Piano Technicians Journal

September 1983

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Piano Technicians Journal
Official Publication of the Piano Technicians Guild

September 1983
Volume 26, Number 9

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PIANO TECHNICIANS JOURNAL (ISSN 0031 9562), the official publication of the Piano Technicians Guild, is published monthly and issued to members. Annual subscription price: $85 per year; $155 for two years; $7.50 per single copy. Editorial Offices: 1515 Dexter Avenue North, 4th Floor, Seattle, WA 98109. Telephone (206) 283-7440 or 282-1991. **Closing date for copy and advertising is six weeks prior to date of publication.** Advertising rates are furnished on request. POSTMASTER: Send address changes to **The Piano Technicians Journal,** 1515 Dexter Ave. North, 4th Floor, Seattle, WA 98109.

Reprints of most articles are available from the Guild home office, 1515 Dexter Avenue North, 4th Floor, Seattle, WA 98109. Price per page (plus postage): $1.25 for the first page of each **Journal** article researched, $1.00 for additional pages of the same article. **Second class postage paid at Seattle.**
US ISSN 0031 9562 Foreign and Domestic.

THE PIANO TECHNICIANS GUILD, INC.
1515 Dexter Avenue North, 4th Floor
Seattle, Washington 98109

Telephone: (206) 283-7440
282-1991

Office Hours: (Pacific Time)
Monday — Friday
9:00 a.m. — 5:00 p.m.

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Editorial

Don L. Santy
Executive Editor

President Ernie Preuitt had an interesting bit of philosophy in his President's message in the August issue which started me thinking about failure. It starts out with "If you think you are beaten, you are," and goes on from there.

Do you know anybody who has never failed? I don't. I doubt if there is a human being on the face of this earth who has not failed at something. It's what you do with that failure that's important — not whether you actually failed or not. I can think of countless examples of failures that were turned around and became successes. It seldom happens by accident, of course. There is almost always imagination, guts, and plenty of ambition present. These are some of the ingredients that turn failure into success.

Sir Walter Scott, Thomas Edison, Robert Burns, Daniel Webster, Henry Ward Beecher and Frederick Froebel were all regarded as dumbbells by their teachers. Irvin S. Cobb was a flop as an insurance salesman and at the close of the first day on his job the boss called him in and said with tragic finality, "Sir, you are not cut out to sell insurance. Good day." I remember Irvin Cobb as the portly gentleman who said, "I shall lift mine eyes to the hills, but my body, never." His body, of course, would have certainly failed had he tried to climb a hill.

Grant stood 156th in his class at West Point out of 223 graduates. The Duke of Wellington was considered the dunce of the family and Lincoln often had difficulty spelling the simplest words. (For years he spelled "very" with two "r"s and up until the time when he entered the White House he spelled "opportunity" with an "e".)

Richard Wagner was told by his first piano teacher that he would never amount to anything as a musician, and Charles Darwin's teachers considered him dull and slow and placed him at the bottom of his class.

I can remember reading about Thomas Edison, when he died, that his teachers had often boxed his ears because of his slowness and inattention, and it later affected his hearing. He often lost jobs because of daydreaming and lack of attention to his duties. He was considered a dullard as a student. Even Einstein was considered slow and cumbersome in both thought and action. People often mistook this quiet genius as retarded and backward. Humility is often mistaken for dullness and lack of intelligence. Albert Schweitzer, the great humanitarian and naturalist, was considered odd and avoided by many.

What would history reflect now if these people had taken others too seriously and just stopped because of their opinions? Suppose they had turned dull simply because people called them dull. What losses to mankind if they had considered themselves 'beaten' because they didn't live up to others' expectations, and simply adjusted to failure?

Franklin Roosevelt failed his final exams in Law School. The son of Robert Kennedy did the same. Have we heard the last of him? I'd be willing to bet we haven't.

When Abraham Lincoln was a young man he ran for the legislature in Illinois. He was badly swamped. He next entered business, failed and spent the next seventeen years paying off the debts of his worthless partner.

He fell in love with a beautiful woman to whom he became engaged — when she suddenly died.

Later on he made a mistake and married a woman who became a constant burden and embarrassment to him. Entering politics once again, he ran for Congress and was badly defeated. He tried to get an appointment to the U.S. Land Office and failed at that. He soon afterward became a candidate for the U.S. Senate and was once again badly defeated. In 1856 he became a candidate for Vice President and failed. In 1858 he was defeated by Douglass. But failure after failure did not deter this great man.

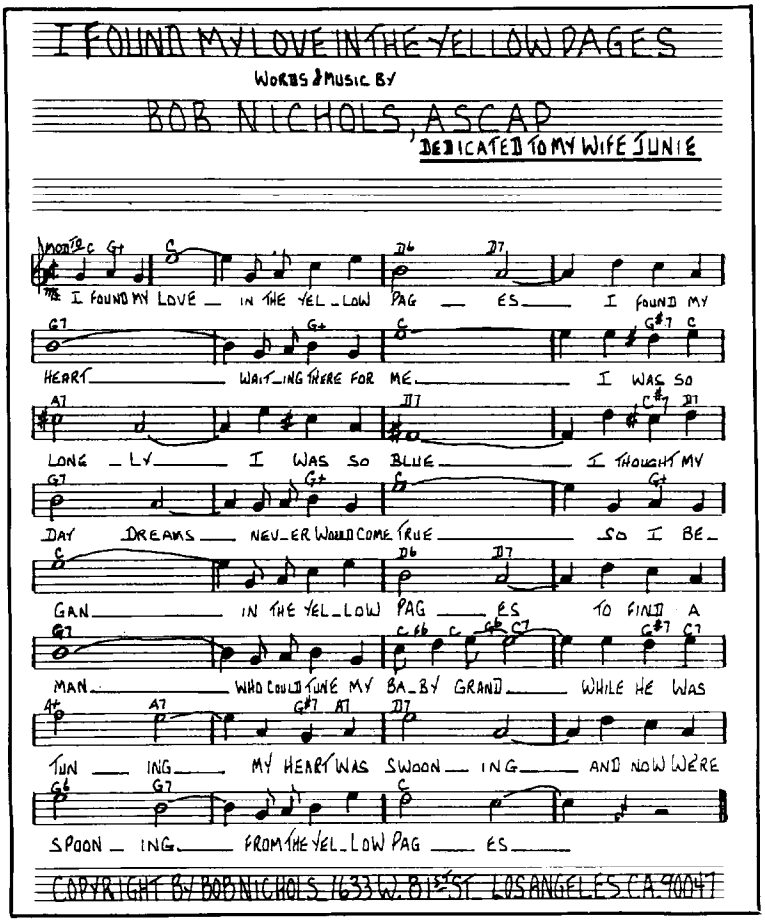
He rose to become one of the greatest figures in our history, if not the very greatest. He has served as an inspiration to countless generations of young and old alike. He suffered untold anguish through organized hate campaigns and personal vendettas against him. He was immersed in extreme sorrow by the loss of his beloved son Todd and lived through the rantings and ravings of his insane wife, and survived it all. His wisdom, his compassion, his homey philosophy, his great capacity for humanity are an example to be treasured throughout the future of mankind. His tragic end was probably brought about by his total trust in those around him — a trust which made him both great and vulnerable at the same time.

Dear Don:

Enclosed is a copy of my latest song. I sent a copy to the Yellow Page Headquarters in San Francisco and they called me on the phone to get my permission to print copies for their employees, which I gladly obliged, stating that I wanted all the publicity I could get.

It also happens to be a true story as this is how I met my present wife. She called me to tune her Hardman Grand and we were married May 5, 1982. That's right, I'm a newlywed. Lost a wife in 1975. I imagine a lot of tuners might get a kick out of my lyrics.

Fraternally yours,
Bob Nichols, L.A. Chapter



President's Message

Ernie Preuitt
President

While the recent trip to the Orient is still fresh in my mind, I would like to make a few comments. I have asked Anne Doerfler to write of this in detail, so will only touch on a few thoughts.

It sometimes gives one an eerie feeling to know that the Communist North Koreans are only forty miles distant; but from all appearances, in South Korea it is business as usual. Our guide, Mike, gave us many insights into life in Korea, and delivered us to Semic, Young Chang piano factory, and other places on time.

We were met in Japan by Kamiko, a lovely and beautiful girl (who after three days started calling me Ernie), who really knew her way around. I'll let Anne tell you about our reception at Yamaha and Kawai, for I feel completely inadequate to describe it.

It was all too short a time to spend in Japan, but China was calling. We visited three piano factories while there, and at each one the welcome was overwhelming. Cloisonne, china, porcelain, were showered upon us, but most of all, I really believe they were most happy to see us.

Ji, Liu, and Shao were with us constantly, and their service and concern for us will never be forgotten. Liu and Shao, both members of the International Trade Research Institute, planned the complete tour of China and Ji Bing, with the International Tour Service, attended to all the details. In addition, in each new city we entered, we had the local tourist guide plus other members of the trade commission, technical service people, foreign trade people and others. I felt we were well chaperoned and provided for. With them present I felt safe and secure, but above all I felt welcome, for we were welcomed every place with a handshake and a smile. Most breakfasts were OK, but noon lunch and evening dinner was almost indescribable. I do know that had I eaten with knife, fork and spoon, I would have been overstuffed at every meal, therefore I stuck with chopsticks, for I could eat no way but slowly.

Yes, this was an adventure few people will have. Not everyone can see the

beauty and mystery of the Orient, and also see the factories where the people are going through their daily tasks.

Yes, it was great to have had this opportunity, but it would have been impossible for any of us had we not been members of the Piano Technicians Guild!

. . . The twenty-sixth annual convention of the Piano Technicians Guild is now history. As always, those attending experienced a "high" which will sustain them, we hope, until the next one.

More about the convention will appear elsewhere. If you are not a member, we hope you will be by the time we see you in Indianapolis in 1984.

The International Scene

Fred Odenheimer, Chairman
International Relations Committee

Japan Impressions

While the technicians had their business and technical meetings, their spouses were entertained by their Japanese counterparts, the wives of the Japanese piano technicians. From all the reports, it seems that our ladies had a wonderful time.

No visit to Tokyo seems to be complete without touring Asakusa, a Buddhist Temple, Shinto Shrine and "country fair" rolled all into one. You have everything there, including a *pagoda* and a *torii* (a spiritual entrance and exit gate), and you can spend your money right there in the stalls where all kinds of merchandise are offered — that is, if you do not prefer to go to the Ginza to shop in one of the beautiful department stores.

Next stop for the ladies was Ueki-Somyo for a demonstration of the tea ceremony, *origami* (paper folding) and flower arrangement. There Mimi Drasche was dressed in a *kimono* by two assistants, and, I was told, she was made into a real good-looking and authentic "Madame Butterfly."

Chinzan-so Gardens for lunch is another wonderful spot — good eating and pleasant surroundings. Your attendant is preparing a meal right in front of you on a *hibachi* and you, wearing a full apron for your "protection," are waiting to be served. A stroll through the beautiful gardens after the meal concludes a delightful experience. Needless to say that our "better halves" were back with us for the banquet in the evening.

Perhaps I should just mention some of the high points of the IAPBT tour. First there were the community baths in the Atami hot springs — ladies and gentlemen separate — which was the start of the later daily *sake* sessions, admission only if you were dressed in *yukata!*

Next, the town of Gifu and cormorant fishing after dark. We sat on the banks of the Nagara river watching the fireworks and the trained birds diving for fish but prevented from swallowing them by strings tied around their necks. Hotel International In Kanazawa with some guards already in place for a later visit of the emperor. No guests were allowed in the hotel for four days before and four days after the visit of the emperor.

In Kobe we stayed at the oval-shaped Hotel Portopia situated on recently filled ocean grounds, with a fully automated elevated train going into the city proper on a regular schedule. Then, the always delightful and Western-oriented city of Kurashiki with its many museums along the tree shaded canal — amongst them the Ohara Museum of Art and the Folklore Museum with the motto by its 89-year-old curator: *"Usability Equals Beauty."* Also in Kurashiki, Japanese families opened their homes to group members. The experiences of our people were as varied as the homes that were visited. And we cannot forget our impressions of Hiroshima; we can only hope that the world and its leaders will remain sane.

THE TECHNICAL FORUM

Jack Krefting,
Technical Editor

Metric System

One of the things I've been intending to address is the question of the eventual adoption of the metric system of weights and measures in this country, and what that will mean to piano technicians. The conversion is proceeding at a much slower rate than had been widely predicted, partly because of general resistance to change and partly because the industrial tooling changeover costs are much higher than expected. It appears likely now that conversion won't be complete much before 1995, and maybe not even then.

It *is* coming, though, and in terms of this magazine we need to decide whether to encourage early conversion by using metric dimensions now, or to hold onto our beloved inch/pound system as long as possible. I would appreciate reader comments on this issue.

VERTICAL REBUILDING

Case Assembly

While the back assembly is in the rebuilding process, the case parts have been gathering dust in a corner, maybe, or possibly are being refinished. In either event, it is now time to reassemble the case around the strung back assembly. If refinishing work has been done, be sure the finish is dry enough to withstand the pressure of the padded clamps; otherwise there will be press marks on the sides.

Usually when the sides are removed there will not be a clean break along the glue line, but rather some of the veneer from the inside surface of the side panel will have transferred to the side of the end backpost. In that case it is next to impossible to remove all the old glue, so one must either reglue without scraping, a questionable practice at best, or bite the bullet and scrape all the veneer and glue from

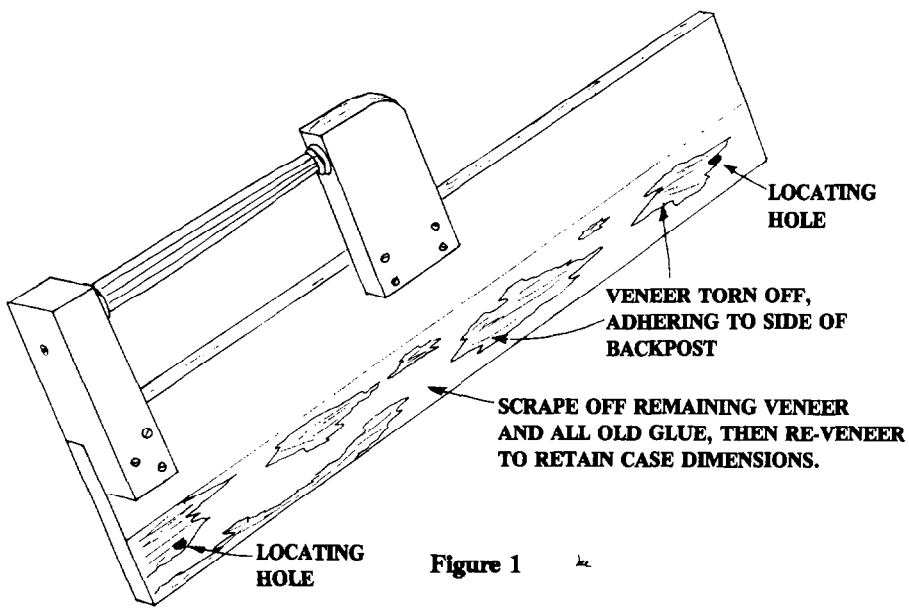


Figure 1

both mating surfaces. Be sure to replace the veneer on the side panels, though, or the case dimensions will be altered — the case will become slightly narrower and the keybed won't quite line up. **Figure 1** illustrates this point.

Some pianos have tooling holes and dowels to align the case sides with the back. This not only assures accurate positioning of parts, but also prevents them from sliding on the glue film when clamping pressure is applied. This feature can be added to any case if the technician has a pair of dowel centers, as shown in **Figure 2.**

Before gluing the sides to the back, make a dry run with the keybed, arms and bottom rail in position to be sure of the alignment. On some instruments it is easier to leave the arms attached to the sides when the piano is disassembled, while in others it is easier to remove the keybed and arms as a unit. Generally speaking, one or the other of those joints will be screwed only, not glued, and that would be the logical one to take apart. Naturally, if measurements were taken and reference marks made before disassembly, reassembly becomes a much easier task and there will be fewer regulation problems later.

Use a glue that allows plenty of working time, such as resorcinol, so that

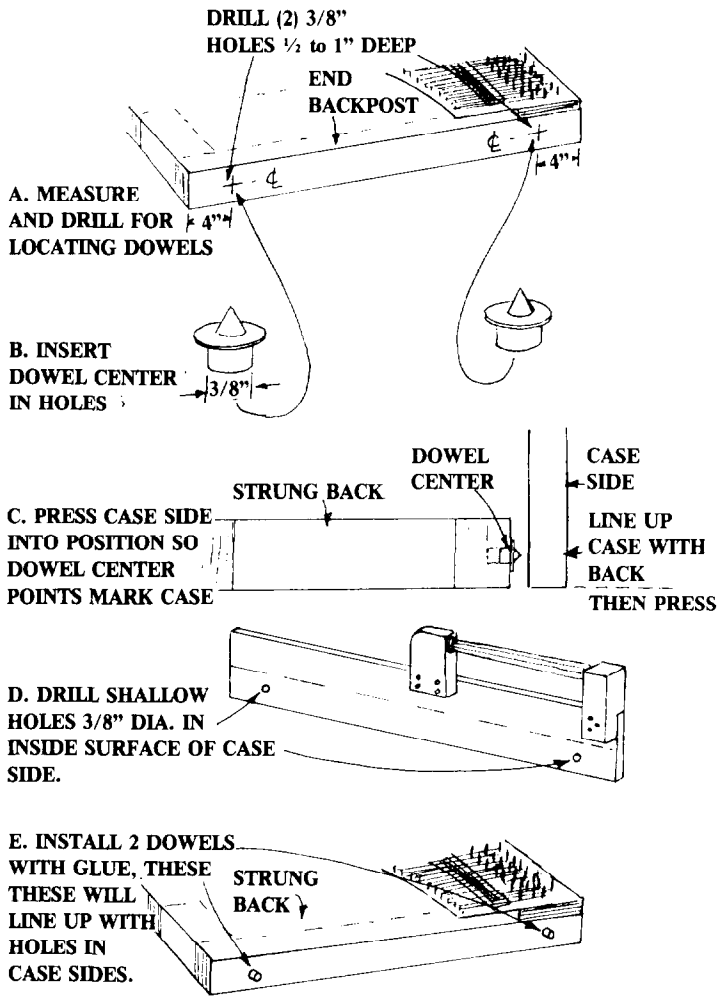


Figure 2

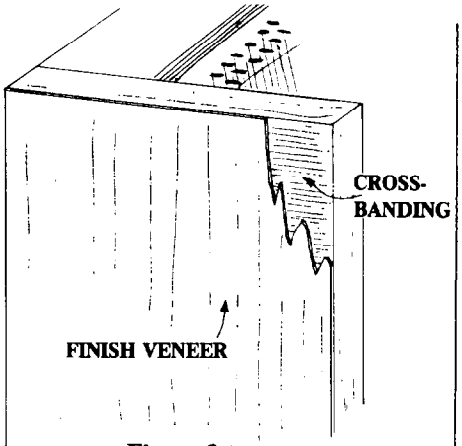


Figure 3

there will be no problem if it is not possible to tighten all clamps immediately. It is a good idea to apply some pressure, install the keybed and bottom rail loosely at least, and then finish tightening the clamps.

Many pianos have a protrusion on the plate that allows for stiffening of the keybed by means of direct attachment; this will usually be too low so that shims may be added to support the rear middle of the keybed. Add shims as necessary to make the keybed flat, and fasten it securely to the plate. If there is a separate stiffener rod from the bottom of the plate to the underside of the keybed, install that now as well. Check to be sure that it cannot touch any strings or bridge pins.

At this point, suggests one wag, we should cut the tops of the sides and install the mirror with the two plastic stars — the curtain of obscurity will mercifully be drawn over the rest of that scene, I hope.

Although it is not our intent to cover refinishing techniques here, since we are supposed to be woodworkers we should talk a little about veneer patching. There are a number of ways to do this, some of which involve tricky inlay work, but others are quite easily done by almost anyone. **Figure 3** shows a typical veneer tearout on a corner of the case, where the crossbanding has not been disturbed. To repair this, first scrape the old glue from the crossbanding and sand the edges of the old veneer so they slant toward the damaged area as shown in **Figure 4.** Be sure there is no loose veneer in the surrounding area by snapping it with a fingernail; a uniform thumping sound indicates good adhesion, while loose areas will produce a higher frequency clicking sound.

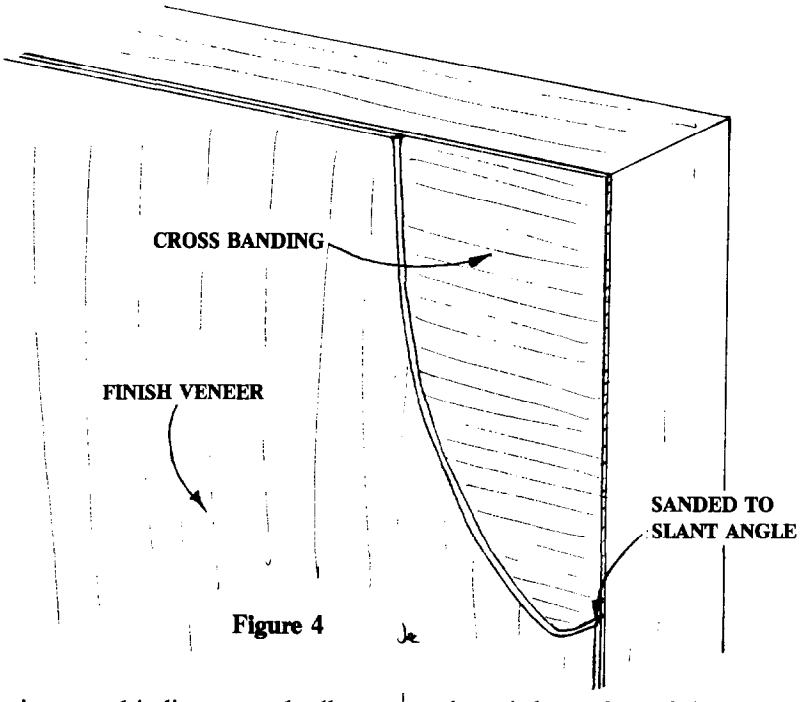


Figure 4

Now select a piece of veneer that is at least as thick as the existing material and try to line it up so the grain features match as much as possible. Make a caul with wood and backrail cloth as shown in **Figure 5,** so the cloth outlines the damaged area only, because we will be making what amounts to a semi-scarf joint and we will need springy cloth to force the veneer into every little void. If the existing veneer is thicker than whatever veneer is currently available, use two thicknesses and sand it down to the proper level later as shown in **Figure 6.**

Curved surfaces are more difficult in that they are harder to clamp, but otherwise they present no particular problem. The part that is time consuming is the making of the gluing caul, shown in **Figure 7,** in convex or concave configuration to match the shape of the damaged area of the case. Regardless of the above, unless the new veneer is actually inlaid, with a butt joint between it and the existing material, the backrail cloth is essential for a good glue joint. Incidentally, the veneer should be lapped so that end grain is never visible from the front or top surfaces.

When the glue is dry, remove the clamps and caul. Trim the overhanging edges with a hobby knife or razor blade and sand the surface of the new veneer until it is flat and level with the old material.

Duo-Art Roll Alignment

QUESTION:

Dear Jack:

I'd greatly appreciate help in solving a problem with a 1928 model Steinway Duo-Art grand. Both on play and rewind, rolls will not move in a straight line; rather, the paper creeps left to right to left to right, etc. Consequently, roll edges are being chewed up — it's particularly disastrous with the brittle paper of older rolls. The piano's owner says it has always mangled rolls.

On this model the feed spool and take-up spool are fixed (only the tracker bar shifts). I've tried changing the spring tension for the feed spool, shimming the take-up spool, adjusting the position of each spool, and combinations of these. I've also checked to see that the roll was positioned and wound properly on the feed spool . . ."

Bob Tomm, RTT
Hermitage, Pennsylvania
Erie Chapter

ANSWER: *I don't work on players, so I decided to ask Durrell Armstrong if he would try this one. Here is his response:*

Here is the answer to Bob Tomm's problem: Steinway Duo-Art grand in

mistracking rolls.

Most Duo-Art players have the same system of tracking rolls as in the foot-pump variety of Aeolian, which is to shift the roll being played by means of a cam controlled by a double pneumatic, bleed balanced through bumping the tracking ears above the tracker bar.

I have seen only one of the very late model Duo-Art grand mechanisms which was produced in very limited quantity, after being completely redesigned some time in the mid-30s, I believe. This had all controls contained in the spool box (no more linkage to the key-slip) and most of the pneumatic parts scaled down in the one unit sitting above the piano action. It had easily removable junction blocks for the tubing behind the cheek blocks (no more tubing through the key bed). The tracker bar had a center movable section to transpose the notes, while the expession holes remained stationary. If I remember correctly, this model also switched to the four-hole tracking system previously used almost exclusively on all Autopiano and Standard action players, so it did away with the tracking ear-valves. This late model Duo-Art may have pneumatically moved the center section of the tracker bar to accomplish alignment, rather than to move the top spool; I can't remember. But if this is the case, it still would not account for the problem of not winding up straight on the take-up spool, even if the tracking pneumatic were not operating correctly, since the alignment of the top spool would be constant in this case.

On all player spool boxes, if the roll piles up straight on the take-up spool during play, there should be no problem on rerolling damage to the edges of the roll. Rerolling a crooked wind-up can be hard on the edges of new paper since it forces realignment within the confines of the roll spools by riding hard on the flanges. It would be disastrous on old rolls with brittle paper. Sometimes on old rolls, rerolling is the cause of the roll being permanently warped. Then it is not the fault of the player mechanism. this can be determined by examining the old roll. Remove the loose roll spool and check the evenness of the paper. Tap it

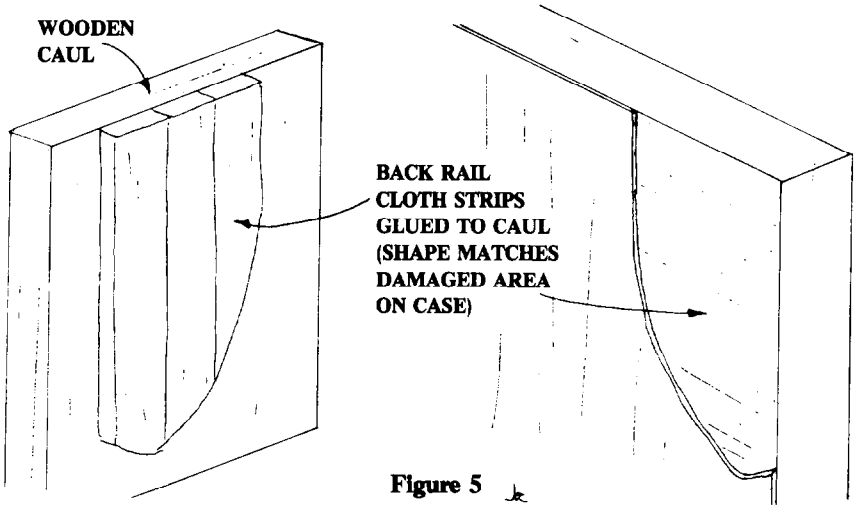


Figure 5

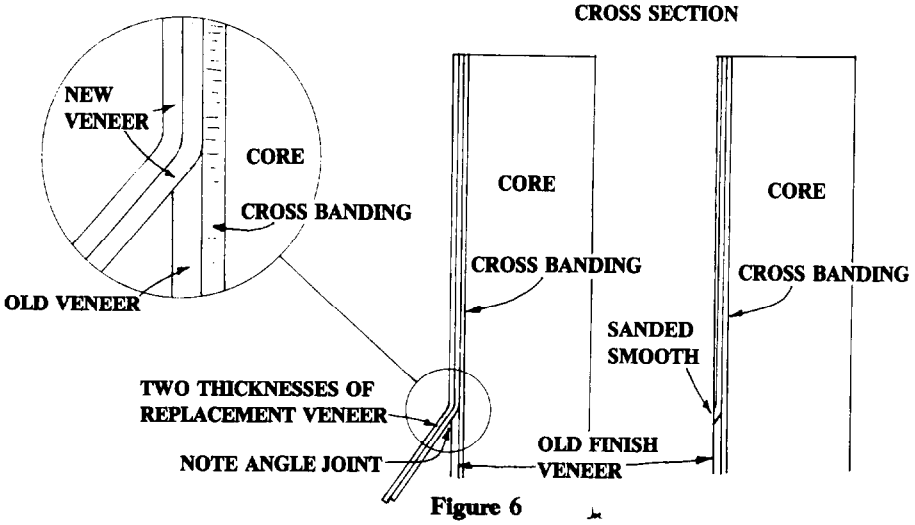


Figure 6

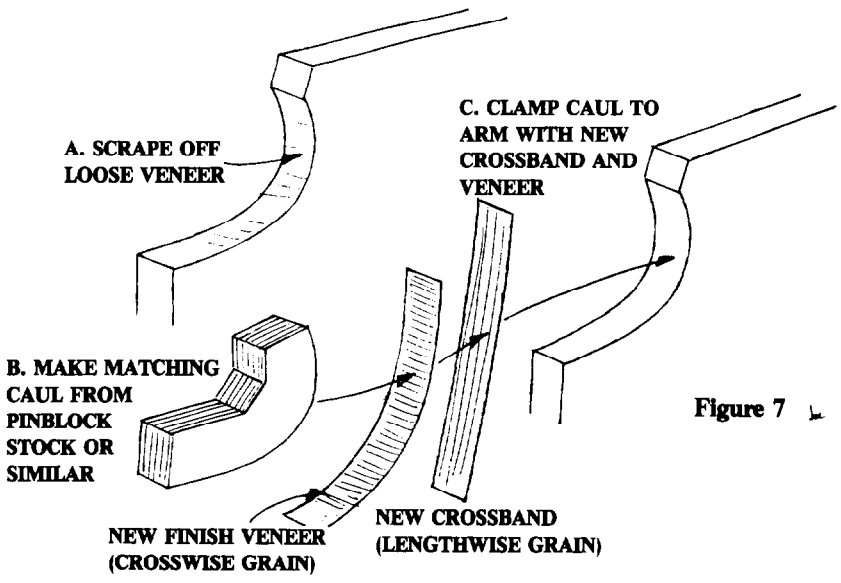


Figure 7

down after loosening, then tighten up the paper again; if bulges appear on the final twists to tighten, then it's warped. This is caused by being rewound crooked and lying in the box for forty years before it was put back into use again. During this time it takes a permanent "set" and little can be done to remedy the damage, except to try to straighten the rounds of paper now, and stop short of the tight winding that allows the bulges to pop out again, and hope that after a few years in this position the old paper will partially retrain to wind straight again.

For playing old brittle rolls, warped or not, the best advice I can give to avoid destruction of the edges is to stop the player before rewind and pull out the loose spool (tape the socket if it won't remain out about 3/16") and then rewind, letting it wander all over if it must and tap it down again before the next play. Also, relieving the brake tension on the take-up spool permanently will save the old rolls, but will require hand tightening after rewind, especially on the longer rolls.

There are several things that can be checked in addition to brake tension, which might cause this wandering of a roll on play.

1. Check take-up spool for side play.
2. Check for droop of both the take-up spool and music roll fittings, in relation to tracker bar. Both right and left sides must be equidistant from tracker bar.
3. Warped or bent tracker bar. Lay a straight edge across it. Brass warps with age. May need to be taken out and pushed straight and then laid on a belt sander, sanding lengthwise to take out remaining dips.
4. Also, any time there is unusually high vacuum in the player stack, except briefly, as with the Duo-Art expression intensities, it will cause the paper to drag on the tracker bar because of the same high vacuum passing through the bleeds in the tracker bar tubes. Without relief occasionally from this high vacuum, the paper can't occasionally slip on itself and more importantly can't slip horizontally on the tracker bar to get back in the normal alignment course. There are no music rolls that have paper tough enough to play continuously with a vacuum drag of over 20 inches water-lift vacuum without running crazy. Dry, waxed-type paper used on new recuts, as well as chain-bridging on the roll, helps overcome some of the problems, but it is still disastrous to old brittle rolls, even though all other conditions are set right. The intensity of stack vacuum on the Duo-Art ranges from about 7 inches water lift to 31 inches, with the exception of the Steinway Duo-Art which has a crash valve actuated by the expression accordions, so that when it reaches the 15th intensity, it throws it wide open to full pump vacuum.

Photo 1

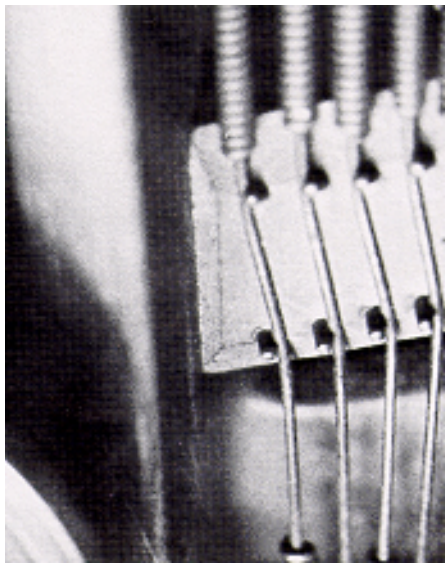


Photo 3

Photo 2

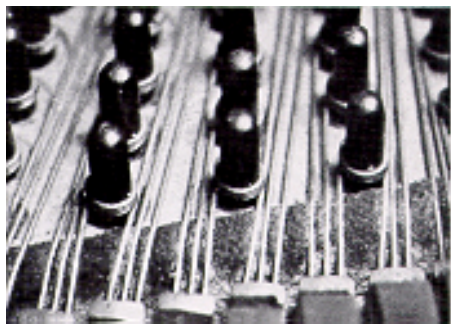


Photo 4

Mathushek Spinet Grand

The following illustrates one of the more unusual piano types of this century. It looks like a typical old square at first glance, except that the bridge arrangement is completely different, providing 90° crossing of strings between tenor and base where the squares had both bridges at the right side. When one looks further it becomes apparent that it has modern grand-type dampers, and that the Broadwood-style butts have been replaced by modern knuckles; it even has modern whippens with repetition levers. Here's Martin with a description, referring to Photos 1 through 4:

Dear Jack:

Enclosed are four photos of an unusual piano I serviced recently: Mathushek Spinet Grand #85165, made in 1936. **Photo 1** *shows a front view of the piano with a yardstick at left, and* **Photo 2,** *an overhead view from the right with a yardstick lying along the far end of the instrument. As you can see, the entire instrument is slightly less than 36" deep. The bass bridge carries notes 1-31, with 1-20 being single strings. There's very little tone on the lowest four or five notes, and* **photo 3** *shows why. The soundboard crown has dropped to the point that the end of the bass bridge is resting conveniently against a plate strut. How much further it would have dropped without this support is anybody's guess. The treble*

bridge is entirely triple strung in plain wire. I took the following string measurements on E32 and C88, the ends of the treble bridge: E32: length 31", diameter .042; C88: length 1 15/16", diameter .030. Using Dr. Kent's formula $T=0.002313\ f_o^2L^2d^2$, *I get tensions of 106.5 lbs. and 136 lbs. respectively for these two strings.* **Photo 4** *shows the tuning pin-string crowding in the trichords, which made unison tuning a bit of a chore. This piano was bought new by the current owners from Weber's Music Store on 57th St. in New York, and the two tunings I did on it were the fourth and fifth the piano had ever received. "It didn't really start sounding bad until the last five or six years." Now, That's Incredible!!*

Unusual Agraffe Repair

The following was sent in by Paul Bergan, who has made something of a specialty of agraffe work in recent years:

In a Steinway Grand the top of an agraffe broke off. The technician tried to drill out the bottom portion using his electric hand drill but the very small bit broke off. The result: a hopeless, almost impossible repair!

At this point I became involved by a long-distance call from a Piano Technicians Guild member in Nashville, Tenn. Willard Sims had told him to contact me.

The very hard steel of a broken drill bit or "EZ-out" in a broken agraffe is an almost impossible repair so I advised him not to try to do it himself, but engage a first-class machinist so he wouldn't further damage this expensive piano. Our phone conversation ended, however, with my feeling that he would try unsuccessfully to drill it out himself.

What a pleasant surprise! The next day he phoned to thank me for the advice given. He was able to engage a widely experienced, retired machinist who came over at once, analyzed the damage, took precise measurements and then left, he said, to construct the tool he would need for this job.

He came back with a special cutter **(see Figure 8)** *which the technician attached to his electric drill. He held the cutter in place with the guide sleeve so it would cut the softer brass around the very hard broken bit in the center. When he was through cutting he could see that the threads in the plate had hardly been touched by the cutter — in fact, he merely cleaned off the threads and twisted on a brand new agraffe! During the cutting process the technician stopped the tool several times in order to clean or blow out the brass flakes that piled up and clogged his vision. The cutter O.D. is 0.198", which is between 3/16" and 13/64".*

Paul Bergan, RTT
Port Bolivar, Texas
Houston Chapter

Technical Tips

Our first tip is related to the Jameson method outlined in our July 1983 issue in that it involves a method of gang-filing hammers that are not fastened to an action rail, but it is different in that it refers to vertical hammers that are not yet shanked. Here's Don Farrar to describe his method:

This may not be new, but I find it useful. For filing a new set of upright hammers I use a Black & Decker Shopmate workbench in which the whole table acts as a vise. About half the hammers can be filed at once this way, with equal access to both sides, and no fear of breaking shanks, and no problem with bore angles. I tacked a furring strip to one jaw to act as a stop, making sure the strip was slightly narrower than the hammer moldings (see **Figure 9** . . . ed.) *and put the hammers in, tightened the jaws, and filed . . .*

Don Farrar, RTT
New York City Chapter

Don sent along a photograph also, seen here as **Photo 5,** which should help us to visualize his idea. This is actually almost identical to one of the factory procedures for preliminary filing of hammers right after they are cut apart. The big advantage of this kind of setup

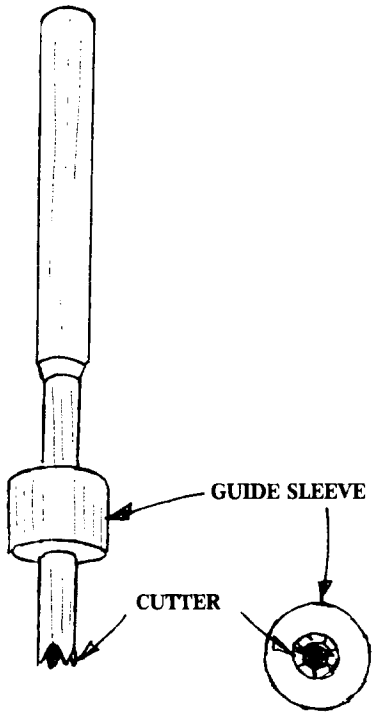


Figure 8

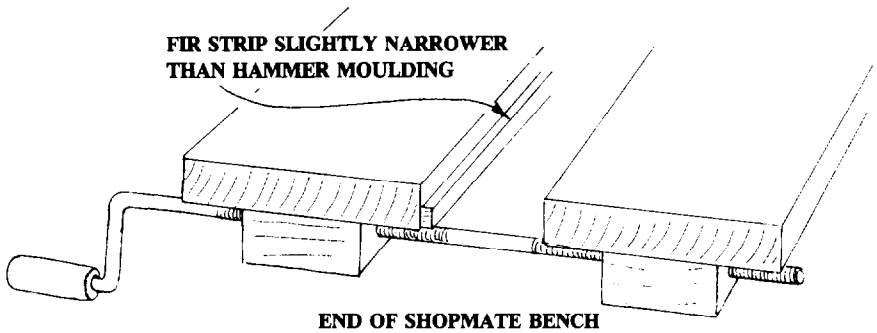


Figure 9

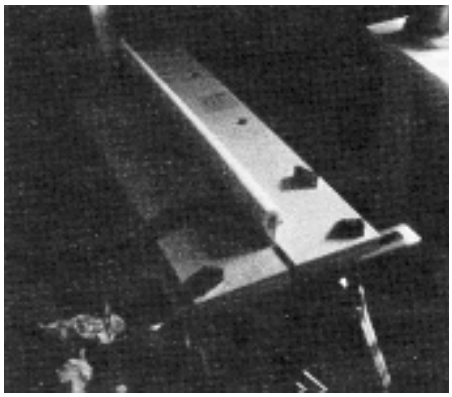


Photo 5

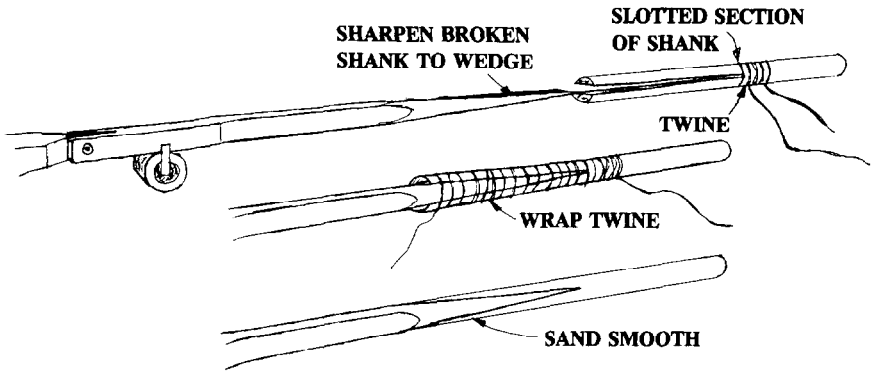


Figure 10

is that the hammers have a much better chance of being filed straight, with nice crisp edges, as opposed to the individual filing that would have to be done after they were already hung, at least in the lower half of the scale. Naturally, this can only be a preliminary filing because it is not feasible to start a tone regulation before the hammers have been hung; but if this method allows for less filing later, which means less chance for crooked filing, then it is certainly worthwhile.

Our next tip, submitted by L.E. Minton, is a variation on a theme by John Ford; but where Ford's fixture held a broken shank so it could be sawn on an angle for a scarf joint, Minton makes a sort of finger-joint. The big advantage of the Minton method is that, because the new piece of shank is sprung so that it pinches the old piece, no clamps of any kind are required. It is necessary, however, to temporarily wrap the new piece with thread to prevent splitting. **Figure 10** illustrates the principle, and here is Minton's account:

Enclosed is a sample of a finished shank repair that is effective and easy. As you probably know, there are times when a broken shank is next to impossible to replace due to outdating and otherwise unavailability. I do not claim originality for this slick repair, having used it for thirty-five years, and do not remember where I got the idea. There is some preparation for this and it is reasonably simple.

I try to carry a few new upright shanks that have been slotted about two to three inches, preferably with a band saw. This can be done with the shank in a vise using a hacksaw; then with folded sand paper smooth out the inside of the slot. (See **figure 10** . . . ed.)

Sharpen the broken shank to a gradual wedge shape, and sand smooth. Wrap twine around the new slotted shank at the end of the slot. This will prevent it from splitting out when the sharpened old shank is applied, with glue. Wipe off excess glue and wrap the twine the rest of the way up the splice. After an hour or so remove the twine and sand the joint smooth. I much prefer this to the "Universal" flange-and-shank that is commonly used for these difficult and/or impossible replacements. It is solid, lasting, and the shank can be cut to proper length after the joint sets up. I have success sanding and shaping the finished joint using a regular sandfile.

L.E. Minton
Clayton, North Carolina
Research Triangle Chapter

Reader Comment

"I see in the April issue that Samuel Nock wants pianos to be made with built-in cracks in the soundboard. He cites his observations of the apparent steadiness of cracked boards, and goes on to contend that a soundboard with expansion joints would be more durable and more pitch stable than a solid board, as the humidity fluctuates from season to season.

"My own observations tell a different story.

"The cracked boards that I work with go up and down with the weather just like the solid ones. Moreover, pianos with cracked boards are sometimes more difficult to tune because cracked boards flex in unpredictable ways. But even if Sam's picket-fence design were stable in maintaining pitch (though I don't think a crown would be possible), it would be a structural disaster. The ribs would all come loose.

"The big problem in wood joinery comes when the wood moves during swelling and shrinking. Cross-grain glue joints shear apart under this great force. That's why ribs loosen at the edges of the cracks. Traditional cabinetry deals with shearing force in three ways: first, by not gluing at all, as in paneled door construction, where the broad pieces are left entirely free to move; second, by increasing the gluing surface, as in plywood construction; and third, by gluing up solid joints but giving the wood an alternative direction to move, as in crowned piano soundboard construction.

"Traditional soundboard design allows the belly to warp up and down while severely restricting lateral movement of the wood. *The design actually keeps the board from coming apart,* except under the most extreme conditions. Naturally, even under average conditions, poorly made boards break down fairly soon, but that's a matter of poor craftsmanship and materials.

Good boards, however, don't come apart until age begins to rob the wood of its resiliency. They don't crack until the wood fiber loses its spring. Age notwithstanding, exceptionally well-made pianos can put on a remarkable performance.

"The solid spruce soundboard is the simplest, strongest, most stable design

possible, in my opinion. The only way to improve its function and durability is by quality control in the factory and humidity control in the home.

"Now that I've been so contrary with Sam, let me agree with him on a point. This whole business of shimming old soundboards is a waste of time and money. We should stop doing it. I remember someone saying sometime back that you can congratulate yourself on having done your best if your shimming lasts three years before opening again. We know very well that most times the results are much worse. Do you think your customers would be impressed by a three-year guarantee?

"A crack is not just an item of damage to be repaired. It's really best seen as a *symptom* of general deterioration of the wood itself. Quite a few rebuilders now, me included, are going almost exclusively to new soundboards. It doesn't take a factory to make them. I make my own in a small shop with inexpensive equipment, and I believe this is what the future holds for all rebuilders of any stature. It's the coming thing.

"I doubt we will be building boards of Sam Nock's conception, but I wouldn't get mad being shown to be wrong. How about somebody making a lattice-work soundboard and finding out?"

Clair Davies, RTT
Lexington, Kentucky
Bluegrass Chapter

Our thanks to both Sam Nock and Clair Davies for sharing their divergent views on the same topic. I expect the debate will continue for the simple reason that we don't have all the answers, and probably never will. I have a few thoughts to add, however.

The biggest problem with shimming is that it is difficult to do well, especially when there are textbooks in print telling technicians to spread the cracks rather than cutting them. Well-meaning instructors have unfortunately advocated all sorts of shimming techniques that are simply wrong from a woodworking standpoint. I'm sure that Clair is talking about a pulpy, lifeless board which is full of compression ridges as well as cracks, in which case it would naturally by proper to replace the board. That is not the same as saying that every old board that has a crack or two should be replaced; we have all heard wonderful, singing tone from ugly old boards, and sometimes the pretty new ones don't sound as good.

If the old board has crown, it can be shimmed provided all of the crushed wood is removed and the shims fit the openings in a properly dried board. Such a glue joint is no different than the edge joint between planks in the board, and should be no more likely to open up later. If it does, then something is wrong with the process.

In Conclusion

We are sorry to see the end of Martin Tittle's excellent "Step by Step" series, and our thanks to him for an outstanding job. Equal thanks to Joe Meehan for his series on appraisals, which will conclude next month. I am sure we have all gained something from Joe's approach to this difficult area.

Please send all articles, technical questions, tips and other technical material for publication directly to me:

Jack Krefting, Tech Ed
Piano Technicians Journal
c/o Baldwin Tech Service
1801 Gilbert Ave.
Cincinnati, OH 45202

The Eclectic's Notebook

Christopher S. Robinson
Connecticut Chapter

etude

Writing a column for a medium such as the *Piano Technician's Journal* can sometimes be a very frustrating experience! This writer's point of view often turns to thoughts of taking pianos apart, and he must therefore exercise some restraint to prevent his communications from becoming more complicated than they really ought to be. Besides, this is a *troubleshooting* or *diagnostic* series, intended to produce a consecutive and progressive method of thinking about problems encountered in the normal course of piano service. Solutions to problems that require the disassembly of pianos must be referred to other sources who have communicated so well in past and present issues of this magazine.

Before we begin with the subject of this month's discussion, I would like to thank two sources for my knowledge of a new and effective approach to the subject of downbearing. George Krippenstapel, RTT, was so kind as to demonstrate to me the use of the device pictured in the third photograph, used for measuring downbearing. It was the Baldwin Piano and Organ Company who initially developed the "balance" approach for measuring deflection in the string band, produced by the upward pressure of the belly bridges. They offer a detailed discussion on this method in classes which are currently being presented at Piano Technicians Guild seminars and institutes around the country. Your attendance is highly recommended!

We left off last month with a discussion of piano string termination points as they were affected by the actual condition of the bridge gains (relief, notches), and the agraffe, or Capo (vee) bar. It is with a certain amount of trepidation that we proceed into a discussion of the superstructure, belly, or AMPLIFIER of our instrument without engaging in an examination of the angle at which the string approaches or addresses the agraffe and Capo bar. When the angle is not sufficiently pronounced, or steep enough, there will be a seepage or "leak" of the activity produced in the speaking length of the string into the front duplexing and damped off sections of the scale in question. This leak is extremely wasteful of energy and requires careful mechanical attention to correct. Diagnosis is fairly simple: taking the chip, or a guitar pick, pluck the string just in front of the agraffe. While it is common to get a very high partial of the note in question, you should not be able to hear the fundamental. In the Capo sections of the piano where there is often a front duplexing system, the high partials will be far more audible. In addition, the technician will also be able to faintly hear the fundamental. However, if the fundamental of the note rings through loud and clear, then the front duplexing bars or risers must be increased in height to provide a more pronounced angle at which the strings may address the Capo bar.

At such time as we have exhausted all of our alternatives regarding the integrity of our oscillator and its termination points, we must move next into the belly of the beast. As practical technicians, there is one thing that we can do to learn about the condition of the piano soundboard and bridges. We can measure DOWNBEARING. What is downbearing? It is the condition which results from the interruption and deflection of the string plane *away from the soundboard* produced by the pressure of the belly bridges. The conventional method of measuring downbearing is shown in picture one. Naturally, we assume that all three legs of our gauge

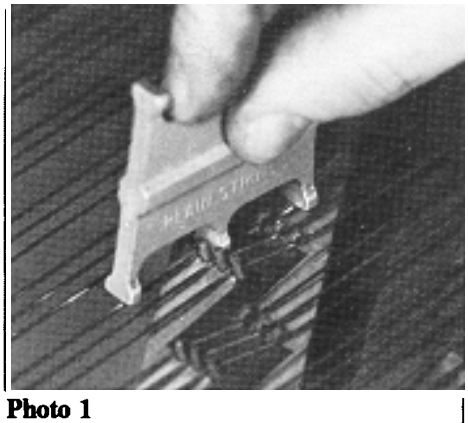


Photo 1

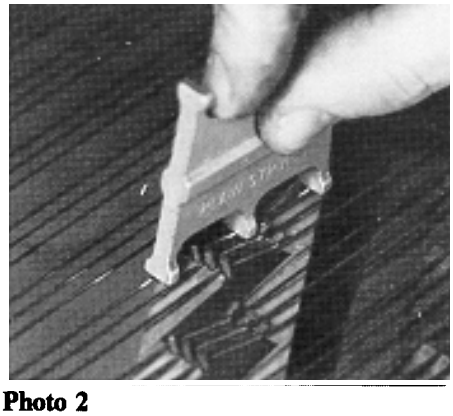


Photo 2

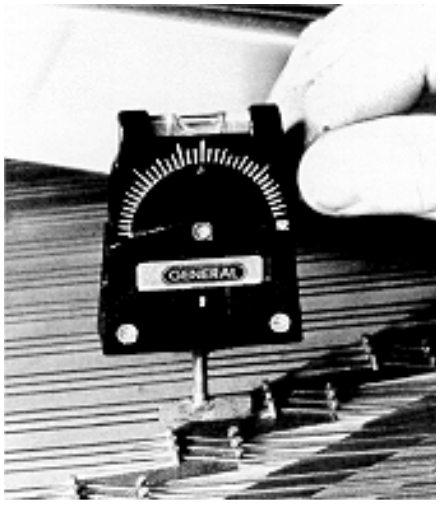


Photo 3

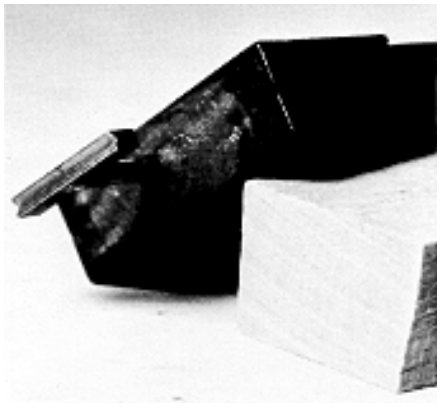


Photo 4

are perfectly level. Perhaps, if we are specification oriented, we might use a feeler gauge under the rear leg to ascertain exactly how much deflection we actually have. *However, to avoid being deceived, it is essential to follow a measurement which has been made at the front bridgepin* **(photo 1)** with a measurement also made at the rear bridgepin **(photo 2).** If we notice an increase of bearing when we move our gauge toward the rear, it means that there is a rolled bridge condition in the piano. When we have *no* bearing on the front pin, and *some* bearing on the rear pin, *the soundboard is almost certainly collapsed.* Furthermore, in all probability, the technician is actually looking at a negative bearing situation. One way to avoid being deceived by the traditional rocker gauge is to use a tool like the one depicted in **photo 3.** It has been made from a *protractor level* and some

Photo 5

brass stock. As you can see in **photo 4,** a small vee channel has been milled into the base of the brass bar. After the bubble has been leveled to the speaking

length of the music wire **(photo 3)**, the tool is moved to the back of the bridge. If the bubble moves TOWARD the bridge, a *positive* bearing condition is indicated, as we see in **photo 5.** If the bubble moves AWAY from the bridge, then the bridge is BELOW the string plane, and there is a *negative* bearing condition **(photo 6).** In almost every case, a negative bearing situation will also indicate the presence of a collapsed or distorted soundboard. However, we

It's The Little Things That Count!

Gerald F. Foye, RTT
San Diego Chapter

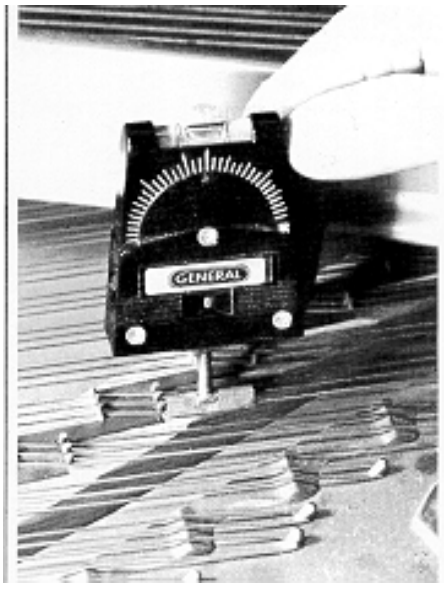


Photo 6

will have to do some additional research to determine if this is in fact the case. For the moment, and for the purposes of this discussion, let's operate by the following rule: if the soundboard and bridges are "healthy," we can proceed with the voicing operation; if they are not, the technician is wasting his/her time and frustrating the expectations of his customer in attempting to regulate the tonal output of the subject piano. There is no sense in putting new spark plugs in the family car when the problem is a blown head gasket. In order to produce the desired results, we must resolve the offending condition.

We'll pursue this line of thinking next month. Thanks again to Ray Zeiner for his photography.

Measuring distance by taking strides, or by utilizing the length of an elbow, or the spread of a hand, was suitable in times past, but not any more. Life in today's world is quite different.

Regarding the world of piano technology there are personal preferences as to how things should be done. Some technicians are not concerned with measurements. Some regulate actions totally in the customer's home while others prefer to do it in the confines of their workshops.

For those who use measurements, and especially those who prefer to do the work in their own facilities, precise measurements are critical.

One very important measurement which is necessary for proper grand regulation is that of string height. The method of taking that dimension determines its accuracy.

Here are some methods of taking string height. A simple arrangement involves the use of a pair of hammer shanks spliced together with a hammer shank repair sleeve. Crimp to make a snug fit, slide up to string, add a spot of glue for safety, use a set for each section where a measurement is required and mark them accordingly.

Another method is the use of an adjustable height gauge of some sort, from which dimensions are established and recorded. In the photo, a Jaras gauge is being used, although not quite in the manner intended.

Personally, I have found these scale markings not to be accurate enough. I prefer another method with which I can achieve an accuracy of about 0.005" (five thousandths of an inch). First, place the gauge on some sort of flat block. Use that same block at all times so that it can be removed from under the gauge, making it quite convenient to remove the gauge without interference. And don't forget to use that same block again when you re-establish the dimensions on your workbench with your let-off rack. Using a six-inch combination machinist's square with aircraft scaling, I take a measurement from the top of the gauge to the top of the scale (note: I am not using any readings from the gauge scale — only the reading off the square) and record. Go to the next section and so on. After making all recordings I double check by re-establishing those readings on the scale/gauge combination and sliding them back under the strings to make sure that all dimensions are correct.

Back in the shop, I can set the let-off rack very accurately — which means the action will need little touch-up work when reinstalled in the piano.

For cost savings, a similar arrangement can be made using odds and ends such as a wood block with a threaded insert and a long bolt with a locking nut. Ingenuity is part of the fun of this trade. For further information regarding the aircraft scaling and close tolerance measurements you might want to refer to "Shop Dimension," by Gerald F. Foye, in the August, 1980 issue of the *Piano Technicians Journal.*

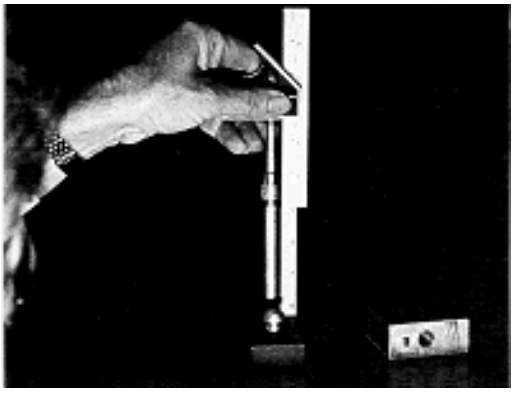


Photo 1
Taking measurement with a machinist's combination square for greatest accuracy.

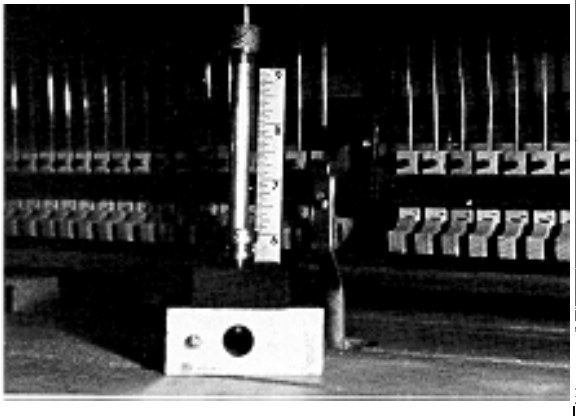


Photo 2
Measuring string height with an adjustable gauge. Note separate block under gauge. Removal of block makes it easy to then remove gauge.

Sound Background

Jack Greenfield, RTT
Chicago Chapter

Italian Baroque Harpsichord Music

Italian Composers of Baroque Harpsichord Music

Keyboard music flourished earlier in Italy than in any other European country; but this was music intended primarily for the organ. In the mid-1500s, the music specifically for the harpsichord which first began to appear consisted mainly of dances, songs, and other pieces from lute repertoire transcribed for the keyboard. The translated title of the earliest printed volume of harpsichord pieces was *The First Book of Harpsichord Dances* by Giovanni Maria Radino, published in 1592. The basic style consists of a moving melody supported by block chords in modal structure.

Italy's first master of *cembalo* (harpsichord) composition was Girolamo Frescobaldi, born in Ferrara in 1583. He acquired such a tremendous reputation as an organ virtuoso and composer early in his career that 30,000 are said to have attended his first performance after he became organist at St. Peters, Rome, in 1608. He was organist later at the Florentine Court 1628-33, but returned to St. Peters where he remained until he died in 1643. The respect he commanded during his lifetime continued for a period after his death and spread to Germany where his work had much influence on J.S. Bach and other composers.

In his earlier compositions, Frescobaldi did not differentiate between works for organ or harpsichord. Many collections indicate both instruments. His first collection designated specifically for harpsichord was published in 1614. Others were published in 1626 (two volumes), 1637 and 1645. There were also a number of single pieces published. These compositions established a richer cembalo style, blending elements of the earlier lute transcriptions with the changes in meter, melodic alteration, contrapuntal texture, improvisatory sections, colorful harmony and chromaticism found in the more developed Italian organ music.

After the death of Frescobaldi, interest in the harpsichord in Italy began to lag as the violin ascended to greater popularity. During the middle of the sixteenth century, the city of Cremona became established as a center of violin making. The achievements of Niccolo Amati (1596-1684), his pupil Antonio Stradivari (1644-1737), Guiseppe Guarneri (1698-1744) and other makers of fine violins directed the attention of the Italian musical community to string music. Prominent composers of instrumental music, such as Arcangelo Corelli, Antonio Vivaldi and Guiseppi Tartini, were violinists who wrote chamber music, concertos, and symphonic music highlighting the violin. String music such as this attracted enthusiastic audiences in Italy.

For much of the second half of the seventeenth century, the harpsichord was used in Italian public performances primarily to provide accompaniment and harmonic support to the opera, symphonic orchestra or chamber ensemble. It was played as a solo instrument mainly for entertainment at private affairs of the upper social circles, or by aristocrats at their leisure in the various small principalities.

Around the start of the eighteenth century, Alessandro Scarlatti (1660-1725) became famous as a composer of opera. He had been born in Sicily, was brought up in Rome, and alternated between positions writing church music in Rome and writing and directing opera in Naples where he founded the Neapolitan School of Opera. He was a prolific composer, writing over five hundred cantatas, dozens of oratorios and masses, and more than one hundred operas. His greatest opera, *Mitridate Eupatore,* was written for Prince Ferdinand de Medici

in 1707, a time when Bartolomeo Cristofori was building instruments for the prince. Alessandro Scarlatti also wrote a small amount of harpsichord music which does not rate as highly as his other work.

His son, Domenico, born in Naples in 1685, took a much greater interest in the harpsichord and wrote music for it which places him in the ranks of such masters of keyboard composition as Chopin and Debussy. Domenico became a touring keyboard virtuoso at an early age. His primary interest was the harpsichord, although he settled down and wrote some opera and church music and was musical director at St. Peters, Rome, from 1715 to 1719. He left Italy in 1719 for other countries where it appeared that he would have greater opportunities to perform and compose keyboard music. He worked as harpsichordist at the Italian opera in London for two years and then went to Portugal where he became harpsichordist for the king.

In addition to his performing and composing duties, he was teacher to the king's daughter, Princess Barbara. Except for a stay in Naples, 1725-9, he remained with Princess Barbara for the rest of his life, moving to Madrid with her to become court harpsichordist when she married the Spanish Crown Prince Ferdinand in 1729. Scarlatti died in Madrid in 1757, and Queen Barbara died the following year. An inventory of the musical instruments owned by Queen Barbara included five Florentine pianos, one containing the name of Cristofori's assistant Giovanni Ferrini and the others without identification, possibly built by Cristofori himself. Although there is no record of any communication between them, it is evident that Scarlatti and Cristofori knew each other.

Scarlatti's keyboard music is more Spanish than Italian. He came to the Iberian peninsula with a pure harpsichord style, but he absorbed the exuberant rhythms of the folk songs and dances and the urban popular music; these were the basis for many of his compositions. He wrote over five hundred pieces, most of them while he was in Spain. He introduced many new technical devices in sonatas written as etudes similar in purpose to the later ones by Chopin. He was bold in the choice of tonality, dissonance, harmony and modulation and achieved a keyboard style that not only made full use of the tonal resources of the harpsichord but is suited for performance on the modern piano as well.

The interest in the harpsichord which Scarlatti created was maintained by the work of at least two of his pupils, Padre Antonio Soler in Spain and Jose Antonio Carlos de Seixas in Portugal and others. A distinctive characteristic of their compositions is the use of devices and figures from the music of the guitar popular in these countries.

Some of Scarlatti's music was played in England in the eighteenth century but very little of it was known elsewhere, even in Italy. There, at least a dozen other composers during the Baroque period wrote little-known cembalo music ranging from fairly good to second rate, probably neglected because of the attention focused on the works of the prominent German composers of the era.

Tuning For Italian Baroque Harpsichord Compositions

According the Lindley in the 1980 *Grove Dictionary of Music,* Frescobaldi in the early seventeenth century was one of the first keyboard musicians to endorse equal temperament. He even recommended equal temperament for one of Rome's most prominent church organs, a recommendation not accepted by the church authorities. Frescobaldi's music exceeds the chromatic range and harmonic limitations of regular meantone temperament but his compositions

could have been played on a harpsichord with split keys tuned in meantone or a conventional keyboard with irregular temperament tuning as well as equal temperament.

In the ensemble music composed by Corelli and others in the final decades of the seventeenth century, the background parts played by the harpsichord gave no tuning problems. Corelli's music is almost completely diatonic with little more chromaticism than a few diminished chords. The harpsichord provides unobtrusive harmonic background while the strings play interwoven contrapuntal patterns.

By Scarlatti's time, the trend in tuning had moved away from regular meantone to irregular or well temperaments. Barbour, however, believes that Scarlatti was so far advanced in his use of accidentals and enharmonic modulations as to require the even greater flexibility of equal temperament.

Changes in Harpsichord Design

After the middle of the seventeenth century, in Italy as in other countries, it was necessary to make changes in harpsichord design to keep pace with the demands of musical composition. Besides the new instruments made, many older Italian harpsichords were now modified to meet these requirements. Instruments with split keys for enharmonic sharps and flats were converted to twelve-note octaves with the extra strings used to extend the range and change the short bass octave into a standard pattern. Four-foot registers were replaced with second eight-foot registers and the second sets of eight-foot registers were installed in single-strung instruments. Fixed jack guide rails were replaced with movable jack slides. An instrument referred to as a type of "piano e forte" in 1598, a century before Cristofori's, is believed to have been a harpsichord with movable jack slides allowing the dynamic difference of single or double strings.

Italian instruments did not develop into the complex forms found elsewhere in Europe. A small number were made with two manuals. Even more unusual were instruments with three manuals or sixteen-foot stops. The few Italian examples of these now in existence are believed to be instruments altered from their original design, since no Italian builder is known to have made instruments with such features. As musical composition advanced, modification of obsolete instruments was justified for musical reasons. During the latter half of the nineteenth century, however, changes were made by a few dealers to increase the price at which antique instruments could be sold. Instruments of lower value were falsely inscribed with names of famous makers, earlier dates and decorations. Others were altered in design to attract greater interest from potential buyers. There were also completely fraudulent instruments assembled from salvaged old parts, offered as genuine antiques. Some were skillfully made, capable of producing good music. Many museum collections today contain instruments known to have been altered or of doubtful origin besides the rarer, highly-prized, verified genuine instruments in original form.

ON PITCH

A Series of Articles Dealing With the Integration and Equation of Aural and Electronic Tuning Techniques

No. 3

Rick L. Baldassin, RTT
Utah Valley Chapter

Last month our discussion included various types of octaves and double octaves. Charts were presented showing the 2:1, 4:2, 6:3, 8:4, 10:5, and 12:6 coincidences of the octave, and the 4:1 and 8:2 coincidences of the double octave. It was noted that because of inharmonicity in the piano, rarely can more than one of these coincidences be matched at a time. Furthermore, the higher the ratio number being matched (2:1, 4:2, etc.), the more *stretched* the fundamental frequencies of a given octave will be. Methods were given to prove the existence of these various coincidences, both aurally and electronically.

The fact that rarely can more than one of these coincidences be matched at a time necessitates two things: 1) selectivity, and 2) compromise.

Selectivity in choosing which type of octave or double octave to tune in different areas of the piano is important because while one type may sound good in a given area, it may sound awful in another.

Compromise is important because at times no one choice is best, and something between two of the choices is the best alternative.

All of this brings up an important question: How does one distinguish the different types of octaves and double octaves? The answer is with intervallic checks and electronic setting instructions for specific types of octaves and double octaves.

This month our discussion will include aural checks and electronic setting instructions for three types of octaves, the 2:1, 4:2, and 6:3.

Knowing that there are several types of octaves, aural checks and setting instructions are necessary to insure that the appropriate type is being tuned in a given area of the piano. Since only one type is in tune at a time (and so rare is the exception), the checks and setting instructions for one type only should be used at a time. The exception, of course, would be in a transitional area, changing from one type to another, and this will be discussed in greater detail in future months.

Two different aural checks for each type of octave are provided so that findings may be double checked. Including the electronic setting instructions with an electronic aid, the findings may now be "triple checked." Since the aural checks employ the use of intervals, both expanded and contracted, for comparison, and either the upper or lower note may be the reference to which we are tuning, four classifications of aural checks result. Be sure to note the classification for each check so as to correctly interpret the findings and make proper adjustments in tuning the octave. The object in each case is to obtain an equal beat rate between the upper and lower notes of the octave and the test note. The "x" indicates an octave note, and the "•" indicates the test note. Though an in-depth discussion of

where to tune the various types of octaves will be presented in the future, for now, the general locations of treble, midrange, and bass will be given for the three types of octaves presented at this time. Each test is given a name corresponding to the intervals employed in the test. In naming the intervals, "P" denotes a so-called *perfect* interval, the "M" denotes a *major* interval, and the "m" denotes a *minor* interval.

CLASS A: Lower note is the reference note. If the beat rate between the test note and the upper note is *too slow* as compared to the beat rate of the test note and the reference note, *raise the upper note.* If the beat rate with the upper note is *too fast, lower the upper note.*

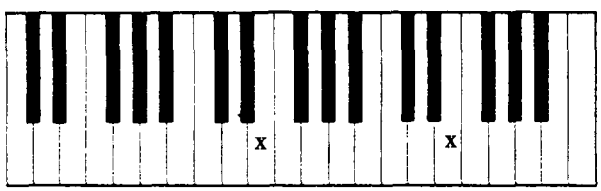
CLASS B: Upper note is the reference note. If the beat rate between the test note and the lower note is *too slow* as compared to the beat rate of the test note and the reference note, *raise the lower note.* If the beat rate with the lower note is *too fast, lower the lower note.*

CLASS C: Lower note is the reference note. If the beat rate between the test note and the upper note is *too slow* as compared to the beat rate of the test note and the reference note, *lower the upper note.* If the beat rate with the upper note is *too fast, raise the upper note.*

CLASS D: Upper note is the reference note. If the beat rate between the test note and the lower note is *too slow* as compared to the beat rate of the test note and the reference note, *lower the lower note.* If the beat rate with the lower note is *too fast, raise the lower note.*

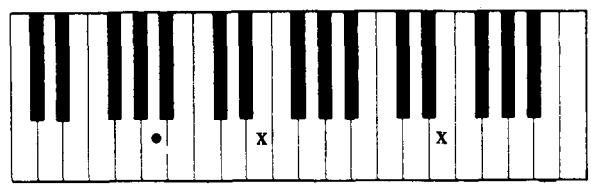
2:1 OCTAVE (Treble)

M10 - M17



(Class A)
Test the octave by playing an M10 below the lower note and an M17 below the upper note.

P5 - P12



(Class C)
Test the octave by playing a P5 below the lower note and a P12 below the upper note.

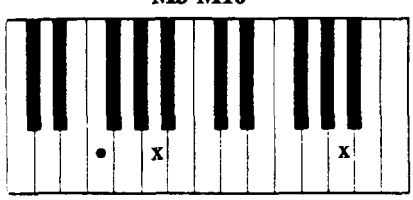
2:1 OCTAVE Electronic Setting Instructions:

On the Upper note

To tune a 2:1 octave, set the tuner to the note and octave settings corresponding to the upper note. Play the lower note, stop the pattern, and tune the upper note. To tune the above example, set the tuner on E7, play E6, stop the pattern, and tune E7.

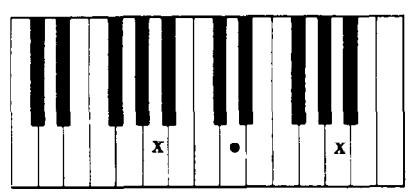
4:2 OCTAVE (Midrange)

M3-M10



(Class A or B)
Test the octave by playing an M3 below the lower note and an M10 below the upper note.

P4 - P5



(Class C or D)
Test the octave by playing a P4 above the lower note and a P5 below the upper note.

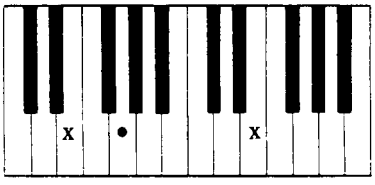
4:2 OCTAVE Electronic Setting Instructions:

Octave above the Upper note

To tune the 4:2 octave, set the tuner an octave above the upper note. To tune the above example, set the tuner on A5, play A4, stop the pattern, and tune A3. Because 4:2 octaves are tuned up as well as down, the procedure might just as well have been to set the tuner on A5, play A3, stop the pattern, and tune A4.

6:3 OCTAVE (Bass)

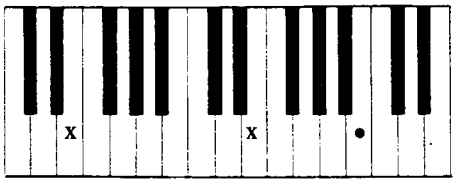
m3 - M6



(Class B)

Test the octave by playing an m3 above the lower note and an M6 below the upper note.

P12 - P5



(Class B)

Test the octave by playing a P12 above the lower note and a P5 above the upper note.

6:3 OCTAVE Electronic Setting Instructions:

Twelfth above the Upper note

To tune a 6:3 octave, set the tuner a twelfth above the upper note. To tune the above example, set the tuner on B4, play E3, stop the pattern, and tune E2.

Prove these aural tests and setting instructions by cross-checking. In the case of the 2:1 octave, tune the octave such that the M10 and M17 are equal beating. Testing now with the other aural test for a 2:1 octave, the P5-P12 should also be equal beating (though very slow). Finally, check electronically by setting the note and octave settings to the upper note. Play the lower note, and stop the pattern. When you play the upper note, the pattern should be stopped as well. Of course, the order in which an octave is tuned and then cross-checked is unimportant. It would be just as valid to tune the octave electronically, then cross-check with the two aural tests. Cross-checking can help to reconfirm your results. Using both a fast-beating and a slow-beating test will help clarify when one is ambiguous. When cross-checking, be sure to use the aural tests and setting instructions for one type of octave at a time.

Next month, our discussion will continue with aural tests and electronic setting instructions for the 8:4, 10:5, and 12:6 octaves.

PIANO APPRAISALS

A Pretty Sticky Wicket

Joseph Anthony Meehan, RTT
Maine Chapter

V. METHODS OF APPRAISAL

In the *Piano Technicians Journal* of January, 1976, former editor Don Galt outlined various methods of appraising pianos. I refer the reader to pages 6 and 7 of that issue for another opinion on this phase of piano work.

In brief, Mr. Galt lists three methods:

A) the current market method;
B) new cost less depreciation, and
C) idealized value minus costs.

It is my opinion that method C (the idealized value) is an offshoot and is based on method A. To compute the ideal value of a particular piano is totally dependant on a working knowledge of the current market. My approach integrates methods A and C and puts little stress on the depreciation factor.

Mr. Galt shows two depreciation tables. Number 1 was from a book published in Germany:

1 year	75%
2 years	70%
3 years	65%
5 years	60%
8 years	50%
10 years	45%
15 years	35%
20 years	25%
25 years	20%
30 years	15%

Number 2 is Mr. Galt's own table (certainly a bit more lenient):

1 year	85%
2 years	82 %
3 years	80%
5 years	74%
8 years	67%
10 years	62%
15 years	52%
20 years	43%
25 years	34%
30 years	27%
35 years	20%
40 years	15%
45 years	10%

A third approach is based on the widespread belief that when a piano reaches age 100 it is worthless (*i.e.*, as far as any kind of investment such as reconditioning, rebuilding, etc.). Of course, at this rate you can subtract 1% per year and it works out perfectly. Besides the fact that this system is far too lenient, it is obvious to piano technicians that some pianos were well built and certainly rebuildable after a century and that others will never come close to that age.

Depreciation

Just how pianos depreciate is a perplexing subject. The *bad news* is that there will never be a blue book on this subject. None of the tables take into consideration the constant ebb and flow of demand and interest in pianos in the musical realm. Also, the tables say nothing about condition, use and abuse.

Example: I recently appraised a Steinway upright serial number 71604. I couldn't believe it when Pierce's Atlas showed it to be 90 years old. It had been used sparingly and had been well maintained throughout its life. All in all, it was in almost perfect condition. Everything was in original condition. Only a trace of grooves on the hammers, bass strings shiny and new looking — it looked as if it had fallen out of a time capsule. Now, on two of our tables this piano would be worth nothing, and on the other it would have been worth a petty 10%. My appraisal put its value near $3,000. Even though this is more than the original cost, a replacement with the closest new model would more than double this figure. So whenever we consider depreciation, the other factor (viz. appreciation) also has to be reckoned with.

Appreciation

How do we find out what prices old pianos sold for in their day? Ask John Ford! Or do a bit of research. Old magazines, catalogs and even some current books on pianos give figures as to the original costs. We've all seen some prices shown right inside the instruments.

The point I'm trying to make here is that when we consider the inflation spiral over the years with regard to pianos, it is very hard to come up with an accurate formula for depreciating pianos, especially if we assume that the wear-and-tear factors are equal. To quote Mr. Galt once more, "Condition must *always* be taken into account, whatever approach is used."

Therefore, the *good news* is: without having blue books we should be kept pretty busy doing what we are qualified for — professionally appraising pianos.

INDUSTRY NEWS

Dr. Tollefson to Assume EAB Leadership

At the July meeting of the Education Advisory Board of the NATIONAL PIANO FOUNDATION, Chairman Dr. Robert Steinbauer, head of the music department at Kansas State University, will relinquish his responsibilities to Dr. Arthur Tollefson, chairman of the music department at the University of Arkansas (Fayetteville). Dr. Steinbauer will serve as chairman of the long range planning committee of the EAB.

This change of leadership is part of the total plan to ensure broad representation on the Education Advisory Board from the various professional organizations in which piano is represented, from higher education, and from the constituency of independent teachers. Over the past six years the representation from the National Guild of Piano Teachers, the Music Teachers National Association, the Music Educators National Conference, and the College Music Society has changed as individual terms of office expired. The National Guild of Piano Technicians is now also represented on the board by Bob Russell. Project chairmen for each of the EAB activities are retiring upon expiration of their initial terms.

1983 NAMM Expo By All Measures A Success!

Attendance figures for the June 18-21 NAMM International Music & Sound Expo, held at Chicago's McCormick Place, confirm that this year's show was the most successful in NAMM's eighty-two year history.

"We felt very strongly all along that this show would top all records," says NAMM Executive Vice President Larry R. Linkin. "The number we're happiest about is our dealer/buyer attendance, which was up 32.4 percent from 1982."

This year's figure for dealer/buyer attendance was 10,763 compared to 8,127 in 1982.

Non-exhibiting suppliers numbered 890; in 1982, there were 1,516.

"This, too, is a barometer of the show's success," says Linkin. "With 485 exhibiting companies, compared to 441 last year, it stands to reason that our non-exhibiting supplier figure is way down."

Another figure of note is press registration. This year, 293 press personnel registered for the show; in 1982, there were 169.

"We were quite pleased with the media attention received by the show," says Elizabeth Scott, NAMM Director of Public Relations. "Not only was the trade press well represented, but Chicago press, radio and TV covered every day of the event. Local news shows on all the major networks ran segments featuring our products, and most of the stations ran several Expo stories each. In a major market area like Chicago, that kind of coverage is worth plenty. It's great advertising for the music industry as a whole — and it's free."

MTV, the music cable network, also is running a news feature on the show, and other opportunities for post-show national publicity are being actively pursued.

Total attendance at this year's NAMM Expo was 21,817 compared to 18,264 in 1982. This represents an increase of 19 percent. Total square footage was 248,500, up nearly 30,000 square feet from 1982.

"I believe, based on the many conversations I had with exhibitors throughout the show, that buying was also very strong this year," adds Linkin. "Exhibitors seem well satisfied with the number of orders and leads generated by the show."

At the recent NAMM show, held in Chicago, June 18-21, 1983, the Piano Technicians Guild had a booth staffed by **Bob Russell,** Trade Relations committee, **Marshall Hawkins,** SERVP, and members of the Chicago Guild chapter.

The Guild's booth was very busy answering questions and solving problems for piano dealers, manufacturers, and piano technicians. Using the Piano Technicians Guild directory they were instrumental in helping dealers, teachers, and manufacturers locate registered technicians in their area.

This semi-annual Trade Show draws about 13,000-14,000 people from all over the world seeking knowledge and information. As you can see by the picture, our Guild is shown to the trade as an integral part of the music family.

This year's Expo saw at least a couple of "firsts" for NAMM. There was the Saturday night rock concert, featuring Kenny Loggins and his band, which was sponsored by NAMM and offered free of charge to Expo attendees.

"We feel that the Loggins concert was a great success," says new NAMM President Jim Kleeman. "It was an excellent way for NAMM to demonstrate its commitment to the entire industry as well as its appreciation of fine musicianship. Kenny Loggins must certainly be ranked among the most talented composer/performers in rock and popular music today."

Another "first" was the introduction of NAMM TV News, which was shown on monitors just outside the exhibit halls and was available for viewing in many of the official Expo hotels. Announcements pertaining to products on display at Expo were interspersed throughout an entertaining program of video music.

"Since music and video are coming together in so many ways these days," says Linkin, "we thought we'd give the NAMM TV News concept a try."

Other show highlights included the NAMM Opening Night Party at Chicago's Navy Pier, the traditional Sunday night All Industry Dinner-Dance with Barbara Mandrell, the Annual Meeting of NAMM Members where eight new directors were elected to the NAMM Board, the International Reception in the garden of Chicago's famous Art Institute, and the new NAMM President's Reception at the Ritz-Carlton.

"Based on this year's Winter Market and now the Expo," says Linkin, "I think it's safe to say the music products industry is alive and kicking. Technology has given our industry a good shot in the arm; people are interested in our products and in what music can do to enrich their lives. Now the important thing is to keep the momentum rolling, keep our products in the public eye and show people how they can benefit from becoming involved in music."

The next NAMM show, Winter Market '84, will take place January 20-22 in Anaheim, California.

NAMM Elects New Officers And Directors

Five Officers and eight new Directors were elected to the NAMM Board during the June 18-21 NAMM International Music & Sound Expo in Chicago.

The new Officers are: Immediate Past President, Charles K. Hale, Hale Pianos & Organs, Inc., Fort Lauderdale, Florida; President, Jim Kleeman, Karnes Music Company, Elk Grove, Illinois; Vice President, Alfredo Flores, Jr., Alamo Music Center, San Antonio, Texas; Treasurer, Lee R. Donais, Gordon Keller Music Co., Vienna, Virginia; and Secretary, Donald Griffin, West L.A. Music, Inc., Los Angeles, California.

Officers are elected by the Board and serve a one-year term of office.

Elected to three-year terms on the NAMM Board of Directors were the following music merchants: Jerry J. Duncan, May and Duncan Music Company, Midland, Texas; Raymond G. Goodman, Guitars, Etc., Seattle, Washington; Philip F. Herter, Herter Music Center, Inc., Bay City, Michigan; Mo Mahoney, Professional Music Center & Drum Shop, Las Vegas, Nevada; A.F. "Joe" Ramsey, Joe Ramsey Music, Annapolis, Maryland; Herbert S. Sato, Easy Music Centers, Honolulu, Hawaii; Robert P. Schmitt, Schmitt Music Centers, Minneapolis, Minnesota; and Nelson Varon, Nelson Varon Organ Studios, Inc., Huntington Station, New York.

Also new to the NAMM Board is the newly elected NAYMM President, Charles Fox, Fox Music House, Charleston, South Carolina.

The eight new Directors replace eight retiring members of the NAMM Board. The current NAMM Board consists of twenty-four Directors, the President of NAYMM and five Officers.

"We believe we have attained an excellent balance on our Board," says President Jim Kleeman, "with music retailers from all parts of the country and specializing in all kinds of product mixes. We're also pleased to have such strong representation from the younger merchants as well as from those who've been NAMM supporters throughout twenty or more years of running a music business. It's that kind of diversity on our Board and in our membership that keeps us in touch with what's really happening in the industry."

Coming Events

September 16-18, 1983
ANNUAL WISCONSIN DAYS
University of Wisconsin at Madison
Contact: Bob Hohf
431 N. Main St.
Lodi, WI 53555
(608) 592-3731

October 1, 1983
FALL FESTIVAL OF FILMS
Piano Store
San Leandro, CA
Contact: Sid Stone
16875 E. 14th Street
San Leandro, CA 94578
(415) 481-1903

October 2-4, 1983
FLORIDA STATE CONVENTION
Sheraton, Jacksonville Beach Resort Inn
Jacksonville Beach, FL
Contact: Barney J. Johns
3546 Oleander St.
Jacksonville, FL 32205
(904) 786-0868

October 15, 1983
OHIO STATE SEMINAR
Mount St. Joseph College
Cincinnati, Ohio
Contact: Robert D. Mollard
9335 Ranchill Dr.
Cincinnati, OH 45231

October 14-16, 1983
TEXAS STATE CONVENTION
Downtown Holiday Inn
Wichita Falls, Texas
Contact: Jimmy Gold
2101 Walnut
Duncan, OK 73533
(405) 255-5804

October 20-23, 1983
NEW YORK STATE CONFERENCE
Executive Hotel
Buffalo, New York
Contact: Charles Erbsmehl
4165 Ransom Road
Clarence, NY 14031
(716) 759-6126

November 18-19-20, 1983
Third Annual N.C. State Convention
East Carolina University Music School
Greenville, NC
Contact: Don Wigent
East Carolina University Music School
Greenville, NC 27834
day — (919) 757-6069
night — (919) 355-2830

IN MEMORIAM

Erwin Otto
1902-1983

Erwin Otto died in Florida July 11, 1983, leaving with us over a half century of experience, fellowship and helpfulness to others.

Erwin came to us from Germany via Mexico in 1928 from the truly old apprenticed way of learning the art of piano tuning and repairing.

All who were so fortunate as to have known him are the better for it; he gave of himself wholeheartedly in his strong and determined way. Those of us who knew Erwin well found him soft and pure as gold inside.

He was honored with practically every award that the Guild had to offer: Member of Note, Hall of Fame, Guild Sustaining Life — and he served us as president. Erwin Otto was what our award system is all about.

Almost monthly one of our grand old members departs this life, leaving for us pleasant memories of comaraderie and fellowship. Erwin was such a member.

My guild life was much brighter because of him, so join with me in saying, "smooth sailing and *auf Wiedersehen, Erv.*"

Jess Cunningham

Larry Scheer

Larry Scheer is an honored name in the history of the Piano Technicians Guild. He joined the American Society of Piano Tuners in 1952 and came into the Guild as a charter member. In all the years since then he has continued to give his time and talents to us for the pleasure it always gave him to share his knowledge.

When quite young he was apprenticed to a tool and die maker, and it was this early training which made him so successful in creating new gadgets and tools for his greatest interest — the piano and its upkeep. For more than ten years his column "Larry's Corner" ran in the *Piano Technicians Journal,* and here he published the new ideas and methods he designed for improving his profession. As a teacher of the piano he knew the needs of the artist as well as the importance of "the other artist," the piano technician.

Through all his years with the Guild, one of the highlights of knowing Larry was watching and listening as he showed and demonstrated one of his gadgets, explained how to make a difficult repair easier, and never failed to bring a laugh and smile from the class with each demonstration. He was a master at teaching with the light touch.

Larry received the Guild's highest accolades: he was a Guild Life Member, was awarded the Golden Hammer in 1971 and inducted into the Hall of Fame in 1982. We shall miss Larry, but we are grateful that we had him for these many years — to know, to appreciate, to remember.

Ernest S. Preultt

Photography courtesy of Elizabeth Ward

Sights and Sounds of the 1983 Annual Convention — New Orleans, LA July 4-8

Attendees saw and heard such things as: *"Great to see you!"* . . . Jazz . . . Crawfish . . . Bayou . . . Po'Boy . . . Dixie . . . *"Sure glad I came!"* . . . Cajun music . . . Bourbon Street . . . Praline . . . Gumbo . . . Mardi Gras . . . Mississippi River . . . *"Hate to Leave"* . . . Chicory . . . Pete Fountain . . . Garden District . . . Jambalaya . . . Plantation . . . *"Certainly will see you in Indianapolis in '84!"* . . . French Quarter . . . Steamboat . . . . . .

Awards

Hall of Fame — Hannah Grover
— John Travis

(Awarded to those who have shared their talents, time and loyalty to our profession so that we may have what is ours today.)

Golden Hammer Award — Presented to **Robert A. Burton** in recognition of exceptional personal service in and for the piano technological profession.

Member of Note, 1983 — Awarded to **Jack Krefting** for outstanding service to the tuning profession.

Awarded to **Maurice Roseburrough** for outstanding service to the tuning profession.

Chapter Contest Winners

Calculated by percentage of chapter members registered for the convention and distance traveled. The following chapters walked away with some great prizes:

First Prize to Central North Carolina Chapter
Film *Music of Sound*

Second Prize to Indianapolis, Indiana Chapter
One Set of Technical Institute Tapes

Third Prize to Austin, Texas Chapter
Four Indexes

Special Prize to New Orleans Chapter
One Index.

Winners of Two Drawings Held During the Convention

At Banquet: *Four nights' lodging at headquarters hotel:*
Mr. and Mrs. Bill Moonan

At Closing Luncheon: *$100.00 bill:* **Mike Travis**

Retiring Board Member — Presented for meritorious service to the Guild to **Dan Evans.**

Plaque for Retiring President — Presented to **Sidney O. Stone** for his years of service and dedication as President and on the Board of Directors of the Guild.

Chapter Achievement Award —

First Place - Large Chapters	**Connecticut**
First Place - Medium Chapters	**Western Massachusetts, MA**
First Place - Small Chapters	**Hutchinson, KS**
Second Place - Large Chapters	**Cleveland, OH**
Second Place - Small Chapters	**Waukegan, IL**

Worship Service

Mississippi Riverboat Cruise Highlights

Red beans and rice and sausage, southern fried chicken, gumbo, parfaits . . . the sounds coming from Johnny and Danny's Dixieland Group . . . the sights along the Mississippi River . . . and dancing . . . all made for a lively and relaxing optional tour put together by the local host chapter.

Banquet Highlights

Steinway and Sons staged a beautiful reception prior to the banquet. It was a wonderful chance for people to mingle among friends and partake in the delightful array of food and libation.

How will anyone forget the Kimball Combo, the group that entertained us at the banquet? Many thanks to Kimball for providing the magnificent Ronnie Kole playing on the beautiful Bosendorfer. It was said over and over . . . *"I could listen to this all night!"*

Closing Luncheon Highlights

A myriad of multi-colored balloons swayed back and forth in the Versailles Ballroom announcing the upcoming convention to be held in Indianapolis '84. The delegation began to make plans for attending. A spark was generated . . . people were sorry to leave New Orleans but were looking forward to Indianapolis.

The audience was entertained once again by the Larry Crabbe singers . . . the luncheon was very tasty and everybody left with a warm feeling of camaraderie.

Convention '84 — The Piano Technicians Guild Indy "500"

by Dick Bittinger

Hello —

I think you will all agree with me that Ben McKlveen did a great job with our Institute this year.

What's ahead for next year? A new format, an overhaul if you will. Our Piano Technicians Guild Indy "500" Institute is going to get a tune-up and an oil change . . .

Indianapolis in '84 will offer new classes, old classes, and also a new pit crew will be ready in '84 for the Piano Technicians Guild and you.

Let's change the Piano Technicians Guild Indy "500" to the Piano Technicians Guild Indy "1,000" and make the 1984 annual convention the biggest ever!

See you there . . .

Receiving the "Hall of Fame" award is an honor I will always treasure. I really am happy to have been so honored and hope I may prove worthy of it for as long as I can be of service to the Piano Technicians Guild.

With best regards,

Fred Drasche
Technical Consultant
Steinway & Sons

To all fellow members in the Piano Technicians Guild, the Awards Committee, the Tri-City Chapter, The Central Iowa Chapter, that promoted the thought that I should be a recipient of the "Member Of Note" award, my sincere thanks and appreciation to you for this experience.

Sincerely yours,
Maurice J. Roseburrough

Talk to Closing Luncheon, July 8

Ernie Preuitt
President

I suppose all people at the beginning of a new job or at the start of a new era have dreams and aspirations.

I certainly include myself in that category. One of my goals is not only to have good conventions but to improve on each succeeding one. New Orleans has done it again as they did at their first convention in 1969. From the general membership I have received nothing but the highest of accolades. Of course, we have had some minor problems, but nothing that cannot be solved if we talk, think, and act intelligently.

We now have a testing procedure that is working very well, and will work even better in the future if we continue to improve upon it. One of my goals is to come up with an acceptable procedure on the bench test and clean up our written test. That load has been taken off the shoulders of the tuning committee and has been given to a special committee in each case. Some of our most responsible people have been appointed to take on that task and I have every reason to believe they will get the job done.

The Articles of Incorporation and Bylaws of the new Piano Technicians Foundation are now approved and filed with the State of Washington. This means that the Piano Technicians Guild has an official foundation open for donations by members and friends of the Guild. Donations may be in memory of someone who has passed away or in honor of someone who is living. It is a very warm gesture to make a donation honoring a friend; a dedicated contributor to the Guild or the local chapter; or someone who has been a leader, a sponsor, a fine technician to follow, or for any other reason which has meaning for you.

All donations are tax deductible and the funds will be used to increase the Steve Jellen Memorial Library for use of the chapters and members; or for the Research and Development Fund, or, perhaps my favorite, for the Scholarship Fund.

I urge you to make your mark and offer a donation to honor or in memory of someone who means much to you. Your gesture will remind us all how much we owe to so many for the progress and success of our beloved Piano Technicians Guild.

Of course other things are on my mind too. I have not consulted with anyone on this (except my own conscience) and I am beginning now to work on possible wider and more liberal ideas on the use of the term Piano Technicians Guild and our logo.

It seems to me we are too restrictive and maybe even too jealous of our trademark. Yes, it will take much thinking on the matter, but if we will just think, I'm sure this matter too can be resolved. Time will not permit us to expand on this issue now. But I would like each of you to let me and the board and others know your thoughts on this matter. There are many sides to this question and we all need to hear all points of view before acting. Don't be afraid to let your position be known. I cannot speak for everyone but I guarantee I'll listen.

My thanks to all of you for your past support, and at our start of this New Year, be it known that I need and relish your support this coming year.

Thank you.

Council

1983 Technical Institute

Joe Helmer
New Orleans, LA

Under the direction of Ben McKlveen and his Assistant, Martha Lagoy, a highly professional Technical Institute was staged in New Orleans. The Institute provided a stimulating blend of experience and up-to-the-minute techniques.

Those of us who attended the Institute had the benefit of the past. Gathered under the Hilton Hotel roof were instructors representing vast experience. Some have worked for some of our finest keyboard artists. Some have helped manufacturers improve the design of their pianos.

The instructors also offered us the benefit of the present. Piano technology never stands still. Musical taste keeps changing. Pianos keep changing. Technology keeps changing, bringing new materials and equipment that we can use to develop new techniques. The instructors demonstrated how to deal with the new problems and opportunities. They also passed along an ever-increasing understanding of why we do what we do when we produce good tuning, repairing and rebuilding.

Each person at the Annual convention had the opportunity to walk away with an enormous amount of useful information. This reporter was in class during every class session. That still didn't amount to a quarter of the classes offered. Fortunately classes were taped and will be available on cassettes.

The following is a report on those classes attended by this reporter.

Larry Bowen is an experienced aural tuner who has been experimenting with using electronic equipment as an aid to aural tuning. In his class **Auro-Electronic Tuning Techniques,** he shared the useful techniques he has developed through this experimentation. He discussed the three instruments developed by Dr. Sanderson — Sight-O-Tuner, Electro Fork and the new Accu-Tuner. Larry pointed out that early electronic tuning developed a bad reputation due to poor equipment and an inadequate understanding of the tuning process. The equipment has improved a great deal since then and Larry predicted that the next generation of devices will be greatly improved over the ones we have now.

He explained a variety of ways the aural tuner can use the newer devices (especially Dr. Sanderson's latest creation) to assist the ear. They can function as tuning forks, giving a very accurate A440 or rapidly sampling many notes to establish the pitch level of the piano. They can "memorize" an excellent tuning or "memorize" the center string of a note while the unison is being pounded in. They can aid very small changes in a temperament where the tuner wants to try something a half-cent or cent different and then return to the original position. They can assist hearing problems in the low bass or high treble, especially in poorly scaled pianos. They can make tuning two pianos to each other much easier.

Care & Feeding of Tools — Did you want to find out how to sharpen a tool? Whoops! Wrong class. Jim Harvey's focus, in this class, was on helping us set up a good system of parts and tools.

He told us to develop a basic kit, with as few tools as possible, that will do 90% of the work we do in the home. Then we need some backup kits of tools and supplies in the car. He told us to be realistic about these backup kits. It doesn't make sense to haul around a lot of tools that we rarely use. The clutter, effort, extra gasoline, etc. negate any advantage we might get from having those tools around for that rare occasion. These tools belong in the third category: workshop tools.

This was a fast-paced, entertaining class. Jim is a skilled speaker who is full of many, many valuable and interesting tips. This is the class where you learn how to get one tool to do the job of several, how to custom make a tool case, how to set up an easy system to tell you when to reorder parts, how to make some of your tools, how to look and act like a professional, and lots more.

Ted Staton offered us a basic introduction to **Computers** and the piano technician. He started by telling us four things that computers will not do:

1) They won't make up for sloppy thinking . . .

2) They won't give answers based on information, unless the information is already in the computer . . .

3) Computers won't eliminate *all* the drudgery tasks of your business. You will still have to enter your customer files *once.* But only once. Then you can perform lots of operations on those files . . .

4) They won't make accurate information out of inaccurate information — "garbage in, garbage out."

Ted pointed out that computers are not for everybody. Is your business going well enough that you have a backlog of jobs and/or paperwork? Do you have a rebuilding shop with several workers? These are the kinds of situations that computers can aid.

Ted gave us his *minimum* requirements for a computer system:

1) 48 k bytes of RAM (Programmable internal memory)
2) A floppy disk drive
3) A printer
4) Software (programs):
   A) CP/M operating system
   B) BASIC (a computer language)
   C) A word processing program
   D) A spreadsheet program
   E) A file management (data base manager) program
   F) A general ledger program

Part of the class was a demonstration of how a computer works. Ted has a computer program that helps a rebuilder determine the most efficient order and timing of rebuilding tasks and most efficient use of workers on a particular job. Using that program, he demonstrated how to let the computer know that you want to use that program, how to feed in the necessary information and how to get out results.

Mr. Staton wants to help piano technicians get involved with computers. He's starting up a forum of piano technicians interested in computers. You can write to him to be part of that. He also has a package of piano technician computer programs for $15.00 that includes the aforementioned rebuilder's program, scheduling and routing of customers, piano rescaling, a "What do I do Today? — What do I take with me" program, estimates and more. Write to: Explore Your Earth, Inc., P.O. Box 320, Auburn, Georgia 30203.

Grand Dampers was presented by the Yamaha team who used slides and video tapes to demonstrate grand damper regulation. The star of the show was Mr. Ohno, an expert factory damper installer at Yamaha. He was filmed while visiting here in America.

Although all the demonstration pianos were Yamaha's, the Yamaha team was excellent in covering situations the technician would face on other pianos. This was a very thorough class with ample time for questions. It started with a slow-motion film of a grand action lifting the damper and striking the string. Damper theory was covered. Installation of a new set of dampers and wires was covered. Helpful tools (especially a wire-bending guide) were presented that will add speed and accuracy to grand damper work.

Joe Bisceglie instructed the class **Grand Regulation and Voicing in the Home.** He presented the expert insiders' story on the Steinway piano. The first half of the class was a slide presentation of the Steinway factory. Here we learned what goes into making a Steinway action and damper system. Joe showed many stages where decisions are made to get the proper action function *in that particular piano.* Each Steinway grand is very much an individual.

Joe spent the second half showing us regulating and voicing in the home based on his broad experience.

Joe's class was also a good place to collect his anecdotes about famous pianists.

How We Hear — Dr. Chuck Berlin is a special combination: skilled professional pianist, world renowned audiologist, excellent lecturer and just plain fun guy. The packed room had to be asked not to laugh so loudly to keep from distracting other classes.

Using lots of sophisticated audio equipment, Dr. Berlin took us through an analysis of how hearing works. He made the statement that how we speak and play an instrument is tied directly to our hearing. The key elements are frequency, intensity and timing. To demonstrate this point, class members were invited to try to speak or play the piano when the sound coming to their ears either varied in intensity or was at a two-tenths of a second time delay. The results were hilarious. We also listened to speech with different bands of frequency filtered out. It was fascinating to see sound being manipulated in this manner. We were also getting the opportunity to know what it's like for people who have certain hearing disorders or whose hearing is suffering from the aging process.

Dr. Berlin also talked about hearing damage. How does it occur? How loud is too loud? How long is too long to listen to loud sounds? Although we produce some loud sounds with our test blows (94 decibels), they are of too short a duration to permanently damage hearing. Dr. Berlin recommended two four-minute breaks per hour to alleviate hearing fatigue. He also recommended avoiding drugs in the aminoglycoside family if at all possible. Streptomycin is an example. Aminoglycosides can cause hearing damage and deafness.

Dr. Berlin has tried his hand at piano tuning and come away with great respect for our craft. He made some suggestions for what to do when you are having difficulty hearing, especially when you are tuning in a noisy environment. Wear earplugs (but cotton doesn't work). Cup your ear(s). Put your head against the surface of the piano. These are all ways of enhancing air conduction or bone conduction of sound. You can also go electronic . . . get an infrared hearing transponder. Chuck demonstrated one made by Siemans (SI406). It is extremely directional. It will pick up only the sound it is directed at and transfer it to light-weight earphones on your head.









Progressive Grand Regulation — Chris Robinson presented a very thought-provoking approach to grand regulation. We know that each piano is unique. In order to get the best possible tuning, we "listen" to the piano. We let it "tell us" the best possible position for each string. We don't try to impose an averaged tuning for six-foot grands on a particular six foot grand if we want it to sound its best. Chris applies this approach to grand regulation. Rather than relying on book specifications, he "listens" to the action and lets it "tell" him the best possible let-off, drop, dip, etc. for that particular piano.

Chris is an excellent teacher. He was entertaining and by asking us a lot of questions, he got us to think about why we do what we do in grand regulation. What's the purpose of an action? Why have a jack? Why have a repetition lever? Why have drop? Does it matter what the jack does after it makes contact with the let-off button?

There was also a section on the theory behind the geometry of keys, wippens and hammers. This information is very useful when replacing old parts with sets of new parts in a piano action.

Ernie Juhn in his **Vertical Troubleshooting** class gave a humorous and very informative presentation on upright troubleshooting. He offered lots of advice on dealing with the piano. How do you find the various buzzes, squeaks and rattles that occur? What parts of the piano are likely culprits? What tools, lubricants and techniques do you use to fix these problems once you've found them? He gave advice on sympathetic vibrations, pedals, the damper lifter rod, hinges, locks, loose floorboards, aliquot noises, ringing dampers, the jack stop rail and moving action frames. As a bonus, Ernie threw in a demonstration of adjusting a few guide dampers (the spoons) in the piano and then spoon bending with the action outside the piano.

At least as valuable as those technical tips was his advice on "hidden" troubleshooting — dealing with the customer. "What do you do when the problem only occurs on a Tuesday, and you're there on a Wednesday?"

Voicing — Newton Hunt and Sally Jameson delivered a very thorough voicing class. Filing, string leveling, needling and lacquering were discussed in detail. They also explained the difference between hammers that are merely hard and those with lots of available compression. They pointed out that the latter is desirable for getting maximum volume from a string. Newton highly recommended the last part of the grand regulation class offered by Kimball. There was a film there that demonstrated the effect of hammer compression on the string.

Sally talked about what we face in voicing work in the field. This included a lecture on tone and how the perception of what is beautiful has changed and is still changing. She pointed out that early pianos were designed with different tone qualities in different registers. This has changed as pianos and music have developed. She also talked about the increasing customer demand for brightness and about differences in tone and voicing technique between Asian and traditional American hammers. She provided valuable tips about analyzing a piano to determine if voicing the hammers would provide much improvement of the tone.

The dynamic duo made excellent use of class time by doing a "tandem" voicing demonstration. One demonstrated the hammer he/she had just voiced and explained what additional voicing was needed. Meanwhile, the other one was busily voicing a hammer on another piano. That hammer would then be demonstrated while the other one was busy voicing the first hammer again.

Besides classes, the Institute offered exhibits. The exhibit area was quite ample. It housed an excellent representation of piano manufacturers along with numerous other exhibitors behind tables heaped with goodies for sale to piano technicians.

The opportunity was also available to learn more about tuning. Tuning tutors were available as was the opportunity to take the tuning exam. Instruction was also available for those who had passed the exam with scores of 90% and above who wanted to learn to be tuning examiners.

A special note of thanks to Ben and Martha . . . each Annual Convention is in a different city, in a building we have never used for a convention before. There are bound to be unpleasant surprises. One of the roles of Institute Director and Assistant is to act as buffers. They need to take the waves generated by these surprises and reduce them to no more than ripples. Their hard work and intelligence was a major factor in this successful '83 Technical Institute. Those attending enjoyed smooth running sessions filled with invaluable information.

That's all for '83 . . . we're "going to Indianapolis" in '84.

Opening Assembly












Auxiliary






Exhibitors




Each One — Reach One . . .

Membership Points
Five (5) points will be credited for bringing in a new registered technician, four (4) for an apprentice, three (3) for an allied tradesman and one (1) for all other memberships.

President's Club
Those who achieve 15 points will receive the President's Club ribbon. At the Awards Banquet each will be presented with the 1983 President's Club pin, and the member who had the most points will be announced and honored.

Restorer's Club
Those who bring in a former member will receive the Restorer's Club award ribbon in addition to the point credits.

Booster Club
Everyone who brings in a new member will receive the Booster Club ribbon at the convention.

Note:
Your name and your own chapter should be shown *in print* on the candidate's application on the line "recommended by," for your guaranteed full point credit. (Sometimes credit cannot be applied because the sponsor's name cannot be deciphered.)

Corrections
Should there be a need for correction on the Booster Club or other lists, please notify the Home Office promptly. We want you all to receive full credit at all times.

Charles P. Huether Vice President

We run our membership promotion year from convention to convention, a "fiscal" year that coincides with our annual meeting. At our convention we honor with special mention and "President's Club" pins those who have done exceptional work in helping technicians become aware of and share in the Piano Technicians Guild.

As worthy of note as those who reach award status are, the major part of new membership comes in smaller units, ones and twos, being generated by individual members who are alert to their friends and fellow technicians in the areas they live and work. These, aside from mention in our regularly published tables, are not mentioned and recognized in any formal way.

I would like to salute those who worked and helped to bring the benefits of the Piano Technicians Guild to others in their areas. I would like to salute those who worked to make sure that the Piano Technicians Guild is an organization of strength and a source of opportunity and advancement to its members. We grow as individuals but in a group. We are not statistics. We are individuals and need individual attention and acceptance. Those who have come into the Piano Technicians Guild this past year know, or are learning, what the experience of sharing and working with people of the caliber we have in our organization can do for one's skill and self image.

I would like to start our new membership "fiscal" year by saluting those who have recently joined and especially saluting each one who helped open our organization and the intrinsic and extrinsic benefits of membership to someone who would otherwise be considerably poorer.

1983 President's Club

	Points	Members
Bittinger, Richard	26	6
Wolf, Bob	24	6
Baldassin, Rick L.	20	4
Stone, Sid	17	6
Crabb, Larry	16	6
Smith, Virgil	16	4
Sankey, Lee M.	15	3

1983 Booster Club

151 members joined the Booster Club by bringing in new members.

1983 Restorer's Club

Bittinger, Richard E.
Caswell, Alan R.
Coates, Timothy C.
Davies, Clair
Dellinger, Ray
Griffin, Rudolph
Hale, Robert
Hawkins, Marshall B.
Hohf, Robert
Preuitt, Ernest S.
Reiter, Michael
Sankey, Lee M.
Seymour, Edwin E.
Welton, T. Scott
Whitting, Edward L.

Auxiliary Exchange

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Editor, Auxiliary Exchange

JULIE BERRY
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A Message From the New President

The New Orleans, 1983, Piano Technicians Guild Convention has come to an end. What a great week it has been. I'm sitting alone in our room at the Hilton Hotel, 26th floor, looking out over this magnificent city, as I write this greeting to you. Many thoughts flood my mind. First and foremost are the friendships renewed and the new friends made during these days. My life has been enriched! Then there was the boat ride, the plantation tour, the Installation Luncheon and, of course, the great food of New Orleans. All of these things are now history — but the memories will linger forever. *Thanks, Piano Technicians Guild, for making it possible to enjoy such a perfectly delightful week with my favorite people!*

My mind goes back to our Auxiliary luncheon. It was my privilege to be installed as your new president. Thank you for this privilege. It is exciting. Already your new Board is planning for next year at Indianapolis. Don't miss our '84 Convention. Start planning right away! It's not too soon.

As your president it is my desire to be your friend — to meet you — and know you. With our new Board we will endeavor to provide an excellent convention program for you. We will give of our time and effort to build our Auxiliary and to serve you in any way possible. We will communicate with you, through our Newsletter which will come twice a year, through the *Journal* each month, and by letter. We want you to feel such a part of our Auxiliary that you won't be able to wait until you get to our '84 Convention in Indianapolis. Write to me. Let me know your ideas and your thoughts. I will answer your letters immediately.

In closing, let me express a gracious and sincere thanks to our past president, Julie Berry, for a great job these past two years. Because of her effective leadership, my job becomes enjoyable and my goals realistically attainable.
Yours for a "going" and "growing" Piano Technicians Guild Auxiliary,
Belva J. Flegle, President

Tuned In To New Orleans . . . Tout De Suite

Some of you didn't make it to New Orleans for the convention. We noticed you were missing, and we hope it was not sickness or sorrow that kept you away. This month we will share a few of the memories so that whether you were there or not you will be able to share in the good times.

Most of us were extremely pleased with the New Orleans Hilton. The hotel employees were amazingly gracious and willing to help the guests. The hotel itself was a beautiful place with outside glass elevators, an atrium several stories high, and marvelous views of the mighty Mississippi River. Five hundred sixty-two people attended this convention but even at that we didn't fill half the hotel.

The Auxiliary's activities, with over one hundred people participating, centered around the Melrose Room on the third floor. On Monday, Helena Thomas gave make-up and make-over demonstrations. A casual atmosphere prevailed as people arrived and greeted each other, many of us seeing each other for the first time since we met one year earlier at the Washington convention. On Tuesday, the Melrose Room was the scene of several Auxiliary activities. The morning began with the members-at-large meeting to elect their Council delegates. The Council meeting began at nine o'clock. (Next month's column will have the secretary's official report of the business meetings.) After the Council meeting Beatrice Skelley, president of the New Orleans Auxiliary chapter and a talented public speaker, introduced us to New Orleans past and present. Her talk provided a backdrop for the city we would come to know and enjoy during the next few days.

In the afternoon we returned to the Melrose Room for Louise Strong's presentation on music appreciation. A special treat came when Louise played Beethoven's "Moonlight Sonata" and other selections for us to complement her narration. Later in the afternon we were musically entertained again as Dean and Helena Thomas presented a program of harpsichord and recorder music at a reception in the Versailles Room. Other highlights of the reception were a six-foot-long Po' Boy sandwich which the hotel staff sliced and served, and a display of piano related artwork by Les Jorgenson. Mr. Jorgenson's prints, many of which have appeared on *Journal* covers in the past, were available for purchase, so many people went home from New Orleans with special prints depicting scenes in the life

of a piano tuner. (If you missed seeing these prints in New Orleans you will be happy to know the Auxiliary Board decided to present them again at the 1984 convention, and several choice prints are still left in the collection.)

Tuesday evening many of us embarked on the riverboat *President* for a delightful cruise on the Mississippi River, complete with New Orleans buffet and Dixieland band. The weather cooperated with clear skies and a light breeze. The following morning 131 of us departed on another excursion in the New Orleans area. We spent the day touring Houmas House and Nottoway plantations, stopping for lunch at a third home which used to be a plantation house and now is known as Lafitte's Landing Restaurant.

On Thursday morning there were two classes in the Melrose Room. The first session found us trying to assemble piano action parts under the expert guidance of technicians Barbara Martin and Daniel Skelley. The second part of the morning was devoted to needlepointing with Dean Thomas, an R.T.T. who set out to show us how some difficult stitches can be easily learned. That afternoon we gathered for a luncheon in the Versailles Room. The tables were graced with delicate ceramic magnolia centerpieces which Ruby Discon spent six months making for this event. In the middle of the head table was an exquisite silk magnolia arrangement on a basket. Marilyn Wright made the arrangement and donated it as a door prize for the luncheon. Ernie Preuitt, president of the Guild, joined us as our guest and spoke to the assembly after lunch. The Key Notes, a singing group comprised of our more musical members, performed under the able direction of Belva Flegle with Ginny Russell as accompanist. After the musical performance the meeting was turned over to Luellyn Preuitt, the installing officer. Lu installed the new Executive Board. (The names of your new officers are listed at the beginning of this column.)

On Friday morning we gathered once more in the Melrose Room. Usually many people are busy packing or out viewing the sights of the city one more time on the last morning of the convention, but this time most of our people came to the Melrose Room because they had seen samples of Marilyn Wright's beautiful silk magnolias, and they wanted to know how to make them. Marilyn even arrived with extra kits beyond the number she had been advised to prepare, but the project was so popular that the kits were gone in ten minutes! The flowers were beautiful and not so difficult to make once Marilyn taught us how. Before leaving the Melrose Room that morning we paused to write a letter to ourselves, highlighting the good times we had each enjoyed in New Orleans and reminding ourselves of the things we had liked best. These letters will be mailed to us in January to bring a perky moment to the mailbox and fight off mid-winter blahs.

Other professions have conventions where the professionals attend alone and leave the family at home. Other professionals attend conventions only if their companies agree to pick up all the expenses. Our professionals in the Piano Technicians Guild attend their conventions with their families most of the time because the families are more often than not involved to some degree with the piano service business, and the families have made friends with other families in the business. Most of our professionals in the Piano Technicians Guild pay their own way to come to the convention. In fact, most of them must save twice as much because their businesses make no money in their absence. Because they don't depend on an employer's generosity before they know whether or not they are going to convention, they can plan ahead and can make it a point to attend the convention each summer no matter where it is held. In some ways our conventions could be compared to family reunions. We look forward to meeting each other, renewing friendships and continuing the conversations we began the year before. We plan festive meals together. We certainly enjoy each other's company. Other professions should have it so good!

From the Past President

Thanks for the privilege of serving this organization as its president for the past two years. And thank you for all the support and friendship you have shown me. When I asked people to help, they did so without hesitation. I would especially like to thank Beatrice Skelley, Marilyn Wright, Deanna Zeringue, Ruby Discon, and the other ladies of the New Orleans area for their great work to make the 1983 convention run smoothly. I would also like to recognize the many contributions and dedicated service of Jewell Sprinkle, Agnes Huether, Ginny Russell, and Arlene Paetow who have served the Auxiliary well for the past several years and who helped me immensely while I was president. I am glad that all of these people are still active in the Auxiliary and plan to remain active even though they are no longer on the Board.

Norma Lamb and I, with the capable leadership of Belva Flegle, the Auxiliary's new president, will remain on the Board and join our efforts with those of Louise Strong, Helena Thomas, Bert Sierota, and Kathryn Snyder, who are just joining the Board. President Belva has asked me to continue as editor of the Auxiliary Exchange, so you and I will still be in touch each month through this column.

I would like to thank all the members for the crystal tray which Belva presented to me on your behalf at the Installation Luncheon. I was thrilled to discover the inscription was in French, reflecting both the flavor of New Orleans and my vocation as a French teacher. You have been a great group to work with, and I look forward to welcoming you to my town, Indianapolis, in July 1984.

Julie Berry
Immediate Past President

Catch a Suncatcher!

The blue, white and silver suncatchers, commissioned by the Auxiliary and made available for sale for the first time at the New Orleans convention, were a resounding success. The suncatchers are approximately 3½" in diameter. They resemble the Piano Technicians Guild logo without the words. The outer circle is a deep blue; the center is creamy white; the crossed tools and piano are silver. Suncatchers may be ordered by mail from the Auxiliary's First Vice President, Louise Strong, at One Knollwood Drive, Rome, GA 30161. The cost (payable by check to the Piano Technicians Guild Auxiliary) is $5.00 plus 50¢ handling for each suncatcher.

With Fond Memories of Jean Huffman

Our thoughts and prayers are with Keith Huffman and family as they sorrow for the loss of Keith's wife, Jean, in June 1983. Many of us remember all the work Jean did for Auxiliary programs at the Cincinnati convention in 1978. We will miss her.

Classified Advertising

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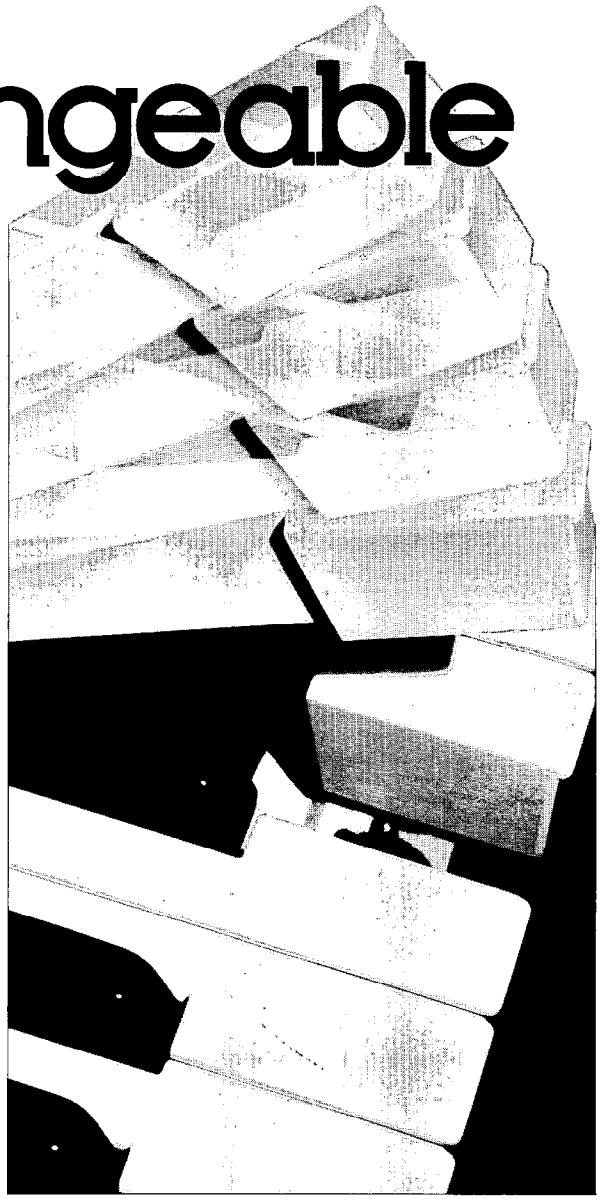

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Piano Technicians Journal
UPDATE
September 1983

July Chapter Mailing

The July chapter mailing to your chapter president contained:

1. **NEWSLETTERS** Message from Vice President Charlie Huether asking chapters to share newsletters with other chapters. Editors, please check this out.

2. **CONVENTION QUESTIONNAIRE** These were handed out at the New Orleans convention but we want *every* member to complete a form and return it to the home office. YOUR input will help in planning future conventions the way you want them.

Fill in the forms and have your chapter return them to us in one envelope.

3. **CHAPTER NOTES** Form to use in sending in items you want used in the Chapter Notes section of the UPDATE.

3. **NEW ADDRESS** Add the words "4th Floor" to the home office address when you write us, please. The post office now requires it.

1983-1984 PTG Directory

Want to be included in the directory this year? Please be sure your name, classification, chapter, address, and telephone number are all correct in the computer printout we mailed to your chapter president in June. The directory will be printed with the information shown *unless* you tell us what you want changed. Only about 25% of the chapters have responded so far and the deadline date is *right now!*

July 14, 1983

To: All Chapters
From Charles P. Huether, Vice President
Re: Chapter Newsletters

In one of our many meetings at the Annual Convention in New Orleans, the Regional Vice Presidents and I discussed the possibility of chapters which are active and busy offering to help smaller chapters to develop member interest. One suggestion for doing this was an exchange of Newsletters. This is the idea:

We are asking that chapters which have a regular and interesting newsletter (and there are many of them) agree to add to their mailing list the members of a chapter which is having difficulty in keeping up member interest. It is hoped that this will help to stimulate activity on the part of the smaller and possibly weaker chapter.

It is not necessary that the chapters in this exchange be close to each other or even in the same region. In fact, it was felt that they should not be close to each other, because distance might add to the excitement and interest. Once contact is established this way, further contact might be promoted through correspondence between members, chapter officers or program chairpersons. Programs might be exchanged through tapes or whatever means might be available.

We need a list to start. If your chapter is willing to consider getting in this program, either as a newsletter sender or as a newsletter receiver, please let your Regional Vice President know as soon as possible. When Regional Vice Presidents collect names we will share them all and try to make some match-ups and start the exchange.

This can be a wonderful way to open up horizons and add a bit of excitement. Let us hear from you soon.

PTG CALENDAR

AUGUST 15	Home Office collection of Chapter Dues Form mailed to all chapters.
SEPTEMBER 5	Last possible date for receipt of corrections for the 1983-84 directory.
SEPTEMBER 15	Last date for receipt of November *Journal* copy.
OCTOBER	Review the Guild Bylaws & Regulations. Proposed amendments should be discussed now in your chapter meetings. Your ideas can make the Guild even better.
NOVEMBER 15	Last date to mail Sustaining Member Applications to the Home Office for presentation to the Board of Directors.
NOVEMBER 15	Send your agenda items for the next Board of Directors meeting to your RVP before this date.
DECEMBER 31	Closing date for nominations by chapters for Piano Technicians Guild awards. Mail nominations and all information to Chairman Willis Snyder.

1983-1984 AWARDS

8/10/83

FROM: PTG Awards Committee, Willis Snyder, Chairman
TO: All Chapters

Your chapter is invited to submit nominations for the following Piano Technicians Guild Awards:

1. **HALL OF FAME** Qualifications for eligibility:
   a. Long-term dedication to the causes, ideals and purposes of the Piano Technicians Guild.
   b. Outstanding personal and professional integrity to the point of being an inspiration to others.
   c. Outstanding contributor and implementor of ideas, programs, etc., resulting in a definite improvement and upgrading of the piano industry as a whole.
2. **GOLDEN HAMMER AWARD** Qualifications for eligibility:
   a. For outstanding service.
   b. Dedication to the Guild over a period of years.
3. **MEMBER OF NOTE AWARD** Qualifications for eligibility:
   a. *Recent* outstanding service.
   b. Dedication to the Piano Technicians Guild.

★ ★ ★ ★ ★ ★

Each chapter may submit a candidate for any or all of these three awards.

Complete the AWARD FORM below (or use your own format) but in any case be sure to include a resume of your chapter's candidate for the award. The committee must have the following information:

Name, address, chapter, place and date of birth, how long in the piano trade, how long a Guild member, and a photograph (if at all possible).

In addition, include a short resume stating the reasons your chapter is nominating the member for the award and listing the qualifications for eligibility for that particular award.

DEADLINE Your nomination and all information must be received by the committee chairman no later than December 31, 1983.

----------CUT----------

Piano Technicians Guild 1983-1984 Awards Form

Mail to: **Willis Snyder, Chairman**
Awards Committee
79 Furnace Street
Robesonia, PA 19551

_____
Date

We are pleased to propose _____ as a candidate for

1. HALL OF FAME ☐ 2. GOLDEN HAMMER ☐ 3. MEMBER OF NOTE ☐

_____
Chapter Name and #

_____
Chapter Officer or Committee Chairman

Resume & information enclosed ☐

( )
_____
Area Code & Telephone #

Piano Technicians Guild Committees 1983-1984

Numbers in parentheses refer to the region

AWARDS

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Regional Vice Presidents
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Vice President
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Local Person
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WAYS AND MEANS (BUDGET)

Executive Board

Report of Chapter Counsel Conclave at the New Orleans Convention

The chapter counsel conclave began with a discussion of the problems of small, spread-out chapters. Alistair Collis of Newfoundland mentioned that some members in that chapter are 1700 miles away from other members. NERVP Robert Smit suggested that chapters keep their business meetings as short as possible to make better technical programs to make it more worthwhile for members to travel. Larry Crabb of Atlanta suggested having an all day meeting at least twice a year with experts from outside the chapter to give a better draw and create excitement in the chapter.

Dale Heikkinen, chairman of the Chapter Management and Achievement Committee, gave a slide program showing the results of the quarterly chapter activity reports. Chapters have been excellent in turning in these reports and Dale reported the percentage of chapters responding as follows: NE 46%, SE 62%, SC 52%, CE 74%, CW 66%, W 75%. This is a great improvement over past response and Dale commends chapters for their help in this project. The ideas that come from these reports will be disseminated to all chapters so that the good ideas can be used by all. For example, if a chapter develops a new tool, this information can go into the *Journal* and be shared. Dale commented that while the quarterly reports are used to decide on the chapter Achievement Awards, they really become a clearing house for ideas and a place where chapters can comment on problems they may have. Problems that show up can then be sent to the appropriate source of help. Ideas for chapter programs will be collected and sent to the Chapter Program Development Committee to be distributed to all chapters. Dale continued with some examples of chapter activities that were on the reports. All present gave Dale and his committee a vote of thanks for the work they have done and encouraged them to continue working in this direction.

The meeting broke into an informal discussion of chapter operations lead by Larry Crabb.