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**Sent:** Friday, May 07, 2004 8:12 PM

**Subject:** How do I fit an 'A' string to my Tenor Banjo?

*"Thanks very much for that. Yes I do mean the #1 string to A. How do you do this on my Tenor Banjo without either breaking the string or having a nervous breakdown with the tension of waiting for the string to break?"*

Ah! Ha! This is a challenge for TB players all over the world. You might like to print out the following golden words, learnt from learning from the best luthier in the world, Vinnie who lives in Texas, and others, and my own experience. Let's break it down into stages.

Stage 1: Make sure the #4, 3 & 2 strings are tuned (C G D) up to pitch. (This helps to maintain pressure on bridge).

Stage 2: Check under tail piece where A string emerges there are no sharp burrs or anything, also check the nut (next to #1 fret), no sharp entry/exit point. Check tuning peg turns freely, if a geared one, is it firm? ie it must not turn easily, it should be adjusted by means of the screw so that the 'button' turns only after a gentle but firm twist. How does the slot in the bridge look? Should not be too deep, should be only wide enough to accommodate the string (pretty fine) and no sharp entry/exit point. How far above the head (vellum) is the tail-piece, it should have a gap of about 1/8th to 3/16th of an inch (that's about 2 to 5 mm). If it is a "special" or unusual banjo the distance might be a little different.

Stage 3: Hook loop end over tailpiece, thread through tailpiece, over bridge and over nut, pull gently to get a little tension and hold (thumb) firmly down over nut to lock string so it cannot move. Now starts the wrestle! Wind string around lower part of the capstan three full turns without any over-lapping, thread string through hole above the windings, pull string tight. Still holding thumb on nut, turn tuner slowly to tighten string observing that winding or turning below hole do not over-lap one another (there is a serious reason for this). You will notice this is a different technique to a guitar.

Stage 4: Once some tension has taken place, let everything go and scrutinize everything: loop end secure? Following through tailpiece OK? Straight, no twists or kinks? Over bridge correctly? Over Nut OK? Are the windings below the hole on the capstan easy to follow round and round and reasonably tight against each other without going over the top or showing any twists? As the tension comes up to tune, any slight gaps in the 'windings' will take up automatically. Caution: From now on, keep your face clear just in case the string does break...

Stage 5: Now to tune, as I have an uneducated ear, I have to use a tuner. Take up the tune slowly, progressively slowly. Stop each time the tension you can feel in the tuning peg seems to come up against "something". Leave it for an hour or so. (Yes, I know, you can't do this on the stage while the band is waiting for you, trust me, more will be revealed)! Take up a little more tension and stop again for an hour or so. Next time you approach the banjo, gently slide four fingers under the A string between bridge and neck and very gently lift up, gently, gently 'stretching' the string. Let it settle again. Get the tuner out and take up a bit more until that "wall" is reached, the string will tell you when it has had enough. Check the tuning of the other strings again; this is to ensure there is an even pressure on the bridge. With a tenor you ALWAYS tune C #4, D #2, G #3 then the A string last.

Stage 6: I've taken 2-days over fitting an A string on my Baldwin because I rushed it the first time and broke a brand new string. THAT makes you very scared! After another 'gentle stretch' lifting the string off the head, turn on the tuner again and you should be able to take it up to tune. When it is getting close I usually play it very hard with chords right up and down the neck bashing hell out of that top string. It helps to settle the whole machine down, settles the tuning peg and stretches appropriately the string in a manner it was designed for.

Now the question: what if I am on stage? You are in trouble! No not really, if you follow the above steps and fully understand the sequence of tuning, you can (I've done it) fit a new string in a few minutes. Retire to a quiet place where you are alone, follow the above steps diligently but in fast-forward mode and you should be OK. Now you will see the earlier comment I made about the 0.009 string (a pig to fit in a hurry) and why the experienced ones will keep either a .010 or .011 in their case for "emergencies". These thicker gauges are a little more forgiving. After you are happy the machine has settled down, trim excess string leaving about one inch whisker, the amount, is up to you.

Hope the above make sense, if not come back. And best of luck!

Vinnie: if you think anything needs amending, or, you have additional information which will be useful for this exercise - go ahead - just let me have a copy please. Ta, Jack.