

Mikrotonal Gitar Metodu
MICROTONAL
GUITAR METHOD VOL.



TOLGAHAN ÇOĞULU



2.3 CENT VALUES OF FRETS AND ADJUSTMENTS

Since 2009, I have been measuring the frets of bağlamas, tanburs, and kanuns owned by my dear friends and colleagues. My good friend, academic, and engineer Barış Bozkurt developed a software titled “Makam Tool Box” which I used to measure the cent values found in the works of pioneering Turkish musicians Tanburi Cemil Bey and Aşık Veysel. To learn more about this project, please watch the video titled “Analysis of Microtones” by me and Barış Bozkurt.²³

I measured the cent values of many tanbur players’ tanbur frets to calculate the Segâh pitch which is the third scale degree in the Rast makam and the Evîç pitch which is the seventh. I usually measured about 14 to 20 cents of flatness for Segâh and 12 to 20 cents of flatness for Evîç. When using a kanun for measurements, these deviations evened out mostly to 17 cents.

I think the main scale of the Rast makam is the closest to 5 limit just intonation we can get. This scale also matches the “intense diatonic scale” aside from the sixth scale degree. The “intense diatonic scale” was first proposed by Claudius Ptolemy in the 2nd century as published by the theorist Gioseffo Zarlino in 1589 (Forster, 2010: 333).²⁴



Figure 30: Ratios and cent values of Ptolemy’s intense diatonic scale

Composer and musicologist Rauf Yekta Bey proposed two tuning systems for Ottoman/Turkish makam music, one of which is the Rast makam scale in 5 limit just intonation.

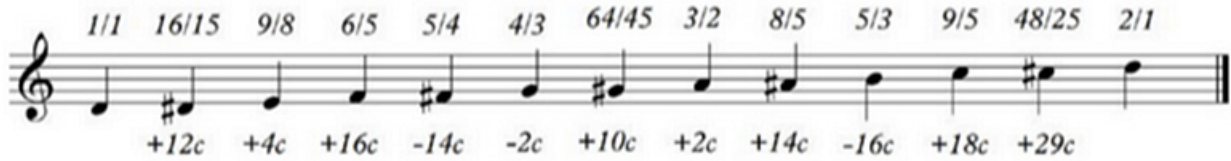


Figure 31: Ratios and cent values of Rauf Yekta Bey’s Rast makam scale (Karaosmanoğlu, 2017: 207)

²³ Several very important pieces of music software were developed in Turkey this century. However, like most new and useful innovations coming from Turkey, they did not receive the attention they deserved and were not as widespread as they should have been. Perhaps readers of this method book will decide to look into these programs, perhaps using them or even developing them further. The main four that come to my mind are as follows: 1. Barış Bozkurt’s program that I have been talking about here “Makam Tool Box.” If this program is used and developed further, it will revolutionize music research. 2. A music notation software titled “Mus2” developed by Kemal Karaosmanoğlu. This sheet music notation software can be brought to the level of competitors like Sibelius or Finale with the necessary investors. 3. “Tritonet” developed by Tolga Zafer Özdemir. 4. Ruşen Can Acet’s “Meşk Tune,” the most successful tuning application ever developed in Turkey.

²⁴ Rauf Yekta, in an article published in *Revue Musicale* magazine in 1908 said the following about this scale: “When I first saw these relationships constituting the major scale, I was quite surprised because the pattern that Europeans had been calling the abstract major scale is none other than the pattern that has been used in Asia for many years known today under the name Rast” (Erguner, 2003: 160). According to the theory of Abdülkadir Töre and Ekrem Karadeniz, this scale series is completely consistent with Rast makam (Karaosmanoğlu, 2017: 145).