Terrific Trio Teaches Tuning Triage Tricks

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Shoreline Prosser's

Joe Goheen

What can we do when we don't have enough time to tune? Joe's standard procedure takes about two hours. One time Joe got a call in Fremont saying the piano would be played on in two hours and Joe had only a half an hour to do it. Another time he was putting on his snow tires on his car when he got a call asking to tune a piano. He would have only an hour between the rehearsals and the actual performance. As he was tuning he heard a comment from his former soccer coach's wife asking someone "wasn't he supposed to do that before?"

Now Joe has about six different ways of tuning, depending on the situation. How can we best utilize our time when we don't have the time for a full tuning? Let's say you have two hours to work, and there are some necessary repairs to be done as well, such as a squeaky pedal, a note that doesn't work, etc. Take into consideration these questions:

- How badly tuned is the piano?
- Is the piano in tune to itself?
- If the pitch is between 439 and 441 and it's in tune to itself, don't move it around
- If it's between 438 and 442 it should be tuned.
- What is the quality of the piano?
- What is the skill of the player?
- How much time is available?

Work backward from unisons, allowing at least a half an hour for unisons. Rick Baldison taught a class saying that 10 minutes on unisons buys an hour on temperament.

Procedures

- If you have 45 minutes or more and the piano is not too good, use the RCT.
- Set a quick temperament, play fourths and fifths and pick out the worst ones, and use contiguous thirds to get it smooth. In other words, quickly go through by machine, playing parallel fifths and fourths and move the worst ones.
- Think in terms of bracketing. In photography this is a common technique, particularly with film. Take a picture at what you think is the right setting, then take one a little over-exposed and one a little under-exposed. In tuning, do the same. Get each string as good or better than the others.
- The low tenor is often the worst part of the piano. Sometimes the bass will be OK by itself but the low tenor is higher or lower, so try to blend them in. Also, the low tenor is where the string tension is lowest; the elongation takes a less percentage of change to make a change in the pitch.
- If you have a section that is a little sharp or flat by a few cents, and the unisons are all pretty good, how should these be blended in? If you are going up the temperament octaves and you

notice that the octave above is flatter or sharper than the one below, fit the notes between to blend.

- Strip-mute the whole piano for speed. Put the mute in every other unison. Strip out only one section at a time if you are not sure how much will need to be moved. If the unisons are good, you might not want to strip out the piano.
- When raising pitch, do unisons one at a time.
- Use a light-weight tuning hammer. Joe keeps his hand on the end of the hammer without needing to slide his hand up to move it.
- Use an ETD if the piano is close. Use aural checks to decide if the note should be moved.
- It's quicker to use one-hand checks.
- For the high treble – the fifth and sixth octaves – use octaves to determine if they are too sharp or flat. Then use double octaves and twelfths if there is time.
- After doing the fine tuning on the first pass, during the second pass focus on unisons. Go through multiple times.
- Joe uses a short, thin rubber mute for testing strings that might be out of tune. This thin mute can be placed on the center string, which might be the only one that is out.
- Going through unisons, play one octave at a time, picking out the worst ones in each octave.
- The highest priority octaves are the 4^{th}, 5^{th}, then the 3^{rd} and 6^{th} octaves. Most people play in the 4^{th} and 5^{th} octaves. Play C4 to C6 and maybe up to F. Play parallel four octaves, fix what stands out, then test with 3rds and 10ths.
- With Smart-Tune, program in the location of breaks and other information, and go through the piano as it says. During the second tuning, go back by ear, touching up unisons and intervals, if there is time. The algorithm can notice that, for example, the inharmonicity is low, which effects the over-pull, particularly on smaller pianos.
    - If the piano is so far off that you can't read it, use pitch-raise mode. Don Manino suggests lowering the bass a bit farther than the program says, and that this makes the piano sound a bit larger. This doesn't work on small pianos. If the inharmicity is higher, the lower partials must be shoved down lower.
- When sampling a piano, tune all the A's to hear how the rest of the notes may be changed. Take sample readings on several notes, like A's, C#'s, etc. If they are all closer to A=441, then tune the piano to 441.
- Joe wears a padded bicycle glove and uses a pounder for setting pins.

Ed McMorrow

- Get the tuning in the sweet spot. There is a range of acceptance where the notes sound good.
- If there are thirty minutes to make the piano sound good, start with the first-played strings in the middle. Tune those strings to match the bass, since the bass doesn't move much. Eliminate the wah-wah's.
- For unisons, step on the pedal, play triads with an octave 6, like the A, B flat and the B. Identify the wah-wah's and eliminate them first. Play them, letting the piano ring with the chord. It's like pitch-raising from the worst notes, and then working out from there.
- Think of the variables as well, such as when the ensemble will be rehearsing. The noise level in the room grows as the doors open and people start coming in. The higher treble is the area that competes most with the room noise, so get that area done first.
- Tune the treble off of the bass. Do the unisons in the middle afterward.

- Experience pays benefits.
- For anything more than 4 or 5 cents, use the Smart-Tune, which is the tuning between a fine tuning and a pitch raise. Standard mode is 25 cents, whereas concert tune is a much narrower tolerance.
- "You must have a good ear." It's not how well you hear, but how you move your hand. What makes a good tuning is a good arm. A tuning pin has two adjustments: a course general rotation adjustment, and a fine tuning with a slight rotational bend in the pin. Flag-poling is not stable. Even with very loose pins a piano will stay; it's just difficult to move the pin by pushing down. Ed believes that the torsional bending actually goes down into the pin block. The hardest kind of pin to tune is when the coils are right down on the bushing.

Roger Gable

Roger can handle the stress level of a limited amount of time, but with other factors the stress becomes too much. If it takes 7 seconds to tune one unison and you have available only half of that time, then each unison would have to be tuned in 3 or 4 seconds. At 7 seconds per unison, the piano could be gone through in about a half an hour. However, some notes will take longer than others.

What can be done in limited time?
15 minutes: unisons only
30 minutes: unisons and octaves
45 minutes: whole piano

The worst request is when they ask you to "touch up" the tuning.
A lady called for a tuning. It was way out, so Roger did a complete tuning. When he finished, she said "I only wanted you to check the tuning, not tune the whole piano. I'm not going to pay you."

There are times when performances demand multiple tunings: upon delivery, during the sound check, and just before the performance. Sometimes a piano is to leave the piano where it is rather than to move it out and put it back in again. There are times when too many tunings can knock out the piano, so it could be best to do minimal changes if any.

There are measurable changes between the piano room where the piano is stored and the stage room with all the lights on. When tuning the piano in the cooler storage room, tune it slightly sharp to allow for the drop in pitch when it goes under the lights. When tuning under the lights, tune it right on pitch.

When following another tuner's tuning, test the pins by nudging them to find out how well they are holding before beginning. Some tuners flagpole, or just pull directly up to the note, and so forth, and these unstable techniques can be felt right away. Give a hard test blow to find out what happens. Hit the strings too hard and you may create more problems, like broken strings or shanks.

Scott Craven

One of the advantages of tuning with a device is in close noisy environments. When tuning during vacuuming or some loud noise, use the note-lock to focus. Tune unisons and then check with the device.

Temperature changes, especially when outside, can be difficult. Determine the time interval of the change in order to figure out the mean range for tuning. When pianos are directly

beneath air conditioners they will go out of tune within a week. Use space blankets to reflect the heat while tuning.

Steve Brady

In Alaska Steve usually has an hour before the concert. Sometimes he is given two pianos to tune in that same hour. One time he was given six pianos to do in the same hour. Usually the players are performing some sort of percussion piece, but still there are standards. If you pitch two pianos together with three or four cents, they will sound pretty good together. First Steve had two pianos that came in from other venues, so he had his tuners put a good tuning on those pianos the day before. The next step is to find the worst piano and spend the most time on that. It is rather nerve-wracking when there is so little time to do so many pianos.