

Solo Banjo Kit 4 String

Welcome to your Solo Banjo Kit!! Thank you for purchasing this kit, and we hope you will enjoy your instrument for years to come. We'd like you to do a couple things before you get started on your assembly.

First, please take the time to check over all the parts in this kit and compare them to the photograph. If you discover a problem with any of the parts, call us at 1-800-632-SOLO (7656) so we can take care of the issue without causing you any delay.

Secondly, we would like you to read over the entire instruction manual to familiarize yourself with this build before you start. There are a lot of parts, and you will need to have certain tools on hand before you start to make things much easier. Reading over the instructions will also help you avoid costly mistakes and frustration. If you have any questions regarding the kit or the instructions, please call us at 1-800-632-Solo (7656) or email us at support@sologuitars.ca.

Tools Required:

Razor knife, various grits of sand-paper, screwdrivers, drill bits, awl, wrenches, nut driver, masking tape drill, ruler, small square and finishing supplies

Parts:



Finishing Your Kit:

All the wood parts in this Solo Banjo Kit have come sealed and ready to assemble, but if you prefer to finish the kit to a higher quality level, now is the time to prepare the parts. If you just want to assemble the kit the way it comes, take the time to check the parts and sand whatever areas require smoothing for your comfort and enjoyment playing.

Neck: You will want to consider taping the fretboard and the flat surface for the nut before finishing. Also you do not want to alter the end of the neck which attaches to the tone rim. Beyond that you can sand and clearcoat or stain first if you prefer.

Tone Rim: The outside of the Tone Rim (Mahogany) can be sanded smooth as well as the inside. This is a good time to make sure all the holes are clear of fuzz and woodchips so the assembly will be easier and cleaner. The top edge of the Tone Rim is where the Remo head will be installed, so it is important that you do not distort this surface. A careful light sanding to smooth the contour is all that is required. If you are adding a finish, the entire surface can be finished inside and out. When the banjo is complete, you will not be able to see the inside of this part.

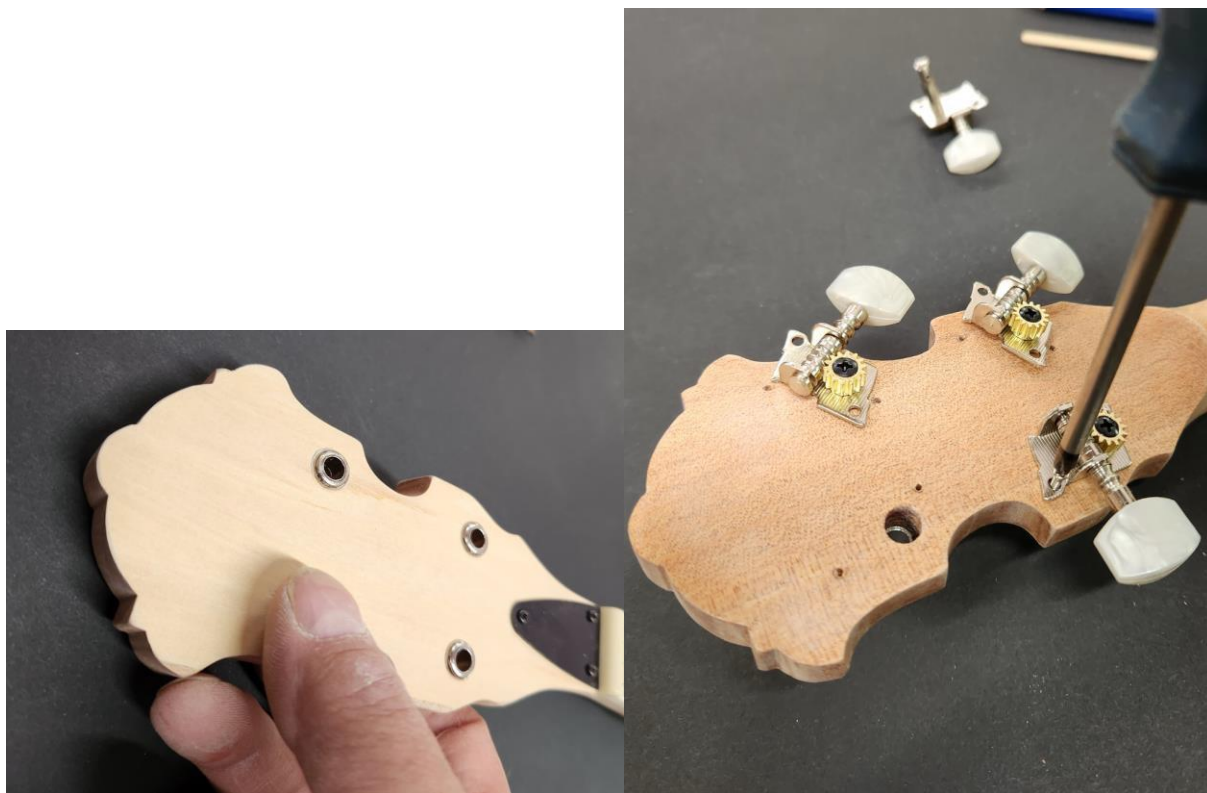


Resonator: The back and sides of the Resonator are Mahogany and the sides are bound top and bottom. A light sanding is all that is required here and the application of your finish if desired. Some people like to paint the inside of the resonator in a darker colour and the flat edge on top, so you do not see the laminations. You may choose to tape off the binding on this surface before you paint, or if you have more experience, you can scrape the paint off the binding after it has dried, with a proper scraper or razor blade.

Once you are satisfied with the prep of the wooden parts and/or your finish, you may go ahead and start the assemble process.

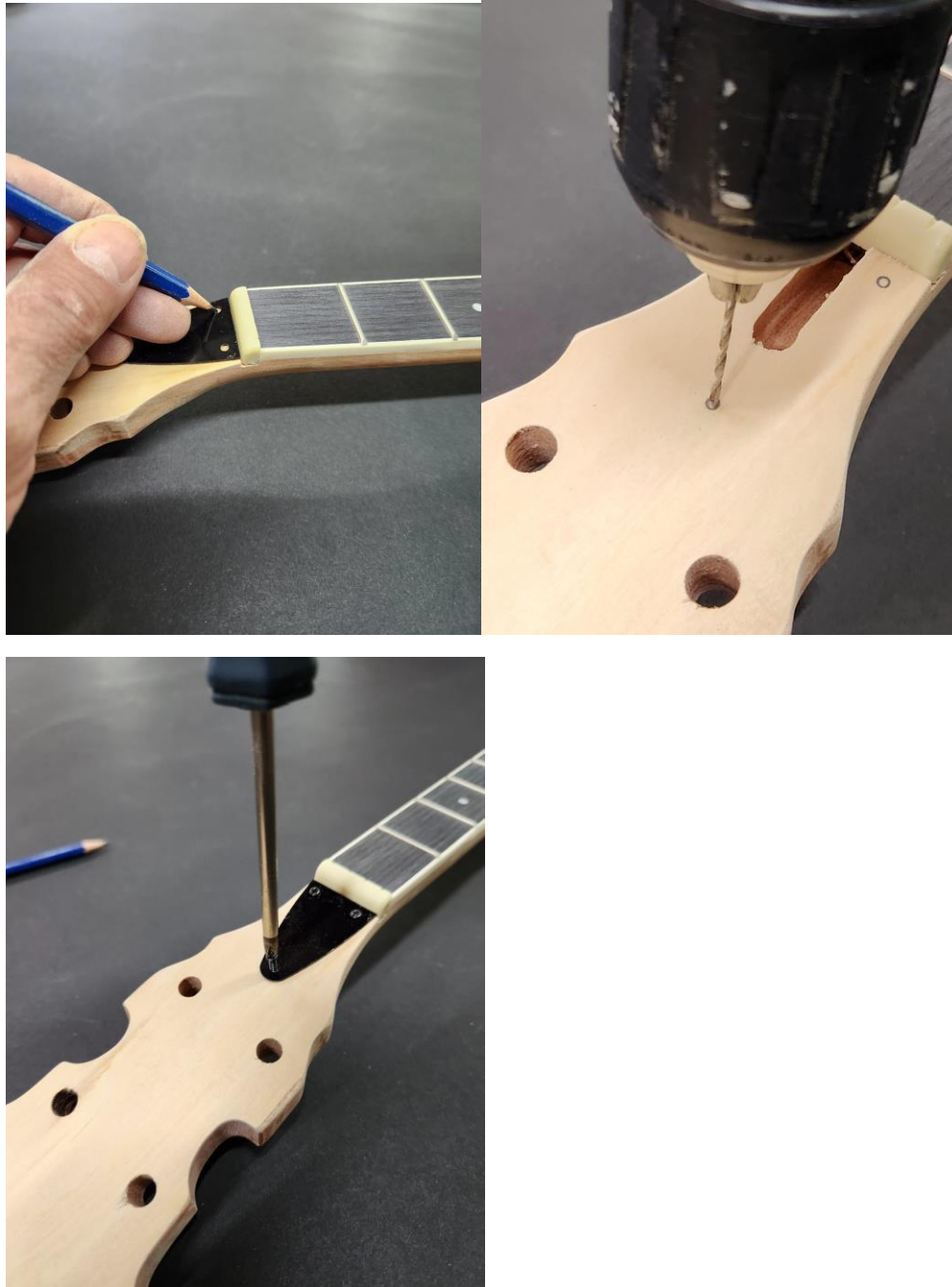
Neck: There are three steps in preparing the neck for assembly. Install the tuners, install the nut and install the truss-rod cover.

Tuners: Each of the 4 tuners is comprised of 3 parts, the tuner itself, a bushing and a small screw. The bushings are press fit and should be able to be pushed in snugly with your thumb. If they are too tight, use an arbor press, or, place the back of the headstock on a solid flat surface and gently tap the bushings in with a small hammer. If they are too loose, a small amount of glue around the bushing should hold it in place. Now go ahead and insert the tuners from the back of the headstock ensuring the inside point of the backing plate is pointing toward the neck (see pic). Using a straight edge, align the tuners with the side of the headstock and mark the holes for the 8 screws. Drill a 1/16" (2mm) hole 1/4" (6mm) deep for each screw and install the tuners. Sometimes a bit of bees wax on the threads will help to make this easier.

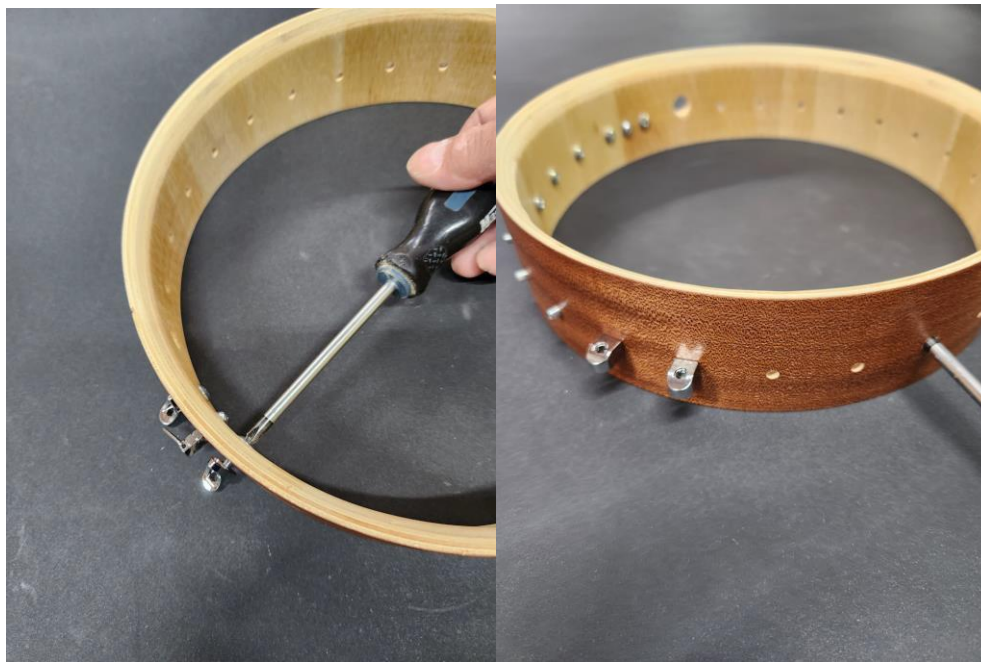


Nut: Ensure that the nut is the correct size and does not stick out on either edge of the neck. If it does, you may have to sand a bit off each end of the nut so that it fits properly. Typically, we use 3 or 4 drops of super-glue on the bottom surface of the nut to glue it in place. Hold the nut in its proper location, making sure it is seated properly on the bottom and against the end of the neck, and that it does not protrude on either side of the neck. Try this installation without glue first to familiarize yourself with the process. Hold the nut in place for about 10 seconds with glue and you should be able to move on.

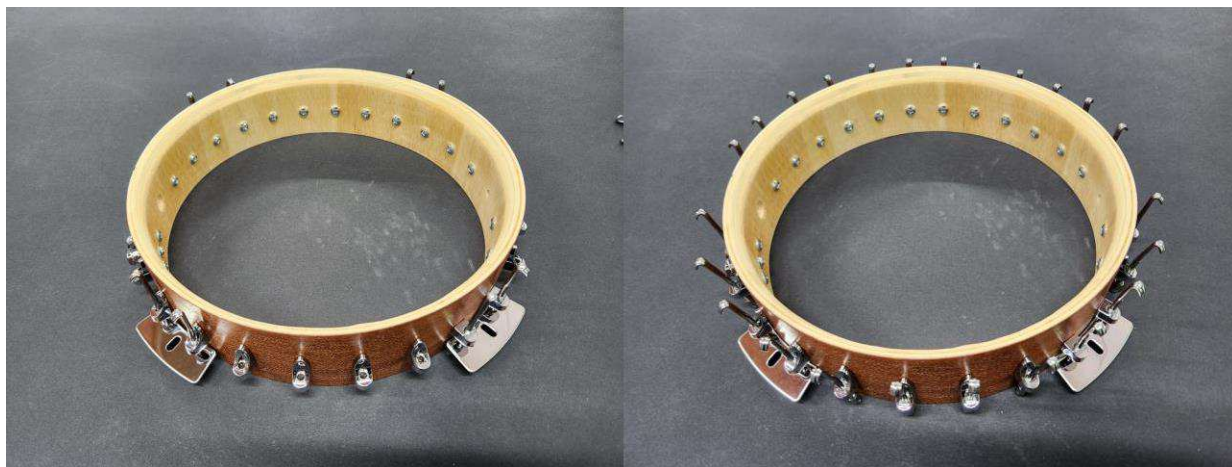
Truss-rod Cover: The truss-rod cover is pre-shaped and comes with 3 black screws. Locate the cover tightly against the nut and center of the headstock. Mark the three holes with a pencil or awl. Drill a 1/16" hole in each spot approximately ¼" (5mm) deep. Install the three screws making sure the truss-rod cover is snug, but do not over tighten the screws.



Tone Rim: This is the most complicated portion of the assembly process. It is much easier to locate all the parts required (see pic) and orient them on a flat surface so you don't mix up parts or holes. At this point, we are not considering the tension rod or the tail piece. Locate the larger hole in the rim and the small hole directly across from it. These two holes will be used for the tension rod. If you direct the larger hole to your left, the lower bout of the rim will be toward you, and the upper bout away from you. There are 12 equally spaced holes in the lower bout and the same in the upper bout with one extra hole for the strap pin. Mark the 3rd and 4th holes on either side of the tension rod holes. These holes will be used for the resonator brackets (see pic). Locate the two shorter shoes and install them in holes 3 and 4 on the upper bout to your right side using the large pan head screws provided. Do not tighten the screws, just make them snug.



Go ahead and install the rest of the shoes with the pointed end directed toward the top of the rim. Flip the rim over and place the Remo head over the top edge of the rim. (We like to orient the Remo logo centered in front of the neck) and install the Tension Hoop over the edge of the head ensuring the flat edge is faced toward the head. Begin installing the Tension Hooks placing the hooked end over the Tension Hoop, through the hole in the shoe and fastening the hex nut only finger tight. Do not install the hooks through the shoes we marked for the Resonator Plates. Once all the hooks are installed, remove the protective coating from the Resonator Plates and install the four plates below the 8 remaining shoes. Ensure all the hooks are perpendicular to the top of the Tension Hoop and begin tightening the hex nuts a quarter of a turn each moving back and forth across the head to maintain a consistent tension. Tighten all the pan head screws into the shoes making sure you do not distort the wood rim, and then tighten the head to your desired tension. (This can be adjusted again before you install the Resonator. The tighter the head, the sharper and more percussive the banjo will sound....using less tension will soften the banjo's tone)



You should now have 24 evenly spaced hooks and 4 Resonator Plates evenly spaced around the Rim. Go ahead and install the strap pin in the extra hole close to the neck on the upper bout (see pic).

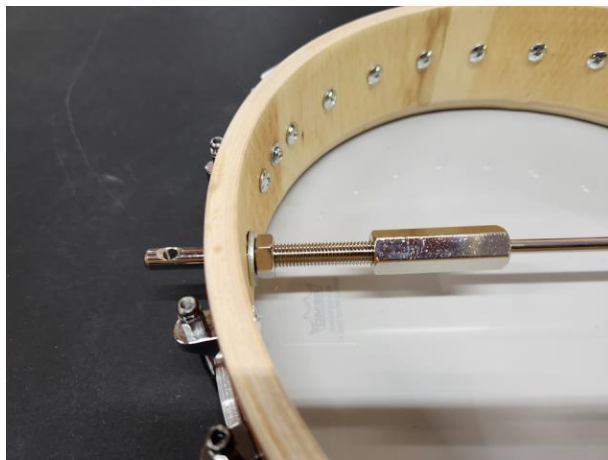
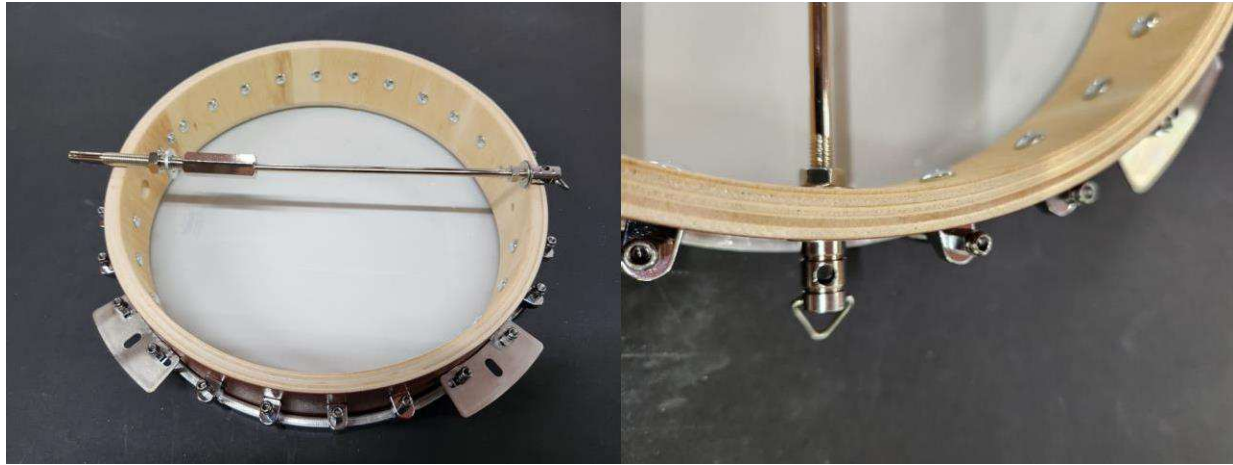


Dis-assemble the Arm Rest and slide the mounting plate behind the 2 hooks that were installed in the upper bout with the short shoes. Using the Thumb screw, re-attach the Arm Rest making sure it does not come in contact with the banjo head (see pic).



Now remove the Strap Pin from the end of the Tension Rod and one washer. Insert the opposite end through the neck hole and then re-insert the Strap Pin end and install a washer and Strap Pin on the outside of the Rim. Tighten the Strap Pin hand tight ensuring the hole is perpendicular to the top. Tighten the nut against the inside of the Rim with a small wrench. Be careful to make it tight, but not to distort the wood on the inside or outside. You are now ready to attach the neck.

Attaching the Neck: Begin by dis-assembling the neck end of the Tension Rod. You will have 4 parts, a sleeve hex nut, a threaded rod with a hole through one end, a washer and a nut. Remembering that the sleeve hex nut is reverse threaded, re-install this part on the rod installed inside the Rim. Thread it all the way on without making it tight. Now insert the threaded rod through the Neck hole and install the washer and nut with the washer between the nut and the Rim. Hold onto the sleeve hex nut and install the threaded rod as far as it can go, again, not making it tight. Holding onto the end of the threaded rod with the hole through it, turn the sleeve hex nut until the hole in the threaded rod is about $\frac{3}{4}$ " (19mm) away from the outside of the rim.



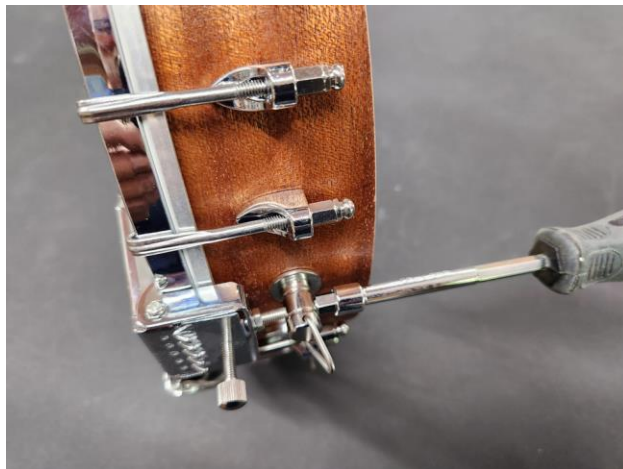
Insert the threaded rod into the hole at the end of the neck with the fretboard facing toward the Remo head. Install a 1 1/4" (35mm) panhead screw through the supplied hole in the heel of the neck making sure the screw goes through the hole in the threaded rod. Tighten this screw. Now start to tighten the sleeve hex nut so it draws the neck to the wood Rim. Adjust the neck as it gets tight so that the surface of the fretboard is even with the top of the Tension Ring. Tighten the sleeve hex nut a half turn tighter than hand-tight and then tighten the nut inside the Rim. You may have to adjust this again once the strings are installed. Drill a 1/8" pilot hole (as in the picture) approximately 1" deep through the Tone Rim and into the heel of the neck. Install the second 1 1/4" pan head screw from the inside of the Tone Rim. This will prevent the neck from twisting on the side of the Tone Rim.



Tighten the sleeve hex nut a half turn tighter than hand-tight and then tighten the nut inside the Rim. You may have to adjust this again once the strings are installed.



Installing the Tail-piece: Loosen the thumb screw on the back of the tail-piece. Remove the hex nut from the threaded rod at the bottom and insert this rod through the hole in the back strap pin. Re-install the hex nut ensuring the two hooks on the tailpiece are over the Tension Ring and tighten. (see pic)

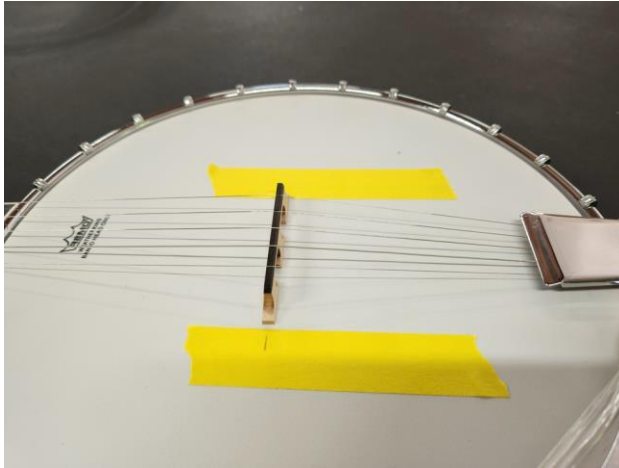


Installing the Strings and Bridge: You are almost there!! Final placement of the bridge for the purpose intonation will take place after the strings are installed but here's a quick hint to help you. Like guitars, the 12th fret is the half-way point between the nut and the bridge, so we like to take 2 pieces of painters tape and place them on either side of where the bridge will be. Measure the distance from the nut to the 12th fret and then take that measurement from the 12th fret onto the Remo head and mark the 2 pieces of painters tape. This will be the approximate location of the bridge.



Now go ahead and install the strings making sure each looped end goes over the hook on the end of the tailpiece. Insert the plain end through the hole above the hook and install on tuner. Before you start the second string, place the bridge under the string on the head with the top edge of the bridge parallel with the marks on the painters tape. Tighten the string to hold the bridge in place and install the remaining strings. Remove the painters tape and bring the strings to their proper pitch. Adjust the thumb-screw on the tailpiece so the top plate puts slight pressure on the strings and the bridge. Now make sure the neck is at the correct angle. You should have about $\frac{3}{16}$ " between the 12th fret and the strings. It could be

less as long as the strings do not buzz on the frets. If the strings are too high, loosen the nut against the inside Rim and try adjusting the sleeve hex nut slightly to get the strings to the right height. Once you have achieved this, tighten the nut again against the Rim and make sure you are happy with all the adjustments. If it is impossible to get the strings low enough, you may have to sand a bit off the bottom of the bridge. Conversely, if you cannot get the strings high enough, you may have to add a shim to the bottom of the bridge.



Intonation: On a banjo, the intonation is very easy. The banjo uses a floating bridge, which just means the bridge is held in place by the tension on the strings. Check to make sure you are tuned to a note (either the correct note for the string or something lower) and compare that note when you play the string open and on the 12th fret. Use only the two outside strings for this process but try to adjust both sides of the bridge to the proper intonation. If the 12th fret note is sharp, move the bridge slightly away from the neck and if the 12th fret note is flat, move the bridge slightly closer to the neck. Take your time....the intonation will never be perfect, but get it as close as you can and bring the strings to pitch. Once you are finished and are satisfied, take a look at the Remo head. It should be fairly flat. If the bridge is causing a huge indentation in the head, loosen the strings and tighten the head with the small hex nuts (remember to go back and forth across the Rim to maintain even pressure). Bring the strings back to pitch and re-check your head and intonation. Continue this process until you are satisfied with the action, the intonation and the sound.

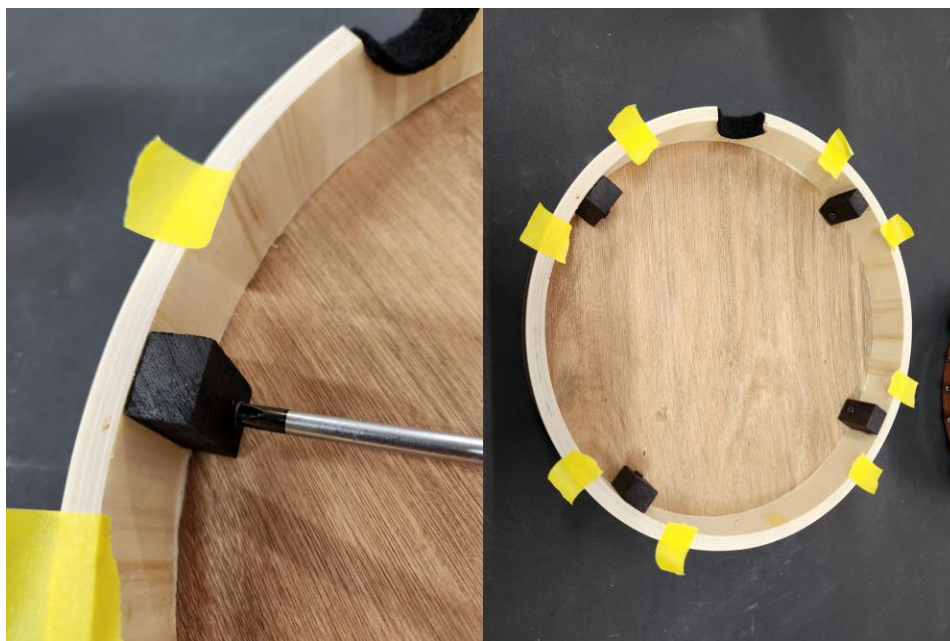
Resonator: Your banjo is ready to play, but if you use the resonator, your sound will be fuller and louder. First. Glue the felt strip into the cutout for the neck. Trim any excess and on a flat surface place the banjo Rim inside the Resonator cavity.



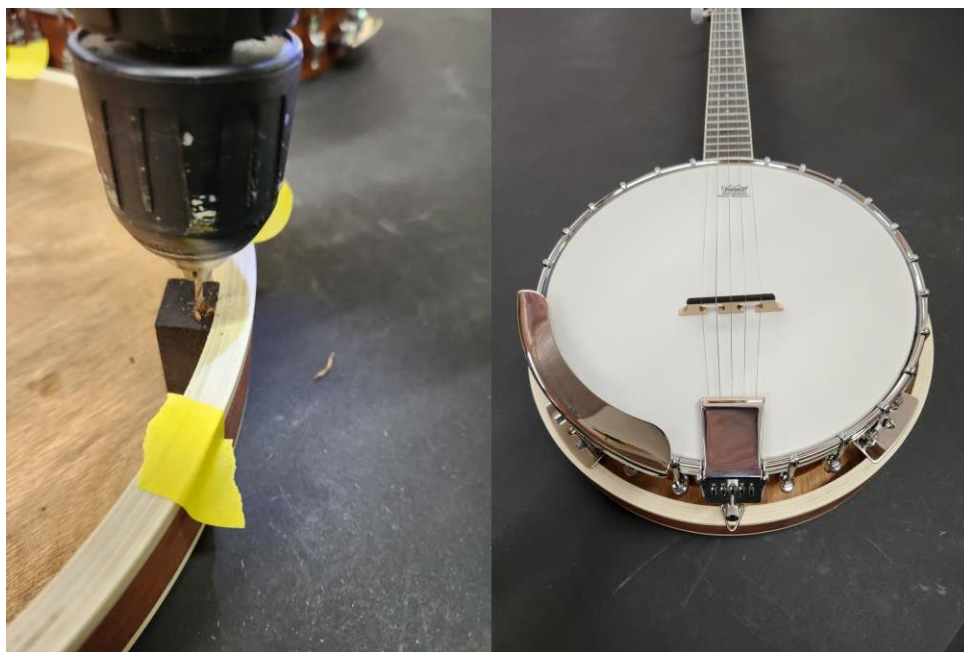
The Resonator Brackets will sit on the top edge of the Resonator. Make sure your spacing is even all the way around and mark each bracket on the rim of the Resonator.



Now take the supplied block shims and install them against the inside rim of the Resonator making sure the screw is toward the back of the Resonator. Make sure you use glue before you screw these pieces in and install the screw so the top surface of the shim is even with the top rim of the Resonator. (There are 5 block shims and 5 screws supplied, but only 4 are required for this process, the fifth shim and screw are supplied in case you have a problem with one)



Hold the banjo inside the resonator and make sure you are nicely in the center. Mark each bracket hole, remove the banjo and drill $1/8''$ (4mm) $3/4''$ (19mm) deep pilot holes. Using the chromed pan head screws, attach the banjo to the Resonator.



Finally....pick and grin! Congratulations on your new Solo Banjo!

Standard Tuning: **CGDA**

