

Below is a diagram provided in the Kitab al-Adwar (Book of Musical Cycles) of Safi al-Din al-Urmawi, a pioneering 13th-century work wherewith the modal music theory of the medieval Islamicate world was first systematized. It shows a complete two-octave gamut, strongly reminiscent of the Ancient Greek Perfect Immutable System, but one which simultaneously shows all of the notes belonging to all the genera of this music: the Greek model presumed a 15-note span in one of the three genera (diatonic, chromatic, or enharmonic).

Here is a translation of the handwritten Arabic text found on this diagram, organized from top to bottom and starting with the labels on the red arcs.

The Arc Labels (Musical Intervals)

البعد الذي بالكل مرتين

Translation: "The interval of the double octave" This represents the frequency ratio of 4:1. The corresponding note is له (Lah = 35).

البعد الذي بالكل والخمس

Translation: "The interval of the octave and a fifth" This represents a perfect 12th, or the mathematical ratio of 3:1. The corresponding note is كح (KaH = 28).

البعد الذي بالكل والأربع

Translation: "The interval of the octave and a fourth". This represents a perfect 11th, or the mathematical ratio of 8:3. The corresponding note is كه (Kah = 25).

البعد الذي بالكل

Translation: "The interval of the whole" (The Octave). This represents the foundational 2:1 ratio. The corresponding note is يح (YaH = 18).

البعد الذي بالخمس

Translation: "The interval of the fifth". This represents the 3:2 ratio in the lower diapason. The corresponding note is يا (Ya = 11).

البعد الذي بالأربع

Translation: "The interval of the fourth". This represents the 4:3 ratio in the lower diapason. The corresponding note is ح (Ha = 8).

ط

This letter stands for the whole tone tanini, representing the ratio 9:8. The corresponding note is د (Dal = 4).

ج

This letter stands for the middle second mujannab,

representing an indeterminate neutral second with several different interpretations/rationalizations provided in Safi al-Din's oeuvre. The corresponding note is ج (Jim = 3).

ب
This letter stands for the smallest melodic interval and constituent of larger intervals, the bakiye, a category variably representing intervals ranging in size from a comma to a Pythagorean limma: the ratio 256:243. The corresponding note is ب (Ba = 2).

The two red horizontal axes contain a continuous sequence of Arabic letters used as numbers to denote the 17 fret positions across two octaves:

Lower Right Baseline:

Starts at the open string آ (Alif = 1) on the far right, moving left through ب (Ba = 2), ج (Jim = 3), د (Dal = 4), هـ (Ha = 5), و (Waw = 6), ز (Zayn = 7), ح (Ha = 8), ط (Ta = 9), ي (Y = 10), يا (Ya = 11), يب (Yab = 12), يج (Yaj = 13), يد (Yad = 14), يه (Yah = 15), يو (Yaw = 16), يز (Yaz = 17), up to يح (YaH = 18).

Upper Left Baseline:

Continues the scale into the higher register and second octave, utilizing compound letter forms. It starts by repeating the octave يح (YaH = 18), and then proceeds like so: يـط (YaT = 19), ك (K = 20), كا (Ka = 21), كب (Kab = 22), كـج (Kaj = 23), كـد (Kad = 24), كه (Kah = 25), كو (Kaw = 26), كـز (Kaz = 27), كـح (KaH = 28), كـط (KaT = 29), ل (Lam = 30), لا (La = 31), لب (Lab = 32), لـج (Laj = 33), لـد (Lad = 34), up to له (Lah = 35).