**“Ordinary” Temperament Strategy**

*Bradley Lehman, © 2013*

Although other instruments will not be matching the keyboard’s placement of every note exactly, some attempt should be made in tuning the keyboard to accommodate the schemes of the other instruments that will be played with it. Other instruments do not play “in temperaments”.

- **Reference pitch**
  - Go through the compositions for the entire performance. Assess the named notes that are required. List the naturals, sharps, and flats separately: for example, if the composition needs both F-natural and E-sharp, these are two different notes.

- **Will the keyboard be played with other instruments, especially fretted or unfretted string instruments?**
  - 1/4 comma or 1/5 comma in the naturals might work OK.
    - 1/4 comma or 1/5 comma in the naturals might work OK.
      - Does the music have many major 10ths or 17ths above the bass, where the bass note has a flat?
        - Yes
          - Lean toward 1/6 comma in the naturals, rather than 1/4 comma. 1/4 comma may be too tight for the fretted instruments, especially.
        - No
          - 1/4 comma or 1/5 comma in the naturals might work OK.

- **Does the music have many major 10ths or 17ths above the bass, where the bass note has a flat?**
  - Yes
    - Lean toward 1/6 comma in the naturals, rather than 1/4 comma. The differences between sharps and flats will be less severe, and easier to handle gracefully.
  - No
    - 1/4 comma or 1/5 comma in the naturals might work OK.
      - Do the keys for the entire performance stay near D minor, G minor, F major, C major, and G major?
        - Yes
          - Lean toward 1/6 comma in the naturals, rather than 1/4 comma.
        - No
          - 1/4 comma or 1/5 comma in the naturals might work OK.

There is no expectation yet that Eb and G# will connect with one another, or ever be used together.

The core of a temperament is the set of naturals C-G-D-A-E, tuned “regularly” with the same amount of slight narrowing each. The above questions, and other musical experience, have helped to determine what that regular size ought to be: somewhere in the range of 1/4 to 1/6 comma, or occasionally as lightly as 1/8 comma.

By default, the remaining notes are generated with the same regular size that was used in the core naturals. C-F-Bb-Eb and E-B-F##-C##-G#.

Adjustments

Ideally, this should be C, or a second choice of F. The use of A as a reference is both less historically sound, and more problematic in practice.

This is a continuum of tasteful adjustment, not necessarily hitting any given comma size exactly.
Adjustments

Need both G# and Ab?
Yes
Raise it to a compromised position at or near the midpoint in E-G# and Ab-C. Consider also lowering Eb, and/or raising C#, to improve those 5ths with G#/Ab. Check the semitones melodically: G#-A, G-Ab. Check the tones melodically: F#-G#, Ab-Bb.

No

Need both D# and Eb?
Yes
Lower it to a compromised position in B-D# and Eb-G. Consider slightly raising B. Consider lowering Bb. Consider raising G#, if you didn’t already. Check the semitones melodically: D#-E, D-Eb. Check the tones melodically: C#-D#, Eb-F.

No

Need both C# and Db?
Yes
Raise it to a compromised position at or near the midpoint in A-C# and Db-F. Check for a good 5th from G#, maybe slightly impure in either direction. Consider slightly lowering F. Consider raising F#. Consider raising G#, if you didn’t already. Check the semitones melodically: C#-D, C-Db. Check the tones melodically: B-C#, Bb-Eb.

No

Need both A# and Bb?
Yes
Lower it to a compromised position, but keep Bb-D better than F#. A#. Consider slightly lowering F. Consider raising F#. The 5ths Eb-Bb and Bb-F might be slightly impure in either direction, or possibly pure. Check the semitones melodically: A#-B, A-Bb. Check the tones melodically: G#-A#, Bb-C.

No

Need both F# and Gb?
Yes
Slightly raise F#, keeping good 5ths B-F# and F#-Gb, possibly pure, possibly slightly impure in either direction. Keep D-F# smaller than Gb-Bb. Consider also lowering Bb, and/or raising B. Check the semitones melodically: F#-G, F-Gb. Check the tones melodically: E-F#, Gb-Ab.

No

Consider raising C# or slightly lowering F. Recheck the C#/Db relationships with its neighbors. Keep Bb-F pure, or slightly impure in either direction. Keep F-C regular, or slightly less tempered, or perhaps pure, but probably not wide. If you moved F, check F-A. Check the semitones melodically: E-F#, E-F. Check the tones melodically: Eb-F, F-G.

Need both E# and F?
Yes
Consider raising B. Keep E-B regular, or slightly less tempered, or perhaps pure, but probably not wide. Keep B-F regular, slightly less tempered, or perhaps pure. Keep G-B narrower than B-D#. Check the semitones melodically: B-C, Bb-Cb. Check the tones melodically: A-B, B-C#.

No

Need both B and Cb?
Yes
Assess results

No
There is too much space between the flats and sharps to be able to make convincing compromises. The contrasts are too strong. Choose a lighter amount of tempering for the core naturals.

Was it necessary to compromise more than two or three accidentals for double duty?

Yes

No

Play through the program to assess the sound of the music in practice, and not merely in speculation from the required notes. You might be finished with the task of tempering.

Was your core tempering nearer to 1/4 comma than to 1/6?

Yes

No

Are your musical colleagues able to perform with it without serious problems?

Yes

No

Assess results

Does the overall sound match your artistic and historic goals?

Yes

No

Consider using a different regular size in the core.

Go back to its decision point, and correct that note.

If your temperament must be reproducible, take notes where everything ended.

No

Yes

Are your musical colleagues able to perform with it without serious problems?

Yes

No

Finished!