

# The Buckeye Backcheck

*Newsletter of the Columbus Chapter of the Piano Technicians Guild*

Volume 39 Issue 2 March 2014



## MESSAGE FROM THE PRESIDENT



The west wind blows wisdom from the prairie shores of Lake Michigan  
breathe in the moist Spring earth

Join us as we meet our regional Vice President this month.  
She is promising to offer advice to make our business run  
like a sleek, well-oiled machine. Look forward to it!

Bryan Hartzler, RPT

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## Chapter Meeting Minutes February 18, 2014

The meeting was held at First Congregational Church.

### Attendance:

Bryan Hartzler, John Schmoll, Ron Kenreich, Chris Burget, David Stang, Ben Wiant, and guest Ben Peters

### Treasurer's Report:

The Chapter has \$2865.77 in checking.

### Old Business:

John Schmoll applied for reduction of his PTG dues.

### New Business:

A budget for future post-holiday dinners was discussed. This would cover, or contribute to, the cost of any musical entertainment and tip for the dinner. The amount agreed to was \$450.

Newly elected Central East Regional Vice-President, Maria Pollock, RPT will speak at the March meeting.

## Poul Henningsen (Circa 1931)



## Thank You!



DEAR PIANO TECHNICIANS GUILD-COLUMBUS,  
THANK YOU FOR YOUR CONTRIBUTION  
IN THE AMOUNT OF \$250<sup>00</sup> TO OUR  
SUMMER STUDY SCHOLARSHIP PROGRAM.  
YOUR DONATION IS VERY THOUGHTFUL  
AND WILL CERTAINLY BE GREATLY  
APPRECIATED BY THE WINNING- PIANO  
STUDENT PARTICIPANTS.

- MEREDITH NEEDHAM, CHAIR  
- MEISHA ADDERLEY, CO-CHAIR  
SUMMER STUDY SCHOLARSHIP PROGRAM  
COLUMBUS MUSIC TEACHERS ASSOCIATION

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## Unison And Octave Tuning

John Schmoll and Ben Wiant offered the February technical presentation on unison and octave tuning. Other related topics, such as muting and tuning stability, were discussed as well.

First, John offered a brief overview of some of his techniques and the philosophies behind them. The unison, with all of its matching partials, is often the hardest "interval" to tune. The strings also have to be the same length and diameter, seated properly to the bridge, level, and mated to their hammers. Inconsistencies here will set up false beats in the unison or cause the strings to vibrate out of phase with one another. The hammers need to be properly voiced and the strings need to stay in tune when played hard. So, "If you're not occasionally knocking out a mute here and there while you're tuning then, perhaps, you're not hitting the key hard enough... Tune hard. Listen soft." Of course, the piano needs to be in good enough regulation to deliver hard test blows. Ideally, you want to settle the strings with blows that are harder than what a performer or client would use.

He also suggested listening to octaves with all strings unmuted. "Octaves can be ruined by the slightest beat in the unison." Other intervals can also be used to uncover beats in the unison as well. Some people prefer faster beating intervals, while others like slower ones. Where in the scale may also be a determining factor. He likes to use octaves, double octaves, octave fifths, tenths, etc.... He'll tune the center string to the unmuted octave, then pull in the left string and check it with both strings sounding and compare them to any other intervals available. Then, he'll pull in the right string and compare with all strings sounding with other unmuted intervals. This can uncover bad unisons and he will correct any as he finds them.

He went on to discuss strip muting in general and offered up some of the pros and cons of it versus tuning all unisons as you go, including the temperament. In some ways, strip muting is easier to set temperament and octaves. However, even after heavy pounding, the center strings may still shift and need correction as unisons are pulled in. Sometimes he prefers to tune and check unisons with one or two single mutes because it may force him to voice as he goes, and recognize problems that may have been hidden with a strip mute. This may entail a little sanding and needling on verticals because hammers are easily accessed, or using a "chopstick" needle on grands. Just a little surface needling on the strike point, not very deep at all, can even out the tone on harsher sounding notes that stick out.

John also mentioned that just doing one pass when all unisons are pulled in does not mean one is finished. Most likely, another pass, or more, may be needed, or at least everything is checked again and notes that have strayed are touched up. He also mentioned that, to beginners especially, this may sound like a lot to do but that it is something to strive for eventually.

Next, Ben Wiant, got up and shared some of his ideas of the mechanics, or kinetics, of tuning. Kinetics is synonymous with motion, and many things are set in motion as a piano is being tuned. Strings, and all their segments, both speaking and non-speaking, are set into motion and tensions shift through all of them, but some segments may store more tension than others if not equalized. Pins in tight tuning blocks can store tension and torque, also known as torsion, and this can slowly shift if the tuner has not reset the natural twist exacted by the string tension. Bridges can roll slightly as tension shifts if the pitch is changed enough, thus causing other unisons elsewhere to drift because their own tensions may have shifted somewhat. Also, the motion of one string in a unison may affect another via "string coupling". Ben stated, "It is an absolute idiocy to believe the motion of one string in a unison doesn't affect another, because it does!" Kinetics also applies to the tuner as well. How hard or soft the keys are struck, when they are struck and why. He also discussed, at times, the manipulation of the tuning hammer and the amount of force, or even lack thereof, applied to it to cause a change. Many of these concepts were offered as he was actually performing a complete tuning on the piano.

One of the first things he mentioned as he sat at the piano was that the tip of the tuning lever must fit snugly on the pin. Otherwise, it is difficult to feel how the pin is moving in the block and detect the faint impulses that travel from the pin, through the tip and lever, and into the hand. This feedback is paramount to making proper decisions of how to manipulate the pin. The hammer he was using actually had the head welded on and was as rigid as could be. This rigidity helps transfer energy to and from the pin.



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**(Tuning continued...)**



Next, he demonstrated a few things he does before many tunings. First, he made sure all strings were seated to the bridge. He held a screwdriver in one hand with the blade on the string right next to the bridge pin at the notch. The other hand tapped on the butt of the handle. Not much force at all, almost as if he held his hand an inch or two above the handle and just let his hand fall freely onto it; as opposed to pounding on it. One doesn't want to mar the string or the bridge notch. Some techs use a brass or wood dowel.

He then explained that he'll often mute the duplex sections in some pianos if they are long enough. Often while tuning up into the treble the duplex sections can be excited enough to sound and induce false beats that can complicate the process. He merely muted these off with strips of masking tape, primarily in the middle two sections around the first treble break. He then went on and tuned the entire piano.

One thing he stressed repeatedly was hitting the key hard enough to settle the strings. One technique involves a forceful double blow to the key using both hands in very quick succession. Sort of a "Ba-Bing!!!" if you will. He would even do this several times on a key with the sostenuto engaged so that a very deliberate and sustained vibration was induced into the string allowing it to travel its full length and aid in equalizing the tension in all segments. When he felt like the string and pin may be settled he would then play the note softly listen to the result while checking an interval. So, again, "Tune hard. Listen soft."

He would also, from time to time, while tuning, try and describe the feedback he was getting from the pin. "One click, two clicks, three clicks... no change in pitch. I'll use more hard blows to the



string to help it render more." Or, "Wow! I barely touched that one and it dropped with one click. This pin is a little loose, but strong enough to hold if I make sure that string tension is properly distributed." Or, "This one was storing torque." And so on. He related that, sometimes in the bass, he may bring the string slightly over and sort of let the string pull the pin back, and then test it, of course. This, as opposed to some strings higher in the scale where he might feel the need to reintroduce the natural twist and leaning of the pin that would otherwise, over time, be induced by the string. This also has to do with the fact that, on grands, the string segment from the agraffe to the tuning pin is shorter in the bass, or makes up a smaller percentage of its total length, and has a smaller area of friction that can hold tension in the wire. Higher up in the scale, before the treble break, this area of friction is greater as it passes over the felt on the plate. So care must be taken to equalize the string tension and to more proactively set the pin. Sometimes while striking the key, he would simultaneously tap slightly downward on the hammer with the handle pointed away from him. "This isn't enough to bend the pin but it will help release the tension built up in the string's upper segment." As with the screwdriver, light pressure, letting gravity do the work.

For this tuning, the whole piano was strip muted. He started with the temperament and the tuned downward through the tenor and into the bass. He then pulled out that strip and tuned unisons starting on the first bichord and went upwards stopping just below the temperament octave. He then went above the temperament and tuned all the center strings all the way to the top. He then pulled in the unisons starting on C8 all the way down through the temperament. He would tune the right string to the center, then pull the mute and tune the left to the other two with all three strings sounding. If he felt a note had shifted he would test it with intervals from the temperament area using thirds, tenths, seventeenth, and arpeggiated chords.

He also went beyond the kinetic aspects and offered suggestions on a variety of topics, including: temperament, octave stretch, false beats, dealing with tenor sections of poorly scaled instruments and sometimes having to reconcile conflicts by relying on a sense of musicality. Probably enough for another article, really. Here's a few. "Thirds and tenths are very important because they figure so prominently in the harmony of western music." So, when testing an octave, the tenth is just slightly faster than the third, yet the octave still sounds clean. That may be fundamental theory, but it is still so very important. He also offered a tip for thirds in the tenor on spinets. If the highest wound string is F#3, then the D3-F#3 third should beat the same as the A#2-D3 third. This isn't a hard and fast rule, so to speak, but one that has worked for him when dealing with jumps in beat rates in this section of poorly scaled instruments. He also played a lot of double octaves while tuning the bass and he also would check the downward progression of octave-sevenths making sure it was smooth. There were several more things worthy of discussion but one thing he stressed was a broader appeal to listen to the client. "If the client tells you they hear something they don't like, you have to try and hear it too. You can't just pretend. You have to try and figure out what's wrong and, if possible, fix it."



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[www.ptgcolumbus.org](http://www.ptgcolumbus.org)

## ...Eine Kleine Nachtmusik?



<http://www.joemarinara.com/thedailyesspresso/strange-inventions-of-the-early-consumer-era/>

### Columbus Chapter of the Piano Technicians Guild

**President** Bryan Hartzler, RPT  
**Vice-President** John Schmoll, RPT  
**Treasurer** Ron Kenreich  
**Secretary** Christopher Burget

*Contributions and pictures for  
the Buckeye Backcheck and the  
web page are always welcome,  
(even if they are only  
peripherally related to pianos)!  
- Chris Burget*

### Upcoming Events Chapter Meeting

Tuesday, March 18, 2014,

**7:30 pm**

**North Unitarian  
Universalist Church**

1574 Franklin Street  
Lewis Center, OH 43035

44 Ways to Make Your  
Business More Efficient  
Maria Pollock, RPT, CERVP

Map Link: <http://goo.gl/maps/U62my>  
South of Lewis Center Rd. next to the  
railroad tracks.

This newsletter was created using the open-source program Scribus running on the Linux Mint operating system.

#### Disclaimer:

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