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## Curing Bigsby B7 Induced Tuning Problems

**Find out what causes the instability and how to fix it.**

**The Bigsby Vibrato** is a guitarist's tool that's been with us for ever... so it seems. On many guitars, it works very well and produces that unique 'wobble' that a Fender Strat just can't. It's gentle and altogether much more subtle.

However, on some guitars, it's almost impossible to keep the guitar in tune. I'm an 'in-tune hound.' I simply cannot accept a guitar that's not in perfect tune. So my Les Paul and Wildkat guitars have seen some serious but simple modifications that any musician could carry out, which cost very little and WILL NOT devalue or harm your instrument in any way!

**Problem Causes:** So what causes the guitar to go out of tune? Well there are four main reasons:

1. The standard Tun-o-matic style bridge saddle profiles are sharp and completely wrong for use with vibratos!
2. The distance between the Bigsby B7 vibrato 'roller' tension bar and the bridge saddles is too short - this is quite common and leads to...
3. The acute angle of the strings going under the tension bar and then on up to the bridge saddles, which leads to...
4. The strings developing sharp 'notches' as they pass over the bridge saddles which prevents the strings from smoothly gliding back and forth as the vibrato is operated. This makes the vibrato feel stiff, like something fighting you... well there is... the accumulation of these design errors!

Why do manufacturers fit standard Tune-o-matic bridges with vibratos? Well, I think Epiphone's Cost Accountants should answer that one!!

*Note: The Wildkat (right) is fitted with a 'licensed' B7 which works extremely well once the problems have been deal with. In fact, mine works more smoothly than the 'real deal' B7 on my Gibson Les Paul. Bigsby take note!!*

**Cure for 1.** Replace the Tun-o-matic bridge with a 'roller' saddles type - about £11 (\$15-20). I used this one for the Wildkat: <http://tinyurl.com/c3kjxpm>

Some players worry about the loss of sustain when fitting a 'roller' saddle bridge. Well, I have never noticed any loss of sustain and what use is a guitar that won't stay in tune anyway! Also, many guitars that have Bigsby vibratos fitted are not usually designed as 'sustain animals' anyway... so just change it!

**Cure for 2.** There is no cure for this. You'll just have to live with it or remove the vibrato altogether.

Cont'd...



**Cure for 3 & 4.** This time there is a fix. Remove the string path from under the roller tension bar, so that they pass over the top of the roller bar. But now, in most cases, the tension on the strings will be insufficient to stop the strings jumping out of the bridge saddles. So, you will need to fit a device that'll provide enough tension to stop the strings jumping out. Here's what I made to do the job (right).

It's just a piece of chrome plated metal bar, cut from an old ladies coat hanger... the type with gripper pegs at each end (discarded) and a couple of electronic 'cable ties' that you can get for pennies from any DIY electronics shop.

With the new roller saddle bridge and the new home made tension bar attached to the B7's tension bar with the cable ties, the strings now have enough downward force to stop them jumping out of the saddles. And the new tension bar will gently rock back and forth with the strings. Resultantly, the strings develop only shallow notches now, which does not prevent the smooth gliding of the strings over the roller saddles. The B7's 'park' position is now also stable. Whereas, before, there were multiple park positions at different pitches!



I accept that my solution does not look very attractive, BUT... it does cure the problem and all my B7 equipped guitars now stay in perfect tune. Maybe, an engineering company will see this and make a proper all metal 'clip-in' version?

Of course, you will need to make sure that the nut is properly cut and lubricated with graphite dust (pencil lead) too! You can also find out how to **stop new strings going out of tune** here: <http://www.award-session.com/pdfs/manuals/stringit.pdf>

I hope you find these of use. Have Fun!!

## © Stewart Ward - September 2012

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