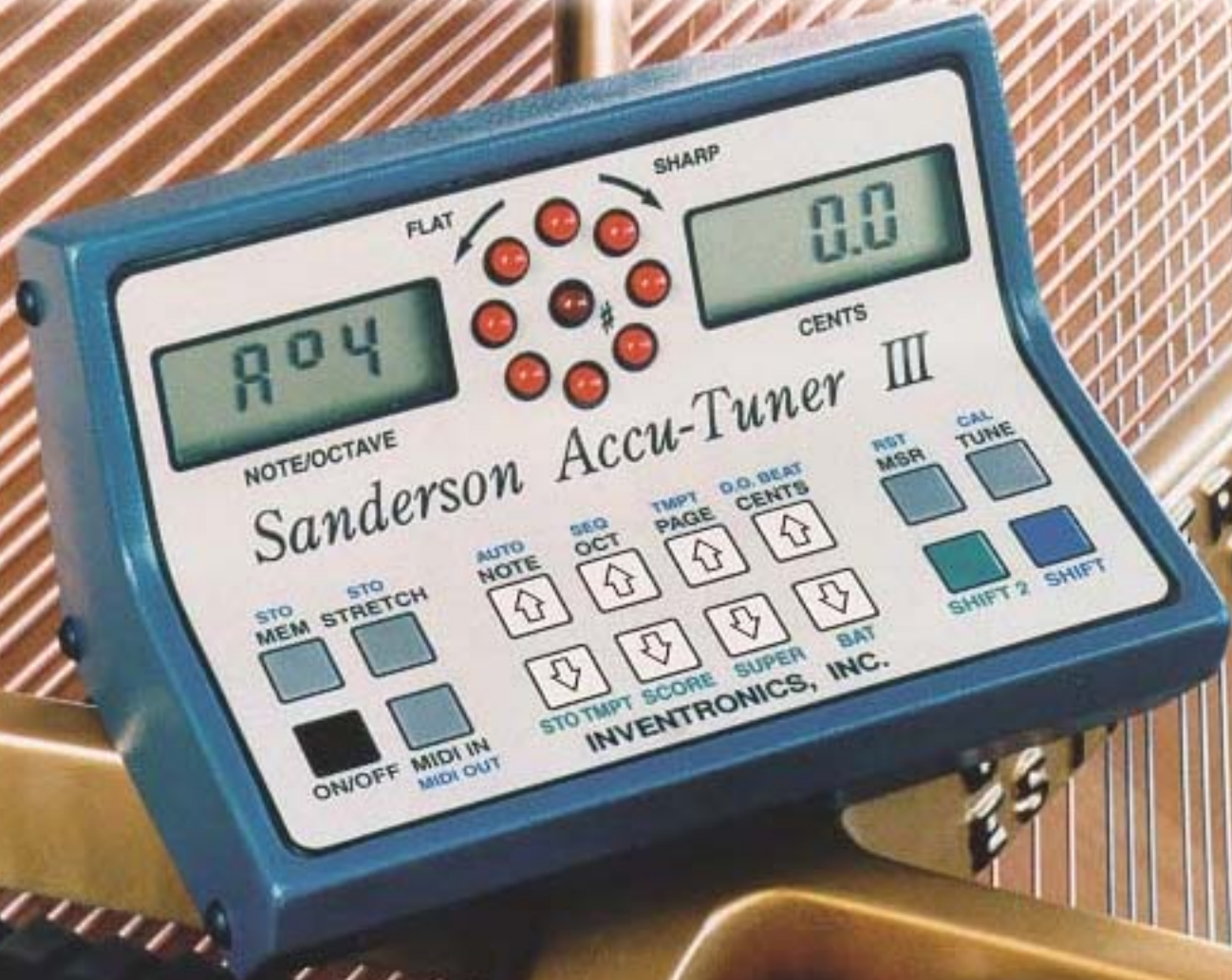


PIANO TECHNICIANS Journal

Official Publication of the Piano Technicians Guild

July 1998

Vol. 41 • #7



Inside:

- *The New SAT III*
- *An Alternative Size Keyboard for the World*
- *Gang-Filing Hammers*
- *Trigger Point Self-Massage for Piano Technicians – Part II*
- *World-Class Junk – Part II*
- *The Tuner's Life*
- *TT&T, Q&A & Much More*

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EDITORIAL PERSPECTIVE Who We Are

At least once a week, I either hear or see (in letters) someone referring to this magazine as the "Piano Technicians Guild Journal," or "The PTG Journal." According to the front cover, however, it's actually the *Piano Technicians Journal*. Yes, it is the "official publication of the Piano Technicians Guild," but I think that the *Journal* serves a wider

audience than PTG, and a wider purpose than simply to represent the interests of PTG. I think that the attitude implied by the name "Piano Technicians Journal," rather than "PTG Journal," though perhaps subtle, is significant.

To me, the *Journal* is for all piano technicians. We have more non-PTG-member subscribers than I had imagined — people who either live in areas without PTG chapters, or who haven't yet discovered the tremendous benefits of PTG membership — and the *Journal* is their magazine, too.



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Steve Brady, RPT
Journal Editor

Occasionally I get a letter that goes something like this: "I didn't like such-and-such an

article in the last issue. After all, the writer of the article is not even an RPT...." Well, you get the drift. These letters always leave me a little perplexed. I fail to see the relevance of the RPT credential when it comes to writing for the *Journal*.

Let me explain my editorial policy. If I like an article, I publish it. Even if I don't like an article, I will sometimes publish it — if I feel it will open needed discussion and eventually be beneficial to readers because of the debate it engenders. I care neither if the author is an RPT, nor if the author is even a PTG member. Many of our Associate members are talented writers and technicians, or bring fresh viewpoints from previous professions to the table. Many nonmembers, such as David Steinbuhler (who is not even a technician *per se*) in this issue, have important news of which we should be aware.

Of course, in saying these things I'm not denigrating RPTs at all. Anyone who has had the guts to put ego aside and step up and submit to the RPT exams, and pass them, deserves recognition. Any tuner/technician who hasn't taken the exams should make a goal of it, because it will result in greater skills and confidence for the individual. An RPT should wear the credential proudly, and I always try to include the "RPT" in print for individuals who have earned it.

A popular theme for discussion in PTG these days is whether the organization should become exclusive or should continue to be inclusive: should the membership consist only of tested technicians, or should it be open to all who have an interest in piano technology? There are good and interesting arguments for both points of view. But in my mind, the *Piano Technicians Journal* must be for all piano technicians, and must be open to all writers — even non-technicians — who bring something valuable

to our discourse, thereby enlarging our view of the world and clarifying our place in it. ☐

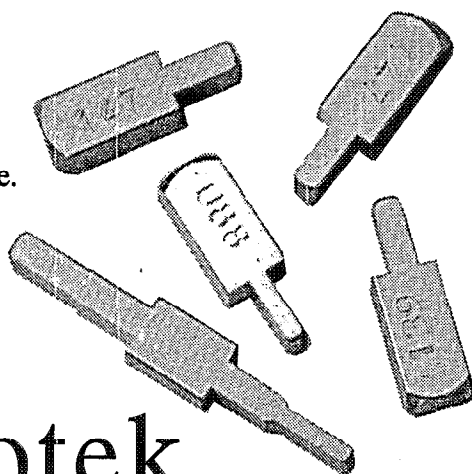
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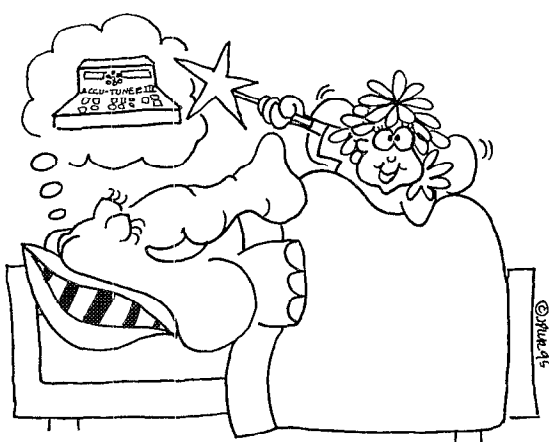
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- 29 — **The Tuner's Life**
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COVER ART

The all-new Sanderson Accu-Tuner III debuts this month in Contributing Editor Jim Coleman Sr.'s review on Page 17.

PIANO TECHNICIANS Journal

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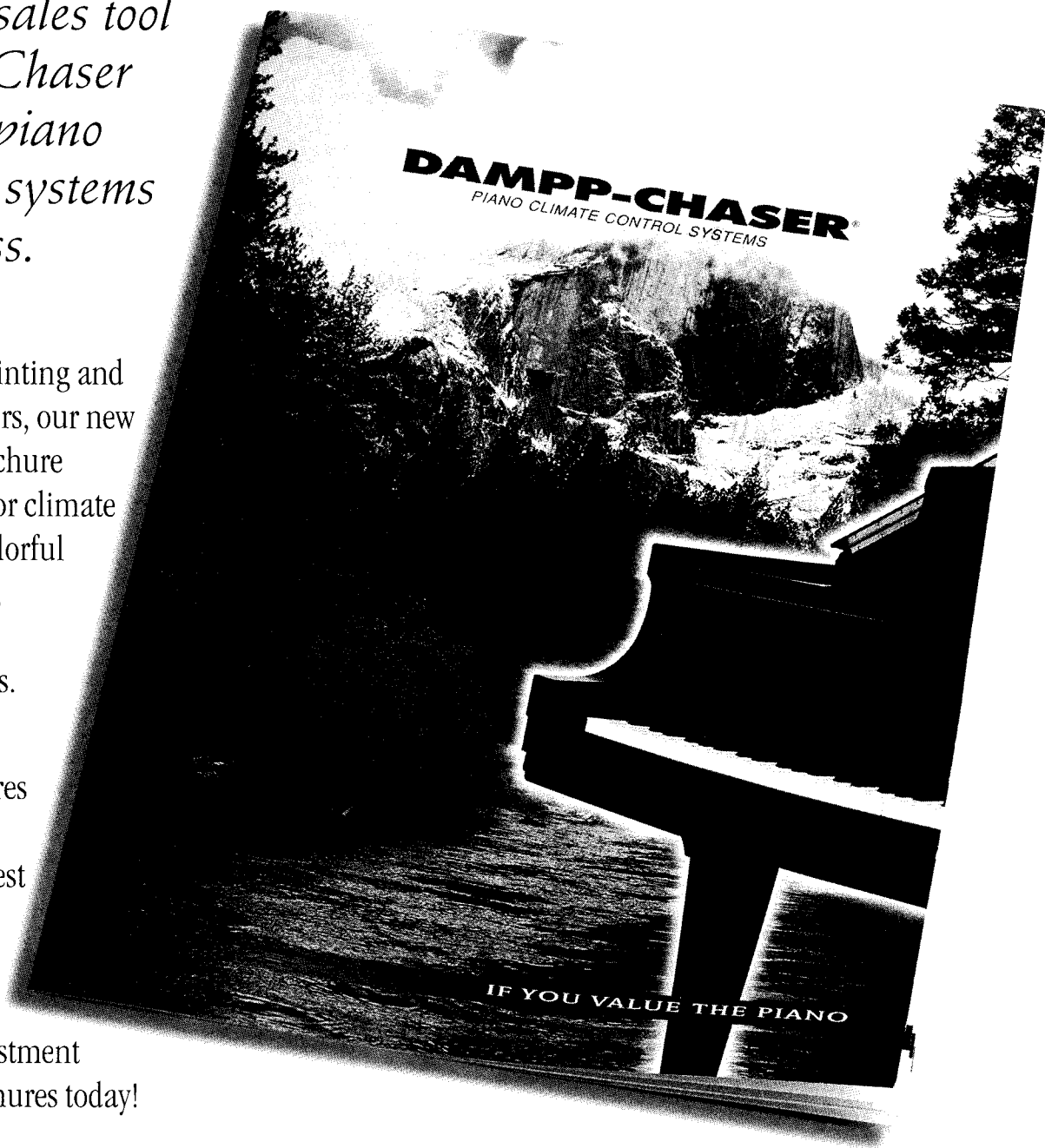
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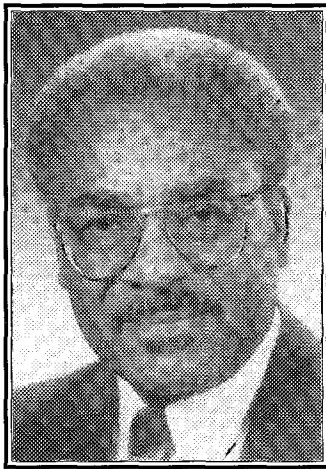
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President's Message

Looking Through the Past

Traditionally I have found it beneficial to go back and review myriad amounts of written material before attempting to write a piece such as this. As I begin this, the last message prior to coming to the end of my fourth term in this office, I am reminded once again of the tenets held by those who many years ago set the standard which we work to uphold today. Below are a few short statements from 1904, when William Braid White was Acting President of the Helmholtz Society. The thoughts which have been selected for inclusion here seem to say some of what has been internalized over the years and remains at the core of much of what we as an organization exemplify.

"The Helmholtz Society of America is permitted, through the courtesy of the editor of The Music Trades, to make its public bow under the most favorable auspices. It seems peculiarly fitting that the columns of the only trade journal that has ever considered the interests of the practical men of the pianoforte industry should be the medium whereby what will surely become a body of national scope and influence should make the first public statement of its aims, hopes and intentions...."



Marshall B. Hawkins, RPT
PTG President

It seems peculiarly fitting that the columns of the only trade journal that has ever considered the interests of the practical men of the pianoforte industry should be the medium whereby what will surely become a body of national scope and influence should make the first public statement of its aims, hopes and intentions....

The Helmholtz Society of America pleads these facts as reasons for its existence. It believes, first, that the evils complained of may be eradicated, and, second, that this can only be done by concerted action on the part of the tuners themselves. The specific programme that the society has made its own may, therefore, be

stated in terms as follows: It is our aim and purpose to unite the army of conscientious practitioners of the existence of that body; to limit membership to those whose professional standing is beyond question, and in this way to afford some standard of comparison, some criterion, whereby the artist may be at once distinguished from the charlatan.

Ambitious as this programme may and does appear, and great as are the difficulties that must be overcome, we nevertheless approach our self-imposed task with confidence. We believe that it is only necessary that the existence and aims of this society should be known publicly for it to receive a large measure of support from the host of good tuners who are, by their ability and standing, eligible for membership.

Our proposals may, therefore, be summed up as follows: The society aims to become, to the tuners, what, for example, the Institute of Civil Engineers is to the men in that profession; a body, membership in which is equivalent to an unimpeachable certificate of competency and excellence.

To come down to details, we may say that the membership of the society is confined to 'wareroom (warehouse), outside and independent tuners,' who must, in addition, show proof, by examination, of their ability to attain to the standard of proficiency maintained by the society. It was thought best to make such a limitation for various reasons.

The outside or independent tuner is peculiarly liable to be affected by the unhealthy conditions mentioned above and he needs protection and the power of an organization behind him more than does his brother of the factory. The existing membership of

the society is composed entirely of tuners who come up to these requirements and we count among our number representatives from the best warerooms....

Here, then, we rest our case and appeal to the tuners throughout the country to examine carefully the points that we have made and the task that we have set ourselves to perform. We invite criticism and we are both ready and anxious to answer inquiries."

— The Helmholtz Society of America
March 24, 1904, New York

This is where it all began. From the Helmholtz Society of America grew the National Association of Piano Tuners from which emerged John Travis, and merging with the American Society of Piano Technicians from which emerged Erroll "Put" Crowl.

So, just as John Travis from NAPT and Erroll "Put" Crowl from ASPT acting as our co-presidents came to the end of their term in office, I now find myself at the end of my fourth term as President. I consider myself very privileged to have known each of the 15 men who have experienced the awesome opportunity to serve in this capacity before me with the exception of Raymond Feaster who had passed when I came along. Each of them possessed and, because I was willing to listen, shared bits of wisdom with me which collectively has served me and benefited PTG in many ways.

The membership has on one other occasion felt the need to return a past president to office. That individual was Don Morton who served from 1961 to 1962 and was returned for a second term from 1962 to 1963. He returned to serve a third term in 1977 to 1978 and was voted in for a fourth term from 1978 to 1979.


After having served three terms as Southeast Regional Vice President followed by two terms as International Vice President, the membership voted to have me serve as International President. I served two terms (1986-1988). After having been off of the Board of Directors since 1990, my name was nominated in 1996, once again for the office of International President. After being returned to office in 1996 for a third term, I sent a message to Don Morton who was not present at that convention. The message was "Don, if I can do half as good a job as you did when you were returned to office for a third term, I will consider it a success."

Just this past February I was able to spend a little time during the California State Conference with Don, who is one of my many mentors. Any time spent with those older than I from whom I can glean any wisdom is always time well spent.

One may ask where I'm going with this and that is a fair question. There is a continuity of purpose through the years and that thread must continue in order that the continuum is what our forefathers envisioned. That is to be unceasingly vigilant in making sure that those who represent this profession have ...

"spent years in hard and continued study and practice; who has cultivated an extraordinary acuteness of ear, and who has been obliged to acquire at least a working knowledge of acoustics and music, both separately and in relation to each other."

As long as our membership insists that these principles are at our core, our voluntary workers and leaders up and down our ranks will be representative and those chosen for this office will always be worthy.

In conclusion I will take this opportunity to thank all of the membership including chapter officers and the many committee members who have given so graciously of your time to help PTG be all that it can be. Again, thank you for the privilege of serving you for the past two years. 

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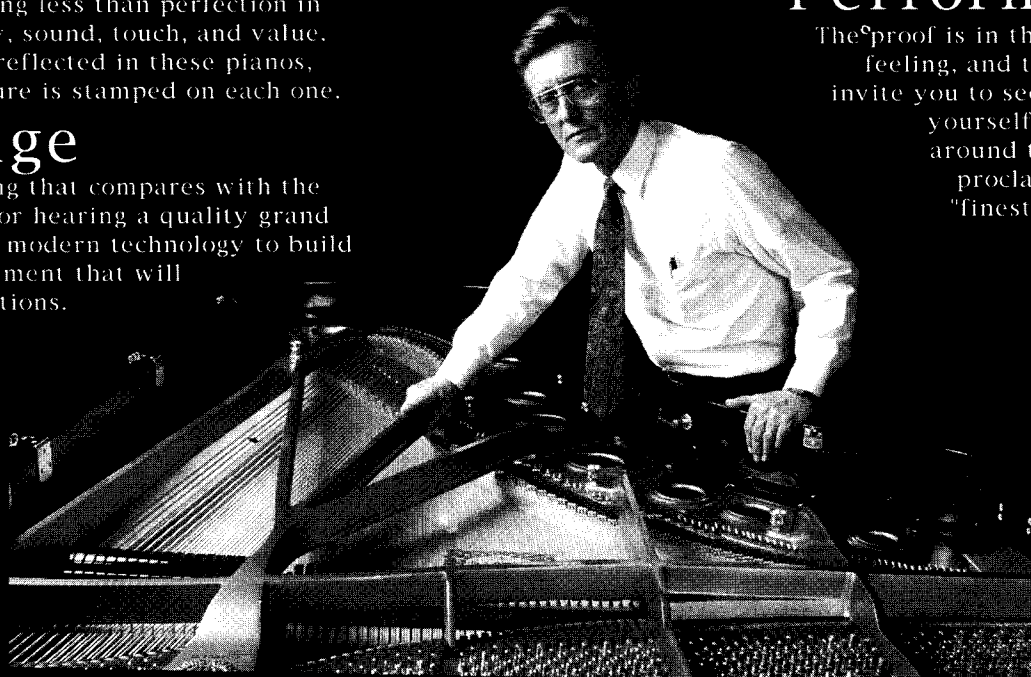
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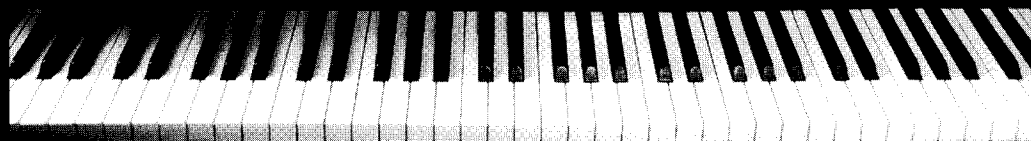
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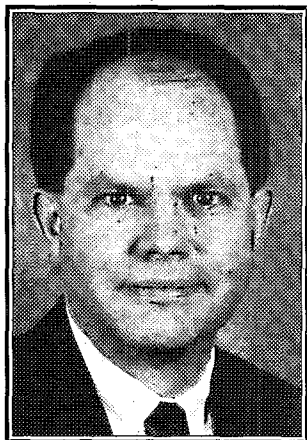
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Why Do You Belong to the Piano Technicians Guild?

Why do people belong to an association? That's a question of central importance for the members, the leaders and the staff of every membership organization, including the Piano Technicians Guild. In this column and my next column, I will explore the reasons people belong, the benefits they receive, and the value of those benefits.



PTG Executive Director
David Hanzlick, CAE

While there are almost as many reasons for belonging as there are members, most members fit into one or more of seven broad, overlapping types. A challenge for any association is to develop benefits that meet the needs and expectations of each group. The types are:

Type 1: Members who seek involvement mainly by mail; they especially value benefits like the *Journal*. They tend not to attend conventions or

chapter meetings.

Type 2: Members who will attend and value meetings and conventions that appeal to their specific needs and interests.

Type 3: Members who have a strong interest in shaping the policies and programs of the organization. They are the most active members and enjoy serving in offices and on committees.

Type 4: Members who have compared the value of benefits received from one association with those they would receive from other groups or from not belonging to an association at all.

Type 5: Members who are deeply interested in the ongoing process of improving their professional knowledge and skills.

Type 6: Members who enjoy the status that membership in the organization provides.

Type 7: Members who appreciate and promote the values of the organization.

Understanding the needs, interests, and motivations of the membership types is extremely helpful in evaluating an organization's programs and activities. We know, for example, that Type 1 members will rarely, if ever, attend a convention. They do, however, have a strong interest in reading the *Journal* and other publications they receive.

On the other hand, Type 2 members will attend meetings and conventions, but only if the content interests them. The challenge, then, is to make sure that we have a way of gauging whether the classes we offer appeal to this audience.

Type 3 members have a strong interest in the organizational aspects of the group. They attend meetings regularly and can generally be counted on to seek out opportunities to serve. The chal-

lenge here is to make sure that there is meaningful work for these willing hands.

Type 4 members particularly value the tangible benefits of membership: access to competitively continuing education, insurance products, and discount programs. The benefits that are most often listed by associations are tangible benefits that appeal to Type 4 members. (Note to Type 4s: Please refer to the June *Journal* for a comprehensive listing of the benefits of membership in PTG.)

Type 5 members are regular readers of the *Journal* and attendees at chapter meetings, regionals, and the Annual. They have an interest in continued learning, without regard to whether it has an immediate application. The needs of these members can often be met through the same kinds of quality programming that appeals to Type 1 and Type 2 members.

Type 6 members value the status of the organization and their association with it. These members very much appreciate the status that is attached to certification programs, like the Registered Piano Technician designation, and seeing the organization's name mentioned favorably in the media and in the professional publications of related associations.

Type 7 members appreciate many of the same public relations and public education initiatives valued by Type 6 members (National Piano Month, Piano 300, the impact of piano study on the cognitive development of young children). The difference is that Type 7 members like to see that the values of the organization are being promoted. These are the members who can be counted on, for example, to write letters to public officials in support of school music funding and other issues that exemplify the Guild's values.

So, which membership types are most likely to read the Executive Director's column? Without a doubt, Type 1s will read these words, because they place a high value on the *Journal*. Type 2s will read it only if they see it as relevant to their interests. Type 3s will read every word since the topic pertains to the organization. Type 4s will use the information to help them compare the value of PTG with other alternatives for their membership dollar. Type 5s will find this information interesting, if not immediately applicable. Type 6s will want to know, perhaps, if the status of membership is being upheld. Type 7s will want to know if my column is promoting the values of PTG.

I hope that you can see yourself in one or more of these membership types and that you are finding the membership services and benefits you want and need. If you have comments, suggestions, or questions about the benefits of PTG, your Regional Vice President and I would very much appreciate receiving them. ■



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Tips, Tools & Techniques

The Importance of Tight Coils

Isaac Sadigursky demonstrated the effects of tightening tuning pin coils. I guess, because I have never worked in a rebuilding shop and have never experienced some of these procedures, this was new and startling to me.

Isaac went to the piano and went tap, tap with a tiny hammer and a soft steel punch. To my amazement, the pitch dropped a lot; maybe 50 cents! I couldn't believe it!

It was a good Kawai upright and when you looked at the coils, you could hardly see any spaces between the strings, but tapping them together dropped the pitch alarmingly. It wasn't hard to understand that these loose coils could be an easy source of instability in the piano.

The coils should be tightened in the factory but if the work is not done carefully, Isaac recommends that we sell the job to our customers. Include a couple of pitch raises before the final tuning and the customer will have a piano that will stay in tune better than it ever did before.

—Ken Burton, RPT

From In Tune, the newsletter of the Calgary, AB Chapter

More M&H Screw Stringer Tips

For some five years in the past, I had a customer with an upright Mason & Hamlin screw stringer piano. It stayed very closed to pitch.

Patience and perseverance helped as the tuning technique is different.

To help prevent over-and-under tension adjustment or jump, lubing of slide glides, nut and bolt threads, bridge pins, and pressure points helped, and arriving at pitch from below worked for me.

For installation of new strings:

- Top tuning nut slacked off to limit
- Attach string to top hanger
- Thread string through pressure points
- Give string one turn around hitch pin
- Cut tail 3"
- With pliers one turn over and behind (as in Figure 1)
- Pull string end to tighten
- Cut tail to lie flat 1/2" pliers
- Apply tension and tune
- String tail is anchored by tension on its own tail and the flat iron plate.

I believe Mason & Hamlin had a good thing there.

—Lloyd Wagner, RPT
Montreal, QC Chapter

Avoid Clogging Soundboard Screw Holes

For those of us who rebuild grands, refinishing soundboards is an everyday event. One thing we do is curse our misfortune when we apply finish to the board only to find it seeping into the plate screw holes. How to keep these holes from becoming clogged? Take dowel stock, a pencil sharpener (the old fashion-

ioned kind with the revolving turret for different size pencils!) and some wax (bee, paraffin, whatever) and make hole plugs that don't stick to the holes! The tapered dowel allows for insertion into any size hole and the wax allows the finish material to go up to, but not into, the hole and release cleanly.

P.S. If you don't have or don't want to buy a good pencil sharpener you can always grind a tapered end on your sanding belt or disc.

—Bob Bartnik,

From the Richmond Update, the newsletter of the Richmond, VA Chapter

Organizational Wizardry

Since last August, I've been keeping my schedule, my address book, my "to do" list, my memo pad, my expense record, my mileage log,

my calculator, and my alarm clock – all in my pocket. The PalmPilot Professional™ model hand-held computer has become my constant companion, allowing me to schedule the next service appointment on the spot,

even if the date is a year or two from now. Small enough to be carried in pocket or purse, or clipped to your belt, this little wonder has big-time computing capability and a full megabyte of memory for data. Among the new generation of hand-held (or palm-top) computers, the PalmPilot™ is far and away the most popular.

Data may be entered in any of three ways: by hunting and pecking on a "virtual keyboard" on the screen, by writing on the screen with the included stylus (using an easy-to-learn alphabet of strokes called "Graffiti"), or by entering the data on a larger computer and then sending it to the PalmPilot™ via the HotSync feature. This last feature makes it possible to synchronize the data on both your desktop machine and the palm-top computer by simply pressing a button. Any changes made on either platform since the last HotSync are automatically made to the other when you press the HotSync button on the docking cradle, which connects to your desktop computer's serial port. With an optional modem and included software, the PalmPilot™ may also be used to read and send e-mail.

The PalmPilot™ operates for about a month or so on two AAA batteries. The "Professional" model now sells for \$299, and a new model, the Palm3™, recently debuted at \$399. Scores of add-on programs are available via download from the Web (that's where I got my trip-log program) or from your local software retailer.

—Steve Brady, RPT
Journal Editor

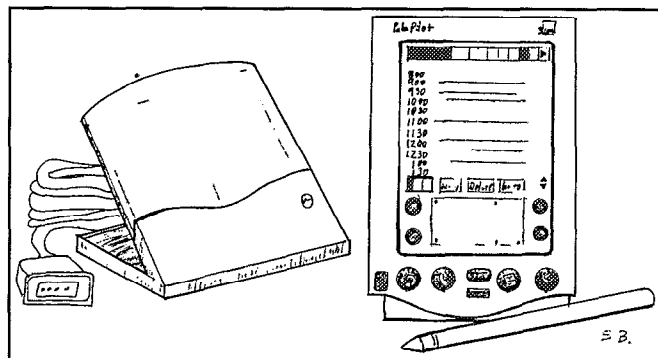


Figure 2 — PalmPilot™ hand-held computer with docking cradle.

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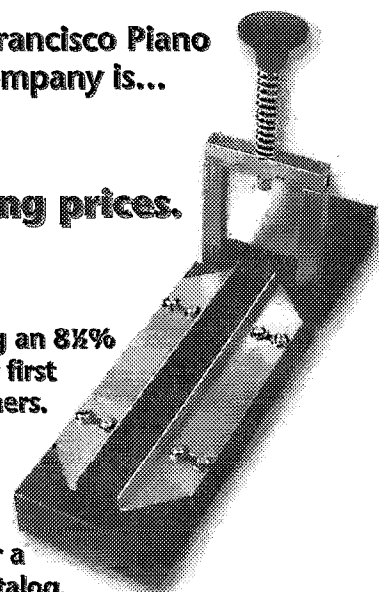
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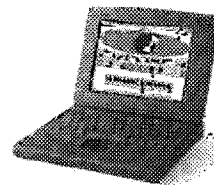
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Q&A/EDITOR'S ROUNDTABLE

Driving Tuning Pins With Varnish

Q I'm getting ready to do my first restringing job and am putting in new pins. As suggested by many on this list, I plan on swabbing the holes with varnish before inserting the new pins, and would appreciate some input on what kind of varnish. I looked at my local home center yesterday, and there's all kinds: oil-based, water-based, poly-whatever, etc. They did have one kind of "Satin Spar Varnish." The more specific the better (being the type that agonizes over such things). Thanks.

— Jerry Hunt
Dallas, TX Chapter

A **Ed Tomlinson, RPT:** Jerry, go with the Satin Spar Varnish. Clean all the holes with the rifle brush first then dip the brush in the varnish till it won't drip too bad. Swab about three holes then re-dip. Should do the trick. Wait a day or two for it to dry. Some on the list will dip the pin then pound, but I don't think that is the way to go. I have done many as described above and all feel good to this day.

A **Carl Root, RPT:** This is not how I learned it... First, the varnish. The product that got this started was sold by Otto Trefz, Phila, PA, now gone. It was a *low-oil* varnish. If it's not low-oil, I wouldn't use it.

You swab just the top third or so of the hole, not the whole thing. The idea is to temporarily soften the wood fibers to reduce the damage from driving the pins. You don't get the benefit if it dries first.

I suggest you try this test. Drill two identical pilot holes into hard maple for two identical large lag screws. Swab the top of one hole, leave the other dry. Turn a screw into each hole. See if you can feel the difference in torque initially. Wait a few days and test torque again.

A **John Freeman:** Trefz recommended drilling a 15/64" hole for a 2/O pin. I couldn't believe it till I tried it, but it worked fine. When I used it, I put a drop on the pin and rotated it on the bushing. The pin drove in easily and worked fine for as long as I serviced the piano.

A **Steve Brady, RPT:** I think Carl's on to something. Having used the satin spar varnish myself on quite a few jobs, I've recently gone back to using no driving fluid. The spar varnish is a "long-oil" or high-oil-content varnish, and is designed to remain pliable when dry. You might say it never cures completely, never gets real hard. It's true that the spar varnish eliminates jumping pins, but I've never gotten a great tuning pin feel when using it; instead of definite little clicks, the feel is sort of mushy. The short-oil varnish is the way to go here, but I have a difficult time finding it.

A **Ed Foote:** I have been reading all these proponents of using varnish for the tuning pins, and I suppose that it works for them. However, lest some get the idea that all technicians do this, allow me to put in a vote from "the other side."

I have been restringing pianos for the last 20 years, and I have never used anything on the tuning pins at all. I make

sure that my hands stay clean while stringing, I clean the pins with acetone before their use, I "mic" all pins before installation, and I keep the pins in a box with plain, unscented talc while I work. I don't have jumpy pins, and my torque readings are within four or five pounds of each other. Many of these stringing jobs are tuned over 100 times a year. It is possible to get the desired result without the use of varnish, so let's not promote it as an absolute requirement.

A **Barrie Heaton:** I too have never had jumpy pins in all the years I have been restringing. I do not use any varnish or such; I put Johnson's baby powder on my hands to keep the moisture down.

You do get the odd click when putting the strain on the back but once the strain is on and you pitch on subsequent visits, there is no jumping or clicking. Let's face it—the manufacturers don't varnish the holes, so why should we?

I was at the Kemble-Yamaha factory in the U.K. last week to bring my Silent™ piano skills up to date. The tuning pin machine just fires the pins in; there is no liquid preparation whatsoever. The process preceding the pin insertion just drills the holes and inserts the plate bushing, and I have never come across a jumpy Yamaha yet.

Response from Jerry Hunt:

Thanks to everyone for the input. As is often the case, there is "more than one way to skin a cat." Whichever way I decide to go, I really appreciate *all* of the responses.

Squeaking Pedal With Una Corda

Q I am about to work on a Steinway B in which the pedal supposedly squeaks only when the right pedal is used with the left. Alone it is fine. Any ideas in advance? Thanks.

— Eliot Lee
Phoenix, AZ Chapter

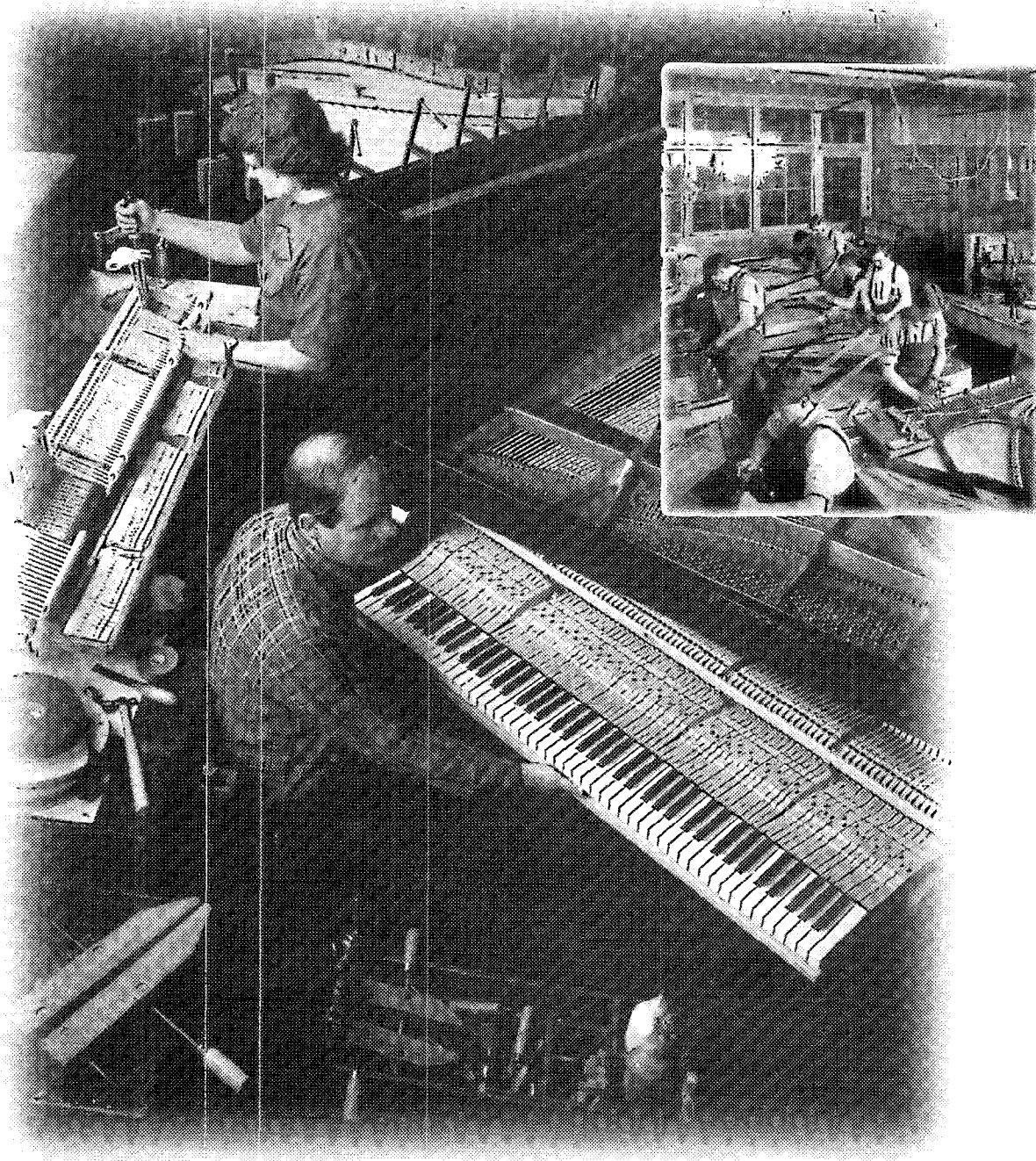
A **David Ilvedson, RPT:** Possibly the shift lever under the keybed is rubbing against the sustain lever when the shift is depressed? Could also be that with sustain on the shift, squeak is amplified by all the open strings—just go through all the usual friction points—use microfine Teflon™ powder on the keybed and keyframe.

A **Willem Blees, RPT:** You didn't say how old the piano is, but assuming everything else on the piano is in good condition, I can't think of a reason inside the piano that would cause the right pedal to squeak when the left one is depressed. Perhaps someone else will come up with an idea, but the problem might not be inside the piano. Make sure the lyre is firmly attached to the bottom of the piano, and that both lyre support rods are firm in their respective holes. By pressing on the left pedal, it might cause the lyre to shift enough to cause a grunt, groan, or squeak where the lyre braces set into their holes underneath the piano, or at the bottom of the lyre.

A **Newton Hunt, RPT:** The action may be moving too far and some keys may be rubbing adjacent damper

Continued on Page 14

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Continued from Page 10

Check for loose glue joints between the top block, the pedal box and the pillars. Also, check to see that the braces are tight. Check all screws underneath that could cause a squeak, especially the pivot blocks on either side of the levers.

A

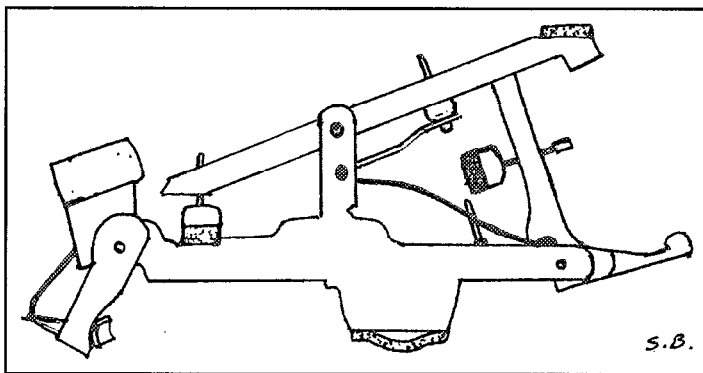
- No “hinge-pins” are walking
- None of the holes the pins pass through had been elongated
- All of the screws holding the blocks in place are good and tight.

Wippen Support Springs

— Chris Purdy, RPT
Columbus, OH Chapter

The “turbo wippen” I measured on the model at the CA State conference was working 17 grams and they had a study which states what happens to up/down with spring on and off and 17 seemed to be the number that Renner was speaking of a lot. Any comments, Lloyd? Obviously the one with the spring

There are other ways to adjust the feel of the action as well as the sound. The hammer weight, which may be measured on the shank as Strike Weight. The action ratio, which may be assessed by looking at the strike weight ratio (*Piano Technicians Journal*, June 1996, "The New Touchweight Metrology.") I'm not blowing my horn so much as I am inviting all of you to learn how to take advantage of newly available ways of looking at our work. Touchweight is made up of components. Look at the components. Hammer weight and action ratio make a foundation that will not be rocked by any spring. Springs only allow you to balance the action with less lead than would be otherwise needed – that's it! There is an advantage to using them in all cases, but they should be used with a full understanding of their specific effects. I'm all for them! I hope this answers your questions and sparks some new ones.



A Jim Bryant, RPT (FL): I agree with what David has said regarding wippen support springs. I recently used a set from Renner USA (Lloyd Meyer) on an old Steinway "A" that was tremendously heavy, and the addition of the springs made it much easier to balance the action. That is, after it sunk into my thick skull that the springs, as shipped, were too darned strong! Try 'em, you'll like 'em!

A Jon Page: Recently I worked on a 20-year-old Baldwin L. Having previously lightened and graduated the hammer weight achieving an average 40-gram Balance Weight the owner was pleased. After many months I

Q&A/EDITOR'S ROUNDTABLE

convinced her to change over to the spring-assisted wippen. My promotion of this was driven by the tremendous amount of lead in the fronts of the keys.

I re-lead the keys and returned the BW to 40 grams with the springs. She is amazed at the ease of playing now. It's interesting how things change when one removes three pounds of lead from the keys.

I'm sure she will want the action lighter as years go by and I will be able to accommodate her in a few hours.

This was my first spring-assisted action change and I know there will be more. I am grateful to Dave Stanwood for his research and showing us how easy it is to get a grand action to work properly.

A Lloyd Meyer (Renner USA): David Stanwood's recent post invites a response concerning the action model Renner USA showed at the California PTG convention with the "Turbo Wippen" installed. David's analysis of the model is correct. We used a standard Steinway action model, and achieved the 17-gram touchweight reduction (from 67 to 50 grams) David describes without even regulating the spring in that particular example. Rick Baldassin did the installation, and was able to remove lead in addition to achieving a lower touchweight. Without the "Turbo Wippen," two additional leads were needed to produce the same touchweight.

I have long appreciated the good work David has done in this area and have nothing to add to his comments. We have had great success with the counter-sprung wippen, having produced it for nearly a century, however I was very apprehensive in making this wippen generally available for Steinway because I was concerned it might be used for the wrong reasons, as David points out. In fact, I have delayed adding this wippen to our Sample Parts Kit until we had more field experience. I can tell you unequivocally that we have now shipped a significant number of these sets, and not experienced a single problem. I know David has assisted at least one of our customers privately and there may have been other problems I'm not aware of, but

the results are very positive and, in a few cases, truly astonishing. This is not a commercial, and I don't want to oversell the concept because it's not for everyone and definitely not intended as a remedy for basic geometry problems.

That's about as technical as I'm able to get, not being a technician. Best wishes.

More on Wippen Support Springs

Q The average weight of a wippen when supported by the flange is about 18 grams. Would it not be feasible to adjust the wippen springs (with the hammers up and out of the way) so that the wippen weight is just neutralized (suspended)?

—David M. Porritt, RPT
Dallas, TX Chapter

David Stanwood, RPT: Dave, adjusting the springs on the bench so that the wippens are just suspended is a sensible approach. The 18 grams of Wippen Weight translates through a 0.5 key ratio to 9 grams at the front of the key. In other words, when you set it up this way your springs are all going to be working around 9 grams. This is how Hamburg Steinway adjusted their springs and it's the best factory application of springs that I have seen. I would still weigh off the hammers first to a weight that is compatible to the ratio, then weigh off the keys with the springs disengaged to balance weight that is 9 grams above what I want with the springs engaged. (44 grams BW springs off) Then engage the springs to achieve a final balance weight. This would make for a 35-gram Balance Weight with springs engaged for classic Steinway balancing. In this situation you would use light or medium springs (0.55mm Or 0.6mm) for springs working above 13 grams I would go to a heavy spring (0.7mm). These are the three sizes made by Renner. ■

Letters

More on those darned grommets:

I'd hardly put down the April *PTJ* when one of those Kimball spinets presented itself.

The old grommets were so hard that the touch felt very stiff as the keys neared bottom. Apparently the grommets had an acid content, as the key-end forks and the drop wire threads were caked with rust. The piano showed no other signs of rust. Removing the wires and remaining shattered grommets from the forks was a struggle; I finally used a sharp awl to penetrate the grommet material and force the wire out of the fork. I removed the keys to clean the rust from the forks with a wire wheel on the bench grinder; removed the action to remove the drop wire rust with a new, sharp Dremel wire wheel; and coated the wire threads and the forks with Protek MPL™, then I spun on the new grommets with the Schaff regulating tool chucked in the power drill. After reinstalling the action and keys, the final regulation of the grommets went smoothly with the hand tool.

Never again will I attempt a re-grommet job without removing action and keys. The time spent cleaning and lubing is time saved trying to work with action and keys in a back-breaking spinet!

Yes, Steve Lehr, that Schaff lost-motion regulator is a "must."

—Terry Cole ■

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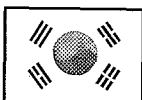
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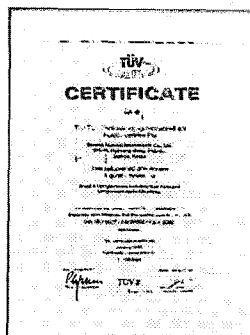
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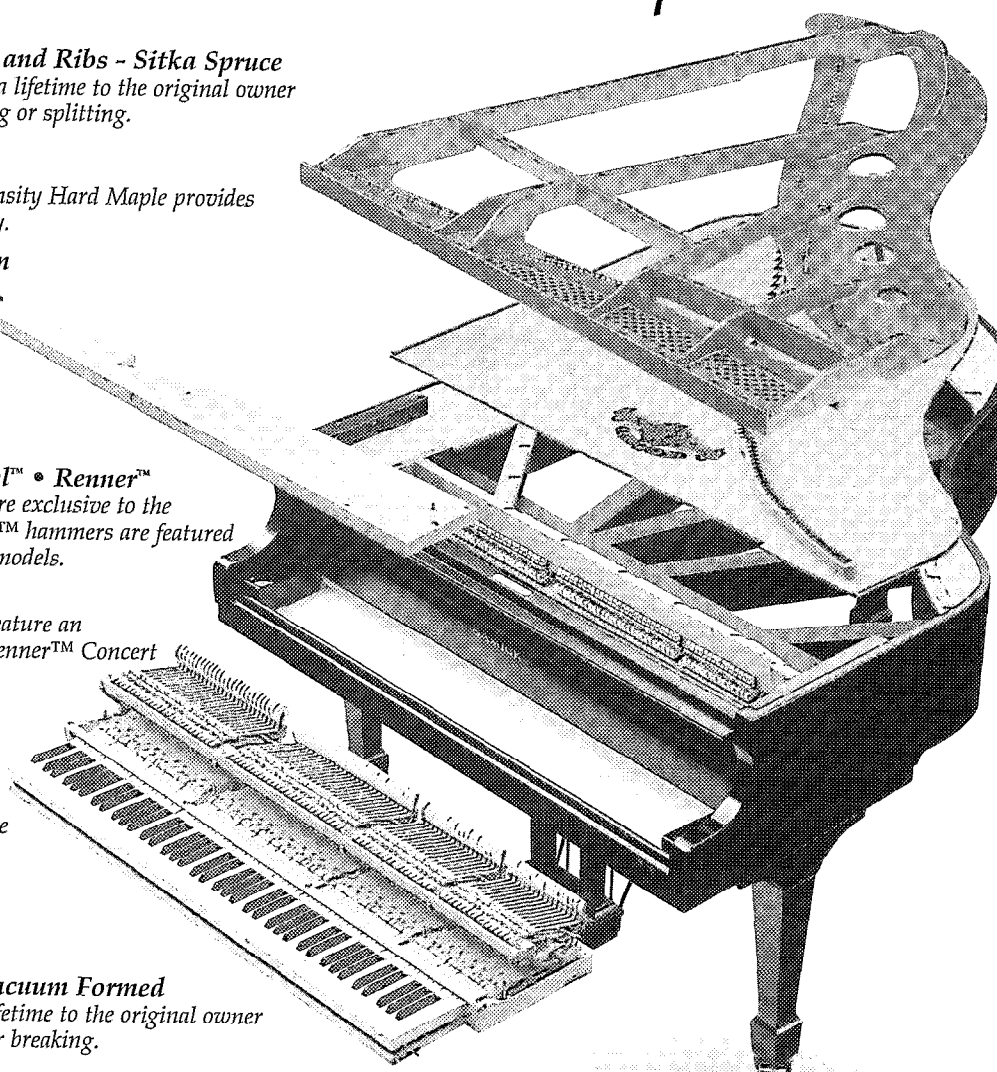


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The New SAT III

By Jim Coleman, Sr., RPT
Contributing Editor

The new Sanderson Accu-Tuner III is a little dynamite package. It will blow away the difficulties of tuning a piano. It makes tuning more fun. Considerably smaller than its predecessors, the new SAT III is only 6-inches long by 3 1/2-inches high by 4-inches deep. Turned up on one end, it only has a 3-inches-deep footprint and will sit on any piano shelf I have ever seen. It can be carried easily in one hand, and will fit in a small, professional-looking attaché-case tool kit. It packs more tuning power into such a small, convenient package than any electronic tuning aid in history.

Between the **OCTAVE** buttons and the **CENTS** buttons are the new **PAGE** buttons. With the addition of only two extra buttons on the control panel, the SAT III provides a number of new advanced features. These are some of them:

Automatic Note Switching

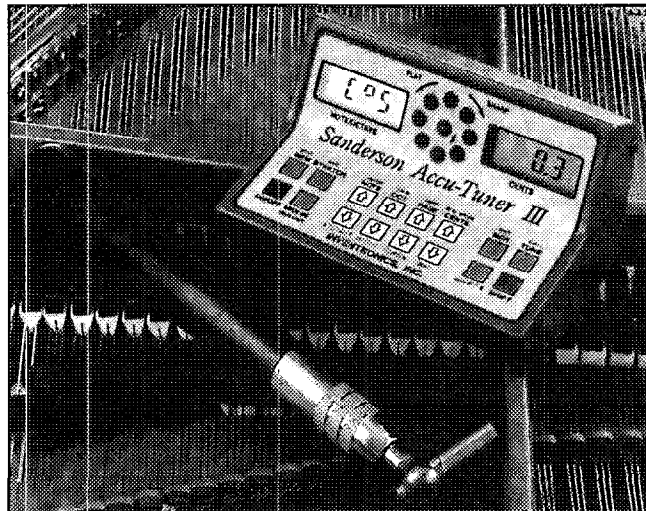
The SAT III features Auto-stepping from one note to the next in either **UP** or **DOWN** or both directions. Hold down **SHIFT** and touch **UP/DN NOTE** button to turn on this function. An indicator in the left window shows which directions are being used.

Historical Temperaments

Converting a regular equal temperament tuning memory page to an historical tuning is done with the touch of two buttons. Hold **SHIFT** and touch **PAGE UP** to select a previously stored temperament variation. Reversing the process is just as simple. There are up to 14 temperament variations available. Each temperament variation only needs to be entered for one octave C to C. When a variation is selected it is applied to those notes in each octave throughout the complete tuning. Entry is simple and the use is simple.

Tuning Sequence

Changing the tuning sequence from chromatic to any of four previously assigned sequences is as simple as the touch of two buttons. If you wanted to use the Baldassin/Sanderson two-octave temperament for example, you might choose **SE1**. If you wanted to use the Coleman Pure 5ths aural temperament tuning order, choose **SE2**, etc. There are up to four sequences of complete 88-note tunings available. You can elect to use only 13 steps or 20 steps for each sequence. If you select **SE-0**, the sequence is canceled and you are back to the chromatic



The new SAT III is much smaller than the SAT II, as seen in this comparison with a tuning hammer.

tuning sequence.

Pitch Raising

Pitch raising to a different pitch than A-440 is now quite simple. Just utilize one of the Historical Temperament pages with that pitch differential stored in each of the 12 note locations. Using this temperament will change every note on your selected page of memory this same designated amount higher/lower than normal.

You could even store a combination of pitch change and temperament variations at the same time with just the simplest arithmetic during setup. To en-

ergize the Pitch Raising program, hold down the **MSR** button until the LEDs stop rotating, then press the blue **SHIFT** button and release **MSR**, then release **SHIFT**, just as was done with SAT II. An additional feature is the added choice of a 25 percent overshoot or a 33 percent overshoot, depending upon whether you like to tune the unisons as you go, or you like to strip mute the entire piano, tune the center strings and then pull in the unisons later as you work out the strip.

Octave Stretch

Controlling the amount of stretch you prefer for the double octave is now quite simple, and it can be done "on the fly" and can be changed anywhere in the scale. Merely hold down the regular blue **SHIFT** button and touch the **UP/DN CENTS** buttons to alter from the normal 1 bps stretch in the double octave in increments of .1 bps. You can instantly see/hear the resultant single octave changes. Everything is adjusted smoothly.

Battery Life

Knowing how much battery charge is left is as simple as holding down the **SHIFT2** button and touching the down **CENTS** button. It will show 100 percent, 75 percent, 50 percent, 25 percent, or zero percent. Isn't it an irritant to have to go get out the charger in the middle of a tuning? That just negates the advantage of having battery operation. The new SAT III battery will last for up to 80 hours of tuning. It looks like charging every week or so should be sufficient.

PTG Tuning Test Program

The new **SHIFT 2** button is used mostly in conjunction with the PTG Tuning Testing program. This button is located where the SAT II **SCORE** button was located. You can give yourself a

Continued on Next Page

The New SAT III

Continued from Previous Page

test while preparing for the official exam. The instructions are simple, the results will be informative. Instructions in the manual are easy to follow. Once you have entered a Master Tuning and have entered the results of your aural tuning on the page **EEE**, you merely select the lowest note of your temperament and while holding down the green **SHIFT 2** button and touching the **STO-TEMPT** button the machine is ready to evaluate your tuning. Hold down the **SHIFT 2** button and touch the **SCORE** button to have any penalty points scored for you. You can then with the **UP/DN NOTE** buttons review error points, if any.

FAC Stretch Numbers

Saving of the FAC stretch numbers is now automatic. They are saved with the record of the tuning on the same memory page. I used to have to write down my stretch numbers in my business records and on the service sticker in the piano. That's not a bad idea anyway, but now you can be sure you have the right tuning for that piano. The serial number can be saved in the two spaces below note A0 and the stretch numbers can be seen by merely pressing the **STRETCH** button three times in succession to show the F3, A4 and C6 stretch numbers of that tuning which was stored in memory.

The FAC numbers are easier to measure. In the past, sometimes it was difficult to read the 8th partial of F3 because it was very weak due to the hammer striking the 8th partial node. Now, with the greater amplification, it is easy to read. Reading the F3 stretch number largely controls how the bass will be tuned. The A4 stretch number controls the overall stretch, and the C6 Stretch number still controls how the high treble is stretched. Measuring and storing these stretch numbers is exactly the same as for the SAT I and II.

More Convenience and Information

The two-button combinations can now be executed with one hand. The two LCD windows have additional digits which give information about whether or not an historical temperament is being used, which tuning sequence is being used, which Super Tuning is being used, in which direction the Auto-stepping is set, etc.

Accuracy and the LED Display

The accuracy of the SAT has improved even more as far as its range and temperature gradients are concerned. The display is more stable, the filter system is greatly improved. With the special phase lock, the display for a steady tone does not quiver at all as some other VTDs do. And even though piano tones are a bit transient in nature, the stability of the display pattern is one of the things I like most about the SAT III, especially with piano tones, and is the reason why I do most all my tuning with the SAT III now.

An old feature, but newly discovered, is the additional accuracy achieved by simply tuning until four lights are lit instead of two. Because from the beginning the SATs have always displayed LEDs so that 1/2 revolution of the lights equal one beat per second variation, it stands to reason that if one LED moves from

one position to the next in one second, that represents 1/4 bps. At A-440, 1/4 bps represents one cent difference. If it takes two seconds for the light to move one space, then the accuracy is doubled (.5 cents or 1/8 bps). If it takes four seconds for the light to move one space, then the accuracy is doubled again (.25 cents or 1/16 bps). However, if one strikes a note such that four lights are lit at once, it is easy to see which way the lights are tending to move. If one pair of lights tends to get brighter than the neighboring pair, then the pitch is gravitating in that direction. If one can tune to keep both pairs of lights at the same intensity, there is an infinitely small inaccuracy of the

tuning. Other tuning instruments which have "jumpy" displays cannot achieve this accuracy even with steady electronically produced tones. Those with indicators of extreme accuracy do not show steady patterns for more than a brief moment using their highest sensitivity. With the SAT III, "what you see is what you get."

Watching the display of piano tones in the Hz mode is more relevant to piano tuning because it relates to beats and that's what it's all about. Even with the argument that cents are more sensitive in the lower frequencies than are beats, the electronic tuning devices don't listen below the 3rd octave during piano tuning. In the most critical part of our tuning (Temperament octave), the SAT III is listening in the 5th and 6th octaves where it is a close tie between accuracy in cents and beats. However, the steadiness of the display and the intuitiveness of the beats makes the SAT III a winner for me.

The display is still my favorite feature. Extraneous noises do not make the LEDs lose their place because of the phase lock on the frequencies. The display will also show two frequencies at the same time in the case of wild string effects. You can choose whether to go with the upper one or the lower one. For aural tuners who have different preferences as to the amount of stretch they like, the new SAT III with its extra double-octave stretch control may be just what they are looking for to duplicate their style of tuning.

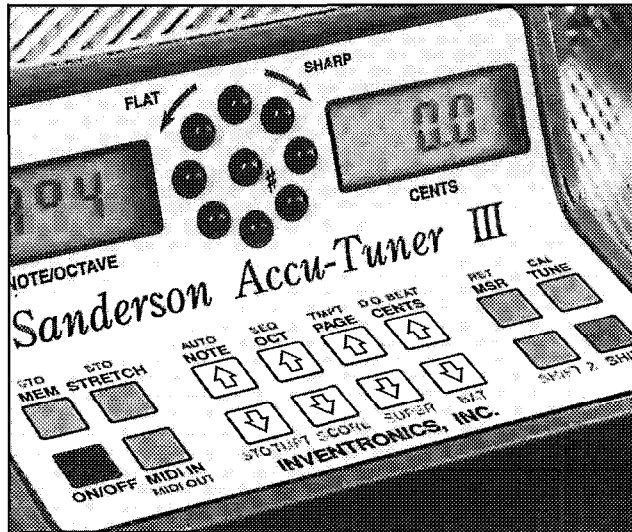
The complete specs and Manual can be read on the Web by using this URL address:

<http://www.concentric.net/~Fast440/atm/atm.html>

Occasionally I will add an item or two in the way of tips on my Web site which is:

<http://www.jimwcoleman.com/sponsors/pianotapes/sat3.html>

One can measure the three FAC stretch numbers in as little as one minute and they can compute a complete tuning scale in five seconds. The new SAT III with its greater amplification can hear the piano in very noisy environments. My wife and I did a test with both yelling at each other while measuring the F3 Stretch number. No problem. The stretch number came out just fine. (PS: We weren't really fighting, this was just a test!) 🎹



Close-up of the SAT III keyboard.

An Alternative Size Keyboard For The World

By David Steinbuhler

Excerpts from a presentation at the PTG Pacific Northwest Conference at the Banff Center for the Arts

As long as the piano has had 88 keys, the keyboard has always been approximately 48" long and, since individual key-width was roughly the same in 1850 as it is today, this size has become a world-wide standard. I would like to invite everyone to be open to think very differently and to consider the possibility of an additional, alternative keyboard size for the piano-playing world. We all know that hands come in all sizes. So, as the piano's 300th birthday approaches, let us explore this revolutionary idea.

Christopher Donison, the music director of the Shaw Festival, and I have formed the partnership – D.S. Standard Limited. The organization's goal is to facilitate the evolution of a second standard keyboard size that allows all pianists equal opportunity regardless of the size of their hands.

It all started in the mid 70s when Christopher was studying music at the Victoria Conservatory. One evening he was practicing Chopin's G Minor *Ballade* for what seemed like the thousandth time. While staring at his

hands, he realized that they did not look right in comparison to the keyboard to accomplish the task. Christopher cannot stretch a 6th between the

People with the longest hands have the advantage – it's a fact. It's always been that way, and there has never even been the thought that it could be different.

Where tens of thousands of aspiring pianists devote countless hours in the pursuit of excellence, so very many are doomed to achieving far less for a simple reason – the keyboard is too large. It is almost unbelievable that we continue in a modern world with such an entrenched paradigm that disenfranchises so many.

I met Christopher in 1991 by chance as a guest

at his bed-and-breakfast at Niagara-On-The-Lake. I heard the story and immediately felt that this was a very big, very important idea. I am an engineer and the technical aspects of making a smaller keyboard intrigued me. I began experimenting on my Steinway.

We felt strongly that because the piano is so hard to move, it is not practical to have many different sizes, as is the case with the violin. *Our solution was to determine a second size that would most fairly accommodate, along with the 48" keyboard, all the hands of the world.* Studies show that a 12 percent reduction in size – a 7/8 standard – would adequately reconcile those not served by the larger keyboard.

The question then becomes, can

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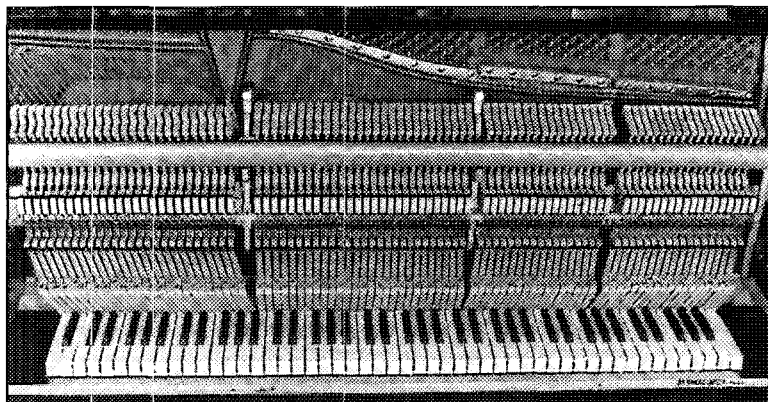
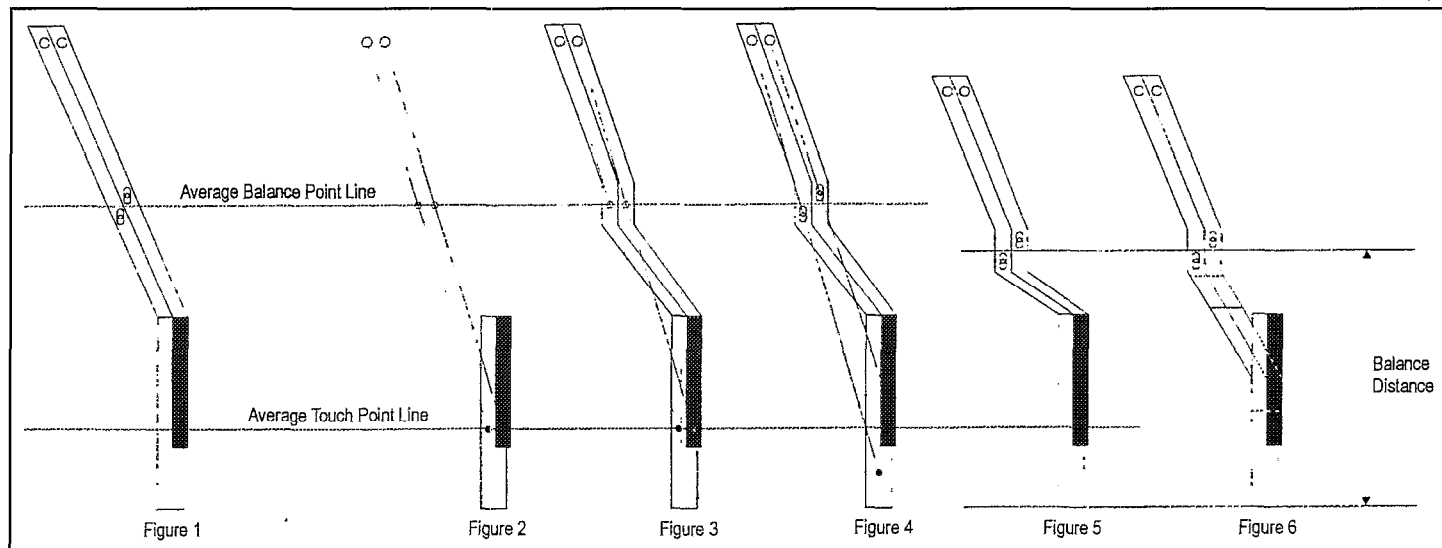


Photo 1 — Normal-sized piano with D.S. Standard 7/8-size keyboard.

index finger and little finger in the right hand. It was then that he realized that his hands would never be larger, but that the keyboard could be smaller!

It took five years for him to have a keyboard fitted to his Steinway D and, with the arrival of his new keyboard, Christopher began an "epiphany of discovery." A whole new world opened up to him and he exposed a great secret: It is much easier to play the great piano repertoire if one has large hands.

Christopher explained that people who live through a piano-studies education are all too familiar with the fact that in a piano class of 20, probably only one or two will have the hands that all the others in the class wish they had.

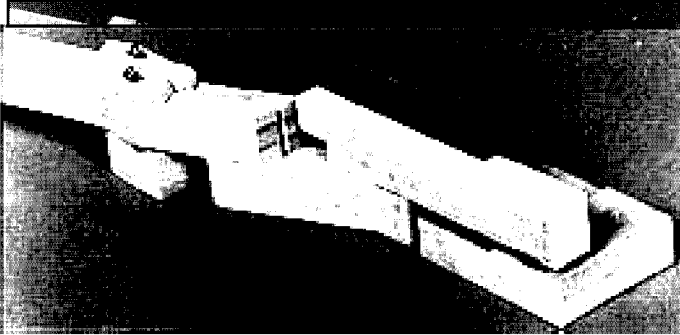


Figures 1 – 6

An Alternative Size Keyboard For The World

Continued from Previous Page

42" keyboards be built that are suitable for professional use? The process of reducing a 48" keyboard to 42" requires fanning the treble keys an additional three inches to the right and fanning the bass keys an additional three inches



keys between front and balance rails.

to the left. This adjustment allows the smaller keys to engage the existing action as can be seen in Photo 1.

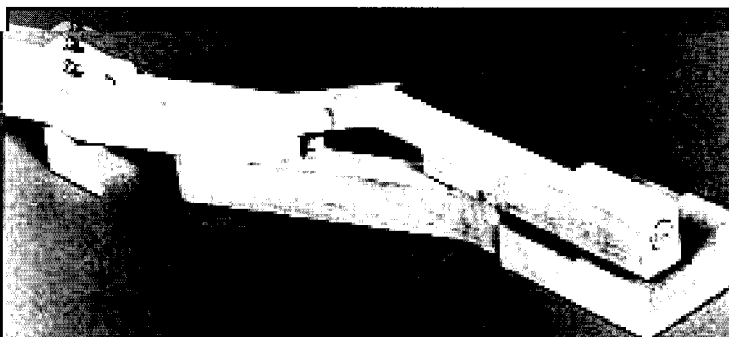
Historically, smaller keyboards have been made with the keys as in Figure 1. This key geometry creates three problems that need to be solved:

- A. The lateral rocking caused by the extra angle produces excessive balance rail bushing wear.
- B. The balance rail bushing does not fit comfortably in the space allowed by the highly angled keys.
- C. In some pianos, keys may be unacceptably weak due to twisting.

Figures 2, 3 and 4 show design steps eliminating problems A and B. In Figure 2, lines have been drawn from the capstan to the average touch point line.

In Figure 3, a section of key is designed parallel to the playing end of the key at the point where the lines of Figure 2 cross the average balance point line.

In Figure 4, holes for the balance pins are put into the parallel section of the key and new straight lines are



drawn from the capstan through the balance hole to the touch point of the keys.

This design places the touch point comfortably on the average playing area for the black and white keys. This we call the straight-line feature and it will substantially eliminate the first problem of lateral rocking. Also, as can be seen in Figure 4, the button bushing is comfortably constructed in the parallel section thus solving the second problem.

The existence of the third problem occurs in uprights when the balance distance gets short as can be seen in

Figure 5. Keys are

subject to a loss of strength due to twisting. This problem is solved by the use of a brace as shown in Figure 6. The brace is constructed underneath the playing end of the key and between the rails as shown in Photo 2. With this construction, the

angle is greatly reduced and keys with more than adequate stiffness can be provided for any piano. The brace is also used in the long bass keys of the concert grand as seen in Photo 3. This insures that the piano retains all of its power.

In designing keyboards, we have used panels made with laminated layers of maple to give to the keys added strength and stability. The weighting of the keys has proved to have no problems using traditional methods. Instrument testing has proven that

keyboards constructed in this manner perform beautifully. Successful retrofitting of the complete range of pianos from small uprights to the concert grand has demonstrated that the keyboards work without any loss of power and repetition. Three-inch cheekblocks are added to the key frame and give the piano a very professional look as can be seen in Photo 4.

As we work on this project, a growing number of pianists are discovering the enormous benefits of using the 42" keyboard. At the same time, they have fears. Pianists wonder if they will be able to switch back and forth and if they are putting their careers in jeopardy if they use it. They wonder if and when the smaller size will be available to them.

One of the first people to try our keyboard was Linda Gould of Victoria, British Columbia. She has been using it for two years now and says that she would "not give it up for all the money in the world." She started to play at three years of age and debuted at 11. Up through the grades, Linda won first-place medals in the province six times.



She went on to study at the University of Victoria under Robin Wood, earning her Bachelor of Music in performance with distinction and receiving her ARCT as well. But due to her small hand size, much of the repertoire was beyond her physical grasp. She could not truly master Chopin or Rachmaninoff. It was always "compromise, compromise, compromise." Out of great frustration, she eventually abandoned her dream of becoming a concert performer.

When she got the D.S. Keyboard, she "went out and bought all the juicy pieces she always wanted to play." Linda is now

Continued on Page 25

Gang-Filing Hammers

By Chris Gregg, RPT
Calgary, Alberta Chapter

Introduction

This is a "nuts-and-bolts" article for beginners and seasoned technicians alike. One of the most routine jobs done by piano technicians, next to tuning and regulation, is reshaping hammers. It is a job that is easily sold to a customer. "Just look at the grooves in these hammers, Ma'am." I have no problem with the concept of selling hammer filing jobs, but I do like to see the job done well. When I first started in the business, I thought that this was a nice job that could be done in the customer's home. Not any more. Now the job has to go back to my shop. I explain that all the hammer assemblies have to be taken out of the action, and, at the same time, the action centers will be checked and accurately re-pinned if necessary. Any other jobs like bridle straps, knuckles, pre-voicing and cleaning will also be done at the same time.

Why Gang-file Hammers Off the Action?

There are two things that I would like to stress at this time; first, the work involved in removing the parts from the action should be routine and, although a little tiresome, the time it takes is offset by the reduced amount of time the actual reshaping takes when gang-filing. Secondly, I believe that it is possible to get a squarer, cleaner, more even and more symmetrical shaping by gang-filing with the hammers off the action than by filing them on the action.

The conventional method of filing hammers is hard on the action centers, (the only support you have is the support that the hand can give you). It is not possible to get right around the shoulders, especially with the bass section on an upright action. With the best will in the world, it is not possible to work with the layers of felt evenly from one hammer to the next. Most of the time filing will look fine at the strike point, however the shoulders fall far from being square. I have heard of hammers being gang-filed on the action, especially in the treble section where the hammers are hung square to the shanks. In my opinion this is a poor substitute for taking the hammers off and holding them in a vise. I am not talking about a light filing that would be done on a fine voicing job, but I am referring to reshaping hammers to their original shape (minus a few layers of felt).

The Gang-filing Method

The system works for both upright and grand hammers. It is obviously less work to take the hammers off a grand action, but it can sometimes be a little trickier clamping the grand hammers, depending on the shape of the hammer tails. When gang-filing, the hammers are clamped and held in the vise for support. This way, the hammers are put back squarely in a line. It is similar to the way the hammers were

when they were formed out of a single block.

Various clamping methods will work for both grand and upright hammers. It does sometimes require a little creativity, however, you probably have the necessary components sitting right in your shop. I find that a bench vise and small bar clamp work well for holding the hammers together. I usually work with a group of eight to 10 hammers. The number will depend on how many hammers in a section, the size of the flanges, (they are normally wider than the width of the hammer, and therefore will have a fanning effect when clamped together) and the size of the vise being used. I installed vise jaws made of half-inch Plexiglas™. They are the most versatile jaws that I have ever

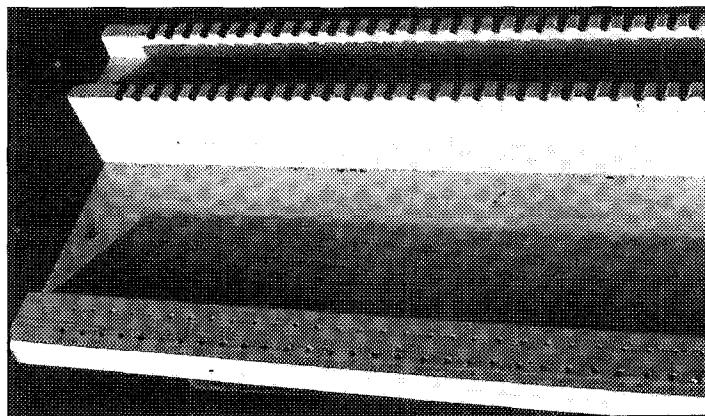


Photo 1 — Shop-made rack for hammer assemblies and screws.

used. Not as hard as metal, but stronger than the wood that is being clamped.

When taking the hammer assemblies off the action, I place them and their screws in a special rack (See Photos 1 and 2) to keep them in order while they're off the action during the filing procedure. It is important that a group of hammers is square and even when put into the vise. Line them up on the bench and check with a machinist's square (See Photo 3). Transfer them to the vise, checking that the line of the felt where it meets the molding is straight. I then use a miniature bar clamp to hold the hammers together.

For the actual filing I find that I do not need to use anything coarser than 220-grit abrasive paper. Because the hammers are held securely, it is possible to work the layers of felt with a fair amount of pressure and longer strokes than if you were doing them individually. I use a combination of paddles to suit the nature of the hammers.

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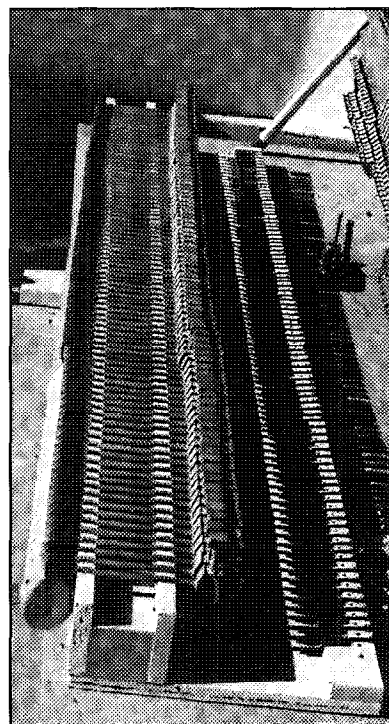


Photo 2 — Hammer assemblies in rack, awaiting filing.

Gang-Filing Hammers

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I have one about one and a half inches wide that I will use for roughing down the shoulders (See Photo 4). It is possible to file across the width of the hammers as well as towards the crown. I have also tried a flexible rubber sanding pad about three inches wide and six inches long that works well.

Then I like to strip-sand with about a 360-grit paper about three inches wide (See Photo 5). I have seen sandpaper reinforced on the back with masking tape used for this job before, but I don't find this necessary. It is important that the paper is sharp to be effective, though.

Strip-sanding will help establish a smooth contour around to the strike point of the hammer. I finish by brushing the felt with a suede brush, which will remove much of the dust but, more importantly, will smooth out the layers of felt (See Photo 6). I try to let the felt tell me the best shape for a particular set of hammers. Different manufac-

turers have their own specifications for shape, and we are trying to recreate that shape. The aim is to take only as much felt off the shoulders as is necessary to get the grooves out of the strike point. Avoid working from the strike point back to the shoulders, because the felt

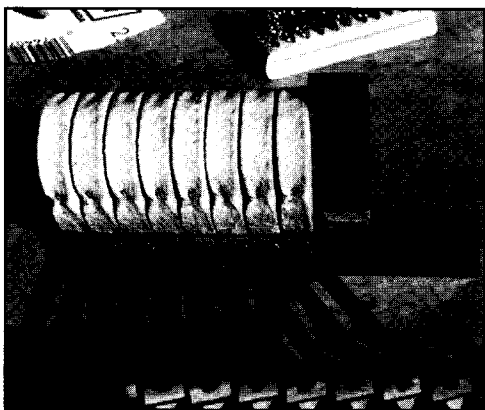


Photo 3 — Hammers bunched together and squared before putting in vise.

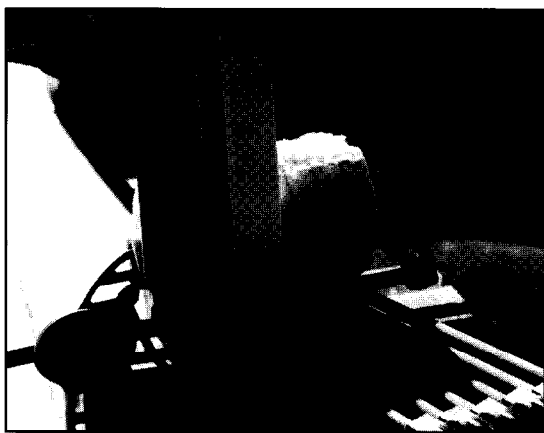
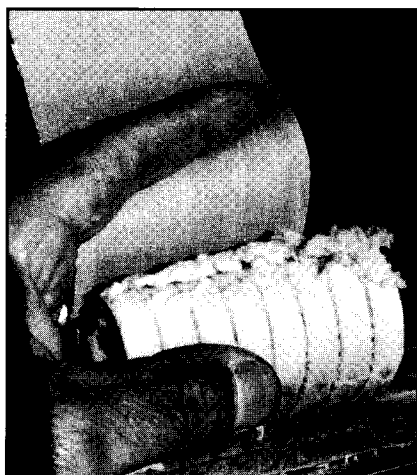


Photo 4 (ABOVE) — Gang-filing hammers in vise with paddle. Note Quick-Grip™ clamp. Photo 5 (RIGHT) — Gang-filing hammers in vise with sandpaper strip.



may come apart at the shoulders and they will lose their support.

If the job has been done well, the edges of the shoulders will be sharp and square because they were held together for the filing (see Photo 7), and the natural nap of the felt will insure that they are symmetrical. In fact, the job should look like it just came out of the factory (see Photos 8 and 9).

If doing the job in your home,

I would recommend a dust-extraction fan. They generally are hung on the ceiling and they work very well to keep the dust down, I also wear a dust mask for this job.

When the action is back in the piano, the shanks need

to be traveled and the hammers need to be squared and lined up to the strings. If the strings are level, there should only be some minor fitting of the hammers to the strings.

Once you have experienced the beauty of gang-filing hammers off the


action, you will find it difficult to settle for anything less. Ted Sambell, who inspired me to write this article, tells me that this is the way that it has always been done in the U.K. 

Photo 6 (LEFT) — Brushing felt with suede brush after filing. Photo 7 (BELOW) — Checking filed hammers for squareness.

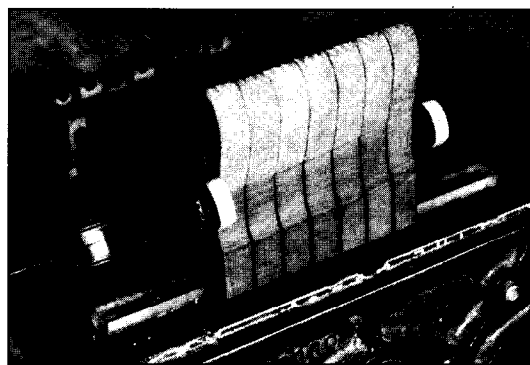
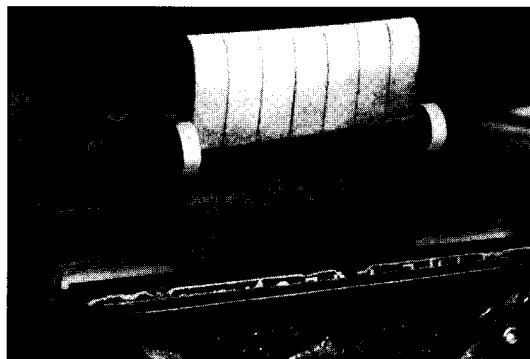


Photo 8 (ABOVE) — Before. Photo 9 (BELOW) — After.



Trigger Point Self-Massage for Piano Technicians — Part II

By Clair Davies, RPT

Why Our Shoulders Hurt

Poor work habits cause virtually everyone trouble in the upper back, top of the shoulders and back of the neck. The critical muscles in this area are the upper trapezius, the levator scapula, the rhomboids and the serratus posterior superior, all of which interconnect the shoulder blade, the thoracic and cervical spine, and the base of the skull. The drawings will serve as a general guide for locating trigger points in these muscles. Exact locations will be found by touch and the sense of pain. To get a picture of what's under the skin, the illustrations in Travell and Simons' *Myofascial Pain and Dysfunction* are hard to beat, but any anatomy book can lend additional insight into where these muscles are and how they're arranged.

The trapezius and levator scapula are the muscles that raise the shoulders. Stress, emotional tension and bad body mechanics tend to keep these muscles contracted and the shoulders up. When giving massage, I often find these muscles literally rock hard, and all evidence indicates the client's shoulders have been in that condition for years. It's almost inconceivable that muscles can remain in a contracted state continuously, 24 hours a day, year-in and year-out, but they do, and eventually we cease to take notice. It's hard enough to get these muscles to soften and let go, but

Before I got my first massage, my level of self-awareness was appallingly low. I had ignored my everyday pain for so long that I didn't recognize the sheer number of chronically contracted muscles that afflicted me as a result of unexamined work habits. Silent trigger points lurked everywhere, ready to flare up at the slightest excuse and slow me down even more with crippling pain.

My awakening began with the good experience I had with that first massage therapist, the one who knew what she was doing. Later, Trigger Point Self-Massage, in making me responsible for my own care, gave me greater awareness yet. I caught on much sooner when I was overdoing it and found I could take care of trouble long before it became disabling. I'm more watchful now, constantly questioning whether I'm working tight or ignoring posture and body mechanics.

the prognosis can be very discouraging, because without a change in the client's lifestyle, which usually means attitudinal changes and changes in the way they do their work, these muscles will probably be rock-hard again before the week is out.

Standing all day at the workbench was one of the dumbest things I used to do to my neck and upper back. With my head hanging forward so I could look down and see what I was doing, and with my hands held out in front of me manipulating action parts, the muscles of my shoulders and neck would be in continuous contraction from breakfast to supper time. And stopping work didn't stop the contractions. The tightness and discomfort would remain through the night and for a day or two afterwards. Several days at the workbench would set me up with trigger points that would be active for weeks.

The fact is that trigger points don't actually go away once established. At best, when the pain has subsided and the problem seems to have been resolved, the trigger points have simply gone into latency – to lie in wait for the next stupid mistake. The low back that goes out from time to time is typically just latent trigger points periodically going active. (Adding to the difficulty of treatment, the trigger points that cause low-back pain are very frequently not even in the back! We'll get to low-back pain in a later installment.)

Preventing Shoulder Pain

After massage began to inform me about the reasons for my work-related pain, I set about developing some new habits. This is a good one to try: just as often as you think of it during the day, stop whatever you're doing, raise your head, take a deep breath and, as you exhale, let your shoulders down. This profoundly simple little trick causes you to automatically relax all over and cuts down significantly on the activation of trigger points in the trapezius and levator scapula. With determination and persistence, it's possible to reprogram yourself to breathe deeply and lower your shoulders in stressful situations rather than holding your breath and keeping your shoulders up.

Whatever the job, get the habit of stopping often, putting the tool down and just focusing on whatever is across

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Trigger Point Self-Massage for Piano Technicians – Part II

Continued from Previous Page

the room, whether you're in a church or someone's living room or your own shop. It helps you hang loose a minute, adjust your attitude and take the kind of breath I've just described. Note that the important part is to put the tool down.

Another helpful shop habit is to break up the work and not spend too long banging away on one job at any one time. Piano work is so diverse that it's easy to have several things going at once, and you can give yourself the freedom to roam among them. This enables you to come to each job with fresh energy and to give attention to such things as posture and economy of motion. You have a chance to calm down, get a new perspective and break the pattern of working like you're killing snakes.

Relieving Existing Shoulder Pain

In dealing with the pain you already have, it's important to remember that referred pain must always be considered part of the equation. When your neck hurts, your natural inclination is to reach up and rub it. It's easy to forget that part, or even all, of pain in the back of the neck can be coming from trigger points in the top of the shoulders and other places as well. For instance, a trigger point in the levator scapula where it attaches to the top of the shoulder blade is what causes the stiff neck that keeps you from turning your head to one side. (See the black dot in Figure 1.) This trigger point will cause your entire neck to hurt on that side, but massage limited to the neck itself will completely miss the mark.

To massage trigger points in the upper trapezius, which are in the roll of muscle right on top of the shoulder,

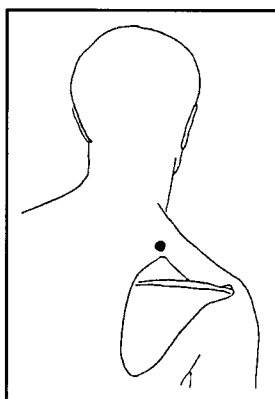


Figure 1 — Trigger point in levator scapula.

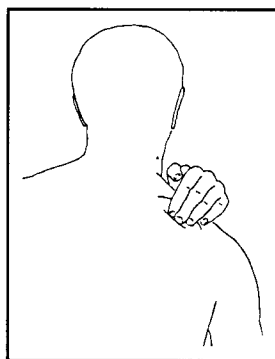


Figure 2 — Massaging levator scapula trigger point.

fingertips rather than the flats of the fingers because of the greater leverage. The general ergonomic principle is to use the fingers themselves as little as possible to keep from tiring them out. Fingers are quite vulnerable to repetitive strain injury due to overuse. To keep your nails from gouging your skin when working with fingertips, it's best to keep your nails filed close to the quick. Even with very short nails, it's better to massage the top of the shoulders through a thin layer of cloth, like a cotton shirt.

You can work the trapezius and levator scapula at the same time with the fingers held in a rigid claw which you pull across both muscles with the other hand grasping the wrist. (See Figure 3) The clawed fingers stay fixed, like a gardening tool or steel scraper. The hand on the wrist does all the work.

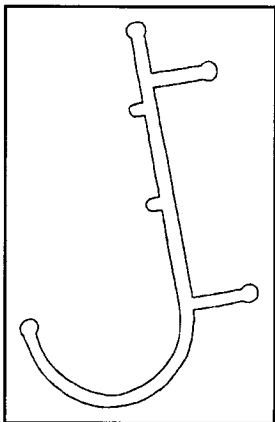


Figure 4 — Theracane™ massage tool.

make a claw with your fingers and squeeze the belly of the muscle between the fingertips and the butt of the hand. (See Figure 2.) It's very important to use the

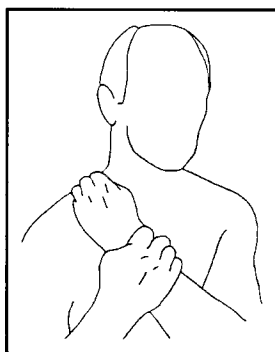


Figure 3 — Stripping massage applied to levator scapula and trapezius.

Self Massage because of their greater sensitivity and the friendliness of their surfaces, another choice for working the top of the shoulders is the

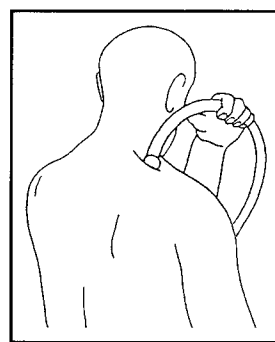


Figure 5 — Massaging trapezius with Theracane™

Theracane™. (See Figures 4 and 5) Don't hesitate in acquiring this tool. (It costs less than the price of a tuning.) It's a great tool for reaching the places that are unreachable with your hands. The following mail-order companies are a few of the many sources where the Theracane™ can be bought:

Edcat Enterprises – 800-274-3566
Living Earth Crafts – 800-358-8292
Trigger Point Company – 800-763-2430

Rhomboid trigger points are easily accessible, right along the inner edge of the scapula, and again, as seen in

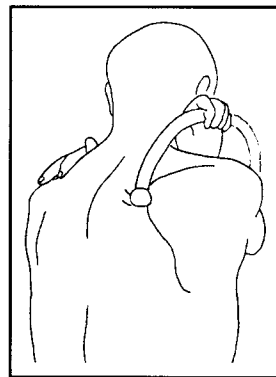


Figure 6 — Massaging rhomboid with Theracane™

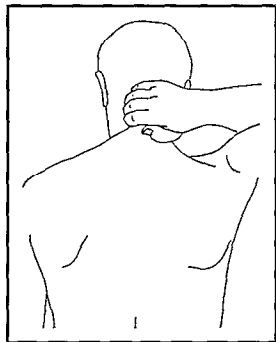
Figure 6, the Theracane™ is the tool to use. For the serratus, which is under the rhomboids, the arm must be crossed over the chest to protract the shoulder blade

forward so

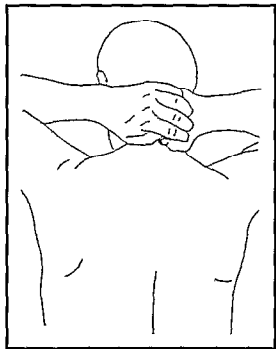
the cane can get to the trigger point, which normally is hidden beneath the shoulder blade. To keep from wasting effort, be sure that it's not the scalenes that are causing the pain in this area (see last month's article).

Keep in mind that the idea in massaging a trigger point is to repeatedly squeeze the blood and lymphatic fluid out of the muscle to encourage a fresh flow. Remember also that an equally important goal is gentle, localized stretching of the muscle fibers. Don't aim at eliminating the trigger points with a single treatment, but be content with working them conservatively and often, up to a dozen times a day.

Working the trigger points in the back of the neck also requires the clawed fingers. As seen in Figures 7 and 8, the opposite hand backs up the claw and provides the active force. The fingers stay in firm contact with the



Figures 7 (ABOVE) and 8 (BELOW) — Massaging trigger points in back of neck.



skin, rather than sliding on it, and move with the skin back and forth across the muscle.

Again, try not to flex the fingers at all but let the supporting hand do all the work.

The target is the roll of muscle on either side of the spine. A single hand can also be used here, squeezing these rolls of muscle between the fingertips

and the heel of the hand. (See Figure 9)

To get at the muscles deep in the neck at the base of the skull, lie in bed with the

fingers of both hands formed into claws and moved along the base of the skull while nodding and rotating your head over them. (See Figure 10)

The weight of the head is an important factor in the force being applied.

It's not commonly recognized that trigger points in the neck and the top of the shoulders are a primary cause of headaches. It's *referred pain* again, delivered to the sides, top and back of the head, and even behind the eyes. When afflicted by a headache, resist taking pain killers until you've

searched the top of your shoulders, the back of your neck and the base of your skull for knots.

Another location to

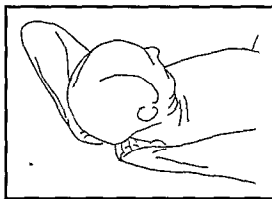



Figure 10 — Position for massaging muscles at base of skull.

explore for a hidden cause of headaches is the sternocleidomastoid, the thick muscle which runs diagonally down each side of the neck and ends up in front. Trigger points in the sternocleidomastoid are also known to cause earaches, fainting and persistent coughs. We'll take on this amazing muscle next month, along with the muscles of the face, scalp and jaw. 

An Alternative Size Keyboard For The World

Continued from Page 20


beginning to perform again. She practices on the 42" keyboard and performs on the 48". She looks forward to the day when she will be able to perform on the 42", but finds that she can readily switch from one size to the other. Just as performers go from violin to viola and back to violin again as part of their job, or guitarists use instruments with different neck sizes, we are finding that pianists can easily adapt.

As for the future, many things are happening:

- Irene Besse Keyboards in Calgary, Alberta is going to begin using the smaller keyboard at their music academy that is supported by a music hall. There are 800 students, the youngest being just three years old. They are going to focus on young children with the gifts and the desire to advance quickly to the more difficult repertoire. Our minds learn the quickest between the ages of two and seven and it is the most natural thing for a small child to use a small instrument as they do with violins.
- Pro Piano, based in New York City, provides the highest quality concert grands to venues all across the country. They are interested in making alternative size keyboards available to performing artists.
- Story and Clark of Seneca, Penn., introduced the D.S. Standard Keyboard at NAMM in January of this year. Other manufacturers are also considering the keyboard to take advantage of the newly expanded market potential that it offers.
- Technician-centered

retrofitting will open new markets to the piano technician interested in retrofitting existing pianos.

- We have begun the process of assembling an Artistic Advisory Board to assist in developing and communicating this idea to the world.

We believe that the times are ripe for a change. I invite everyone to be open to this revolution in thinking and join us in taking those steps that will lead to equal opportunity for all pianists, regardless of the size of their hands. 



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Part I of this article (May 1998) dealt mainly with dangers to our physical health, but this one moves on to another kind of safety. Once again, it is an individual matter to decide what level of attention these risks warrant.

If I happen to feel tired and stressed-out, I sometimes find myself agonizing over things that have never happened to me. One of the most disturbing images is what it would feel like to get sued, or unjustly accused of something. At bad moments this doesn't seem all that implausible, given the amount of frivolous litigation going on, and the level of fraud of all kinds in society as a whole.

In daily life, though, my fears recede deep into the background. My customers don't seem at all alarmist, vengeful or rapacious. Any risks of liability spring from the kind of normal mishaps that can't be entirely avoided: the scratch on the piano case, the repair that didn't stay repaired, the broken string. I deal with them, make them good when I can, and, like a piano spin-doctor, minimize the damage when I can't—by “fessing up” immediately, and offering to hire someone to fix whatever went wrong. I've never had anyone take me up on the offer, but I would follow through if they did. (Of course, I charge for the string; the “mishap” is if I haven't warned someone that strings may break, before I start tuning.)

I take some pains to prevent damage to pianos, customers, their children and their belongings. I also attempt to avoid damaging my reputation. Prevention is far, far better than regret and is what I'll discuss today.

Avoiding Damage to Anyone and Everything

• Children

They are curious and like to get into things. Little ones reach for things and put them in their mouths. If the things have been inside pianos they are *filthy*. Sometimes they are small and could choke a child. Keep them out of reach, either by putting them high on top of the piano, in the trash, in a closed cupboard or give them to the parents. Warn parents and children to wash their hands after handling anything from inside a piano.

Children reach for things. In my kit are sharp tools. I try to be aware of where small children are, but one defeated me (after many attempts), and I looked around and saw my awl in his two-year-old hands. I was very lucky that day. No damage had been done. I try to keep the sharp things deeper inside the kit rather than invitingly on top of everything else. The same goes for things like CA glue.

If you leave case parts up on the furniture, children can pull them off so they fall, or children can attempt gymnastics on the furniture and fall onto the case parts. If you leave case parts on the floor, but standing up, children can pull them over onto themselves. If you leave the case parts flat on the

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Susan Kline, RPT
Feature Writer

Trying to Stay Sort of Safe — Part II

loose. I lightly steamed and moderately filed the hammers, and she really liked the sound. She still complained that she couldn't get any *resistance* when she played loud. So I rebushed the keys; but when I put them back on I noticed that the balance rail still seemed pretty loose, even though the cauls exactly matched the key pin size. She tried the piano, and said they hardly seemed different, and were still too loose. So, I did what I shall never do again: rebushed the balance rail using undersized cauls and thicker cloth. Then, *after* I brought them back, she told me about her wrist injured while river rafting, and her tendinitis. I sat down with my pliers, and eased every single one. She called me a week later: she had played for a few minutes, and her tendinitis was bad for days. I took the keys back home, and bushed the balance rail again, using the original cauls and cloth.

If asked to increase friction in a piano for any reason, I *intend* always to ask about any tendinitis or joint problems before I do anything.

• Benches & Stools

As mentioned in my earlier article, if they look at all fragile, I won't sit on them, and I try to tighten loose hardware before I sit down. I've never broken anything yet by sitting on it, and I don't aim to start.

• Lids & Hinges

When raising a grand lid, especially on the first visit, it is prudent to check the hinge pins first. If there are only two, and one is missing, you may have quite a surprise, and a repair to a bent hinge, and/or a big scratch on the inside of the lid. Quite an unforgettable sensation — a runaway grand lid!

Uprights are a little more forgiving, but on the other hand, the hinges or hinge pins are more likely to be missing or bent. It is a good idea to either replace the missing hinge pin, with a nail if necessary, or to remove the last one, and leave it in the piano. That way the remaining hinge won't get bent when the next person raises the lid. Many bent hinges can be removed from the piano and made more or less straight by careful pounding with a little hammer, outside, against something that won't matter, such as the front step. (This, like most of my advice, applies only to junk, and to hinges already ruined.) If a hinge pin, or a nail put in to replace a hinge pin, is too loose, it may be bent slightly with bending pliers until it is just snug (see Figure 1). That way it's less likely to come back out.

Lids have a few other problems. A good lid prop can keep

floor, children will often walk on them. I don't know any absolutely safe thing to do with case parts. I just try to find a good place for them, and I try to keep an eye on them.

• Adult pianists

Normally, playing the piano is not considered a very hazardous activity, but in special circumstances it can be. A teacher complained that her Yamaha console, which had seen heavy wear, was loud and

them from falling on you, or on whomever else is in the way. If you must lean the lid against the wall, it's a good idea to ask for a dish towel or hand towel, and, folding it up, put it between the lid and the wall, to prevent marking the plaster.

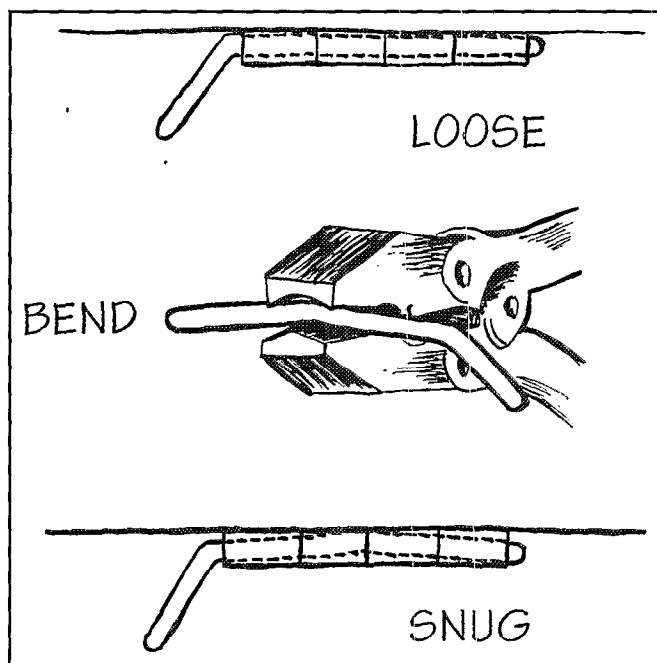


Figure 1

A small but real concern – when the piano is too close to the wall to open the lid, one tries to move it from the wall. One's customer, however light and frail, will rush forward and try to move the opposite side of the piano, usually with a very poor stance, risking a back injury. Saying, "Here, let me do it, don't hurt your back," sometimes works, but often doesn't. "Watch out, you may ruin the front leg," ironically, has a better success rate. If anyone out there has a better way to keep customers from doing more than they should in the heavy lifting category, I'd be glad to hear about it.

• Bric-a-brac

Don't break it, and do be seen to care about breaking it. If something looks very fragile, I often say, "I think I'll let you move that one." Place the various articles out of harm's way as well as you can. Putting all the clutter back onto the piano I consider to be the owner's job, though for fragile elderly people I will replace difficult items such as big framed mirrors or other heavy things.

• Clocks

So many people own those wonderful grandfather clocks that play elaborate chimes every 15 minutes! It always seems I am tuning at 11 a.m. for such people. Do not, however, be tempted to do what I did one day. The owners were gone, and the clock chimed on and on, loudly. I figured it would do no harm to gently stop the pendulum, and set it swinging again when I left, after moving the hands back to the right time. They were very nice about having to call their clock man to come and get the hour hand and the hour chimes back in synch. I offered to pay, but they wouldn't hear of it.

• Mud

More and more often these days I step into a nice new house, and see my customer in sock feet. Whether I follow suit and remove my own shoes depends on the amount of mud outside, and how opulent the carpet is. If I walk into a house belonging to Asian people, and see the little mat with shoes of all sizes neatly lined up on it I always take off my own shoes (Velcro closures help), and am always told, "Oh, you don't need to!" I leave them off, anyway. It's a good reason to keep your socks free of holes.

• Finished surfaces

Don't ask how I know, please – Superglue™ permanently mars a normal Formica countertop. (Once again, the owner was very nice about it.) Of course, if offered a cold drink, you will want to leave it in a place where it won't make a ring. I never leave a drink anywhere near a piano. If my customer has put the drink on the piano, I immediately move it elsewhere, and suggest that they get a "little table" to put near the piano if people want to drink something while they play. I always say it like this, because nothing that could be described as a "little table" will be taller than the keyboard.

Oh, those pianos with the perfect finishes! One moment of inattention, and I've dropped a tool, scratched the fallboard, chipped the shiny polyester. Eternal vigilance only reaches just so far ... then what? I "fess up." Life is too short to slither out of such situations. Wondering if and when the owner will notice, and wondering if one will be blamed, is a little like leaving behind a small piece of unexploded dynamite. I tell my customer what happened, and try to make it right. I keep scratch remover and polish in the car. Using it brings up another point – having scratched the piano, am I about to drop scratch remover on a light-colored carpet?

At times, working on pianos of no great value can be comforting. Certain problems are less likely to arise. On the "pianotech" E-mail list, Horace Greeley was talking about how to choose a tool case, and said, "One mistake I did make (well, in this regard, at least) was to get one with too wide a weave (measured in dieners, for some obscure reason). It was a beautiful case, with fibers just hefty enough to leave a marvelous set of scuff marks on the top of a *very* expensive piano... (I know, I know, but the studio was, er, crowded, and the owner "said" to do it...) Cost me a bundle to have that thing buffed out."

Intangible Safety

No discussion of safety would be complete without some basic talk about preserving something unseen but critically important to a technician's well-being – a good reputation.

In my experience, all but a tiny minority of customers have been incredibly understanding, tolerant, kindly and forgiving. Given half a chance they come through for me all the time. So, how do we continue to "give them half a chance?" Turning the issue around, I can say that I am kindly, tolerant and forgiving when I see someone trying to do their very best for me, especially if their very best includes good training and well-developed skills. So, when I do work of whatever kind, I try to allow the effort and education and desire for their well-being to show. I respect them and their wishes, and that shows, too. This can't be faked, but it can be cultivated.

Continued on Next Page

Trying to Stay Sort of Safe — Part II

Continued from Previous Page

Basic Rules:

• Don't Promise What You Can't Deliver

The largest threat to one's reputation is unrealistic expectations, which customers can conjure up with fatal ease. It is so important to warn them of anything that might reasonably go wrong, so that they receive more than they are expecting, instead of less. When I'm contemplating working on a piano with plastic parts, or rusty wire, or of obsolete design or with a failing pinblock, I want the owner to know *all about* the risks before I touch the thing. That way, if the work is successful, I'm a heroine; if problems develop in spite of my best efforts, I don't catch it in the neck.

• Talk About What You Are Doing As You Are Doing It

Help them to understand the process, and let them see developments as they occur. That way, if trouble arrives, as Murphy's Law predicts it will, they can make an informed decision. Also, they will understand and appreciate their piano more.

• Insist On At Least One Adult Being There The First Time You Visit

If you are like me, people will try to get you to come tune when they aren't home, leaving you a key. I resist this, partly by being willing to work on weekends or evenings, partly by stubbornly insisting on an adult being there at least when I start the job, especially the first time I tune for them.

These days, being alone in the house is risky enough, but being there alone with children or teenagers is begging trouble, especially for men. It's not that a disturbed child or teenager would make up slander very often; it might never happen at all in a lifetime of piano service. It's just that the trouble could be so disastrous (and so unearned) if it did happen. I just choose to sidestep the whole problem — if I'm not there when the adults are gone but the children are home, the danger disappears.

• Find Out As Much About The Piano As Possible


Having adults there is not only less risky, but it is important for the success of the job. The first time I see a piano, I almost always find several things to point out to the owner. I show them problems, ask to fix things they may have forgotten to mention, or maybe didn't even notice. I sometimes point out possibilities they may have been unaware of, such as a good location for the piano, or the possibility of steaming banging, loud hammers. I try to find out what they are doing with the piano, and what may be bothering them

about it. Sometimes I simply want to express admiration for their piano. I want to react to it in their presence.

As this is happening, they get to know me, and to see what kind of care their piano is getting. The longer they are around as I work, the better their understanding of what their fee has bought them, and the greater their chances of being satisfied with me and my work. Until at least some of this learning process takes place, I feel uneasy and even unsafe. Too many people in the past have been surprised at how much I am doing when tuning. ("You mean you have to adjust every one of those?") I get the impression that a lot of people assume that a piano tuning is less work than it really is.

Priorities (What Really Matters)

When one has thought too long and deeply about safety, the world can seem a very dangerous and uncomfortable place. Obsessing about safety can be as great a danger as several of those mentioned here and in last month's article. To restore proportion, it helps to consider what is really important. For me, what matters the most are people's feelings and general well-being; doing honest, careful and appropriate work; and saluting and preserving quality wherever I find it. If these things are right, most of the rest will fall into place. I try to make most safety precautions automatic and convenient. I have the musician's earplugs with me, and the dust mask. I've had the tetanus shot. Making disclosures and giving warnings to customers are second nature to me. By making precautions automatic, one can stay fairly safe without constantly fretting and fearing the worst. **PD**



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Tuning for an Audience

By Anita Sullivan
PTJ Feature Writer

There is a multicolored cloth frog on top of Middle C when I walk in to my first tuning this morning. He is facing me from the keyboard, his splayed feet spanning a tritone. I decided to leave him for last, after I have cleared off the top of the piano, removing a vase of early spring flowers, a heap of confetti, several piles of music, a set of plastic trains.

Next to the piano, two rats alert to my presence, come running to the southwest corner of their cage, poking the pointy ends of their noses through the wire in affable inquiry. "You guys gonna listen to me tune?" I say, gently patting their little pink claws. At the far end of the house, where the mother of the rats' owner is doing her morning aerobics, I hear the opening strains of "Performance Today." Down the blue circular stairs comes the father of the rats' owner to say good morning. He sees the frog still sitting on Middle C and plucks it off. "You never know when you'll need a frog," he says, as he goes off to work. I couldn't agree more.

I unscrew the music desk and take it off to figure out why Middle C isn't playing. Nope, it's not the frog's fault, only a pencil which has fallen inside and rolled back, jamming itself at the far end of the key. A grey paper whale hangs over the piano and drifts slowly in the breeze coming in from the tightly-closed window.

"Is this a typical tuning day?" I ask myself, and I feel a bit like a performer, a clown perhaps. Left alone here in the childrens' room, with the rats and the rocking horse and the frog and the whale, and the pink cabinet full of plastic dishes, I lift my tuning hammer and begin making music for my audience.

We look so serious when we go about our work, we tuners, as if we were doing something important. "A piano is like a great big guitar," I explain to kids, and to their parents, too, if they are interested. "Over 200 tuning pins, each one about two-and-a-half

inches long." That's why it takes so long to tune a piano.

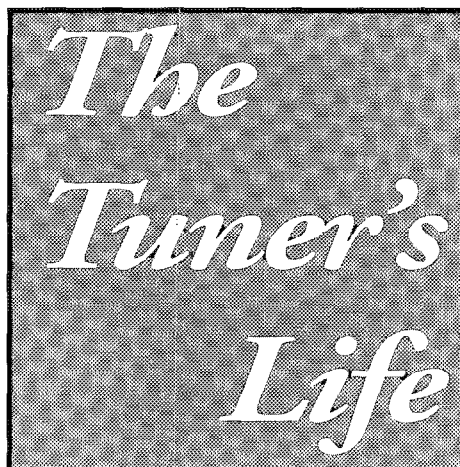
And that's why nobody ever sticks around to listen to the whole performance. A one-and-a-half hour concert, which either puts people to sleep or sends them out for a long walk with the dog. "Do you mind if I watch?" many a piano player will ask, and I always say, "No, not a bit," knowing full well s/he won't last more than five minutes.

It's minimal music – although the opening of a tuning, the setting of the temperament, rings out like plainchant, fifths, fourths and thirds, in quick sequences, hypnotically lovely.

Nevertheless, as the tuning progresses, the audience thins. Once an entire family lined up behind me, in a row of chairs. I grinned at them, "Where's the popcorn?" I said, and they laughed and made themselves comfortable for the show. But very soon they found reasons to excuse themselves: need to check my e-mail; got to get dinner going; maybe I'd better put in another load of wash.

I can't blame them. As I bend over the piano keyboard with my head at its odd listening angle, I often imagine that the whole exercise is being filmed, and I'm an actor going through the motions. I mean, here I stand day after day, tuning 230 tuning pins less than one degree to the right or left. Who would ever know the difference if I stopped turning the pins and just went "plink! plink! plink!" for an hour and a half with my left hand? – the performance would sound the same, I would collect my money, and leave.

A piano tuning doesn't survive for long, about as long as a frog quilted in motley, or a meteor streaking through the heavens, or a sequence of plainchant. Any day now I'm expecting someone from the audience will run after me as I back down the driveway and holler "Wait! You come back here! Wash my windows, install a new heater duct! I want results!" ☐



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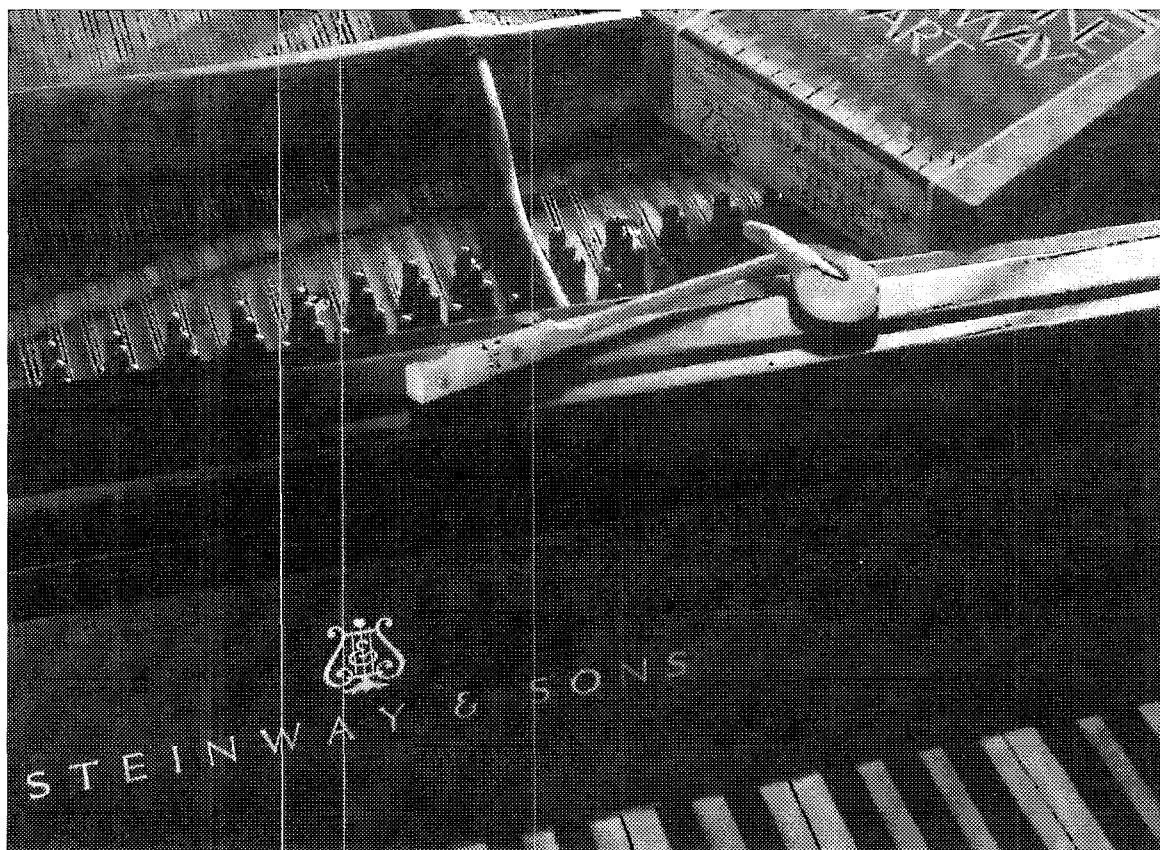


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THE PAGE FOR *Serious* CASES



The Taming of The Screw

By Terry Greene, RPT

Among some of the deficiencies of the human condition is the problem of having two hands when we really need three or more. One wonders why the expression "Two heads are better than one" has a prominent place in the lexicon of English expressions, when the real problem is one of not having enough hands. For many of us, having one brain is quite enough, thank you, and one would seemingly sometimes do better without that! This was reinforced by our parents from a very early age when questioning the one head we had as being a liability, as they were always saying, "...if you had half a brain you'd be dangerous...." Which, of course, implies that though we do have one head, it was not actually filled with the due amount of grey matter typically expected, but instead something of a vacuous nature or the opposite, some dense matter, something along the cerebral lines of lead. That we had less than half a brain and still had problems leads one to think that any more would have really been disastrous.

Be that as it may, the real problem, as any piano technician can tell you, is that we need an extra hand. How many times, for instance, have you had a screwdriver in one hand, a hand inside the drop-action (so beloved by tuners everywhere) and been forced to use a knee or other appendage to manipulate the linkage of key to action, only to need another appendage to hold the flashlight? How many times has one of your customers found you in what could be considered by some to be a compromised position with regard to your body parts, not to mention your verbal position vis-à-vis your use of the English language and variations thereof. Picture this – one hand with screwdriver, the other hand inside action, knee holding up repetitions and flashlight in mouth verbalizing what comes out sounding like: "Dis dab scwu wo't scwu id!"

God is a great inventor – you gotta give Him credit for all the cool things He developed. But one improvement He possibly could have made is an extra hand or two – or at least one that could rotate around more than the current 180 degrees. And, a simple variation on the fingernail concept could have given us an index finger with slotted screwdriver point and/or the next, a Phillips head, along with the wrist joint that could simulate the circular movement necessary to deal with the average screw. What an improvement that design change would mean to your

typical piano man!

For the taming of the average flange screw, or any other screw in a piano (Lord knows, there's a bunch of them, and all placed in awkward places), only Elastic Man of the Elastic Four is anatomically correct.

According to various curmudgeons and commentators on world events and human relations, the world is a screwed-up place. We don't dispute this notion in the least; however, those commentators never try to unscrew it, fix it, then put it back together in the fashion of piano guys, within our chosen area of expertise. Odds are that those commentators don't have a clue how to unscrew a cheek block, never mind trying to unscrew the world. Not to mention fixing and putting it back together. We tuners would never attempt to unscrew a political problem or cure a loose economy, because those screws are out of our league. Rather, give us a 70-year old upright that's been in rust mode for 69 years and doggone straight if we can't, given enough time, pull out any screw there, clean it or replace it, and put it back to rights.

And that's using only the two hands that came with our "basic tool kit!"*

PIANOMAN Adventures

by Alan Hallmark



PTG Review

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Credit Management – A Dark Subject?

It is curious that the subject of credit and credit management is so rarely discussed in the context of business how-

Economic News & Views

to. Is it because we are all somewhat reluctant to speak of debt, financial need or financial

problems in general? Perhaps, but my experience tells me that this very important part of all business endeavor is simply not well understood – or is just not a priority.

Credit is very important when establishing a business and even more important when expanding or growing a business. Credit is also a very difficult and potentially dangerous tool to manage properly. The recent proliferation of second home mortgages is a typical example of potential credit abuse. As tax laws favor this type of loan it is understandable that many will take advantage of tax deductible credit. These loans, however, were never intended to be used as “giant credit cards!” Homes are at risk, and the creation of long-term equity for the future is severely hampered.

As in the case of home equity loans, other sources of credit should also be

taken very seriously if we are to avoid the temptations and pitfalls of credit abuse. Years ago when I was a student at the New York Trade School – Piano Crafts Dept., the teacher taught me a simple but valuable lesson on this subject. He suggested that after acquiring the very basic tools needed (perhaps with a small loan), that we finance each additional tool by pricing it into the first job that required it. For example – if a good pair of wire benders was needed then charge the full price of the tool to the next regulation. In this way we could gradually equip our shops without a major loan or credit exposure. This obviously will not work for all things, but it illustrates the need for careful control of debt and possible methods for avoiding it.

It's much easier to borrow a sum of money and go on a shopping spree, but much better to develop the discipline of credit control and learn to borrow only when absolutely advisable or necessary. A major tool like a drill press or variety saw can be purchased by adding a surcharge to all major shop jobs and then saving this income for the intended purpose! In any case, the principal here is to fight the temptation to use credit to

make purchases that we can really not afford at the time. Obviously, the interest costs associated with excessive credit are a major drain on profits. Yet it is common to disregard these costs or even deny them. I find the common credit card, our so-called “plastic money,” to be the most expensive and frequent offender. These cards are just too easy! It takes discipline and planning to avoid the credit card trap. I have been

in more than one discussion where it was clear that the major cash flow factor involved was credit card debt.

Setting aside some time each month to review credit/debt levels and refine the plan can pay real dividends. Debt reduction is not only an important everyday activity, but also an essential way to stay financially strong and independent. When expansion time comes around, a good low cost business loan is a common way to accelerate the process. Again, good planning is important to avoid over-extending. As in all credit matters, the most important part of the plan is the timely repayment of the loan! It is not at all uncommon to meet people who are trying to “borrow their way out of debt.” This is basically an unwillingness to confront the issue of debt with conviction and fortitude. It is often much easier to avoid debt than to repay debt that has been foolishly incurred.

By approaching the subject of credit in a disciplined and planned fashion, we can bolster our business efforts considerably while avoiding the dangers of excessive debt load. Credit, like many other tools, must be used correctly and safely if the outcome is to be acceptable.

— Robert W. Beck, RPT



On Feb. 27 Central West RVP Kent Swafford, RPT (from left), RPT Robert Dillinger, president of the Kansas City, MO Chapter, and Wayne Yockey, RPT, prepared 18 grand pianos in Yardley Hall at Johnson County Community College in Overland Park, KS for a March 1 multi-piano concert by the Kansas City Music Teachers Association (KCMTA). Members of the Kansas City Chapter regularly tune the pianos for the annual concert.

The PTG Home Office
Will Be Closed
July 3 – 13

Technology
With the July 4th Holiday and
the 41st Annual Convention
& Technical Institute, the
PTG Home Office Will Be
Closed for 10 Days, from July
3 – 13. The Home Office Will
Respond to Messages As
Time and Staffing Permits.
Piano Technicians Guild '98

Piano Technicians Guild Foundation

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"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."

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FOUNDATION Focus Preserving the Past

July is here, we will be meeting in Providence within days. These are my last days as the PTG Foundation President. I have enjoyed serving the Foundation and I am sure those who come after me will continue to cherish our past and look for ways to save bits and pieces of it so that people in our future will better understand the evolution of the piano and those who love to work on them.

Thank you to everyone who donated in the name of a loved one or friend this year. These contributions will ensure that the work of the Foundation will continue and will help preserve the history of piano technology for future generations.

Next year's Annual Institute will be held in Kansas City, Mo., home of PTG's headquarters and the location of the PTG Foundation's museum. I would hope that the Foundation would be able to open the museum to those who come to the convention. This will take a lot of work, money and time. Our museum opened in 1994 and, putting it kindly, is still in its infancy. We could use more donations, help and funds to organize, catalog and display.

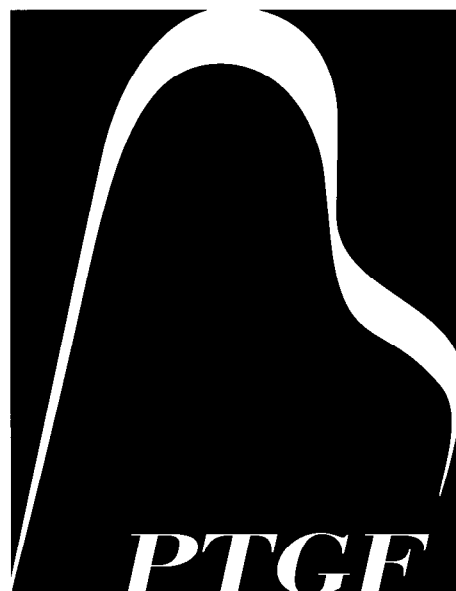
I would hope that over the next year you might think about the tools we use in our trade. If you have any that might be of historic interest, please consider donating them to our museum. Some chapters have historic photographs that could be copied and added to our collection. Many of us are second and third generation technicians. There are family tools that are unique and stories of interest we could use to help preserve the history of our profession.

Whatever you do, please continue to support the Foundation. Contact a Board Member with your ideas or donations. We all know how quickly time passes, let's be sure to document our past so that those in the future will know who we are.

— Laura Kunsky, RPT
PTG Foundation
President ♦



Jane Karwoski, NCTM, of Albuquerque, NM, receives the Piano Technicians Guild Foundation Scholarship from Tim Geinert, RPT, a member of the PTG Teacher Relations Committee. The presentation was made during the Music Teachers National Association Convention in Nashville in March. The annual PTGF Scholarship is a competitive award.



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. You may also designate the PTG Foundation as the beneficiary of your PTG death benefit. 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)
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Phyllis Tremper
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AUXILIARY

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DEDICATED TO AUXILIARY NEWS AND INTERESTS

It's Convention Time

Well, convention time is here once again. Seems like yesterday that we just left Orlando, doesn't it? We all had a great time there, but I will guarantee you one thing this year, it will not be as warm as Florida – so be sure to bring layers of clothing for you know, also, how cold the air conditioning can be.

Some of you across the country may receive your July *Journal* before you leave for convention and some of you may not get it until you return so watch the September issue for all the happy events which will take place in Providence. And I do hope that all of you are in the pictures; that means you must be there to be in the pictures. Don't forget your by-law revisions.

Since *Journal* deadline is so early for this issue, I did want to mention the passing of Frank Sinatra, which took place today, as I am writing this. Whether you liked him or not, he was an American Legend. Many of us members remember the bobby soxers who cried over him at each concert. I wouldn't say that I did that, but as a singer I certainly can and did appreciate his breath capacity and style of phrasing. There just is or was no other like him. The popular songs that he sang seemed as if he were singing just to you. Could he pick the songs. And how about those arrangements behind him? Wonderful.

Popular music has never been the same since the golden voice of the Chairman of the Board. Old blue eyes will be greatly missed by us all. Good-bye Frankie, we'll miss you!

— Phyllis K. Tremper
President, PTGA

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In memory of Barbara Zeiner

Shirlee Felton, Mountain Top, PA

In memory of Barbara Zeiner and Bert Sierota

Summer Notes

Just when I think I'll never fool with gardening again, never bother to put another seed in the ground, or, at least, never pull those awful weeds or sweat in the hot summer sun, I discover the first crocus in bloom, or the daffodils bursting with yellow, or delight in the tulips' "grand-show." Then, unmercifully, I'm hooked again for another year.

Another year of gardening: digging, planting, cutting, pruning, weeding, watering and sharing my bounty with family and friends. My hobby of flower gardening seems to provide strenuous exercise for the body as well as refreshes the mental health of my soul. The beauty and color of the flowers beckons to me year after year. Are you a "fool" as am I?

Membership Update:

Thank you all for sending our treasurer, Marilyn Raudenbush, your membership dues. Remember that the Auxiliary is a vast networking of support to the PTG. We look forward to greeting and getting to know you in Providence this summer.

— Carolyn Sander, PTGA
Vice President

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NORTH CAROLINA REGIONAL CONFERENCE October 22-25, 1998. Holiday Inn Select Koger South Conference Center, Richmond, Virginia. National and Regional Instructors along with Major Piano Manufacturers and Preferred Exhibitors will be on hand for 2 1/2 days of comprehensive training for the professional piano technician. Spouse activities include a Richmond tour with riverboat luncheon. For more information contact Alan Hallmark, RPT (804) 346-8063

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PianoDisc Two-Day Certified Service Seminar. October 21-22, 1998. Prior to the **NORTH CAROLINA REGIONAL CONFERENCE** in Richmond, Virginia. For more information contact Alan Hallmark, RPT (804) 346-8063.

Supplemental All-Day Refinishing Class with Webb Phillips. October 22, 1998 at the **NORTH CAROLINA REGIONAL CONFERENCE.**

THE RANDY POTTER SCHOOL OF PIANO TECHNOLOGY — Home Study programs for beginning students, associate members studying to upgrade to Registered Piano Technician, and RPT's wanting to continue their education. Tuning, repairing, regulating, voicing, apprentice training, business practices. Top instructors and materials. Call or write for information: **RANDY POTTER, RPT;** 61592 ORION DRIVE; BEND, OR 97702; 541-382-5411. See our ad on page 3.

Review Harpsichord Maintenance and Historical Aspects of the piano with Thomas and Barbara Wolf at the 1998 **NORTH CAROLINA REGIONAL CONFERENCE.**



INSTRUCTIONAL VIDEO TAPES. Victor A. Benvenuto. Piano tuning, \$50.00*; Grand Regulating, \$50.00*; Grand Rebuilding, \$100.00 (2)*; Key Making, \$50.00*; Soundboard Replacement, \$29.95*. (*Plus S/H). The Piano Shoppe, Inc., 6825 Germantown Avenue, Philadelphia, PA 19119-2113; Ph. 215-438-7038, Fax, 215-848-7426

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WANTED



WANTED!! DEAD OR ALIVE: "Steinway uprights and grands." Call collect, Ben Knauer, 818-343-7744.

WANTED:DOLMETSCH-CHICKERING Harpsichord by Michael W. Hart, PO Box 268, Corbin, KY 40702 (606)528-8760.

WANTED early square pianos- any make, or condition-especially original condition. Michael W. Hart, Box 268, Corbin, KY 40702. 606-528-8760.

PIANOS! PIANOS! PIANOS! !!!Free phone appraisal!!! Buying all types of usable pianos. Cash or bank check on pick up. Won't hesitate on price. Call us first for fast professional service. "Steinway, Mason-Hamlin command specialty prices." Jay-Mart Wholesale, P.O. Box 21148, Cleveland, OH 44121. Call Irv Jacoby 1-800-411-2363, or collect 216-382-7600/FAX 216-382-3249.

NEED PLATE for 1920's Baldwin Model G Grand, Serial# 52 ***. Kelly#2645. Please call (505)524-1465. Guy Nichols, RPT.

WANTED: TINY PIANOS such as the Wurlitzer Student Butterfly or other small types. No more than 50 keys. Call toll-free: Doug Taylor, 1-888-895-6211. I'll pay shipping!

WANTED: Very old Chickering Grands to restore. Also, very old square pianos. PTG member, technician would appreciate your referrals. Contact Michael W. Hart, P.O. Box 268, Corbin, KY 40702 (606) 528-8760.

Advertise your goods and services in the PT Journal classifieds.

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Include your check or Visa/Mastercard number (with expiration date), along with your name, address and daytime phone number.

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Calendar of Events

July 8-12, 1998

PTG ANNUAL CONVENTION & INSTITUTE

Westin Hotel, Providence, RI
Contact: PTG Home Office (816)753-7747
3930 Washington,
Kansas City, MO 64111

October 9-11, 1998

OHIO STATE CONFERENCE

Location: To be announced
Contact: Bob Russell
(440)449-5212
1414 Lander Rd, Mayfield Hts, OH 44124

October 15-18, 1998

TEXAS STATE ASSOCIATION

Marriott - Greenspoint Area
Contact: Roy Escobar
(281)745-0231
2710 Durban, Houston, TX 77043

October 17, 1998

NYSCON

Holiday Inn, Plainview, NY
Contact: Michael Slavin (516)781-8888
2409 Wood Ave., Bellmore, NY 11710

October 22-25, 1998

NORTH CAROLINA REGIONAL CONFERENCE

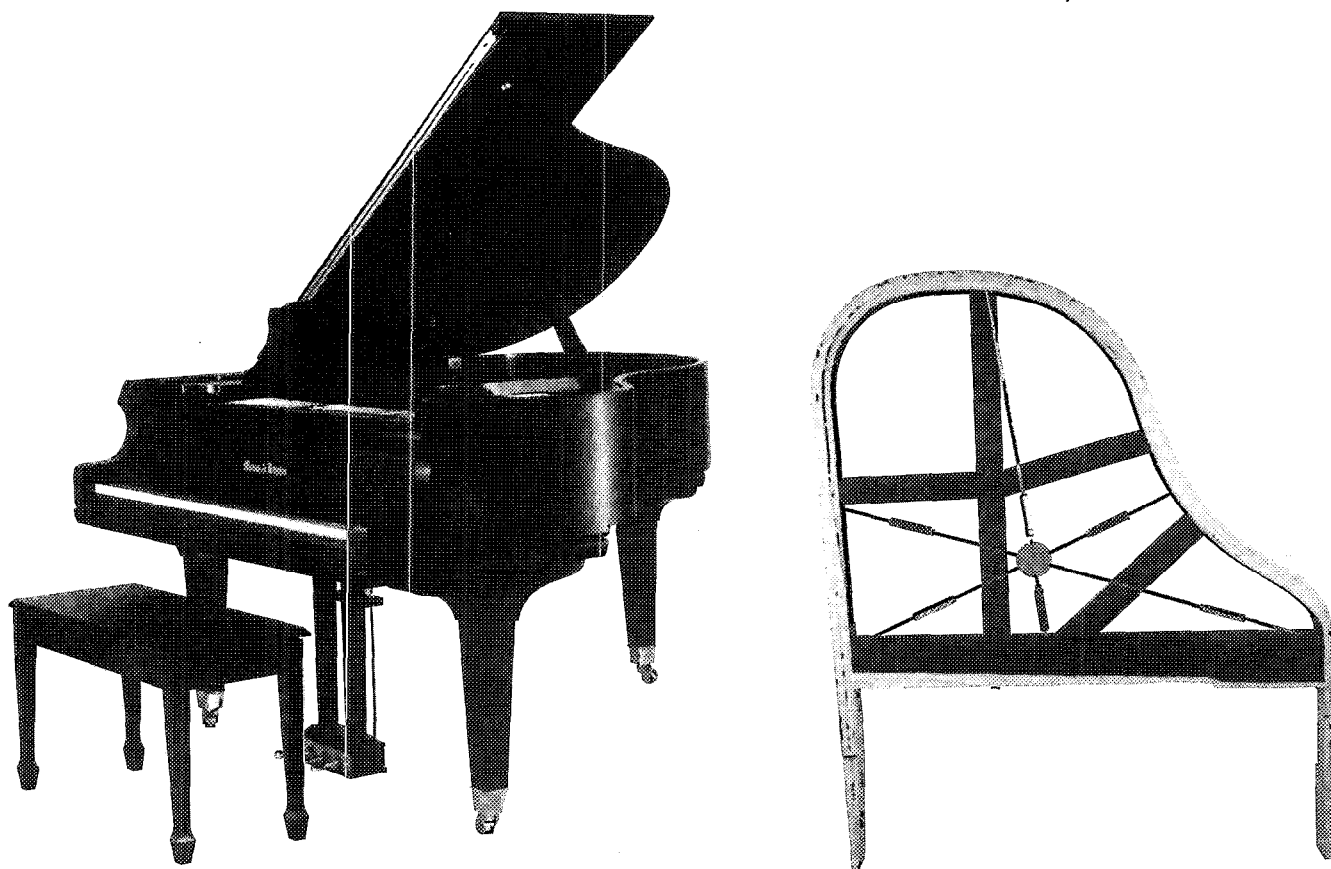
Holiday Inn Select, Richmond, VA
Contact: Alan Hallmark, (804)346-8068
email: pianomanadventures@erols.com
Or Contact: Lewis Spivey (919)937-4777
15 Rachel Dr., Nashville, NC 27856

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.

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Tech Gazette

Yamaha Service

July 1998

Yamaha Music Manufacturing is one of the newest, most modern and efficient piano manufacturing facilities in the United States. Over half of the Yamaha pianos sold in the U.S. are manufactured in Thomaston, GA.

Two products that have not been mentioned and also are manufactured at YMM are the Disklavier® and MIDIPIANO™ models. Due to the unprecedented success of the Disklavier throughout the world, production of "digital/acoustic" pianos has been a part of the daily activities for several years at Thomaston. Almost every model of Yamaha piano is now made in three different ways: the traditional acoustic piano, as a Disklavier model and also as a MIDIPIANO.



disklavier®

The Four-In-One Piano:

1. It is a traditional piano, one that plays, sounds and feels exactly like a traditional piano.
2. It is a reproducing piano, playing back recordings of your children, to the world's greatest musicians via a 3.5-inch floppy computer disk.
3. It is a recording piano that records any performance for immediate playback or posterity.

4. It is a MIDI piano that can interface the traditional piano sound to the world of electronic music.

MIDIPIANO™

The Other Four-In-One Piano:

1. It is a traditional piano, one that plays, sounds and feels exactly like a traditional piano.
2. It is a MIDI instrument. Fiber optic sensors convert keystrokes into digital information, which can be sent to external tone generators, sequencers and computers.
3. It has an onboard digital piano with the sampled sound of a concert grand so that when the hammers are blocked from hitting the strings, the digital piano sound can be heard through a headset.
4. It is an "audio out" piano where the sampled concert grand sound can not only be heard in the headset, but also recorded on a tape at studio quality or amplified without the problems associated with microphones.

All Yamaha studio or console pianos sold in the United States and made in the last 10 years, whether traditional, Disklavier or MIDIPIANOS were manufactured at Yamaha Music Manufacturing.

Stay tuned for next month's information from Yamaha Music Manufacturing.