Some Basic Patterns Underlying Genus 12 & 17

Reprinted 1981 with revisions
1983 with revisions and additions

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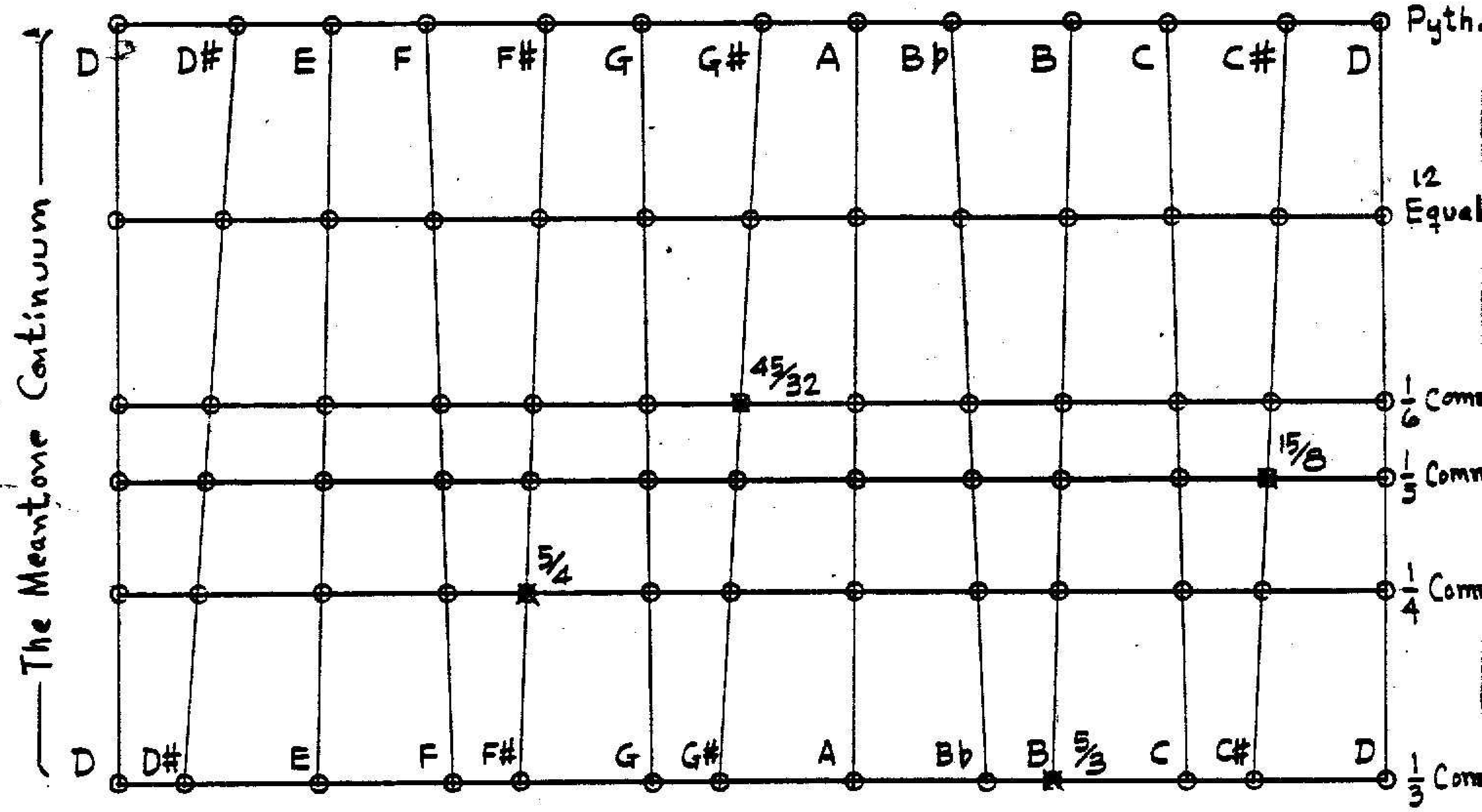
1.

D	D#	E	F	F#	G	G#	A	Bb	B	C	C#	D
1/1	2187/2048	9/8	27/32	81/64	4/3	729/512	3/2	128/81	27/16	16/9	243/128	2/1

2187/2048	256/243	256/243	2187/2048	256/243	2187/2048	256/243	256/243	2187/2048	256/243	2187/2048	256/243	Pyth. 12
9/8		9/8		256/243	9/8		9/8		9/8		256/243	Pyth Diatonic

2.



3.

9/8			10/9			16/15	9/8			10/9			9/8			16/15	Just Diatonic
135/128	256/243	81/80	256/243	135/128	81/80	256/243	135/128	256/243	81/80	256/243	135/128	81/80	256/243	135/128	256/243	81/80	Just

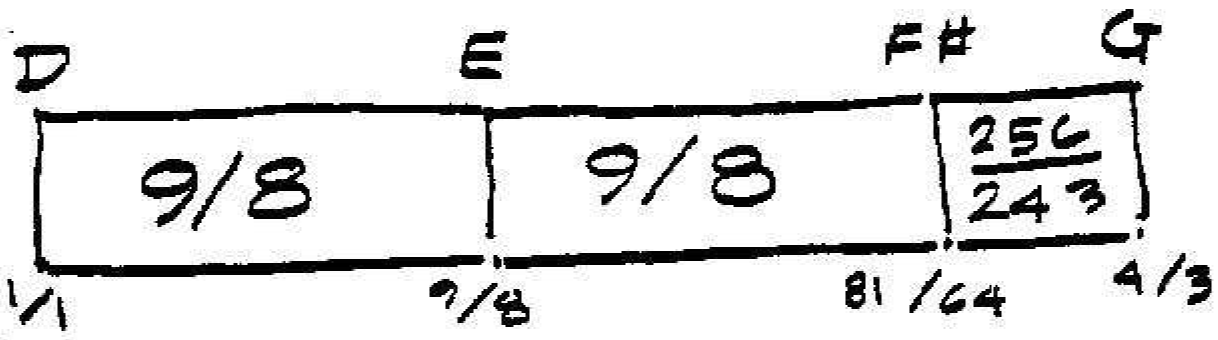
1/1	135/128	10/9	9/8	32/27	5/4	81/64	4/3	45/32	40/27	3/2	128/81	5/3	27/16	16/9	15/8	160/81	2/1
D	D_1#	E_1	E	F	F_1#	F#	G	G_1#	A_1	A	Bb	B_1	B	C	C_1#	D_1	D

1. The Pythagorean Diatonic, with true Fifths, when modulated thru six Keys gives a 12-tone genus.

2. Meantone 12 retains these six keys but seeks good Thirds at the expense of the Fifths.

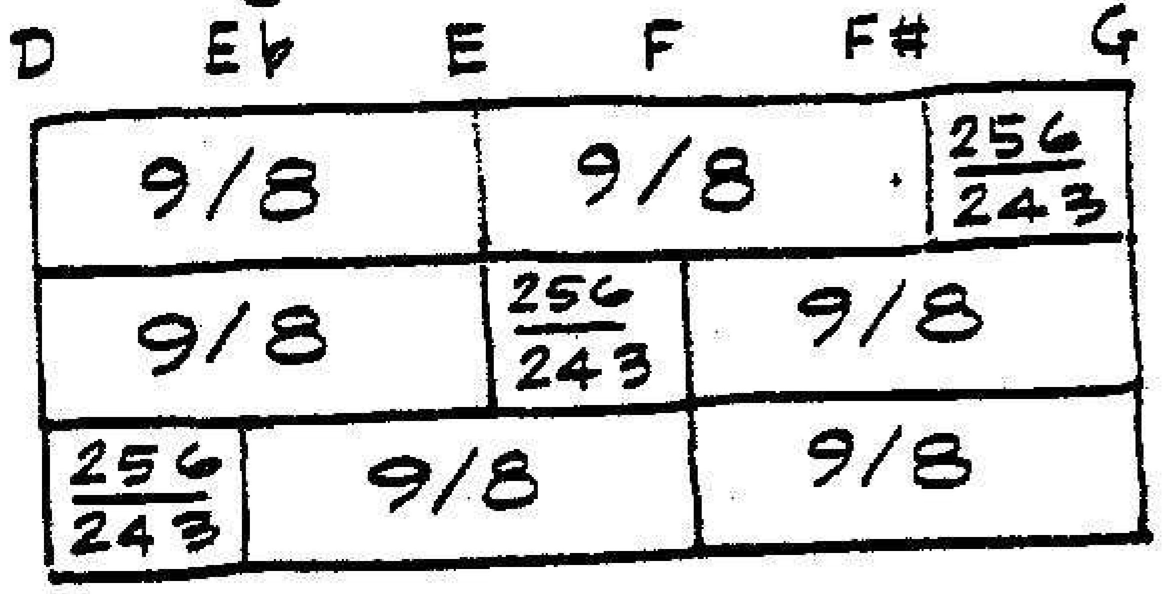
3. However, when the Just Diatonic, having both true Thirds and True Fifths, is modulated thru the same six Keys a 17-Tone genus results.

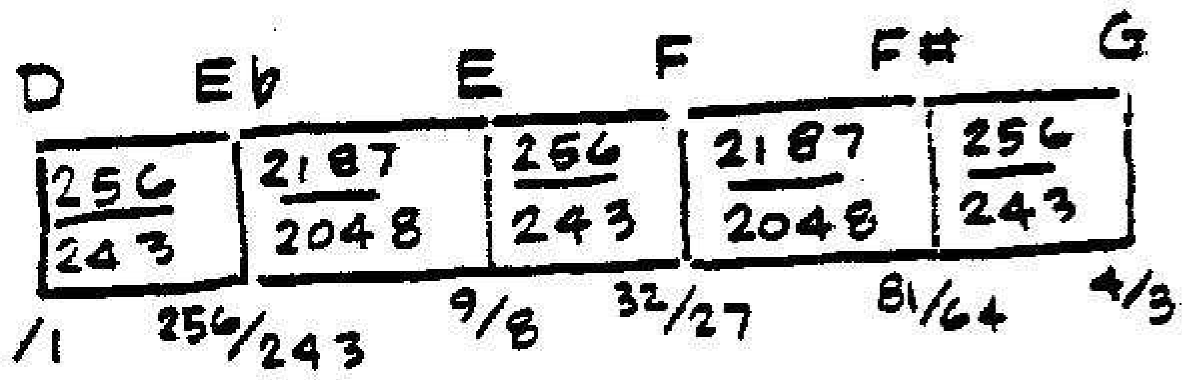
Consider the Tetrachord.



It has 3 rotations.

These may be arranged in PARALLEL position, as shown;

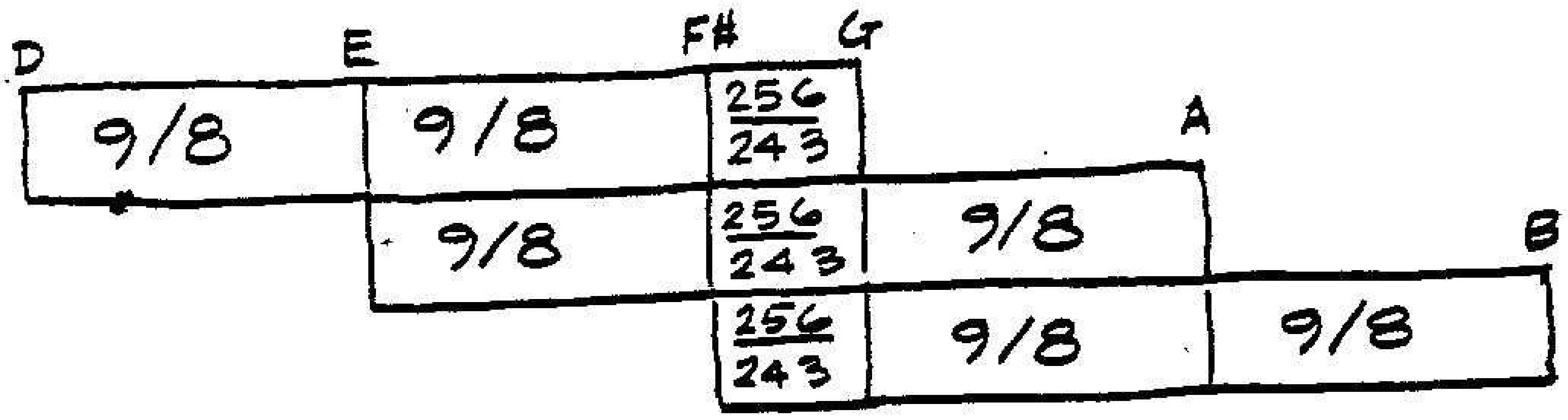




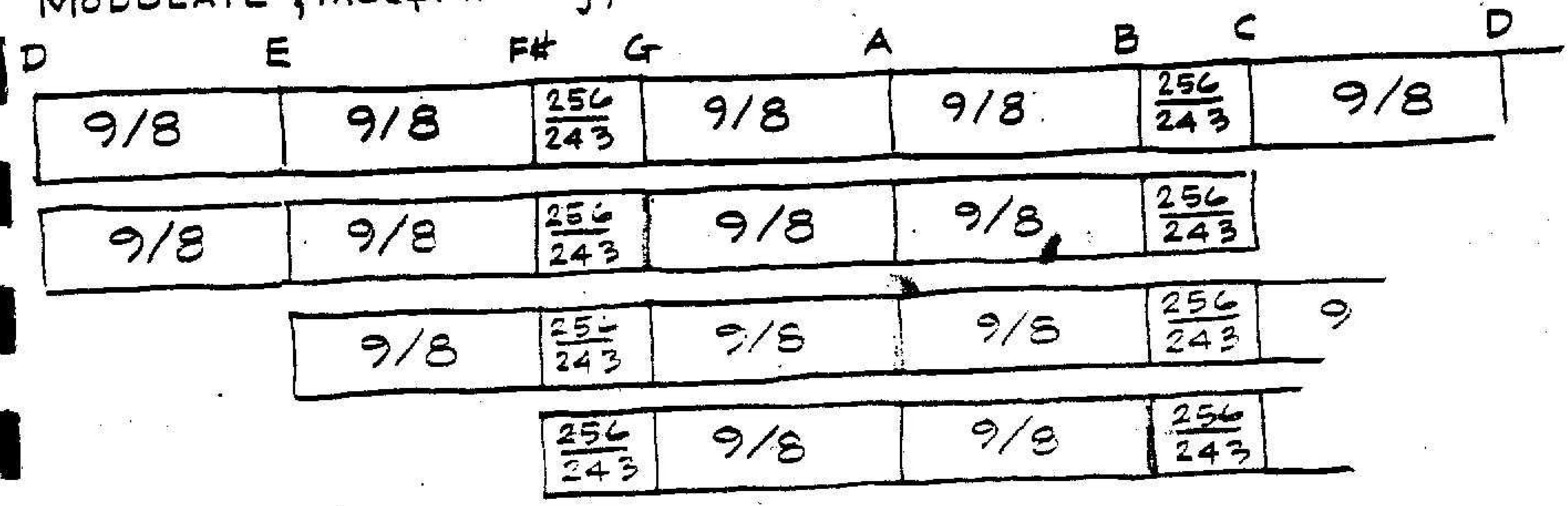
Composite genus

This sequence returns to it's beginning and forms a CLOSED cycle.

Or these may be arranged in RELATIVE position, as shown;

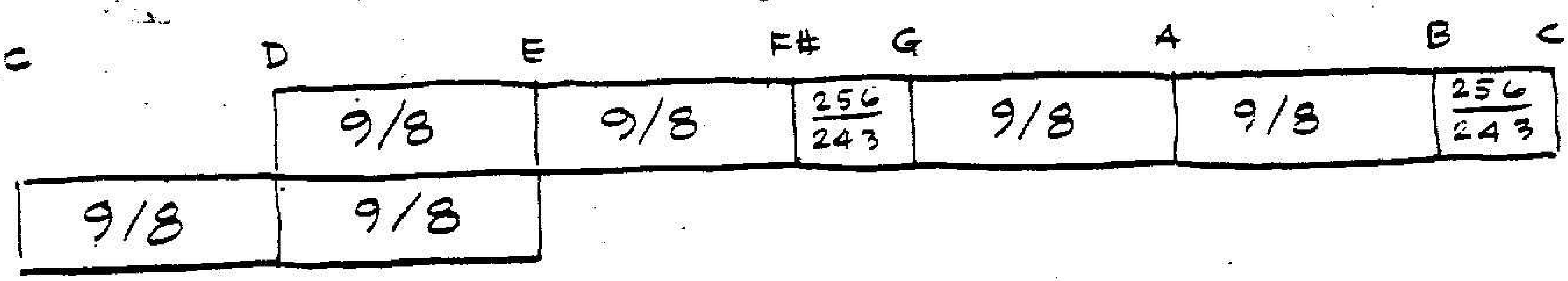


The linkage between the interlocking tetrachords serves to generate a repeating series. This is OPEN-ended and may be extended, to MODULATE, indefinitely, each of the 3 tetrachords;



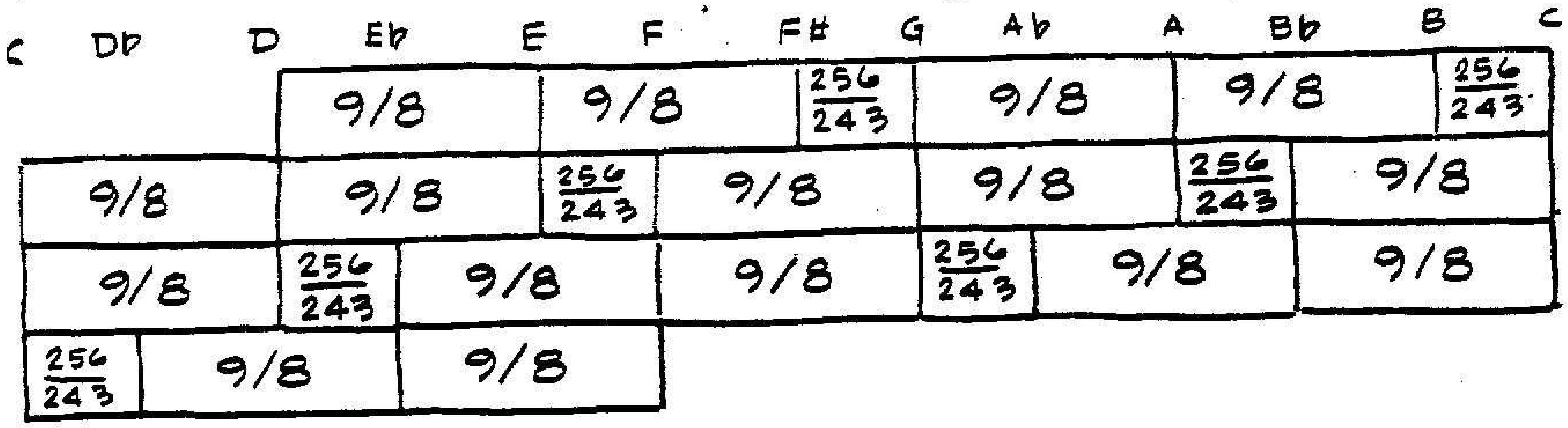
ream"
Genus

This series of overlapping tetrachords may be extended, thus, to form a 7-tone genus;



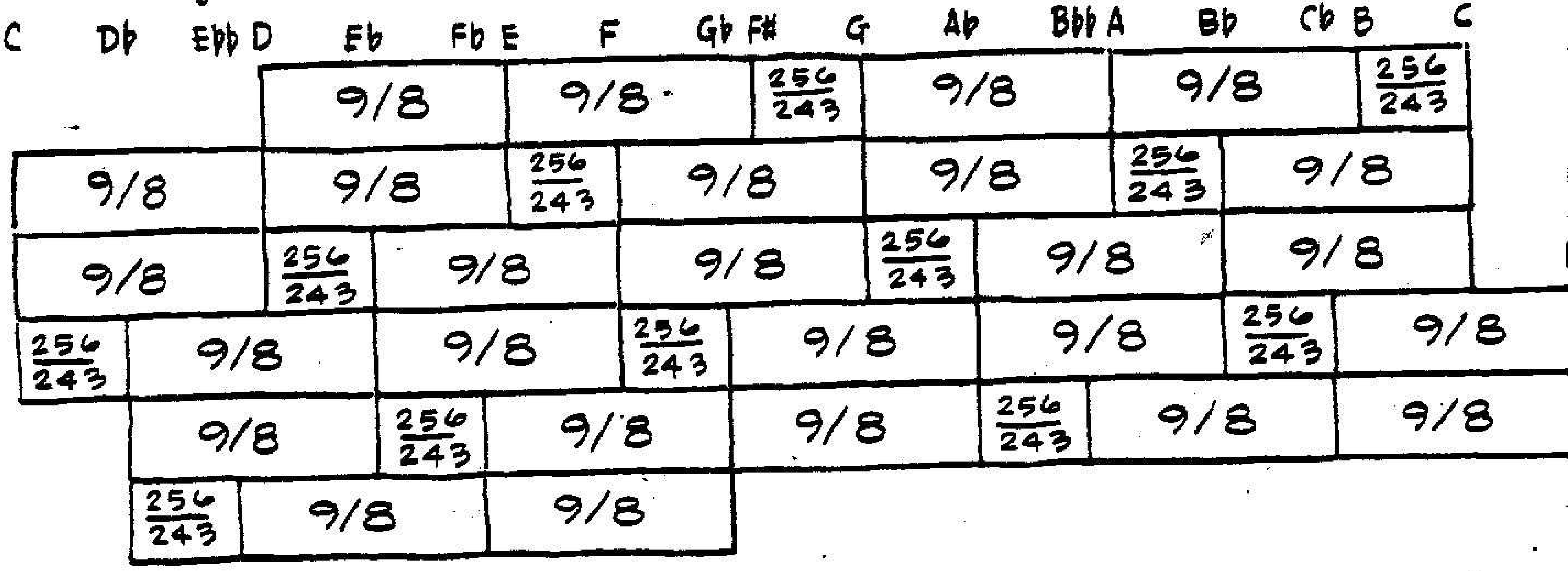
C	D	E	F#	G	A	B	C
9/8	9/8	9/8	256/243	9/8	9/8	256/243	7-Ton
1/1	9/8	81/64	729/512	3/2	27/16	243/128	2/1

Further extended to form a 12-tone genus;



C	Db	D	Eb	E	F	F#	G	Ab	A	Bb	B	C
256/243	2187/2048	256/243	2187/2048	256/243	2187/2048	256/243	256/243	2187/2048	256/243	2187/2048	256/243	12-T
1/1	256/243	9/8	32/27	81/64	4/3	729/512	3/2	128/81	27/16	16/9	243/128	2/1

Continuing this series brings to light an important 17-Tone genus;



C	Db	Ebb	D	Eb	Fb	E	F	Gb	F#	G	Ab	Bbb	A	Bb	Cb	B	C
256/243	256/243	531441/524288	256/243	256/243	531441/524288	256/243	256/243	531441/524288	256/243	256/243	256/243	531441/524288	256/243	256/243	531441/524288	256/243	"Pyth 17-Ton

Three Cycles forming the 12-tone Genus

Fig 5. Cycle of Fourths

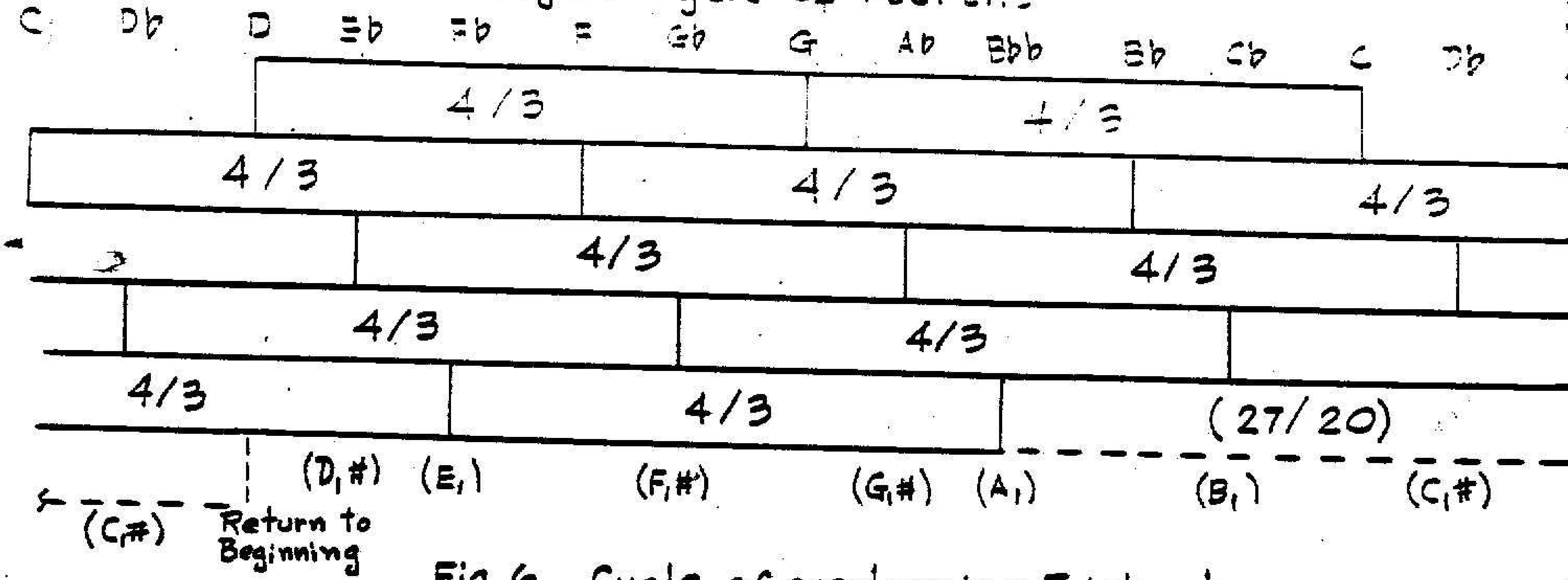


Fig 6. Cycle of overlapping Trichords

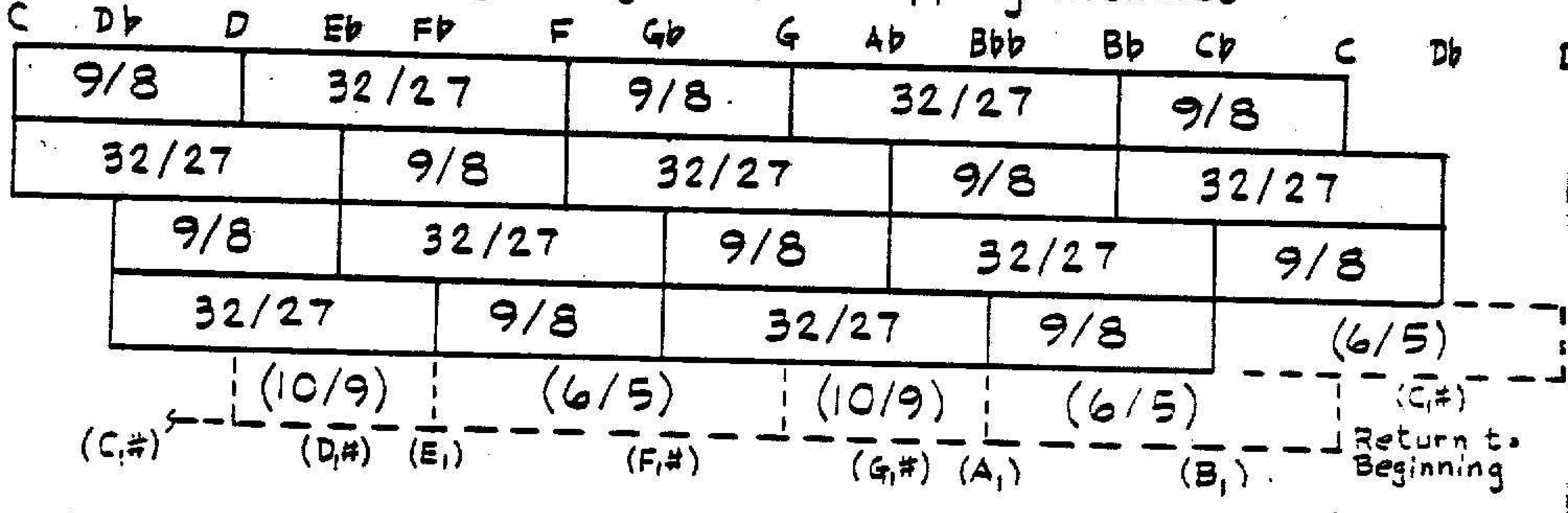


Fig 7. Cycle of overlapping Tetrachords

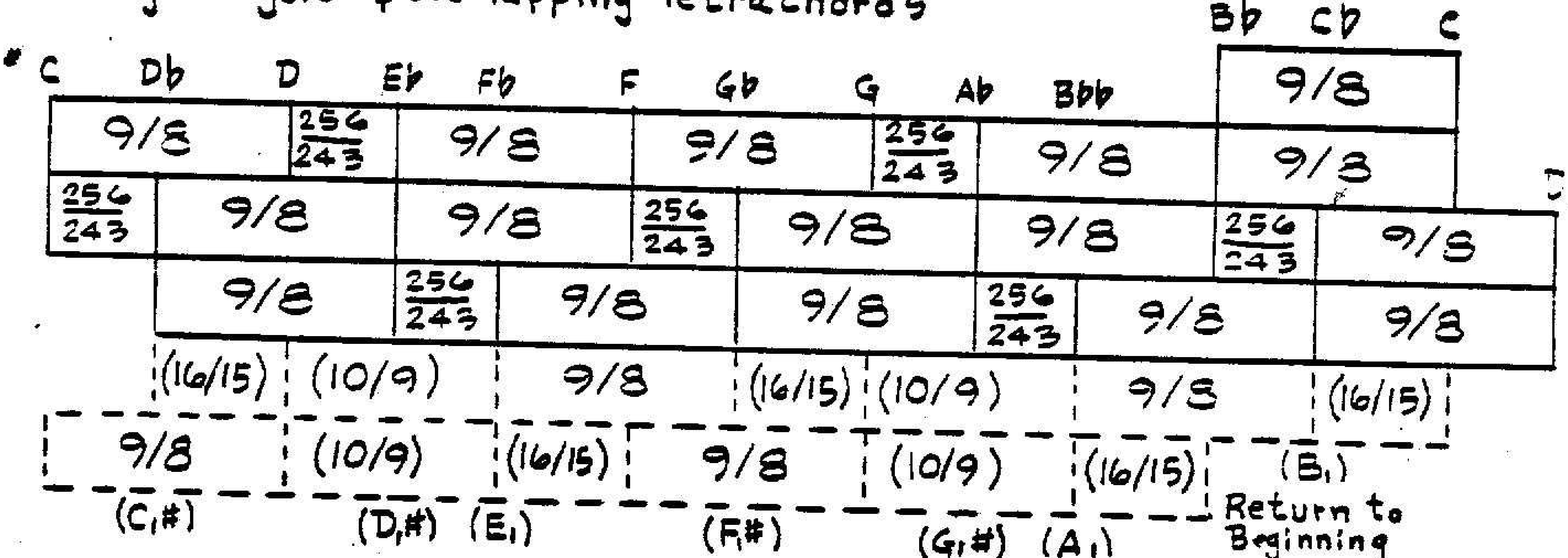
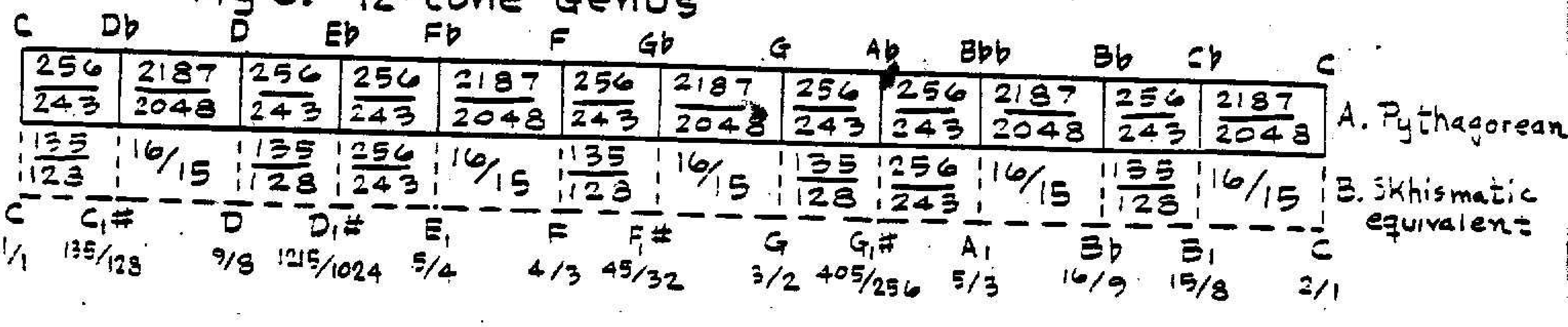


Fig 8. 12-tone Genus



C Db D Eb Fb F Gb G Ab Bbb Bb Cb C Db D

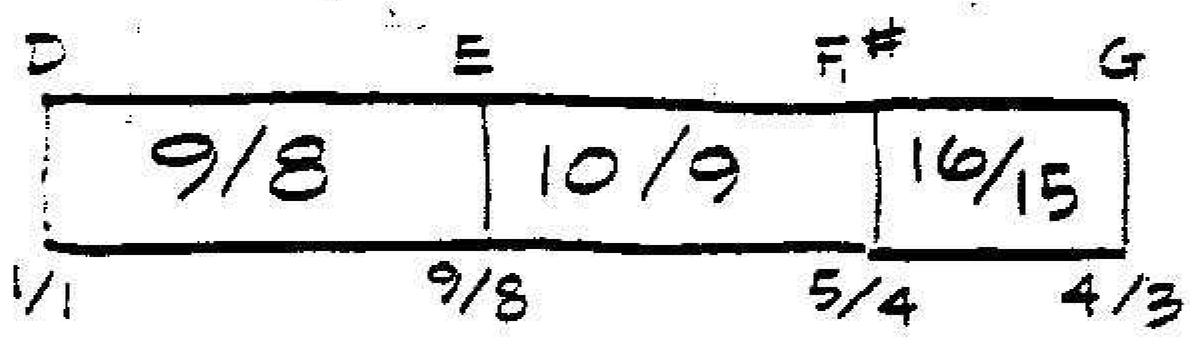
256/243	9/8	9/8	256/243	(9/8)	9/8	9/8
256/243	9/8	9/8	256/243	9/8	(9/8)	9/8
256/243	9/8	9/8	256/243	9/8	9/8	(9/8)
(9/8)	9/8	9/8	256/243	9/8	9/8	256/243
9/8	(9/8)	9/8	256/243	9/8	9/8	256/243
9/8	9/8	(9/8)	256/243	9/8	9/8	256/243
9/8	9/8	256/243	(9/8)	9/8	9/8	256/243
9/8	9/8	256/243	9/8	(9/8)	9/8	256/243
9/8	9/8	256/243	9/8	9/8	(9/8)	256/243
9/8	9/8	256/243	9/8	9/8	256/243	(9/8)
(9/8)	9/8	256/243	9/8	9/8	256/243	9/8
9/8	(9/8)	256/243	9/8	9/8	256/243	9/8
9/8	256/243	(9/8)	9/8	9/8	256/243	9/8
9/8	256/243	9/8	(9/8)	9/8	256/243	9/8
9/8	256/243	9/8	9/8	(9/8)	256/243	9/8
9/8	256/243	9/8	9/8	256/243	(9/8)	9/8
9/8	256/243	9/8	9/8	256/243	9/8	(9/8)
(9/8)	256/243	9/8	9/8	256/243	9/8	9/8
16/15	(10/9)	9/8	9/8	256/243	9/8	9/8
16/15	10/9	(9/8)	9/8	256/243	9/8	9/8
16/15	10/9	9/8	(9/8)	256/243	9/8	9/8
16/15	10/9	9/8	16/15	(10/9)	9/8	9/8
16/15	10/9	9/8	16/15	10/9	(9/8)	9/8
16/15	10/9	9/8	16/15	10/9	(9/8)	(9/8)
(9/8)	10/9	9/8	16/15	10/9	9/8	16/15
9/8	(10/9)	9/8	16/15	10/9	9/8	16/15
9/8	10/9	(9/8)	16/15	10/9	9/8	16/15
9/8	10/9	16/15	(9/8)	10/9	9/8	16/15
9/8	10/9	16/15	9/8	(10/9)	9/8	16/15
9/8	10/9	16/15	9/8	10/9	(9/8)	16/15
9/8	10/9	16/15	9/8	10/9	16/15	(9/8)
(9/8)	10/9	16/15	9/8	10/9	16/15	9/8
9/8	(10/9)	16/15	9/8	10/9	16/15	9/8
9/8	256/243	(9/8)	9/8	10/9	16/15	9/8
9/8	256/243	9/8	(9/8)	10/9	16/15	9/8
9/8	256/243	9/8	9/8	(10/9)	16/15	9/8

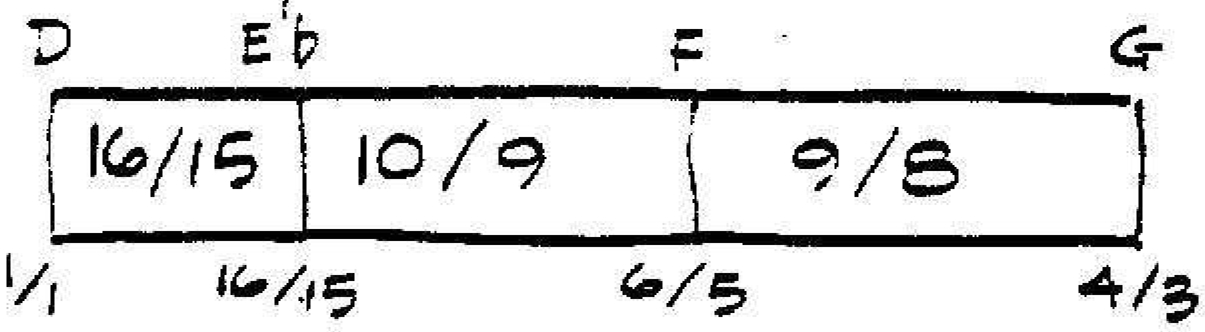
	C–Db	Db–D	D–Eb	Eb–Fb	Fb–F	F–Gb	Gb–G	G–Ab	Ab–Bbb	Bbb–Bb	Bb–Cb	Cb–C
"Pythagorean" 12-tone Genus	256/243	2187/2048	256/243	256/243	2187/2048	256/243	2187/2048	256/243	256/243	2187/2048	256/243	2187/2048
skhismatic equivalent	135/128	16/15	256/243	135/128	16/15	135/128	16/15	135/128	256/243	16/15	135/128	16/15

C C_1# D Eb E_1 F F_1# G G_1# A_1 Bb E_1 C

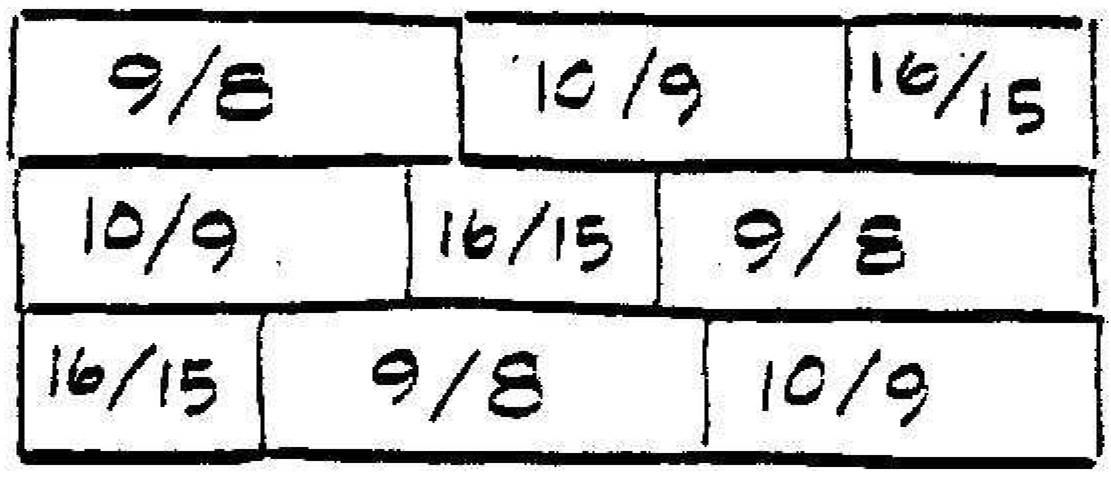
A Cycle of 7-tone Scales from the 12-tone Genus,
The Skhisma neglected
Note; Tetrachordal disjunctions in ().

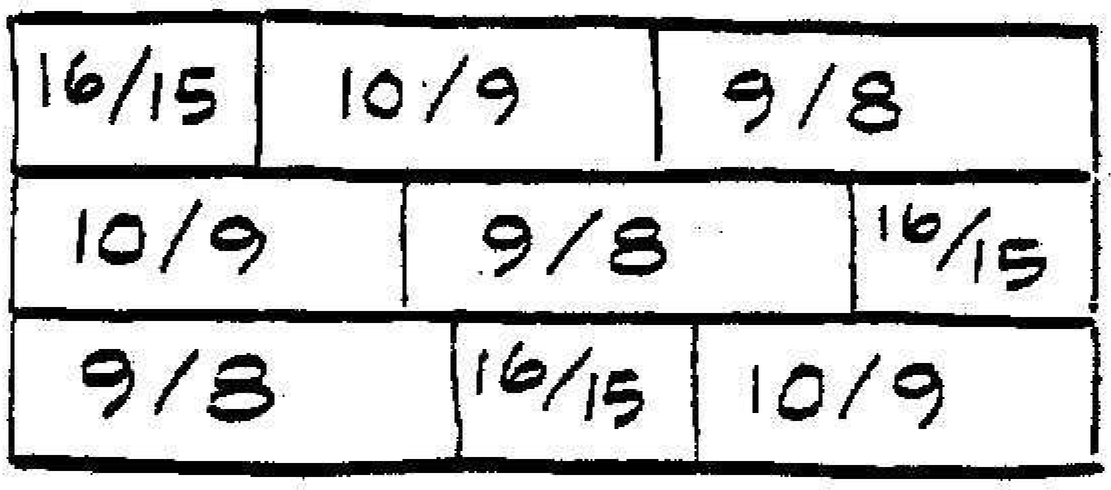
Consider a second important tetrachord, and its mirror,

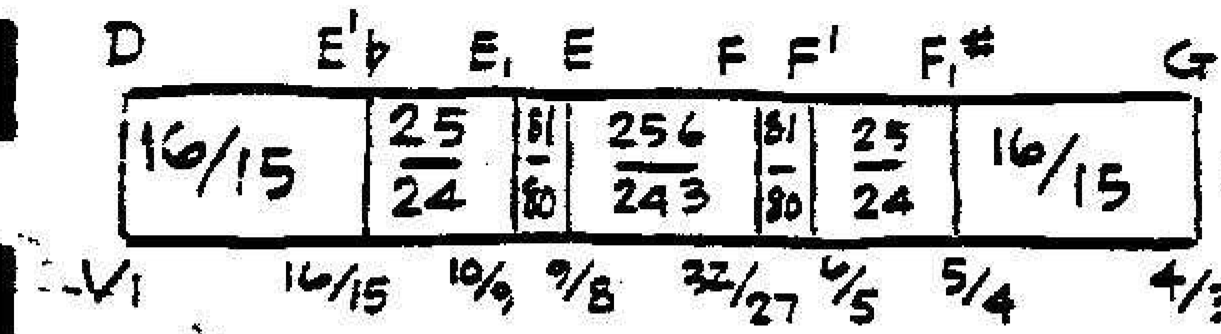




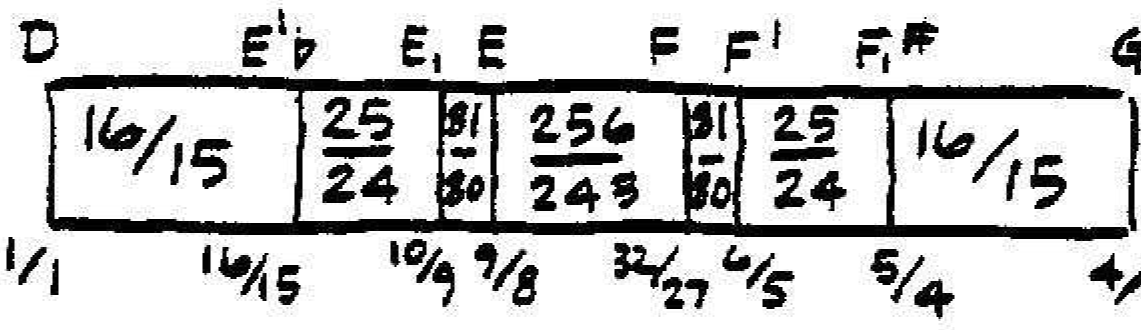
These have 3 rotations, each, which arranged in PARALLEL position are, respectively;







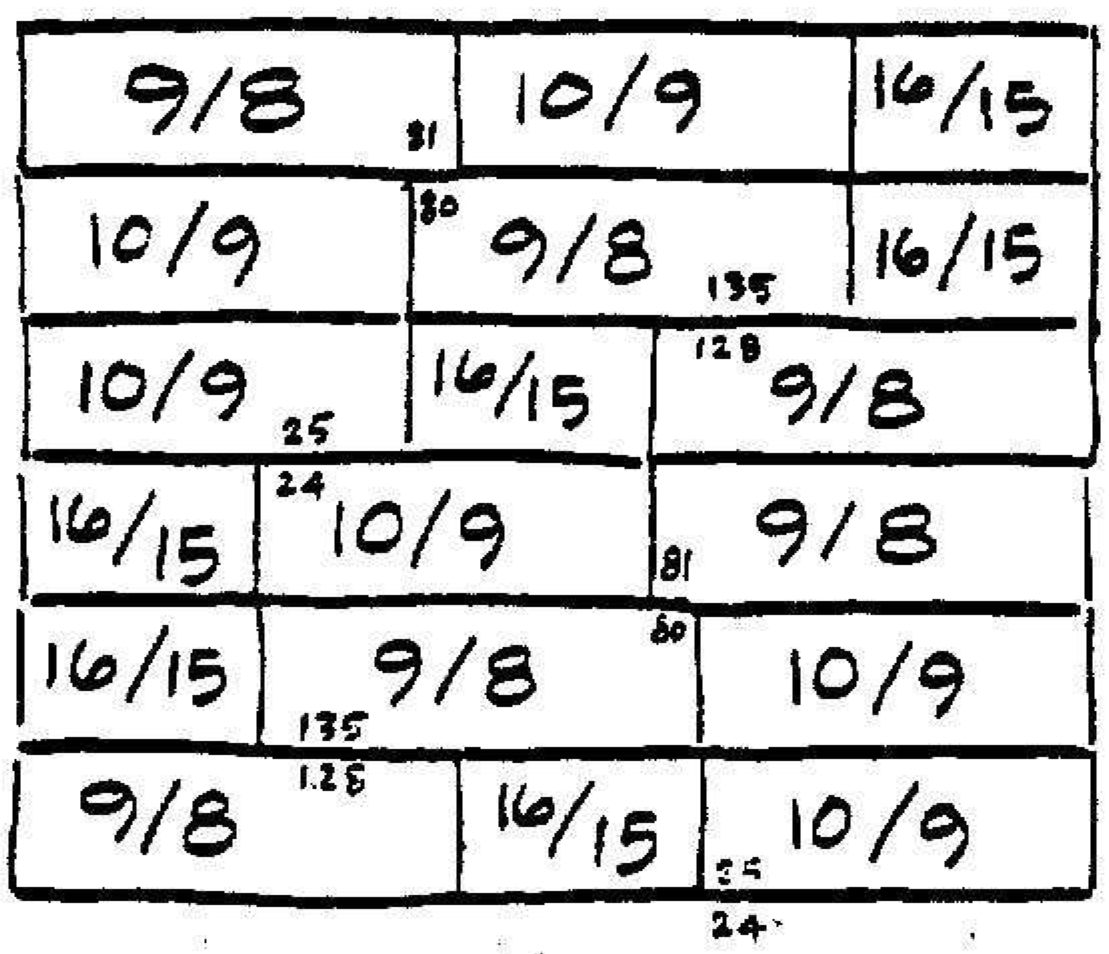
Composite



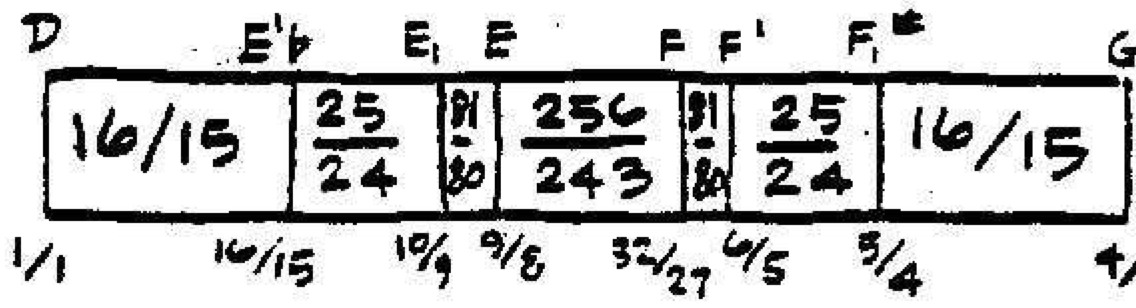
Composite

These sequences return to their respective beginnings forming CLOSED cycles. Their respective composites are equal to each other.

A BRAID, which pivots its way thru all six PERMUTATIONS, and returns to the beginning, forming a closed cycle, is as follows;



→ return to beginning



Composite

Or, these rotations can be put in RELATIVE position, establishing the basis for 2, repeating series, as shown:

9/8	10/9	16/15		
	10/9	16/15	9/8	
		16/15	9/8	10/9

D	E	F_1#	G	A	B_1	C	D	E_1	
9/8	10/9	16/15	9/8	10/9	16/15	9/8	10/9		etc
1/1	9/8	5/4	4/3	3/2	5/3	16/9	2/1	10/9	

and;

10/9	9/8	16/15		
	9/8	16/15	10/9	
		16/15	10/9	9/8

D	E_1	F_1#	G	A_1	B_1	C	D_1	E_1	
10/9	9/8	16/15	10/9	9/8	16/15	10/9	9/8		etc
1/1	10/9	5/4	4/3	40/27	5/3	16/9	160/81	10/9	

Six, 7-tone, tetrachordal species are derived, three from each series. They are, respectively;

9/8	10/9	16/15	9/8	10/9	16/15		
	10/9	16/15	9/8	10/9	16/15	9/8	
		16/15	9/8	10/9	16/15	9/8	10/9

and;

10/9	9/8	16/15	10/9	9/8	16/15		
	9/8	16/15	10/9	9/8	16/15	10/9	
		16/15	10/9	9/8	16/15	10/9	9/8

The composite repeating series gives a 10-tone species, thus;

D	E_1	E	F_1#	G	A_1	A	B_1	C	D_1	D	E_1
10/9	81/80	10/9	16/15	10/9	81/80	10/9	16/15	10/9	81/80	10/9	
1/1	10/9	9/8	5/4	4/3	40/27	3/2	5/3	16/9	160/81	2/1	10/9

Similarly, Six, 17-tone species are derived, three from each series. One from each series is shown, respectively;

C C,# D, D D,# E, E F F,# F# G G,# A, A Bb B, B C C,#

	16/15	9/8	10/9	16/15	9/8	10/9
16/15	9/8	10/9	16/15	9/8	10/9	16/15
9/8	10/9	16/15	9/8	10/9	16/15	9/8
10/9						

C C,# D, D D,# E, E F F,# F# G G,# A, A Bb B, B C

135/128	256/243	81/80	135/128	256/243	81/80	256/243	135/128	81/80	256/243	135/128	256/243	81/80	256/243	135/128	81/80	256/243	17-tone species

1/1 135/128 10/9 9/8 1215/1024 5/4 81/64 4/3 45/32 729/512 3/2 405/256 5/3 27/16 16/9 15/8 243/128 2/1

And;

C C,# D, D D,# E, E F F,# F# G G,# A, A A,# B, B C C,#

			10/9	9/8	16/15	10/9
9/8	16/15	10/9	9/8	16/15	10/9	9/8
16/15	10/9	9/8	16/15	10/9	9/8	16/15
10/9	9/8	16/15				

C C,# D, D D,# E, E F F,# F# G G,# A, A A,# B, B C

135/128	256/243	81/80	135/128	256/243	81/80	256/243	135/128	81/80	256/243	135/128	256/243	81/80	135/128	256/243	81/80	256/243	17-tone specie

1/1 135/128 10/9 9/8 1215/1024 5/4 81/80 4/3 45/32 729/512 3/2 405/256 5/3 27/16 3645/2048 15/8 243/128 2/1

These 2 species differ from each other at one tone only; and there, by the very small interval of the SKHISMA, about 1/612 of an 8ve, and having the ratio of 32805/32768.

A 12-tone genus conspicuously is not generated by extending the repeating series 9/8, 10/9, 16/15, nor its mirror 16/15, 10/9, 9/8.

However, the "Just" (above) 17-tone genus differs from the "Pythagorean" 17-tone genus by one skhisma at intervals 135/128 and 81/80. The mapping is as shown; (* = 531441/524288) († = 2048/2025)

C C,# D, D D,# E, E F F,# F# G G,# A, A Bb B, B C

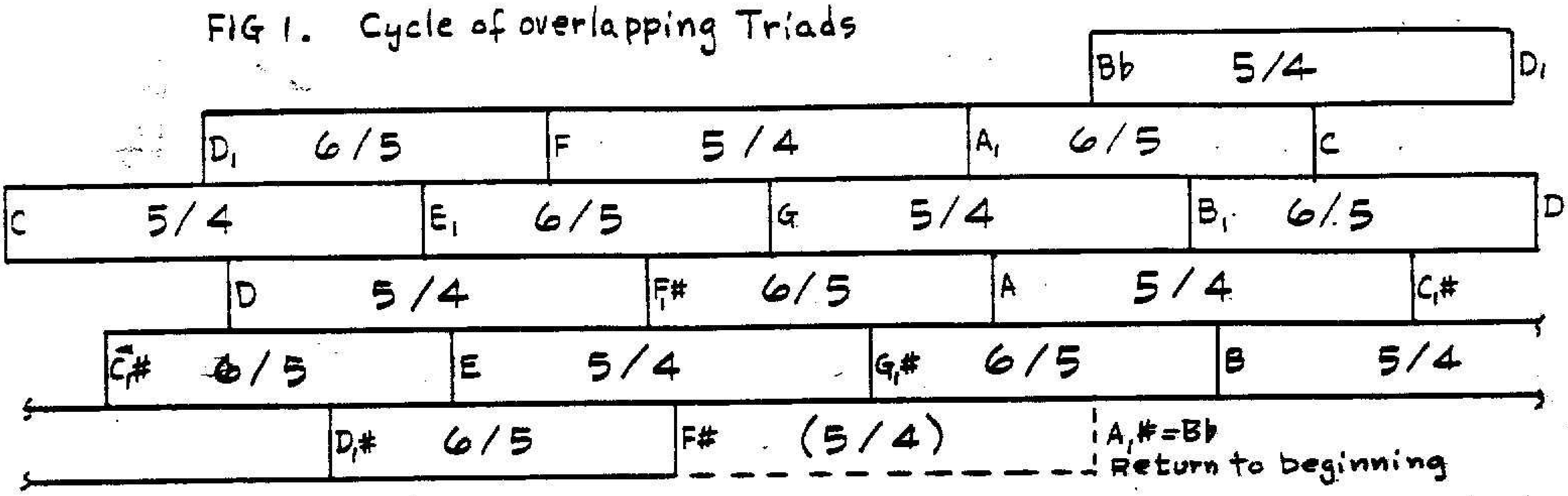
135/128	256/243	81/80	135/128	256/243	81/80	256/243	135/128	81/80	256/243	135/128	256/243	81/80	256/243	135/128	81/80	256/243	"Just" 17-Tone Genus
256/243	256/243	*	256/243	256/243	*	256/243	256/243	*	256/243	256/243	256/243	*	256/243	256/243	*	256/243	"Pythagorean" 17-Tone Genus (Persian)

C Db Ebb D Eb Fb E F Gb F# G Ab Bbb A Bb Cb B C

256/243	135/128	†	135/128	135/128	†	135/128	135/128	†	135/128	256/243	135/128	†	135/128	135/128	†	135/128	(Third form added 1983)

C Db D, E'bb Eb E, F'b F F,F G'b G Ab A, B'bb Bb B, C'b C

FIG 1. Cycle of overlapping Triads



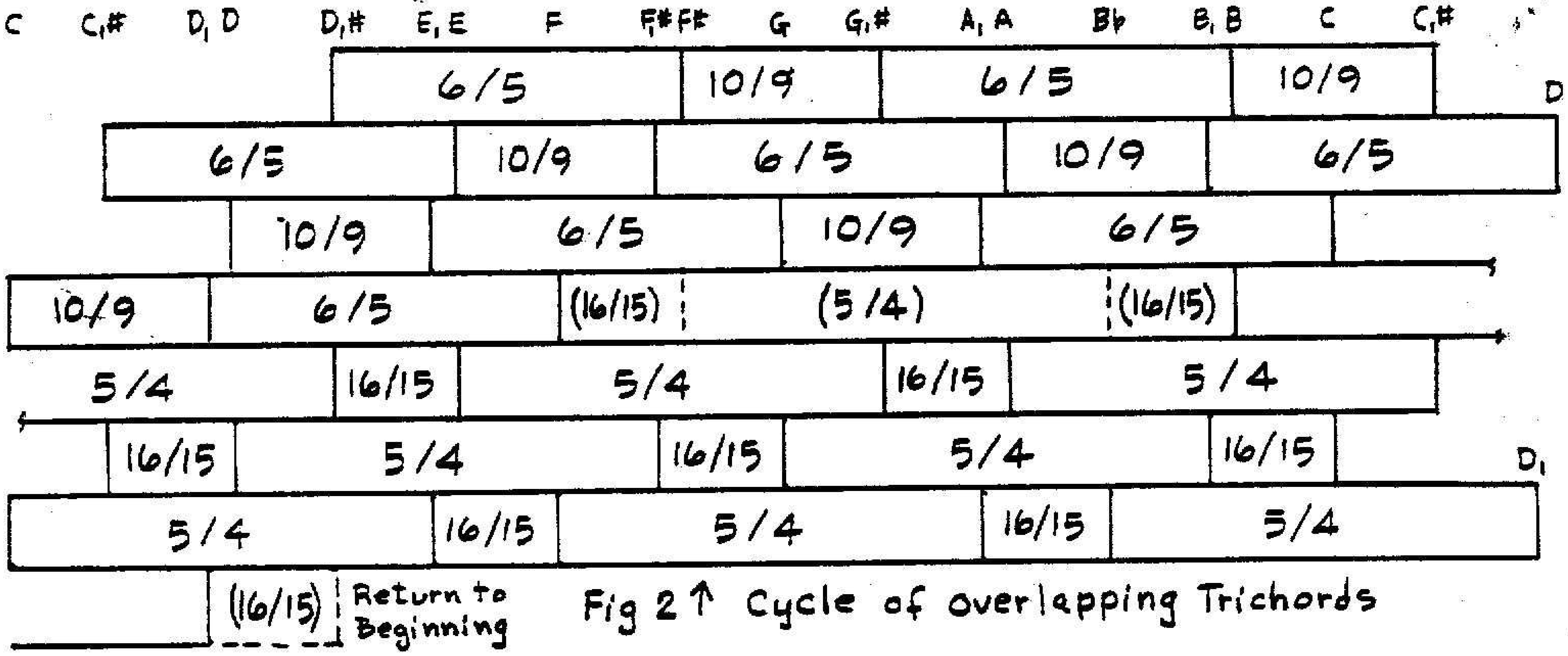


Fig 2 ↑ Cycle of overlapping Trichords

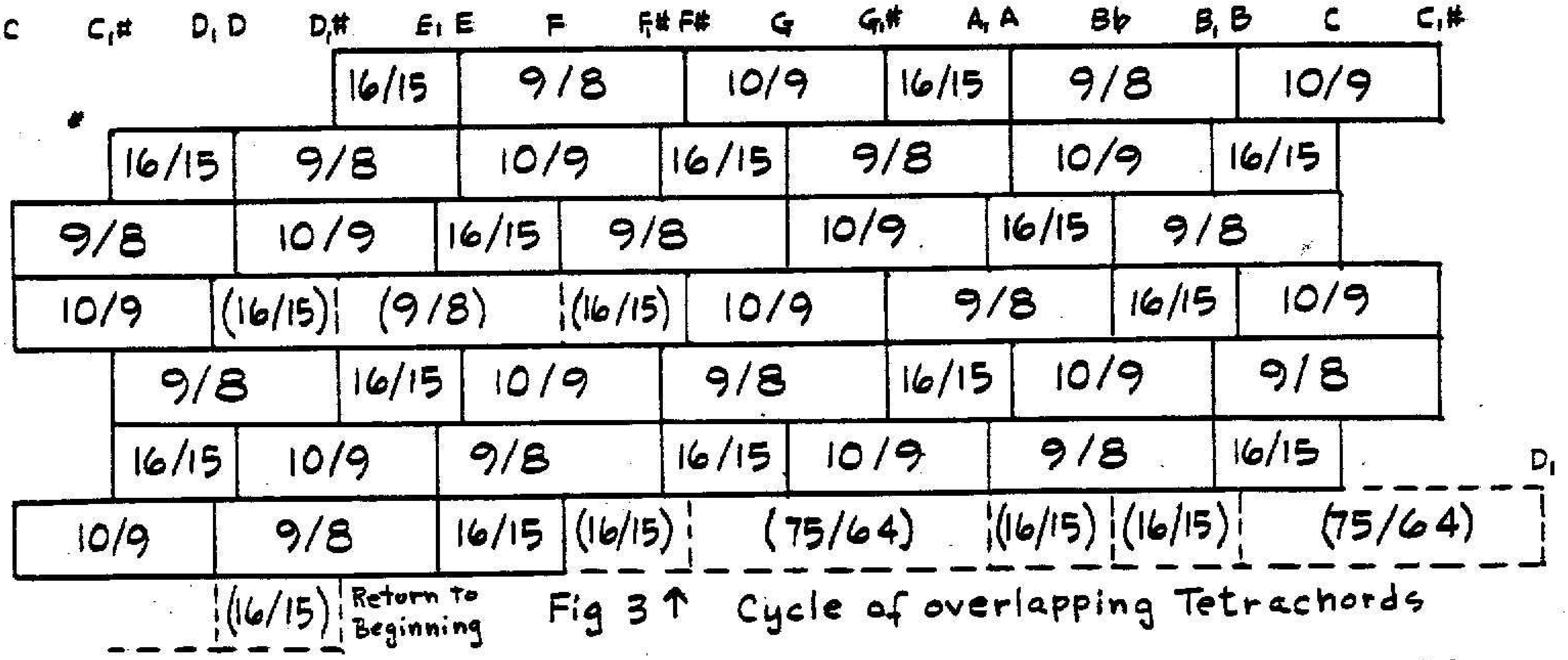


Fig 3 ↑ Cycle of overlapping Tetrachords

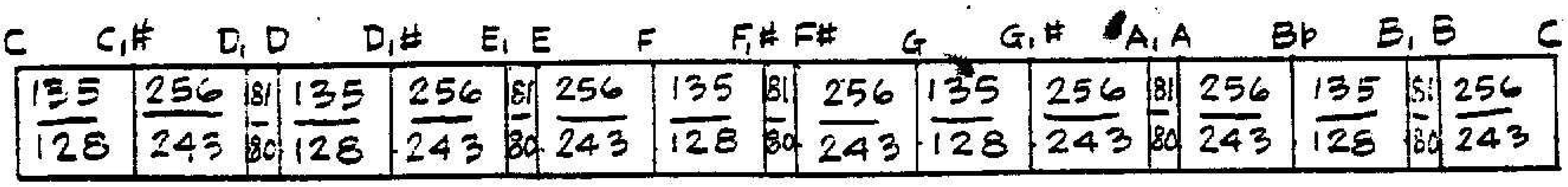


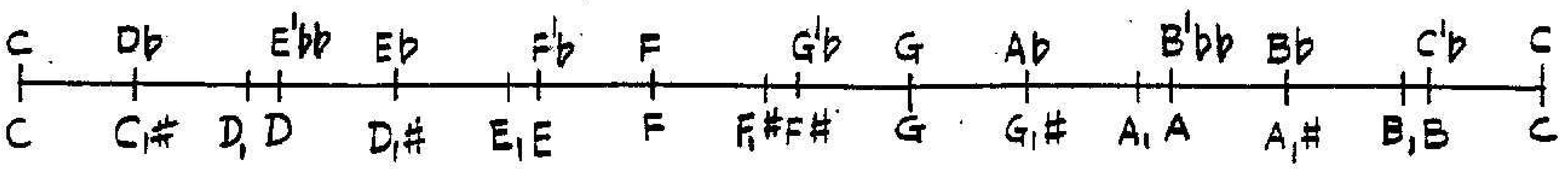
Fig 4
17-tone Genus

Three Cycles Forming the 17-Tone Genus

Note; Ratios in () are skhismatic equivalents of more complex ratios.

A cycle of 7-tone scales
derived from the cycle of triads in 17
(the skhisma neglected)

C 10/9	D_1 9/8	E_1 16/15	F 9/8	G 10/9	A_1 16/15	Bb 9/8	C
C 10/9	D_1 9/8	E_1 16/15	F 9/8	G 10/9	A_1 9/8	B_1 16/15	C
C 9/8	D 10/9	E_1 16/15	F 9/8	G 10/9	A_1 9/8	B_1 16/15	C
C 9/8	D 10/9	E_1 9/8	F_1# 16/15	G 10/9	A_1 9/8	B_1 16/15	C
C 9/8	D 10/9	E_1 9/8	F_1# 16/15	G 9/8	A 10/9	B_1 16/15	C
C_1# 16/15	D 10/9	E_1 9/8	F_1# 16/15	G 9/8	A 10/9	B_1 9/8	C_1#
C_1# 16/15	D 9/8	E 10/9	F_1# 16/15	G 9/8	A 10/9	B_1 9/8	C_1#
C_1# 16/15	D 9/8	E 10/9	F_1# 9/8	G_1# 16/15	A 10/9	B_1 9/8	C_1#
C_1# 16/15	D 9/8	E 10/9	F_1# 9/8	G_1# 16/15	A 9/8	B 10/9	C_1#
C_1# 9/8	D_1# 16/15	E 10/9	F_1# 9/8	G_1# 16/15	A 9/8	B 10/9	C_1#
C_1# 9/8	D_1# 16/15	E 9/8	F# 10/9	G_1# 16/15	A 9/8	B 10/9	C_1#
C_1# 9/8	D_1# 16/15	E 9/8	F# 10/9	G_1# 9/8	A_1# 16/15	B 10/9	C_1#
D_1 16/15	Eb 16/15	F'b 9/8	G'b 10/9	Ab 9/8	Bb 16/15	C'b 75/64	D_1
D_1 16/15	Eb 9/8	F 16/15	G'b 10/9	Ab 9/8	Bb 16/15	C'b 75/64	D_1
D_1 16/15	Eb 9/8	F 16/15	G'b 75/64	A_1 16/15	Bb 16/15	C'b 75/64	D_1
D_1 16/15	Eb 9/8	F 16/15	G'b 75/64	A_1 16/15	Bb 9/8	C 10/9	D_1
D_1 9/8	E_1 16/15	F 16/15	G'b 75/64	A_1 16/15	Bb 9/8	C 10/9	D_1



A Cycle of Pentatonic scales from the 17-tone genus (Skhisma neglected)

C C₁# D₁ D D₁# E₁ E F F₁# F# G G₁# A₁ A Bb B₁ B C C₁#

(9/8)	6/5	10/9	6/5	10/9
6/5	(9/8)	10/9	6/5	10/9
6/5	10/9	(9/8)	6/5	10/9
6/5	10/9	6/5	(9/8)	10/9
6/5	10/9	6/5	10/9	(9/8)
(9/8)	10/9	6/5	10/9	6/5
10/9	(9/8)	6/5	10/9	6/5
10/9	6/5	(9/8)	10/9	6/5
10/9	6/5	10/9	(9/8)	6/5
10/9	6/5	10/9	6/5	(9/8)
(9/8)	6/5	10/9	6/5	10/9
6/5	(9/8)	10/9	6/5	10/9
6/5	16/15	(75/64)	6/5	10/9
6/5	16/15	5/4	(9/8)	10/9
6/5	16/15	5/4	16/15	(75/64)
(9/8)	16/15	5/4	16/15	5/4
16/15	(9/8)	5/4	16/15	5/4
16/15	5/4	9/8	16/15	5/4
16/15	5/4	16/15	(9/8)	5/4
(9/8)	16/15	5/4	16/15	5/4
16/15	(9/8)	5/4	16/15	5/4
16/15	5/4	(9/8)	16/15	5/4
16/15	5/4	16/15	(9/8)	5/4
16/15	5/4	16/15	5/4	(9/8)
(9/8)	5/4	16/15	5/4	16/15
5/4	(9/8)	16/15	5/4	16/15
5/4	16/15	(9/8)	5/4	16/15
5/4	16/15	5/4	(9/8)	16/15
5/4	16/15	5/4	16/15	(9/8)
(9/8)	16/15	5/4	16/15	5/4
16/15	(9/8)	5/4	16/15	5/4
16/15	6/5	(75/64)	16/15	5/4
16/15	6/5	10/9	(9/8)	5/4
16/15	6/5	10/9	6/5	(75/64)

D₁ D

D₁

C C₁# D₁ D D₁# E₁ E F F₁# F# G G₁# A₁ A Bb B₁ B C

135/128	256/243	81/80	135/128	256/243	81/80	256/243	135/128	81/80	256/243	135/128	256/243	81/80	256/243	135/128	81/80	256/243

C C₁# D₁ D D₁# E₁ E F F₁# F# G G₁# A₁ A Bb B₁ B C C₁#

	(9/8)	16/15	9/8	10/9	16/15	9/8	10/9	
	16/15	(9/8)	9/8	10/9	16/15	9/8	10/9	
	16/15	9/8	(9/8)	10/9	16/15	9/8	10/9	
	16/15	9/8	10/9	(9/8)	16/15	9/8	10/9	
	16/15	9/8	10/9	16/15	(9/8)	9/8	10/9	
	16/15	9/8	10/9	16/15	9/8	(9/8)	10/9	
	16/15	9/8	10/9	16/15	9/8	10/9	(9/8)	
	(9/8)	9/8	10/9	16/15	9/8	10/9	16/15	
	9/8	(9/8)	10/9	16/15	9/8	10/9	16/15	
	9/8	10/9	(9/8)	16/15	9/8	10/9	16/15	
	9/8	10/9	16/15	(9/8)	9/8	10/9	16/15	
	9/8	10/9	16/15	9/8	(9/8)	10/9	16/15	
	9/8	10/9	16/15	9/8	10/9	(9/8)	16/15	
	9/8	10/9	16/15	9/8	10/9	16/15	(9/8)	
	(9/8)	10/9	16/15	9/8	10/9	16/15	9/8	
	10/9	(9/8)	16/15	9/8	10/9	16/15	9/8	
	10/9	16/15	(9/8)	9/8	10/9	16/15	9/8	
	10/9	16/15	9/8	(9/8)	10/9	16/15	9/8	
	10/9	16/15	9/8	16/15	(75/64)	16/15	9/8	
	10/9	16/15	9/8	16/15	10/9	(9/8)	9/8	
B	10/9	16/15	9/8	16/15	10/9	9/8	(9/8)	C
	(75/64)	16/15	9/8	16/15	10/9	9/8	16/15	
	10/9	(9/8)	9/8	16/15	10/9	9/8	16/15	
	10/9	9/8	(9/8)	16/15	10/9	9/8	16/15	
	10/9	9/8	16/15	(9/8)	10/9	9/8	16/15	
	10/9	9/8	16/15	10/9	(9/8)	9/8	16/15	
	10/9	9/8	16/15	10/9	9/8	(9/8)	16/15	
B₁	10/9	9/8	16/15	10/9	9/8	16/15	(9/8)	
	(9/8)	9/8	16/15	10/9	9/8	16/15	10/9	B
	9/8	(9/8)	16/15	10/9	9/8	16/15	10/9	
	9/8	16/15	(9/8)	10/9	9/8	16/15	10/9	
	9/8	16/15	10/9	(9/8)	9/8	16/15	10/9	
	9/8	16/15	10/9	9/8	(9/8)	16/15	10/9	
	9/8	16/15	10/9	9/8	16/15	(9/8)	10/9	
	9/8	16/15	10/9	9/8	16/15	10/9	(9/8)	
	(9/8)	16/15	10/9	9/8	16/15	10/9	9/8	
	16/15	(9/8)	10/9	9/8	16/15	10/9	9/8	
	16/15	10/9	(9/8)	9/8	16/15	10/9	9/8	
	16/15	10/9	9/8	(9/8)	16/15	10/9	9/8	
	16/15	10/9	9/8	16/15	(9/8)	10/9	9/8	
	16/15	10/9	9/8	16/15	16/15	(75/64)	9/8	
Bb	16/15	10/9	9/8	16/15	16/15	75/64	(9/8)	
	(9/8)	10/9	9/8	16/15	16/15	75/64	16/15	B₁
	16/15	(75/64)	9/8	16/15	16/15	75/64	16/15	
	16/15	75/64	(9/8)	16/15	16/15	75/64	16/15	
	16/15	75/64	16/15	(9/8)	16/15	75/64	16/15	
	16/15	75/64	16/15	16/15	(9/8)	75/64	16/15	
	16/15	75/64	16/15	16/15	9/8	(75/64)	16/15	
A	16/15	75/64	16/15	16/15	9/8	10/9	(9/8)	
	(9/8)	75/64	16/15	16/15	9/8	10/9	16/15	Bb
	9/8	(75/64)	16/15	16/15	9/8	10/9	16/15	

A Bb B₁ B C C₁# D₁ D D₁# E₁ E F F₁# F# G G₁# A₁ A Bb B₁ B C

A Cycle of 7-tone Scales, derived from the cycle of tetrachords in the 17-tone Genus, the Skhisma neglected

Note; tetrachordal disjunctions in ( ).

(5+12) 17-TONE TUBULONG, GENUS $3^8 \cdot 5$

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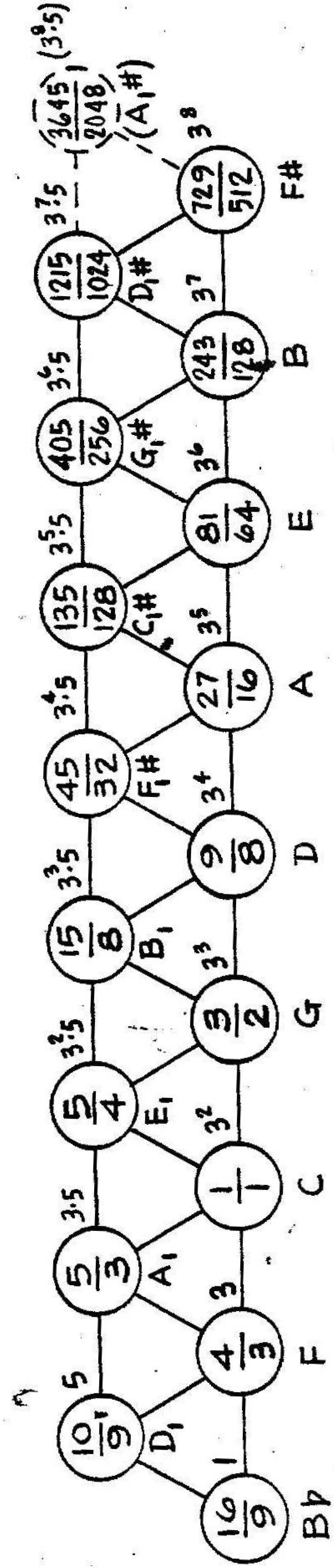
2/1	528	C	17/0.
243/128	501.19	B	16.
15/8	495	B_1	15.
16/9	469.33	B♭	14.
27/16	445.5	A	13.
5/3	440	A_1	12.
405/256	417.66	G_1#	11.
3/2	396	G	10.
729/512	375.89	F#	9.
45/32	371.25	F_1#	8.
4/3	352	F	7.
81/64	334.12	E	6.
5/4	330	E_1	5.
1215/1024	313.24	D_1#	4.
9/8	297	D	3.
10/9	293.33	D_1	2.
135/128	278.44	C_1#	1.
1/1	264	C	17/0.



Tetrachordal Scales from the 12-tone Genus
(the Skhisma neglected)

1/1 9/8 81/64 27/20 3/2 27/16 9/5 2/1

9/8	9/8	16/15 81	10/9	9/8	16/15	(10/9)	Bbb
9/8	9/8	256/243	80 9/8	9/8	16/15 81	(10/9)	Fb
9/8	9/8 81	256/243	9/8	9/8	256/243	80 (9/8)	Cb Gb Db Ab Eb Bb
9/8	10/9	80 16/15	9/8	9/8 81	256/243	(9/8)	F
9/8 81	10/9	16/15	9/8	10/9	80 16/15	(9/8)	C
10/9	80 9/8	16/15	9/8 81	10/9	16/15	(9/8)	G
10/9	9/8	16/15	10/9	80 9/8	16/15	(9/8)	D

1/1 10/9 5/4 4/3 40/27 5/3 16/9 2/1

1/1 9/8 6/5 27/20 3/2 8/5 9/5 2/1

9/8	16/15	9/8 81	10/9	16/15	9/8	(10/9)	Bbb
9/8	16/15	10/9	80 9/8	16/15	9/8 81	(10/9)	Fb
9/8	16/15 81	10/9	9/8	16/15	10/9	80 (9/8)	Cb
9/8	256/243	80 9/8	9/8	16/15 81	10/9	(9/8)	Gb
9/8 81	256/243	9/8	9/8	256/243	80 9/8	(9/8)	Db Ab Eb Bb F C
10/9	80 16/15	9/8	9/8 81	256/243	9/8	(9/8)	G
10/9	16/15	9/8	10/9	80 16/15	9/8	(9/8)	D

1/1 10/9 32/27 4/3 40/27 128/81 16/9 2/1

1/1 16/15 6/5 27/20 64/45 8/5 9/5 2/1

16/15	9/8	9/8 81	256/243	9/8	9/8	(10/9)	Bbb
16/15	9/8	10/9	80 16/15	9/8	9/8 81	(10/9)	Fb
16/15	9/8 81	10/9	16/15	9/8	10/9	80 (9/8)	Cb
16/15	10/9	80 9/8	16/15	9/8 81	10/9	(9/8)	Gb
16/15 81	10/9	9/8	16/15	10/9	80 9/8	(9/8)	Db
256/243	80 9/8	9/8	16/15 81	10/9	9/8	(9/8)	Ab
256/243	9/8	9/8	256/243	80 9/8	9/8	(9/8)	Eb Bb F C G D

1/1 256/243 32/27 4/3 1024/729 128/81 16/9 2/1

Note: Disjunction in ( ).

Tetrachordal Scales from the 17-tone Genus (the Skhisma neglected)

1/1 75/64 5/4 4/3 25/16 5/3 16/9 2/1

75/64	16/15	16/15	75/64	16/15	16/15	(9/8)	F#
75/64	16/15	16/15	9/8	(25/24) 10/9	16/15	(9/8)	B
9/8	(25/24) 10/9	16/15	9/8	10/9	16/15	(9/8)	E A D G C F
9/8	10/9	16/15	9/8	16/15	(25/24) 10/9	(9/8)	B♭
9/8	16/15	(25/24) 10/9	9/8	16/15	10/9	(9/8)	D_1# G_1# C_1# F_1# B_1 E_1
9/8	16/15	10/9	9/8	16/15	16/15	(25/24) (75/64)	A_1
9/8	16/15	16/15	(25/24) 75/64	16/15	16/15	(75/64)	D_1

1/1 9/8 6/5 32/25 3/2 8/5 128/75 2/1

1/1 10/9 32/27 4/3 40/27 128/81 16/9 2/1

10/9	16/15	9/8	10/9	16/15	9/8	(9/8)	F# B E A D G
10/9	16/15	9/8	16/15	(25/24) 10/9	9/8	(9/8)	C
16/15	(25/24) 10/9	9/8	16/15	10/9	9/8	(9/8)	F B♭ D_1# G_1# C_1# F_1#
16/15	10/9	9/8	16/15	16/15	(25/24) 75/64	(9/8)	B_1
16/15	16/15	(25/24) 75/64	16/15	16/15	75/64	(9/8)	E_1
16/15	16/15	75/64	16/15	16/15	9/8	(25/24) (75/64)	A_1
16/15	16/15	9/8	(25/24) 10/9	16/15	9/8	(75/64)	D_1

1/1 16/15 256/225 32/25 64/45 1024/675 128/75 2/1

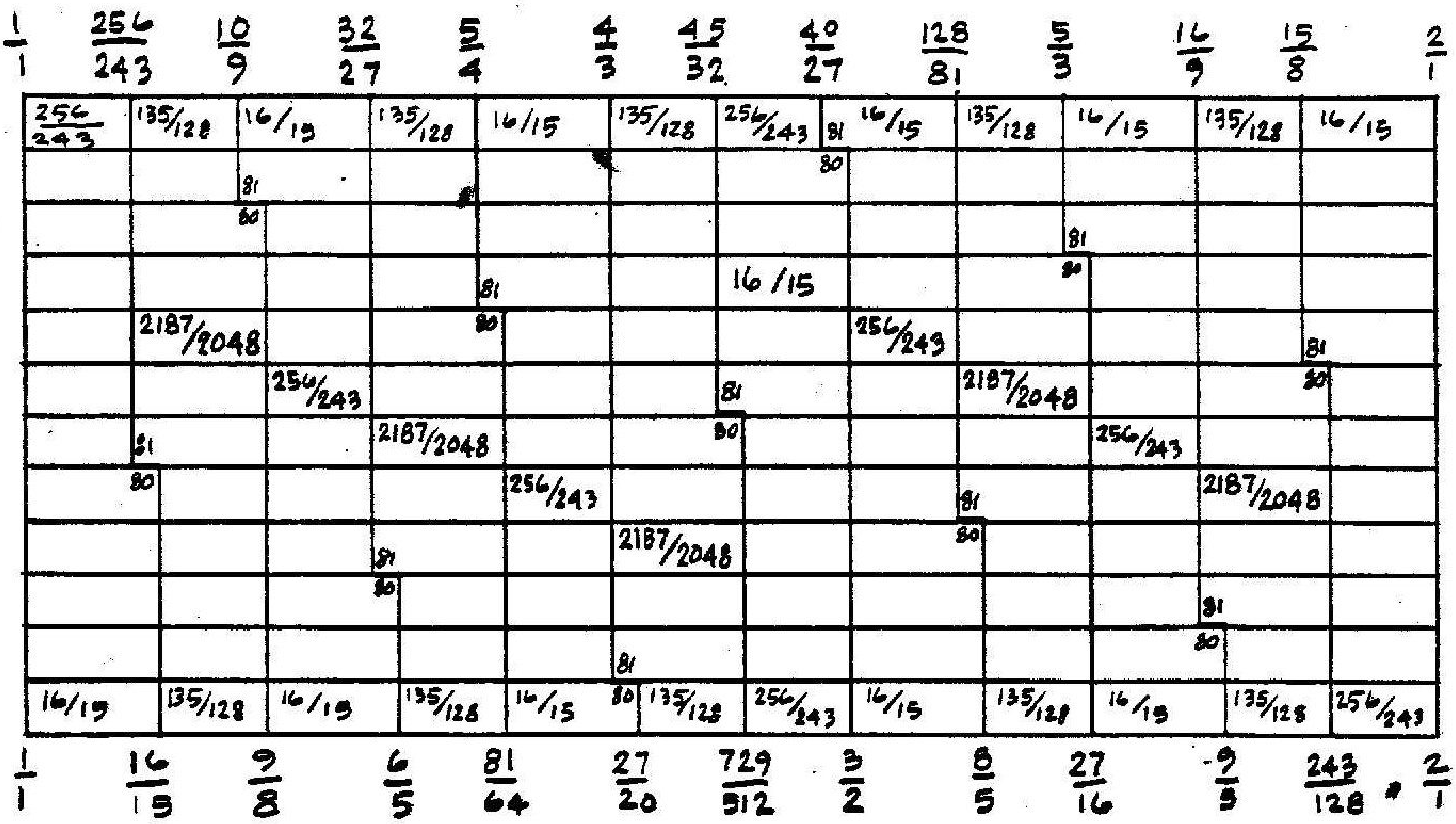
1/1 10/9 5/4 4/3 40/27 5/3 16/9 2/1

10/9	9/8	16/15	10/9	9/8	16/15	(9/8)	F# B E A D G
10/9	9/8	16/15	16/15	(25/24) 75/64	16/15	(9/8)	C
16/15	(25/24) 75/64	16/15	16/15	75/64	16/15	(9/8)	F
16/15	75/64	16/15	16/15	9/8	(25/24) 10/9	(9/8)	B♭
16/15	9/8	(25/24) 10/9	16/15	9/8	10/9	(9/8)	D_1# G_1# C_1# F_1# B_1 E_1
16/15	9/8	10/9	16/15	9/8	16/15	(25/24) (75/64)	A_1
16/15	9/8	16/15	(25/24) 10/9	9/8	16/15	(75/64)	D_1

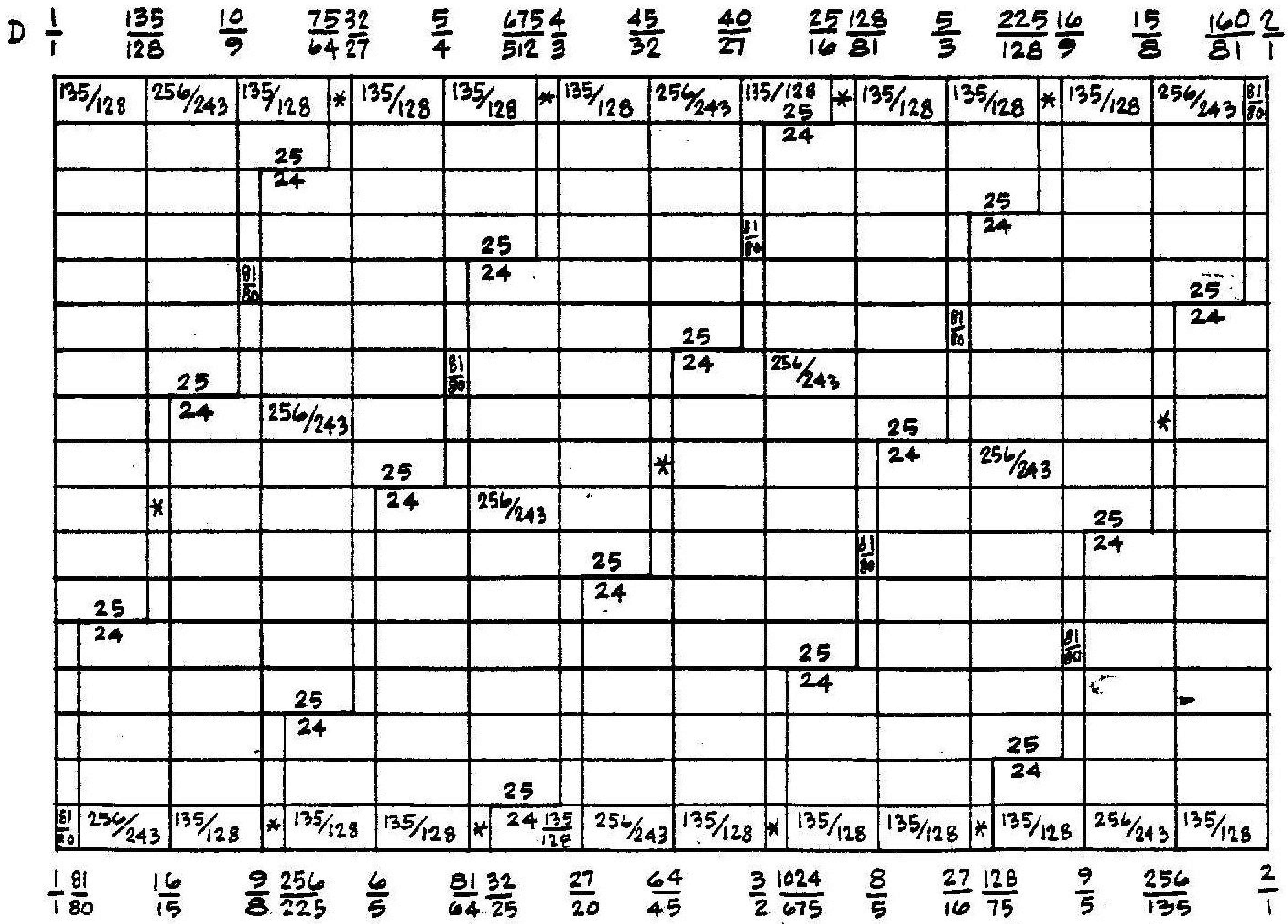
1/1 16/15 6/5 32/25 64/45 8/5 128/75 2/1

Note: Disjunction in ( )

Modes of Linear 12, floating skhisma

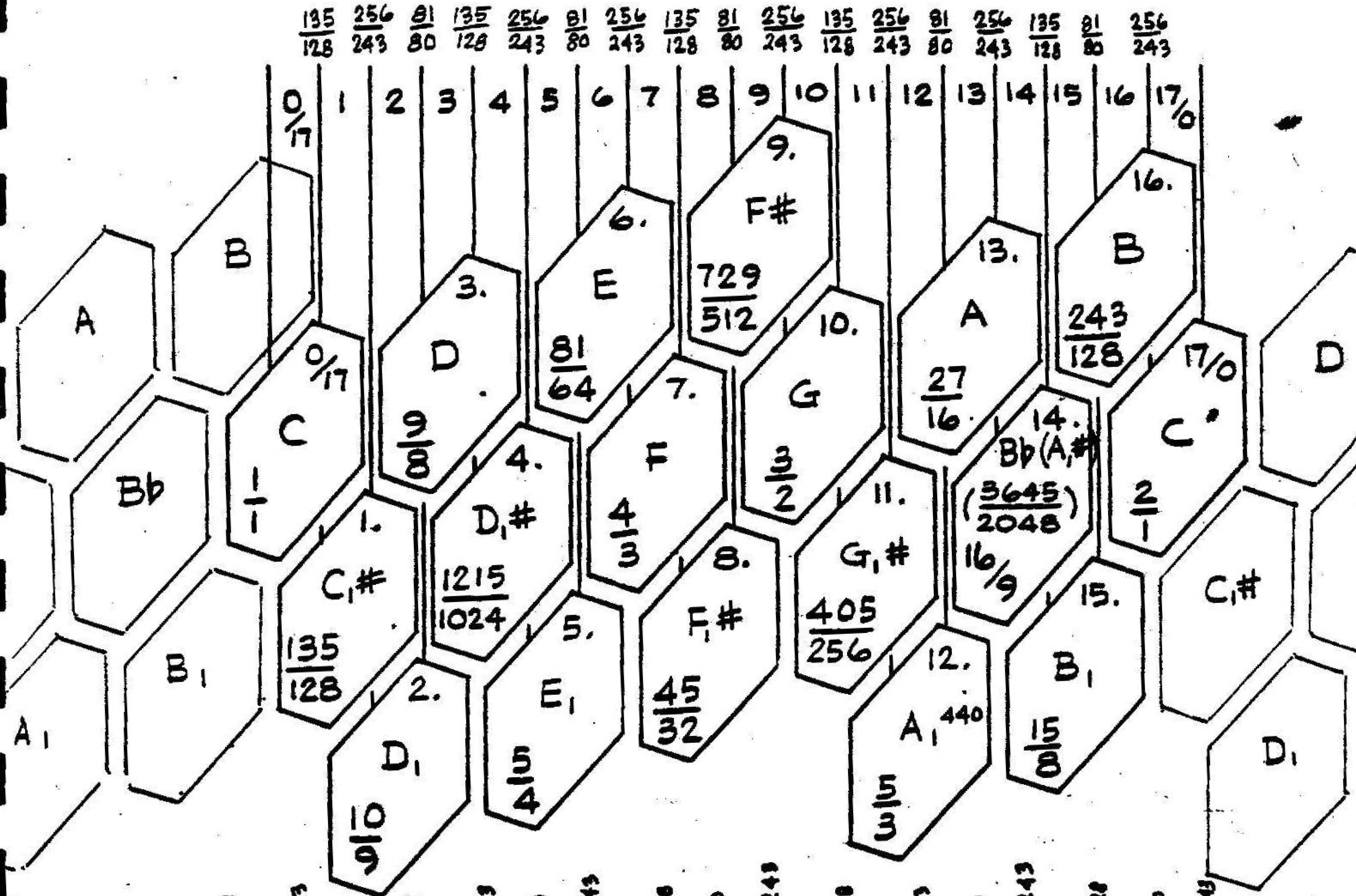


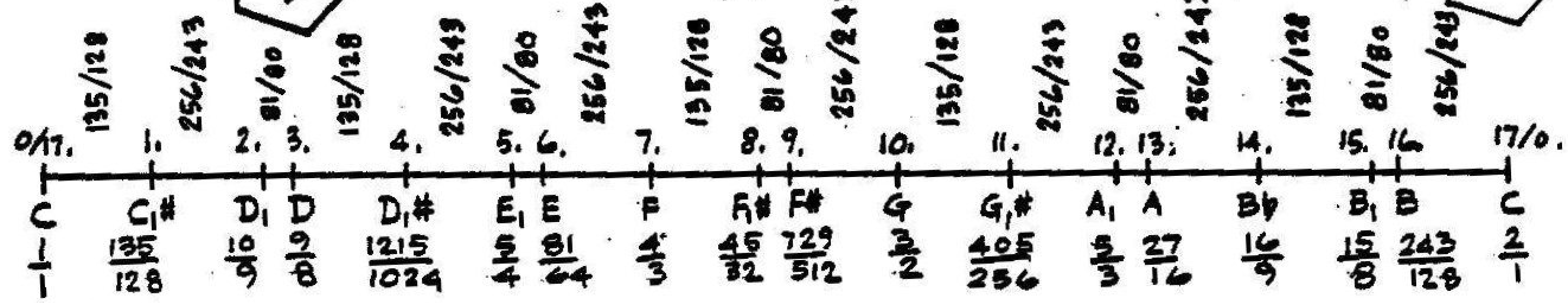
Modes of Linear 17, floating skhisma

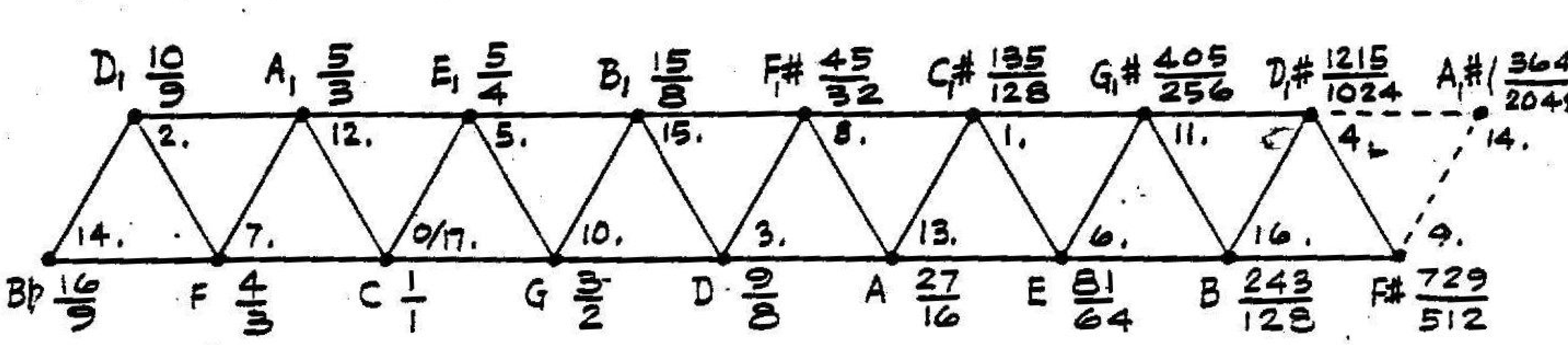


* = 2048/2025

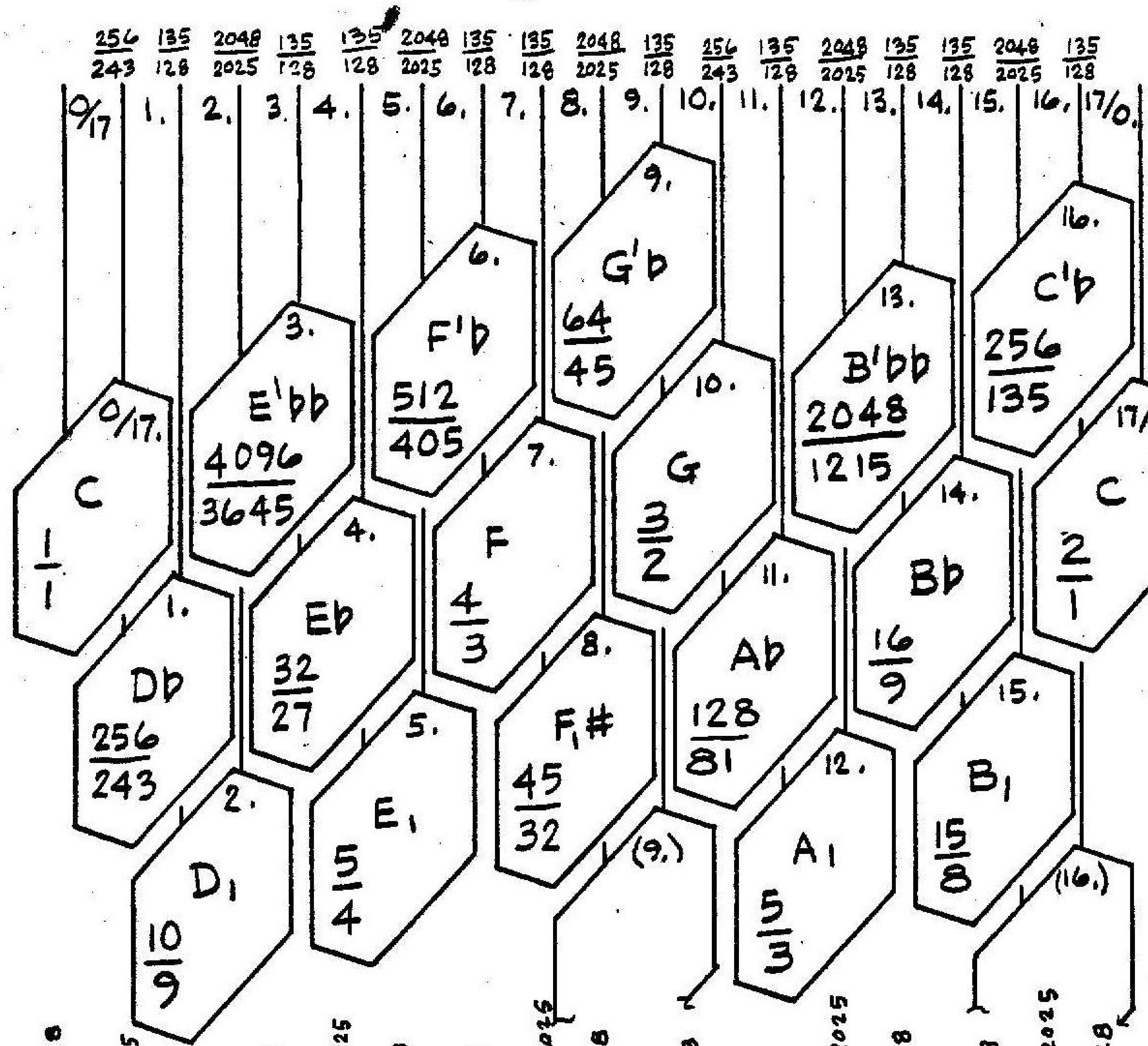
Generalized Clavichord Keyboard (after Bosanquet) with 17-tone Scale

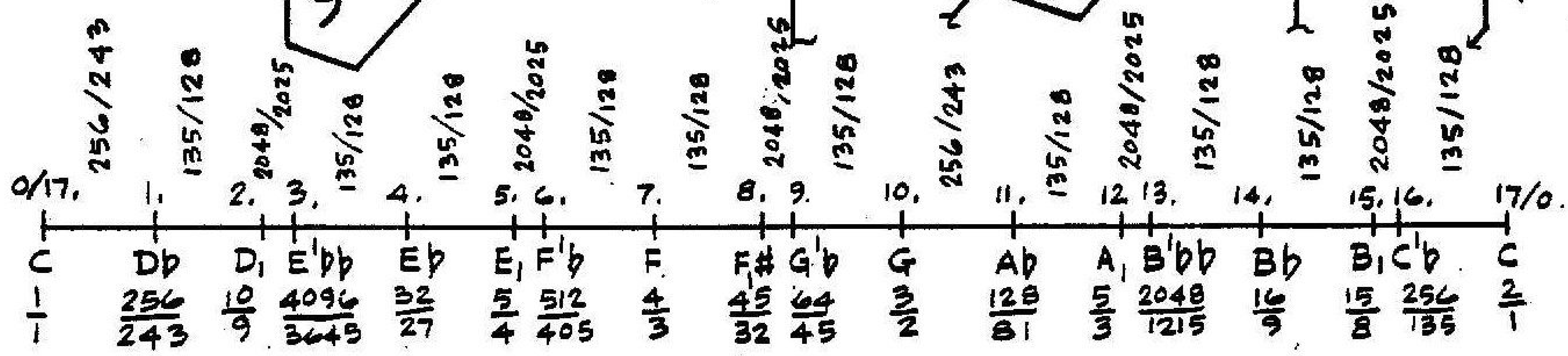


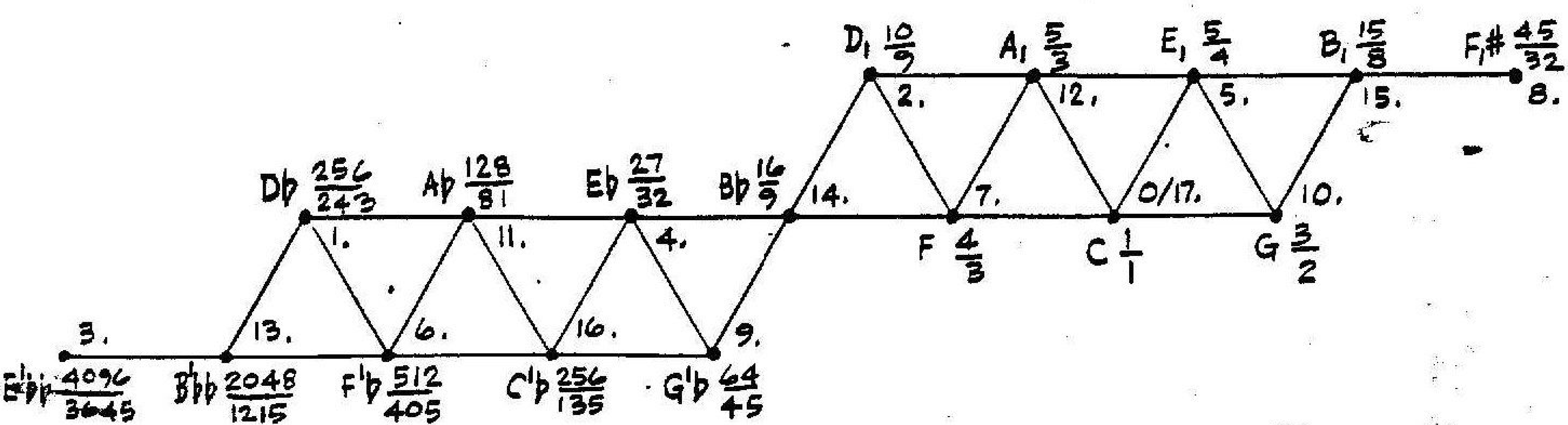


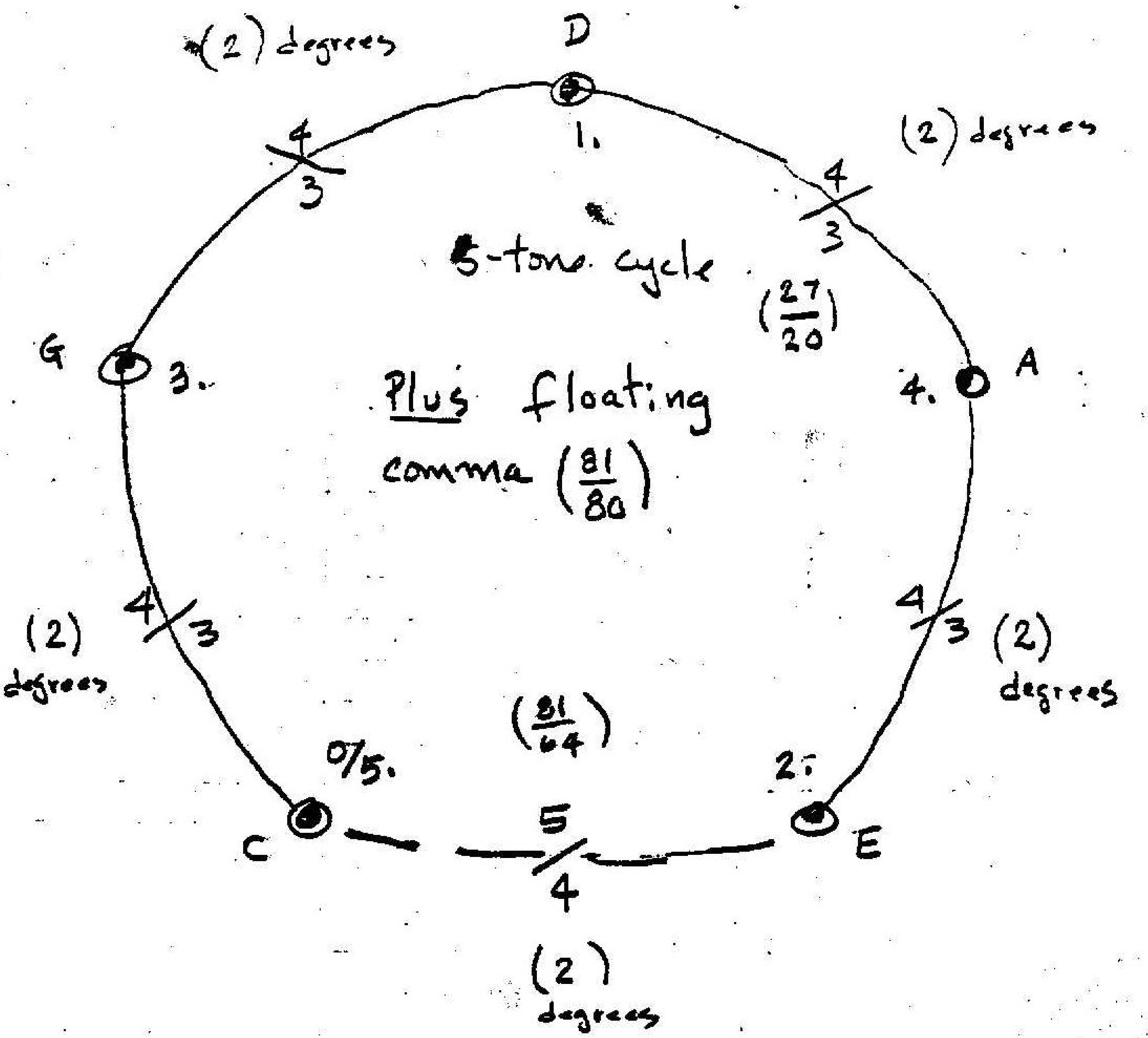


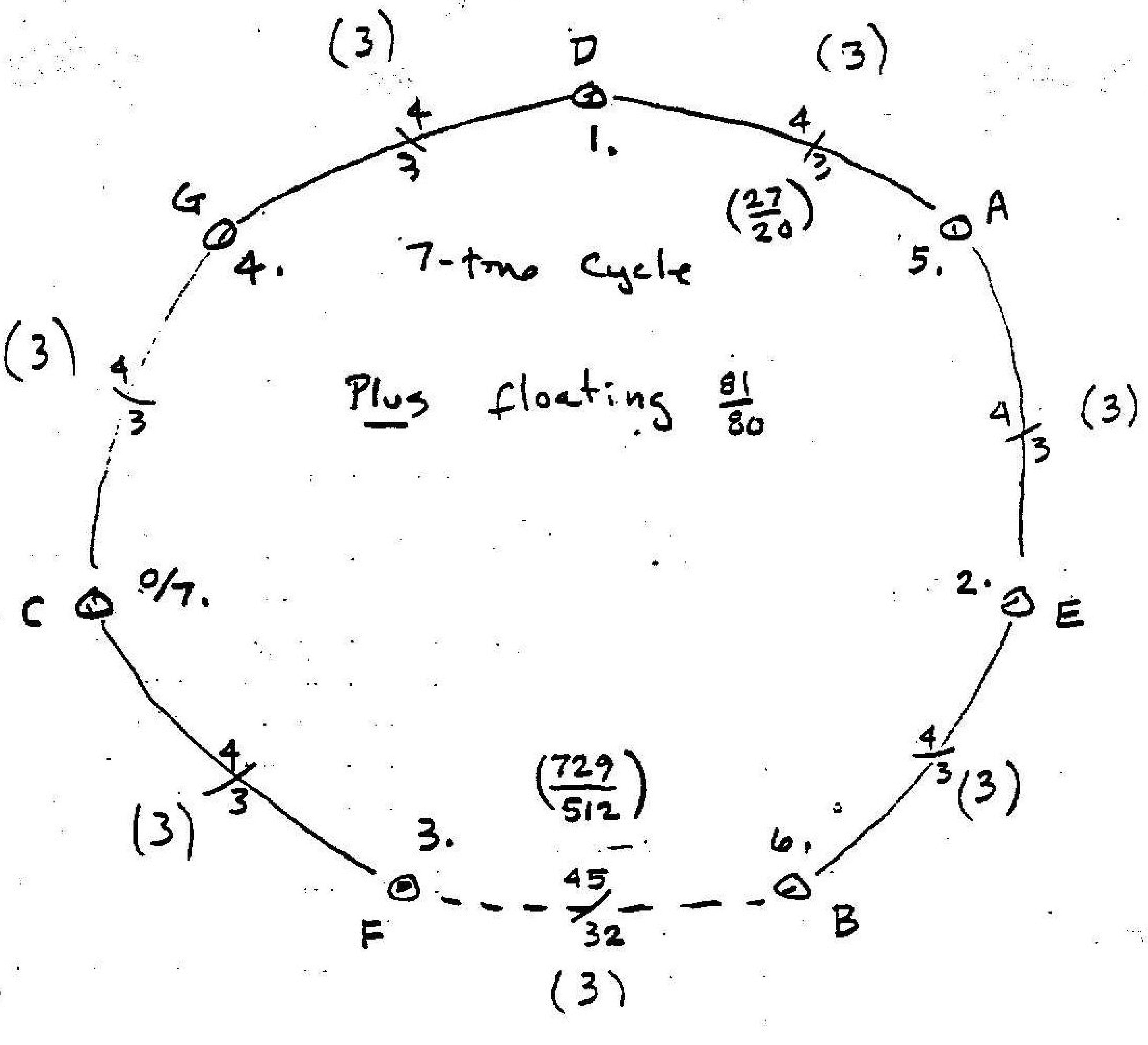
Variation of 17-tone scale with comma of 2048/2025 on generalized keyboard



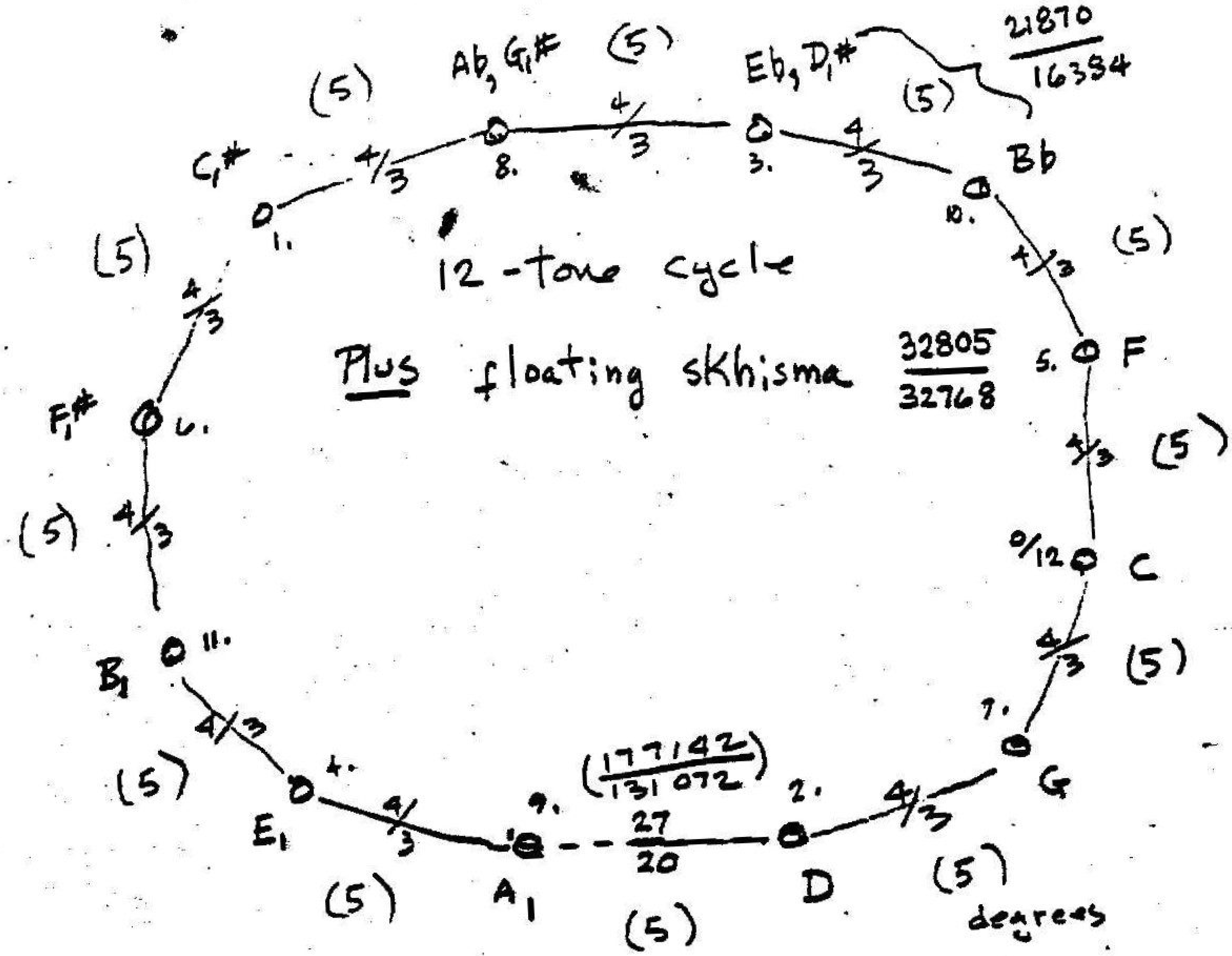


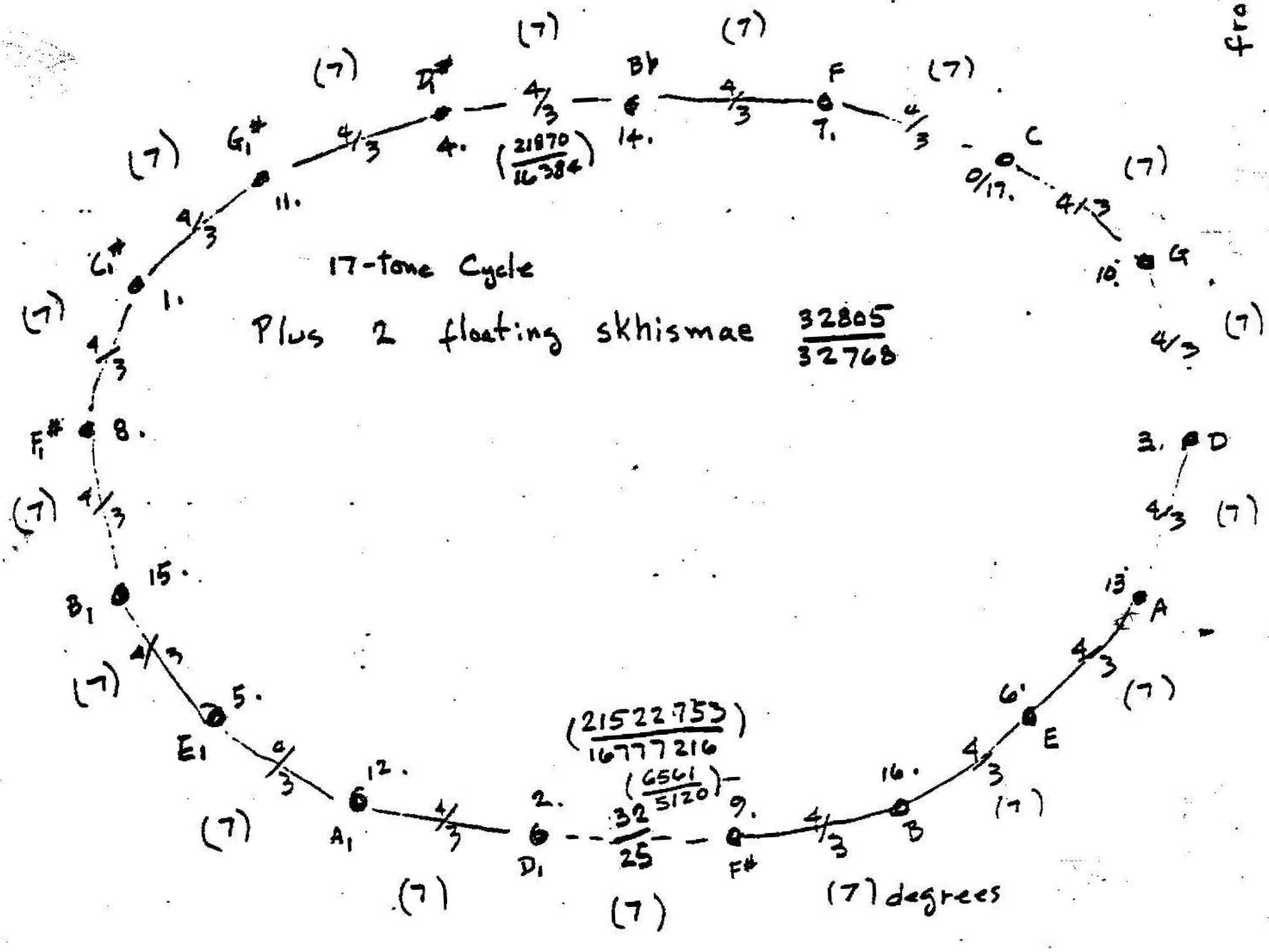




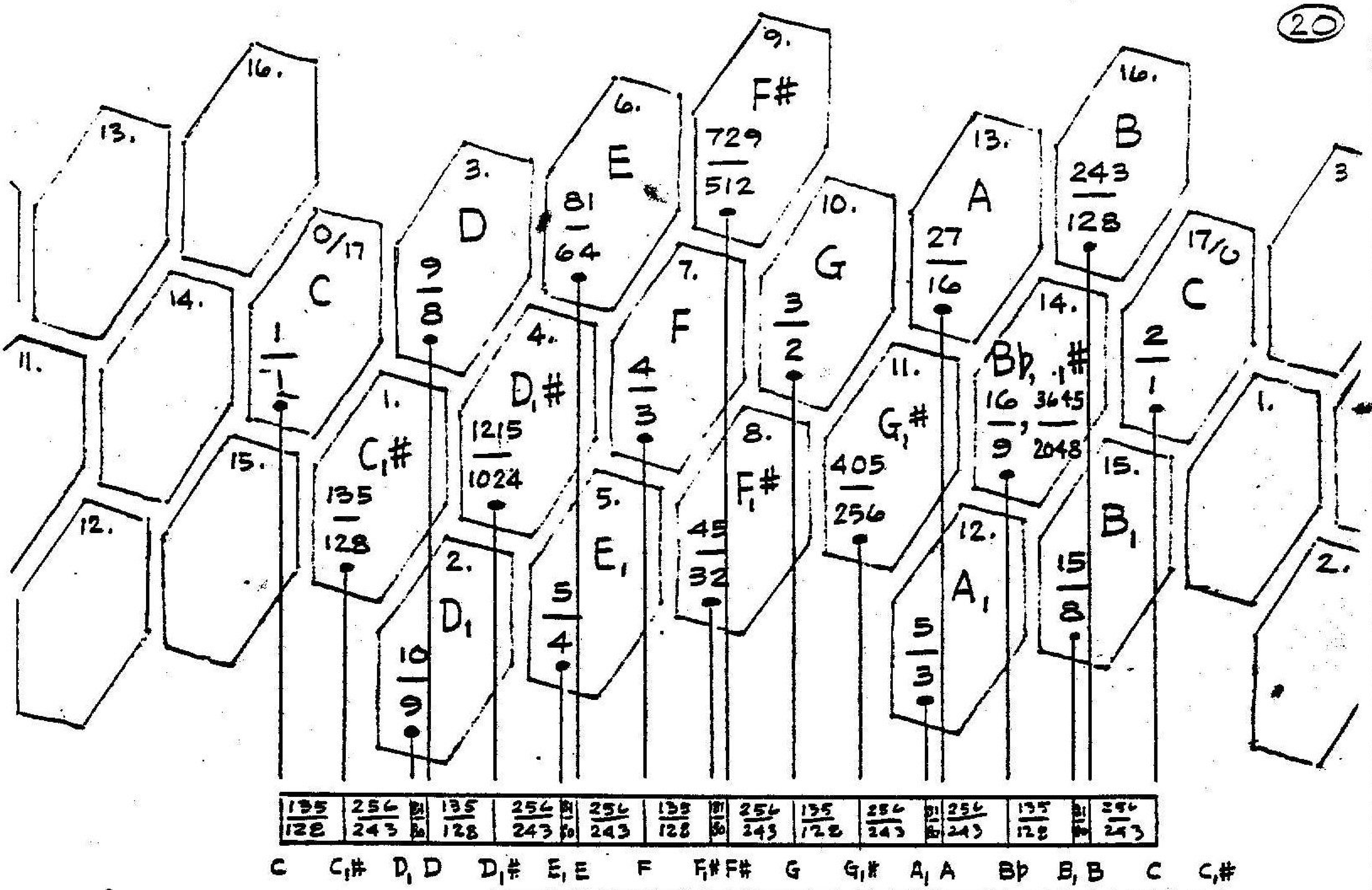


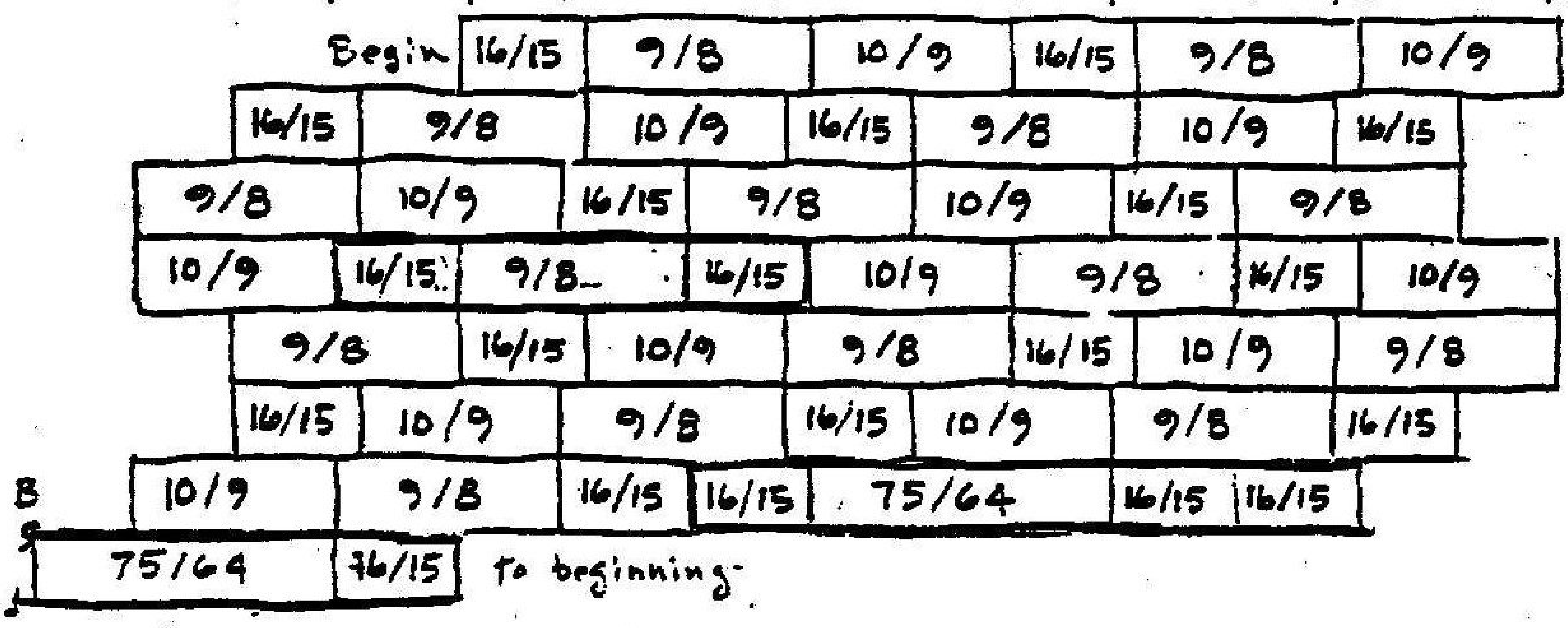
Figures
From my notebook

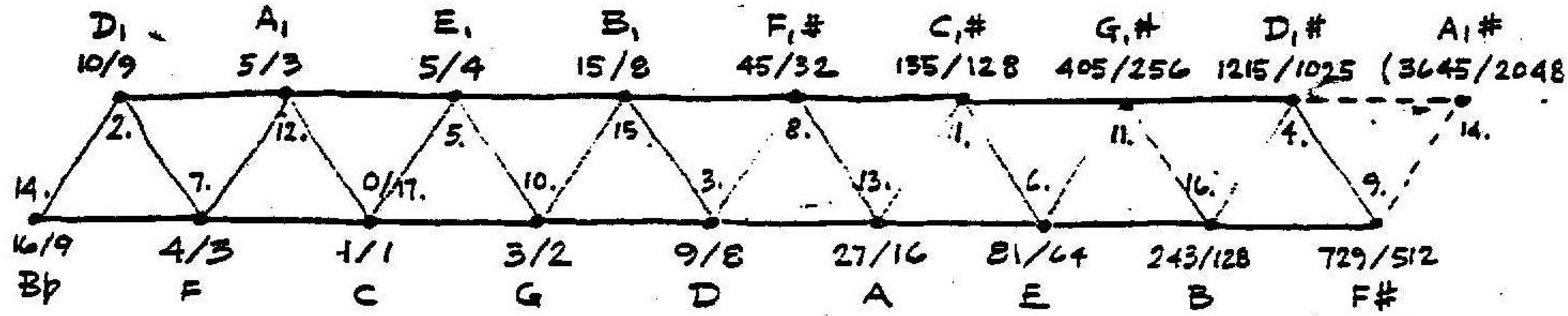




Figures from my notebook


16.
13.
0/17
C
1/1
3.
D
9/8
6.
E
81/64
9.
F#
729/512
10.
G
3/2
13.
A
27/16
16.
B
243/128
17/0
C
2/1
3
11.
14.
1.
C1#
135/128
4.
D1#
1215/1024
7.
F
4/3
11.
G1#
405/256
14.
Bb, 1#
16/9, 3645/2048
1.
15.
12.
2.
D1
10/9
5.
E1
5/4
8.
F1#
45/32
12.
A1
5/3
15.
B1
15/8
2.
135/128 256/243 81/80 135/128 256/243 81/80 256/243 135/128 81/80 256/243 135/128 256/243 81/80 256/243 135/128 81/80 256/243
C C1# D1 D D1# E1 E F F1# F# G G1# A1 A Bb B1 B C C1#


Begin 16/15 9/8 10/9 16/15 9/8 10/9
16/15 9/8 10/9 16/15 9/8 10/9 16/15
9/8 10/9 16/15 9/8 10/9 16/15 9/8
10/9 16/15 9/8 16/15 10/9 9/8 16/15 10/9
9/8 16/15 10/9 9/8 16/15 10/9 9/8
16/15 10/9 9/8 16/15 10/9 9/8 16/15
B 10/9 9/8 16/15 16/15 75/64 16/15 16/15
75/64 16/15 to beginning


D1 A1 E1 B1 F1# C1# G1# D1# A1#
10/9 5/3 5/4 15/8 45/32 135/128 405/256 1215/1025 (3645/2048
2. 12. 5. 15. 8. 1. 11. 4. 14.
14. 7. 0/17. 10. 3. 13. 6. 16. 9.
16/9 4/3 1/1 3/2 9/8 27/16 81/64 243/128 729/512
Bb F C G D A E B F#