



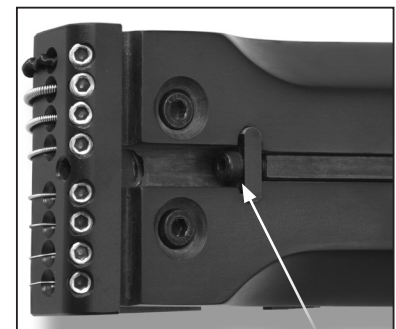
*The truss adjustment screw is located in the rear at end of the neck.*

The NS/Stick has an innovative but simple truss rod that can easily be adjusted using the accompanying 3.9mm Allen wrench. Unlike guitar, it's meant to be used by the player, especially if you change string gauges or tunings. For very low "Free Hands" string tapping action and light touch, it's good to check fretboard straightness from time to time and to tweak the truss rod when the seasons change, if need be.

Most often, a simple twist of the Allen wrench (supplied in the case with each NS/Stick) will straighten the neck to bring the action down low. This truss adjustment is usually all that is ever needed. All other settings, including heights at bridge, nut and pickups, usually return to optimum low action with this single truss adjustment.

I often have to emphasize the importance of maintaining a straight profile on a tapping instrument neck. A straight fretboard with an even plane of fret tips and very low playing action makes a huge difference in full tone, speed, expression, intonation and in general, your music! Also, low action enables a greater range of finger dynamics, starting with the softest note you can touch down onto a fret. Greater finger velocity is of course always available to the player, even with very low string heights above the fret tips.

A "twist" of the Allen wrench equals 1/6th of a turn. Just a half twist to two twists, one way or the other, will usually straighten the neck.



*Truss adjustment screw*

Subtle adjustments make a noticeable difference on this dual role tapping/plucking instrument because it's designed for uncompromisingly low action. The truss rod works in the most straightforward manner, pulling like a cable from the rear to counteract string tension from the front.

The fretboard should be straight for best playability. You just "sight" the neck profile with one eye at the tailpiece end, twisting the instrument 90 degrees (frets oriented vertically), first with the melody fret ends pointing upward, then with the bass ends upward, and aiming the headless nut toward any light or open window. You'll see a "string of lights" which should appear as a straight line of reflected light off the fret edges. If there's a bow or dip in the middle region of the fretboard, just tighten the truss a twist or two to pull the fretboard straight. If there's an arch or hump in the middle region, just loosen the truss a bit and the strings will pull it straight. The adjustment is immediate — no settling, no "breaking in".

The proof then is in the playing - easier, faster, more expressive, more dynamic and with fuller tone. Still, there's a more definite proof for those willing to try. If you prop your NS/Stick (with books) on a well lit desk or table, and you face a light that's angled down onto the reflective frets tips (the light "bouncing" back up into your eyes), you'll then see height and shadow very well, especially on high pitched outer strings, revealing how closely each string "clears" the next higher fret from where it is pressed and held. Such clearances should be extremely close to each succeeding higher fret as you test your way up the board pitch-wise and should be uniform all along the board. At the headless nut, height adjustable side-saddle setscrews allow you to set the same minimal string clearances over the first fret.

If string clearances are greater at the mid and low pitched frets, your instrument is "bowed" and the truss rod should be tightened. If clearances are greater at the high pitched frets (perhaps even with strings laying on the low pitched frets), then your instrument is "arched" upward in the middle ("back-bent"). Once you've adjusted the truss rod to achieve generally uniform clearances from one end of the fretboard to the other, you might also try to adjust the bridge saddle screws a bit lower, although they were set for optimum low action when they left our shop.

It may well be that the first step of fretboard "sighting" and truss "tweaking" is all you'll ever need to maintain optimum playability and the performing ease and confidence that goes with it. And of course we're always here to take on the job of repair, reconfiguration and setup of your instrument if you're unsure about doing it yourself.

All the Best,  
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