

The Art of Tone Regulation

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- I. What is voicing?
 - A. Different preferences
 - B. Different techniques
 - C. Judgment: The essential ingredient

- II. Conditions prior to actual voicing
 - A. Piano must be in good physical condition (pinning, glue joints, etc.)
 - B. Solid tuning, especially unisons.
 - C. Regulation must be good and even.

- III. Initial voicing parameters
 - A. Hammer shoulders must be able to move, ergo deep needling or pliers work.
 - B. Hammer shape must be good.
 - C. Optimal strike point
 - D. String terminations clean and solid.
 - E. Strings level and hammers fitted to strings.

- IV. General methodology
 - A. Voicing for brilliance & power
 1. All work from III.
 2. More filing
 3. Chemicals: lacquer solution, white shellac, collodian.
 - B. Voicing for mellowness or softness of tone
 1. Needling in upper shoulders and/or crown
 2. Steam
 3. Chemicals: alcohol & water

- V. Voicing for Evenness (Hard-pressed hammers)
 - A. Begin voicing for evenness by playing each key hard (*ff*) and listening for harshness. If harshness present, mark the key and needle deep in mid-to-upper shoulders, finding hard spots.
 - B. Continue by playing each key at *mf*. Shallower needling in upper shoulders.
 - C. Continue by playing each key softly. Use sugar coater for color.
 - D. Voice in the shift position by listening to each string separately and needling either between the grooves or on the offending grooves, depending on whether the shift is set to miss the left string or not. Use a single needle. Sometimes a quick swipe of the sanding file diagonally across the left corner of the crown will help if that area is hard.

- VI. Voicing for evenness (soft-pressed hammers)
 - A. Mark string lines if grooves are not developed

 - B. Begin by voicing for evenness in shift position, using a multi-needle tool to voice in the spaces between string grooves. Sometimes a quick swipe of the

sanding file diagonally across the left corner of the crown will help if that area is hard.

- C. Continue by voicing for evenness at *mf* and *ff*. Isolate the strings that stick out and voice directly through the crown using a single needle.

VII. Clean-up shoeshine hammers, graduating to 600-grit sandpaper to bring striking surface to a smooth finish.

VIII. Re-check voicing & shift voicing for evenness, repeating steps V or VI as necessary.

Tools:

- Sand files and sandpaper strips backed with tape
- Hammer tail support for needling (should support three to five hammers)
- Hammer tail support for gang filing (2 x 2 to support at least a whole section)
- Curved sand file
- Felt-stiffening solution such as 1:3 lacquer in acetone
- String hook
- String seating tool
- Vise-grips or pliers modified for voicing
- 3-needle voicing tool
- 1-needle chopstick voicing tool
- Multi-needle Steinway shift voicer
- Sugar coater
- Chalk and hammer felt scrap
- #5, #6 needles
- Carbon paper

Optional tools:

- Alcohol & water
- Steam pot

Notes: