When and How Do I Change the Strings on My Hardingfele?

by Loretta Kelley

Here are some techniques and tips that I have collected over the years on when and how to change hardingfele strings, which I hope may be helpful to others.[1]

I change my upper strings when:

1) any sign of wear appears. This would include stretched-out winding or missing winding on the G, A (if metal) and E strings (and D string if close-wound). To check for missing winding on the portion of the string that is not touched by the bow, run your finger slowly up and down. Fingertips are sensitive enough to detect extremely small variations. To check for missing winding on the bowed portion of the string, first clean the string well with a Q-tip swabbed in rubbing alcohol (Warning: cover the top of the fiddle with plastic wrap to prevent the alcohol from accidentally dripping on the varnish), then view with a magnifying glass. Avoid touching this part of the string; skin oil prevents the bow from gripping properly.

2) any deformation of the winding on the open-wound D string is noticed, particularly over the bridge or the nut. The winding of an open-wound D string is particularly sensitive to getting caught by the bridge or nut as the string is tightened or loosened, causing the winding to bunch up. To prevent the winding from being caught, make sure that the groove where the D string passes over the bridge or nut is well-lubricated with pencil lead (graphite) and that there are no sharp edges, particularly at the nut, that might catch the winding.

3) the tone on an upper string sounds impure or "false". This is much harder to determine on a hardingfele than on a violin, because the sound of one string is so sensitive to the tuning of all the other strings, much more than on a violin. To check for falseness, I recommend muting the understrings first by wrapping them with cloth, or if you are skillful you can hold your finger on them while bowing the upper strings. Tune the upper strings as exactly as you can using your ear, not an electronic tuning device.[2] Then take a long, firm but not heavy bowstroke on one string alone, lifting the bow at the end of the stroke to allow the string to ring. Listen to the ringing sound after the bow is removed, and check for any change in pitch. If the sound after the bow is removed starts off in tune but then changes pitch as it dies out, then this means that the string is no longer perfectly round, or has another physical defect too small to see. Note that the understrings can still affect the sound even when muted, so try this procedure several times using different techniques over a period of days to see whether you get consistent results.

I change my understrings (sympathetic strings) when I see evidence of rust or damage.

If a fiddle is well cared-for this should be very infrequently. Clean the understrings

using an alcohol swab as described above, especially where the finger touches them to check the tuning. Then examine carefully for any black or brown spots, imperfections, kinks, etc.

This is how I change my understrings:

1) Remove all of the understrings.

2) Starting from the right to the left as you face the instrument (high to low), thread the top understring under the fingerboard and fasten it, and tune it up just enough to hold it in place.

3) Thread the next highest understring through the fingerboard slot, making sure to keep the natural curve of the string facing away from the string that is already in place, and fasten it, and tune it up just enough to hold it in place.

4) After attaching each understring check to make sure that it has not looped itself around the neighboring understring by holding the fiddle up to a light and sighting down the tunnel underneath the fingerboard.

5) Proceed with the remaining strings. After all the understrings are attached then tighten them all up to pitch gradually.

About winding the strings on the pegs: Insert the end of the string in the hole in the peg, then pull the end of the string out about 1/2 inch. Wind the string a turn or two in one direction, then wind it the other direction so that it overlaps the first windings for more security. Continue so that the windings lie tight and even, not bunched up. The windings should stay as close as possible to the center of the peg. If the windings get too close to the sides of the pegbox, they will interfere with the natural in-and-out of the peg as wood shrinks and expands with temperature and humidity.

About checking the bridge after changing strings: Tuning up a new string, especially the D string, has a tendency to pull the bridge over towards the top of the fiddle (the scroll). Leaving the bridge in this condition can cause it to become permanently warped. To correct, check the bridge frequently as you tune up the new string. If it starts to pull over, place the fiddle securely in your lap and, bracing the bridge on both sides with thumb and forefinger, very slowly and gently pull it back into place, making sure to place equal pressure in the opposite direction so that it doesn't go over too far. Loosen the strings a little if it is too difficult to pull it back.

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[1] See also David Golber's article, "Changing Strings", in the "Luthier's Corner" in this issue.

[2] If you want to be absolutely perfectly in tune when playing by yourself or only with other fiddles, then you cannot use an electronic tuning device to check the intonation of individual violin strings, because electronic tuners use notes in the equal temperament scale, which is by definition slightly out of tune. Bowed instruments, when not playing together with equal temperament instruments such as the piano or accordion, use the just intonation scale. You can use an electronic tuner to set the pitch of the A string, but then the other three strings and the understrings must be tuned by ear.