

Practical Touch™ Toolkit User's Guide

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<http://pianosinsideout.com/Bonus>

Welcome to Practical Touch, a new method for quickly analyzing forces, leverage, distances, and inertial response of a grand action.

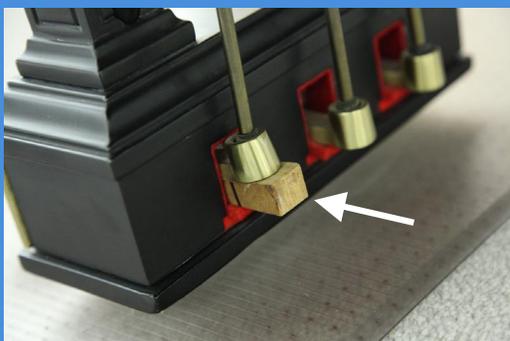
Perform the following steps on or close to note F3 (F under middle C), then enter the measured values in the Practical Touch calculator (free download from <http://pianosinsideout.com/Bonus>).

This kit contains:



Prepare

Prop the pedal up with a wedge



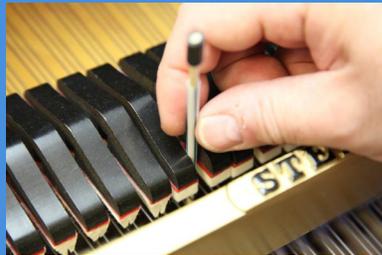
Step 1

Measure Downweight (**DW**) from 4 mm dip, Upweight (**UW**) between 7 and 4 mm dip.



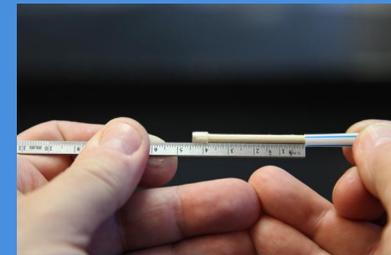
Step 2

Measure **blow distance**:
Hold the straw and hammer dip stick, insert between dampers catching the string.



Drop plunger onto hammer, then squeeze straw, hold, and pull the tool out.

Read the scale on the stick against the straw or use ruler to measure tip to straw (deduct 1 mm to compensate for string thickness).

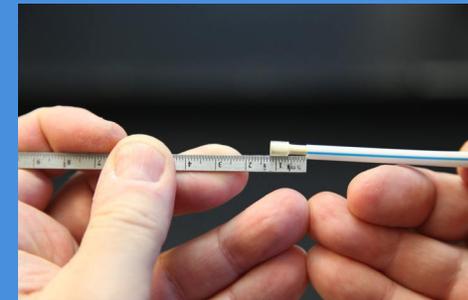


Step 3

Measure **hammer distance at 6 mm key dip**:
Place the 6mm dip tool on key at SMP, squeeze the straw, and insert between the dampers.



Drop the plunger onto hammer, squeeze, and remove the tool, then read the distance (if reading against a ruler, deduct 1 mm).



Step 4

Measure **FW**: Jam the hammer and wippen in the up position to free the key for measuring FW.



Hook the repetition lever behind the repetition lever post and lower the cork.

Don't displace the repetition spring!

If the action has abstracts, remove the action and disconnect the F3 abstract, then measure FW. Reconnect the abstract before reinstalling the action in the piano.

Step 4

Affix a piece of Scotch tape to the key top at the Standard Measurement Position (SMP).



SMP: 13 mm in from edge

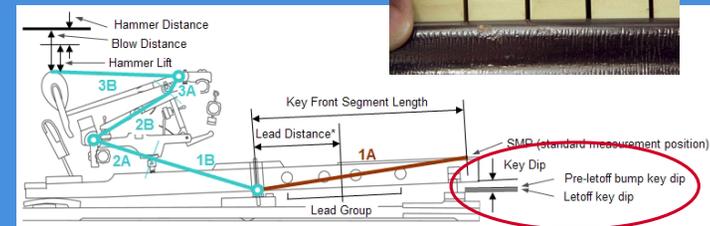
Step 5

Measure the front weight (**FW**): Lift, then lower the key with the gauge. FW is the average of the two readings.



Optional Step 5

Use the digital dip gauge to measure **key dip**, **letoff dip**, and **pre-letoff dip**.



Optional Step 6

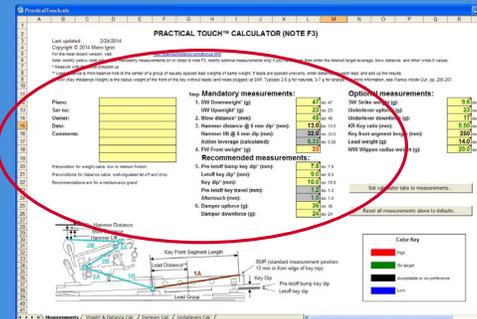
Remove wedge from under the pedal.
Measure damper up force, down force.



Analysis

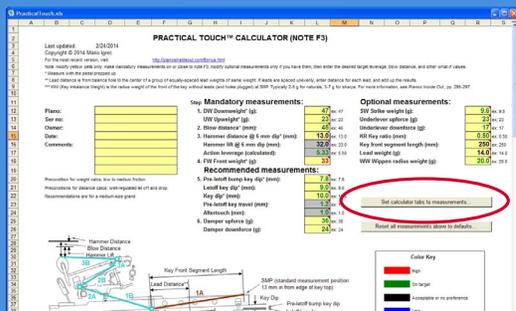
Enter the information about the piano and measured values in yellow fields in the Practical Touch™ spreadsheet:

Tip: Don't overwrite the gray fields, which contain formulas. (In Excel gray fields are protected, but not in Numbers for iPad.) Don't overwrite recommended and optional measurements unless you take them.



Analysis

Click "Set calculator tabs to measurements" (in scaled down versions open each calculator tab and copy the values that appear in small type next to each yellow field into each yellow field).



Analysis

Click each Calc tab and play what-if scenarios by altering values in yellow fields while observing the other values.

