

## Introduction

The player of a wind or bowed instrument pays far more attention to its welfare than the average home pianist pays to the condition of his or her piano. The piano is, of course, a more stable instrument, but it is rather surprising in this 'do-it-yourself' age that more owners do not take a practical interest in their pianos – granted, that is, that they are practical people in other areas. In some ways, this has redeeming features, for the piano, by its value in some instances, by the tensions in its structure, by its complexity and the delicacy of many interacting adjustments, stands somewhat apart from most other domestic instruments. There may be more at stake to be lost by blind poking and turning of screws, and certainly the piano is an instrument in whose servicing experience and an intuitive sense count for much.

But there is more than prudent caution involved. The piano is surrounded – some may say protected – by an aura, a mystique. Some of this may derive from the great era of the piano when, in the home, it was often a ladies' instrument, and ladies had servants and tradesmen ('craftsmen' would hardly be recognized) do the manual and maintenance work – though the ladies of an earlier age had tended their own clavichords. Some of it is due justly to the value and intricacy of the instrument. But now the piano is less an appurtenance of the finishing school, and indeed the ladies themselves see things differently. Amateurs in other fields do work on valuable and complex mechanisms and duly appreciate that the finer adjustments verge on the subjective and cannot be presented by formula or executed with mechanical exactitude alone. Skilled crafts are being revived everywhere by non professionals, whilst it is yet recognized that the expert must be called in for his or her experienced skill or other support.

I see this book as for the musician with a practical interest in pianos, and with some ability and inclination for practical work with the many materials that make up a piano. If a large reason for the vogue of 'do-it-yourself is economic – as, for example, in attending to the car or the decorations – this is not primarily a 'do-it-yourself book. Except insofar as you may well decide to restore an instrument yourself which you could not afford to have restored professionally, or which the profession has refused to touch, the object is not to cut running costs or to reduce servicing or to make you less dependent on your professional consultant – though some of these may happen. The object is more to enable you to perform what a tuner, for one reason or another, may fail to do, or what he cannot do as often as you require, it is partly to help you towards the very great satisfaction to be found in working on pianos, and partly to enable you to improve your musical experience and to gain in appreciation of the instrument. This work involves many crafts in themselves rewarding, but the real reward is in using those crafts to produce a refinement which only the musician can fully enjoy. It is arduous work restringing a piano, although the process can be enjoyed; but the real satisfaction comes when you have the new strings reasonably stable and first begin to hear an acceptable tonal result of your labours. We shall be thinking of an intricate machine, and many people find intricate machines themselves to be of interest; but I have in mind such a person whose fundamental aims and standards are musical.

In my view there is no reason for, and no room for, enmity between the professional tuner/technician and the owner who feels obliged to adjust his or her own piano or to restore other instruments – provided that such a person preserves respect for the full-timer and does not, without a great deal of self-scrutiny as to his or her own merits, risk taking business from the professional. A professional can recite appalling instances of uninformed dabbling. I have seen some myself. But the way to avoid such catastrophes is to try to inform, for you cannot stop people from trying to help themselves and I believe that you should not attempt to do so. The role of the informed and practically-interested amateur is supplementary to that of the professional and not in conflict with it. Indeed, as one's response to the instrument develops with practical experience, one may well call on the tuner more rather than less; and that because one's own standards rise rather than because of nasty accidents.

Nonetheless, there are important cautions. Only you can assess the risk of offending and possibly losing your tuner. You must decide how far you are prepared to learn from your own piano and how far it may be practicable or desirable to pick up a 'banger' for experimental purposes – unless of course it is such a martyred instrument that you own already. It is most important for relations with the industry that you do not do imperfect work, with substitute materials, on other people's pianos whether or not for payment. It is far better to admit your limitations and restrict yourself to activities where enquiries of the professionals have met with a negative response than to bring the amateur into disrepute. Secondly, do not underestimate the task – even in simple terms of the space and endurance which may be needed. You can probably imagine the problem of getting 88 notes into a more or less mathematical series of pitches if you have cause to put the piano right out of tune. Envisage also the amount of reasonably dry space, the period of time, the volume of dirt and the sheer physical demands involved in overhauling a piano fully. Some jobs require more than one person, most work requires clear floor and storage space and even so apparently restricted a task as tuning can make intolerable demands of the human spine.

This book considers only 'straight' pianos – it omits electric pianos, mini-pianos where the action is below keyboard level, and the playing apparatus of player-pianos, although much of what is said will apply to these types also. There are chapters on tools and materials, on tone and touch and on tuning and toning, but the main part of the book is the sections on structure and resonant parts, on actions, and on keyboards. Each of these sections has a space devoted to repairs and adjustments. Some more general questions of buying or acquiring an old piano and restoring it are considered in the last chapter. Pianos have a specialized and not wholly standardized terminology which I have tried to use consistently but which may differ from what you might read elsewhere. The Glossary of Terms at the end of the book is intended to lessen such difficulties.

The diagrams are generally diagrams, not scale drawings. I hope that they help you to find your way about. The photo graphs of actions are, however, of real actions with only slight modifications (not affecting regulation) to make them fully visible. I hope that they give a clearer picture than diagrams of how piano actions work. The oscillograms are used purely for their illustrations of rather difficult concepts; for various reasons an oscilloscope is not in fact of much practical use

in servicing and restoration of pianos, although experiment with it is of interest.

I should like to acknowledge once again the help I have received from Dr. and Mrs. A. J. Allnutt in producing the photo graphs and the oscillograms. They gave time, patience and expertise with extraordinary generosity. I am also grateful for the forbearance of my wife and family as pianos take over the house, a thick layer of dirt covers all, and single notes are struck ad infinitum into the small hours of the night.

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