guides.....2 2.
- 3. 4.
- #2 x 3/8" Phillips Head Screws ...... 2



Qtv



Figure 5. Tremolo bridge.

Bag 4	Qty
Tremolo Bridge	1



Figure 6. Audio patch cable.

Bag 5	Qty
Audio Patch Cable	1

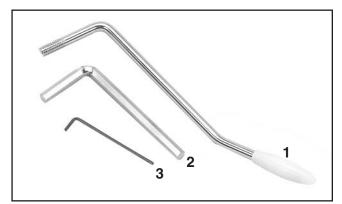


Figure 7. Bag 6 components.

#### Bag 6

1.	Tremolo Arm	1
2.	5mm Hex Wrench	1
3	15mm Hey Wrench	1



Figure 8. Bag 7 components.

Bag	7	Qty
1.	Springs	3
2.	Spring Hanger	1
3.	Strap Buttons	2
4.	String Nut	1
5.	#4 x 3/8" Flat Head Screws	20
6.	#10 x 1 <sup>3</sup> / <sub>4</sub> " Flat Head Screws	4
7.	#7 x 1 <sup>1</sup> / <sub>2</sub> " Flat Head Screws	2
8.	#4 x 1" Phillips Head Screws	6
9.	Back Plate	1

## **Supplies/Tools**

Most of the wooden components in this kit are fully machined from the factory and are ready for assembly. A small amount of drilling, sanding, and light machining need to be performed to complete the guitar.

### **Recommended Tools & Supplies:**

- Phillips Screwdriver
- Needle-Nose Pliers
- Electric Drill
- Drill Bit Set
- Soldering Iron & Solder
- Aluminum-Oxide Sanding Paper #180, #240 and #320
- Sanding Block
- Masking Tape
- Painting/Finishing Supplies
- Coat Hanger
- C-Clamp
- Hex Wrench 5mm (supplied)
- Hex Wrench 1.5mm (supplied)
- Tack Cloth
- Coping, Jig, or Scroll Saw (optional)

Qty

# **SECTION 4: ASSEMBLY**

### **Sanding Body**

The guitar body has been machined and rough sanded at the factory. A light coat of sanding sealer has been applied to protect the guitar parts from moisture. It is necessary to sand the body before finishing.

#### To sand the guitar body:

- 1. Wear an ANSI-approved dust mask and safety glasses when sanding wood!
- 2. Using either an electric palm sander or a sanding block, sand the guitar body (EXCEPT the guitar neck notch and other recessed areas) with #180 grit aluminum-oxide sanding paper until there is a consistent scratch pattern on the entire surface.
- **3.** Sand the guitar body with a #240 grit sanding paper until there is a consistent scratch pattern on the entire surface.
- 4. Sand the guitar body with a #320 grit sanding paper until there is a consistent scratch pattern on the entire surface.
- 5. Wipe the guitar body with a damp cloth. Wiping the workpiece with a damp cloth before the final sanding helps to "raise" the wood grain; thus, allowing the "raised" grain to be sanded smooth.
- 6. Once the guitar body is dry, repeat Step 4.
- 7. Wipe the guitar body with a tack cloth to remove all remaining sanding dust.

### **Sanding Neck**

Like the guitar body, the guitar neck is mostly complete from the factory; however, the neck headstock can be customized to reflect personal taste. Additional cutting, inlay, or design work can give an otherwise ordinary guitar that custom look that sets it apart from others!

**Note:** Take your time with this sub-section and consider testing ideas in scrap wood before performing the work on the actual headstock.

#### To sand the guitar neck:

- 1. Wear an ANSI-approved dust mask and safety glasses when sanding wood!
- 2. Perform any custom cutting, inlay, or design work to the neck headstock.
- 3. Using the sanding technique described in the previous sub-section, sand the entire guitar neck, EXCEPT for the fingerboard surface (see Figure 9, on Page 6).

**Note:** Sanding the fingerboard will affect the playability of the guitar, and could lead to unrepairable damage.



## **Masking Tape Areas**

In preparation for the finish coating, the following parts of the guitar (see Figures 9 & 10) need to be covered with masking tape:

- Neck Pocket
- Fingerboard
- Truss Rod Cut-Out

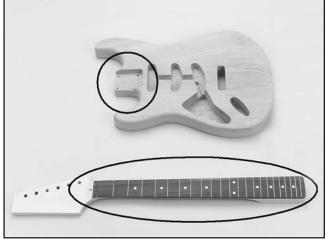


Figure 9. Neck pocket and fingerboard areas.

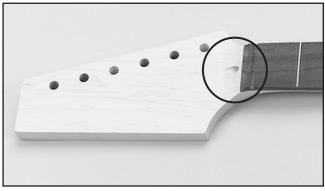


Figure 10. Truss rod area.

Use a small stick of wood to carefully press all the masking tape edges securely to the guitar pieces. The finish coat can seep under these edges, especially near corners, uneven edges, and where the frets meet the fingerboard.

**Note**: Failure to correctly mask off these areas could result in unrepairable damage to the guitar.

# **Painting/Finishing**

Painting and finishing supplies are not supplied with the guitar kit.

**Note**: The guitar body is made from alder wood and the neck from maple wood. Clear finishes such as lacquer look exceptionally stunning and glossy on these nice types of wood.

### Painting/Finishing Tips:

- Always work in a well ventilated area when using finishing materials.
- Wear an ANSI-approved respirator mask and safety glasses when using finishing materials!
- Fabricate hooks from shirt hangers to suspend the guitar components during the finishing process.
- Several thinner coats usually produce a nicer finish than one heavy coat.
- Dust particles suspended in the air will settle on wet finishes, resulting in less than satisfactory results. To avoid this problem:
  - **a.** Leave the room where the finishing will take place completely undisturbed for 24 hours prior to applying the finish.
  - **b.** Have the guitar components positione for the finish application upon entering the room.
  - **c.** Avoid making unnecessary movement upon entering the finish room.
  - **d.** Apply the finish to the desired guitar parts and immediately leave the finish room.
  - e. DO NOT return to the room until the specified drying time has elapsed.

**Note:** Always follow the finish manufacturer's instructions.



## **Mounting Tuners**

#### To install the tuners:

1. Slide each of the six bushings into the predrilled holes through the front face of the headstock.

**Note:** If you have trouble inserting the bushings, turn a drill bit by hand in the top of the hole to widen it just enough to insert the bushings. You can also use a deadblow hammer or a dowel in a drill press to press the bushings into the tuner mounting holes.

- 2. Slide each of the tuning machines through the bushings from the back face of the head-stock.
- **3.** Align the tuning machines, secure their position on the headstock with masking tape, and mark the mounting holes.
- 4. Remove the tuners.
- Fasten a <sup>7</sup>/<sub>16</sub>" thick wood shim with tape on the top side of the peghead near the tip (see Figure 11). This will help stabilize the neck during the next step.

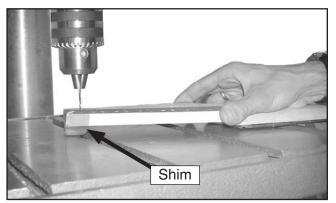


Figure 11. Peghead supported with shim.

6. Using a <sup>1</sup>/<sub>16</sub>" drill bit, drill <sup>3</sup>/<sub>8</sub>" deep holes into the back of the peghead (see **Figure 11**).

**Note:** Drilling the holes deeper than  $\frac{3}{8}$ " could result in drilling out through the front face of the headstock.

7. Insert the tuners into the bushings and mount them with the #2 x 3/8" screws, as shown in **Figure 12**.

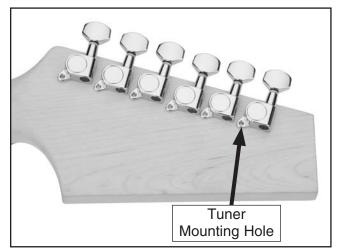


Figure 12. Tuners aligned to edge of headstock.



# **Mounting Neck**

### To attach the neck to the guitar body:

- Remove the masking tape from the neck 1. pocket.
- 2. Place the neck into the neck pocket (Figure 13).

Note: Make sure the neck is fully seated into the neck pocket. No gaps should be visible between the neck and the body.

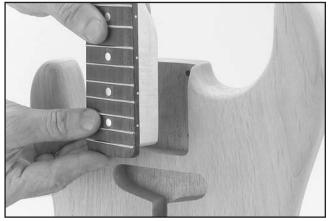


Figure 13. Fitting neck into neck pocket.

- 3. Hold the neck to the body with a C-clamp.
  - -If the back side of the fingerboard does not sit flush against the guitar body, then lightly sand the neck pocket, so the neck fits snugly.
- 4. Using a <sup>5</sup>/<sub>32</sub>" drill bit, drill 1<sup>3</sup>/<sub>4</sub>" deep holes straight through the four holes in the back of the body (see Figure 14).

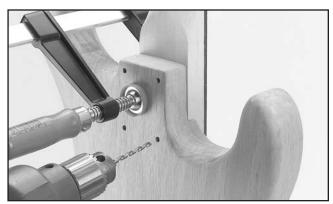


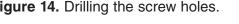
Figure 14. Drilling the screw holes.

Note: Drilling the holes deeper than  $1^{3}/4^{"}$ could result in drilling out through the fingerboard.

- 5. Place the black neckplate setter and the silver neckplate over the holes on the back of the guitar body.
- Secure the neckplate assembly, the guitar 6. body, and the neck together with the included 1<sup>3</sup>/<sub>4</sub>" wood screws (see Figure 15). DO NOT use glue.



Figure 15. Correctly attached neck.





### Positioning Pick Guard

To position the pick guard on the guitar body:

1. Push one white and one black wire through the hole shown in **Figure 16**.



Figure 16. Pick guard wires.

2. Push the remaining black wire through the hole shown in **Figure 17**.

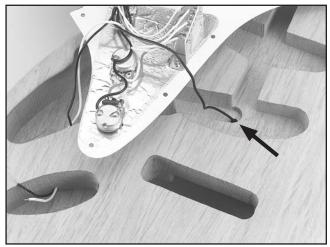


Figure 17. Pick guard wire.

- **3.** Secure the wires with masking tape so they do not fall back out through the holes.
- 4. Align the pick guard on the guitar body, as shown in **Figure 18**. Pay special attention to the neck cutout alignment on the body.



Figure 18. Pick guard alignment.

- 5. Secure the position of the pick guard to the body with masking tape.
- 6. DO NOT drill the screws at this time! Final adjustments need to be made after installing and winding the strings.

# **Tremolo Bridge**

To attach the tremolo bridge to the guitar body:

1. Place the tremolo bridge in the cut-out shown in **Figure 19**.

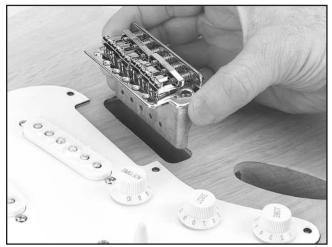


Figure 19. Tremolo bridge placement.

**2.** The tremolo bridge is correctly positioned when the distance between the center of the 12th fret and the front edge of the tremolo bridge are precisely 12<sup>7</sup>/16<sup>°</sup> apart (**Figure 20**).

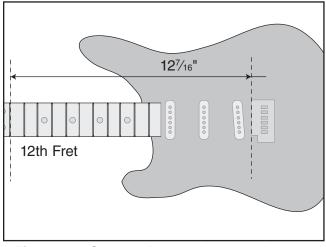
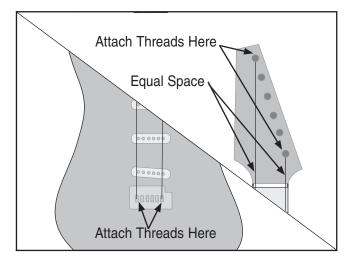
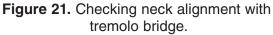


Figure 20. Correct distance between the 12th fret and the tremolo bridge.

- **3.** Attach pieces of sewing thread to the 1st and the 6th machine head and tape the opposite ends to the 1st and 6th positions of the tremolo bridge.
- 4. Adjust the tremolo bridge so there is an equal amount of space between the fingerboard edges and the threads (see **Figure 21**).





- 5. When all adjustments are correct, secure the position of the tremolo bridge to the guitar body with masking tape.
- 6. Using a <sup>3</sup>/<sub>32</sub>" drill bit, drill <sup>1</sup>/<sub>2</sub>" deep holes straight through the six holes in the tremolo bridge (see **Figure 22**).

**Note:** Drilling the holes deeper than 1" could result in drilling out through the back of the guitar body.

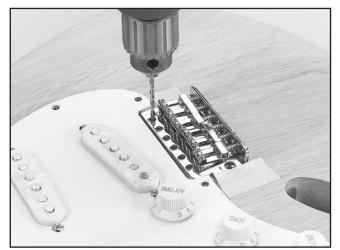


Figure 22. Drilling the bridge mounting holes.



- 7. Secure the tremolo bridge to the guitar body with the included six 1" wood screws.
- 8. Flip the guitar body over and place the spring hanger in the cavity, as shown in **Figure 23**.

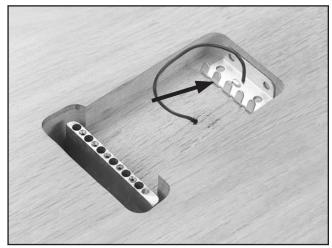


Figure 23. Spring hanger placement.

- **9.** Secure the position of the spring hanger to the guitar body with masking tape.
- **10.** Using a  $\frac{1}{8}$ " drill bit, drill  $\frac{11}{2}$ " deep holes straight through the two holes in the spring hanger (see **Figure 24**).

**Note:** DO NOT drill the holes deeper than  $1^{1}/2^{"}$ .

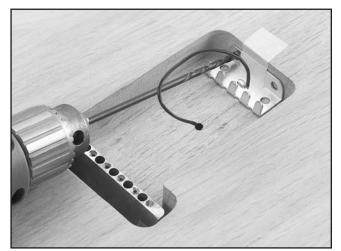


Figure 24. Drilling the spring hanger mounting holes.

- **11.** Solder the black wire to the spring hanger.
- **12.** Secure the spring hanger to the guitar body with the included two 1<sup>1</sup>/<sub>2</sub>" wood screws.
- Hang the three springs from the spring hanger to the tremolo bridge, as shown in Figure 25.



Figure 25. Correct spring placement.

# **Strap Buttons**

The strap buttons are positioned on the guitar, as shown in **Figure 26**.

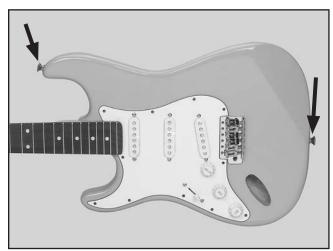


Figure 26. Location of strap buttons.

### To attach the strap buttons to the guitar body:

- **1.** Using a <sup>3</sup>/<sub>32</sub>" drill bit, drill <sup>3</sup>/<sub>4</sub>" deep holes at each of the mounting locations.
- 2. Secure the strap buttons to the guitar body with the included two <sup>3</sup>/<sub>4</sub>" wood screws.

Model T24830 (Mfg. Since 9/12)



### **Audio Jack**

#### To attach the audio jack to the guitar body:

1. Solder the wires shown in **Figure 27** to the tabs on the audio jack.

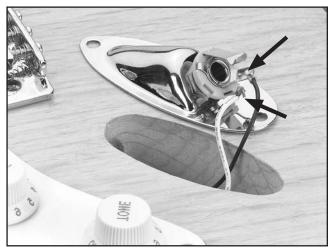


Figure 27. Soldered audio wire.

- 2. Turn the audio jack over and insert it in the cavity on the guitar body.
- **3.** Secure the position of the audio jack to the guitar body with masking tape.
- **4.** Using a  $\frac{3}{32}$ " drill bit, drill  $\frac{1}{2}$ " deep holes straight through the two holes in the audio jack.

**Note:** Drilling the holes deeper than  $\frac{1}{2}$ " could result in drilling out through the back of the guitar body.

5. Secure the audio jack to the guitar body with the included two  $\frac{1}{2}$ " wood screws.

# Winding Strings

The correct position of the guitar strings is shown in **Figure 28**. The thin High E string is called the "1st" string and the thick Low E string is called the "6th" string.

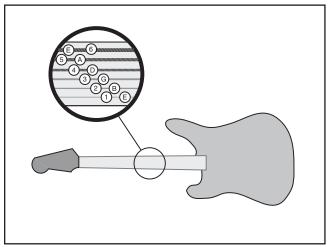


Figure 28. Correct string locations.

### To install the guitar strings:

1. Slide the 1st guitar string through the hole in the back plate (see **Figure 29**).

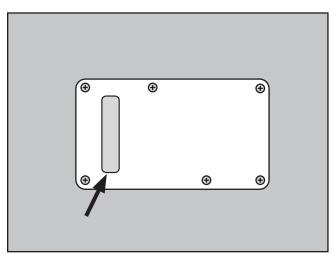


Figure 29. Back plate hole location.

- 2. Guide the string over the string saddle on the tremolo bridge, over the string nut, and through the string hole in the corresponding machine head.
- **3.** Allow only enough slack in the string for 2-3 rotations around the machine head.

**Note:** If too much slack is allowed, then the string could wind off the machine head after many successive rotations. If not enough slack is allowed, then the string may not hold the winding tension.

- **4.** Bend the string at a right angle across the edge of the machine head.
- **5.** Rotate the tuning machine until the string just begins to hold the winding tension.

**Note:** DO NOT tighten the strings beyond the initial tensioning at this time. Final tensioning should be completed during the string tuning process.

- 6. Use wire cutters to cut off the excess string.
- **7.** Repeat the above process for the remaining strings.

## **String Retainers**

The short string retainer mounts between the 1st and 2nd strings and the taller spring retainer mounts between the 3rd and 4th strings (see **Figure 30**).

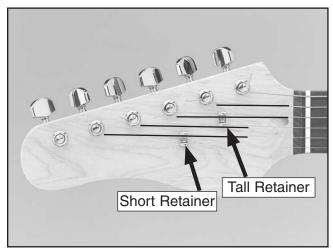


Figure 30. String retainer locations.

#### To install the string retainers:

- 1. Secure the position of the string retainers to the headstock with masking tape.
- **2.** Using a  $\frac{1}{16}$ " drill bit, drill  $\frac{1}{2}$ " deep holes straight through the holes in the string retainers.

**Note:** Drilling the holes deeper than  $\frac{1}{2}$ " could result in drilling out through the front face of the headstock.

**3.** Secure the string retainers to the guitar with the included two <sup>1</sup>/<sub>2</sub>" wood screws.



# **Mounting Pick Guard**

#### To secure the pick guard to the guitar body:

1. Position the pick guard so the 1st string is centered over the corresponding round metal pick-up peg, as shown in **Figure 31**.

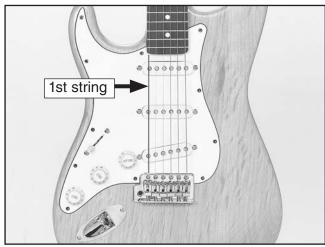


Figure 31. Pick guard mounting location.

- 2. Secure the position of the pick guard to the guitar body with masking tape.
- **3.** Using a  $\frac{3}{32}$ " drill bit, drill  $\frac{1}{2}$ " deep holes straight through the eleven holes in the pick guard.

**Note:** Drilling the holes deeper than 1/2" could result in drilling out through the back of the guitar body.

**4.** Secure the pick guard to the guitar body with the included eleven  $\frac{1}{2}$ " wood screws.

# **Mounting Back Plate**

Once mounted, the six holes in the back plate need to align with the six holes in the tremolo bridge. This will simplify the string installation and removal process.

#### To mount the back plate to the guitar body:

 Position the back plate over the cavity in the back of the guitar body, as shown in Figure 32.

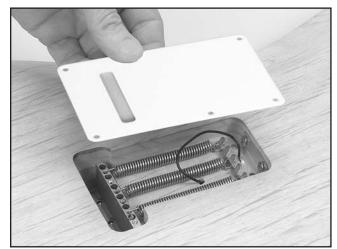


Figure 32. Mounting the back plate.

- 2. Secure the position of the back plate to the guitar body with masking tape.
- **3.** Using a  $\frac{3}{32}$ " drill bit, drill  $\frac{1}{2}$ " deep holes straight through the six holes in the back plate.

**Note:** Drilling the holes deeper than  $\frac{1}{2}$ " could result in drilling out through the front of the guitar body.

**4.** Secure the back plate to the guitar body with the included six  $\frac{1}{2}$ " wood screws.



# **SECTION 5: SET UP**

### General

Guitar set up is an art that requires skill, patience and experience. If you have the patience, you can acquire the skill and experience. If you don't have the patience, you may want to have your guitar set up by a qualified guitar technician.

This section presents an overview of setup practices. We highly recommended that you research more in-depth methods. Books on setting up electric guitars can be ordered through Grizzly Industrial, luthier supply catalogs, or may be available through your local library.

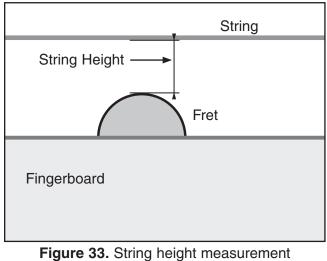
# **Neck Adjustment**

The guitar neck was adjusted perfectly straight before it was packaged; however, the moisture content of wood acclimates to the humidity of the surrounding environment. This characteristic results in movment of the wood components with regards to alignment. It is not uncommon for the neck to require adjustment several times each year, especially in regions where the seasonal climate changes are more drastic.

If your guitar neck is no longer straight, have it adjusted by a qualified guitar technician.

# **String Height**

Correct string height is crucial for maximizing the playability of your new ectric guitar. The string height is the distance between the top face of the fret and the bottom face of the string, as illustrated in **Figure 33**.



(side view).

Measurements are taken at the following locations.

**Note:** Use a steel ruler with a resolution of at least  $\frac{1}{64}$ ":

- 1st fret: 1st string, 6th string
- 12th fret: 1st string, 6th string



### To check the string heights of the 1st and 6th strings at the 1st fret:

1. Measure the string heights at the 1st fret (see **Figure 34**).

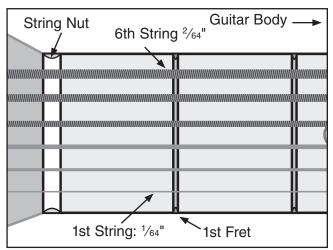


Figure 34. Correct 1st fret string heights.

- —If the string heights are correct (see Figure 33), then move to checking the string heights at the 12th fret.
- —If the string heights are incorrect at the 1st fret, this is an indication that the groove the string nut sits in needs to be either deepened or made shallower. This condition is most likely a result of wood movement due to humidity changes in the environment. We recommend having a qualified guitar technician raise or lower the nut before continuing with string height adjustment at the 12th fret.

To check the string heights of the 1st and 6th strings at the 12th fret:

1. Measure the string heights at the 12th fret (see Figure 35).

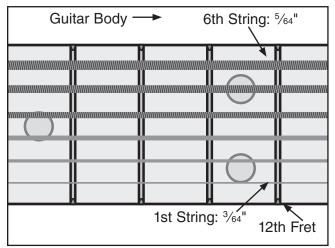


Figure 35. Correct 12th fret string heights.

- -If the string heights are correct, then continue to the next sub-section.
- -If the string heights are incorrect at the 12th fret, then continue to the next step.
- 2. With the supplied 1.5mm hex wrench, adjust the string saddle setscrews until the string heights are correct.
  - Turn the screws clockwise to raise the height of the string saddle; therefore, increasing the string height.
  - Turn the screws counterclockwise to lower the height of the string saddle; therefore, decreasing the string height.
- **3.** Adjust the middle strings so they gradually increase in height from the 1st string height through the 6th string height.

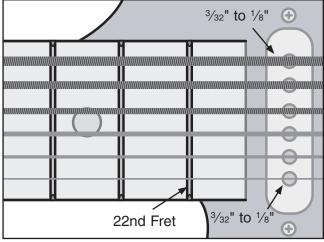
# **Pick Up Height**

Pick up height can have a dramatic effect on the audio output signal. The closer the strings are to the pick ups, the higher the audio output signal will be. This can be ideal unless the strings are close enough to cause distortion due to magnetic interference caused by the electronic components. The pick up height was adjusted correctly before it was packaged; however, future adjustments may be needed.

### To measure the string height at the pick up:

1. Measure the height of the 1st and 6th strings at the pick up while the strings are "fretted" at the 22nd fret (see **Figure 36**).

Note: Use a steel ruler with a resolution of at
least 1/32".



**Figure 36.** Correct string heights over the pick up while the strings are fretted on the 22nd fret.

- -If the string height is between <sup>3</sup>/<sub>32</sub>" and <sup>1</sup>/<sub>8</sub>", then the pick up is adjusted correctly. Continue to the next sub-section.
- -If the pick up does not fall within the above heights, then continue to the next step.
- With a Phillips head screwdriver, adjust the screws on each side of the pick up (see Figure 35) until the string heights are correct.
  - Turn the screws clockwise to raise the height of the pick up, therefore, decreasing the string height.
  - Turn the screws counterclockwise to lower the height of the pick up, therefore, increasing the string height.

### **Tremolo Arm**

Screw the tremolo arm into the mounting location shown in **Figure 37**.



Figure 37. Installing the tremolo arm.



# Tuning

Tuning is the most important concept of playing a guitar. If the guitar is not in tune with itself, or the other instruments in an ensemble, the resulting music will not sound pleasing to the ear. Having a good understanding of tuning is essential to maximizing the full potential of any guitar.

### Important issues to consider when tuning a guitar:

- Get into the habit of tuning the guitar every time it is picked up to be played.
- Always tune the strings "up." The final tuned tension of each string should be reached while tightening the string, not loosening it. If the string is tensioned too far, loosen the tension and tune "up" again.
- The goal when tuning is to make the strings in tune with one another. Standard tuning is shown in **Figure 38**.

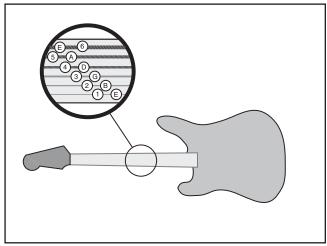


Figure 38. String tuning notes.

• The easiest way to tune a guitar is using an electronic tuner such as the Grizzly T23099 Chromatic Tuner shown on **Page 19**. However, knowing how to tune a guitar by ear is an important part of being an accomplished guitar player.

### To tune the guitar:

- **1.** Play a known Low E pitch. A piano, a tuning fork, or an electronic computer file will work.
- 2. Play an open (non-fretted) 6th string. The goal is to match the open 6th string to the known Low E pitch.
- **3.** Adjust the tuning peg until the pitch of the open 6th string sounds exactly like the known Low E source.
  - -If the string is tuned too high, back the tension off and retune the string back up to match the Low E pitch. Now the other strings can be tuned to the 6th string.
- 4. Next, the 5th string needs to be tuned. The tone of the 5th string must be matched to the tone of the 6th string by playing the same note on each string, one after another. This is done by playing the 6th string while it is being pressed (fretted) at the 5th fret, and immediately after, playing the open 5th string.
- 5. Listen to the two tones. As the two notes are still resonating, adjust the tuning peg of the 5th string until the two notes have matching tones. Remember to tune "up."
- 6. Perform the same tuning steps on the 4th and 3rd strings.
- **7.** When tuning the 2nd string, the 3rd string should be fretted at the 4th fret instead of the 5th fret.
- 8. Tune the 1st string in the same manner as the 6th, 5th, 4th, and 3rd strings.

# **SECTION 6: REFERENCE INFO**

### Accessories

### NOTICE

Refer to our website or latest catalog for additional recommended accessories.

### T23099—Chromatic Tuner/Metronome

This metronome/tuner is suitable for all electric and acoustic stringed instruments. It has an easyto-read LCD display and is able to tune notes: A, A#, B, C, C#, D, D#, E, F, F#, G, and G#. Seven beat settings and 5 rhythms make this versatile device a must for the novice or experienced musician.



Figure 39. T23099 Chromatic Tuner.

#### H4409—The Art of Inlay

This book is both a celebration of the art of inlay and a hands-on guide to its materials, tools and techniques. Includes over 70 color photos, diagrams, how to instructions and design insights from Larry Robinson. 112 pages.

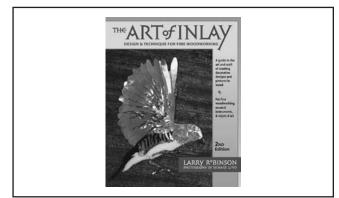


Figure 40. The Art of Inlay Book.

#### H4412—The Guitar Handbook.

The Guitar Handbook is the complete guide to playing the guitar — from simple chords to advanced improvisations. Its unique learning program combines step-by-step photographs with a chord dictionary containing over 800 easy-to-follow fingerings. It is also a comprehensive manual on guitar hardware and performance technology, sound equipment and special effects. 256 pages.

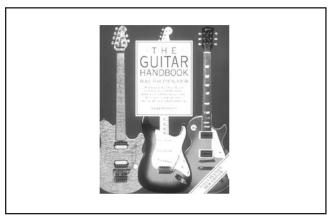


Figure 41. The Guitar Handbook.

### T21359—Guitar Finishing DVD

This DVD gives very specific instructions for finishing a guitar with aerosols. It shows the steps necessary for a toned finish, a sunburst effect, and a clear finish using Behlen Vinyl Sealer, Stringed Instrument Lacquer, Starcast Amber Guitar Toner, and Encore Brown Guitar Toner aerosols.

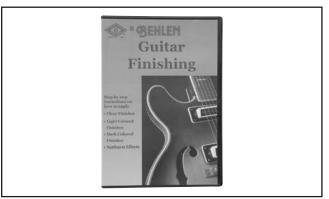


Figure 42. Guitar Finishing DVD.

### order online at www.grizzly.com or call 1-800-523-4777

Model T24830 (Mfg. Since 9/12)



H3901—Behlen Jet Spray™ Clear Lacquer– Flat

H3903—Behlen Jet Spray™ Clear Lacquer– Satin

H3937—Behlen Top Coat Lacquer - Satin H3938—Behlen Sanding Sealer, 13 Oz.

Behlen Master Top Coat Lacquer Sealer is an alcohol and water resistant, high solid nitrocellulose lacquer sealer. Use to seal and protect Behlen solvent based stains and other Master Aerosols. Master Topcoat Lacquer Sealer performs like a spray gun applied finish. 13 fl. oz. Cannot ship air.



Figure 43. H3938—BEHLEN Sanding Sealer

H0818—Fine Prepolishing Paste, 1.85 Lb. H4873—Medium Prepolish Liquid, 1 Qt. H0821—High Gloss Polishing Liquid, 1 Qt. Menzerna professional polishing compounds will remove any fine scratches from the finish and give your instrument the incredibly high gloss finish that you are looking for.



Figure 44. Menzerna polishing compounds.

H2499—Small Half-Mask Respirator H3631—Medium Half-Mask Respirator H3632—Large Half-Mask Respirator H3633—Disposable Cartridge Filter Pair H3635—Disposable Cartridge Filter Pair This lightweight elastomeric facepiece has cradle

This lightweight elastomeric facepiece has cradle suspension, easy adjust headstraps and low profile for greater field of vision and compatibility with normal use of glasses or goggles. Purchase cartridges separately depending upon intended application.



Figure 45. Half-mask respirator and disposable cartridge filters.

#### H5962—Guitar Stand-Electric/Archtop

- Stable stand keeps electric and archtop quitars safe yet accessible on stage or on display
- Folds up for easy transporting
- Three adjustable locking positions
- Padded protection at all contact points
- Non-slip rubber feet



Figure 46. Model H5962 Guitar Stand.

Download from Www.Somanuals.com. All Manuals Search And Download.



Buy Direct and Save with Grizzly<sup>®</sup> – Trusted, Proven and a Great Value! ~*Since 1983*~

Visit Our Website Today For Current Specials!





Free Manuals Download Website <u>http://myh66.com</u> <u>http://usermanuals.us</u> <u>http://www.somanuals.com</u> <u>http://www.4manuals.cc</u> <u>http://www.4manuals.cc</u> <u>http://www.4manuals.cc</u> <u>http://www.4manuals.com</u> <u>http://www.404manual.com</u> <u>http://www.luxmanual.com</u> <u>http://aubethermostatmanual.com</u> Golf course search by state

http://golfingnear.com Email search by domain

http://emailbydomain.com Auto manuals search

http://auto.somanuals.com TV manuals search

http://tv.somanuals.com