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Registered Piano Technician

by Rob Mitchell, RPT

Having recently passed my RPT exams, I thought this would be a good time to do an article on just what being a Registered Piano Technician means. For this, I'll be borrowing heavily from Piano Technicians Guild documents (since they're the ones that do this) and hopefully describe the achievement in a way that is useful to all piano owners.

Similar to the way that financial planners, accountants and real estate agents must pass a testing process for accreditation, the Piano Technicians Guild (PTG) has assembled a set of exams for the Registered Piano Technician (RPT). (A member of the PTG who has yet to pass the exams is classified as an "Associate".)

These exams have been developed over many years by some of the top technicians in the world as a way of raising the level of service provided to piano owners. The exams cover what most consider to be the basics of piano history & terminology, repairs & regulation and tuning. But please don't equate "basic" with "easy".

All RPT exams are timed and this sometimes generates a lively discussion within the ranks. Invariably someone asks, "why should it matter how long it takes me to do something, as long as I do it correctly?" While there is some credence to this, the philosophy of the test designers was that a *successful* piano technician must be able to complete the exams both correctly *and* quickly.

(The following sections of this paper will cover the entire exam set for those interested. Others may want to skip to the "Why should a piano owner care" section at the end.)

Written Exam

To start off the process, the technician must be a member-in-good-standing of the Piano Technicians Guild and pass a written exam of multiple choice questions. The questions cover a wide range of piano history, terminology and mechanical operation. It insures that the examinee has invested enough time to "understand the basics" either through study or through practical training.

The next two tests are the Tuning Exam and the Technical Exam, and may be taken in either order. Each exam requires four to five hours to complete and score. To insure objectivity, three examiners are present for the exam: a Certified Tuning or Technical Examiner and two other RPTs.

Technical Exam

The Technical Exam is broken down into three parts:

1. Upright Regulation
2. Grand Regulation
3. Repairs

Remember that "regulation" is the piano technician term for correctly setting the 15-20 adjustments *per key* to assure the best mechanical performance of the instrument. These include key dip, blow distance, letoff, damper lift and after touch, just to name a few.

For Upright Regulation, a 3-key action model is used that has two naturals and a sharp, all with dampers. For Grand Regulation, a single-key action model with a damper is used. (Action models are used instead of actual pianos, to assure complete consistency through the testing process). Prior to each exam, the action model will be "de-regulated". In addition, for the Grand Regulation test, the model will be almost completely disassembled.

For both tests, the examinee must know a reasonable starting point for all the regulation parameters and then be able to fine tune these for optimal operation (much as we do in the real world). All of the regulation settings are then measured and scored.

The repairs section is divided into a representative sample of common repairs. These include splicing a broken string, replacing a broken upright hammer shank, rebushing a flange and shaping some hammers. Again, each repair is timed and the quality of the work is scored.

Tuning Exam

There was a time in our not-too-distant-past when *all* piano tuning was done "by ear". Although the vast majority of technicians now use electronic tuning devices for expediency, there is still value in being able to demonstrate a proficiency in aural tuning.

As with the Technical Exam, the Tuning Exam is a multipart test:

1. Set A4 to a 440Hz pitch reference

2. Aurally tune the two middle octaves (C3 to B4)
3. Tune the balance of piano either electronically or aurally
4. Demonstrate tuning stability
5. Aurally tune the unisons in the middle two octaves.

Setting A4 to a 440Hz pitch reference (a tuning fork or electronic tone generator) is a challenge given the ±3c tolerance on the results. 3 cents around A4 translates to a range of about 439.25Hz to 440.75Hz -- not much margin for error.

Once A4 is set, the examinee has a limited time to tune the two octaves between C3 and B4. The passing tolerance in this range is also very tight, varying between 1.0 and 1.5 cents of allowable error. Meeting these tolerances will deliver a fine tuning that would satisfy the most discriminating pianist. Scoring in this area is a complicated process combining both electronic measurement and aural listening by the examiners.

Following the mid-range tuning, the examinee may either electronically or aurally tune the center strings for each note on the rest of the piano. First, the accuracy of this tuning is scored. This is followed by the Stability Test, which involves dropping a weight from a known height, three times on specific keys to see if their pitch drifts (what would generally be considered to be a very sharp blow on the key). The pitch will move under these conditions if the examinee hasn't done a good job of "setting the pin" or equalizing tensions in the different segments of the string. A successful piano technician must be able to deliver an accurate *and* stable tuning to a customer.

Finally, this is all wrapped up by tuning the unisons by ear in the middle two octaves (that is, the left and right strings are tuned to the center string on each note). All three strings must be within 1 cent of each other or points will be lost.

Preparation

To its credit, the PTG devotes considerable resources to preparing Associates for the exams. Voluminous written materials are available and many classes are given through local chapters, regional conventions and national conventions. Those who already have their RPT credential will usually go to great lengths to assist those studying for their exams. Prior to taking either the Technical or Tuning exam, the Associate is encouraged to do a "pre-screening" or a dry run of the complete exam.

Why Should a Piano Owner Care?

Unlike doctors or lawyers who cannot practice without board certification, anyone can hang out a shingle and claim to be a "piano technician". Many years ago, the Piano Technicians Guild recognized the need to elevate the standards of service provided to piano owners and to establish an objective examination process. In the PTG's words, "Registered Piano Technicians are professionals who have committed themselves to the continual pursuit of excellence, both in technical service and ethical conduct."

The Piano Technicians Guild actively promotes the "RPT Brand" and would encourage any piano owner looking for a technician to seek out the RPT credential. If you visit the Guild website looking for a technician, you will first be directed to the RPTs in your area.

The exams do an excellent job of covering a large swath of fundamental skills. But there are certainly more advanced topics not covered -- voicing, touch-weight regulation, action rebuilding and historical temperaments (just to name a few). Depending on your needs as a piano owner, you may want to seek RPTs who have these additional skills.

Having the RPT credential is obviously not a guarantee to being a good piano technician. (The flip side is also true. I know some excellent piano technicians who, for whatever reason, have never sought to become an RPT). But being an RPT should be a pretty good indicator that your technician possesses the skills needed to successfully care for your piano and is invested in improving themselves.

For more information or to request an appointment, visit www.mitchellpianoservice.com.

