

Helix-Mount

Player's
Manual



Specifications

Weight : 7.5-10.5 lbs. (depending on tone ring)

Scale length: 26 3/8"

Neck width at nut: 1.28" (1.22" Athena & Moonshine)

Neck width at 22nd fret: ~2"

Bridge: Compensated Enterprise Bridge

Tailpiece: Nechville Inline Tailpiece

Head: 11" Medium crown

Head Tension: 92-93 on drum dial

Factory string sizes: GHS 10, 12, 14, 22, 10

Nechville Musical Products

9700 Humboldt Avenue
Bloomington, MN 55431

www.nechville.com

747-222-6567

sales@nechville.com

Since 1982, my goal has been to present the world's best banjo. The Heli-Mount was born in 1986, and my dream was fulfilled. Heli-Mount banjos are built with today's diverse musical styles in mind. The modular Heli-Mount system not only makes it easy to customize for different playing styles, but allows you to explore countless new options for tailoring your sound.

- Tom Nechville

Enjoy Your Heli-Mount!

Warranty

Nechville Musical Products warrants the Heli-Mount banjo against defects in material or craftsmanship for as long as it is owned by the original owner. If defective parts are returned to Nechville Musical Products, they will be repaired or replaced without cost, other than shipping costs. Any related labor that is required for repair or reassembly will be performed at no charge for the first year, and at one-half the usual shop charge for subsequent warrantee repairs.

Nechville Musical Products

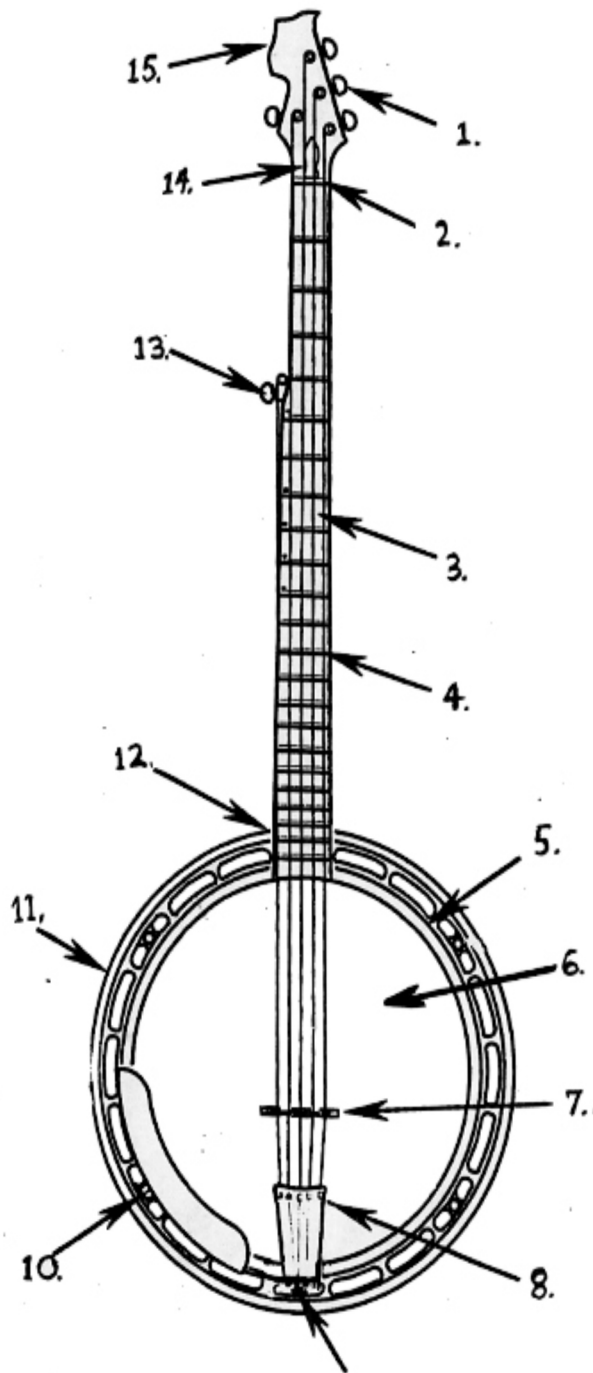
9700 Humboldt Avenue
Bloomington, MN 55431
612-275-6602
E-mail tom@nechville.com

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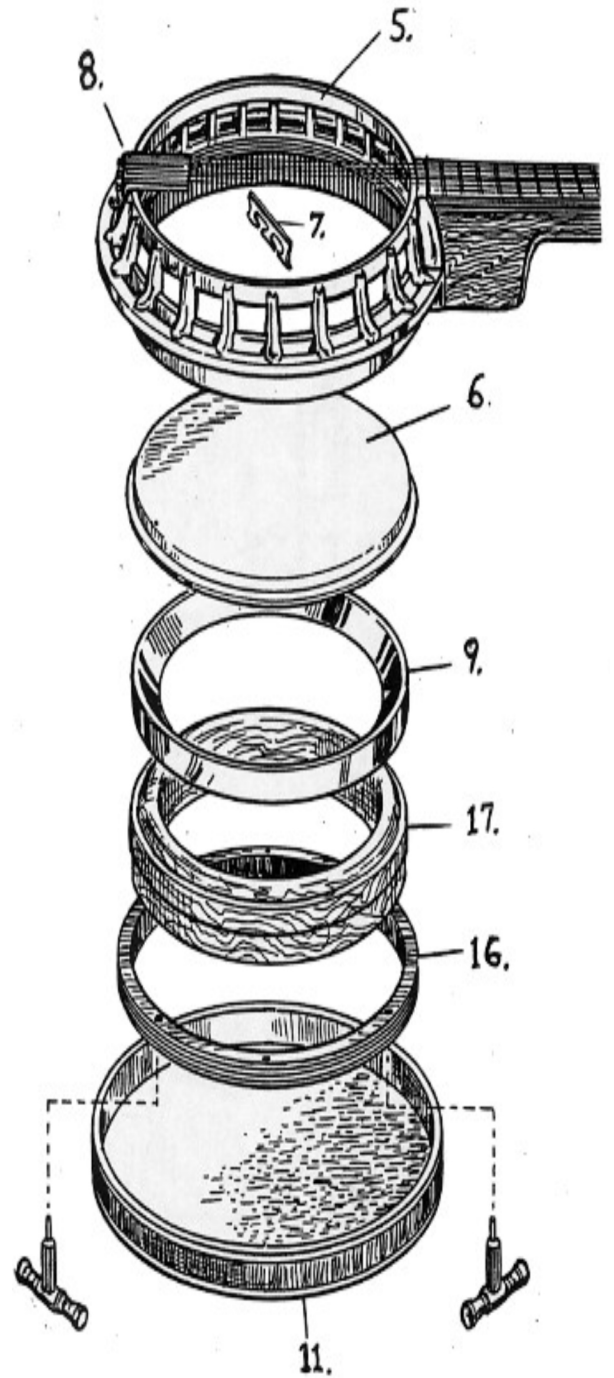
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Parts of the Heli-Mount Banjo

| | |
|----|----------------------|
| 1 | Tuners |
| 2 | Nut |
| 3 | Fingerboard |
| 4 | 12th Fret |
| 5 | Heli-Mount Frame |
| 6 | Head |
| 7 | Bridge |
| 8 | Tailpiece |
| 9 | Tone Ring |
| 10 | Armrest |
| 11 | Resonator |
| 12 | Neck Interface |
| 13 | 5th String Tuner |
| 14 | Truss Rod Cover |
| 15 | Peghead |
| 16 | Threaded Flange Ring |
| 17 | Wood Rim |



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Introduction

The innovative 2 piece Heli-Mount design eliminates about seventy movable parts in conventional banjos. Adjusting or removing the Heli-Mount banjo head or tone ring is as easy as turning a wrench. Uniform head tension is automatic.

Further, metal hardware no longer touches the instrument's tone components, which allows a fuller, richer banjo sound.

In all, the Heli-Mount's patented design makes all adjustments extremely accurate as well as simple: **No more rods, hooks, nuts, or broken heads!**

The Heli-Mount's neck can be adjusted or removed with a simple Allen wrench. This unique feature provides a solid neck-to-body contact and adjustability without a sacrifice in tone.

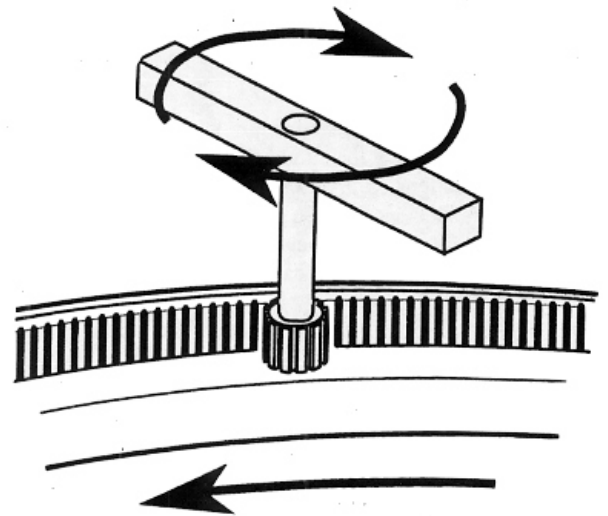
The neck action adjustment eliminates the risk of rim warpage, and the cumbersome shim compensations often necessary with traditional banjo models. It can also provide higher action settings for clean hammer-ons and pull-offs and to avoid fret rattles during hard picking.

The Heli-Mount's improved Nechville/Price self-adjusting tailpiece greatly reduces the bridge stresses that often occur with other banjos.

Most Heli-Mount banjos feature a compound radiused fingerboard with a properly compensated bridge for easier playability and more accurate intonation. Contact Nechville for additional information about customizing your banjo with built-in electrics or alternative tone components.

Nechville Musical Products also offers professional amplification packages for your Nechville Heli-Mount banjo. Our dual source Warp Drive pickup relays an accurate and detailed acoustic signal complete with all of the freedom that a pickup offers.

We also offer a fully electric Comet banjo that opens up an entirely new world of banjo sound and power, letting you tailor your sound to your mood and whatever sounds you have in your head.



Maintenance

Head Adjustment and Replacement:

1. If you plan to change the head, loosen the strings just enough to remove the **bridge** and follow steps 1 through 12. For simply adjusting head tension, follow steps 2-4.
2. Remove the **resonator fastening screws**, and carefully remove the **resonator**. Then place the banjo face down in your lap for steadier handling and to prevent scratching.
3. Flushly fit the pinion wrenches into opposing holes of the **threaded flange ring**. Make sure wrenches go all the way into the flange holes.
4. Loosen the head by turning the pinion wrenches clockwise. Tighten it by turning wrenches counter-clockwise. Considerable force applied equally to each wrench is required to move the threaded flange ring when head is at or near playing tension. Brighter tone increases with higher head tension. (See Figure 3).



Attention



Be sure to fully insert both pinion wrenches provided before adjusting head tension. If wrenches don't fall all the way into their holes, gently tap them down until they are fully seated. Use equal force in the same direction with both wrenches simultaneously.

5. After removing the Heli-Mount retaining ring, be careful not to nick or bend its threads or the threads of its housing component, as this may impede the smooth operation of the Heli-Mount.

6. Remove the **rim** and the **tone ring** to gain access to the **head**. It is easiest to grab from the inside of the tone ring and pull out the entire tone ring/rim assembly. Be aware that there may be up to 80 ball bearings inside the tone ring, so always lay the tone ring top-side-down before separating it from the rim or you might spill the balls.

7. When the Heli-Mount is disassembled, clean out the thread grooves and gear with a toothbrush. Using the toothbrush or a rag, apply Heli-mount grease or oil to the helical internal thread of the Heli-Mount frame, if desired.

8. When replacing a head, make sure that the head's outer bead is flush against the tension ring and is clear of the screws on the tailpiece. (**Note:** Remo medium crown heads are recommended, but any 11-inch medium or high crown head will do. High crown heads give higher string action than lower crowns do).

9. Carefully replace the tone ring and the rim, seating the tone ring firmly down into the head. (**Note:** If you have a custom model with pickups, you should now align the rim for proper pickup remounting).

10. When all other components are in place, you may begin threading in the Heli-Mount tension ring. Note that it is best to first back-thread the tension ring by hand (counter-clockwise) until its threads seat evenly with the threads of the housing component. When you are confident that the threads will engage properly, you may

begin threading the flange ring in by hand (The flange ring itself tightens clockwise while the wrenches turn counter-clockwise).

11. Once the hand threading becomes difficult, completely seat the pinion wrenches into opposite holes of the tension ring for tightening. Turn both wrenches counter-clockwise until turning becomes difficult. Apply equal torque with both pinion wrenches and continue twisting until head is tight.

Finding Optimum Head Tension

Brilliance and volume will generally increase with higher tension. For Bluegrass, you'll want a tight head. It should not yield from pressure, but flex slightly when pushed in. Many players "tap test" the head listen to its pitch. G sharp is a good tension to strive for, but it is difficult to detect a specific pitch from a head. After having encountered stiff resistance from the wrenches, you still may find that the head still needs more tightening. If wrenches are plugged all the way into their holes, the Heli-Mount is designed to withstand the torque needed for even the brightest of tastes. You will eventually reach the point where additional tension does no good and you will want to back off the tension until some warmth returns to the tone. After setting the desired tone, remount the resonator and replace the resonator screws. In order to properly judge your setup, you may want to reevaluate and re-adjust after playing a day or two. Once your optimum tension is reached, it should remain there indefinitely. *We recommend using a drum dial and setting the tension to 92-93.*

Bridge Replacement

(Note: Read this carefully as it is crucial that the bridge placement is correct in order to obtain the best performance from your banjo).

1. For best results, use only the compensated Enterprise bridge available from our factory.

2. Measure 13 3/16" down from the 12th fret to the head. Place and hold the bridge at that location with string tension.

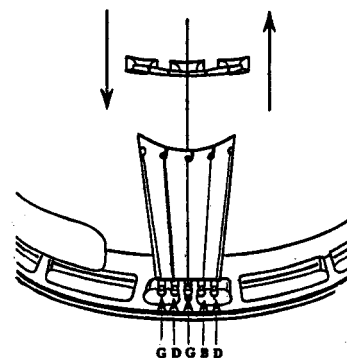
(Note: To fine tune the bridge setting, use a harmonic technique called "chimes").

3. Lightly touch the 3rd string above the 19th fret while plucking. This clear ringing sound is called "chimes" or "harmonics".

4. Play the string again while fretting the 19th fret just behind the fret wire. If these two notes are exactly the same, your bridge is set correctly.

5. If the fretted note (from Step 4) is higher than the harmonic note (in Step 3), move the bridge slightly toward the tailpiece. If the fretted note is lower than the harmonic note, move the bridge slightly away from the tailpiece. In each case, repeat Steps 3 and 4 until both notes are exactly the same.

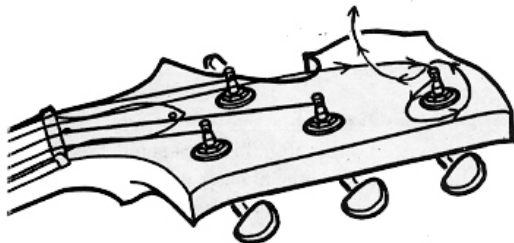
6. Once the proper bridge location is found, it is suggested that you lightly mark the bridge position on the head with a pencil. This is to insure the proper setting of the bridge in event that it is knocked out of place.



String Replacement

(Note: To insure that bridge placement is not disturbed, it is suggested that string replacement is done one string at a time).

1. After removing the first string, you may rub some pencil lead into the slot of the nut, allowing the string to slide more easily into tune.
2. After running the string through the tailpiece and over the bridge and nut, pass the string through the peg hole from the center of the peghead toward the outside.
3. Leaving a little slack in string length, kink the free end of the string in the opposite direction (forming a figure "S" or a reverse "S." Pass the free end under the existing string length and pull it up trapping it between the string and the tuner post.
4. Remove any slack by pulling on each section of the string, turn tuner knob until slack is taken up. Make sure the strings come off the inner side of the tuner post.
5. Repeat above process with remaining strings.



Tailpiece Adjustment

The Nechville tailpiece comes adjusted for your banjo from the factory. If desired, the 2 small mounting Allen screws can be re-adjusted to angle tailpiece left or right. Tighten right screw to orient tailpiece toward right. Tightening left screw angles tailpiece to left.

Larger screw in end of tailpiece is the break angle adjustment screw. Putting pressure on this screw lowers tailpiece, increasing break angle and focusing the sound. The Heli-Mount works well with this screw left without much tension, but not rattling for the fullest tone.

Neck Adjustments (Action Adjustment)

1. Before attempting to adjust the neck, first make sure that the head is tight and then test the action by measuring the clearance between the top of the **12th fret** and the bottom of the string. Low action is around a 1/8 inch gap. Any less is too low.

Note: Remember that tightening the head also raises the action, so does loosening the truss rod. See Pages 11 and 17.

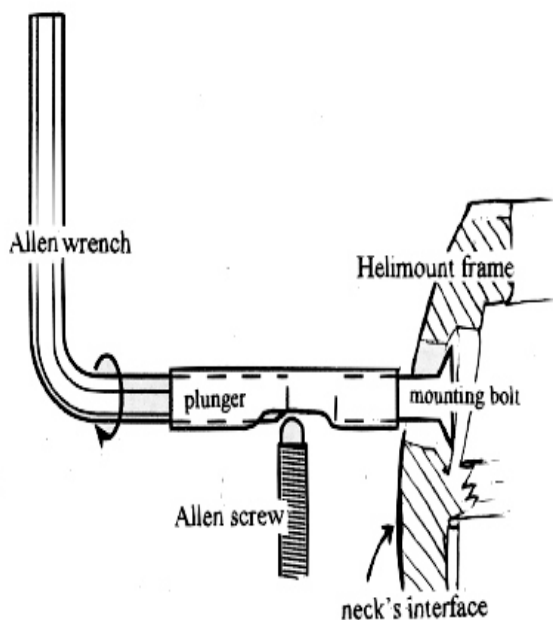
2. If you want to raise the action via the Allen screw heel adjustment, carefully turn the body over and place in your lap. Use a 5/32 inch Allen wrench and loosen the neck. It may slide forward. Hold the neck in the desired position, and lock it in place by retightening the Allen screw. (See Figure 6).

Important Note: If the Allen screw goes in all the way and the neck is still loose, the neck should be removed and the anvil in the plunger will need to be screwed exactly one turn in, with the 5/32 inch Allen wrench. See following

illustration and video online.

3. If you want to lower the action, you must first loosen the strings slightly before following the procedure in Step 2.

4. If you wish to remove the neck, simply back out the Allen screw about 1/4 inch, remove the tailpiece, and pull the neck free from its anvil and plunger mounting assembly.



Notes: plunger should not be tightly fastened to the mounting bolt in order to allow for neck movement along the full range. Allen wrench shown is not to scale and is the same tool for adjusting main Allen screw on heel.

Truss Rod Adjustments

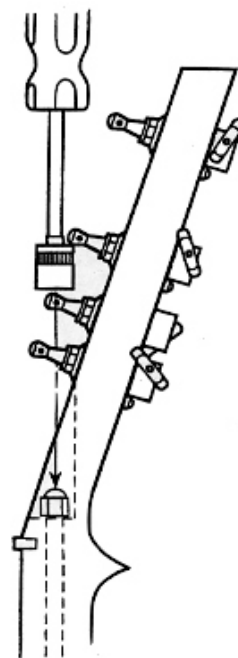
The truss rod is used for adjusting the amount of bow in the playing surface of a neck. A properly adjusted neck should not be back bowed or even perfectly flat. For clean tone it is best to have a small amount of forward bow.

Note: It is important to read all instructions first.

Before attempting to do any truss rod setting, you should know that banjo necks are sensitive and potentially breakable. If you have tried all other neck action adjustments and the action is still impeded by an improper neck bend, carefully follow the steps below. (If you are not comfortable with truss rod adjustments, it is suggested that you take your Heli-Mount to a reputable repair shop.

1. Test the truss rod setting by placing a capo just above the 1st fret while holding the string down at the 22nd fret and measuring the clearance between the top of the 7th fret and the bottom of the string. The clearance should be approximately the thickness of one or two business cards. (Remember that overall string action adjustments are done at the Heli-Mount/neck interface).

2. Remove the **truss rod cover** and find a 1/4" nut driver that will fit in the truss rod access hole.



3. Carefully set your banjo on a sturdy padded surface, with the peghead facing toward you and the neck facing away. With the 1/4 inch socket wrench or nut driver, engage the truss rod nut. (See Figure 8). Turn the nut only slightly, about one eighth to one quarter of a turn. Again test the neck bow as described above, and do so with each successive adjustment. It is also possible to view down the edge of the fingerboard and actually see the amount of bow changing.

Troubleshooting

Loose Neck

If there is any play in the neck, follow the directions in the second paragraph of the “Neck Adjustments” section on Page 16.

Note: If the Allen screw goes in all the way and the neck is still loose, the neck should be removed and the anvil in the plunger will need to be screwed exactly one turn in with the 5/32 inch Allen wrench. (See Figure 6 on Page 16). If the neck is still loose, it is suggested that the entire plunger be tightened to its mounting bolt. (If access from the inside of the Heli-Mount frame is needed refer to Steps 1 through 12 on Pages 11 through 13).

Before attempting to adjust the neck, first test the action by measuring the clearance between the top of the 22nd fret and the bottom of the string. Low action is considered .090” at the 12th fret (between fret and string) *with the first fret held down*. Any less is too low.

Buzzes

If there are any buzzes during hard picking, hammer-ons, or pull-offs, your action is too low. Follow Steps 1 and 2 in the “Neck Adjustments” section on Page 16. Very rarely you may encounter a high or low fret as the source of your

problem. Have frets examined by a qualified luthier for dressing or possible replacement.

Action Check

Follow the procedure in Step 1 of the “Neck Adjustments” section on Page 16. If neck is improperly bowed, see “Truss Rod Adjustment” on Page 16.

If the bow is adequate but the action is too low, carefully turn the body over and place it in your lap. Use a 5/32 inch Allen wrench to slightly loosen the neck interface for adjustment. Hold the neck in the desired position and lock it into place by retightening the Allen screw. (See Figure 6 on Page 15).

Off Pitch

If your banjo is off pitch when played up the neck, follow Steps 3 and 4 in the “Bridge Placement” section on Page 14. If your banjo is not equipped with a Nechville “Enterprise” compensated bridge, procuring one would help overall intonation.

Bridge Check

To check the bridge, use the “chimes” technique described in the “Bridge Placement” section on Page 14.

First lightly depress the 3rd string above the 12th fret while plucking. Next play the string again while fretting the 12th fret just behind the fret wire. If these two notes are exactly the same, your bridge is set correctly.

Rough or Protruding Fret Edges

During extreme dry spells, the neck wood may shrink leaving uncomfortable fret ends protruding. Consult a qualified repair person to file and polish the fret ends, while the weather is still dry.

Caring for Your Heli-Mount

Cleaning and Treating

(Note: Wood parts should be wiped off after playing to insure lasting beauty. Metal parts need only occasional dusting).

1. The head can be cleaned with a pencil eraser, or any mild household cleaner like 409. You can even use a scrub pad on tough stains, but take care not to scratch any wood or metal parts.
2. The fingerboard should be cleaned and moisturized with non-varnishing lemon or orange oil at least once a year. Preferably in the late fall. Treat the inside of the resonator the same way.
3. The finish on the neck and back of the resonator can be cleaned and buffed with a non-abrasive cotton cloth and distilled water. Small scratches can be polished out with a bit of automotive rubbing compound and a cotton cloth. Polish until the finish is smooth. Deep scratches will require professional attention. Periodically rub the inside of your resonator with lemon oil or a similar product to prevent drying out.
4. Metal parts may be plated, so it is important not to use abrasive polishes. You can use “Never Dull” non-abrasive cotton wadding to polish any nickel-plated parts intended to shine. It leaves a protective film that allows you to simply buff periodically with a clean cotton cloth. The Heli-Mount frame is powder-coated so cleaning is easy. Clean threads and gear with a toothbrush when disassembled and apply a bit of clean grease to the threads.

Storage

It is suggested that your banjo be stored in its

case when not in use. This is to avoid the potential exposure of extremes in temperature and humidity. Cases protect from these sudden changes by slowly graduating any climatic change.

Increased humidity swells and expands wood, while dry periods cause shrinkage. While the high-tech finish on your Heli-Mount is extremely durable, sudden changes in temperature or exposure to cold may cause problems with the finish of your banjo. Try to keep your instrument within temperature ranges of 60 to 80 degrees, and 35 to 60 percent humidity. Pay attention to weather reports forecasting sudden changes in humidity and dry periods.

Travel

When traveling, always keep your banjo in its case. If traveling by car, cover your case with a blanket to avoid its exposure to direct sunlight and sudden temperature changes. Do not store it in the trunk during sunlit days.

If traveling to dry areas, it may be wise to purchase a case humidifier. If you are going to travel by plane, it is best to have a hard shell case. When making reservations, ask about insurance and if special arrangements can be made to carry your banjo on the plane with you. Often times the banjo will fit in the overhead compartment and it is good to keep in mind that in many cases flight attendants will provide tailored assistance for you.