OME MAINTENANCE & SET UP MANUAL

May, 2020

INTRODUCTION

YOUR OME IS A PRECISION INSTRUMENT. It needs to be carefully **Maintained** and **Set-Up** for optimum tone, response, and playability. Banjo **Maintenance** is relatively simple and can readily be implemented. Banjo **Set-Up** is more of an **Art** and there is no substitute for experience in doing this. If you are not experienced in Banjo **Set-Up**, get the help of someone who is until you become familiar with the process.

PART ONE: BANJO MAINTENANCE

I. HUMIDITY & TEMPERATURE

- **EXTREMES & RAPID CHANGES IN HUMIDITY & TEMPERATURE can damage your banjo**. If possible, store your instrument within temperature ranges of between 50 to 80 degrees, and 30 to 60 percent humidity. Do not leave your banjo in excessively hot, cold, damp, or dry locations, and store the Banjo in it's case when not in use.

II. STORAGE, TRAVEL, & SHIPPING

- **STORE YOUR BANJO IN ITS CASE.** Your case protects your Banjo against rapid changes in temperature and humidity and also against accidental impact. When storing for long periods of time, loosen the strings.

- **AUTOMOBILE TRAVEL** Storing your Banjo in the trunk of a car is asking for trouble. Trunks can readily become an oven or icebox causing serious damage to your instrument. If you have to use the trunk for "out-of-sigh" storage, make sure the trunk is not exposed to the sun. If the banjo is in the passenger compartment, keep it out of the sun, or at least covered with a blanket or coat.

.

- **AIRLINE TRAVEL** If possible, carry your Cased Banjo on the plane and store it in the overhead compartment. If you have to "check" the Banjo as "luggage": 1) loosen the strings, 2) Secure the peghead and body of the banjo with padding so there is no instrument movement in the case, and 3) Use a "Padded Case Cover" over the Hard-shell case for added protection.

- **BANJO SHIPPING** If you must ship your banjo: 1) Loosen the strings and lay the bridge flat. 2) Tighten any Resonator screws. 3) Make sure there are no loose parts floating around inside your case. 4) Using bubble or foam padding, secure the peghead and body of the banjo so there is no instrument movement in

the case. And 5) Secure the case latches and insert the case into a heavy oversize cardboard carton with at least 2" padding on the top and bottom, and 1" padding on all sides, seal the box and insure.

III. LOOSE PARTS

- **PERIODICALY TIGHTEN ANY LOOSE PARTS** Banjo components can vibrate loose over time and use. Loose screws and nuts can cause loss of tone, lost parts, and even damage to your instrument. Periodically check the Bracket Nuts, Tuning peg screws, Resonator Thumb Screws, and make sure the Neck is secured solidly to the Rim with the Rim Rods. (See the Banjo **Set-Up** section for more detailed information on adjusting loose parts.)

IV. FINISH **Wipe off your Banjo and strings after use.**

- **LACQUER WOOD FINISH** OME Professional, Custom, and Artist Series banjos have a polished lacquer finish which can be cleaned and buffed with a non-abrasive cotton cloth. Small scratches can be polished out with an automotive polish. Deep scratches will require professional repair. (Do not use polish on satin finishes as this will result in uneven surface appearance.)

- **TUNG OIL WOOD FINISH.** OME Old-time and Vintage Series banjos have a Tung Oil finish (Except for curly maple, which has a satin lacquer finish). Any of our Tung oil finished banjo parts can have the finish renewed by applying, a **light coat** of furniture oil such as tung oil or lemon oil. This also works for OME fingerboards and resonator insides as well. **Be sure and wipe off all excess oil & wax within 5 minutes of application**.

- **NICKEL HARDWARE** Nickel plating is the most traditionally used banjo hardware finish. It has a rich, yellow-silver appearance that is durable, but it will tarnish in some environments. If the nickel hardware does tarnish, it can be brought back to looking almost like new with a nickel polish and buffing. Note: Nickel Hardware is not recommended for costal and industrial areas.

- **AGED BRASS HARDWARE** Aged Brass is now our most popular Hardware finish. It is achieved by oxidizing polished brass and has a greenish bronze color with touches of pinks and blues. With use, some oxidation will rub off over time but this can be renewed by touching up with a brass oxidizer.

- **CHROME & GOLD HARDWARE** Chrome is our most durable finish. It has a brilliant, bluish-silver color and and will not tarnish. Gold is rich and beautiful and will not tarnish, but it is relatively soft and will wear over time. **Never use an abrasive polish on Gold finish.**

PART TWO: BANJO SET-UP

Your OME was carefully **Set-Up** in our shop in Boulder, Colorado before we sent it out. However, with use and over time, components can move and your banjo's **Set-Up** can change. Generally, your banjo's **Set-Up** should be checked every 6 months or so to maintain optimum performance. In addition, because Banjos are very **Adjustable,** you might want to experiment with different **Set-Ups** to vary your instrument's tone, response, and playability.

Please remember, Banjo **Set-Up** is an **Art** and there is no substitute for experience in doing this. If you are not experienced in this Art, get the help of a knowledgeable player or luthier until you are comfortable with the adjustments.

I. NECK.

- **NECK ADJUSTMENT** There is an adjustable "**Tension Rod"** in every OME neck. Most musicians prefer for the Neck to have a slight **Up-bow.** The easiest way to check this, is to sight down the fingerboard edge from the nut to the rim. There should be a very slight **Up-bow.** A more precise way to check this, is to hold down the 3rd string on the first and last frets simultaneously. There should a space between the top of the 7th frets and the string that is about 0.15" – 0.20" or about the thickness of a business card. If this space is greater, the intonation may be off along the fingerboard. If the space is less, the strings may buzz.
- **For more up-bow**, (less buzz), loosen (counterclockwise) the neck tension rod nut under the peghead cover. **For less up-bow**, tighten (clockwise) the nut. When adjusting the tension rod nut, only do a 1/8 – ¼ turn at one time and **never over tighten.** If the adjusting nut is difficult to turn, aid the adjustment by bending the neck slightly in the desired direction while turning the adjusting nut. Remember, **too much torque can break the rod and ruin the neck**. If you're not experienced at this, get professional help.
- If your OME does not have the neck adjustment nut in the peghead, it is in the heel of the neck which requires removing the neck for adjustment. Otherwise the process is the same.

- **STRING NUT** Most String Nuts are made of bone and may wear over time causing a buzzing or duller sound on the open or unfretted string. If so, the nut slots may be too low or simply worn out. A luthier can revive the nut with a careful layer of super glue and bone dust in the slot and then reshaping the slot with a nut file. The nut slots should slope down towards the peghead. The 5th string nut can also be similarly maintained.

- **TUNING PEGS** OME Tuning Pegs are packed in grease and sealed and do not need lubricating. There is an adjustment screw at the knob end of the peg that can be tightened to keep the peg from slipping.

II. COORDINATOR & RIM RODS

- **BRASS RIM RODS** OME 26.25" scale necks are attached to the pot with two brass Coordinator or Rim rods. This connection should always be tight so the neck does not move. Should these rods become loose, they can be tightened by inserting a small allen wrench or nail into the rod's center hole and tightening the rod against the rim.
- The Coordinator rods can also be used to vary the string action slightly. **When the strings are too low**, loosed the outer rod's screw under the tailpiece nut, and tighten the 5/8" rod nut against the rim. When **the strings are too high**, loosen the 5/8" nut away from the rim and tighten the outside screw under the tailpiece nut, then retighten the 5/8" nut.. **Note: it's a mistake to use the rods for more than a minute action adjustment.** Any major changes in the playing action should be accomplished by changing the bridge, or by re-cutting the heel to the appropriate angle.

- **WOOD RIM RODS** OME 25.5" scale necks are attached to the pot with a round wood rim rod and a brass ball lug. This connection should always be tight so the neck does not move. Should the neck become loose, tighten the wood rim rod by hand, and tighten the Ball-lug by inserting a small allen wrench or nail into the lug's hole.
- The string action on banjos with a Wood Rim Rod can be varied slightly by adding or removing a washer at the tailpiece end of the rod. **When the action is too low add a washer**. **When the action is too high, remove a washer. Note: it's a mistake to use this method for more than a minute action adjustment.** Any major changes in the playing action should be accomplished by changing the bridge, or by re-cutting the heel to the appropriate angle.

III BANJO HEADS

- **HEAD ADJUSTMENT:** The Banjo's "Head" is essentially the "soundboard" of your instrument and greatly effects tone. Generally, the tighter the head, the **brighter** the sound. The looser the head, the **darker** the tone. Many Bluegrass players like to tune their heads to a G# (90 on a drum dial) for a "bright" response. Open-back players normally prefer lower head tension for a "darker" tone. If the head is too loose, response suffers, and the bridge will depress too far creating string buzz. You can also over tighten and break the head if you're not careful. Keeping the Tension Hoop and Head Tension **even** is always best. This can be easily achieved by adjusting the 5/16" bracket nuts evenly, which is largely a matter of feel.

- **HEAD REPLACEMENT** All OME Heads are weather resistant Mylar, and need not be replaced unless broken (when there are soft spots around the rim perimeter) or totally stretched out (when the tension hoop pulls down below the rim), To replace the head, remove the neck, tailpiece, armrest, brackets, tension hoop, and the old head. (While the banjo is apart, this is a good time to clean and polish the components, and to put a tiny drop of oil on the threaded end of each bracket hooks before reassembling.)

  Next, place the new head on the rim then proceed replacing the tension hoop and brackets. **Tighten the bracket nuts evenly**, making sure the tension hoop pulls down evenly over the rim, until the desired tension is reached. New heads will have to be periodically retightened until they "settle in" and become stable. (You can also change the head without removing the neck but you will have to be very careful not to damage the fingerboard when removing the tension hoop with the neck still attached).

  MYLAR BANJO HEADS are pre-mounted and are the most widely used banjo heads today. We generally use Remo's **Medium Crown Renaissance** heads, as we feel they give the **best balance between bass and treble.** Next in popularity is the Top Frosted heads heads which many Bluegrass players prefer for a brighter tone and traditional Bluegrass look. Fyberskyn heads are heavier and look like skin, but they reduce response because of their thickness.

  ANIMAL SKIN was the only material used for banjos heads until the 1950's. These do have a wonderful tone if they are correctly installed and the humidity is just right. However, as humidity changes, skin heads shrink and expand causing tone and playability to change.

IV. BRIDGE

- **BRIDGE TYPES** The banjo's Bridge is the least expensive, easiest to change, component of your banjo. There are many types of banjo bridges available today. The most popular, is still the three legged Maple & Ebony Bridge. Some players prefer the 3rd string to be compensated with a notch or curve, while others prefer a straight bridge. The bridge's height normally varies between 9/16" and ¾", and string spacing runs between 0.42" to 0.44". Bridge weight generally runs between 2 and 3 grams. All of these variables can effect your banjos tone. For example, a heavier bridge gives a darker, warmer tone while a lighter bridge gives a brighter, crisper tone. Bridge Woods also vary and effect tone. Which Bridge should you use? As with most of the Set-Up variables, it's up to the player. What works best for you.

- **BRIDGE LOCATION** As the banjo's bridge is moveable, periodically check it's position by checking the harmonics at the 19th or 12th frets, and comparing the note with the fretted note at the same fret. If the fretted note is **Sharp**, move the

bridge slightly towards the tailpiece; if the fretted note is **Flat,** move the bridge forward towards the peghead. You may also want to slant the bridge slightly and to mark it's position with a small pencil dot for future reference.

- **BRIDGE HEIGHT** Normally, for a banjo with the bridge properly located, the optimum string height would be about 1/8" away from the 12th fret, and 9/64" above the last fret. Minor adjustments in string height can be obtained by adjusting the Coordinator or Rim rods, or by using another bridge.

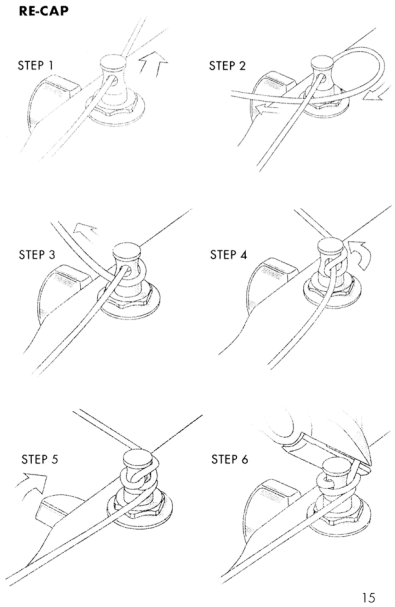
V. STRINGS *OME Strings are Nickel Wound, and Chenille wrapped for optimum tone and longevity. They are available in light, Medium, and Heavy gauges.*

- **STRINGS LONGEVITY** With use and exposure to perspiration and humidity, strings will eventually loose their tone and accuracy (intonation). **Wiping off the strings after use,** will increase their longevity. As to when to change the strings, opinions vary from a few days to several months, depending on use, the environment, and the player's preferences.

- **NEW STRINGS** are brighter and more responsive but may require playing on for a few days before mellowing out. Nickel wound strings may be brighter and last longer while bronze wound strings may have a warmer tone. On 5-string banjos, only the 4th string is wound. On tenor banjos, the 3rd and 4th strings are wound. Heavier strings are generally warmer, louder, and fret harder, while lighter strings are brighter, and fret easier.

- **REPLACING STRINGS**

When changing strings, remove and replace one string at a time. This will minimize bridge and tailpiece movement. After removing an old string, you may rub some pencil lead into the nut slot, allowing the new string to slide more easily into tune. Loop the new string end over the appropriate tailpiece anchor pin, through the tailpiece string hole, over the bridge and nut and pass it through the tuning peg hole from the center of the peghead towards the outside. While leaving a little slack in the string length, bring the free end of the string back around the top of the peg shaft and under and around back over the existing string length and pull it up, trapping it between the string and tuner post (see diagram) . Remove any slack by pulling on the string, while tightening the tuner knob until slack is taken up. Make sure the strings come off the inner side of the tuner post. Clip off and bend downward, the ends of newly installed strings.



VII. TAILPIECE.

- **TAILPIECE ADJUSTMENT** Over the years, OME has used a variety of different tailpieces, too numerous to mention here. The last few years, we have settled on using the **Short** and **Long Sweetone** Tailpieces, which we feel are as as good as it gets. The Sweetone is made of heavy solid brass, and is attached with one bolt, to the rim ball-lug or resonator flange. This attachment bolt can be adjusted for up and down movement to vary string pressure. The Sweetone also has two small allen screws which can be adjusted with the allen wrench provided, to move the strings slightly to the left or right if so desired. Tighten the right screw to move the tailpice to the right and tighten the left screw to move the tailpiece to the left. The **Short Sweetine,** puts less pressure on the strings for a more "open" , "warmer" tone, usually perfered on Open-bank banjos. The Long Sweetine tailpiece puts more pressure on the bridge giving the instrument a brighter, crisper tone, usually preferred by resonator banjo players.