

## **Taking the Fifth: How Tuning in Fifths Changed My Experience Playing the Double Bass**

by Dennis Masuzzo

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Tuning the double bass in fifths has brought me closer to how I always imagined the instrument could respond and sound.

Most stringed instruments, except the double bass, are tuned in fifths or open chords. For example, violins, violas, 'cellos, mandolins, and tenor banjos are tuned in fifths. Guitar tuning mixes fourths with an interval of a third. The electric bass, however, is tuned in fourths because of its relationship to the double bass.

In the article "*Quintessential Quarrington*" that appeared in the Fall 1998 issue of *Double Bassist*, Joel Quarrington explained the advantages of playing the double bass tuned in fifths (C-G-D-A) instead of the traditional tuning in fourths (E-A-D-G). Quarrington, Principal Bassist of the Toronto Symphony, described how tuning in fifths could improve intonation, make the instrument respond faster, and provide a simple means of achieving low C without an extension. Using a combination of solo and orchestra-tuning strings, I experimented with fifths tuning on an inexpensive plywood bass. There was a consonant overtone resonance of open strings and harmonics I had never experienced—I was hooked.

Tuning the bass in fifths does not change its characteristic sound. The differences are subtle and may be more noticeable to the player than to the listener. I heard a new clarity to the sound of the bass tuned in fifths, and felt the instrument resonated more warmly and naturally. Notes played with the bow, as well as plucked, seemed to lose a halo of muddiness or "boom" surrounding the center of the pitch. Perhaps when conductors request less bass, they are searching for less boom.

Joan Miller, PhD, a former Bell Labs mathematical acoustician and violinist, was interested in finding an acoustic explanation for my preference for the bass tuned in fifths. She developed a chart that illustrated the sympathetic vibrations of open strings for the instrument in both tunings and explained, "The frequency range between the lowest and highest string is greater when the bass is tuned in fifths, and there are more opportunities for fundamentals and their partials to stimulate open strings. For this reason, there are more cases of sympathetic vibrations with the instrument tuned in fifths, a fact that may enhance the resonance of the instrument."

Miller also introduced me to Carleen Hutchins, who has made a set of instruments known as the Violin Octet. I had heard of her work in 1971 when I was a double bass student of David Walter at Juilliard. Hutchins designed her Octet based on the resonances of the violin. The first six of the eight instruments are tuned in fifths, while the Small Bass Violin and Contrabass Violin are tuned in fourths. I told her why I believed they should all be tuned in fifths. She agreed, in principle, and suggested that I write an article about my experience playing the double bass tuned in fifths.

For every challenge of fifths tuning (relearning three of the four strings and a new fingering system) there are many advantages: including the ability to play low C without an extension and a sense that the instrument vibrates more naturally. Intonation is one of the best reasons to play the bass tuned in fifths. I feel a connection with the other stringed instruments as though we are speaking the same language.

Learning a new fingering system for fifths tuning poses a problem initially, but if you have proficient knowledge of the fingerboard, across as well as up and down in fourths, you might enjoy the challenge of finding fingering solutions for fifths tuning. Occasionally, I shift farther to reach a given note; otherwise I use the same fingering system in fifths tuning that I use when the bass is tuned in fourths. It's a small sacrifice for playing an instrument I enjoy more than ever.

I discuss fifths tuning with my students, although I teach them to play the bass tuned in fourths to provide them musical training with appropriate and necessary traditional skills. More experienced bassists, however, might benefit from and enjoy learning fifths tuning. It is easier to learn to play the bass tuned in fifths on a second instrument to avoid changing strings. Writing out scales, arpeggios, and fingerings gave me something useful to practice every day. In addition, to become familiar with fifths tuning, I read through orchestral excerpts, chamber music, solo pieces, 'cello music (including the Bach 'Cello Suites), and the 'cello/bass parts of Beethoven symphonies. I did this because I think of the bass tuned in fifths as a completely different instrument; I'm not transposing but playing the tuning.

After seven weeks of practicing in fifths tuning, I performed the *Nutcracker* with the New Jersey Ballet. The many hours of preparation and fingerings paid off and I was comfortable playing. During the *Nutcracker* run, I had a church job for which I could not get music in advance. I had played the same pieces many times before with my bass tuned in fourths and believed I could sight read them with my bass tuned in fifths. The result, unfortunately, was many wrong notes. Old habits die hard!

Six months later, I performed Verdi's *Joan of Arc* with the Orchestra of St. Luke's in Carnegie Hall. When I got the music, I found it took no longer to learn the parts with the bass tuned in fifths. Fourteen months after my introduction to fifths tuning, I performed Beethoven's *Ninth Symphony* and felt confident I could play any piece of music with my bass tuned in fifths that I would normally have played with my instrument tuned in fourths.

Much of my musical work is with the Paper Mill Playhouse in Millburn, New Jersey, where I typically perform eight shows a week. Because of limited space in the orchestra pit, substitute players for bass and percussion usually play on instruments that remain in the pit. The bass I use for these performances is tuned in fourths to accommodate the substitute bassists, so I must alternate between the different tunings on a regular basis. In addition, I occasionally encounter music that must be played using fourths tuning because of the harmonics and open strings, such as the Hindemith Sonata and other modern works. The tuning would still be E-A-D-G, or solo-tuning F-sharp-B-E-A, for these pieces, creating the need to alternate.

I change tunings and instruments depending on the situation or the performance: when I'm in fifths I think; when I'm in fourths I use my instincts. My fingers have been playing in fourths for so long I don't have to consider where the notes are, but must concentrate more on fingering when I'm playing in fifths.

In 1996 I began using wound gut strings, which I prefer for their warmer sound. Coming up with string solutions for fifths tuning in wound gut is even more challenging than for steel strings, but it's worth the effort. The following are strings I originally used for tuning in fifths:

C—a Eudoxa silver on gut B string (medium or thin) for a five-string bass tuned up a half step to C

G—a Eudoxa chromesteel F-sharp string (fourth string from the solo set) tuned up a half step to G (there are no solo-tuning strings in gut that I know of)

D—a Pirastro Olive gut D string from the orchestra set

A—a Pirastro Olive gut G string from the orchestra set tuned up a whole step to A. I tuned it up slowly over a period of about a week; although it was a little tight, I liked the sound better than a solo A steel string.

Encouraging string manufacturers to produce fifths-tuning string sets in steel and gut is the next step in making fifths tuning more practical for bassists. In addition to the Thomastik Spirocore Red Mitchell string set, Velvet Strings of Switzerland makes the Compas 180 and Garbo string sets for tuning in fourths and in fifths. For the past couple of years, I've been using the Compas 180 synthetic core strings and they have agreed to offer their Anima wound gut strings for fifths tuning in the near future.

In March 1999, I met bassist Joel Quarrington after his solo performance with the Princeton Symphony Orchestra. I described to him some of my discoveries about playing in fifths. We discussed his efforts to spread the word about fifths tuning through his website, master classes and solo performances. At the end of our conversation Quarrington said, "Welcome to the Fifths Club!"

My friend Joe Cascelli, age seventy-three, had been playing the bass since he was fifteen. We played a concert together and he said, "This is the last time I'll play the bass; I've thought about it a lot and have decided I want to retire." I said he should keep playing as long as people wanted to hire him and that I hoped he would change his mind. At the end of the first rehearsal, I told him my bass was tuned in fifths and that I had taken off the extension. After the concert he re-tuned his bass in fifths and decided he wanted to play again, but his friends had already given him a retirement party. I said "Hey Joe, what are you going to tell everyone when they see you at the next rehearsal?" He replied, "I'll tell them I've retired from playing – in fourths!"

What started as an interesting experiment has turned into a new beginning for me, too.

*Dennis Masuzzo was born in 1953 in Norfolk, Virginia. He earned his BM and MM as a student of David Walter at the Juilliard School of Music. Dennis is a freelance bassist, teaching privately in Upper Montclair, New Jersey. He plays a guitar-shaped double bass made in 1833 by Vincenzo Lucarini and uses a Kurt Dölling German bow. Contact Dennis at [www.dennismasuzzo.com](http://www.dennismasuzzo.com).*