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Suppliers of your Requirements for Violins, Violas, Cellos and Double Basses

Instrument Care & General Tips

SEAMS: Gluing of seams is the most frequently needed repair. The violin family instruments are put together with relatively weak hide glue, water reversible. Hide glue has high shear strength, low tensile strength....just opposite of white glues. Tops are glued on with half strength glue, for a good reason. Wood expands with high humidity (summer) and contracts with low humidity (winter.) If the tops and backs were solidly glued on, the wood, especially of the top, would crack, since it could not come loose during humidity changes. Cracks reduce value somewhat, especially those over/under sound posts or along the length of the bass bar. So, let the seams come loose...first notice may be a buzz...then have them glued back by a professional. This is the lowest cost repair in the luthier's arsenal. Time to glue a seam may take three hours or so.

SOUND POST: The post will need changing from time to time. The body of the instrument is constantly changing due to seasonal changes and other environmental conditions. Most always, the post needs lengthening (a new one) in normal use. Adverse environmental conditions cause the need for a shorter post, or maybe just an adjustment. Please do not adjust the post yourself! Very frequent adjustment wears a concavity in the top and the setter damages the ff holes. NEVER use scissors post adjustment tools. They are wreckers of ff holes and posts.

BRIDGES: When set at the proper 90 degree angle (tilt) the bridge must not be bent. The feet must show good contact with the top on all edges (no gaps.) The strings must NOT be buried into the bridge grooves. If any of these conditions exist, the bridge needs to be replaced by a professional. Bridges do come in various quality levels. The better the wood, the higher the price of the blank. All bridges must be custom fit and shaped (tuned) for your particular instrument. Improperly fitted bridges wreck the top, besides not producing optimum sound.

FINGER BOARDS: When a finger board comes loose, wrap the tail piece with something soft to prevent scratches, then loosen the strings. If not loosened, the neck will bend due to string pull. If the strings are tight for 24 hours, the neck will have a permanent bend....resulting in a more costly repair. Finger boards, over a period of years, become rutted in the high traffic areas. Sometimes, the board changes shape. Both problems result in buzzes and poor intonation. At this juncture, the board needs re-contouring to proper smoothness and swoop. This is done by planing the board and sanding. Re-contouring should be done every 4 to 10 years, or when badly worn. Eventually, the board will need replacement as it may get too thin. Boards are replaced every 40 to 50 years. When the board is replaced, the nut will be adjusted to proper height and with the correct grooves.

SADDLES: Saddles, under the tail piece at the end block, do come unglued, causing difficulty in maintaining tune. It is a simple job to re-glue or replace a saddle. The saddle needs to be shortened every 5 to 10 years. The top shrinks and the saddle doesn't, making it too tight. If not shortened often enough, cracks will develop up the top from the saddle ends. Incidentally, a high saddle tends to sweeten the sound. A low saddle tends to make the sound more brilliant.

PEGS: Balky ill-fitting pegs are impossible to deal with by the player. New pegs, when installed, should be used several times a day to make them and their holes maintain roundness. Unused pegs shrink oval shaped, as do the holes they are installed in, resulting in the familiar "ratchet-ing" feel..like cogs slipping, and not holding at some spots. Pegs do wear out and change fit over time, refusing to stay put. Normally, pegs tighten in the summer and loosen in winter. Frequent use prevents this problem. However, when the small end of the peg sticks out 3 mm. or so from the peg box wall, it is time to re-peg. Eventually, the peg hole becomes enlarged by many fittings of new pegs. The holes must then be filled with new wood (bushed) and new pegs fit. If the holes are left large, the peg box is in danger of splitting out, especially at the A peg on violins and the D peg on violas and cellos. New pegs will soon need lubrication, such as "Hills Peg Paste", to make them work right. If they slip, a small amount of a dope, like "Hiderpaste" will make them hold. Your friendly luthier will normally do this at no charge...especially if he put the pegs in!!

Adjustments

We all know a properly adjusted instrument is a joy to play.

STRING HEIGHT: Simple things make a big difference in "playability", such as string height. Personal preferences differ, of course, but, in general, violin strings are 3 mm. above the end of the finger board at the E and 4 mm. above the board at the G. Some professionals and teachers want the heights to be one mm. higher. The viola A is 4 mm. above the board, the C 5 mm. above. The cello has the A at 6 mm. above, and the C 9 mm. above the end of the board.

TAIL GUT: After ring is greatly improved if the distance from the bridge crown to the tail piece fret is proper length by adjusting the tail gut. If the bridge is 90 degrees and all else ok, the string section between the bridge and the tail piece will, when plucked, ring at two octaves above the next highest string. For instance, on a violin, pluck the G string behind the bridge, it should be two octaves above the open D string if all adjustments are correct. If well adjusted, the ring will sustain quite nicely. Optimum sound and projection are the result of the proper bridge spacing from the tail piece. This length is normally 55 mm. for violin, 61-63 mm. for viola, and 120 mm. for cello. The assumption is that the bridge is 90 degrees to the belly and other adjustments ok. Smaller sized instruments will have proportionally smaller distances behind the bridge.

SOUND POST: Post adjustment is critical. Your favourite luthier can, by simple post adjustments, balance the power and sonority of the strings. He can brighten and or darken the sound, and with a variety of combinations of movements, make the instrument sound as good as it can. Sometimes a new post is indicated.

Bows

The bow is as essential to the instrument as the player or the strings. It deserves as much respect and care as any other member of the playing "team." The stick must be kept free of rosin build-up. Wiping with a soft cloth after each playing session will do nicely. The bow must be loosened after each use, or it will stretch hair and lose camber. Proper camber is indicated when the hair just almost touches the stick when loose.

ROSIN: Rosin should be used sparingly and only if the bow slips or doesn't grip. Too much rosin creates a mess and actually causes the hair to feel slick.....hastening the need for re-hairing. NEW HAIR: Hair should be replaced when it has no more grip, when it gets too long, or when hairs are lost on "the player side" of the ribbon. Failure to re-hair when edge hairs are lost will result in a permanently warped bow which will have to be straightened.

BOW HAIR BUGS: Bows left unused in the case for a few days or a few weeks are prime fodder for the bow hair bug. It is really the larva of the carpet beetle, and thrives on rosined hair and only in the dark. If the bow is used every day, the bug will not eat the hair. If you ever notice shredded hair in your case, get the bow rehaired soon, vacuum the case well, and place two mothballs (camphor type) in the case. The fumes will kill existing larvae and prevent eggs from hatching.

RE-HAIRING should be done by an expert. More bows are damaged by inept repair persons than by other accidents. Proper hair amount is essential. Strong bows get more hair than weak ones. Too much hair makes the bow sluggish in response. Too little hair produces weak sound. Hair, having been a living substance, lasts only six to eight months before becoming brittle. Frequency of installing new hair depends on use. It is common for very active players to re-hair once per month.

Bridges

The very act of tuning pulls the top of the bridge toward the fingerboard. The bridge must be placed back upright, ever so little, each time tuning takes place. Maximum power transfer from the strings to the belly takes place when the mass of the bridge is 90 degrees to the belly. A warped or bent bridge severely decreases power and sonority.

BRIDGE BENDING: If the bridge is left bent....normally toward the fingerboard, it will become permanently deformed. At this stage, if it is put at 90 degrees, the feet will not fit and a new bridge is needed. To check the bridge position, make sure it is directly across from the inner ff notches. Then take a plastic ruler, place it between the bridge and the tail piece. when the end of the ruler is squarely on the belly, the bridge back

should be parallel with the ruler edge, touching the bridge back and the belly at the same time. If the bridge does not touch, it must be gently pulled (from the top) toward the tail piece until it is 90 degrees. A curve in the bridge relative to the straight ruler edge indicates the need of a new bridge. If you are uneasy doing this procedure, your friendly luthier may do it for no charge...it only takes a few seconds to adjust.

BRIDGE STRING GROOVES: Each time a string is changed, a soft lead pencil is used to lubricate the string notch (graphite) at both bridge and the nut, under the string (more about this in the String Maintenance section). Lubricating the string grooves will lessen the effects of pull when tuning, and will make the bridge tilt easier to correct.

STRING NOTCHES: Anytime a string buries itself in the bridge, the bridge should be replaced, or, at least vellum glued over the groove to lessen its depth. Ideally, the groove depth should be only one third of the string diameter at the bridge and the nut. Shallow string notches lengthen string and bridge life, make the tilt easier to correct, and greatly improve both response and after-ring of the instrument. Lubricate string grooves with a soft (6B) pencil.