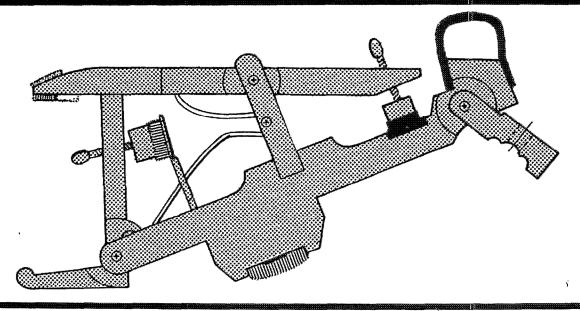
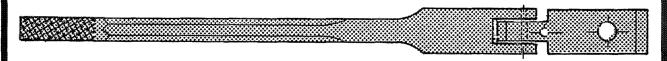


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EDITORIAL PERSPECTIVEA Night on the Town

Ben Marcato was not amused. "There's altogether too much emphasis on tuning," he declared. We were seated in the back of a very crowded restaurant on a Friday evening, and despite the noise of the partying throng, I could hear my old friend's voice loud and clear. The yuppie couple at the next table kept glancing our way and I felt a little embarrassed.

Oblivious to my discomfiture, Ben continued. "Just the other day I



Steve Brady, RPT Journal Editor

worked with a fellow who's a Certified Tuning Examiner, obviously a crackerjack tuner, but I determined that he didn't have the skills to keep a discerning pianist happy. What I'm talking about is the ability to diagnose a piano's playability and go right to the heart of the problem. Too many technicians get caught up in splitting cents seven ways from nowhere, but they can't do a tuning that will survive 10 minutes of Rachmaninoff. Others can do a solid tuning, but they'll completely overlook a weak treble, a sluggish action or a tone that would break glass. Their only thought is

tuning, tuning, tuning!"

I mentioned that I was planning an all-tuning "theme" issue for the January, 2000 *Piano Technicians Journal*. Ben was quick to reply. "I have no quarrel with featuring tuning from time to time. After all, it's the minimum skill most of us absolutely need in order to stay in business. And historical temperaments have their place, too, as do varying octave stretches for different types of music. All I'm saying is that none of it makes any difference if you can't tune solidly. And even solid tuning doesn't help much if the let-off is 3/8" from the string, and the keyframe isn't bedded and the piano sounds like a tin can."

By now, the couple at the next table had stopped eating and turned their full attention to our conversation. Ben went on, his voice rising to fever pitch: "But that's not all. Think about all the rebuilders who are rescaling pianos with fancy-shmancy computer programs, but who couldn't voice their way out of a wet paper bag! Or the action rebuilders who have all the latest equipment for redesigning the touchweight to a gnat's eyebrow, but who can't even do a first-class regulation job!"

I thought maybe now wasn't the time to mention the rescaling software I had just bought or the .1-gram-accuracy electronic scale that sits on a workbench in my shop. The yuppies slowly shook their heads and turned back to their escargot and Belgian endive salad, muttering something that sounded like "Get a life" into their glasses of Petite Syrah.

Ben helped himself to a large spoonful of my tiramisu and summarized his argument between swallows. "Tell them to master the basics first. Clean, solid unisons that will take a pounding. Good enough playing skills that they can feel and hear what the pianist is experiencing. Knowing not only how to regulate, but how each step of the process affects the touch. Finally, voicing skills that will help transform clunkers into instruments that won't get in the way of the music!"

I couldn't help but agree. We paid the bill and as we rose to leave, Ben pulled a business card out of his pocket and slapped it down on the yuppies' table. "Ben Marcato," he announced, "RPT."

Please submit tuning and technical articles, queries, tips, etc., to me:

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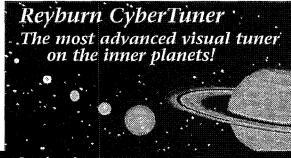
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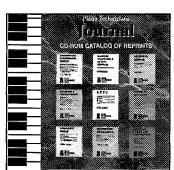
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The main studio at the Maison de la Radio in Paris is featured on this month's cover. For a look at the state of pianos in France see Craig Turner's article beginning on page 29.

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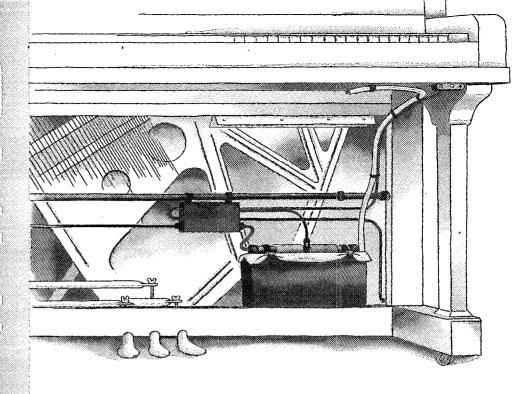
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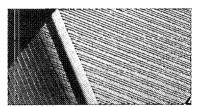
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President's Message

End of an Era?

As the millennium comes to a close we can rest assured that much time will be given to historical pondering over every conceivable subject. I think a dose of such reflection is also appropriate for the piano industry.

Considering the state of things 100 years ago, our industry may be unique in the degree to which we have not changed. Our instrument is largely the same now as



David P. Durben, RPT PTG President

it was then. But there have been many changes, some of them significant, like the number of manufacturers in the United States. Others, like the use of CA adhesives, may not be seen as important from any perspective but that of the individual technician.

For the Piano Technicians Guild, the changes that took us from the Helmholtz society to ASPT and NAPT to the present reflect a changing culture that challenges an organization like PTG to change with it. The organizations that preceded PTG would be quite inappropriate for our day and we must be prepared for changes in PTG so that it can remain vital in the future.

Let us presuppose that the piano market continues to thrive and the need for technicians continues to grow. The pool of manufacturers is pared to three or four in the United States and they are hard-pressed to keep their dealers' technicians even marginally trained. There is even some concern that a cynical public will

finally turn away from the piano because it has become too costly to maintain and reliable service is just too hard to find.

In such a world, is PTG in its present form capable of delivering what its mission statement calls for? – "The mission of the Piano Technicians Guild is to promote the highest possible standards of piano service by providing members with opportunities for professional development, by recognizing technical competence through examinations and by advancing the interests of its members." More to the point, is this mission the correct one to carry us into the next millennium? Does it address the real concerns of the culture we purport to serve?

These are questions that we must try to answer. Then after those very basic considerations we must determine whether we are accomplishing our goals. If we are, that's great! But we can't rest on past accomplishments, can we? Our predecessors certainly did not, and if we are to honor their work and continue our fellowship, we must maintain an energetic pursuit of goals that are appropriate to the culture of the day.

I believe that in order for us to work effectively toward the fulfillment of our mission we must begin now to focus outwardly, toward the greater industry we serve. The needs of that industry will provide the impetus for us to continue and the vitality that we bring to our task is the vitality that will sustain our Guild.

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Letters to the Editor

More on Accuracy of Tuning Forks

I read the question asked by Brian Trout regarding the accuracy of tuning forks (*PTJ*, Sept. 1999, pp.12-14). In the answers I did not see one mention of Peterson strobe tuners. In our advertising literature we claim accuracy to within 1/10 of a cent. When we tested the newest AutoStrobe tuners using one of the most sophisticated scientific testing devices available we found them to be a lot more accurate than the 1/10 of a cent we claim. In all the answers no one asked, "What do the tuning fork manufacturers use to tune the forks?" There are two manufacturers of tuning forks (Riverbank Laboratories of Geneva, IL and Gardner Products of Rochelle, IL) who produce the majority of the tuning forks sold in the U.S. These forks are used to calibrate very precise devices such as medical equipment, military equipment, radar and scientific equipment. Both of these manufacturers use Peterson strobe tuners in their manufacturing processes.

— Joel Simpson, Advertising, Sales, and Marketing Peterson Electro-Musical Products

National Piano Travelers Association Alive and Well

I still maintain my Associate membership in the Piano Technicians Guild and have just finished perusing the September issue of the *Journal*. On page 34, I read Ernie Preuitt's article with great interest, but the statement that the PTG Foundation began with a gift of \$750 from the "disbanded Piano Travelers organization" really threw me for a loop.

Let me set the record straight – The National Piano Travelers Association (NPTA) is alive and well – very well, I might add. Yes, there was a period of time when the NPTA did not function as it did in the "good ol' days," but it has been revitalized and is quite a viable organization with well over 300 members. Our financial condition has never been better and we are on the verge of awarding scholarships to worthy piano/music students.

Each year, on the evening before the NAMM trade show begins, we hold our annual business and social meeting. Numbered among our members are Henry Steinway, Nikolaus Schimmel, Henry Heller and your own Marshall Hawkins, RPT. (Marshall and I, by the way, were old Navy musicians back yonder.)

— Wilton H. Syckes NPTA Secretary-Treasurer

Chopped Pianos

I was reviewing the article about the cover of the September, 1999, issue of the *Journal*. The author asked in the article if anyone had seen a piano chopped down like that and if they knew what the scoop was. I think I can help. I have a customer here in Erie, PA, that has a similar piano. The piano was used in a theater and was chopped in order to make it fit into the music pit of the movie palace. They were basically fitting the piano to the room much like you design a theater organ pipe chamber to fit the room.

As you know, appearance was king in these movie palaces so they were probably altering the piano to fit into some sort of artistic design of the room itself, attempting to keep it from interfering with that design by its original shape. I hope this is helpful.

— David Rodgers via e-mail 🗃



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Tips, Tools & Techniques

Organize Splicing Wire

I've started using several plastic parts boxes with pre-



cut lengths of piano wire six to eight inches long ready for splicing. I label each compartment for wire gauge and 0.0XX" sizes for quick selection

— Alan Hoeckelman, RPT St. Louis Chapter

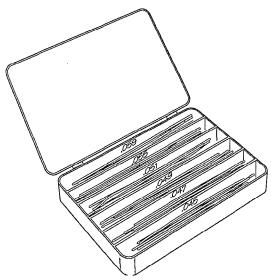


Figure 1 — Splicing wire organized in plastic parts box.

A Moving Tip

When moving a grand piano using a traditional grand skid board, sometimes you need to scoot it just a little



way and do not want go to the hassle of putting it on a dolly. The problem is that it has been sitting in one place long enough that it doesn't want to

budge, since some miracle of adhesion has occurred or the piano is just that heavy. If you will tip the piano sideways just far enough to place a couple of hammer shanks under the skid board on each side, they will act as mini-rollers to help the piano scoot back and forth just a little bit.

> Reprinted from The Sooner Tuner, newsletter of the Oklahoma Chapter

Use the Expensive Tape

What kind of tape should be used when a piano is miked? I checked with the tech crew at our Perform-



ing Arts Center today. They recommend the highest professional grade of gaffer's tape. They emphasized that it must be the "expensive" stuff;

lower grades leave much more gunk that's almost impossible to get off, and they said, "don't use duct tape." They also emphasized that the tape should be removed as soon as possible after the performance. The longer it's left on, the more residue is left on the piano. For stubborn gook, they use Goof OffTM.

Their procedure must work. Our PAC is almost six years old and there's not a single tape mark on any of our three concert instruments, all of which are miked a lot

— Gina Carter, RPT Charlotte, NC Chapter

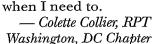
Specialty Key Ring

Several years ago I put together a key ring of keys to

the most com-



Kawai,
Steinway, etc. I got them
from the manufacturers
and I carry it in my case.
Some of the keys fit other,
or older brands, so
there are not too many
pianos I can't get in to



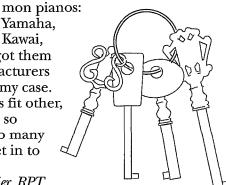
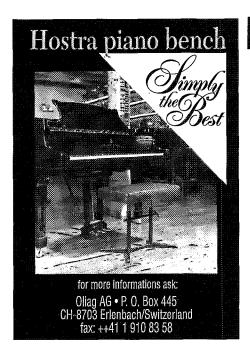


Figure 2 — Special key ring for plano keys.



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—Dan Franklin



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Q&A/ROUNDTABLE



How Soon to Tune?

Most piano stores provide a free home tuning with piano sales. Usually they have a cadre of technicians and assign these tunings with

"Service Bonds" to one of their crew. The manager at one store instructed technicians to contact customers within 10 days of the delivery date posted on the service bond. I did this consistently. Many times, the customer would explain that their sales person instructed them to wait for periods of weeks before having the piano tuned in order that the instrument become properly acclimated to its new surroundings.

I have discussed this waiting period with a number of other technicians and store salesmen and there appears to be a serious debate about the issue. I'd be interested in views of some informed parties. My own personal bias is that anything more than 72 hours would be unnecessary. But I'm willing to learn.

— Mark Stern, RPT Beverly Hills, CA



Steve Grattan:

As a dealer for Charles R. Walter and Young Chang and as a rebuilder I advise my customers to wait three to four weeks based on several things. When I receive a new piano from

either of the above companies it is usually in pretty good tune. After a week or two it seems to drift some. After three to four weeks it is off the wall and takes a good tuning. A rebuilt/restrung piano needs to settle in after being in our climate-controlled facility and they seem to wander the same way that new pianos do. It has worked this way for several years. If they are tuned before this period, they do not seem to hold the tuning as long.

Jim Bryant, RPT:

In this case I believe that the salespersons are correct. The tuning on any piano which is moved from one location to another will change, sometimes subtly, sometimes radically, during the first two to three weeks after the move. As well as the regulation possibly changing, clicks show up, etc. The difference in environment, i.e., temp/humidity, will change the tuning on any instrument and it takes at least two weeks to fully acclimate to a new location. For this reason I will not tune any piano that has not been sitting in a given location for at least two weeks and I prefer to wait for three weeks. This does not apply to performance pianos used in a venue where they have just arrived and will be leaving tomorrow. Having done store/free service tunings for many years and judging the effects of the move on newly purchased instruments over those years, I am of the opinion, biased if you will, that any tuning done during the first week after the move is essentially wasted.

Richard Brekne:

It depends on the amount of prep work and tuning done in the store. If the customer gets the piano right out of the box, it's going to need work right away. If it is well-prepared and tuned prior to delivery (and it should be), my own. experience says to wait about three months, which usually puts you into another season and a different climate. After that tuning, I recommend that the customer have the instrument tuned twice within the following year then at the very least once a year after that. All my experience tells me that the better start a piano has in the home environment, the longer it will last and the better it will perform. One could easily tune a piano 72 hours after delivery, but you can't get away from the fact that if the climatic conditions in the home differ significantly from those of the store, the piano is going to react and will need tuning and perhaps other service.

Settling into a new and permanent home is more than simply recovering from the move. I want the piano well out-of-tune when I come for the first service tuning. I want the customer to have played it a good deal – started to break it in, if you will. I always tell them at delivery to make a list of anything they feel they need to comment on and note the key number beside their comments.

Rarely do I find that a piano is in urgent need of tuning or regulation after two to four weeks, assuming it's had adequate attention in the store. In those cases where a customer feels otherwise, I always "go the extra mile" and provide this "extra" visit as well.

Roger Hayden, RPT:

We buy, rebuild and sell from our basement shop and see many different conditions. What's fascinating is to hear a piano just after delivery. Awful! We usually tune the day before delivery. Give it time to even out the temperature and it comes back that same day. Then wait: in a couple days it goes crazy again — the wood is now reacting. A few days later and it evens out a bit. Just a bit. Two to three weeks and your tuning should hold okay, barring any violently changing weather, such as the kind we have in North America.

What I have also found fascinating is string-setting techniques. Wow, what a difference it makes in achieving an early stability when you take all the bends out of the strings. Plus the tone is clearer, stronger and sustains better. It's a very good use of your time.

Michael Jorgensen, RPT:

At the universities I'm apt to check on my tunings in subsequent days and weeks, especially with new instruments which are usually on loan. Some are delivered directly from the crates, others from summer camps and some from stores. Though I have not done a scientific study, my general perception supports the conclusion that tunings last much better if I wait a few weeks after delivery to tune them



Soundboard Cleaning Elixir

I am in pursuit of a magic elixir for soundboard cleaning. The pianos are in homes, still in service and obviously still

strung. Many of these instruments have had only tuning throughout their service lives and are each from various places *other* than here originally. And, the soundboards are ... nasty.

I'm looking for something that is safe to use for

Continued on Page 14

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Q&A/ROUNDTABLE

Continued from Page 12

cleaning soundboards under these conditions. This type of "dirty" doesn't respond to simple methods (rags, soundboard steel or Spurlock's cleaning wands). Water (moisture) alone doesn't seem to work since I need something to cut through the layer of "whatever" to get to the actual dirt beneath.

I've experimented with various cleaners. Some, like FantastikTM could possibly work, but I'm reluctant to use them due to the chance of contacting and contaminating the strings. Mineral spirits or lemon oil seem to work – sort of, but I've only tried them on the perimeters away from strings.

I admit that I have more cleaners and solvents than I've actually tried, including various citrus-based offerings, Simple Green, ENTNT (miracle stuff) and others. I just don't want to be the one who goes up a one-way street on customer-owned goods. Does anyone have a product to recommend under these circumstances? Thanks!

— Jim Harvey, RPT Greenwood, SC

Gina Carter, RPT:

Try plain old Spic and Span[™], but use it sparingly. It has worked for me on the grungiest pianos, some I really didn't want to touch. The powdered form worked best, but

since my box finally emptied after 15 years, I've only been able to find the new liquid kind. I don't like it as well, but it does work. Maybe in your neck of the woods you still will have the powder.

Brian Lawson:

Cleaning a soundboard is not a service I've thought of offering nor been asked for in a customer's house, but my suggestion for cleaning is to "dry wipe, wet wipe." First, you clean, brush, vacuum or blow out (compressed air line) the dirt from an area and then wash with soap or detergents. The point is that by doing it that way you avoid soaking more dirt than necessary into the material you are cleaning.

Also, having palm trees around is useful. I get the spine of a palm leaf and use that to poke the rags in under the strings, it is stiff and flexible and won't scratch like a piece of metal might.

Philip Coleman, RPT:

3M[™] makes a product under the Scotch-Brite[™] label called The Original Dobie Cleaning Pad. Because of its attributes I feel comfortable experimenting with various cleaners while using it. It is a rectangular 4.375" x 2.69" x .56" (no, I didn't measure it – it says so on the box) foam pad inside of a plastic netting.

I apply a modest amount of cleaner on one side only and then slide it under the strings, wet side down. Because of its size and shape, it is difficult to roll it over like a cloth thus exposing the wet side to the strings. Even if your solution soaks through to the top of the pad, its .56" height is comfortably below the strings. You'd have to really try to get it up as high as the strings. For nasty CokeTM spills, you will need to apply some pressure. This is where the plastic netting is so great. The netting will "scour without scratching" and at the same time it keeps your small blade screw-

driver (or whatever tool you want to use) from poking through the foam pad. The claim, "scours without scratching" does have a small print disclaimer that says: "On delicate surfaces, test first on an inconspicuous area with the pressure you desire." It's been my experience that the "nasty" soundboard no longer qualifies as a delicate surface and the results look way better than leaving the Coke™, or the cat feces or whatever. The Dobie is designed for scouring Teflon™-coated kitchenware. I found them in the household cleaners section at Walgreen's for \$1.39 each.

Harvey responds:

Thanks for your various thoughts on this subject.

To Brian:

You're right on target with your procedure, that is, instead of adding to the problem, get the loose, easier stuff out first then proceed to other methods for more difficult cleaning. I do think you should consider offering cleaning packages as a "back-room" activity for supplemental income. It has done well for me, to the extent that I have Level I, II and III cleaning "packages" available and note them accordingly on my invoice. Customers don't often ask me about the service either - I plant the seeds for cleaning (and any other work) very discretely during the initial service call, rather than pulling the idea out of thin air. When the subject comes up again later, after more significant work, it's presented nonaggressively, such as "would you like me to schedule additional time during the next appointment for [the] cleaning package?" This way, it doesn't come as new information to the client.

To Phil:

I like the 'Dobie' idea and have already acquired a similar pad, based on your description. The only thing I dislike is that I didn't think of it!



Portable Piano Tilter

I finally bit the bullet and bought a portable piano tilter from APSCO a couple of months ago. I was tired of the acrobatics I have to do in

my van when I take my larger one from Schaff to a job site. I used it for the first time last week and it's great except that it comes with two clamps that are supposed to be used to lock the tilter to the frame posts.

I tried every conceivable way that I could think of to use those clamps – without success. For those who don't have one, the clamps are 1/2" threaded steel rods about 8" long with a small plate roughly 1" x 2" welded on one end in a plane perpendicular to the axis of the rod. A piece of angle iron of roughly the same size slides loosely along the rod by means of a hole in one arm of the angle. Finally, a large wing nut screws onto the free end of the rod.

The clamp is clearly designed so that the welded plate gets braced on a post while the angle iron fastens onto the tilter and the wing nut tightens it in place. The problem is I can't figure out any way to make the angle iron fasten anywhere and tighten the nut. I can, of course, bypass the

Continued on Page 16

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Council Action Ends Death Benefit

(Kansas City) - Last July PTG Council Delegates voted to end the \$1,000 Death Benefit for PTG members. The benefit policy will be in effect until December 31, 1999, and will no longer pay out benefits after December 31, 1999.

According to the policy certificate each member has 31 days after the policy terminates "to convert his/her life insurance under this policy without medical examination to an individual policy of life insurance." This means that until January 31, 2000, you can convert you PTG term life insurance to an individual whole life policy. PTG members may convert their \$1,000 term life insurance to other whole life products offered by Royal MacCabees Life Insurance Company. (Please reference your group policy number G20935, phone 1-888-222-9513.)

Individual PTG members carrying the supplemental life insurance policy of \$10,000 or \$25,000 still will be able to keep this coverage. Other PTG members not now covered may apply for this supplemental life plan, subject to underwriting approval. If interested in supplemental life coverage contact: Ms Lupe Sherman, Gallagher Benefit Services at 800-934-4624 or by e-mail: lupe_sherman@ajg.com.

If you have questions regarding this benefit, please feel free to call Taylor Mackinnon, PTG Vice President, at 502-846-1501, or e-mail to mackinnon@intregrityonline.com for more information.

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Q&A/ROUNDTABLE

Continued from Page 12

problem by not using the clamps, which is what I did on this job, and use straps instead. If there is a right way to use them, however, I would like to know. Does anybody have one and ever have to deal with this?

> — Paul S. Larudee, RPT Richmond, CA

by Susan Kline recommending that technique. I just use two C-clamps or two short bar clamps. I have tried this on really big pianos. It's not worth the trouble with anything under a 50" upright.

Editor's Note: Susan Kline's article was "How Firm a Foundation," Piano Technicians Journal, August, 1998, page 27.]



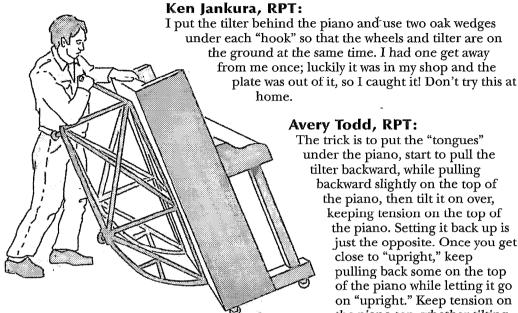
they're not safe, in my opinion. I just set them aside and use a cargo strap around the posts and the tilter frame and then I know it's not going anywhere.

Bob Anderson, RPT:

I learned an important lesson a long time ago. I had a large upright on the tilter and I was setting it back up. It was on a concrete floor, an easy surface for casters to roll on. As I levered it up, the back casters hit the floor first and pulled the piano away from me before the piano was vertical enough. Down went the piano on its

back. Fortunately, no harm was done to the piano or me. The correct technique is to *not* stand the tilter all the way up. As the piano rises, be aware of the exact moment that the casters touch ground. Stop lifting the tilter at that point. The prongs of the tilter will keep the piano from taking off. They are pointed slightly up and "dig in" to the bottom of the piano. Now push the piano gently away from you. The back of the piano is still caught by the prongs of the tilter. The piano will tip off the tilter and the front

casters will come down safely. You can control the piano with one hand and the tilter with the other. Working from the back treble side of the piano, keep your left hand on top of the piano. (I assume you have removed the lid.) You can push the piano away from the tilter with this hand and at the same time control the piano from coming down too violently on the front casters. The right hand keeps the tilter in contact with the bottom of the piano by pushing the tilter away from the piano at the handle. I have tried clamping the tilter to the piano recently. I read an article



the ground at the same time. I had one get away

Avery Todd, RPT: The trick is to put the "tongues" under the piano, start to pull the tilter backward, while pulling backward slightly on the top of the piano, then tilt it on over, keeping tension on the top of the piano. Setting it back up is just the opposite. Once you get close to "upright," keep pulling back some on the top of the piano while letting it go on "upright." Keep tension on the piano top, whether tilting it backward or forward, and

you won't have any problem. I have never felt the need for any kind of strap provided you do it the way I described.

Dick Beaton, RPT:

I lost a big upright once after I put new casters on it. When the new casters hit the floor it was gone and I got out of the way fast! Best solution I found was to lock the wheels on the caster with rubber mutes. If the wheels don't turn you won't lose it. As an additional precaution I found that it is best to have the casters on a piece of carpet rather than concrete.

Dave Stocker, RPT:

My truck has short stubby little toes; there aren't any clamps or straps. I have tilted the biggest uprights I've ever run into without ever having a problem (unless the customer tries to help). I prefer to place the truck under the piano,

then hold the top of the piano and pull it back to rest on the truck. Most of the time I *never* touch the tilt truck. To place the piano upright, I lift from the back of the pinblock until the casters touch, then grab the handle of the piano and lift with my shoulder on the pinblock. This controls the piano if it should start to slip.

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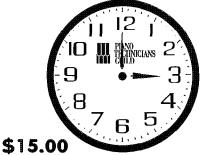
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"Helping Each Other"

(Publisher's Note: My personal credo goes like this: "Life is tough enough so we ought to help each other through it!" So when I saw the following story it reminded me of this credo. It

Dan Hall, CAE PTG Executive Director

also reminded me that we all had to start somewhere, first depending on our parents, then teachers and career mentors. Now that we are mature adults maybe we need to help those following in our footsteps.)

"Wishing to encourage her young son's progress on the piano, a mother took her boy to a Paderewski concert. After they were seated, the mother spotted a friend in the audience and walked down the aisle to greet her. Seizing the opportunity

to explore the wonders of the concert hall, the little boy rose and eventually explored his way through a door

marked "NO ADMITTANCE." When the house lights dimmed and the concert was about to begin, the mother returned to her seat and discovered that her child was missing. Suddenly, the curtains parted and spotlights focused on the impressive Steinway on stage. In horror, the mother saw her little boy sitting at the keyboard, innocently picking out "Twinkle, Twinkle Little Star." At that moment, the great piano master made his entrance, quickly moved to the piano and whispered in the boy's ear, "Don't quit. Keep playing." Then leaning over, Paderewski reached down with his left hand and began filling in a bass part. Soon his right arm reached around to the other side of the child and he added a running obbligato. Together, the old master and the young novice transformed a frightening situation into a wonderfully creative experience. The audience was mesmerized."

Hope you enjoyed the story and happy holidays....



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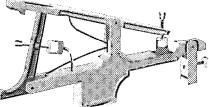
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Touchweight & Friction

By Mark Abbott Stern, RPT Los Angeles, CA Chapter

oday's mission is to explode a myth. Forget that there are diagrams and even an equation or two. That stuff will be simple. Promise. The hardest part will be giving up the belief in a widely accepted statement:

"One half the difference between downweight and upweight is the friction of that note."

Not entirely true. Repeat — not true. Friction is certainly a part of that value, but there's more to it; there is a portion that cannot be reduced by all the lubricants in the world. Fortunately, there are ways to reduce the value and we'll find out later what they are.

First - let's agree on two very simple, seemingly unrelated mechanical truths.

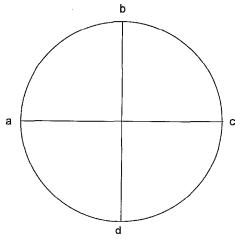


Figure 1

Truth #1

Figure 1 depicts a disk with two perpendicular diametric lines ("ac" and "bd"). The disk is at rest but we are going to begin to rotate it clockwise about its center. Figure 2 shows the instantaneous movement of point "a" as the disk begins its first rotational movement. Point "a" moves upward, perpendicular to the line ac. In

Figure 3 we see the disk has rotated and point "a," at the instant we look, is still moving perpendicular to the

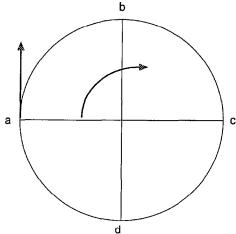


Figure 2

diameter, but no longer even close to the vertical direction from which it started. Figure 4 shows the progressive directional changes as points on the circumference of the disk arrive at the originally selected "a," "b," "c" and "d." Moreover, it should be clear that every point on those diameter lines is changing direction constantly as the disk rotates. In Figure 5 four points along lines "ac" and "bd" are depicted.

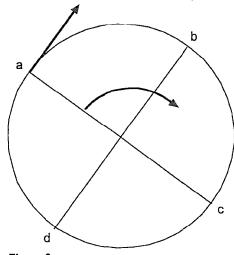


Figure 3

We could have selected any points on the face of the disk – if it's rotating, the direction of every point changes constantly in circular arcs.

Actually, the same is true on any rotating element. Let's think of line "ac" as a stick pivoting about its center, again clockwise. Points "a" and "e" would both begin to move upward, perpendicular to the stick as shown in Figure 6. Correspondingly, points "f" and "c" would move downward at the instant rotation started. All points on the stick would change direction of movement constantly as the stick rotates.

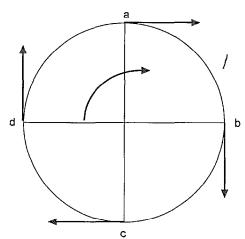


Figure 4

Now, consider that familiar-looking device in Figure 7 rotating clockwise about its pivot point. As the finger depresses the key, the capstan rises. But direction of the capstan changes constantly because key movement is a rotation. Instantaneous directional movements from the initial position are shown for the major features.

Likewise, another familiar-looking shape (Figure 8) rotates counter-clockwise about a fixed point, in which case every part changes direction constantly. The focus of our interest is the heel cushion, which moves perpendicular to a line from the wippen flange center pin to the center of the

heel cushion. The direction is shown in Figure 8.

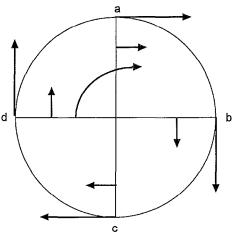
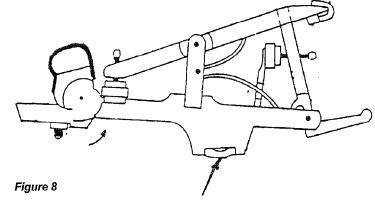


Figure 5

It can be seen that the direction of movement of the capstan and of the wippen heel are identical at only one point - where the junction of the capstan and heel cushion cross the line between the centers of rotation of the

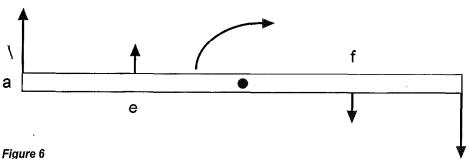
they are equal $(F_1=F_2)$, the chain will not move - the system will be in balance or "in equilibrium." Likewise, a beam impressed by equal and opposite forces, as in Figure 10, would also be stationary, signifying



equilibrium. That all seems so simple you wonder why it bears mention.

Well then, consider the threepiece chain in Figure 11. When stationary this system is also in equilibrium - also due to the fact that $F_1=F_2=F_3$ – all the forces acting upon the system are equal. But, unlike the chain in Figure 9, there is no single force equal and opposite to F1. What then keeps the system from moving

angles is formed. The lengths of the triangle sides accurately reflect the values of forces resulting from the one force acting at an angle. In fact, the 2unit force along the line of F2 results in a 1-unit force to the right and a 1.732 (square root of 3) unit force upward (away from F3). These are called "vectors." This can be computed from the right triangle equation:



key and wippen. Therefore, throughout most of the movement of both parts, the capstan is pushing the heel in a different direction than the heel is moving. Hold onto that thought. This is Truth #1.

Truth #2

Visualize a rope or chain being pulled from its ends as in a tug-of-war. In Figure 9 the chain is shown with two opposing forces, F1 and F2. If one of these is larger than the other, the chain will move toward the larger. If

toward F1? Of course, F2 and F3 share equally in resisting that movement. Consequently, if F1=F2=F3=2 units of force, then F2 and F3 each contribute 1 unit of force to balance F1. How do they do that?

The answer is: by vectors. In Figure 12 force F₂ is diagramed showing the force and the angular relationships. Force F2 has a value of 2 units acting 60 degrees off the direction of force F1. A right triangle with 30-degree, 60-degree and 90-degree



Where: $c = 2 = F_2$ $a = 1 = F_2$ contribution to offset F1

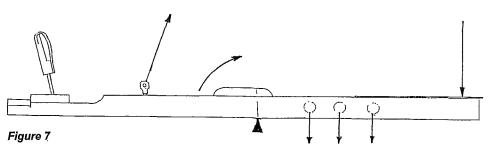
Then
$$1^2 + b^2 = 2^2$$

 $1 + b^2 = 4$
 $b^2 = 3$
 $b = \sqrt{3} = 1.732$

Notice that the force acting at 60 degrees away from the axis is one-half efficient – 50 percent. At 30 degrees away, it is 1.732/2 or a little more than 86 percent efficient. That means there is a loss of almost 14 percent of the energy expended due to the vector, not due to friction. The exact same is true of F3 so that the vertical vectors of F2 and F3 are equal and opposite and, therefore, in equilibrium in the vertical plane as well.

What does this mean? If a force is applied in the direction we desire, it is 100 percent efficient and all the energy applied is useful. If, on the other hand, the force is applied in a direction other than desired, there are energy losses. Truth #2.

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Touchweight & Friction

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The Upshot

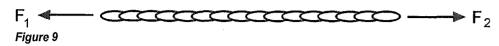
Well, let's combine Truth 1 and Truth 2. Throughout most of the movement of the key and wippen the capstan is applying force in a direction different

difficult to find an action where this is not so. Well, so what? Truth 2 tells us there are inherent energy losses at both junctions. These are vector losses – not friction. These losses are the consequences of action geometry issues and nothing else.

How can we evaluate them? How

and make changes accordingly. For stages in between these two extremes, try some of the same remedies, or ask a more experienced technician.

But, above all, remember that lubrication won't solve this problem. Only changing action geometry will. And, of course, when you measure touchweight, remember that the difference between downweight and upweight is composed of both vector losses and friction losses.





from the heel movement. Furthermore, the same thing is happening where the top of the jack meets the knuckle – only less efficiently! The jack pushes in a different direction than the knuckle wants to go, virtually throughout the complete stroke. It is

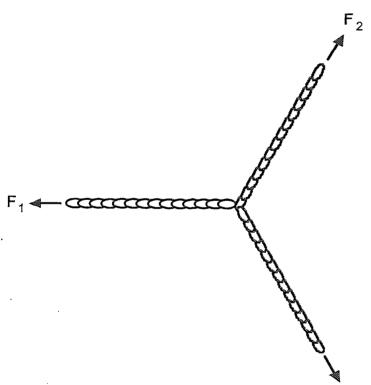
can we correct them?

To see if there is a geometry problem, connect a string between the centers of rotation:

- from the wippen flange center pin to the base of the key at the balance rail pin.
 - from the wippen flange center pin to the hammer flange center pin.

Observe the junctions of (1) capstan and wippen heel, and (2) jack top and knuckle. If the junction crosses the string line at the exact center of the keystroke, the system is operating as well as it can geometrically. If the junction does not cross the line at all. read the February, 1999 Piano **Technicians** Journal article entitled "What

Happens If..."



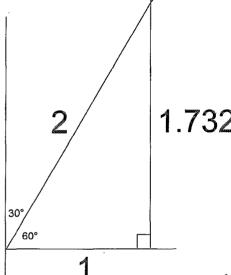


Figure 12

Figure 11

Ear Training: Bees & Hummingbirds

By Ed Sutton, RPT Contributing Editor

s piano technicians we are lucky to have considerable control over our sound environments. If we're clever, we can use that control to our advantage and improve our skills. We are sound specialists and we have the right to be picky about what we hear. Wine tasters are careful to protect their sense of taste – we should do the same with our sense of hearing.

Once during a tuning lesson I asked Tom Sheehan how I could improve my hearing of fast beats. He said: "Think of bees, think of hummingbirds ... think of the fast, buzzing sounds you already can hear and enjoy."

That was good advice. Since then I've consciously set out to become a connoisseur of sounds, a collector of hearing experiences and a practitioner of meditative listening. It has paid off, both in direct pleasure and in tuning.

One of the rules that seems to operate over and over in our lives is that there's almost nothing a person doesn't get used to. So much goes on around us - good, bad and neutral - that we just can't afford being aware of all of it. We become oblivious to avoid being overwhelmed. But hidden in this thought is the possibility that most of what we need is already with us, if we could just learn to recognize it. If we can learn to let down our habitual hearing guard, we may find our ears are more adept than we'd supposed. This is, after all, about professional development; if it also happens to be pure selfindulgent pleasure, that can't be helped.

Be true to yourself. If you really believe it's your *professional duty* to be unhappy at your work, stop reading this article! If, on the other hand, you're willing to invest a few minutes of your life in enjoyment, it might make earning a living easier. Think of it as a matter of labor relations: a happy brain is a hard-working brain.

Practice short periods of the most complete sound awareness you can muster. Turn off the noise machines and try to notice every sound that your ear hears. Don't generalize, try to hear each sound in detail. If something scrapes, hear the start, middle and ending parts of the sound. Savor the little bumps that the scrape is made of. Hear the changing pitch of your own breath. Breathe deep and slow and notice the amazing silent moment between inhaling and exhaling, the closest we can come to pure silence. Be totally surprised by the sound of something you've done thousands of times without listening.

"Think of bees, think of hummingbirds ... think of the fast, buzzing sounds you already can hear and enjoy."

Early morning is a good time to start. Perhaps you are one of the lucky people who awake without a noisemaker. A tree by the window is a good source of morning sounds. I hope you can think of the first sounds of the day as blessings.

It isn't easy to maintain complete sound awareness for a long time. Don't be surprised if you drift into activity, but notice how a few moments of sound awareness gently focuses and concentrates. A tool that makes a beautiful sound, a well-tuned plane or a fine handsaw, has a way of drawing us closer to the work and of drawing better work out of us. A well-maintained shop continually announces itself and expects quality in our response.

Now try this very practical, job-related experiment:

As you arrive for a tuning, practice sound awareness. Turn off the radio and hear the sound of your vehicle. Hear the sound of picking up your tool kit and the sound of your feet on the sidewalk or grass. Maybe there's a gravel walk and some birds or wind! Hear the sound of your feet on the step and of the knock or the bell and of the door being opened. Hear the sound of your voice and of the customer's voice, the walk to the piano, the kit and piano being opened ... and the delicious, delicate sounds of the temperament strip being inserted.... At some point you'll just be tuning ... focused, gently concentrated in a world full of sound.

Piano Shop Trade Secrets

By John Hartman, RPT New York City Chapter

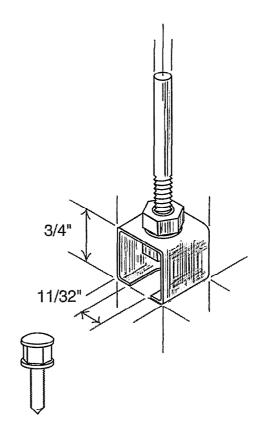
Make This Useful Capstan Removing Tool

I have never liked those hexagonal-sided capstans found on earlier Steinway grands. The width across the sides is so inconsistent that I have to use two different-size wrenches to regulate. I now routinely remove them, plugging the holes and installing new capstans. Removing the old capstans is one of the difficulties you will encounter. I designed this tool to do the job. Chucked in a portable drill it can remove all of the capstans very quickly.

To make this tool you will need a short length of 3/4" square steel tube from the local home center (the wall thickness is about .057"), a 1/4" by 2-1/2" bolt, two nuts and one lock washer. Secure the tube in a vise on the drill press and drill a 1/4" hole through both sides, 3/8" from the end. Enlarge one hole to 11/32". Clamp the tube in a bench vise and use a hacksaw to cut off a 3/4" length. Use the hacksaw to cut the two sides of the slot tangent to the 11/32" hole. Cut off the head of the bolt. Bevel and de-burr the end. Assemble the tool as shown.

I use this tool chucked in a battery-powered portable drill that has variable speed. Seated in a chair with the drill resting on my thigh I hold each key in my other hand and engage the wrench on the capstan. At first I work the drill slowly, making sure the capstan is lined up properly and there is no undue stress on the key. Once started, I can go faster and quickly remove the capstan.

The threaded shanks of these capstans come in two different sizes, so the hole they leave can vary slightly. A common 3/16" dowel will usually work. First drill out the holes with a 3/16" bit to make a clean surface for the glue. Cut the dowels on the



bandsaw to about 1/4" over length. Glue them in and leave them sticking above the key surface. Make sure to carefully clean off the excess glue. Let them dry thoroughly overnight. If you encounter the capstans that leave a hole that is larger than 3/16" use an epoxy like "West System" to glue in the dowels.

After the glue dries, the dowels need to be cut flush with the top of the key. I have been using a scroll saw and find it to be fast; it also leaves a smooth surface. If you don't have a jigsaw try a Japanese handsaw designed for flush cutting. This will leave the smooth surface you need to scribe a new capstan line. I will describe boring the hole and inserting the new capstans in the next installment.

An Essay on the History of Tuning

By Skip Becker, RPT Northeast Florida Chapter

"They watched the door swing open energetically,

and gazed upon the flushed and animated face of

Ludwig Von Beethoven."

Part 11: Keys to the City

n Friday, May 15th, 1809, Andreas Streicher opened the door to the piano shop for his wife Nannette, just as he had every workday morning for the past 15 years, with the notable exception of the previous three. Two children were with them nothing unusual there, they had grown up in the shop. And they were arriving a little later in the morning than they would ordinarily. But this was a most unusual, terrifying day for the Streichers and everyone else still in Vienna. The sky was full of dark clouds, but they knew the booming they heard in the not-too-far distance was not thunder. Napoleon's artillery was reducing the city walls of their Vienna to rubble. This was the fourth day of intense bombardment. The French would likely break through later in the day, and then, well, no one knew what would happen. The French had occupied Vienna three years earlier, but that unfortunate event had been uncontested. It was bloodless, everyone continued working — life continued pretty normally. This time promised to be bad. This time Vienna was resisting with all her might, but the Austrian army had so far been able to do little but slow Napoleon's advance. In fact, since the entrenchment of the French outside the walls of Vienna, their army had been invisible — if indeed they still loomed in the field, as was hoped. Many fled Vienna; most of those remaining were hunkered down as best they could for the duration of the bombardment. The Streichers quickly entered their workshop and found it deserted. Now that was unusual.

Nannette walked over to the piano she had left four days ago, relieved to find it undisturbed in her absence. It already bore her signature on the belly rail; later today she would add the serial number 770. Andreas told her that he would spend the shortest while in his office, working on correspondence and then return for today's "assignment,"

the endearment he used when working in his wife's shop. He had no qualms about leaving her there. He wouldn't be far, and even in his "worst case scenario," it was his hope that the French would continue to show

little interest in Viennese pianos. The shop was her demesne, the source of her strength; and the children were more than capable help. It ran in their blood. He hoped his wife was correct about the benefits of working today, a gentler and more productive way of passing the time than anxiously hiding in the cellar, as they had for the past three days. Andreas entered the business office and set to work as best he could, reading from the pile of letters on his desk. The emphatic staccato of French cannonade made it difficult for him to concentrate.

Nannette began working. She applied some glue to the underside of her piano, which lay exposed to her, upside down. She took the precut brace from the hands of her 13-year-old son Johann and placed it in position. Then she

took the mallet from her 12-year-old daughter Sophie. The children, on cue, backed up to give her room as she tapped the strut into her "brickwork." Nannette was startled when a raspy voice chided: "Your glue is too hot, Madame Streicher." She looked up to see the wizened smiling face of Josef, her shop foreman. She had not heard him come in. Josef, her most senior employee, had worked for her father, Johann Andreas Stein, and had come with her to Vienna when the business relocated there. As Josef walked away to resume work on his own recently abandoned piano, she reflected on what he had said to her. She had heard the remark for the first time in her youth, spoken by her father to the then apprentice, now shop foreman, in the old Augsburg shop, over 30 years ago. Nanette, then eight years old, had tormented him with "Josef, your glue is too hot," all the rest of that day and many others to follow. Josef never minded; even back then he knew the pecking order in the Stein Instrument shop. He always accepted her teasing, however merciless, with his quiet good nature. For as long as she could now remember, it had been her special greeting for him. Josef had likely waited 30 years to deliver his bon mot. The stoic expression on her face softened. A half-smile appeared quite unexpectedly. Nannette looked around the shop and noticed that more of her craftsmen had reported for work, however surreptitiously. They were now joined by others less adept at arriving unobserved. Even on this most terrible day, there were small contentments to be found. She was right about going to work.

Missing today in the shop was the usual friendly banter as they crafted their instruments. No one was smiling, but they were all glad to be at work. They were nervous, to be sure, because the French were battering the city walls; but they were respectfully silent because they had no wish to intrude on the private grief of Madame Streicher. They knew she was not worried about Napoleon; she was far removed from his ability to harm her. The French had

already done their worst. Her dear brother, Friedrich Stein, a wonderfully talented musician, had been swept up by the wave of German Nationalism and the City Councilor's "Love of Emperor" propaganda.

He had enlisted in a local militia; less than two weeks ago he gave his life in the defense of their city. A hero's death to be sure; but she would give up Vienna, and all of Austria besides — one hundred times over — to the French or anyone else, to have her brother back. She was grateful her own children were too young for such nonsense.

Andreas' reading was interrupted as he heard a carriage coming down the street. The unmistakable clip-clop stopped in front of their building. "Who would be out on a day like today?" he wondered. "Surely the French have not arrived yet." He hurried to the main entrance of the building and peered into the street. He smiled wryly when he recognized the man stepping out of the carriage. Then

Continued on Next Page

An Essay on the History of Tuning Continued from Previous Page

he hurried back down the corridor to the shop, stuck his head in and announced: "Madame Streicher, we have a visitor."

Nannette shook her head in disbelief, then smiled, happy for the distraction — a visitor indeed! She left her work and joined Andreas in the corridor. The couple walked slowly, arm-in-arm, toward the main entrance. "Who is it?" she asked her husband. "You'll see soon enough," was his reply. They watched the door swing open energetically and gazed upon the flushed and animated face of Ludwig Von Beethoven.

A visit from Beethoven was no surprise, except for the timing. He came frequently to the Streicher factory. The expressed purpose was often to select an instrument for a student or a patron. Just as often these visits turned into thinly veiled attempts to wheedle possession of a Streicher piano for himself — he never could afford one, but was surprisingly successful in obtaining such a loan. The Streichers had realized early on that Beethoven's playing style was the wave of the future. They patiently accepted abuse in the form of scratches, spills and breakage in their efforts to learn how to make their instruments more durable. Lately Beethoven was also coming for financial advice. Andreas was always interceding between

the irascible composer and his publishers; more lately he came almost daily to use Andreas as a calculator for his investments (the genius composer never mastered addition, let alone arithmetic). Andreas was the most

advanced mathematically in his small circle of friends. But the frequency of these visits led everyone to the unspoken conclusion that Beethoven really came to see Nannette. He covered this as discreetly as he could with unending questions to her about how to run his household.

This morning Beethoven's attire was more disheveled than usual, evidence that he had dressed hastily. His hair was a fright, his eyes bulging red. He called out to his friends: "Good morning, dear Streichers." He began to briskly walk toward them, but suddenly halted as he passed a grand piano near the entrance. As if on some irresistible impulse, he turned toward the instrument, centered himself before the keys, reached out and smashed some chords. Then he sat down and began to play. "My, that's a beauty," he said to no one in particular. He continued playing. "I must have one just like it. No... I must have this one." He was already enraptured by the time the Streichers reached his side. The music was new, exciting, touching the heart in ways previously unimagined. But there was no mistaking the style. It filled the building, drowning out even the erratic French rhythm in the background. The children immediately knew who was playing and ran to join their parents. The workmen also knew who was playing, but they remained in the shop. They knew their place; but the door was propped open as they crowded near as possible to listen to this pied piper of Vienna. Nannette looked in the direction of the shop and with a wave beckoned the bolder faces she saw emerging from the doorway. Everyone, especially today, should be permitted to enjoy this impromptu concert in the corridor.

Beethoven eventually returned from wherever his music had transported him and his audience. He shook himself awake and realized slowly that his introspective recital had drawn a crowd. He stood and greeted the children: "Ah, good morning to you, young Streicher. And here is my favorite 'homing pigeon." Then he again addressed the parents: "My dear Streichers, this instrument is magnificent. It is your best ever! It will haunt me in my dreams. I must have it."

"So, Herr Beethoven. You have come this morning to purchase an instrument?" bemusedly inquired Nannette.

"I must warn you, the delivery schedule for today is ... uncertain," added her husband.

Beethoven smiled at the wry humor. "No, no tricks for the Streichers this morning." (in German "trick" is "streiche" — so, "no 'streiches' for the Streichers" was a clever play on words. In his good humor, Beethoven was an inveterate punster). "I have come instead on a most noble purpose: to ensure the safety of Madame Streicher."

For a long moment, the Streichers were dumb with astonishment – that this wild-eyed eccentric standing before them, who could not keep a thought in his head let alone take care of himself, would make such an offer. Finally Andreas stifled a laugh, but the effect was contagious. Nannette could not stifle hers. Her beautiful contralto resounded in unexpected glee. She was joined in a chorus of guffaws, chortles and knee-slapping from her workmen. Beethoven was taken aback, totally unaccustomed to being the source of such mirth. He was

"This time Vienna was resisting with all her might;

but the Austrian army had so far been able to do

little but slow Napoleon's advance."

uncertain as to what he said that was so funny. He looked again at the gathered crowd and saw many kind and loving faces. Just then a French cannonball landed near, too near to be anything but portentous. It sounded

like the end of the world. "I see you are in good hands, my dearest Madame," declared the composer, again very animated. "I shall leave you now and go to ensure the safety of my brother Karl, who awaits me in his cellar." He turned, opened the door and hurried into the street.

As the door closed behind Beethoven, Nannette turned to her husband, and hugged his chest. "We're so fortunate," she whispered. Andreas folded her in his arms.

After a moment, Josef took charge of the workmen with his mock taskmaster's snarl: "Back to work, you mangy lot. Beethoven has left the building."

The French entered Vienna on May 15, 1809 after four days of intense bombardment. The defense of Vienna had bought the time necessary for Archduke Charles to assemble the Viennese militias and integrate them with his regular troops into a formidable fighting force. On May 21-22, at Aspern, across the Danube from Vienna, the Austrian army maneuvered brilliantly and inflicted the first defeat Napoleon was to suffer on the field of battle. The rejoicing in Vienna was short lived. They did not pursue the disorganized French. Napoleon regrouped and then annihilated Archduke Charles's forces in July, at Wagram. At the Treaty of Schönbrunn (October, 1809) the Habsburgs surrendered considerable territory, but at least remained in existence. As a suitable punishment, Napoleon quartered 100,000 troops in Vienna for the next year, compelling the Viennese to house and feed them. He also commandeered Schönbrunn castle for his command post, even slept in the Emperor's bedroom – but on his own military cot (Spartan warrior he). When Napoleon left, he gave orders for his cot to remain there in the event it was necessary for him to return. It's still there.

Electronically Enhanced Tuning — Part I

By Joe Garrett, RPT Portland, OR Chapter

Pitch-Raising

Because I regularly work on "birdcage," 1 square and square grand pianos, I probably do a bit more "pitch-raising" than the average technician. During all of these pitch-raises I started to notice some interesting phenomena. Most pianos, with the exception of structurally unsound ones, react the same in the pitch-raising process. I think this is due, in part, to the similarity of plate/soundboard/string configurations. I have come to think of everything we are dealing with as being fluid in composition. (If you think about it, they really are.) Once this mental image is established, it seems easier to predict and anticipate occurrences before they happen.

It is probably safe to say that the worst fears we all have when pitch-raising are, in order of terror, (1) plate failure, (2) structural failure and (3) string failure. These things are to be avoided at all cost, but how?

Several years ago Dr. (Albert) Sanderson, RPT developed the idea/concept of starting a pitch-raise at Note #1 (A0) and to tune all unisons as you ascend up to Note #88. Hearing, in his class, how he developed this concept was rather comical and gave us all the idea that his wife, whose piano he experimented on, must be a saint. I firmly believe, after all these years of using that system that it is the only safe way to pitch-raise and thereby, hopefully, avoid the

Over the last four or five years I have been developing and nitpicking an installable

"tuning" into my SAT's memory - one that meets my criteria for pitch-raising (see chart). These criteria are:

1. Cause the least trauma to the overall structure, in regard to

General Pitch-Raising Scale for the Accu-Tuner

(a modification of Sanderson's of the same title) Developed by Joe Garrett, RPT

	Piano Note	SAT	Cents	Piano Note	SAT	Cents
	A-O	E3	-35.0	F-4	F6	2.9
	A#-O	F3	-31.0	F#-4	F#5	3.7
	B-O	F#3	-23.0	G-4	G5	4.0
	C-1	G3	-28.0	G#-4	G#5	4.0
	C#-1	G#3	-24.0	A-4	A5	2.0
	D-1	A3	-22.0	A#-4	A#5	6.0
	D#-1	A#3	-18.0	B-4	B5	5.5
	E-1	B3	-20.0	C-5	C6	6.0
	F-1	C4	-13.0	C#-5	C#6	6.5
	F#-1	C#4	-10.5	D-5	D6	6.5
	G-1	D4	-7.0	D#-5	D#6	7.5
	G#-1	D#4	-6.2	E-5	E6	8.5
	A-1	E4	-6.0	F-5	F6	9.5
	A#-1	F4	-4.5	F#-5	F#5	10.0
	B-1	F#4	-4.2	G-5	G5	10.5
	C-2	G4	-3.9	G#-5	G#5	10.5
	C#-2	G#4	-3.6	A-5	A5	10.5
	D-2	A4	-3.0	A#-5	A#5	10.5
	D#-2	A#4	-2.7	B-5	B5	10.5
	E-2	B4	-2.4	C-6	C6	15.0
	F-2	C5	-2.1 j	C#-6	C#6	15.0
	F#-2	C#5	-1.5	D-6	D6	15.5
	G-2	D5	-1.5	D#-6	D#6	16.5
	G#-2	D#5	-0.2	E-6	E6	16.0
	A-2	E5	0.5	F-6	F6	18.0
	A#-2	F5	-0.5	F#-6	F#6	20.0
	B-2	F#5	-0.0	G-6	G6	25.0
	C-3	C5	-1.4	G#-6	G#6	30.0
	C#-3	C#5	-1.2	A-6	A6	30.0
	D-3	D5	-1.8	A#-6	A#6	30.0
	D#-3	D#5	-1.5	D-6	B6	30.0
	E-3	E5	-1.0	C-7	C7	30.0
	F-3	F5	-1.0	C#-7	C#7	32.0
	F#-3	F#5	-1.0	D-7	D7	34.0
	G-3	G5	-1.0	D#-7	D#7	34.0
	G#-3	G#5	~0.7	E-7	E7	34.0
	A-3	A5	0.0	F-7	F7	35.0
	A#-3	A#5	1.0	F#-7	F#7	37.0
	B-3	B5	1.8	G-7	G7	40.0
	C-4	C6	2.0	G#-7	G#7	42.5
	C#-4	C#6	2.2	A-7	Α7	46.0
	D-4	D6	2.4	A#-7	A#7	48.5
	D#-4	D#6	2.6	B-7	B7	55.0
	E-4	E6	2.8	C-8	C8	50.0

NOTE: For pitch raises of 10 cents or less use this program without any offset. For pitch raises from 10 cents to 25 cents, it is suggested to use a +5 cent offset. For pitch raises of more than 25 cents, it is suggested that more than one pass be used. It is further suggested that if the instrument is really flat and you suspect possible string breakage or structural damage, then do not use an offset for the first pass. This program is designed to raise pitch without putting undue stress on the structure of the piano and yet leave the piano within the close tolerances of normal tuning. (Every note to the bass side of A=440 should be slightly flat and inversely sharp in the treble.)

torqueing, twisting and shock. 2. Raise the pitch of any given string as high as is necessary to obtain a

stable, in tune note, and, in so doing, not exceed the allowable

breaking strength of the

3. "Load" the strings/ tuning pins/structure so that each note has the inclination to, eventually, go flat or sharp and remain in a more musical relationship with all the other notes. To put this another way: all notes to the bass side of A49 (A440) should be "loaded" to the flat side. And all notes to the treble side of A49 should be loaded to the sharp side.

4. Compensate in this "loading" for structural movement, etc., still maintaining the other parameters.

Phew! Having said all that, I present to you the tuning that I use specifically for pitch-raising only (see Chart 1). This "tuning" should not be construed as a real tuning. For you "light stoppers," who recognize "numbers," don't let the weird numbers deter you from trying this scheme.

A few tips I have gleaned over the years are: On all uprights that are 10 cents or more flat, I always use an impact tuning hammer. The only time an impact hammer will not work is on grands or pianos with excessively loose tuning pins. I have slightly modified my impact tuning hammer.² The modification was to shorten the swing arm to approximately the same overall length of a standard tuning hammer. The reason I did this was two-fold: (1) the weight was originally cross-threaded on the shaft and cocked at an angle (due to poor

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Electronically Enhanced Tuning

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workmanship by the manufacturer) and (2) it wouldn't fit in any of my kits (SAT case or small tuning kit). Because of this modification I've found that I don't "overshoot" the desired pitch as far. However, I do have to put a little more effort into the wrist action.

- On any piano with apparent rust or corrosion on the strings, "v" bar, pressure bar, capo, understring felt, etc., I like to lightly lubricate with LPS-1TM. This lubrication is available at electronics and fullservice hardware stores. (It used to be available from Tuners Supply.) The reason I prefer using this lubrication, as opposed to others, is that it doesn't creep and dissipates quickly so as to not to be a dust collector. In order not to get it in places I don't want I spray some in the cap and paint it on the appropriate surfaces with a small artist's brush.
- On any piano of doubtful integrity, I prefer, on the first pass, to raise only to pitch. I do this by not using my pitch-raising program. I simply turn on my SAT and leave the pitch on 0 (zero). The first note I tune is A49 and its unison strings. If all is well there, I reset my machine to minus 10 cents, reset to A1 and tune the first 12 notes of the piano. (When you cross over to the "C" the machine will automatically go from B1 to C2. At this point reset the C to C1.) When you reach A1 reset the "offset" to 0 (zero). Because most of the strings in the first octave generally are close to 50 percent of their breaking strength I don't want to tempt the "fates" and tune them too sharp. If no breakage has occurred on the first octave, then I feel fairly confident and proceed up (tuning unisons as I go) to C88. Throughout this first pass I leave the machine on a 0 (zero) setting all the way up. I simply want to see if the strings will take any kind of tuning movement. Leaving the machine at 0 (zero) most certainly will not over-stress the upper treble. If something breaks, with this procedure, it definitely was not the tuner's fault. An aside: always check the entire structure: front, back, bridges, plate (with action out on uprights), etc., before starting the pitch-raising

process!

 Always plan to go all the way through the piano several times. (Here, speed tuning is appropriate. The faster you do it the more stable everything will be and a more balanced added stress to the structure will occur.)

I should mention something about pitch itself. Over the years I have used the following policy: If the piano was built before 1860, I always use A=425 cps* as the standard. This is 80 cents flat of A=440. This number was gleaned from the pitch charts in the back section of Helmholtz' On The Sensations of Tone. Because most of the square pianos and birdcage uprights I work on were built in England, I chose 425 cps, as it was most common (approximately) in many venues listed. This pitch standard for pre-1860 pianos has not gotten me in trouble yet, and is an easy math calculation to log as an "offset" when using the SAT.

As for pianos built between 1860 and 1900, I usually choose A=435 cps. I have not been able to verify when "International Pitch" was established and whether piano manufacturers, piano engineers and designers used it or not. The only reference I have ever seen, on a piano, was on Chickerings built prior to 1920-something. I feel that the technology of piano wire and plate construction was fairly well established by 1890. So it usually is safe to tune those pianos built after 1890 to 440 cps.

There are exceptions to this theory. One that comes to mind is the Kranich & Bach (affectionately known as the "Chronically Bach") uprights. These pianos invariably have at least one wire size section that will break strings on a regular basis if 440 cps is used. I believe they just got a bad batch of wire from some lesser-quality manufacturer. I choose to call this wire "Rotten Wire."

It should be said that the difference between 435 cps and 440 cps, in regard to tension, is approximately five pounds per string on average. This is not very much, considering most scales average about 160-180 pounds per string, in the plain wire sections and are usually in the 40 percent to 50 percent of breaking-strength range.

Another item to discuss is that if a piano is not up to its designed pitch, there will not be enough tension to "cock" the tuning pins in the pinblock, therefore rendering a less than stable

tuning. This is the major reason I choose not to tune 1/2-tone flat, when possible.

I have found that if strings start to break in the middle (temperament) section or below (plain wire), in the attempt to raise pitch, it's usually due to high friction. This high friction occurs in the area between the tuning pin, through the pressure points to the speaking length of the string. In this occurrence, the string invariably breaks at the tuning pin coil. This section of the piano should be the least likely to have string breakage, because the tensions of these large diameter wires are oft-times at 30 percent of the breaking strength or less. This is opposed to strings in the bass and upper treble, that are usually at 50 percent to 60 percent of the breaking strength. In this circumstance, if you have taken every feasible precaution and strings break, it is my opinion that the piano wire has had it and should be replaced, not tuned a 1/2-tone flat as many do. After all we are, in an off-hand way, training ears. "A=440 or Die!" is my motto. And I refuse to have anything to do with parents, etc., that don't seem to realize the importance of A=440 for their children/students. If I can't convince them, I'm "out of there"!

I've been told that the industry perception of "string life" or rather "string tonal life" is approximately 20-25 years. Considering this, it is fair to assume that that 110-year-old grand piano is probably only producing a minimal amount of tone and volume as compared to what it would with new wire.

It is my hope that all this information piques your interest and hopefully will make your pitch-raising life a little less stressful and with a little less terror. Happy pitch-raising!

Next up: "My Method of Electronically Enhanced Tuning."

Notes

- 1. The correct designating term is "over-damper pianos."
- 2. I've never met a tool I didn't modify.
- * The "Hertz" term, although scientifically correct, has always bothered me, because we are, in fact, talking about frequency or "cycles per second," hence cps.

The State of Pianos in France

By Craig Turner Northern Virginia Chapter

ianos are not just pianos. There are pianos that are historically important, pianos that are mechanically significant and pianos that are beautiful to look at. I was on my way to France for two weeks and I decided I would find all three.

This trip to "Europe's favorite sister" would be part

pleasure, part pianos. I knew that traveling in a country that has played such an important role in music and art, I could find keyboards at every corner. And so, I was off to see pianos in France.

Of course, any traveler must go properly equipped. I recruited my 11-year-old nephew for the trip (he made for an interesting travel partner), bought tickets and brushed up on my nonexistent French. With a bulging backpack and a seventh grader in tow I boarded a 747 and was on my way.

The first few days were fun: go to the top of the Eiffel Tower (scary ride, excellent view), ride a tour boat down the Seine (mellow ride, excellent view) and sample some of the fine French cuisine. Of course, France isn't only sights and food. There are pianos to see and plenty of them.

Once in Paris head for the Musee de la Musique the Music Museum. This museum is a must for any traveler passing through Paris. With more than 4,500 instruments on display, there is certainly something for everyone.

You'll find most of the pianos on the second floor,

though one certainly does not need to stick to this instrument to enjoy the museum. The pianos are superb! Many are painted with pastoral scenes typical of the day - a picnic or an outing by the river. All are excellently preserved and many date from the 1700s.

A piano technician could spend a couple of hours

simply staring at the pianos (and harpsichords) without even touching the other instruments. As the photographs illustrate, this museum contains outstanding pieces – fully restored and in excellent condition. The other instruments are interesting and also very well preserved, with most carefully displayed behind glass cases. One will find a cello approximately 12 feet tall, medieval-looking instruments like an oblong trumpet with only two valves and an instrument that is a strange conglomeration of pipes, cymbals,



Photo 1 — With more than 4,500 instruments on display, the Museum of Music is spacious and beautiful.

Reproduced by permission of Musee de la Musique.

whistles and a small water bucket that left me wondering exactly what the thing actually does.

Paris has more to offer than museums, of course.
Besides the conservatories we visited (we were not allowed into any of them), there is the Maison de la Radio along the Continued on Next Page

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busy Avenue President Kennedy. This large industrial building shaped like a glass donut is best known for broadcasting music to all of Paris through its radio station. But broadcasting is not the end of it, because the center – a conglomeration of administration, public relations, association support and including an attractive gift shop on the ground floor - creates music as well. I spent an evening with a piano technician originally from Seattle, who works for Steinway Hall in Paris, at a recording session in the main studio on the ground floor. A violinist and pianist were recording a piece by Bartok for a compact disc that was being sponsored by a wealthy patron. I was amazed at how many times the performers could play the same sections of music repeatedly without showing any signs of fatigue. The Maison de la Radio was truly impressive and I could not think of its counterpart in the United States.

P.hoto 2 — The Museum of Music in Paris is a must for any traveler through the city. This 1677 harpsichord is one of many superb instruments on display.

Reproduced by permission of Musee de la Musique.

After our short tour of Paris my nephew and I headed south by train at night in our sleeper car. There were so many interesting people to talk to from around the world — unfortunately none of them musicians — that I spent much of the night in the hallway talking. One fascinating university student, fluent in four languages, told me of her life in Lebanon and the Middle East. Her English was better than mine.

At dawn we pulled into Lourdes, a small town nestled in the spectacular Pyrenees Mountains by the border of Spain that is famous for its miraculous healing waters. It is said the Virgin Mary appeared here during the 1800s and left a spring of water with supernatural healing powers. More than 5,000 people have been cured by drinking or bathing in the water since then.

The piano technician in Lourdes, or any part of France for that matter, has much the same craft as his counterpart in the United States. A tuner will charge on average 500 francs to tune a piano, my source told me. This comes to

about \$95, a tidy little sum for one hour of work, until you walk into a restaurant and find that a can of soda sells for \$2.50. The cost of most items is high, though there is the occasional rock-bottom bargain: a skinny loaf of bread three feet long costs a mere 50 cents.

Piano teachers seem to do well, financially, here. One American who had just returned from six years of teaching students in Paris charged \$36 per 45 min. lesson — far better than the roughly \$14 -\$15 per half hour a teacher might earn here.

A large percentage of tuners in France are salaried employees of stores. The largest piano store in Paris employs 10 full-time tuners. But, like in the United States, many tuners practice their trade on their own, maintaining a craft that has been in existence for three centuries.

We found no pianos in Lourdes — not a store, a technician or even an old Pleyel. It made for a fascinating diversion, and we left the next day loaded with six liters of "miracle water."

We headed west toward Italy by train and arrived at Grenoble, a mid-sized provincial city that is overshadowed by the medieval Bastille build on a cliff to protect the city. It is here that I find the typical French piano store - not the massive conglomerates found in Paris displaying 400 pianos, but the "average" piano store.

With only about 750 square feet of floor space, this is not even a mid-sized store by American standards. And unlike its American counterparts, this store displays a dozen different brands of pianos but only one or two models by any manufacturer. Squashed together to conserve precious floor space, they leave little room for maneuvering.

I found that every piano displayed a price tag, unlike many U.S. stores that hide prices. There was one Bösendorfer (the only piano with a "Do Not Touch" sign), a couple of Yamahas and Schimmels and an assortment of pianos that had vaguely familiar names at best. Most played well – some did not.

The proprietor, stopping me as I walked through the store writing prices of pianos on a sheet of paper, simply smiled and offered help.

From Grenoble we headed northwest by car deep into the Alps near the Swiss and Italian borders. Though I was driving 110 kph, little Citroens and Peugeots sped past me like I was standing still. We stopped at Chamonix, a small village famous for one reason: Mont Blanc, Europe's tallest peak towers over the village like a sleeping giant. At more than 15,500 feet, it is certainly no dwarf, and the village lies a stunning 12,000 feet down the frozen peak in the balmy valley below.

The following morning we took the cable car up to Pic du Midi, the shorter cousin to Mont Blanc. For those with a fear of heights, this trip is not for you. Pic du Midi is a small outpost carved out of the top of a rocky peak that looks like the end of a pencil poking through ice. Vertical cliffs tumble on all sides to snow and glaciers below. A fall would be fatal, and if not, no one would ever find you anyway.

At lunch time we drove to Les Gets (pronounced Le Jze) about an hour and a half away. Here one finds the somewhat modest but attractive Musee de la Musique Mechanique – the Museum of Mechanical Instruments. It is the museum for those interested in player pianos, because one third of the museum – an entire floor – is devoted to this instrument.

The museum itself, built in a former convent, contains a variety of different instruments, almost all of which play by themselves. They include violins, accordions, xylophones, pipe organs and organ grinders, a banjo, a saxophone, a trumpet called a "Trombino," and a flute. There is also an impressive number of attractive music boxes and hand-crank record players.

The player banjo on display was made in 1896 in Boston and contains four metal claws to play the four strings. The museum notes with excitement that the mechanism can pluck ten notes per second.

The player violins are built into a glass and wood case, suspended vertically in front of the piano that accompanies the instruments. It is a beautiful instrument and certainly one of only a few in the world.

Nevertheless, the pianos are the star attraction for the museum. The tour begins with a demonstration by the 1926 Bechstein-Welte built in Freiburg. Its player mechanism still works perfectly and a note near the piano mentions that one paper roll lasts 100 performances.

Also on display are a "Stransky" (circa 1900), an 1846 "Debain" that runs by hand crank and an eight-foot-tall Fratinola decorated with four beautiful glass lamps in front. My back hurt just thinking about moving it.

An 1889 "Melotrope" is also on display, an interesting portable mechanism that fastens to either side of the piano by the cheek blocks. At about five octaves the mechanism actually depresses the keys of the piano it is attached to and can be moved from one piano to another. It is one of two such devices in the museum.

This museum was an interesting find – not worth a trip to France just to see it, but certainly a worthy detour if already in the area.

There are distinct advantages and disadvantages to traveling with an 11-year-old. Once again, I got to see life through the eyes of my youth. He made interesting observations about the world and presented viewpoints that I had not considered in decades. On the other hand, I was dictated every episode of "The Simpsons," listened to the entire *Guinness Book of World Records* and heard detailed descriptions of all the best flavors of potato chips. I became adept at "Uh-huh" and "Oh, really."

Back in Grenoble, we boarded our TGV, the fastest train on earth. At 186 mph, we would be traveling three times faster than highway speed, unless, of course, you drive a Peugeot or Citroen. I assured my nephew that he would not be disappointed.

We departed the station and before long began to chug along slowly through the French countryside. After an hour, we screeched to a halt. Soon, an announcer, who identified himself as the "Purser," said the train was broken, according to the woman seated behind me. He didn't use these words, of course, but that was the message. We would be moving shortly, he assured us. We eventually started moving again, and at 8:30 p.m., after a long day of travel, our train limped

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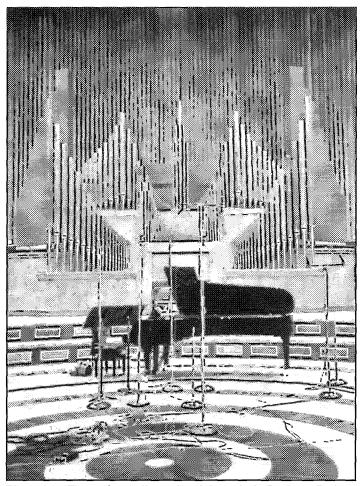


Photo 3 — The main studio at the Maison de la Radio in Paris is impressive. This Steinway was provided by Steinway Hall of Paris for a recording of Bartok. Photo by Craig Turner.

The State of Pianos in France

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into Lyon Station. Letting out a long groan and a puff of steam, our TGV ground to a halt. We had arrived in Paris.

For those who simply can't leave their work at home, one can go in search of pianos in art.

At the Louvre, France's most famous museum, I had five different information guides assure me that the museum contains nothing with a piano in it — not a painting, sculpture or even a drawing. It was not until I was passing through the bookstore on my way out that I saw a postcard of Napoleon's private apartments, all adorned in red and part of the museum on the third floor. Here I found my piano. This was not a painting, mind you. It is the actual piano acquired by Napoleon III and used 16 times by Franz Liszt.

The piano, a medium walnut Erard, dates to approximately 1854 and, according to the guide in the room, is not in good condition. It was "fully restored 10 years ago," he told me, but is in such poor condition now that some of the keys don't even work. Still, one of the tour guides, a pianist, arrives 20 minutes early each morning to have the distinction of playing Napoleon's piano.

The art museum to see pianos, if one is so obsessed, is

the Musee d'Orsay across the Seine. Here one finds the 18th and 19th-century masters painting pianos at parties, gatherings and lessons for children. They are beautiful works of art and worth a visit if only for their exceptional quality.

Before heading to France one should spend some time touring pianos in France - at www.francepianos.com. Once at the site (click "English Summary"), check out the short section called "Piano Building" as well as "Tuner Formation" and "Piano Manufacturing."

This last selection contains 82 pages of photos with explanations, if you are patient enough to wait for the 4.5 MB to download. It is also possible to download free files. More than 100 Midi files are downloadable free of charge, as is music (with other selections that are for sale).

My favorite section, though, is museums (at the top, click "Musee,"). This portion of the site, which includes the Virtual Piano Museum (click "Musee" again), is well worth exploring.

France was scenic and friendly, with more to do than one might have time to spend. As we passed above the Eiffel Tower on our Jumbo Jet back home I reclined my seat and toured the country again in my mind. From the Alps to the Pyrenees to metropolitan Paris, we had seen glaciers, monuments, museums, the highest peak in Europe and, of course, pianos. More than anything else, though, we had learned why France is "Europe's favorite sister."

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'It's a thrill to be an *All Steinway School* because I really feel that I'm working with the best.' - Enrique Rosano

Chief piano technician
University of Arizona School of Music

When Enrique Rosano fell in love with the incomparable Steinway sound as a 7-year-old, he couldn't possibly imagine that 40 years later he would be an important part in the purchase of nearly 100 of these exquisite musical instruments.

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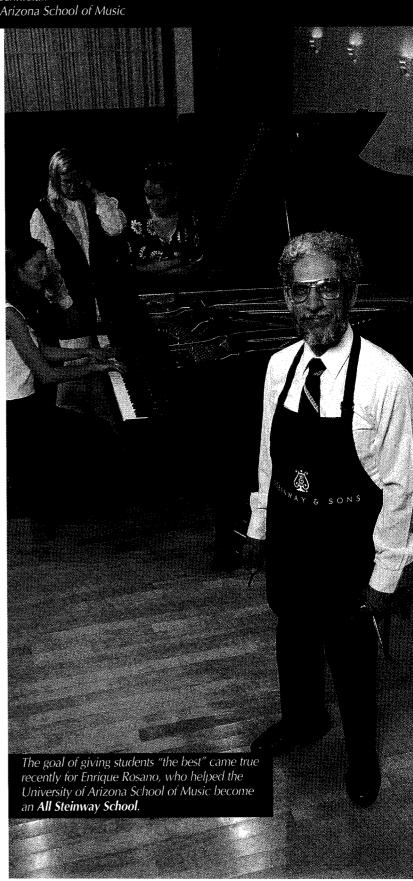
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PICReview

PIANO TECHNICIANS GUILD

Dedicated To PTC News • Interests & Organizational Activities

The Metro

By Andrew Margrave, RPT President, Northern VA Chapter & Host Chapter Chairman

Last month's article concerning the 2000 PTG Convention, next July 5-9 in Arlington, VA, promised to delve into the Washington, D.C. subway system, called "Metro," in some future *Journal* piece. That future piece is here and now.

"Metro" is short for "Washington Metropolitan Area Transit Authority." It is one of the world's premier subway systems. I, myself, use it frequently, finding it far more convenient than a vain attempt to park a car in crowded areas of Washington, D.C. In 1993, 1994, 1995 and this year, I used Metro to reach (Ronald Reagan) National Airport for flights to the PTG Conventions in those years. For the 1996 PTG Convention, Metro got me to Union Station in downtown Washington, D.C. from where a MARC (Maryland Commuter Train) carried me to Baltimore-Washington International Airport for a plane ride to the convention. (I returned, on Amtrak, to Union Station and Metro returned me to Virginia.)

Metro operates from 5:30 a.m. to midnight on weekdays and from 8 a.m. to midnight on weekends. It is best to reach a station by 11 p.m., since the last trains at some stations go

out before midnight.

Some Metro stations are above ground, others below ground. The Metro stop at Ronald Reagan National Airport is above ground, while the Crystal City stop is underground. Please do not go into shock if you ride a train that changes from one side of the earth's surface to the other!

Riding the Metro requires the purchase of a farecard. Every station has a farecard machine and a board denoting fares and travel times from one station to another. Fares, always quite reasonable, are higher on weekdays from 5:30 a.m. – 9:30 a.m. and 3 p.m. – 7 p.m. than at any other time. Bring small bills and considerable change to the farecard machine, which can provide change only up to \$5 and that in coins.

Those willing to drive to the Convention environs next year may profitably avail themselves of multi-day parking, available at \$2.25 per day at the following four Metro stops: Greenbelt, MD (green line), New Carrollton, MD (orange line), Huntington (yellow line, Alexandria, VA), and Franconia-Springfield (blue line, also in Virginia). One may park the car and take the Metro to Crystal City's stop, returning to the car via Metro after the convention ends. Leave the car free of valuables, please, as Metro takes no responsibility even if Murphy's Law strikes at your car's expense.

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The Road Less Traveled

"Two roads diverged in a wood, and I-I took the one less traveled by. And that has made all the difference."

The Road Not Taken — by Robert Frost

Like you, when I first began to tune and repair pianos, I had a choice to make. Would I do the best work that I could do or would I do just enough to get by? After all, it was just a piano, most likely an older piano that had seen better days. Who would know the difference? One road was easy and smooth, the other rocky and steep, what road to take?

My colleague tells me that you can't make a living tuning pianos anymore. People just won't pay what the work is worth, he tells me. I go to conventions and folks who have made great lives tuning pianos tell me that I can do it. Who should I listen to? Should I take another road?

The dealer tells me that he needs me to service pianos the week of July 5-9, 2000. The PTG Annual Convention and Institute is in Arlington, VA, that week. Should I go or should I stay? What road is best for me? Which road will lead me to where I want to be in 10 years?

Being in the piano service business sometimes demands hard choices. Occasionally, we have to choose between making a living and having a life. Like sands through the hourglass, these are the days of our lives. The good news is that when you choose to further your education in Arlington, you will learn techniques that will save you time, make you money and you will have fun doing it. You may make a friend from across the country or even across the world. There will be concerts and receptions every night, classes every day, the Piano 300 display at the

Smithsonian and the gracious hospitality of the Northern Virginia Chapter, led by Host Chapter Chair Andrew Margrave. The Exhibit Hall is the largest we have had in many years and it will be packed with pianos, tools, supplies and technical representatives from the greatest piano makers in the world. You could be there, you could take the road to Arlington!

Or you could stay at home and work in the gawd awful heat of a July schoolroom without air conditioning. Or you could listen to someone complain about your work and have them tell you that they cannot wait until that piano technician returns from the convention so they can have their piano serviced properly. Or you could go bass fishing in your bathtub. What road would you rather take?

— Dale Probst, RPT Institute Director ≰

Can Do or Can't Do?

Once upon a time, long, long ago two little boys were born. Can Do and Can't Do. Can Do learned to walk at the early age of nine months, Can't Do was well past two years of age before he got it right. I won't get into potty training and solid food eating. We look ahead to elementary and high school. Of course, Can Do always

excelled in all grades, became high school class president and was the best football quarterback that Central Union Hi ever had.

Can't Do just barely squeaked by and gave it up in the 10th grade. He just didn't have the heart to go further in school. He worked down at the packing plant for a couple years, changed

jobs twice in the next two years and married Rebbeca Handly. He is now working at the Industrial Supply Company, cleaning offices six nights a week. Rebbeca is working at the packing plant to help make ends meet. They have a four-year-old daughter, Juley, and a two-year-old son, Jake. I guess Can't Do will keep changing jobs until he finds something he likes, if ever.

Can Do, on the other hand, went on to Super Learn College when he finished high school. He worked nights and weekends at Gibson's Music Store the four years he was in college. When he graduated Mr. Gibson was able to get him enrolled in a prestigious Piano Service School in Up State. He worked diligently at learning all that he could while there, and finished with top honors. He came back home and worked for Mr. Gibson for many years. He was introduced to the Piano Technicians Guild while he was in Piano Service School, joined and soon upgraded to Registered Piano Technician status. He was President of his local PTG chapter for a number of years. I don't recall a

Chapter meeting, Regional Conference, or National Piano Convention that he ever missed.

Once I asked Can Do why he spent so much time going to all those meetings when he seemed to have all the knowledge he needed.

He said, "Jack, when you stop learning you start withering, you don't ever stay in the same place." He also said, "Can't Do could be a lot better off in life, but he doesn't want to put forth any more effort than he has to, he wants to just get by."

I got to thinking, how many are there in the Guild that are just like Can't Do? They just want to get by, they stopped learning a long time ago. They are amazed at the people, like Can Do, that spend so much time adding to their education at every opportunity.

Then I got to thinking: The greatest learning opportunity we will have at the beginning of the Century will happen in Arlington, VA, July 5-9, 2000. The Hyatt Regency Hotel will be the site of a very unusual happening. The 43rd PTG National Convention, a place of learning like never before.

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Arlington 2000

PTG's 43rd Annual Convention and Institute will feature some of the best and brightest that PTG has to offer. In several cases, teacher's will be teaming up to offer you double the experience in an exciting, action packed format. Some of our delightful duos will be Dr. Al Sanderson and Jim Coleman, Sr., Roger Jolly and Gina Carter, Willis & Dave Snyder, Richard Davenport and Alan Vincent. "Hands on" classes will be offered throughout the 4 1/2 days. Many instructors will be teaching an Applied Skills or Rebuilding Skills class to "back up" their lecture-style classes with an opportunity for you to try what you've learned. Special classes for Advanced Technicians will be offered in tuning and voicing. All the major piano manufacturers will have Technical Reps in attendance to teach and listen. There will be classes on preparing for the RPT exams as well as tuning tutoring help available for a very reasonable price. The "All Day Wednesday" classes will be back and with Council being scheduled for one day only, so all attendees will be able to take advantage of the most comprehensive educational experiences available to any piano technician on earth. Watch the mail for your convention information and PLAN TO ATTEND. (You really can't afford not to!)

— Laura Olsen, RPT Assistant Institute Director

The Metro

Continued from Previous Page

One may also drive to a Metro stop each morning from a nearby walletfriendly motel, park the car there (before 6:30 a.m. please, as some Metro parking lots are full by 7 a.m.), and hop the subway to the Crystal City stop, returning at night on the subway to the car, then driving to the wallet-friendly motel. This would work also if one is staying with friends or relatives. This strategy is not usable on Saturday and Sunday because Metro opens too late on those days, but on the other hand, side-street parking across US 1 from the convention hotel (Hyatt Regency Crystal City) becomes feasible on weekends, which it is not on weekdays. (For more information on walletfriendly motels, consult an AAA

Tourbook and obtain directories for Motel 6, Super 8, Days Inn, Red Roof and other similar businesses.)

The Hyatt Regency Crystal City operates a shuttle, from 6 a.m. until 12:30 a.m. the following day, to and from the Metro stops at both Crystal City and Ronald Reagan National Airport, by request. Call 1-888-HYATT12 or (locally) (703) 418-1234. The shuttle comes in handy because the Crystal City Metro stop is about 3/4 of a mile (1.2 kilometers) from the Hyatt Regency Crystal City.

To obtain a Metro pocket guide write to the Washington Metropolitan Area Transit Authority, 600 Fifth Street NW, Washington, DC 20001, or call (202) 637-7000. The Metro has a website: www.wmata.com.

Here are some key Metro stops for

next year's convention-goers:

- Crystal City (blue line and yellow line) nearest the convention site.
- National Airport (blue line and yellow line) one stop from Crystal City, serving Ronald Reagan National Airport, a natural and effective means of reaching the convention by air.
- Union Station (red line) Amtrak and MARC Stations, as mentioned above. The Union Station stop is also two blocks from the Washington, D.C. Greyhound Bus Station.
- King Street (blue line and yellow line) Amtrak, and only three stops from its Crystal City counterpart.
- Smithsonian (orange line and blue line) very near the Smithsonian Institution's Piano 300 Exhibit, a must-see to end all must-sees.

RPTs - Can I Have Your Attention?

Where are you in your career? Do you want more time, more money, more clients, more respect? How do you intend to get what it is you want? Let me give you a few ideas. Many of us are self-employed. If not, we usually work for a relatively small organization (even the ones we consider large in our industry are considered relatively small). We have to be everything from CEO to floor sweeper. Do you have a plan to grow your business, retire, expand, contract? Which should you do? Try some of the business classes to get a handle on where you are, where you want to go and how to get there. Besides, if you don't know where you're going, how will you know when you get there?

So you want to expand your home service business. How about voicing, value added items (like accessories and upgrades), appraisals, historical temperaments, better tuning techniques? Think of what else you would like to add to this list and then see if it doesn't show up in the class schedule. If you don't see it there, drop us a line and we'll see what we can do. In fact we may even ask you to teach it!

The dream shop - you've thought about it for years. How do you set it up? What kinds of procedures will you do there? Are there new tools you can use? How about a new approach? Gee, do you wish I would stop asking so many questions? Come to Arlington and meet the people who do

Onward and Upward

Wow! We've come a long way over the past years. When I first was appointed to the Institute Committee, I was honored to be included with so many outstanding people. Then I realized the task they face. Each year, the Institute is expected to be bigger and better than the year before. After seeing the ones that I've been involved with, I had no idea how we could make that hope a reality. However, I've been pleasantly surprised and I

think you will be, too.
Arlington will have be a classic example of "new" and "more." Let me give you an idea of what I'm talking about.

Wednesday – Plan on new and a greater variety of all-day classes. You can learn about actions, regulating, design, touchweight and many other areas in day-long seminars designed to carry you into the depths of the field. Nowhere else can you

Continued on Next Page

what you want to do in the type of places you want to do it in.

So, I guess that it's obvious that the answer to all of these questions will be brought out in Arlington, VA, July 5-9. The answers are there for anyone willing to go after them. We'll see you there!

— Allan Gilreath, RPT, Assistant Institute Director

Attention Associates!

What's holding you back from becoming an RPT? Do you need to expand your skills? Do you need extra practice or a little tutoring? Do you want to take the exam? Do you need that little nudge? Do you have another reason that hasn't been mentioned? I have a solution for you. Come to the Annual Institute in Arlington, VA, July 5-9, 2000.

If there's an area that you feel a little weak in, focus in and balance out your skills. If you believe that your overall experience is insufficient, take more advanced classes. If you need hands-on practice with expert guidance, go to the skills and hands-on classes. If you're unsure of the exam.

attend classes on taking the exams. You can even be tutored or tested if you desire. Besides, as an added perk, once you pass your exams to become an RPT, your next year's Convention and Institute Registration is

covered!

Have you ever been to the Institute? You owe it to yourself to try it. I can't imagine how many folks tell me that, after they attend the first one, they won't miss any more ever again. If you know someone who goes regularly from your chapter, ask them why they go back year after year. If you talk to someone who doesn't attend regularly, ask them why, then compare their reasons with what you read about in these pages.

So here you go folks; the gauntlet is at your feet. What will you do with this opportunity?

— Allan Gilreath, RPT Assistant Institute Director

Associate Makes the Grade

REGION 6

901 – Los Angeles, CA Kayoko Forrest 814 19th Street, #D Santa Monica, CA 90403

New Members Join in October

REGION 2

296 – Western Carolinas, NC Craig F. Lantz 397 New Haw Creek, #G Asheville, NC 28805

REGION 6

917 – Pomona Valley, CA Ken J. Bedes 15736 Lasalle Avenue, #2 Gardena, CA 90247

Can Do or Can't Do? Continued from Previous Page Dale Probst, Institute Director, and four

Dale Probst, Institute Director, and four assistants are filling up the class schedule by working diligently every day. There will be Rebuilding classes, Player Piano classes, Tuning classes, Service & Repair classes (this is hands-on-learning), Exam classes, Action & Regulation classes, classes for the Visually Impaired, Regulation classes that are hands-on learning, Voicing & Concert Prep classes, Business & Computer classes, a whole host of Min-Tech classes, Private Tutoring to help any that want extra help, and so much more that you will be absolutely amazed at all that is going on in Arlington. You

can spend time with your friends, your spouse will have plenty of activities to stay busy. There is just so much going on that you will wonder why you have not made a yearly practice of coming to every PTG National Convention.

Come join "Can Do" and all of his friends, find out what he is doing to make him so successful. Become a part of the greatest happening in the brand new century. Make a vow that "beginning the year 2000 you are going to make a difference in your life. You are going to become as happy and prosperous as Can Do. If He can do it, you can do it.

I will see you in July in Arlington.

— Gary A. Neie, RPT, Assistant Institute Director

Onward and Upward

Continued from Previous Page

find this variety of specialized classes. In fact, you won't find this collection of world-class instructors anywhere! The biggest problem you will have is deciding which one to choose out of this great lineup. Some of them will even feed you lunch. So if you haven't planned on being in Arlington for Wednesday, start planning now!

Thursday and Friday will feature classes on tuning, rebuilding, regulation, voicing, moving, repairs, players, design, re-design, business and other classes that may not fit into one of these areas. Whew, I really feel sorry for you folks attending. Over two days you can only choose eight classes out of everything offered. Now if you attended last year, or the year before, or sometime before that, don't expect to see the same material again. This year's lineup features mostly new or completely revamped classes. Your favorite instructors will be covering new ground and new instructors will be everywhere. There's one other thing I want you to remember though, if you miss them this year they might not be back next year. So be there!

Saturday continues with more classes, hands-on classes, more classes, rebuilding skills, more classes, player classes, more classes, mini technicals and more classes. If you can't find something to interest you, catch an Institute Committee member in the

Attention All Chapter & Committees, bylaws proposals and amendments are due by **December 31, 1999**. Any recommendations should be sent to

the Bylaws Committee Chair:

Vivian Brooks

376 Shore Road, Old Lyme, CT 06371

The PTG Award Committee requests that you submit nominations for the following awards to the PTG Home Office, 3930 Washington, Kansas City, MO 64111-2963:

Golden Hammer, Hall of Fame and Crowl-Travis Member of Note.

Any member in good standing may nominate candidates to their chapter. Upon chapter approval, a resume of the candidate(s) must accompany the chapter's choice of nomination. The deadline for these nominations is **December 31, 1999**

hallways and we'll see what we can do to take care of you.

Sunday rounds out the week with a morning full of classes to keep your mind busy on the way home. Business classes, player classes, field service skills, seminars — there's always something great to choose. We hope that your brain is so full of piano knowledge at this point that you walk out of the hotel in a zombie-like stupor just itching to

get ahold of a piano.

Wow, do you think that is enough to keep you busy for four and half days? Is it worth your time? Is it worth the investment (not expense)? Can you afford not to be there? If your answer is "no," drop me a line and let me know what, other than paying your way there, we can do to make it what you want!

— Allan Gilreath, RPT Assistant Institute Director

Many Mini Technicals

(Arlington, VA) A potpourri of new, as well as proven, classes and instructors. Gary Dunn – "What Do the Numbers Mean"- How we can use AccuTuner numbers to our advantage.

Steve Davis – "Upgrading the Steinway Sustain Pitman." An easy-to-assemble tool kit for that job, and how to do it efficiently.

Paul Kupelian - "Replacing the Leather Buttons on Vintage Steinways."

Eldridge Travis - "Tools and Equipment for the Institutional Technician."

Melanie Brooks - "Humidity: Its Effects on Pianos."

Joe Sciortino - "Tools and Gadgets."

Rick Baldassin – "The Renner Factory during the days the 'Blues' were being developed."

Paul Monachino - "Mason & Hamlin History."

Ted Sambell - "Jigs for Vertical Actions."

Bob Anderson - "Analyzing Friction Through Touchweight."

Tim Coates - "The New Wapin System" developed by Michael Wathan.

Joyce Meekins - "The Ins and Outs of Prepared Pianos."

Guy Nichols - "Let's Not Find Out!"

Also Paul Dempsey, Dave Campbell, Bill Davis and more will present a great selection of classes on Saturday afternoon. Don't miss the most in minis!

— Vince Mrykalo, RPT, Assistant Institute Director

CALENDAR of EVENTS

February 18-21, 2000

CALIFORNIA STATE "TUNE-IN 2000" Santa Clara Marriott Hotel, Santa Clara Contact: Roland Kaplan (408) 927-0620 6528 Leyland Park Dr., San Jose, CA 95120

March 31-April 2, 2000 PACIFIC NW REGIONAL

Ridpath Hotel, Spokane, WA Contact: Scott Colwes (208) 667-3393 / (509) 994-0673 1315 Coeur D'Alene Ave, Coeur D'Alene, ID 83814

March 23-26, 2000 PA STATE CONFERENCE

Hilton Hotel, Allentown, PA Contact: Chris Solliday (717) 420-9588 Fax: (717) 424-6986 / E-Mail: solliday@ptd.net P.O. Box 277, Delaware Water Gap, PA 18327

April 7-9, 2000 CENTRAL WEST REGIONAL

Sioux City Hilton, Sioux City, IA Contact: Charles Schuett (712) 276-2328 5040 Stone Ave., Sioux City, IA 51106

April 9-12, 2000 FLORIDA STATE SEMINAR

Treasure Island Inn, Daytona Beach, FL Contact: Walter Pearson (904) 255-4804 1128 State Ave., Holly Hill, FL 32117

July 5-9, 2000 PTG ANNUAL CONVENTION & INSTITUTE

Hyatt Regency Crystal City, Arlington, VA Contact: The PTG Home Office 3930 Washington, KC, MO 64111 (816) 753-7747

All seminars, conferences, conventions and events listed here are approved PTG activities. Chapters and regions wishing to have their function listed must complete a seminar request form. To obtain one of these forms, contact the PTG Home Office or your Regional Vice President.

Once approval is given and your request form reaches the Home Office, your event will be listed six-months prior and each issue until the month in which it is to take place.

Deadline to be included in the Events Calendar is at least 45 days before the publication date; however once the request is approved, it will automatically be included in the next available issue.

Foundation Focus



Give as Wise Tax Planning

Making extra gifts or accelerating future gifts into the 1999 tax year can enable an itemized income tax deduction. The standard deduction threshold for '99 is \$7,200 for joint filers and \$4,300 for singles. Many people have nearly enough Schedule A deductions to itemize but may lack a few hundred dollars of being able to itemize. Here's where your year-end gift can put you "over the top" for a full itemized deduction. (Many tax-wise donors accelerate contributions from the coming year to enable itemization at least every other year.)

Give Idle Assets

Year end is a great time to do an inventory of your assets. Many people discover that they have accumulated a substantial number of underutilized "idle assets" which could be given away. Such assets that make particularly good gifts include Series E savings bonds, cash value life insurance policies, boats and other recreation vehicles, plus a wide variety of other items that tend to clutter up our lives. Many items can be given directly to the PTG Foundation, others are better sold first with the cash contributed. Check with your tax advisor for more information on asset giving.

(This publication does not attempt to give any legal or tax advice. For advice in specific situations, the services of a competent legal, tax or financial planner should be obtained.)

PTGF Fundraiser Named

Pris Chansky, PTG's former interim executive director, was recently contracted to provide fundraising services to the Piano Technicians Guild Foundation.

As the PTG Foundation fundraiser, she will develop internal sources of funding for the Foundation; explore and develop external funding sources; research and write grant proposals for the funding of Foundation projects and develop materials for fund-raising programs.

In announcing Chansky's employment, PTG Foundation Executive Director Dan Hall said that Pris brought to the work knowledge of the industry combined with fundraising organization skills.

Would You Like to Share a Piece of History?

The Piano Technicians Guild Foundation is seeking unique, rare or historic pianos which could be loaned for exhibit in the PIANO 300 expo at the 43rd Annual Piano Technicians Guild Convention & Technical Institute in Arlington, VA, July 5 - 9, 2000.

Anyone interested should contact Jack Wyatt, 2027 15th St., Garland, TX 75041; phone 972-278-9312; e-mail jwyatt1492@aol.com "The Piano Technicians Guild Foundation is formed to support the goals of PTG by preserving and displaying historical materials and providing scholarships and grants for piano performance, study and research."

The PTG Foundation Needs Your Help!

The history of PTG and its predecessors is in danger of being lost. As part of its mission, the PTG Foundation has taken on the task of preserving that history.

The work of collecting, organizing and preserving our past must be an ongoing part of our present. Your donation of money or historical materials will allow us to continue this important work.

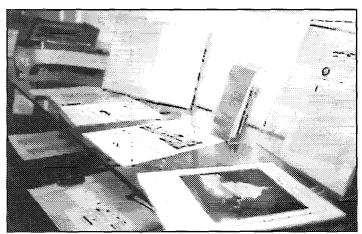
Contact the Home Office for details.

Honor a mentor, friend or associate, either living or deceased, with a tax-deductible contribution. Three contribution levels have been established:

- Patron (\$100 or more)
- Contributor (\$50-\$99)
 - Supporter (\$35)

To make a contribution, or for more information, contact:

PTG Foundation 3930 Washington Kansas City, MO 64111 (816) 753-7747



Memorabilia from conventions past grace the walls of the Piano Tehnciains Guild Foundation Museum in the PTG Home Office in Kansas City. The museum is open daily during normal Home Office business hours



DEDICATED TO AUXILIARY NEWS AND INTERESTS

It Is Better To Give, Than To Receive

We are now enjoying an economy unsurpassed by any in my lifetime. Will the bubble break? We don't know what



Phyllis Tremper PTGA President

the future brings, but if we get past this Y2K dilemma in one piece, perhaps we can appreciate the 21st century and all the new technology that it promises to give. What we have to do is "keep our head and use common

sense." From what I am told, we must prepare a few things, but not hoard or panic.

If you are concerned about Y2K, you might consider these precautions. Have canned food on hand, candles, flashlights and batteries and enough cash to get by for a few weeks. Remember, there will be no electricity so either have an outdoor charcoal burner or a pot over the fireplace as our grandmothers used to prepare dinner. You will not be able to use an electric can opener so buy the good old-fashioned hand kind; also, matches could come in handy. I don't think that I will temp fate by riding in an airplane or on an elevator on January 1, 2000, but I really am not worried about Y2K, if I can keep my head on straight and rely on my own common sense. After all, most of us in this membership lived through World War II without a lot of "things" and we managed all right, didn't we? We must remember the weaker ones in our neighborhood and see that they are taken care of, especially the elder shutins. And please don't forget the animals. In your stress to live through this once-in-a-lifetime happening, don't forget to feed the pets. The wildlife will do all right as they have always done.

All this brings me to the title of this column. They say it is better to give than to receive, but how about giving and receiving and feeling good all at the same time? Remember last July when we heard our scholarship winners and how excellently they performed? I, for one, really experi-

enced joy and satisfaction while hearing their performances and knowing that I/we gave them assistance so that we could receive something in return. It works both ways. So, during this month of holiday celebration and remembrance, please don't forget to add a donation to our Auxiliary Scholarship Fund when you pay your next year's dues. The scholarship winners and you and I/we will be greatly rewarded.

Please don't forget to return any form you may receive along with your remittance. It helps the people in the front office to distribute the funds in a much faster and more accurate way. As our dues statements will come from the Kansas City office this year, please help them make the job easier to perform. We hope that this reaches more potential members this way. We all need to look for new members in the Auxiliary as we are here to aid the Guild in the advancement of piano technology in the 21st century.

Have a wonderful holiday month, both Hanukkah and Christmas, and I look forward to seeing all of you in our Nation's Capital in the 21st century! Remember Music Is The Spice Of Life.

—Phyllis K. Tremper PTGA President

Enjoyment For A Lifetime — The Community Band

"People can play musical instruments long after the knees give out and the cheerleading outfits no longer fit." This is what Harvey Benstein, Musical Director/Conductor said to the sold-out theater audience of 800 at the Summer Pops Concert of the Walnut Creek Concert Band.

Members of this all-volunteer, 70-piece community band range in age from students in their teens to retirees in their late 80s. Some are professional musicians, but most play their instruments only for enjoyment. The members come from all walks of life. For the Ternstroms, it's a family affair. Ray and Dan, both piano technicians, play tuba and trombone. Evelyn, retired

nurse and PTGA Recording Secretary, plays clarinet. The conductor is also the music director/conductor for a chamber orchestra and for a high school. He has received national awards for his excellence as a conductor.

The concerts provide music to suit everyone's taste — Sousa's marches, Bellstedt's "A Tribute to Spike Jones," Aaron Copland's "Lincoln Portrait" and Gershwin's "Rhapsody in Blue" with its tremendous piano solo. The Diablo Vista Sweet Adelines sang two numbers at a recent band concert in the park.

The theater concerts provide high quality music at a bargain price. Holiday concerts are played in the park. The informal setting permits picnic basket lunches. Persons in the audience, from little children to older adults, have been seen dancing or keeping time to the music.

Wynton Marsalis, Pulitzer Prize winning jazz musician, said in a recent interview:

"A lot of people are musicians. They can play instruments, but because they think they are not good or because they haven't played, they just stop playing. We really should have more community bands and people pulling those old horns out of their attics."

If you have a band instrument, why not get it out and join a community band? If you cannot join a band, remember to support your local community band. Whether you're performing or in the audience, the community band is a source of enjoyment for a lifetime.

— Evelyn Ternstrom PTG Auxiliary Recording Secretary

Piano Technicians Guild Auxiliary

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Closing date for placing ads is six weeks prior to the month of publication.

Ads appearing in this publication are not necessarily an endorsement of the services or products listed.

Send check or money order (U.S. funds, please) made payable to Piano Technicians *Journal*, 3930 Washington, Kansas City, MO 64111-2963

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HEX SHANK ADAPTER—Adapt your power screwdriver to fit any combination tool you like. Save time and effort. See review on page 14 in the Oct. '98 Journal. Cost: \$14.50 including shipping. Ken Amend, RPT, 3352 Holiday Dr. S., Salem, OR. 97302; 1-800-489-8920; kamend@open.org

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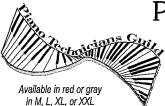
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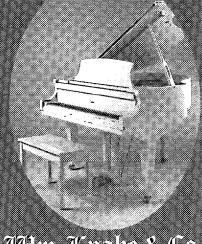
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If a technician verifies there is a problem that is due to faulty materials or workmanship, and the piano is within the warranty period, a claim should be submitted for the repair. Just fix it and submit the bill. If parts are required, be sure and tell us that this is a parts order for a warranty situation when you place the order.

In the case of a warranty situation, you must first contact Yamaha Piano Service (8:30am-5:00pm PST, weekdays at (800) 854-1569) to get an authorization number. This authorization number is essential to processing your claim form.

All warranty claims must be made on a Warranty Service Claim form, and include the following information:

Authorization Number

Customer Name

Model Number

Serial Number

Date Purchased

Date Service Requested

Date Service Completed

Describe Problem/Complaint

Conditions Noted & Service Performed

Dealer Number

Dealer Name

Yamaha Service Account No.

Service Agency Name

Address, City, State, Zip Code

(or "Dealer Stock", if unsold) (include finish."C3E PE" for example) (just the numbers, no letters) (or Dealer Stock, if unsold)

(if unsold)
(business name)
(if you have one)
(your business name)
(your business address)

If you have a Yamaha Service account you may submit your claim electronically, by fax, or by mail.

If you chose to submit it electronically, you will need a user ID and password, obtained by calling Wood Technology's Help Desk at (562) 988-1190 between 7:30am and 5:00pm PST Monday —Friday. Be sure and have your servicer account number handy. After you have a User ID and password, log onto http://www.woodtek.com. and fill in the on-screen form. The on-line areas noted with a blue asterisk (*) are mandatory fields to be filled out.

If you elect to mail in the Claim Form, send it to:

Wood Technology Yamaha Warranty Claims C/O Wood Technologies International 8919 N. University St. Peoria, IL 61615-1637

Fax your claim form to (562) 988-1190

If you don't have a Yamaha Service account number, mail your completed form to:

> Yamaha Corp. of America Attn: Barbara Pavelec 6600 Orangethorpe Ave. Buena Park CA, 90620



Mark Wisner

By Mark Wisner

Originally from San Francisco, Mark is the father of two daughters; Amanda is married and Jennifer is currently in college. Mark started in the piano service business in 1973, and has been self employed since 1974. He spent a couple of years employed as a touring concert tech nician, then switched to traditional piano service until coming to work for Yamaha in 1987. While he enjoys the technical aspects of traditional pianos, his favorite call is one that involves Disklaviers or MIDI problems and applications. Mark enjoys bis job because of the quality of Yamaba products, and the corporate recognition of the importance of customer service.

If you would like a Yamaha Service account, request the application from Barbara Pavelec at the above address.

To order Warranty claim forms, call Yamaha Parts Dept (800) 854-1569 and order item F-481. They will be sent to you at no charge.

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