



BOWED PSALTERY

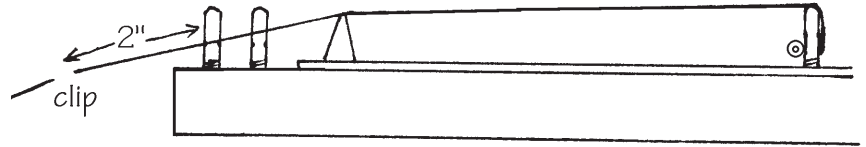


Musicmakers
14525 61st ST CT N
Stillwater, MN 55082

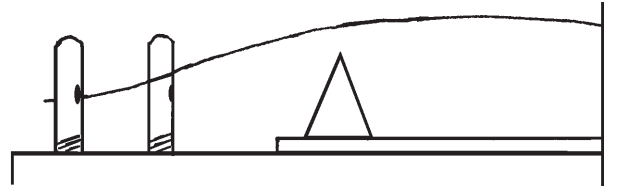
HOW TO INSTALL OR REPLACE STRINGS

____1. Lay the BRASS ROD on top of the BRIDGE, holding it temporarily in place with some masking tape until the first few strings are installed.

____2. Poke the end of one .010" dia. wire through the hole in the first scuffed pin, passing it through the pin in the direction of the point of the instrument.

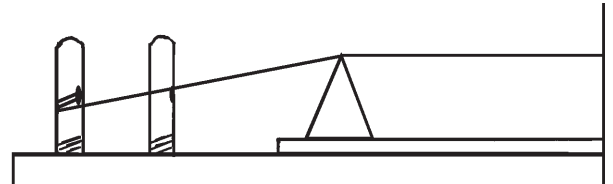


____3. Pull the string all the way through and draw it up over the top of the scuffed pin, to the top of the bridge, and then across the instrument to the correct tuning pin.



____4. Clip off the excess wire so that it measures only about 2 inches beyond the tuning pin.

____5. Insert the string into the hole in the tuning pin so that it just pokes through the other side.



____6. Turn the pin clockwise with the tuning wrench to wind the string onto the pin. Try to make the string wind downwards on the pin. Tighten only enough to pull the wire taut across the span.

NOTE: You may find it helpful to ask a friend to participate in this part of the project. Sometimes two hands are just not enough! One person can keep the wire from falling off the top of the scuffed pin while the other person turns the tuning pin and guides the wire windings.

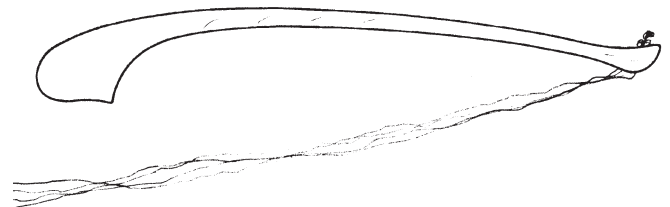
____7. Attach all the rest of the strings, in order, the same way. Take note of where the string sizes should be changed.

____8. Tune your psaltery to the notes shown on the tuning chart. The longest string that runs down the center is the lowest note, "middle C". All other notes go up the scale from there, with naturals along the right side and sharps/flats along the left. You will notice that the black marks identify all the "C" and "F" notes on the scale.

HOW TO RE-HAIR THE BOW

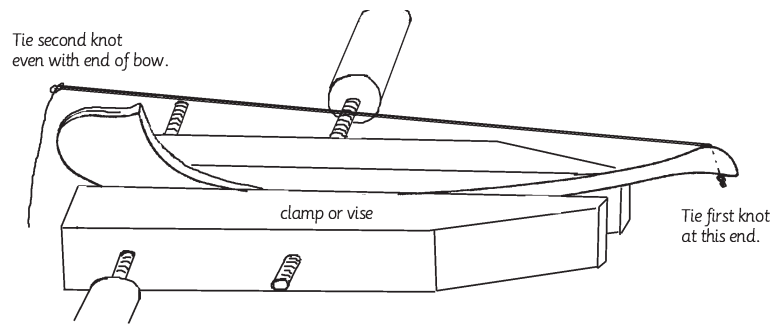
____1. Tie a simple overhand knot in one end of the bow hair. Slip the hair through the slot at the pointed end of the bow, as shown:

Hold the bow up in the air so you can comb the bow hair with a regular pocket comb as it hangs down from the tip. You want the hairs to be as straight and smooth as possible.



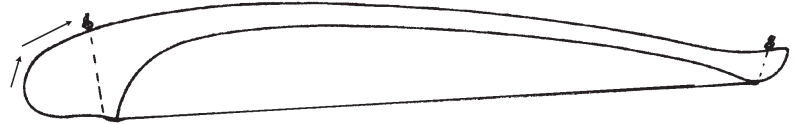
____2. Clamp the bow upside-down in a vise or woodworking clamp to hold it firmly as you install the hair.

____3. Tie the second knot about even with the other end of the bow, as shown. Try to keep the hairs straight and smooth as you tie the knot. Then slide the hair into the slot to test the tension. The bow hair will tighten as the knot is pushed around the curve of the bow. If it isn't tight enough, take it out and re-tie the knot in a different spot. Trial and error will produce the proper tension.



____4. When satisfied with the tension, work some glue into both knots to prevent them from loosening in the future. When the glue is dry, you can clip off the unsightly excess hair at each end, just above the knot.

Slide knot around handle of bow until the hair becomes taut.



____5. Chip off a little corner of rosin from the block enclosed in this kit, put the small chip of rosin in a plastic bag and pulverize it into a fine powder. Work that fine dust into the threads of the bow hair along the entire length of the bow, as an initial preparation. Better yet, dissolve this rosin powder in a few drops of alcohol so you can “paint” the sticky solution onto the bow hair for a more thorough initial application. After it dries you can pull the bow forcefully across the remaining block of rosin to add more friction to the bow hair. Without a healthy application of rosin, the bow will not play the strings of your instrument.

____6. Chip off a little corner of rosin, put the small chip in a plastic bag and pulverize it into a fine powder. Work that fine dust into the threads of the bow hair along the entire length of the bow, as an initial preparation. Better yet, dissolve this rosin powder in a few drops of alcohol so you can “paint” the sticky solution onto the bow hair for a more thorough initial application. After it dries you can pull the bow forcefully across the remaining block of rosin to add more friction to the bow hair. Without a healthy application of rosin, the bow will not play the strings of your instrument.

TUNING INSTRUCTIONS

Cut the TUNING CHART transparency along the lines and tape the parts together at the horizontal lines. Then you can slide the tuning chart under the strings to help guide you with tuning the instrument.

The notes along the right-hand side of the instrument are all “natural” notes (like the white keys of the piano), and those along the left side are all sharps/flats (like the black keys of the piano).

Start on the right side with the shortest string, the highest “g” note, two and one-half above middle C. If you have a piano or electric keyboard, you can count out 19 white keys to the right of middle “C” to find this first note.

Pluck that shortest string to see how the pitch relates to the note to which it should be tuned. To adjust the pitch, be careful to place your tuning wrench on the correct tuning pin, and turn the pin SLOWLY as you keep plucking the string to hear the effect of your efforts. Turning the pin clockwise will raise the pitch, and turning it counter-clockwise will lower it.

The shortest strings can be fussy to tune, because the slightest turn of the wrench causes a significant change in the pitch. If you have difficulty arriving at just the right pitch, try tuning the string a bit too high and then pushing on it with your finger. That should lower the pitch somewhat by stretching the wire. A little trial and error should suffice.

Continue tuning down the right side of the instrument, matching the pitches with the white keys of the piano, as shown on the tuning chart. The longest string, which reaches to the very point of the triangle, should be tuned to middle C.

As you move over to the left-hand side of the psaltery, the first string near the middle should be tuned to C#. Work your way up the left side, matching the pitches to the black keys of the piano as you go. The shortest string on the left should match the high F# key, about 2-1/2 octaves above middle "C".

If this is the first tuning for your instrument, you may find that some of the strings you tightened need to be tuned again already. This happens because the wire strings are still stretching under the tension. To hurry this "settling" process, you might push on the strings with your finger to stretch the wire before tuning the second time. Then the strings should stay in tune quite well.

HOLDING THE INSTRUMENT

If you are standing, hold the psaltery at about chest height on your left fore-arm, with the square end resting against your abdomen. In that position you will be able to comfortably handle the bowing motions with your right hand, playing strings along either side of the instrument. If you are sitting, you may try crossing your legs and resting the instrument on your lap. In such a position you will be able to use two bows, one in each hand, for playing harmonies.

USING THE BOW

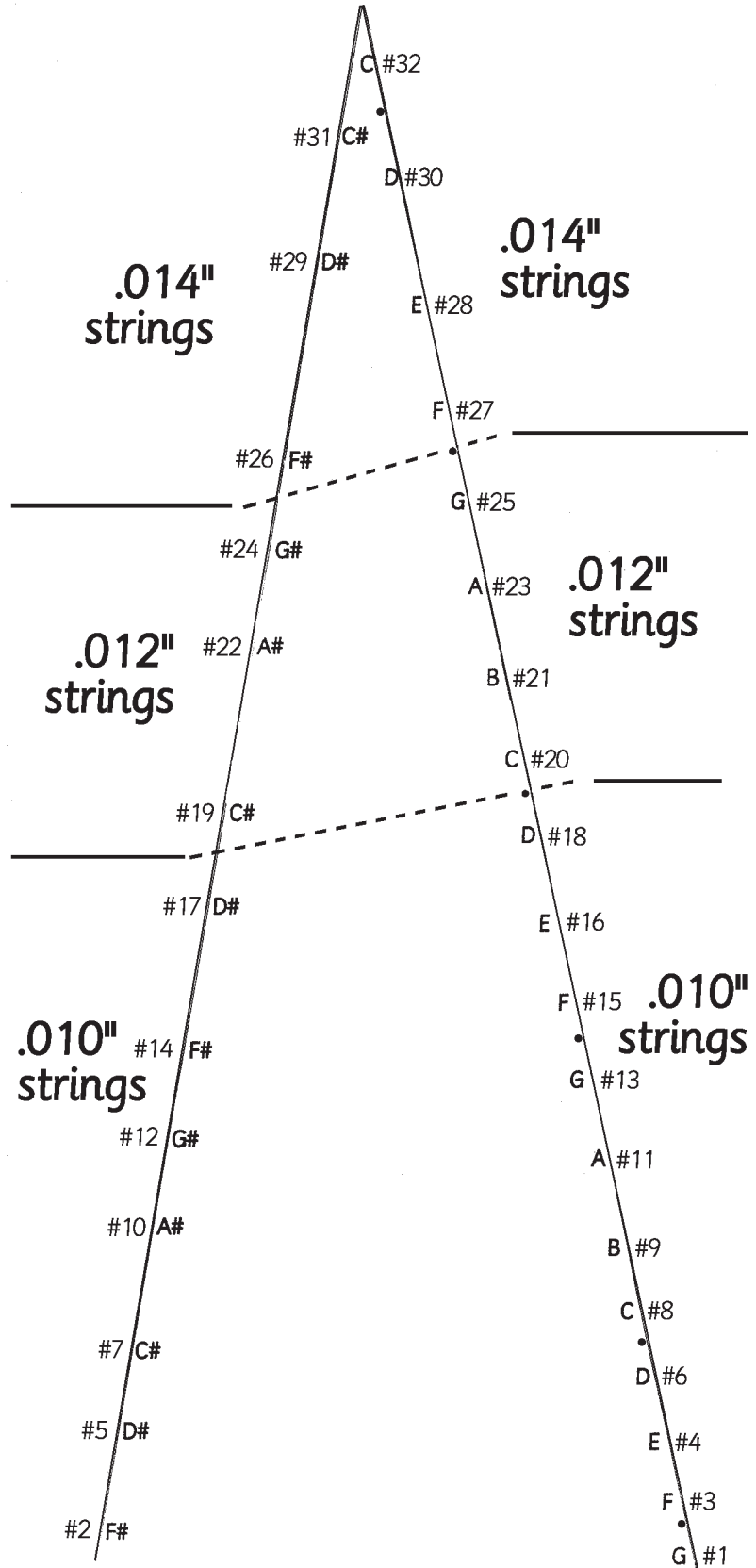
Hold the bow with the fingertips of your right hand. Rest the bow hair on one of the psaltery strings (no need to press hard) and draw the full length of the bow across that string, making a long, even note. Push the full length of the bow across the same string in the opposite direction.

Bowing technique may take a little time to develop. Try to keep a light but even pressure on the bow as you stroke the strings, one at a time. Tilt the bow downward on the right side to play the natural notes, and downward on the left to play the sharps and flats along the other side. With a little practice, you'll be able to move quickly up and down the scale.

If you wish to use music, we recommend any sheet music or songbook that shows the melody in the treble clef. You can play both the alto and soprano ranges on this instrument. Playing by ear is also quite simple, especially in the key of "c", because the notes on the right side of the psaltery form the "do, re, mi" scale, beginning at either of the "c" strings (marked with a black dot).

BOWED PSALTERY
STRINGING CHART

String	Size	Note	Code
1	.010	G6	BALL-01
2	.010	F6#	BALL-01
3	.010	F6	BALL-01
4	.010	E6	BALL-01
5	.010	D6#	BALL-01
6	.010	D6	BALL-01
7	.010	C6#	BALL-01
8	.010	C6	BALL-01
9	.010	B5	BALL-01
10	.010	A5#	BALL-01
11	.010	A5	BALL-01
12	.010	G5#	BALL-01
13	.010	G5	BALL-01
14	.010	F5#	BALL-01
15	.010	F5	BALL-01
16	.010	E5	BALL-01
17	.010	D5#	BALL-01
18	.010	D5	BALL-01
19	.012	C5#	BALL-03
20	.012	C5	BALL-03
21	.012	B4	BALL-03
22	.012	A4#	BALL-03
23	.012	A4	BALL-03
24	.012	G4#	BALL-03
25	.012	G4	BALL-03
26	.014	F4#	BALL-05
27	.014	F4	BALL-05
28	.014	E4	BALL-05
29	.014	D4#	BALL-05
30	.014	D4	BALL-05
31	.014	C4#	BALL-05
32	.014	C4	BALL-05



NOTE: If purchasing replacement strings from another source, ask for “ball-end” guitar strings in the diameters shown above. They should be available at most music stores.