NS DESIGN WAV
VIOLIN INSTRUCTIONS

NS CUSTOM SHOULDER REST

The unique design features of the NS Shoulder Rest enable a customized fit for every player. There are three basic adjustments, each of which contributes to achieving desired comfort and support. Determining the optimal combination for your individual body shape and playing style will entail some back-and-forth experimentation with each of these:

- The flexible aluminum base, which can be bent and shaped by hand, can be molded to comfortably match the contours of where it contacts your shoulder and upper chest. The more contact between the shoulder rest and your body, the better.
- The distance between the instrument and shoulder rest can be adjusted by changing the depth that the support rod is inserted into the instrument - further out if you have a longer neck, and vice versa.
- The shoulder rest base can be moved closer towards, or a bit further from, your body by adjusting its location along the lower portion of the support rod.

When inserting the long portion of the support rod into the body, you may need to loosen the clamp assembly a bit, using the knob located on the small clamp member (by the chinrest bar). After inserting the support rod to the desired depth, tighten this knob firmly.

If your shoulder rest assembly slips during use when the knobs are tight, one or both clamps may need adjustment, as follows:

- Check whether the two members of the clamp touch each other at one end or the other when the knob is fully tightened.
- If they do, loosen the clamp a bit and the adjust the set screw (see the arrow in the Clamp Detail image above) so that, when the knob is tightened again, the two halves of the clamp are parallel (as shown in the Clamp Detail image).
- Once that has been checked or adjusted, if some additional friction is needed, a light coating of powdered rosin can also be applied to the support rod where it contacts the clamp.

To store the violin in its case, loosen both knobs and slide the entire shoulder rest assembly out of the instrument. Fold the connecting arm flat against the shoulder rest. The violin and rest are now ready to be placed in the case. Remove the shoulder rest and support rod from the violin before placing it in the case.

WAV SERIES PASSIVE CONTROLS: Use high impedance input (over 1 meg ohm) for best results, (no battery required).

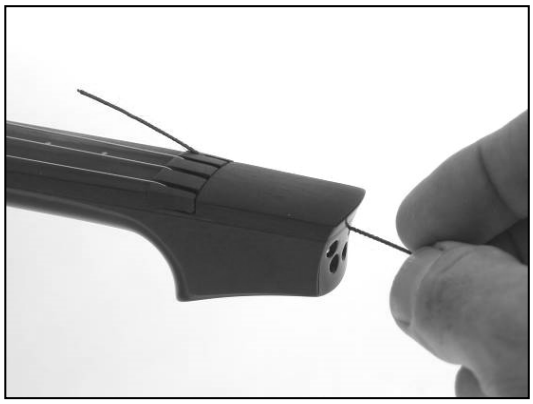
Knob 1 - Volume. **Knob 2 - Treble cut**.

TUNING AND STRING CHANGE

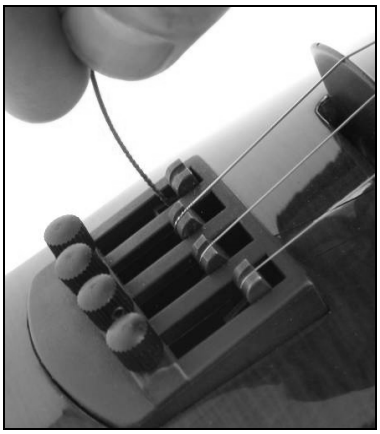
We recommend NS Electric strings, but any solid and stranded core strings may be used. Tune strings with knobs located behind the bridge, like conventional fine tuners.

To remove strings, loosen knob all the way until the string pulls out of the tuner. If necessary, use a finger to push the tuning lever back and down to open the tuner jaws to free the string.

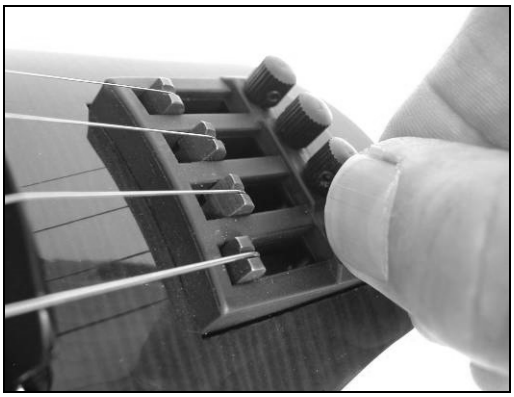
To install strings, thread the string through the hole in the end of the neck and pull it through the nut. Insert the free end of the string into the appropriate slot located just behind each tuning lever. (Be sure knob is rotated all the way in the counterclockwise direction to open tuner fully so sting can enter easily.) Pull string through the tuner from the back, making sure the string is in the slot that rides up over the tuning lever, as shown above. Tune the string to pitch (the string will clamp automatically when tuned). Cut excess string.



Threading the string through the neck



Inserting the string through the tuner



Clamping the string

Note: We do not recommend Nylon, Perlon, or Gut Core strings, which have a great deal of stretch, and will not reach pitch unless they are pre-tensioned. The pitch of the pre-tensioned string must not be more than one fifth lower than the correct final pitch. If the string is not properly pre-tensioned, the string will not reach pitch.

To pre-tension string: After the string is inserted into the tuner, rotate the tuning knob clockwise until the string just begins to clamp (when the string can no longer be pulled out of the tuner). Pre-tension the string by pulling the string firmly through the tuner from the back. The string must be pulled strongly enough so that the resulting pitch of the pre-tuned string is less than a fifth below the correct pitch. For example, the D string must be pre-tensioned to A or higher. In this way the correct pitch can be achieved within the range of the tuning mechanism. This procedure should be repeated if the final pitch is not reached. The string ends may be wrapped around a pencil or similar object to grip the string so greater pulling force can be applied.

Pre-Tension Perlon Strings

ACTION HEIGHT:

Adjust bridge height with the screws located under the bridge and accessible through the holes the back.

BODY BOUT EXTENSION

The body bout extension provides the conventional position reference for the left hand. It is easily removable with the single screw located at the back of the neck.