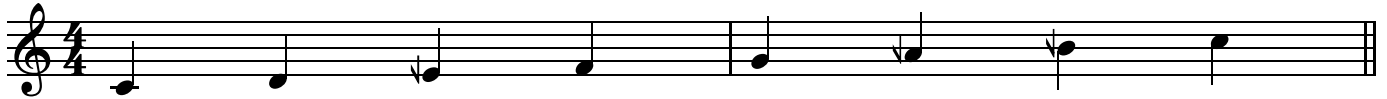


5-Limit Scales

Andrew Meronek

1. Major

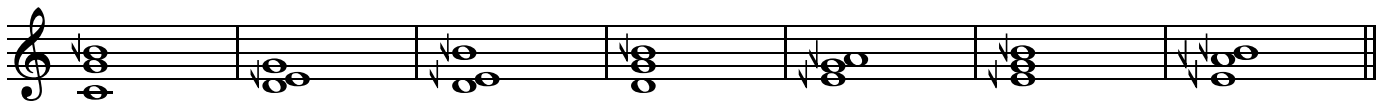


Consonant (contains 2:3, 3:4, 3:5, 4:5, 5:6, 5:8, 5:9, 8:9, 9:10, 8:15, or 9:16
and does not form a 3-note cluster)

³ 8:9:12 4:5:6 12:15:20 8:10:15 6:8:9 3:4:5 6:9:10



¹⁰ 8:12:15 9:10:12 9:10:15 3:4:5 15:18:20 10:12:15 6:8:9



Dissonant (3-note consonant cluster, or one dissonant and does not contain 27:40)

¹⁷ 8:9:10 24:27:32 8:9:15 12:15:16 24:32:45 24:40:45 27:32:36



²⁴ 15:16:18 15:16:20 8:9:10 30:36:45 30:40:45 36:40:45

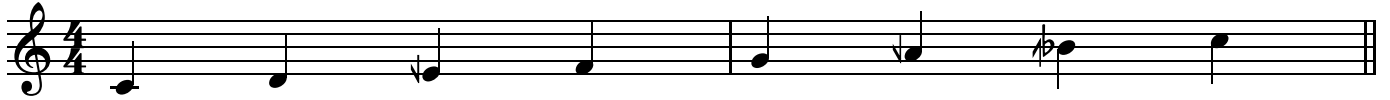


Ugly (contains 27:40 or two dissonant intervals)

³⁰ 24:27:40 27:30:32 27:30:40 27:32:40 27:32:45 27:36:40 27:40:45 30:32:45



2. Mixolydian



Consonant

3 8:9:12 10:12:15 12:15:20 6:8:9 3:4:5

A musical staff showing five chords: C major (C4, E4, G4), D minor (D4, F4, A4), E minor (E4, G4, Bb4), F major (F4, A4, C5), and G major (G4, B4, D5).

8 6:9:10 10:15:18 9:10:12 15:20:24 15:18:20

A musical staff showing five chords: A major (A4, C5, E5), Bb major (Bb4, D5, F5), C minor (C5, Eb5, G5), D minor (D5, F5, Ab5), and E minor (E5, G5, Bb5).

Dissonant

13 8:9:10 24:27:32 40:45:72 12:15:16 20:25:36 15:20:27 27:32:36

A musical staff showing seven chords: F major (F4, A4, C5), G major (G4, B4, D5), Ab major (Ab4, Bb4, D5), Bb major (Bb4, D5, F5), C minor (C5, Eb5, G5), D minor (D5, F5, Ab5), and E minor (E5, G5, Bb5).

20 45:50:72 15:16:18 15:16:20 25:30:36 8:9:10 40:45:54

A musical staff showing six chords: F major (F4, A4, C5), G major (G4, B4, D5), Ab major (Ab4, Bb4, D5), Bb major (Bb4, D5, F5), C minor (C5, Eb5, G5), and D minor (D5, F5, Ab5).

Ugly

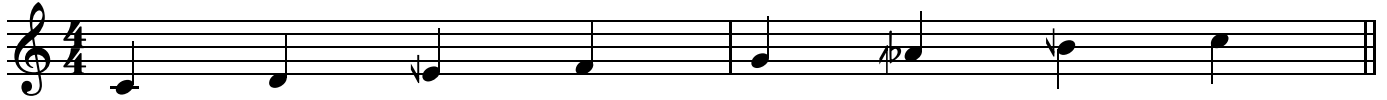
26 24:27:40 15:25:27 27:30:32 27:30:40 27:32:40 135:160:216

A musical staff showing six chords: F major (F4, A4, C5), G major (G4, B4, D5), Ab major (Ab4, Bb4, D5), Bb major (Bb4, D5, F5), C minor (C5, Eb5, G5), and D minor (D5, F5, Ab5).

32 27:36:40 135:200:216 75:80:108 75:100:108 20:25:27 45:50:54

A musical staff showing six chords: F major (F4, A4, C5), G major (G4, B4, D5), Ab major (Ab4, Bb4, D5), Bb major (Bb4, D5, F5), C minor (C5, Eb5, G5), and D minor (D5, F5, Ab5).

3. Harmonic Major



Consonant

3 8:9:12 10:12:15 8:10:15 6:8:9 15:20:24

A staff of music showing five harmonic triads corresponding to the notes of the scale. Each triad is marked with a downward arrow indicating the leading tone. The triads are: C major (C-E-G), D minor (D-F-A), E minor (E-G-B), F major (F-A-C), and G major (G-B-D).

8 8:12:15 9:10:12 9:10:15 9:12:15 10:12:15

A staff of music showing five harmonic triads corresponding to the notes of the scale. Each triad is marked with a downward arrow indicating the leading tone. The triads are: A minor (A-C-E), B minor (B-D-F), C major (C-E-G), D minor (D-F-A), and E minor (E-G-B).

Dissonant

13 8:9:10 24:27:32 40:45:64 8:9:15 12:15:16 20:25:32 24:32:45

A staff of music showing seven harmonic triads corresponding to the notes of the scale. Each triad is marked with a downward arrow indicating the leading tone. The triads are: F major (F-A-C), G major (G-B-D), A minor (A-C-E), B minor (B-D-F), C major (C-E-G), D minor (D-F-A), and E minor (E-G-B).

20 10:15:16 40:64:75 27:32:36 15:16:18 40:45:48 30:36:45

A staff of music showing six harmonic triads corresponding to the notes of the scale. Each triad is marked with a downward arrow indicating the leading tone. The triads are: G major (G-B-D), A minor (A-C-E), B minor (B-D-F), C major (C-E-G), D minor (D-F-A), and E minor (E-G-B).

Ugly

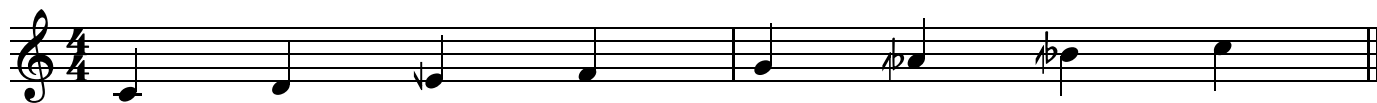
26 27:30:32 45:50:64 135:160:192 27:32:45 45:60:64 45:64:75

A staff of music showing six harmonic triads corresponding to the notes of the scale. Each triad is marked with a downward arrow indicating the leading tone. The triads are: A minor (A-C-E), B minor (B-D-F), C major (C-E-G), D minor (D-F-A), E minor (E-G-B), and F major (F-A-C).

32 75:80:96 30:32:45 25:30:32 50:64:75 160:192:225 60:64:75

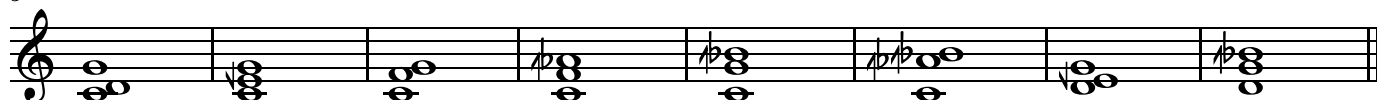
A staff of music showing six harmonic triads corresponding to the notes of the scale. Each triad is marked with a downward arrow indicating the leading tone. The triads are: F major (F-A-C), G major (G-B-D), A minor (A-C-E), B minor (B-D-F), C major (C-E-G), and D minor (D-F-A).

4. Mixolydian Flat 6



Consonant

3 8:9:12 10:12:15 6:8:9 15:20:24 10:15:18 5:8:9 9:10:12 15:20:24



Dissonant

11 8:9:10 24:27:32 40:45:64 40:45:72 12:15:16 20:25:32



17 20:25:36 15:20:27 10:15:16 45:50:72 27:32:36 45:64:72



23 15:16:18 25:30:36 40:45:48 40:45:54 20:24:27 15:16:18



Ugly

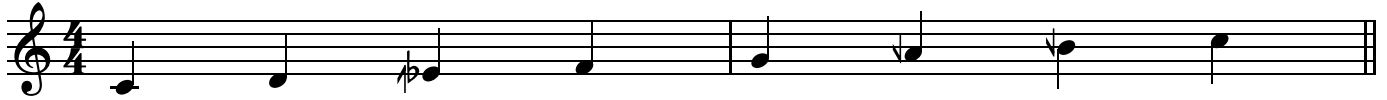
29 27:30:32 45:50:64 135:160:192 135:160:216 45:60:64



34 75:80:96 75:80:108 25:30:32 25:32:36



5. Melodic Minor



Consonant

3 8:9:12 15:18:20 10:12:15 6:8:9 3:4:5 6:9:10 8:12:15 3:4:5

Dissonant

11 40:45:48 24:27:32 8:9:15 15:18:25 40:48:75 24:32:45

17 24:40:45 45:48:60 27:32:36 36:40:45 18:20:25 36:45:50

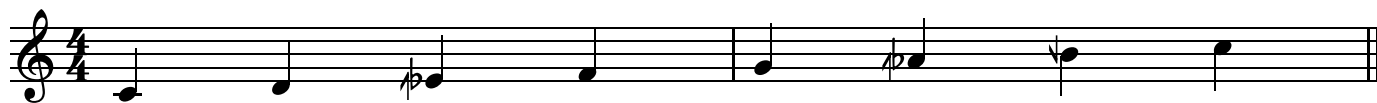
23 16:20:25 8:9:10 30:36:45 30:40:45 36:40:45

Ugly

28 24:27:40 135:144:160 135:144:200 45:48:75 27:32:40

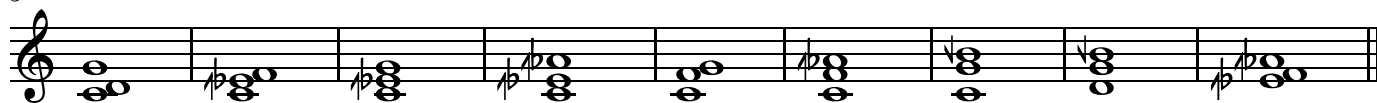
33 27:32:45 27:36:40 27:40:45 144:160:225 144:200:225

6. Harmonic Minor



Consonant

3 8:9:12 15:18:20 10:12:15 5:6:8 6:8:9 15:20:24 8:12:15 3:4:5 18:20:24



Dissonant

12 40:45:48 24:27:32 40:45:64 8:9:15 40:48:75 24:32:45 10:15:16 40:64:75



20 45:48:60 27:32:36 36:40:45 12:15:16 16:20:25 40:45:48 30:36:45



Ugly

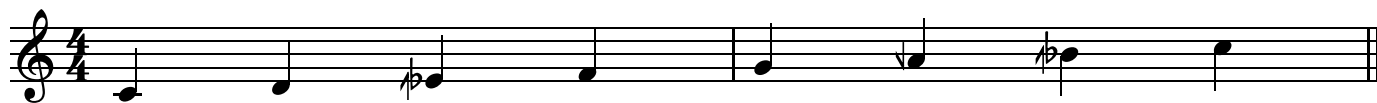
27 135:144:160 45:48:64 45:48:75 135:160:192 27:32:45 45:60:64



33 45:64:75 144:160:225 48:64:75 160:192:225 60:64:75



7. Dorian



Consonant

3 8:9:12 15:18:20 10:12:15 5:6:9 6:8:9

8 3:4:5 6:9:10 10:15:18 15:20:24 4:5:6

Dissonant

13 40:45:48 24:27:32 40:45:72 15:18:25 15:20:27 15:25:27 45:48:60 45:48:72

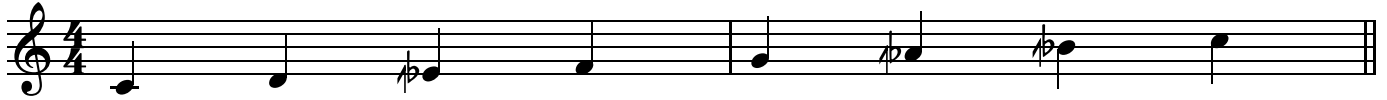
21 27:32:36 36:40:45 36:45:50 15:16:20 75:80:108 8:9:10 40:45:54

Ugly

28 135:144:160 24:27:40 135:144:200 27:32:40 135:160:216

33 27:36:40 135:200:216 75:100:108 20:25:27 45:50:54

8. Minor



Consonant

3 8:9:12 15:18:20 10:12:15 5:6:8 5:6:9 6:8:9 15:20:24

10 10:15:18 5:8:9 15:20:24 18:20:24 4:5:6 6:8:9

Dissonant

16 40:45:48 24:27:32 40:45:64 40:45:72 15:20:27 10:15:16

22 45:48:60 45:48:72 27:32:36 45:64:72 36:40:45 75:80:108

28 12:15:16 40:45:48 40:45:54 20:24:27 15:16:18

Ugly

33 135:144:160 45:48:64 135:160:192 135:160:216 45:60:64