

# Agraffe Graffiti

Newsletter of the Phoenix Chapter of the Piano Technicians Guild

March 2009

## Are You on the Level? From June 2002 PTG Journal Q&A Roundtable

Over the years I have tried a number of different ways of holding punchings while leveling keys. I keep them in a compartment box, but to get one out has always been a challenge. When I reach my fingers in the cubicle, I wind up picking up three or four of them. The thick punchings aren't too bad, but those thin ones are a struggle. I've put them in the palm of my hand and I've laid them on a flat surface. But, I still have difficulty picking up just one punching unless I wet my finger. And when you're leveling keys, your fingers have a tendency to get dirty. So, what are some of you doing?

**-Willem Bles, RPT**

**Sid Blum:** I just use a similar box and tweezers.

**Zen Reinhardt, RPT:** Use tweezers! Seriously, the ones I use have very slender bent tips, originally designed to pick up itty-bitty little pieces of hot silver solder in jewelry making. The tweezers commonly sold in hardware stores or supply houses with the big blunt rounded tips are clumsy by comparison.

**Robert Goodale, RPT:** I now use a wonderful steel box I bought at Harbor Freight Tools. It is just like the cheap plastic types but will never crack, chip, etc.; it is very professional looking. I lined the lid with felt that seals each of the compartments when it is closed so that the punchings don't slip out and get mixed up. I modified one compartment to double size to perfectly fit my dip blocks and sharp leveler. As far as applying punchings, I use medium sized forceps. These are basically the long special jaw-like tweezers with a scissors type grip. They are perfect for picking up any sized punching right out of the box and placing them over the pins. The end of the tool has just enough of an edge on it to lift seated punchings off a pin. It took a lot of time, trial, and error, but I think I have perfected the perfect system.

**Tommy Black:** I bought a sponge in a glass container in order to keep my finger damp: no licking. But while we're on this subject, some technicians evidently level the keys by cutting a "V" in the punchings so they can insert them without

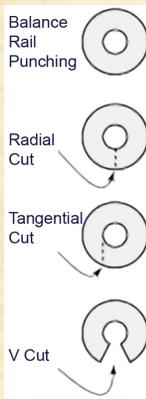


Figure 1

removing the keys (see Figure 1). Do you know anything about this technique? Is it acceptable practice?

**Bob Moffatt:** This is usually done on grands without removing the stack. Tip the keyframe up and forward at the piano, raise the key, insert the slit punching under the felt punching.

**Bles:** This is a good method, if you need to level one or two keys with the action still in the piano. But in my opinion, it would take longer to cut Vs in punchings than it would to lift the key and wool punching.

**Terry Farrell:** I have never used this technique. But, although it would take a few minutes to cut the punchings, it will also save you from removing the stack. Further, it will provide the consistency of the actual action providing the weight on the back of the key, potentially resulting in a more accurate key leveling. Am I right with these statements?

**Bles:** Leveling keys with the stack on is a good way of doing it. I am not sure it is a more accurate way or not. I use weights hung on the back checks to level keys. Although I do this on the bench, I have done it in the piano. I don't see how you can put a punching on a center pin without removing the key, unless you cut a V in the punching. As I said, I have done this in an emergency. But when I have tried doing it for a complete leveling job, I found that I bent, broke, pushed out, and disturbed the other punchings too much, causing more work in the long run. Leveling keys is not an easy, quick job. The more time you take doing this part right, the easier it will be to get the action regulated.

**Roger Jolly:** For the most stable job, i.e., major leveling, I use the split punchings. After completion, I remove the stack and replace them with uncut punchings. Save the split punchings for the next job. You may find you have to install a few thin onionskin split punchings, but

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## Our Previous Meeting

Jim Coleman Sr., RPT, gave us a pop quiz, and it was a good one! Normally, a fleet of action models this large would be seen only at a National Convention. Jim used the models to simulate nine different "bobbling hammer" scenarios.

Everyone attempted to determine the cause for each one, writing down the answer. Nobody got all nine correct, which also means that everyone learned something from this exercise that they can take to the job. Thanks, Jim, for keeping us on our toes!



In our business discussion, we decided that the Phoenix Chapter would not be sending a representative to California for the Western Regional Conference Organization meeting.



## Our Next Meeting

## Technical Session: Key Leveling

We're pleased to announce that ASU Technician David Brown, RPT, will share his key leveling secrets with us on Monday, March 2 at 7:30 PM at AZ Piano!

*See back page for map and address.*

### From the Treasurer's desk.

January Seminar Registration Deposits: **\$1075.00**  
Total Seminar Expenses: **\$1753.024** (Randy Potter \$809.00, Catering \$876.00, Refreshments \$68.02)  
Checking balance: **\$4315.45** (Transferred \$1000 from savings to maintain \$4000 minimum balance)  
Savings balance: **\$5960.32**  
Total in bank: **\$10275.77**

*Ecc. 7:12: For wisdom is a defence, and money is a defence: but the excellency of knowledge is, that wisdom giveth life to them that have it.*



Wendell Smock

this is just a small refinement. It is important to press firmly down on all the key buttons, to make sure all keys are firmly seated for best results, and then recheck your work.

**David Love, RPT:** The tricks are in the tools. You will need two pairs of alligator forceps, longer ones for the sharps. For leveling on the bench, precut the punchings, lay your level, and insert them just slightly under the front rail punchings corresponding to the key where they go, sticking out so you can grab them easily. For the sharps put the punchings between the two naturals so that they are right in front of the sharp where they will go. Stand the action up on the backrail and insert a prop stick from the bench to the inside of the front rail to hold the action up (see Figure 2). If you are concerned about the precariousness of the stick prop, cut a “V” shape in the top to cradle the keyframe and secure the prop to a flat base about 8 x 8 in. (20 x 20 cm). If you are really nervous, make two of them. With the action propped up, push the key up slightly and use a spring hook to reach in and raise the punching if it’s hard to reach. Grab the punching with the forceps, insert, and push the key down. If you are careful, you should not damage the existing punchings. With Steinway balance rail bearings it can be a little trickier, but the spring hook works well to raise those, also. Be careful not to spin them around as you raise them. You will benefit from a carefully placed light, and to see the sharps, it is sometimes easiest to sight between the bottom of the key and front rail. When at the piano, place a cloth or pad over the stretcher, set the action up on the backrail, and lean it against the stretcher to hold it in place. If you don’t have the pad, the dropscrews will scratch the finish. When you bring the action back down be careful that there are no hammers raised that can catch underneath the stretcher and snap off. You can level this way very quickly and accurately; I do it all the time.

**Kevin Ramsey, RPT:** I agree with David here. Occasionally I have to re-level keys on a player installation, in which the level is really out, and I always do it with the stack on. The only exception to this would be on a Steinway accelerated action, then I tend to use key weights. The only difference in our methods would be perhaps the tools. I have a pair of spring tweezers (you have to squeeze them to get them to open) that I have ground down on both sides to a point with a whetstone. I level all the Cs, say, and then “guesstimate” the whites in that octave. I place the cut punchings under the cloth front rail punchings as I’m measuring and guessing. (Just lift the cloth, place the punchings half way under the cloth, and depress the key). When I think I’ve got it, I take a stiff wire jig, 14 in. long by about 1.5 in. high (35 x 4 cm), put it under those keys, and lift them all up. Bill Spurlock teaches this, and I like the way it works. Then, I just lift the action up, and I can pull the punchings out and place them on the appropriate pins. The reason I ground the tweezers to a point is so that I can use them to raise the cloth punchings before grabbing the paper ones to place on the pins. On the sharps, I place them on under the felt of the front pins just to the left of the sharps, which I am leveling so that I don’t have to reach as far into the frame to retrieve them. Once you do this one or two times, it goes really fast.

**Dave Nereson, RPT:** Cutting a “V,” or just a radial cut straight across one side of the punching is for when you tip a grand action up on the edge of the back rail; then keys can be lifted up and punchings inserted from underneath. Kenzo Utsunomiya at Yamaha’s Little Red Schoolhouse uses this method. He makes chalk marks first on the front rail telling him what size punchings he needs to insert. I will use it only for a few keys, to avoid unscrewing the stack. Otherwise, I think it’s a big hassle. You, of course, have to remove the key-stop rail for any method of key leveling. But with this method of standing the action up on its back edge, you also have to watch that the drop screws don’t gouge the stretcher, and drape something over it for protection. With some grand actions, the keys extend back farther than the back rail, so when you tip it up on edge, the keys want to ride up on their pins, the action isn’t in a stable position, and it’s quite difficult to lift keys and insert punchings. It’s difficult, no matter what type of action. If the key is over part of the keyframe (the slats that span between the balance and front rails), it’s difficult to get the tweezers in there at the right angle and get the cut punching to go onto the pin – a ‘V’ does work better than just a plain cut, though. You’re supposed to face right and let the action lean against your left hip, leaving both hands free for manipulating keys and punchings. But, if you have to do some keys way down in the first octave, you have to face left and preferably be left-handed. It can be done, with the right attitude, as David Love describes. The stick propping up the action sounds precarious to me. I would think the weight of the action would tip the bench over. I don’t know; to me it’s much easier to take the stack off and use the weights on the backchecks (unless it’s just a few keys).

**Tommy Black:** When one uses this method, what instrument does one use to make sure the keys are level? Do you set the key height at the bass and treble end and then use a straight edge to set each key while the action is in the air? I guess it is obvious one cannot use the little “gizmo” that slides on the keybed that allows you to set the height of each key. If not either one of these methods, how do you gauge the height of each key while the action is raised in the air?

**David Love:** In the shop I use a straight edge from Steinway, curved on one side, straight on the other. I generally use the straight side. I set a few of the end keys and block them up with punchings. In the field I carry an aluminum straight edge to level the keys between the samples. I use a Jaras™ tool for the sharps. I choose the punchings to be inserted with the action flat, place them temporarily under the front rail punching as I described, and then insert them with the action tilted upward.

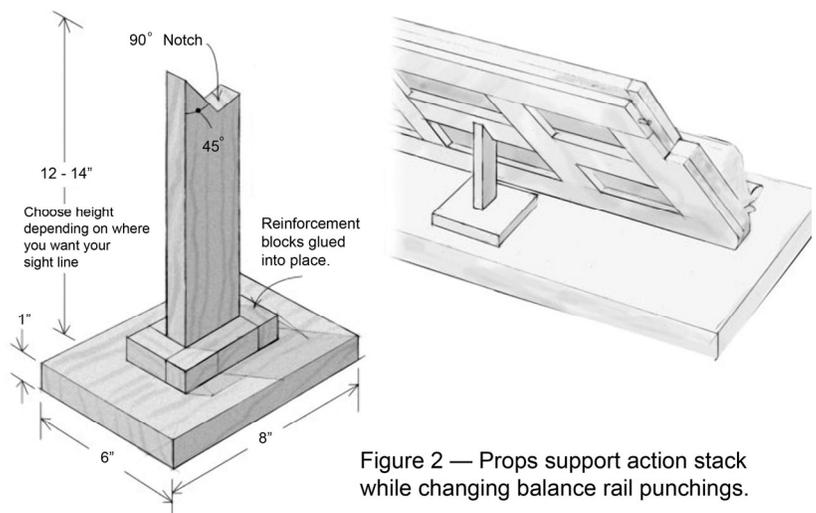
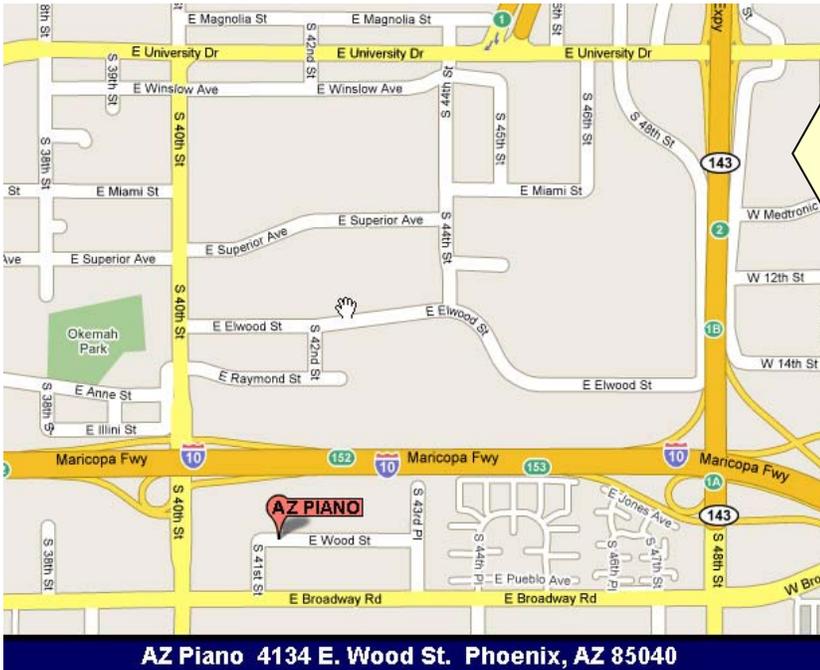


Figure 2 — Props support action stack while changing balance rail punchings.

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Map to our next meeting  
**Monday, March 2nd at 7:30 PM**

AZ Piano  
4134 E. Wood St. Suite 200  
Phoenix, AZ 85040

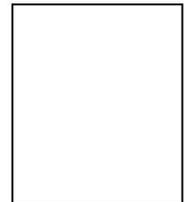


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