

PIANO TECHNICIANS Journal

OFFICIAL PUBLICATION OF THE PIANO TECHNICIANS GUILD
June 2022

Vol. 65 No. 6

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Multiple-Piano Concerts

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Two Tips

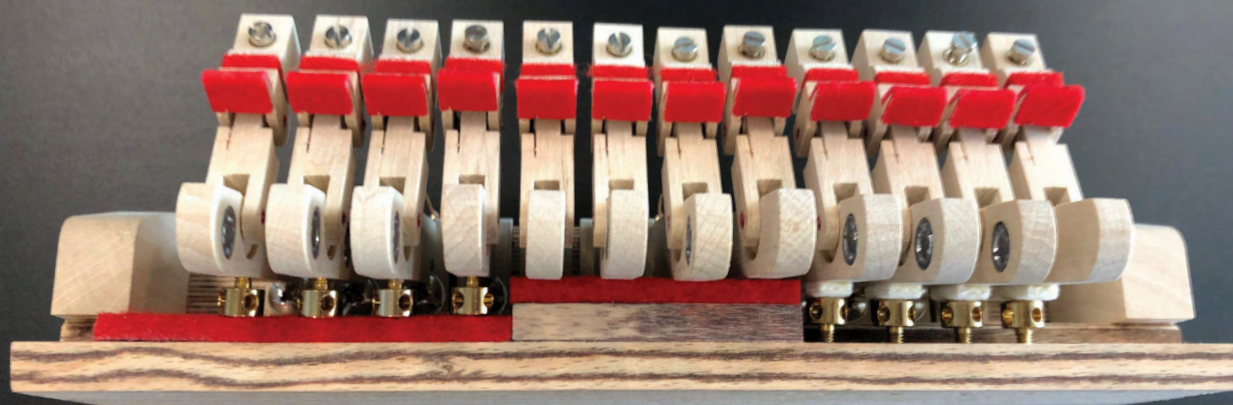
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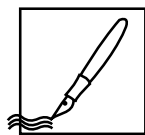
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In Praise of the Spinet (and Other Terrible Pianos)

By Scott Cole, RPT
Journal Staff

The editorial in the May Journal by John Granholm, RPT, inspired me to riff on the value of spinets and other “piano-shaped objects.” A few years ago, when speaking to a customer, I offered an analogy between spinets and the atrocious Suzuki Samurai truck: There’s absolutely no reason to get either one.

He seemed a little hurt and replied, “But I have a Suzuki Samurai!”
Oops.

Having actually driven a Suzuki Samurai, I stand my ground: It is one of the true nadirs of automotive history and an insult to the proud warriors of feudal Japan.

Like most technicians, I can’t stand spinets. I hate sitting down, hunched over the piano, trying to tune something that will never sound in tune when I’m done. Replacing a broken hammer shank in a spinet is a migraine-inducing nightmare, and I don’t even get migraines. As we all know, everything about them — tuning, touch, sound — is miserable. Yet, I must admit that there is indeed a place for spinets and all the other pianos we so dearly hate, including old klunkers and all the low-quality consoles pumped out since the 1940s. All of these miserable excuses for musical instruments do in fact have value: They are where we earn our chops as technicians.

Recently, I was tuning one such spinet in very poor condition. It was the end of the day and I was 50 twisting, mountainous miles from home. The room was dark and overheated. Forget the money — I just wanted to tune it and get out. Unfortunately, the worst happened: A bass string broke. With head in hands, I considered my options. The customer was elderly, hard of hearing, and from the dust pattern on the keys, not an advanced pianist. He’d probably never notice nor care if I repaired the string. I could tweak the damper somehow, close up the piano, charge my regular fee, and leave the old string in its dusty wooden tomb at the bottom of the piano.

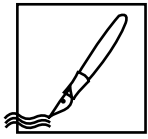
Yet something bothered me. If I really had to splice the string, could I do it? Of course, I can do a splice. I’ve done it plenty of times. Just not lately. I install lots of plain-wire strings, but I might do one splice a year, if that. It’s easy to muck up, especially if the knot ends up in the wrong place, or it doesn’t hold. Run out of unwrapped leader and you’re toast. Did I really remember how to do it? I was fairly confident. *Ok, here I go. Challenge accepted. I will splice this #@\$\$ spinet string.*

After vacuuming out an inch of filth and cobwebs, I got to work. I knew how to make my “Ps and Qs” and remembered to make the first loop on the repair wire instead of the broken string. Then things went sideways. Instead of ending up just below the pin, the knot was now just below the termination point. Dang. I did it again, and one of the loops gave way. *Oy gevalt!* I did it a third time and it finally held.

We know that spinets and other poor pianos can have emotional meaning for our customers. But the value for us technicians is the opportunity to practice our full range of repairs and regulation procedures. Some of those skills, like splicing, need occasional practice. Some others, like repairing a cabinet scratch or fixing a loose tuning pin, we may have never attempted before. We might need to learn to listen through crazy false beating or develop the arcane skill of voicing. How else would we learn and practice these skills? On a concert grand? On a teacher’s beloved Steinway B? Definitely not.

Instead of belittling all those spinets and other pianistic junk that we all love to hate, realize their true value for us as technicians: low-stress, low-risk opportunities to practice our skills, learn new ones, and teach our mentees.

Lean into the spinet!



Letters to the Editor

From time to time over my 45 years as a member of the Guild I have read articles that I have found to be highly questionable and highly debatable. The article in the March Journal dealing with a “self-tuning piano” system certainly falls into that category.

Apparently, this system heats the strings to alter the pitch. To me, passing an electric current through a wire to effect a change in its pitch is tantamount to performing heart surgery with a butter knife. To make matters worse, it is only possible to lower the pitch. As we all know, pianos almost always lose pitch. What is the point of a system that can only result in lowering a string’s pitch? It seems to be an unfortunate oversight on Mr. Gilmore’s part that he failed to incorporate a closed loop, recirculating system of liquid nitrogen that would raise the pitch of the strings when necessary.

Consumers who want an instrument that doesn’t require tuning should purchase a digital keyboard. The person that wants an acoustic instrument should buy a quality piano and pay a competent technician to service it on a regular basis.

I have absolutely no concern over losing business to a “self-tuning piano.” It would be better off displayed in a tent as an oddity at a Barnum and Bailey’s circus side show. There is a high probability that Mr. Gilmore’s bizarre experiment will be a one-off event, destined to take its rightful place alongside the *Titanic*, the *Hindenburg*, and McDonald’s bubblegum-flavored broccoli.

Timothy Strang, RPT
Quad Cities IL Chapter

I couldn’t help but smile when I read Tim Strang’s humorous critique of my invention. It seems that my two-minute tuning of the entire piano to within 1/10 of a cent last night was an impossibility! If only it had occurred to me over the last twenty years that a string might be flat! Curses! Back to the drawing board! Seriously, though, Tim is not the only person who has expressed concerns of this kind. I should explain the operation a little better.

All the strings begin in a sharp state when cold. In fact, the diagnostic software will enable the tech to easily bring the strings into range by displaying them all graphically on a laptop screen connected via a USB cable. When the system is installed new, the tech will just pull each string up until it turns green on the screen (“in range”), then it’s ready to go. The very first automatic tuning will take a little longer as the program tests a couple of temperatures and measures the pitch to calculate calibration factors. These coefficients are saved in memory and are good forever for that piano. From then on you get the

two-minute tuning. Actually, there will be a choice: The musician can either just turn it on and get yesterday’s tuning in about ten seconds, make it go through a new tuning for that day in about two minutes, or have their tech give it a true aural tuning, just the way they want it, and save that tuning in memory for future use. Of course, some historic/exotic tunings will also be offered for fun.

Tuning kits will be sold wholesale to techs, who can then decide how much they want to mark up and what they want to charge for the installation. Diagnostic software will be available free for qualified techs. Servicing will be largely the replacement of parts, which is easy: Sustainers unplug and only cost a few bucks; fuses are ordinary automotive type, etc. In all, it should prove to be a money-making proposition for techs throughout the world.

Don A. Gilmore
Kansas City MO

I want to thank you for publishing Jason Cassel, RPT’s excellent article, “Five Tips for Running a Stress-Free Piano Service Business” in the January 2022 Journal. While I appreciate the technical articles published in the Journal, I was happy to see an article that tackles the emotional issues technicians face. As dedicated craftspeople, we take our customers’ satisfaction seriously, but as Mr. Cassel points out, we can also internalize too much responsibility for customer happiness, sometimes allowing isolated customer complaints to cause us to question our own competence. We can also allow our dedication to service to draw us into stressful situations involving unreasonable demands or unrepairable instruments.

Many technicians work alone and don’t have the benefit of immediate co-workers with whom to vent their everyday frustrations and stresses. It can be difficult to discuss these with colleagues in the wider community out of a concern that being open about emotional struggles will be perceived as “weakness.” Kudos to Mr. Cassel for discussing this topic and for encouraging us technicians to give as much consideration to our own mental health as we do to our tools and skills.

Steve Moss
Wichita KS Chapter

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The Piano Technicians Journal is seeking a person to serve on its editorial staff. Here’s a short list of qualifications we’re looking for. A strong candidate will:

- Be a Registered Piano Technician.
- Possess intermediate to advanced technical skills and experience.
- Be a capable writer.
- Be a capable photographer.
- Be a capable computer user (Microsoft Word/Excel and PDF editing).
- Be an active team member with good communication skills.
- Be able to meet deadlines consistently.
- Be available to attend monthly virtual staff meetings.
- Have adequate professional time to meet Journal responsibilities, 10-20 hours per month.

Experience with editing and publishing is a plus. This is a contracted and compensated position, open until filled. If you have questions or are interested, contact us at editor@ptg.org.

PIANO TECHNICIANS Journal

Vol. 65 No. 6 • June 2022

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DEADLINE: No less than 90 days before publication date (i.e., September 1 for December issue).

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Subscriptions

Annual subscription rates: \$150.00 for Non-Members (U.S.)/1 year; \$280.00 (U.S.)/2 years;

Single copies: Past 12 months/\$15; 12-24 months old/\$5; Older than 24 months/\$2, if available. Piano Technicians Guild members receive the Journal as part of their membership dues.

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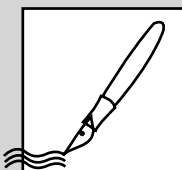
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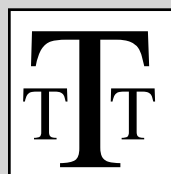
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By Marc Poulin, RPT
PTG President



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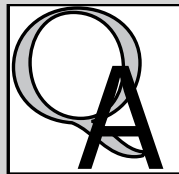
A new sandpaper,
install a bass string,
fix a mangled bass
damper, coffee mug
glue transport



Compiled by
Scott Cole, RPT

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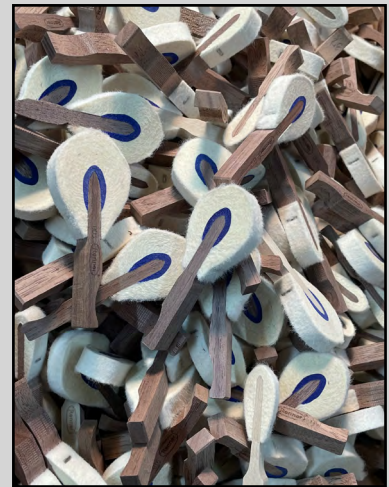
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New hammers at Renner USA in Scottsdale, AZ.
Photo by Andrea Hackbarth, RPT.

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Tuner’s Life/Tuner’s Health stories, and
queries via email to: editor@ptg.org

Submit topics and questions for
Q&A Roundtable to: q_a@ptg.org

Submit tips for TT&T to: TTT@ptg.org

From Your Board of Directors



Small Beginnings

By Marc Poulin, RPT
PTG President

Over the years there have been so many discussions of why our members should attend the Piano Technicians Guild Annual Convention and Technical Institute that I have lost count. Why each of us makes the decision to come to the convention is an individual concept, and what motivates any of us will not necessarily be what motivates other members. I am not going to try to convince you to attend; I will simply tell my story.

Upon becoming an RPT and graduating from North Bennet Street School in 1997, I was still in the process of becoming a Certified Tuning Examiner. I had attended two regional conferences over the previous two years, and those were fun. I had helped with exams, taken a few classes, and met a ton of people, including PTG President Marshall Hawkins, RPT. Everyone I spoke with said the same thing: “Regionals are fun, but you GOTTA get to the national.” Yes, it’s the “Annual Convention and Technical Institute,” but everyone then called it the “national” (and many still do). I spoke with Jack Stebbins, RPT, about continuing my examiner training, and he agreed that going to the convention was the quickest and best way to finish. With that encouragement, I registered for the convention in Orlando, Florida. Little did I know that 24 years later, I would be elected PTG president in that same city.

Arriving that July and walking into the hotel, I knew absolutely no one. I cautiously made my way towards the registration desk, observing the goings-on around me. There were a lot of handshakes, big smiles, little knots of people in deep conversation about what had happened in “Council” (What’s that?), and a whole lot of hugging of people walking in the door. What had I gotten myself into? Who were these people?

I eventually made it to the front of the queue and came face-to-face with Sandy Roady, with whom I had spoken exactly zero times. She greeted me like a long-lost friend with her perpetual smile and friendly greeting. There I was, five minutes after arrival, having met one of my future closest friends.

I settled into my hotel room, then set off to find the exam floor. There I found all kinds of serious people wearing these intimidating black examiner ribbons. I was introduced to Keith Kopp, RPT, the tuning exam sub-chair, who welcomed me with a smile, a handshake, and his quiet way of explaining how crazy the rest of this week would be.

Throughout that week, giving exams or wandering around during brief breaks, I met more people by the moment, people I’d heard of in conversations at school or whose names I’d read in the Journal. You know, people like RPTs Dr. Albert Sanderson,

Michael Travis, Jim Coleman, Sr., Dean Reyburn, Don Mannino, Ward Guthrie — the list goes on and on. Each of them greeted me personally, and we spoke for a few moments. Most of those I met I now consider friends. Not once did I ever feel unwelcome, or that I didn’t have something to contribute that would be appreciated as a member of the organization.

At the opening ceremony, awards were given to members for all kinds of reasons. It was impressive how well everyone got along and worked together for the betterment of the group. It seemed to be a family, and it quickly became exactly that.

By the end of my first convention week, I was a Certified Tuning Examiner. RPTs Keith Kopp and Richard Bittner (the ETSC Chair) came to me and asked if I would be interested in serving on the committee. I heartily agreed. After I had agreed, they added that since the convention would be held in my region the following year, they wanted me to be a full-time examiner.

My second convention was spent in the exam rooms. We had more time off that year than today, as the unified exam wasn’t yet a thing. We had 90 minutes between the start of an exam and scoring it, so we could wander into classes and visit with others. The introductions and conversations with people from all over the country and the world continued. Most of them became immediate friends.

A couple of days into the week, Keith Kopp walked up to me with a stack of exam forms and stated quickly, “I’ve been elected to the board. You’re in charge.” He hurried off. What had just happened? In charge of what?

That preceded ten years on the ETSC. Attending almost every convention (I missed 2003, as my son Alex was born the week before) led to spending a great deal of time with the institute team, which led to an invitation to join them. That involvement led to an invitation to run for the board, which I eventually did. Here I am, 25 years later, as the President of PTG.

I said I wouldn’t try to convince you to attend our convention and institute. However, for me anyway, great things came from taking the plunge and signing up for that first convention. It doesn’t hurt a bit, you can write it off on your taxes, you’ll learn a thing or two, and I guarantee you’ll make at least one friend. You never know where it may lead. To quote the android David from Ridley Scott’s 2012 movie *Prometheus*, “Big things have small beginnings.”

I hope to see you all in Anaheim.



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Tips Tools & Techniques

Compiled by Scott Cole, RPT
Journal Staff

A Great New Sandpaper for Hammer Filing



Photo 1: This Mirka™ Abranet® sandpaper is my new favorite.

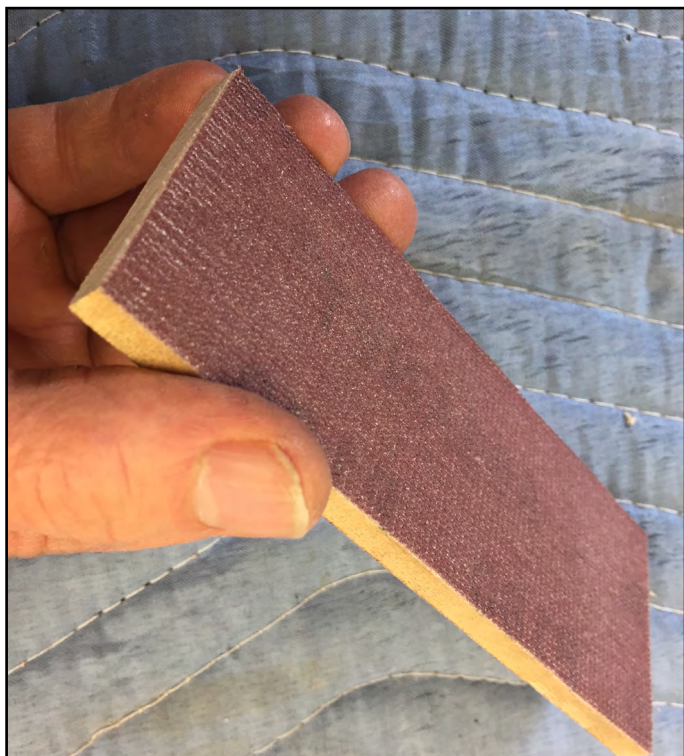


Photo 2: Use it by itself or glue it to your favorite sanding device.

I'm thrilled with Mirka Abranet sandpaper, and so are those I've recommended it to (Photo 1). It shears the felt rather than tearing it up and fluffing it. I glue it to 3/16" paddles (Photo 2) that are the width of four hammers with 120, 180, and 400 grits for gang filing, even on angled hammers, then shoeshine finish with strips of 400 and 800. This abrasive is fast, sharp, and doesn't clog.

I find that short back-and-forth strokes work well without tearing the felt like regular sandpaper can. Go to mirka.com for more information.

Jim Ialeggio
Boston MA Chapter

VS Profelt for Proper Bass Damper Seating

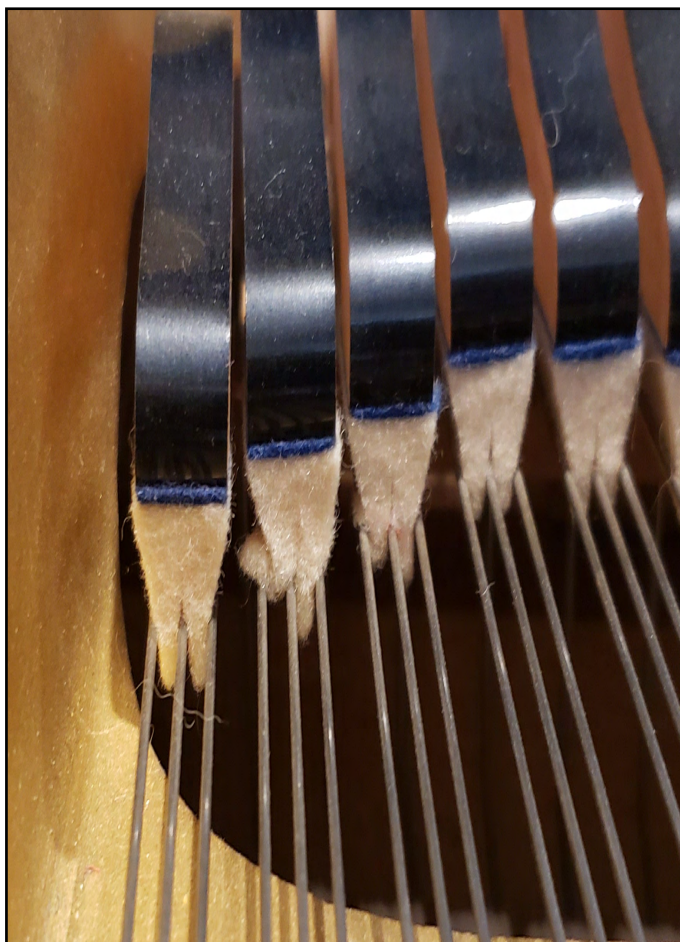


Photo 3: Dampers can occasionally get twisted or unseated.



Photo 4: Wet the errant damper with VS Profelt and use a flat-bladed screwdriver to nudge it back into position.



Photo 5: The damper is now properly mated to the string. (Long dampers like these should be first trimmed if time and budget allow.)

When tuning a grand piano, it is common to see wedge dampers that are malformed or improperly

seated on the strings (Photo 3). For decades, I have used a small screwdriver blade to guide them back into position. Too often they don't stay there as long as I would like. If the damper felt is wetted with VS Profelt first, the felt will stay in shape and in position much better and longer (Photo 4). This can be done in a minute or two without removing the damper, and the damper will now conform to the string (Photo 5).

Bruce Dornfeld, RPT

North Shore IL Chapter

Tip Challenge #30: VS Profelt has some useful applications, like the tip above for restoring a damper. What else do you use it for? Send these and other tips to Scott Cole, RPT at ttt@ptg.org

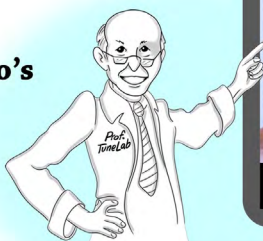
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Theory of 3-part tuning

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Q&A Roundtable

Compiled by Andrea Hackbarth, RPT
Journal Staff

An Interview with Lloyd “Chip” Meyer of Renner USA

In March, I had the opportunity to travel to Scottsdale, Arizona and meet with Lloyd “Chip” Meyer of Renner USA. He offered a tour of the Renner USA facility along with an interview. When we first sat down to talk, I asked him about the relatively recent purchase of the Renner company by Steinway & Sons and what if any changes that acquisition has brought about.

Chip Meyer

Renner and Steinway have quite an interesting history. My dad used to run Steinway, so I grew up around this industry and I remember going over to John Steinway’s house as a kid. Back then, they were struggling with their action parts in New York, and my dad was working on turning the company around. The folks at Renner were making the high-quality parts without Teflon™ bushings for the Hamburg Steinway factory, so he thought the obvious solution was to have Renner make the action parts for the New York factory as well, which started with the B and D models. Renner did that for a time, but then Steinway was bought and sold several times and they went back to making their own action parts in New York for many years. Now they have decided once again to have Renner make the action parts for both of their factories, and they bought the Louis Renner company.

Renner is continuing to make parts for their normal customers and operates independently, even after being acquired by Steinway. However, it has created some challenges in the supply and demand for parts. The most common question we get on the phone right now is, “Do you have any action parts for Steinway?” Unfortunately, they’re on back order and have been for quite some time. Part of that is due to the additional burden of the Renner factory making parts for the New York Steinway factory again.

Another reason for the backlog is due to Covid. When it first hit, we thought it would have negative effects in that it would screw up the economy, but what happened was interesting. At first, everything shut down and nobody was doing anything because piano techs weren’t going into people’s houses and concert halls were closed. But a few weeks later, our phones started blowing up. Technicians were saying, “This shutdown gives me a chance to finally get to that rebuild project I’ve been meaning to do, so I need some action parts.” We saw an immediate uptick in orders from people who were isolated working in their shops. Later that year when things started to open back up, it really took off. Piano owners were home, spending more time playing their pianos and realizing that their instruments needed some work. Some people were getting stimulus checks, and they weren’t going on vacations or going out to eat much, so they thought it would be a good time to invest in rebuilding their pianos. We saw it take off after that and it’s really continued to just blow up.

So yes, we have a huge backlog of orders. The factory just hasn’t been able to ramp up that quickly to meet the much higher demand now for action parts. It’s a great time to be a piano technician except that everybody’s struggling with supply chain issues. It’s not only the action parts, but strings and everything else too. Thankfully, everybody’s been understanding of what’s going on. They realize we’re working through it the best we can. With shanks and flanges, we’re pretty close to getting caught up. We still have some back orders for those, but as soon as we get shipments in, we’re sending everything out to fill old back orders. Right now, it’s the wippens that have the longest wait. For those placing a new order for shanks and flanges today, it might be a month or two before they get here, but the wait for wippens is

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much longer. We're filling orders for wippens right now from last July and August. We hope this surge in demand continues, as it's good for the whole industry.

AH

After some initial conversation, Chip gave me a tour of the Renner USA warehouse and technical shop, starting with the felt and tool room, where he showed me a variety of unique tools available from Renner. I asked him about other new developments at the company that technicians might be interested in.



The felt and tool room, where all the tools, felts, and bushing strips are kept. In the bottom corner, notice the full-octave action model, complete with pins, strings, and back action, which is used by Renner Academy students.

Chip

You've seen the ads for our new Baldassin 3-in-1 back action kit, right? That has been a popular new product. It gives technicians the flexibility to replace a whole back action, configured in any of three different ways. The kit includes capstans that can be inserted into the pre-drilled underlevers or installed in the tray, but you can also install it without using capstans like our previous design. Our students build a whole section of this back action in each of those three ways at the Renner Academy. They also build a whole octave of the front action, including installing and regulating wippens, boring, pre-filing and pre-voicing hammers, and hanging them on new shanks and flanges.

We also just worked with the PTG to secure the future needs for the RPT grand regulation exam action models. This is quite an upgrade from the single-note model, with three keys and a working sustain and sostenuto pedal. Renner builds these exclusively for the PTG, and we don't sell them to anybody else. We think it was a really proactive move by the PTG exam team

and board of directors to approve the funding to secure their needs for these for the next ten years. We used to have good support for special projects like this at the factory, but with some of the recent changes we've seen over there, we think it was a wise decision to order these now while the factory was still willing to manufacture those models at cost for us and the PTG.

AH

Then we made our way to the main warehouse, where Chip explained the variety of parts available in the Renner sample parts kit and provided some unique background information about Renner hammer felt.



Chip with the Renner USA Parts Kit inside the climate-controlled main warehouse, where all action parts and hammers are stored. The parts kit includes samples of all grand wippens, hammer shank and flange styles, as well as damper felts, hammers, backchecks, and upright hammer butts. Technicians can use the samples to test the fit in a particular piano and order exactly what they need.

Chip

There's kind of an interesting story about the felt used to make our Premium Blue Point hammers. We call it "Weickert Special" felt, which is the name my father suggested to Jack Brand, owner of the Wurzen felt company, who manufactures this amazing hammer felt in Germany. It's an intricate interweave of long and short felt fibers and there's a specific recipe for how it's made. It's the kind of felt that used to be used by Steinway New York and other fine piano hammer makers, but it became unavailable for many decades after World War II when the felt making plant was taken over by the communist government in East Germany. But after the Berlin Wall came down and Jack and his father re-privatized the old Weickert plant, they got a call from Renner asking if they could make the old Weickert felt. A

former production manager of the Weickert's returned the special recipe, which had been taken home long ago by an employee for safekeeping. That practice was common during wartime to protect valuable company documents in case factories were bombed or destroyed. There's a great video on the Wurzen felt company's website where Jack tells the story about how they worked with Renner and some of Renner's piano making customers to bring back the legendary Weickert Special felt.

We did a lot of research and development to figure out how to optimize our hammers to take advantage of the unique characteristics of this felt. Piano hammers are a fascinating topic and technicians have varying opinions about how hammers ought to be made. These hammers are made with a high-tension felt that doesn't require lacquer or chemical hardeners. Voicing is done by relaxing certain areas of the felt with needles. In our R&D for the Blue Points, we discovered that if we could press the hammers into a more pointed, diamond-like shape, it would take advantage of the unique characteristics of this particular felt. The result is an incredible dynamic range with big sustains, evenness, and all of the other features that pianists desire. That's a result of the felt as well as the way the Renner factory presses it for us.

A few weeks ago, I was talking to Paul Schiller, a concert pianist and top piano technician who worked with Franz Mohr at Steinway. He explained why these hammers have the tone qualities they do: The sharper contact point leaves the string quicker, allowing for the optimal frequencies to be produced. If the hammer is on the string even milliseconds too long, it acts like a damper. You need an appropriately dense felt to excite the string to get the right fundamental and partial tones, but you don't want it on the string too long. An advantage of this hammer is that it's pressed into this shape, which is ideal for this felt recipe. It hits the string, delivers the energy, then immediately bounces back.

AH

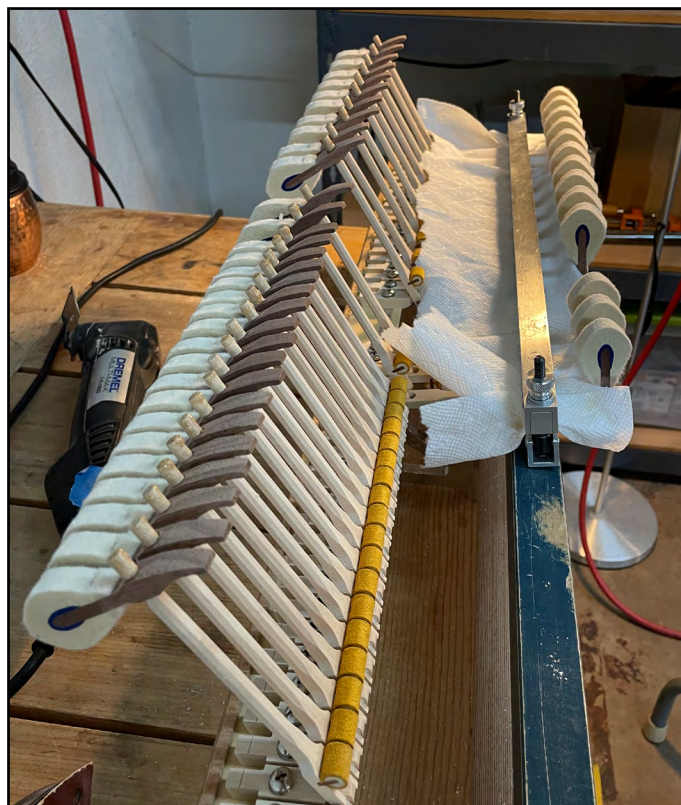
We then moved on to the back shop, where all the hammer boring, shaping, and hanging is done.



The back shop, showing the Renner USA hammer boring jig, as well as hammer and shank samples waiting to be replicated to factory specs or customer samples.

Chip

We use the Renner USA hammer boring jig in our shop to do custom hammer boring. Here are some samples from a Steinway, for which we're copying the angles and bore distances. You can see there's one of the generations of Steinway flanges with a more curved end. Our high-definition flange with the squared angles will fit on the same rail, but instead of just sitting on the top of the rail, they seat on the shoulders, providing two contact points for better seating on the various generations of hammer flange rails produced over the past 120+ years. We also have the factory specs, including angles and bore distances, for most of the popular pianos, except Yamaha, so for those we need technicians to provide their requirements or send us samples from the piano for duplication.



Hammer hanging in progress. Steven, the lead technician, explained his process of clamping every other hammer to provide enough space for cutting and sanding the shank ends by hand.

AH

After the tour, our conversation turned to the subject of piano technician education. I asked Chip about the status of the Renner Academy and any plans for future sessions.

Chip

We did one session of the Renner Academy last year, but that was rescheduled from the year before due to Covid. I can't tell you how many times we had to reschedule that thing! I think we had students from five countries, so there were travel restrictions and other issues to work around. Finally, we got everybody together in May of 2021 and completed a full Renner Academy. It was great, but we decided to put it on hold until we can see how things settle down with Covid and other world issues.

In the meantime, we're working on some enhancements to the course to make it bigger and better than ever. One thing we're working on is incorporating the new Ravenscroft Performing Arts Center as a venue. One of the most fun parts of the whole experience, especially for me as a non-technician, is to hear live what happens in the voicing demonstration. What we thought would be really cool is to do a before and after voicing in the performance hall. We'll have somebody play the piano so students can hear how it sounds with just a basic set of Renner Blue Point hammers with standard pre-filing and pre-voicing. Then, we'll go through all the voicing procedures and let everyone hear the difference. We have been doing that part at the Ravenscroft factory, but what we're talking about now is doing that voicing class on an actual concert stage in a performance hall with amazing acoustics.

Of course, students in the course also get classroom instruction and we bring them here to our technical shop where they get hands-on experience with the drill presses and hammer boring jigs. They also get to do hammer filing and needling, and even hanging. Then we take them over to the Musical Instrument Museum, where they get an exclusive behind-the-scenes tour by the curator of the museum, who takes them into places not on the regular tour. One other cool thing we do is take pictures of the students doing each aspect of the course. There are two reasons for that. One is to give students some marketing material to use on their websites or social media, and in the press release we provide

about their professional training experience. The second reason is they can look back and remember everything they did without having to take so many notes.

Though we don't have a future Academy session planned yet, we currently have almost 140 folks asking to get in. We've previously limited the class size to 15 students with four instructors, which is an incredible ratio, but we just can't accommodate everybody who wants to attend. At that pace, it would take us ten years just to get through our waiting list, so we're considering increasing the class size. This kind of education and training is needed, and obviously the desire is there. There are a lot of books, lectures, and videos available, but the Renner Academy is one of those rare opportunities to work hands-on and side by side with people who really know what they're doing. There's just no substitute for that kind of in-person learning.

It's also a great opportunity to meet and connect with other technicians from all over the country and the world. I always find it fascinating to talk with the technicians who come to the Academy about how they got attracted to piano technology. People come to this work from all different walks of life, and there is a big demand, now more than ever. It's a great career, and I think a lot of people would really enjoy it if they had the exposure to it. The PTG has a great opportunity right now to attract new technicians, and we are fortunate to be able to provide this kind of training.



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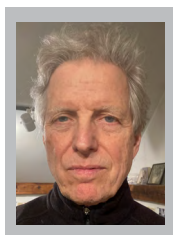
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Weighing Off the Grand Action, Part 2

By Chris Brown, RPT
Boston MA Chapter

Pragmatics

We weigh off a key to help its note function properly. With good geometry, good regulation, and appropriate friction in place, key balancing fine-tunes how well the note will play. Key weights offset weight and friction on the back side of the balance rail to help the player make music from the front side.

Unless we are installing a new keyset, we inherit the factory leading (with possible additions or subtractions made by other technicians). This may or may not help us along. One style of leading spaces key weights across the whole front of the keystick. Some of these key weights will certainly be in our way.

The first step in weighing off the keys is to fully regulate at least one natural and one sharp. We must confront the impact of friction (verdigris in action centers, for instance), hammers that are too light or too short after filing, and any other factors that have changed since the original weighoff. Then, decide which parts or materials need to be changed and what geometry might have to be tweaked.

When you have chosen and validated a strategy and confirmed that it will fit within the project budget, remove lead as needed and plug holes, then bench regulate and weigh off. Twenty g upweight in the bass indexes this balancing process: Less upweight compromises repetition; more makes the heaviest notes feel heavier than they need to. Remove lead from any key that cannot lift 20 g in the bass and graduate the testing to higher minimums for the rest, removing as few leads as possible to save on cost but clearing as much space as possible to facilitate placement. Ideally, try for lead removal in one pass ahead of regulating; after regulating, add new key weights in one pass.

Pragmatics dynamically influence our work. Form a hierarchy of the relative importance of each element and pay most attention to those at the top. If hammer friction is less than six half-swings, there will be trouble; if more than 13 half-swings, there may also be trouble. If friction is over 20 half-swings, huge improvements can be made, but be aware of factors hidden by loose pinning: They need to be assessed and accounted for ahead of time. Even the best manufacturers have to live within these constraints, and each piano we work on teaches us features of the hierarchy and variations on what to do when things are out of balance. Sensible weighoff provides a solution to poor action performance that is at least highly consistent, so that our customers feel rewarded for their investment.

Trials and Errors

How much can weighoff help grand action playability? Sometimes, as with poor action geometry, weighoff will not

help unless other problems are corrected first. I found myself challenged in this way by a vintage Baldwin L: Replacement hammers, shanks, and wippens were in good shape and of good quality, but the action did not play well. My customer wanted to know what could be done for her instrument, which was attractive but played like a truck and no longer held its tuning. I recommended the fairly expensive route of new belly, block, and strings, plus a deep regulation using the existing parts, which she agreed to. After the belly work was completed, the piano came to me, ready for action fitting and regulation.

When it arrived, two keys were jammed on top of their front key pins, despite the shipping rail being correctly in place. The problem was that the key pins were not extending far enough into the front mortises. This circumstance was caused by replacement back rail cloth that was not quite thick enough. I solved this by slicing open its rear glue joints, adding medium action cloth, and gluing them back down.



To raise the back rail cloth, I sliced the rear glue joints, inserted medium action cloth, and reglued with PVC-E glue. Note the action return cloth is attached to the keyframe (not action stop).

Next, the capstans were too far under the wippen heels. No wonder the action felt so heavy. The cast-iron action stack had detachable hammer and wippen rails, so I decided to move the wippen rail back, which required extending its attachment slots. When it was on the bench for this operation, I discovered that the slots had already been ground quite a long way, but in the wrong direction. Perhaps the previous technician had only realized the error when it was already too costly and had returned the rail to its original position, accepting the shallow dip, heavy weight, and compromised playability.

I also noticed that the repetition levers had been cut shorter at the drop screw end, prompting me to measure the action spread, which was a little under 109 mm. My memory was that these modern Renner parts should have a spread of 112 mm. So, I ground the wippen rail attachment slots in the other direction until I achieved this action spread, then reassembled it. The weight was much better, but the capstans were now too far forward (toward the player) under the heels.



Slots in the wippen rail were extended to change the action spread to support a useful geometry with the existing replacement parts.

So, I moved the capstans. Knowing that a little goes a long way, I also converted from angled to straight capstans. This meant I could avoid the drill bit being influenced by filler material in the old hole, while only moving the capstan-to-heel connection the short distance that was needed.

The principle mistake I made was in assuming that 112 mm would be the magic number to resolve all problems, rather than taking the time to fully re-regulate samples to validate. I had removed capstans, filled holes, drilled new holes, reinserted capstans, and roughed the regulation back in only to discover that the weight improvements I'd achieved with spread were largely undone by the capstan move. Ouch.

Meanwhile, another factor was applying a constraint. After I had filed the hammers, the top several notes sounded like wood, over-striking to a point on the strings too close to the capo. One of the odd features of this piano was the use of triangular bars (point side up) instead of keyframe guide pins, with no cheekblock adjustment in or out, and dogs that touched the back edge of the keyframe when the cheekblocks were locked in position. There was no moving the keyframe in and out without surgery to one or more elements.



Triangular guide "pins" fit cheekblocks with no adjustment capability. With no glide bolts and a gap unresolved by the cheekblocks, a maple strip completed the fit.

The hammer rail could be ground with much effort to move backward, but it already over-encroached on where the wippens wanted to be. Or, the whole action stack could be moved with even more effort, but that would worsen the capstan/weight issues. I was between a rock and a hard place. I tried shimming the hammer rail up to reduce overstriking but ran into drop screw-to-stretcher interference. I then tried shimming just the front action stack feet, which worked better and did restore tone to the top register.



Shimming the front action bracket feet solved the high-treble overstriking, restoring good tone.

The job was then interrupted for a month, which refreshed my energy for dealing with the situation. When I returned to the job, I realized the capstans had to go the other direction. After several rounds of sampling different variations, I came up with a solution that lightened things the most, while still appearing to be in reasonable dip and blow distance territory.

Out came the capstans, in went the filler. I drilled holes (angled this time) to the new line and installed the capstans. With everything put back together and roughed in, it was clear that I'd been fooled again. Because I expected the new weight to be a little lighter, I had removed one or two leads from each key in anticipation. But now the weight was too light, the hammers rose nowhere near enough, and the dip needed to be deeper than it could get. I was in the wrong place in the opposite direction than I'd been previously.

Chris Robinson, RPT, one of the foremost technicians and teachers of my formative years, had a great classroom technique: Regulate an item too far in one direction and see what happens; then regulate it too far in the other direction and see what happens. Now, you better understand where it should go and why. This, of course, is just what I had done for myself. The best place for the capstans turned out to be a very slight move forward instead of backward, about halfway between my first and second tries.



Spread changed from 109 mm to 112 mm and finally to 111 mm. Note the spring-induced groove on the side of the keyframe, which required sanding the keyframe and squaring the return spring.

It worked, but only just. I had been overly optimistic in my estimation of improvements that could be made with the modern parts. In the end, I did find the best that could be had through my trials and errors. The best turned out to be just normal specs with a slight change in weighoff. With less assuming and better sampling, I could, perhaps, have found the answer in one round instead of three.

Levers

Hammer weights and travel parameters get amplified or minimized depending on the geometry between the keytop and hammer crown. Lighter at the key equals loss of hammer travel, and each of the three main levers contributes to this as a give-and-take. Their relative impact varies, of course, so when considering a change, keep in mind the hierarchy of which changes will make the most difference. Shifting hammer position a millimeter on the shank, for instance, makes far less difference than shifting knuckle position the same distance. But, of course, moving the hammer could make a critical difference to tone in the high treble when faced with inflexible keyframe positioning, as in the Baldwin L. The fixed and movable aspects of each action generate their own spectrum of possibilities, and somewhere in that mix lies the best improvement.

The process of trial and error helps solve this puzzle. Even applying sophisticated math requires a trial to validate the math by implementing its solution. The alternative is to accept the current condition of the action, inheriting its errors, and limiting the benefits we can offer a customer. The hazard of the trial may be an error, but the error teaches. One way or another (I tell myself), we must brave both trials and errors to excel at this work.

Lately, I have met some extreme variations on this theme: a 110-year-old Weber with failing parts, a 100-year-old Baldwin



The final try at capstan-wippen heel placement (which was successful) involved an improved method of capstan line drawing and a better drill-bit sighting system.

With a more meticulous sampling, and with wood filler now in both directions, the capstan drilling came out right. I did have to contract the spread to 111 mm, but now dip was 0.40", hammer blow was 1.75", and aftertouch was just right. The drop screws had just enough stretcher clearance, and the repetition levers had just enough hammer rail clearance. The angled capstans met the nonangled wippen heels just forward of center. Note 88 was in the right place tonally. The weighoff worked with 50 g downweight and 20 g upweight in the bass. Lead was only slightly reduced, a personal disappointment to me, but when the hammers were made vertical and traveled to move vertically, they all cleared each other nicely. With strings fit to hammers, the piano sounded great.

L with ill-fitting replacement parts, and a 100-year-old Welte with a bit of each. Starting spreads in these actions ranged from 109 mm to 115 mm, with my choices of replacement parts favoring 112 mm. I would argue that since the gradual forces of gravity and wear will have altered the proportions of most actions by the time we get to regulate them, and since available parts and materials often don't quite match the originals, tweaking geometry is a skill we need to develop.

Let's take a look at the levers, starting with the key on the keyframe. We all share the playground memory of a seesaw, fulcrum in the middle, heavier person at one end, lighter person in the air at the other. If the seesaw allows, the heavier person can move toward the fulcrum and/or the lighter person move away from it to achieve a balance. As they ride the now-balanced seesaw, the heavier person, being closer to the fulcrum, will move less distance and at a slower speed than the lighter person. In the case of a piano key, a certain gram weight at the front (downweight), say 50 g, can depress the key and lift all that rides on its capstan at the other end through to letoff. If all but 20 g (upweight) is removed from the front, the loaded capstan may lift the key back up. The weight at the front of the key that will balance the capstan plus its load (balance weight) will be halfway between the downweight and the upweight. In this case, 35 g at the front should balance the key with both ends in the air, even if friction were eliminated.



The chalk-circled keys were correctly balanced as they were. Those with copper key weights needed more weight and those with tick marks needed less, probably due to friction in a downweight-only weighoff.

The ratio of the distance from the front of the key to the fulcrum (effort arm) versus the distance from fulcrum to capstan (resistance arm) will be about 2:1, suggesting that the front of the key will lift twice the weight half as far. All three levers will together lift approximately 10 g (hammer) 44 mm (blow distance) with 50 g (downweight) traveling 10 mm (dip). About five times the hammer's weight at the front of the key moves the hammer about five times the key dip for an approximate action leverage ratio of 5:1.

Fingers are the engine of this machine, and they have a limited range, particularly when resetting and repeating rapidly. But they have plenty of power with added arm weight and a

powerful energy stream, so they need an action that converts their modest range of motion from one direction to another and amplifies it sufficiently to move strings, bridges, and soundboard from *ppp* to *fff*. The wippen and shank together multiply distance by about 10 and the key divides it by two.



Here is my little finger pressing with a force of 2 kilograms, more than enough to play a 10-g hammer but needing distance amplification from action leverage to achieve a 1.75" blow distance.

The effort arm of the wippen is a little shorter than its resistance arm, but there have been actions with no wippen, just a direct connection by jack. The wippen's main role, then, is not as a multiplier or divider, but rather as an interruptible connection to improve repetition. Still, it does play a part in the weight and distance balancing. If the knuckle is moved out further on the shank (lengthening the hammer's effort arm relative to its resistance arm), the jack will launch the hammer with more leverage (the hammer will feel lighter) but with less reach (it will need deeper dip and/or a shorter blow distance). If the wippen center is not moved, the jack, regulated to the new knuckle position, will make a shorter resistance arm for the wippen (center to jack tip) relative to its effort arm (heel to center), making the hammer feel even lighter. Knuckle moving is a double whammy and therefore needs to be employed judiciously. The benefits to weight should be carefully considered against the cost to blow distance and/or dip.



Note the short front portions of keys, with a less than 2:1 ratio. For the geometry to succeed, a long spread, a long hang distance, a long bore, and a long knuckle-to-hammer center were all needed.

Changes of jack position affect not only the overall wippen leverage, but also the jack's angle of address to the knuckle. Ideally, the surface of the jack tip should be tangential to the surface of the knuckle at rest (back of jack aligned with back of knuckle core). The transfer of power is weakened, and friction increased, as this alignment veers from 90°. Also, in this part of the puzzle, aftertouch is reduced as the knuckle moves out on the shank. In the other direction, space in the repetition window for the jack to clear after letoff is reduced. The jack must not jam on the stop felt of the window but must clear the knuckle in aftertouch, so knuckle diameter needs to be considered. Some best-designed heyday actions had 9-mm knuckles that reached 10 mm from the underside of the shank. A 10-mm knuckle has the same reach but with a greater diameter to clear, and a 9-mm knuckle has the same clearance but changes elevations and the jack's angle of address a little. The imperfect matching of available parts creates this dance of considerations for which the best choreography is found through sampling.

In modern parts, we can choose wippen heel height and placement. By using heels that are 2 mm taller for the sharps, the difference in geometry between naturals and sharps is reduced (the half-travel intersection of heel-capstan contact with the line between balance hole and wippen center is about 2 mm lower for sharps). In an action, capstans and hammer and wippen centers are aligned note-to-note, but balance and front key pins are not. This leverage discrepancy between sharps and naturals will also show up in a staggering of backchecks when fully regulated. The travel of the sharp backcheck being along a smaller circle, it needs to start slightly further back to catch its tail at the same height as the natural.

An important constraint in the optimization game is sharp height. For comfort of fingers and so they don't trip while playing, sharps should not exceed 12.7 mm (0.5") above naturals, and they must not "bury" between neighboring naturals at full dip. Additionally, natural dip should not exceed 10.9 mm (0.43") and blow should not be less than 44 mm (1.75"). Aftertouch must be comfortable. As previously noted, there needs to be enough front key pin in the front bushings and enough balance key pin sticking out of the key button bushings. The keys must not show a gap above the keyslip or touch the fallboard. Drop screws must not scrape the pinblock or stretcher, and backchecking should be closer to 12.5 mm (0.5") than 16 mm (0.625").

Really, all's fair in the push and pull for a regulation that works, but exceeding these constraints risks transgressing user

expectations, whether aesthetic, mechanical, or musical. Also, prudence would recommend imitating original playability characteristics, such as consistent downweights for an action that was designed that way.

When original-style parts are not available, we enter this push and pull, like it or not, and should aim for the acceptable zone within the borders of these constraints. The customer with specific needs or desires should be brought into the decision-making process, and it can be helpful to make the tradeoffs clear. Everything has a cost in tradeoff, in labor, and in price. Some things are not possible at any price, period. We should withdraw as early as possible if expectations demanded are simply not obtainable.

Mostly, though, the poorly playing grand action offers us an opportunity to be well paid, enjoy our work, and enhance our customers' enjoyment of their pianos. ▣

Christopher Brown, RPT, has worked as a piano technician in the Boston area since 1977. A graduate of North Bennet Street School, he has worn many hats in his career: college technician, concert tuner, rebuilder, private customer piano-care provider. Action work gradually became a specialty, leading the development of a line of regulating tools and protocols for the trade, available at grandwork.tools.

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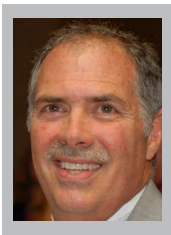
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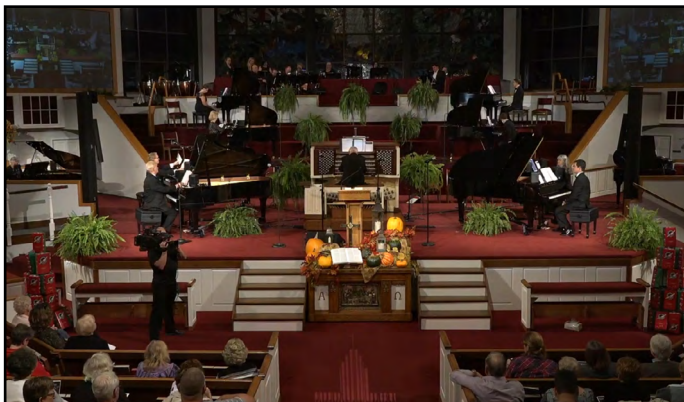


Multiple-Piano Concerts: Anatomy of a Ten-Piano Program

By Greg Junker, RPT
St. Louis MO Chapter

Most concert piano technicians service one or two pianos at a time, but what is the procedure for an event involving ten grand pianos? For over three decades, ten pianists have gathered to perform together at St. Matthew United Methodist Church in Southern Illinois for an annual concert called “Keyboard Praise.” Preparing for this concert presents a wide array of challenges for the auspicious tuner. Over the years, experience has provided me a blueprint for ensuring the success of such a concert; however, a wide variance of potential issues guarantees that no two concerts are the same. To successfully prepare pianos for this event, a tuner must be as flexible as a rubber band to maintain sanity, yet sturdy enough to withstand the physical strain.

Following is a step-by-step description of my preparation procedures for this concert, with an example of a successful daily schedule. At the music director’s instruction, most of the work must be completed in two days, complicating matters immensely and testing one’s physical and mental state in a unique manner.



The “Keyboard Praise” concert stage.

Monday

The pianos arrive from the dealership and are set up at three different stage levels. The church uses four of their own grand pianos along with six rental pianos. Sometime after the dust settles, it is wise to make a quick on-site inspection of the new arrivals, noting the condition of the pitch and voicing, as well as any repairs needed. This initial inspection aids in constructing a strategy for completing such an endeavor in the following two days.

Many different makes and models of pianos could be in the mix, adding to the complexity of the situation. Manufacturers represented will vary from Boston to Yamaha and Kawai. Some, in fact, may arrive still in their crates, not having seen the light of day since leaving the factory and journeying across the ocean. In circumstances such as

these, expect anything, from damage due to shipping or storage, to unusual regulating and tuning issues. Examples include but are not limited to hammers blocking against strings, keys sticking, flat and sharp pitches, and pedals improperly adjusted. Make notes of everything, including the time estimates to rectify these irregularities. Complete the list of “to-dos” within one hour.

Tuesday–Wednesday

The excitement begins! The goal for Tuesday is to complete all repairs, regulating, and pitch adjustments on each of the ten pianos, while finalizing the fine tuning on the four selected to tune first. Allow no more than 10–15 minutes for each pitch adjustment (when required), along with several additional hours to complete the needed repairs and regulating, followed by a long, well-deserved break. I prefer to revitalize myself by complete removal from the premises, both mentally and physically, whether by taking a long walk, refueling with a healthy snack, or meditating in complete silence away from both people and pianos. Following this blueprint, I can expect a ten-hour day.

After Tuesday’s servicing accomplishments, Wednesday’s goal is to complete the tuning of the six remaining pianos, while applying minor voicing techniques intermittently. It is most important to remember at this point to completely remove oneself from the venue mentally and physically every few hours, as fatigue starts to diminish focus, negatively affecting muscle groups. This is likely to be the longest day, which can cause problems for mental focus.

I would be remiss if I did not discuss tuning technique and posture, which are necessary for success. For tuning, I combine ETD and aural techniques. Experience has taught me to begin the process by tuning the finest-quality pianos first, employing the ETD. For this concert, it happens to be a pair of Boston GP-218 grand pianos that are meticulously maintained throughout the year on a monthly, prearranged schedule. After using the ETD on the remainder of the pianos too, I rely on my aural skills to reconcile the differences generated by incorporating so many different makes and models of pianos. I permit extra time for precise adjustments until I am well satisfied. Being a musician myself, my sense of hearing is the final arbiter when integrating so many pianos together.

My preferred physical posture is standing for pitch adjustments and sitting for fine tuning, using my carbon-fiber tuning hammer with my right hand. My right arm remains perfectly parallel to the piano, minimizing the risk of shoulder and muscle fatigue. To accomplish this arm position when sitting, I elevate the height of the bench from the

standard 19" to 27", using an 8" bench pad. My left hand strikes the keys with a hard blow to settle the strings. I recommend using a key pounder to minimize the strain on the fingers, hand, and wrist. With such high decibel levels created by pounding, it is imperative to protect one of our most valuable physical attributes: our sense of hearing. Earmuffs have always been my preference when minimizing decibel levels, as the cuffs can be placed over the ears in multiple positions to alter the effect.

Thursday–Saturday

These are off days for the concert preparation, and circumstances are now totally out of the tuner's control. Between the tunings and actual concert the pianists have an opportunity to familiarize themselves with their chosen instruments through individual practice and group rehearsals. Unfortunately, because this concert takes place in October, the weather can change drastically, with cold fronts causing the humidity to plummet when the heating system operates overtime. The humidity can drop to half the level it was on Tuesday when the pianos were tuned. To add to the instability, the building has over 10,000 square feet of clear glass panels, causing direct sunlight to shine its adverse influence on the pianos.

Sunday

Concert day has finally arrived with a flurry of activity. It is time to converse with the musicians, addressing any

concerns they may have regarding their chosen pianos and making technical adjustments as needed. In prior years, an hour was provided between a rehearsal and the actual concert to undertake this daunting task. While this is not nearly enough time to accomplish 100% satisfaction, it does allow for a manageable compromise. Since there is a possibility that the soundboards and bridges have contracted over the previous three days, focus on cleaning up unisons that may have wavered and making minor adjustments to any pitch discrepancies in the first octave of the treble bridge.

Now sit back and enjoy these fruits of the previous days' labor. Regardless of all the time limitations with this event, the blending of ten pianos at the concert is spectacular, with a pleasing, full sound, aided by the venue's superior sound system. Imagine the magical effect that approximately 2,300 strings can have on the senses: vibrations lifting the human spirit in a unique, relaxing, and therapeutic manor.

***Greg Junker, RPT**, joined the PTG in 1977, and has maintained a service-orientated full-time piano business over the past 45 years. Greg apprenticed with Robert Tipple, RPT, a renowned violin maker and St. Louis symphony member from 1947-1950. Greg enjoys spending free time with his family, including six grandchildren, and hiking the American West and Northwest.*



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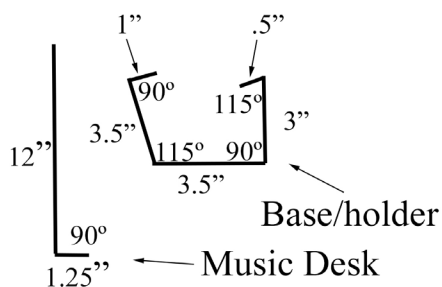
Two Tips

By Larry Lobel, RPT
San Francisco CA Chapter

I. Music Desk Too High? Make a Lower One from Acrylic



Many pianists have trouble reading from the standard grand piano music stand. For me, the printed music sits too high and too far away, making me tilt my head back, causing neck pain and necessitating a separate pair of prescription eyeglasses. A creative customer of mine invented a solution to the problem by fashioning a music stand from two sheets of acrylic plastic, bent and glued together to fit over the stretcher and fallboard, thus bringing the music lower and closer to the pianist. He generously made one for me. It works great, and though it rests close to my hands, I don't find it interferes with my playing.



Schematic: side views of the desk and base.

The music stand is made from 1/8" sheets of extruded acrylic. You can buy it clear, translucent, opaque, and in many colors. This material can be cut on a table saw, bandsaw, or with a hand saw, and it can be bent by heating it with a heat gun. It can be glued to other pieces of acrylic with special glue, and you can polish the edges smooth. All this is available from TapPlastics.com, whose website has good instructional videos showing how to cut, bend, glue and polish acrylic sheets. They suggest a strip heater for bending, which you can buy, or they show you how to make one.

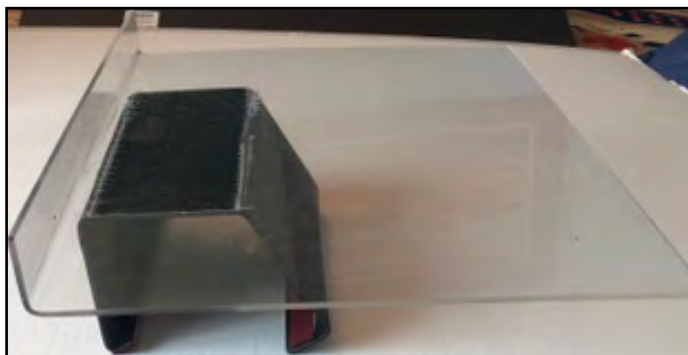
I used a heat gun and the edges of my workbench to bend the plastic; it's a forgiving material and easy to work with. Leave on the protective paper that's glued to the acrylic when you buy it, or cover it with paper or fabric to protect the plastic from heat damage. You must heat the acrylic to a fairly high temperature before it will bend; keep testing it as you heat it and wear protective gloves! Once it reaches the bending temperature, you have a minute or two to get the bend as you want it before it starts to cool and lock itself into position. If you bend it either too far or not far enough, you can reheat it and try again. The total cost for materials is about \$15.



My stand is made from two sheets of acrylic; one for the music to rest on and the other to hang the stand on the piano. It's not attached by screws; it just hangs from the stretcher and rests against the fallboard and plate and can be placed on and lifted off in two seconds. Acrylic won't scratch the piano, but if you want to be extra cautious, you can attach felt to the parts that touch the piano finish, as I did.

The larger piece measures 15" wide by 13" tall. The smaller one is 7-1/2" wide by 11-1/2" tall. These measurements are approximate and aren't critical; you can vary them

to fit your needs. I think these measurements will work for most pianos, but I suggest you measure yours to be certain.



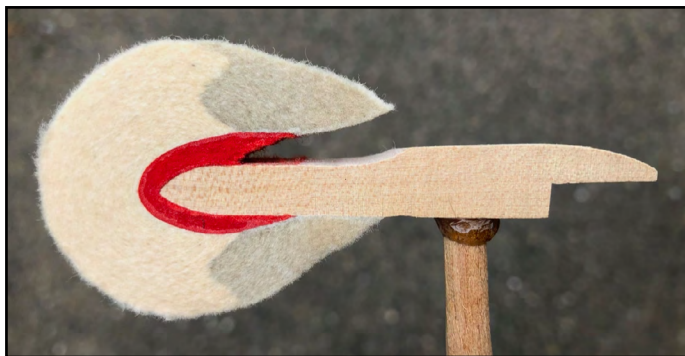
The larger piece (clear) that the music rests on has just one bend: 1" in from the bottom at a 90° angle for the music to rest on. The smaller hanger piece (black) has five straight segments and four bends to fit over the stretcher and fallboard.

Starting at the bottom, 1/2" in it makes a 115° bend. Then a straight run of 3-1/4" and a 90° bend, another straight run of 3-1/4", followed by another 115° bend. Finally, straight for 3-1/2", then a 90° bend, leaving a 1" straight run at the top. See the side-view schematic above. You can test the fit of the hanger on your piano before gluing it to the music stand.



When all the bends are made and the pieces have cooled, you can polish the rough edges with heat gun or sandpaper. Then glue the hanger to the back of the music stand at the bottom. You're done — no more neck strains to read music!

II. Repairing Unglued Hammers



A 40-year-old grand had a half-dozen hammers coming unglued from their moldings. Gluing and clamping the soft, round hammers presented a challenge; most clamps are designed for hard workpieces with square corners and wouldn't work on these. Also, the rounded felt wanted to return to its original flat state, and it takes a tremendous amount of pressure to press the felt against the wooden molding.

My triangular spring clamps were strong enough to apply the needed pressure, but only at one point, leaving parts of the felt not touching the wooden molding. I then tried cutting triangular-shaped wood pieces to fit around the hammer, creating a flat, square clamping surface and enabling me to put it in a vise. This worked a little better but still didn't provide even pressure along the full length of the glue joint.

I searched the PTG's Pianotech list and Facebook's Piano Technicians International page to see how other techs had dealt with this problem. One suggested solution, clamping with cable ties (zip ties), seemed promising, but I couldn't draw them up tight enough, and they kept slipping down the hammer's slope. They also cut deeply into the felt, and I thought they would permanently deform the shape of the hammer.



I contacted fellow San Francisco chapter member Vladan Temer, a professional engineer, who suggested a simple but brilliant solution that worked perfectly. Take two spare hammers of about the same size as the one to be glued and cut their felt along a line parallel with the wooden molding to create a flat surface on one side for clamping. The round shape of the uncut side of the hammers provides sufficient clamping pressure. Position

them on either side of the glued hammer, facing the opposite direction. Place this assembly in a vise and tighten them together enough to get glue squeeze-out along the entire length of the glue joint.

I used Titebond® Quick & Thick glue, which makes a strong bond between felt and wood, gives a long enough setting time to position parts, but sets quickly. This glue is used by many techs instead of hide glue for attaching hammers to shanks. I left it in the vise for several hours to give the glue time to fully bond. □

Larry Lobel, RPT, has been a professional piano technician since 1972. Though now officially retired, his life-long fascination with pianos continues unabated.

DEADLINES

June 16, 2022

All Reports and Requests for Action (RFAs) Due.

Reports and RFAs (not sent to the bylaws committee) must be received by this date to be included in the Board/Council book. A Committee Report form can be found within the Forms and Documents section under Committee Documents, at www.ptg.org.

All reports and RFAs should be submitted in WORD format for easy placement into the Board/Council book. If you have any questions, please feel free to contact Barbara Cassaday at Barbara@ptg.org or call 913-276-5207.

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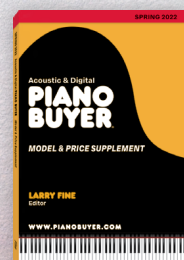
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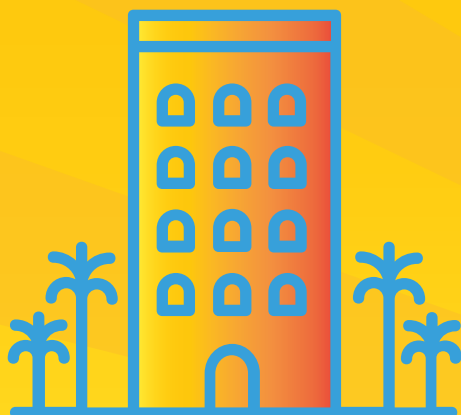


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WEDNESDAY, AUGUST 3

FREDERIC CHIU IN CONCERT

SPONSORED BY THE PTG FOUNDATION - 8 P.M.

**CLASSICAL SMACKDOWN: HEART AND SOUL,
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THURSDAY, AUGUST 4
ALEXANDER AGATE IN CONCERT
SPONSORED BY KAWAI - 8 P.M.

Alexander began studying piano at 11 and attended the Applied Music Scholarship program at Moorpark Community College at 13, working with Professor Mona DeCesare. He received lessons from concert pianist Robert Thies before studying with Dmitry Rachmanov at California State University, Northridge. He completed his master’s degree at Manhattan School of Music and continues to study under Andre-Michel Schub as a recipient of the Eugene Istomen Endowed Capital Campaign Scholarship while working towards his doctorate of musical arts. Alexander regularly competes on the international stage, most recently at the Sendai International Piano Competition (2019) and the National Chopin Competition (2020).



FRIDAY, AUGUST 5

YAMAHA RECEPTION - FEATURING YAMAHA ARTIST FREDERIC CHIU - 8 P.M.

Follow up the Barbershop Concert with another opportunity to spend time with friends in an informal setting. Enjoy the complimentary dessert bar and music. Cash bar available.

CHECK CONVENTION.PTG.ORG UNDER SCHEDULE FOR OTHER SPECIAL EVENTS.



“What’s Wrong with the High Notes?”

By Jeff Skousen, RPT
Pittsburgh PA Chapter

One of my long-time customers called me a few weeks ago. It had been almost a year since I tuned her lovely Yamaha G2 grand piano. She said, “Something’s wrong with the high notes on the piano. They seem off and there’s a funny noise to them.”

“Hmmm,” I said, “have you moved the piano?”

“Oh, no,” she responded, “you told me not to move it.”

“Has something else changed in the house? Have you put anything under or on the piano?”

“No, I try to keep it clean and not to place anything on it.”

I wondered if she had moved or added furniture to the room, but I wouldn’t know until I got there and listened. I said, “Okay, I’ll come by and take a look in a few days when I’m out your way.” When I get these types of calls, I am usually surprised at what I find, and the solution is often not what I originally imagined.

When I arrived, we exchanged greetings and I asked about her family and chatted about the latest happenings. Then she took me to the piano and showed me the problem. She played C6, E6, G6, then A6. “Do you hear that?” she asked.

“Hear what? What are you hearing?” The notes all sounded very nice to me, and the unisons were holding surprisingly well. I was quite proud of the clarity of those notes.

She played G6 and A6 again, then C6. She said, “I can hear the C, but I can’t hear G or A. They have a dull sound to them, and so do the ones above them.”

They all sounded fine to me, and I told her so. “I don’t hear the dull sound, zing, or anything abnormal to any of those notes. To me, they are quite clear, but let me check a few things.”

Acknowledging the old motto that the customer is always right, I looked at the strike points on the hammers, which had only slight dimples where the hammers struck the strings. I pulled up the hammers to see whether they hit the strings evenly and pulled each string to snug it up against the capo bar. Then I checked the dampers to see whether they dropped onto the three strings squarely and plucked each string to see if there was any singing or zinging with the damper down. I listened for action noise, such as clunking or thudding. I even had her play the notes while I stood at different places in the room. Nothing. I played all the notes again for her. She said they sounded the same as before.

I scratched my head and said, “I don’t see or hear anything wrong, but I can do a little voicing on the hammers to see if that changes the sound to you. But,” I added, “I don’t think the hammers need it.”

She responded, “I don’t understand, I just had my hearing checked and the doctor said my hearing was good for my age.”

The hearing checkup set off a small alarm in my head. “Oh, I see. Did the doctor who tested your hearing give you a sheet of paper with a chart on it?”

“Oh, yes, I’ve got it in the other room,” she said. I asked if she would allow me to look at it. She responded she would and walked out of the room to retrieve it.

Being familiar with audiograms, I was curious to see if the chart would confirm my suspicions about my customer’s hearing, which I believed to be declining with age, especially at those high frequencies. After a few minutes, she came back and handed me the audiogram. Sure enough, it showed a sharp decline of hearing around 1,500 Hertz, almost exactly at G6 (Figure 2 and Table 1). Compare these with Figure 1, which shows a normal audiogram with minimal hearing loss.

I told her that the high frequencies where her hearing levels drop, as shown on the audiogram, matched the notes of the piano that she could not hear or that sounded dull to her. I played the notes louder, which seemed to help her hear them slightly better. I emphasized that I certainly was not an audiologist, but this explanation seemed to help us understand the reason for her not hearing the high notes.

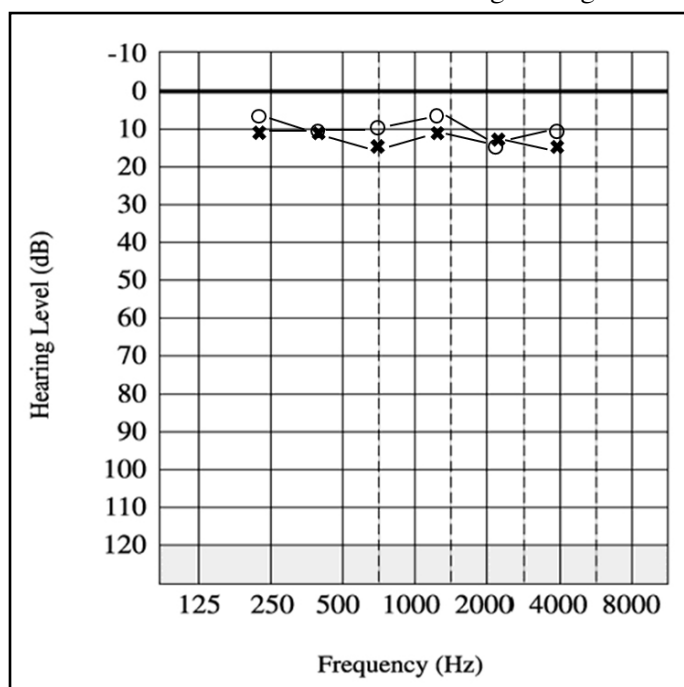


Figure 1: This audiogram depicts normal hearing. The “x” symbols are hearing levels for the left ear and the “o” symbols are for the right ear. Source: babyhearing.org/what-is-an-audiogram.

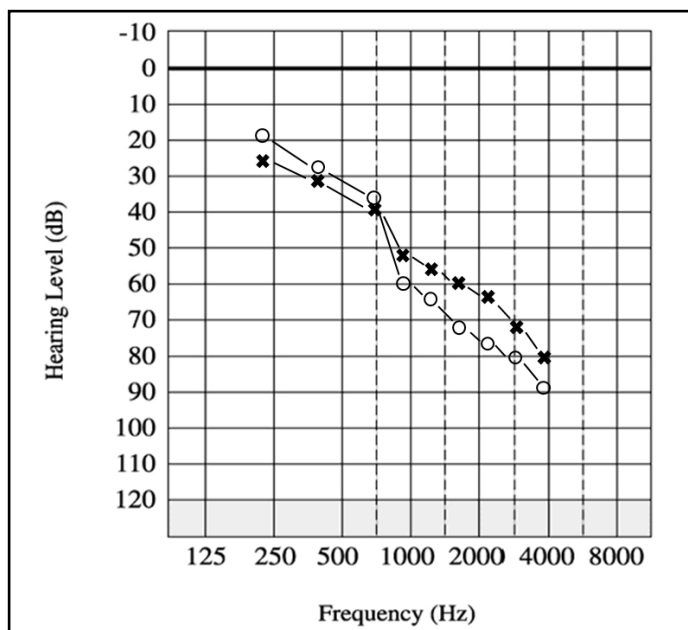


Figure 2: Audiogram of my customer's hearing, showing a rapid drop in hearing at the 1,500 Hz level and at higher frequencies, almost exactly where she could not hear the piano notes (shown with permission).

Octave	Note											
	C	C#	D	D#	E	F	F#	G	G#	A	A#	B
0										27.5	29.1	30.91
1	32.7	34.6	36.7	38.9	41.2	43.6	46.2	49.0	51.9	55.0	58.3	61.7
2	65.4	69.3	73.4	77.8	82.4	87.3	92.5	98.0	103.8	110.0	116.5	123.5
3	130.8	138.6	146.8	155.6	164.8	174.6	185.0	196.0	207.7	220.0	233.1	246.9
4	261.6	277.2	293.7	311.1	329.6	349.2	370.0	392.0	415.3	440.0	466.2	493.9
5	523.3	554.4	587.3	622.3	659.3	698.5	740.0	784.0	830.6	880.0	932.3	987.8
6	1047	1109	1175	1245	1319	1397	1480	1568	1661	1760	1865	1976
7	2093	2217	2349	2489	2637	2794	2960	3136	3322	3520	3729	3951
8	4186											

Table 1: Frequencies in hertz (Hz) of musical pitches, covering the full range of a piano with an even-tempered scale at A=440. The frequencies in bold are the ones my customer could not hear well. The octave number is in the left column and the note is along the top row. For example, to find the frequency of C4, look down the "C" column until you get to the "4" row: Middle C is 261.6 Hz. Source: seventhstring.com/resources/notefrequencies.html.

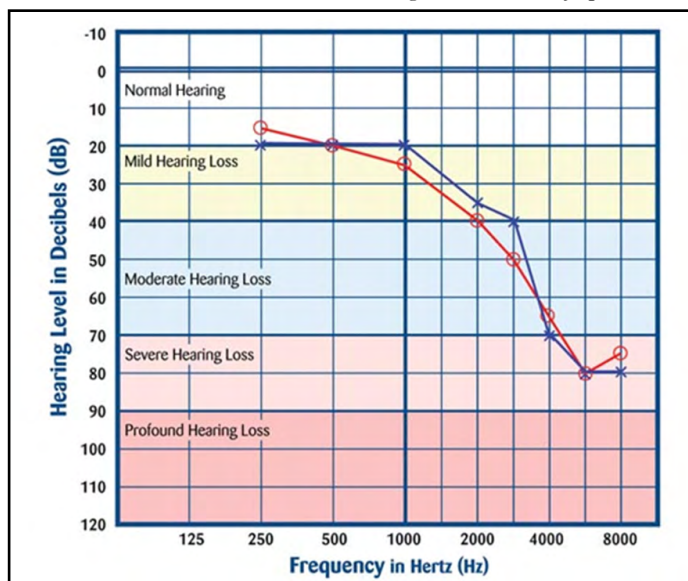


Figure 3: Example of an audiogram with colored sections related to hearing loss. In the example above, the sound must be at the specified decibel (dB) level for this person to hear the sound at this frequency. This example shows severe hearing loss (>70 dB) at a frequency of 4000 Hz and above. Sounds at these frequencies must be 70 dB or higher for the listener to hear them.

Sound is measured in decibels (dB). A whisper is about 30 dB, normal conversation is about 60 dB, a vacuum cleaner is about 80 dB, a blender is 100 dB, a lawnmower is about 110 dB, and a rock concert (near the front) is 120 dB. The eardrum bursts at 160 dB and the extreme loudest noises are 190 dB. Constant exposure to sounds above 80 dB will cause hearing loss.

Information sources: cdc.gov/nceh/hearing_loss/what_noises_cause_hearing_loss.html

noiseawareness.org/info-center/common-noise-levels/

Graph Source: nationalhearingtest.org/wordpress/?p=786

Other hearing disorders include hyperacusis, Meniere's disease, and tinnitus. Hyperacusis is a condition where certain sounds may seem unbearably loud even though people around you don't seem to notice. Some examples might be a running faucet, a kitchen appliance such as a dishwasher or refrigerator, a car engine, or a loud conversation. Meniere's disease is a disorder of the inner ear that can lead to dizzy spells (vertigo) and hearing loss. Tinnitus is the perception of a ringing, buzzing, roaring, whistling, or hissing sound in your ear. It is a common problem and affects about 20% of the population, especially older adults. There is no cure for tinnitus itself, but ear infections, earwax blockage, and circulatory problems can heighten the noise. Therapies include noise-canceling headphones, soft music, hearing aids, and low-dose medications. (Much information about hearing disorders can be found on the internet. The sources for this information came from medlineplus.gov/eardisorders.html, mayoclinic.org/diseases-conditions/, webmd.com/a-to-z-guides/understanding-tinnitus-treatment.)

My customer was relieved to know that nothing was wrong with her piano. She was aware that her hearing had diminished because she had difficulty hearing people speak to her, which is what prompted her to have the hearing test. She mentioned that the audiologist told her to consider obtaining hearing aids. I said that this recommendation sounded like a good idea! At least now she had a reason for not hearing those high notes. □

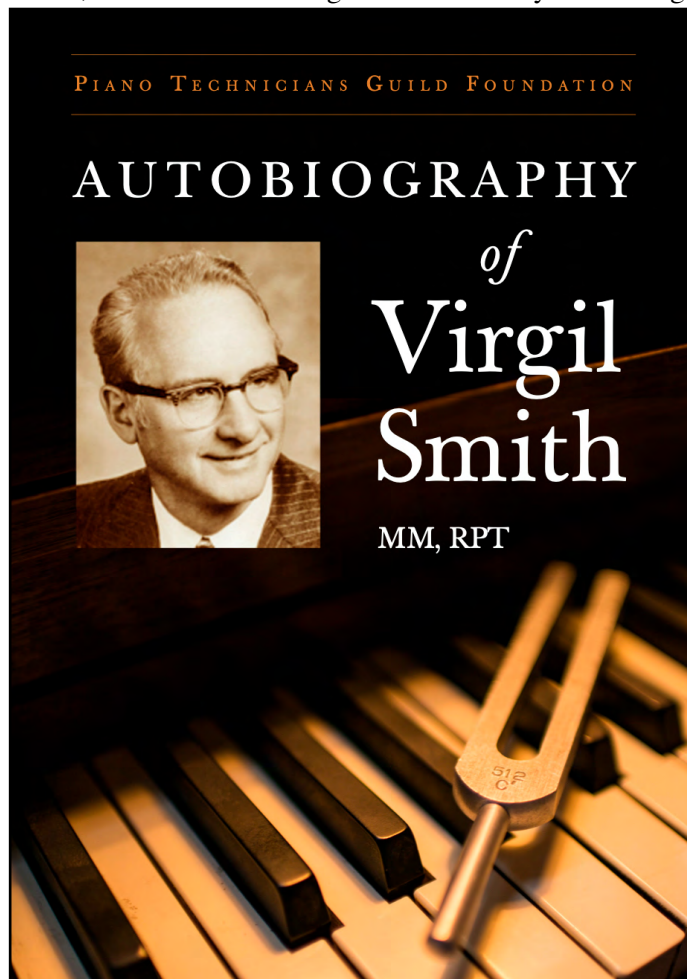
Jeff Skousen lives in Morgantown, West Virginia, and has been an RPT since 1981.



Review: *Autobiography of Virgil Smith*

By Ben Gac, RPT
New York City NY Chapter

The *Autobiography of Virgil Smith* tells an intriguing tale of American success. This new (2022) collection of Virgil's writings, compiled and edited by the PTG Foundation, is essentially "the complete works" of Virgil Smith. The book is broken up into multiple sections that, taken together, tell a robust story: first, Virgil's autobiography; second, the latest edition of his book *New Techniques for Superior Aural Tuning*; third, a new book about tuning that Virgil was writing but that was not published before his death; and fourth, a reprint of his letters to the editor from the PTG Journal, which provides an excellent snapshot of the controversy Virgil was mired in regarding his promotion of "natural beats" and "whole tone tuning." As a technician who was profoundly shaped by Virgil's influence near the beginning of my own career, I found these writings to be absolutely fascinating.



Autobiography of Virgil Smith is now available for purchase from the PTG store in print or downloadable versions.

In his autobiography, Virgil gives us a simple yet clear accounting of his life events. Insight about how he became

his friendly, unabashedly candid self is woven into the pages of this book. His time growing up on a farm in Iowa tells a characteristic tale of rural America in the 1920s, but the story quickly shifts as Virgil moves away to a school for blind children due to his sight challenges. Virgil's love for music becomes apparent early on, and he develops a special love for the Moody Bible Institute, where he trained in piano, voice, and violin. Virgil also taught at Moody for many decades, and Moody was where his tuning career got its launch. His development into a prestigious piano tuner, technician, and voicer tells a charming story of how one can build a remarkably successful career with dedication, self-awareness, and a willingness to just try it!

Virgil wasn't afraid of failure. While he had some extraordinary successes, he freely shares some of his biggest mistakes. He also shares some of his more notable exchanges with other legends in the piano world: Franz Mohr, Alfred Brendl, and Garrick Ohlsson, to name a few, as well as many pillars in the industry whose names are still well known in the Chicago area. For my own part, I found Virgil's stories regarding the musical and technical community of that time especially insightful, having just entered the piano industry when Virgil's career was winding down. I recall with joy the stories he recounts in the last few pages of his autobiography, especially since I was present to witness a couple of them myself.

Following his autobiography, the 2008 edition of *New Techniques for Superior Aural Tuning* is reprinted. In this small booklet, Virgil gives a brief explanation of the fundamentals of keyboard and music theory, then dives into his techniques for achieving the best stretch between intervals and octaves. He touches on the two controversies that he was known for: the purported drop of pitch when more than one string in a unison is sounding, and listening to "natural beats" instead of beats at coincident partials. His explanations are not long; I often found myself wishing for more exposition or for differently worded explanations. Nonetheless, Virgil's love of aural tuning reminds me why I choose to tune aurally as well as tune the unisons as I go. I found Virgil's words echoing in my head while performing my most recent tunings; it was good to take his points into consideration and take the time to really assess what I was listening to. I know that my tunings benefited from considering his perspective.

Virgil's new book on aural tuning, now being published for the first time, is a more in-depth outline of his perspective. Here, his background as a music theory professor becomes more apparent. There are still vagaries in some of his explanations but practiced piano technicians will have little difficulty sussing out the meaning behind Virgil's words. There are more step-by-step lists for achieving the most ideal spacing and stretch, and

while none of it is groundbreaking, it is insightful to understand what Virgil himself preferred to do all those years. He outlines a perspective of different tiers of quality in tuning, subtly inspiring us to strive to reach the highest level in our work. He emphasizes that even the technique of how we play the piano while we tune can affect the tonal quality of the tuning — a profound insight in and of itself.

Finally, the last section includes reprinted letters to the editor from the 2007-2010 Journals, in which Virgil espouses his take on how one should listen when approaching aural tuning. His letters polarized the tuning community, resulting in passionate replies from tuners who were both for and against his perspective. Best of all is the back-and-forth dialogue between Virgil and Dan Levitan, in which the two respectfully and artfully espouse the reasoning behind their conflicting viewpoints while remaining friends. These reprints are an excellent resource to have all in one place! In them, Virgil is allowed to fully express his thoughts, something which I can't help but wonder whether the Journal would have printed, had Virgil not already been a well-established, well-respected tuner. I still wish Virgil could have provided more details for his claims of validation from sources like *Scientific American* or even Al Sanderson's coining of the phrase "the Virgil Smith phenomenon," but reading all perspectives still gives us a good understanding of Virgil's standpoint.

Whether or not you're in the same camp as Virgil when it comes to tuning, *Autobiography of Virgil Smith* gives great insight into his life. The autobiography portion is chock-full of

interesting stories and experiences, and Virgil's works — now fully published thanks to this book — give him the full opportunity to explain his stance on how to achieve the best aural tuning. Virgil's skills and renown in the piano world exemplify a distinctly American success story. While not professionally trained in most aspects of piano technology, he still found great success through determination and guileless self-evaluation. Fellow piano technicians will wholly enjoy reading this story and will also be compelled to reevaluate their own perspectives about the quality of the tunings they produce. Those who were familiar with Virgil Smith in life will be greatly rewarded with a full-bodied epitaph of "Virgil-ness." Even those who may not be as familiar with Virgil will enjoy the read, not only as the platform for Virgil's inimitable views, but also as a window into the historical life of one of America's greatest tuners □.

Ben Gac, RPT, has been the Technical Trainer at Steinway and Sons in New York since 2014. Ben is a driver of technical quality initiatives in piano manufacturing at the Steinway factory, providing expertise to raise the quality of preparation, tuning, and voicing of the piano. Ben also manages, teaches, and develops the curriculum for Steinway's apprenticeship program, training the next generation of piano builders. Before coming to New York, Ben served the Chicago area as a concert piano technician and taught the advanced curriculum at The Chicago School for Piano Technology.



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Foundation Focus

PTG Anaheim 2022 Artist in Residence

By Robin Olson, RPT, 2022 Institute Director



Frederic Chiu, featured pianist at the 2022 PTG Convention and Institute.

Yes, you read that correctly. This summer the Annual Convention and Technical Institute will feature pianist and educator Frederic Chiu participating in several activities. Besides being an excellent pianist, Mr. Chiu enjoys talking about technical aspects of piano work with piano students and piano technicians. This year's Foundation concert on Wednesday night will feature Chiu performing an interactive concert program called "Classical Smackdown: Heart and Soul, with Music of Debussy and Prokofiev." This concert will prove to be a fun way to look at classical piano music, and the audience will be able to vote for their favorite composer. Prior to the concert on Wednesday there will be a special fourth-period class called "A Master Class in Concert Prep." It will be a panel discussion moderated by Eric Johnson, RPT, with four experienced masters in the concert field: Kathy Smith, RPT, Steve Brady, RPT, Ferdinand Braeu, and Frederick Chiu. Chiu and Braeu will be able to give us a firsthand account of their work together as they will have completed their preparation for the Foundation concert that evening. An

interesting fact is that the piano Chiu will be playing is a Bösendorfer 280VC concert grand, and it will be the first time he has ever performed on a Bösendorfer VC.

The evolution of this idea began at Lancaster, when at the end of a class on concert preparation, Eric Johnson treated us to a phone call with pianist Garrick Ohlsson, who talked about his experience performing at different venues and how a well-prepared piano is essential for a good performance. That was my first year on the institute committee, and I decided then that when I became director, I would create a similar class with a well-known pianist in attendance. And as long as we would be getting a concert pianist to come to the convention, I thought, why not have him play a concert? Then in Tucson, Institute Director Douglas Laing, who used a theme related to historical instruments, had a special Foundation concert with pianist Malcom Bilson performing on several historic fortepianos. This set a precedent for what I believe to be an institute theme-related concert on the first night of the institute. Since my theme for this year is based on the idea that every technician can learn from concert tuning experiences, I found that selecting Frederic Chiu to perform a concert and participate in a class was fitting. Mr. Chiu has written articles and given lectures at other organizations on various aspects of piano technology and how they relate to pianists. The art of communicating with a pianist is an essential skill for all technicians, whether they are on the concert stage, at a teacher's studio, or at the home of a serious pianist. Knowing how a pianist thinks about a piano and what we can do to facilitate that relationship will make us better technicians with happier clients.

I also want to mention and thank Yamaha Corporation for providing the wonderful Bösendorfer VC and the services of Mr. Ferdinand Braeu from the Vienna Bösendorfer factory. Mr. Braeu started working in

the factory in 1978 and has been a concert technician, technical teacher, manager, and director in the fields of manufacturing, product development, and artist relations. He has worked with artists such as Sir Andras Schiff, Vladimir Ashkenazy, Alfred Brendl, Oscar Peterson, Chick Corea, and many others. His experience working with these artists and his hand in the development of the VC make him the perfect choice to be part of this special concert. For many of us, this will be our first opportunity to hear the fantastic Bösendorfer VC 280 "up close and personal." As piano technicians, we go to piano concerts as much to hear the piano as we go to hear a particular pianist. So here is another good reason to make the trip to California this summer!

In addition to the Wednesday activities, Frederic Chiu will be part of a Disklavier presentation at Friday night's Yamaha party. On Thursday, Mr. Chiu will assist Steve Brady in a special class called "What Difference Does It Make?" In this class Steve will demonstrate, with the help of Frederic's playing, how subtle changes to a piano can have a big effect on the feel and sound of the piano.

I want to thank the PTG Foundation for their generous financial contribution to this event, and RPTs Fred Sturm and Douglas Laing for their enthusiastic support of this idea. Many thanks to Barbara Cassaday for her efforts in working on all the details to arrange for the funding for this event. I also want to thank David Durben, RPT, of Yamaha Corporation for his enthusiasm with the project and his help in making this a reality.

I hope this article will give you another reason to want to attend the 2022 PTG Convention and Technical Institute this summer. The institute committee has created an excellent array of classes and instructors covering all aspects of piano service.



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In Memoriam



Lloyd W. Meyer II

Lloyd W. Meyer II, a legend in the musical instruments industry, passed away on March 11, 2022, at his home in Carefree, AZ. From humble beginnings in Hollywood, CA, Lloyd completed Harvard University Business School's Advanced Management Program and reached the pinnacles of success in the music industry.

Perhaps best known as the president of Steinway & Sons who led the dramatic revitalization of that company in the 1980s, Lloyd enjoyed tremendous success as a top executive at CBS, leading the company's music division, which became the largest manufacturer of musical instruments in the U.S. during his tenure. He also excelled as an entrepreneur, founding Lloyd Meyer & Company and its Renner USA division, which is responsible for product development, marketing, and

distribution of piano action parts throughout North and South America.

Lloyd and his wife Donna, both talented musicians, have been a familiar presence at various Carefree festivals and community events, delighting audiences with their piano and organ performances. They also have shared their musical talents at the Desert Hills Presbyterian Church, where Lloyd served as an Elder and directed a major Rodgers organ design and installation project in the months prior to his death.

In addition to his wife, surviving family include son, Lloyd W. Meyer III, also known as Chip, and his wife, Janet; son, Michael, and his wife, Tracy; and brother, Don, and his wife, Wendy, along with several cousins, nieces, and nephews.



Franz Mohr

In 1968, following Hupfer's retirement, Franz Mohr became a PTG member and Hupfer's successor at Steinway & Sons.

Franz accompanied "his" pianists to all important performances and recordings. Vladimir Horowitz never gave a concert without him and without his own instruments, so Franz now traveled the world. In addition, the Mohrs now belonged to the select circle of friends of Vladimir and Wanda Horowitz-Toscanini. In his dealings with the ingenious pianists, Franz proved to be not only an excellent workman, but also an empathetic advisor and now and then even a counselor. And, of course, he prayed regularly for his artists, for which Horowitz, for example, highly credited him.

Franz Mohr retired from Steinway & Sons in 1992, although he continued working with them as a consultant and spokesman at special events. In retirement, he continued

to pursue his passions of music and faith, eventually bringing him to the place of writing his autobiography in collaboration with Edith Schaeffer, *My Life with the Great Pianists*, which became a success. His amazing life has been showcased in newspapers, on radio interviews, and even TV appearances, making him known worldwide. Above all, he gained an international circle of friends who now mourn him. For numerous people, Franz Mohr was much more than a legend of international concert life. For many, especially musicians, he became a friend, an encourager, a mentor, an intercessor, and a great example in faith. For his family he leaves a legacy of Christian faith that will last for generations.

Franz Mohr was born in Nörvenich, Germany in 1927, the son of postman Jakob Mohr and his wife, Christina Stork. He first studied music at the Academy of Music in Cologne, and also studied viola for seven semesters at the Detmold Academy of Music. Recurring tendonitis forced him to abandon his studies. Through an advertisement he became aware of the Ibach piano company in Schwelm, where he began an apprenticeship. In 1956 he moved to the Steinway branch in Düsseldorf, and in 1962, another advertisement proved to be decisive: Steinway & Sons in New York was looking for piano technicians. Franz, now married, emigrated to New York with his wife Elisabeth and his two sons, Peter and Michael; their daughter Ellen was born later in the United States.

Franz first became assistant to Steinway's chief concert technician, Bill Hupfer. Soon Franz was tuning for Glenn Gould, with whom Hupfer had fallen out of favor because of carelessness (Hupfer had touched him on the shoulder), as well as for Vladimir Horowitz and Arthur Rubinstein.

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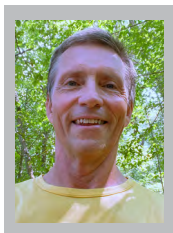
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Driven

By John Parham, RPT
Charlotte NC Chapter

I tuned a Baldwin R for a local musician. The sound was too brilliant for my taste, so I sugar-coated the strike point for a slightly softer sound. I liked the results and hoped the pianist would as well. As I stood up to leave, he arrived. He was soft-spoken and had a warm smile. We exchanged a few pleasantries as I walked toward the exit. I was curious to hear what my tuning sounded like from a distance, so I slowed my pace to listen for a moment. "Wow," I thought, "he's good." I later learned he was Greg Knight, an accomplished musician who was unusually passionate about his music. He told me later that he liked what I did to the Baldwin that day. We have stayed in contact with each other ever since.

Greg Knight is a constant presence in the community where I tune. He plays for a prominent church near me, his sister is the principal of a local school where I tune, and his friend Richard repeatedly calls me to tune for Greg's performances. He is also a regularly featured artist with the Western Piedmont Symphony. Coincidentally, the piano in my shop once belonged to that same symphony's founder. A local piano technician and I are rebuilding it for a fundraiser. Greg is scheduled to play this piano at that event, so lately I'm feeling challenged to do my best work as quickly as possible. That piano makes Greg a constant presence in my shop.

Greg is a driven musician, always composing, performing, and exploring limits. Already having placed in the top six contestants of the 2016 Cliburn International Amateur Piano Competition, he is on a fast-track dream of breaking free from job-related demands that distract him from the piano. Obstacles to him are challenges to overcome. A family member once told him that a piece was too hard for her to learn. He responded, "So? Just learn it." He was so driven to

succeed that he practiced for one year on one 20-minute piece in preparation for the 2020 Cliburn competition. Unfortunately, Covid cancelled that event. Life is not always fair, but it does find a way.

The older I get, the less I care about being impressed and the more I want to be inspired. That's how Greg affects me. On one occasion he said to me, "I've got to get away from my regular job so I can spend more time on the piano." Greg gets up at 4:00 a.m. every day to practice piano four hours before going to work. "Most people memorize a piece by muscle memory, but muscle memory can fail you," he says. He memorizes musical pieces more deeply by playing the music in his head on his way to work. "When you can see each note in your mind and know which finger to play it with, then you have it memorized." His work ethic is inspiring. One of my 2022 goals includes having a conversation with him about how we both can make more time in our lives for music.

Before I slow down for more music, however, I have to finish rebuilding the 1950 Knabe in my shop. I open my doors on weekends to anyone wanting hands-on training, and I'm hoping there's a way I can use this piano as a teaching tool. Instead of an opportunity, however, it is becoming a time-consuming obstacle. Rebuilds always take me longer to finish than I expect. As an outreach for the symphony, I'm volunteering my time on this project, working on it when I can. The auction will happen soon. Again, I'm feeling stressed about finishing it in time. Then I imagine Greg Knight saying, "So? Just do it."

* * *

Greg suddenly died in early January 2022.

Now there is nothing to talk about anymore with Greg Knight. He's gone.

I am deeply saddened that my friend, a gentle soul, and a gifted musician would die at 59 with so much more to offer the world. I'm heartbroken, mad, and not sure how to process this loss. The Knabe in my shop was for him to play at the symphony fundraiser. It's going to be hard to enjoy the work without his constant presence in my shop.

I received an email from Rebekah, a new PTG member reaching out to me for hands-on training. New requests are always exciting, but under the circumstances, I'm selfishly less enthusiastic than usual about starting a new relationship.

Rebekah and I had an introductory Zoom on her way home from work. She pulled off the road before she got home, excited about our first conversation. "Hi, I'm Rebekah. My father told me to follow my passion. He died recently, so now I feel driven to learn this trade. Maybe you knew him. His name is Greg Knight."

One week to the day after Greg's funeral service, Rebekah was in my shop. I showed her the Knabe project and explained its connection to her father. I wasn't sure how she would respond.

"I'm going to help you rebuild it," she said.

Greg Knight continues to be a constant presence in my shop, and his daughter is driven... just like her father. ■

John Parham, RPT, balances tuning and shop work with grandparenting. On good days, he has students in his shop. On very good days, there's camping and music as well.



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