Using Fast Beating Intervals
(by Maggie Jusiel, student of Rick Butler, 10/13/20)

Quick Review: (modern temperament; simplified)

A major 3rd is tempered wide and its inversion, a minor 6th, is tempered narrow.

Example: **C3** | | | | | | **E3** | | | | | | | | | | | | | | **C4** (not tempered)

C3 | | | | | | | **E3** | | | | | | | | | | | **C4** (tempered)

A major 6th is tempered wide and its inversion, and a minor 3rd,is tempered narrow.

Example: **C3** | | | | | | **Eb3** | | | | | | | | | | | | | **C4** (not tempered)

C3 | | | | | | **Eb3** | | | | | | | | | | | **C4** (tempered)

(Vertical lines give a visual cue about the width of the interval, not beat rates.)

(Vid 1 & 1.5)

A major third \ minor third comparison can "pigeon hole" a note.

Example #1: **IF** E3 and Eb3 are tuned well, **THEN** you can use them to place C3, because moving C3 will always make one beat faster and the other beat slower, providing more aural information than just all beating faster or all beating slower.

If we lower C3, we widen the already wide C3-E3 interval so it beats faster (& vice-versa).

Also if we lower C3, we widen the narrow C3-Eb3 interval so it beats slower (& vice-versa).

C3						**E3**	**C3**						**E3**
C3						**Eb3**	**C3**						**Eb3**
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C3							**E3** (expanding to beat faster)	**C3**					**E3** (contracting to beat slower)
C3							**Eb3** (expanding to beat slower)	**C3**					**Eb3** (contracting to beat faster)

(Vid 2 & 2.5)

Example #2: **IF** the M3/m3 comparison to tune C3 doesn't work, **THEN** you know one of the other notes is off.

<u>Ths is one of many possibilities:</u>

Correct proportion:

C3 | | | | | | E3

C3 | | | | | | Eb3

Incorrect proportion:

C3 | | || | | E3 (The M3 **might** be too narrow.)

C3 | | | | | | Eb3 (The m3 **might** be too wide.)

(Vid 3)

A minor third \ major sixth comparison can "pigeon hole" a note.

Example #1: **IF** Eb3 and A3 are tuned well, **THEN** you can use them to place C3, because moving C3 will always make one beat faster and the other beat slower, providing more aural information than just all beating faster or all beating slower.

If we lower C3, we widen the already wide C3-A3 interval so it beats faster (& vice-versa).

Also if we lower C3, we widen the narrow C3-Eb3 interval so it beats slower (& vice-versa).

C3 | | | | | | A3

C3 | | | | | | Eb3

C3 | | | | | | A3 (expanding to beat faster)

C3 | | | | | | Eb3 (expanding to beat slower)

C3 | | | | | | A3

C3 | | | | | | Eb3

C3 | | | | | | A3 (contracting to beat slower)

C3 |||||| Eb3 (contracting to beat faster)

(Vid 4)

Example #2: **IF** the m3/M6 comparison to tune C3 doesn't work, **THEN** you know one of the other notes is off.

<u>Ths is one of many possibilities:</u>

Correct proportion:

C3 | | | | | | A3

C3 | | | | | | Eb3

Incorrect proportion:

C3 | | | | | | A3 (The M6 **might** be too narrow.)

C3 | | | | | | Eb3 (The m3 **might** be too wide.)

(Vid 5)

A m3\M6 comparison combined with a M3/M6 comparison can help place the M6th.

Example: **IF** C3, Eb3, and E3 are tuned well, **THEN** you can use them to place A3, because C to Eb will beat slightly faster than C to A, and C to E will beat slightly slower.

If we lower A too much, the M3 will beat faster than the M6; if we raise A too much, the m3 will beat slower than the M6.

C3 | | | | | | Eb3 (This must stay faster than C-A.)

C3 | | | | | | | A3 (This must stay slower than C-Eb but faster than C-E.)

C3 | | | | | E3 (This must stay slower than C-A.)

(Vid 6)

More Videos

Video #7: Combining the m3/M3 and m3/M6 comparisons

Video #8: Tuning 4 notes with just M3rds, m3rds, & M6ths

Video #9: Using the M6/m6 comparison and the tritone