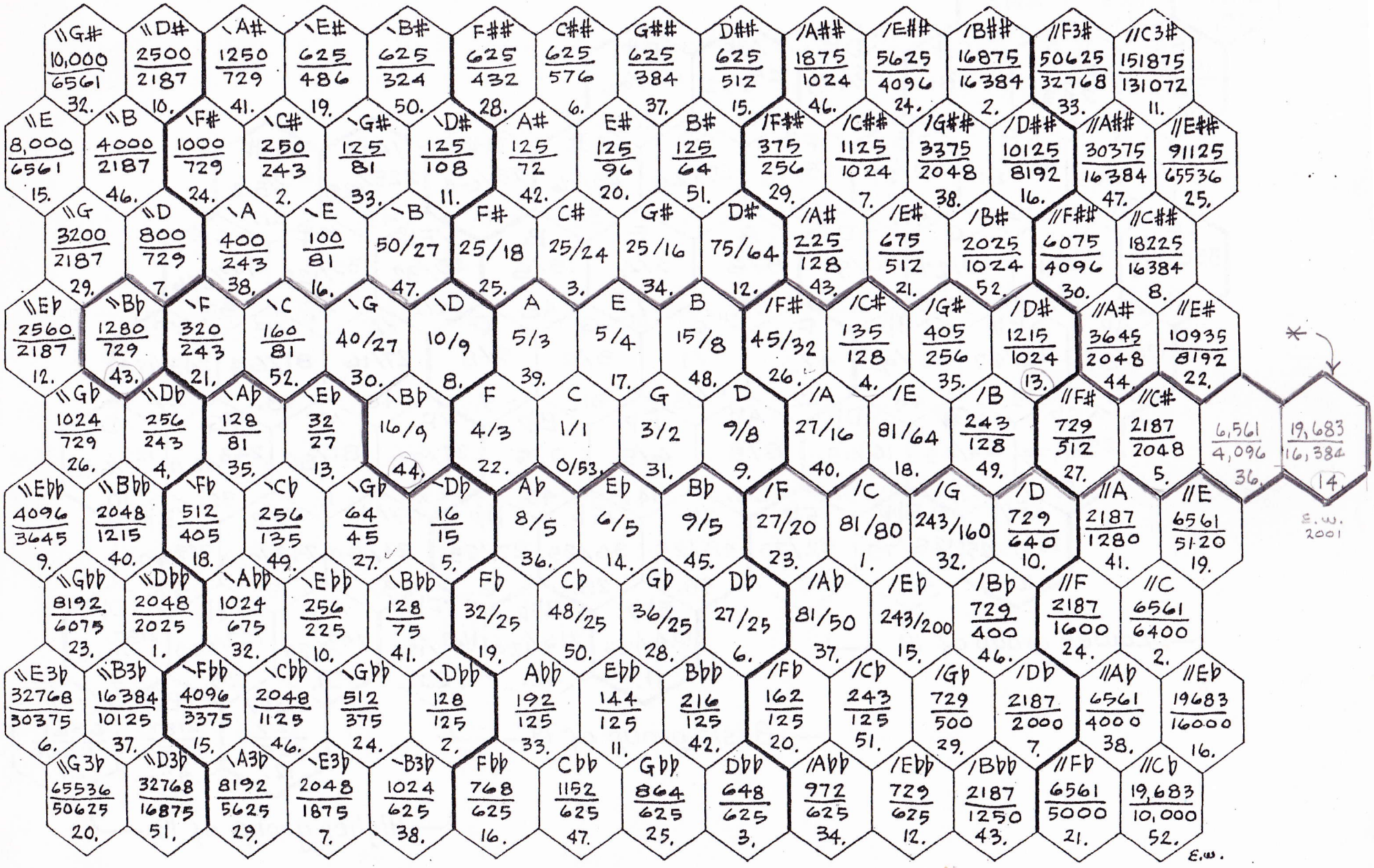
Annotated 5 Mar 2001 by Erv Wilson, to show tone-lattice* for inferred Turkish 24-Tone system.

Ref: "Non-Deterministic Sound Structures Observed in Traditional Turkish Music" by Can AKKOÇ, 1999

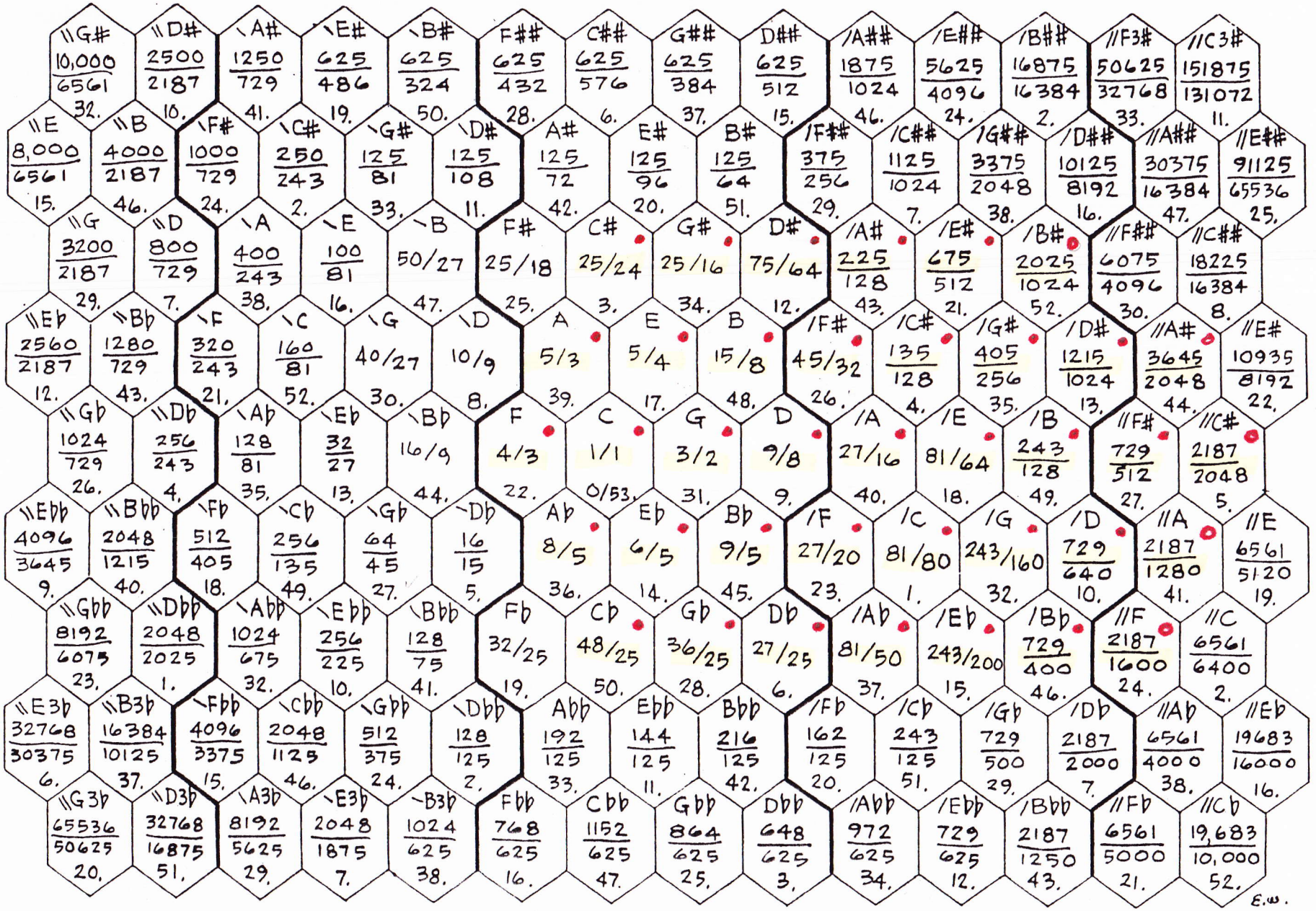
Figure #1 Major-Minor Triadic Lattice for 53 (redrawn from 1942 original)



Ref; "Development of a 53-tone Keyboard Layout," Larry A. Hanson 1989, Xenharmonikon XII

Figure # 1

Major-Minor Triadic Lattice for 53
(redrawn from 1942 original)

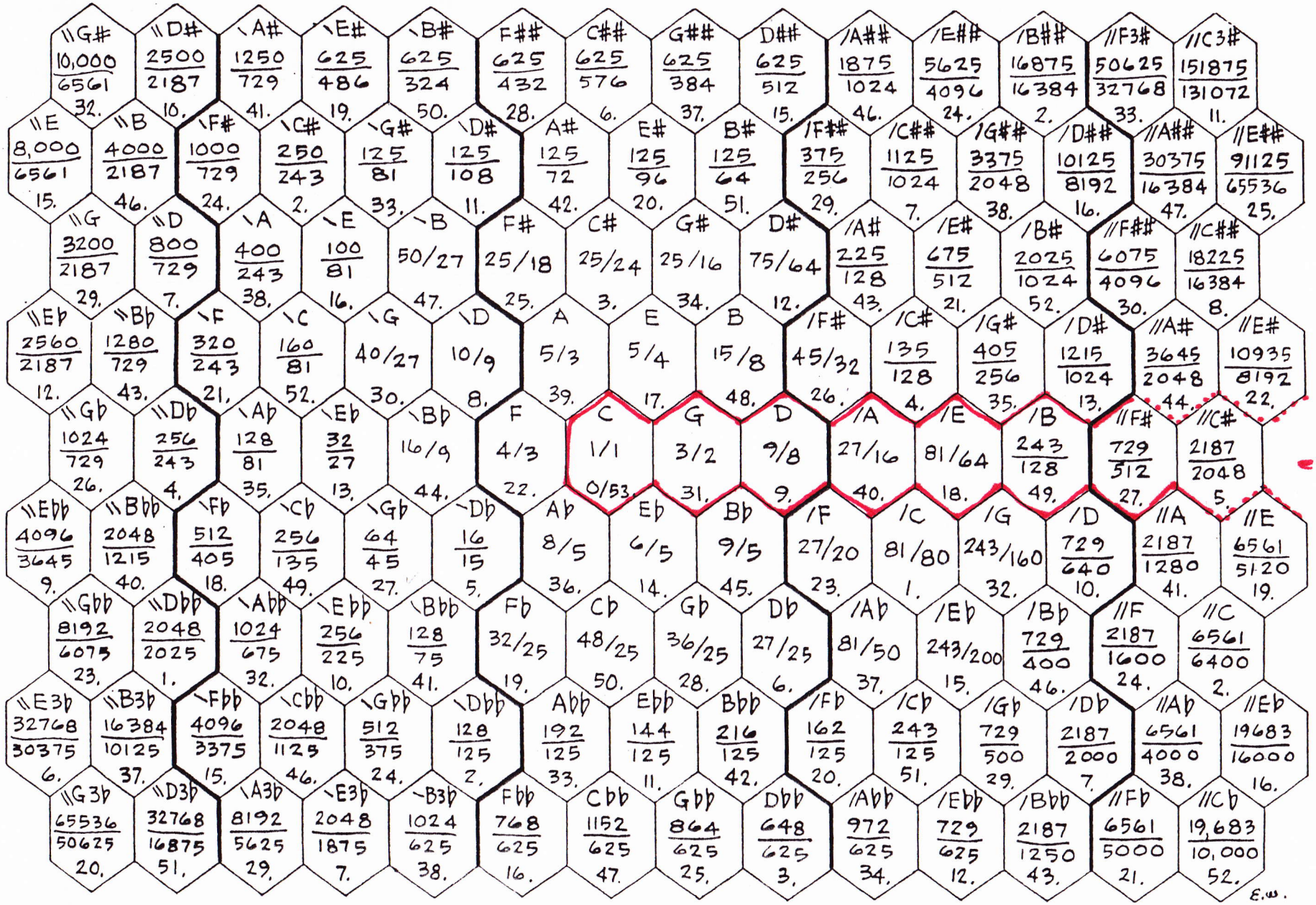


Outlined in red is the major extended reference pattern. See Boomslitter & Creel Organization in Auditory Perception Page 16

E.W. 1997

Figure # 1

Major-Minor Triadic Lattice for 53
(redrawn from 1942 original)



Outlined in red is the theoretical scale of 22 steps, of modern India. Note that 135/128 is minutely ~~higher in~~ larger in magnitude than 256/243 (schismatically equivalents) as are

$\frac{405}{256}$ to $\frac{128}{81}$

$\frac{1215}{1024}$ to $\frac{32}{27}$

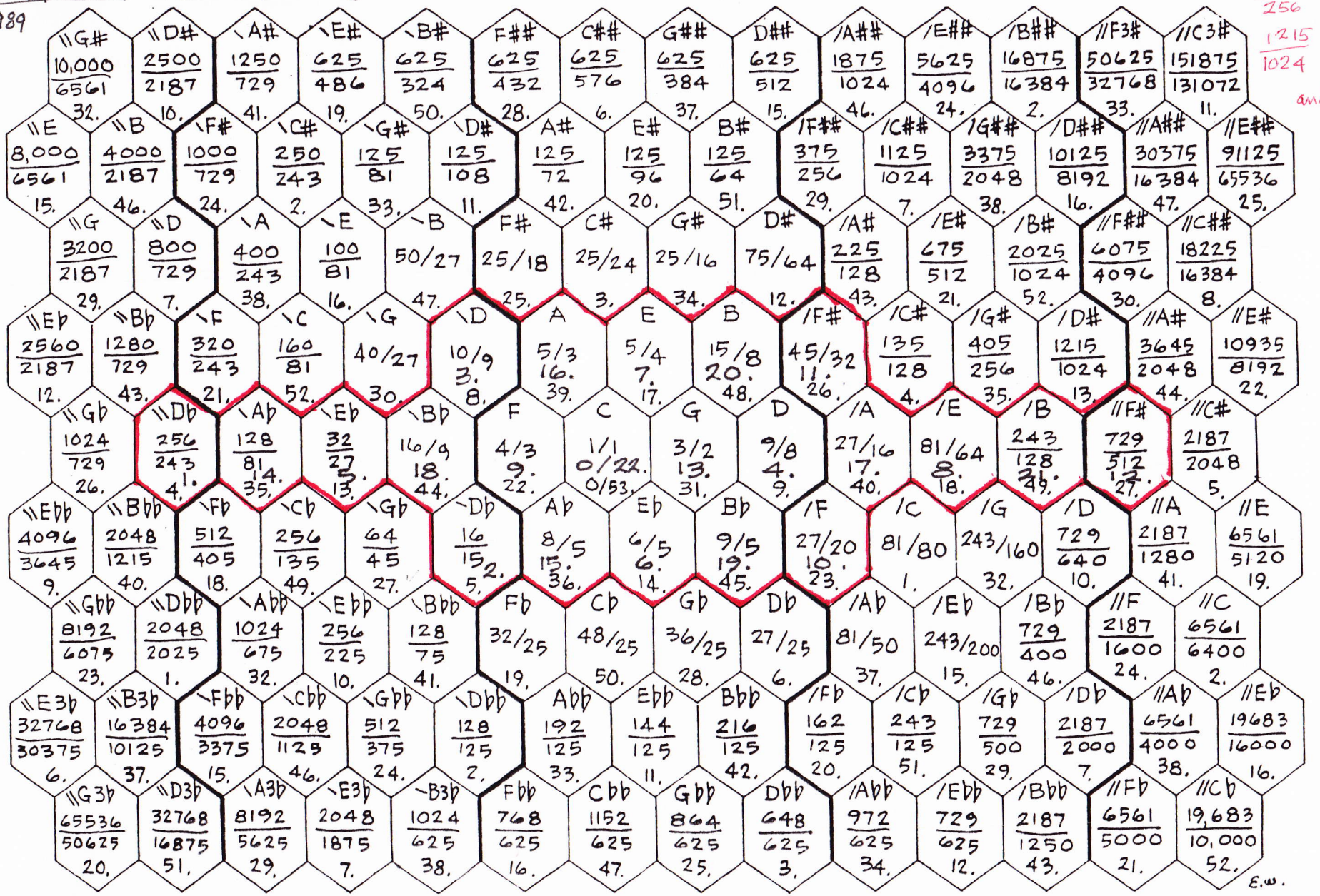
and so forth

E.W. 1997

Figure #1

Major-Minor Triadic Lattice for 53 (redrawn from 1942 original)

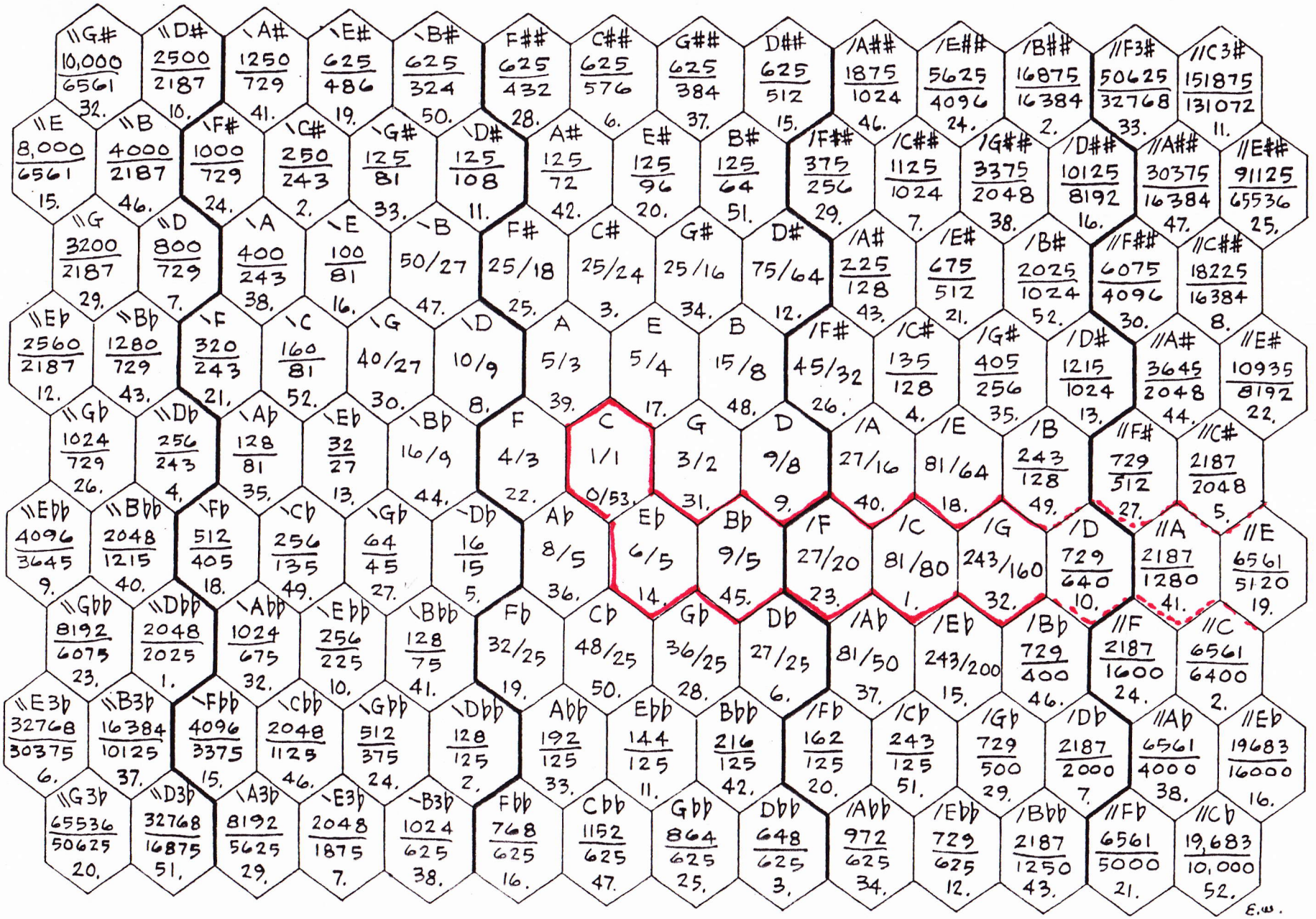
From L. A. Hanson's Development of a 53-tone Keyboard layout 1989



Outlined in red is the minor extended reference pattern, See Boomsliter & Creel, Organization in auditory Perception, P. 16. E.W. 1997

Figure # 1

Major-Minor Triadic Lattice for 53
(redrawn from 1942 original)



E.W.

Boomsliter & Creel, The blue extended reference pattern, see p. 17

Figure # 1

Major-Minor Triadic Lattice for 53
(redrawn from 1942 original)

Compare this with independently derived ratios for Marwa, Purvi, Lalit$_2$, Todi, Lalit, Ref 17 Persian Version N. Indian Raga scales 1996 Erv Wilson

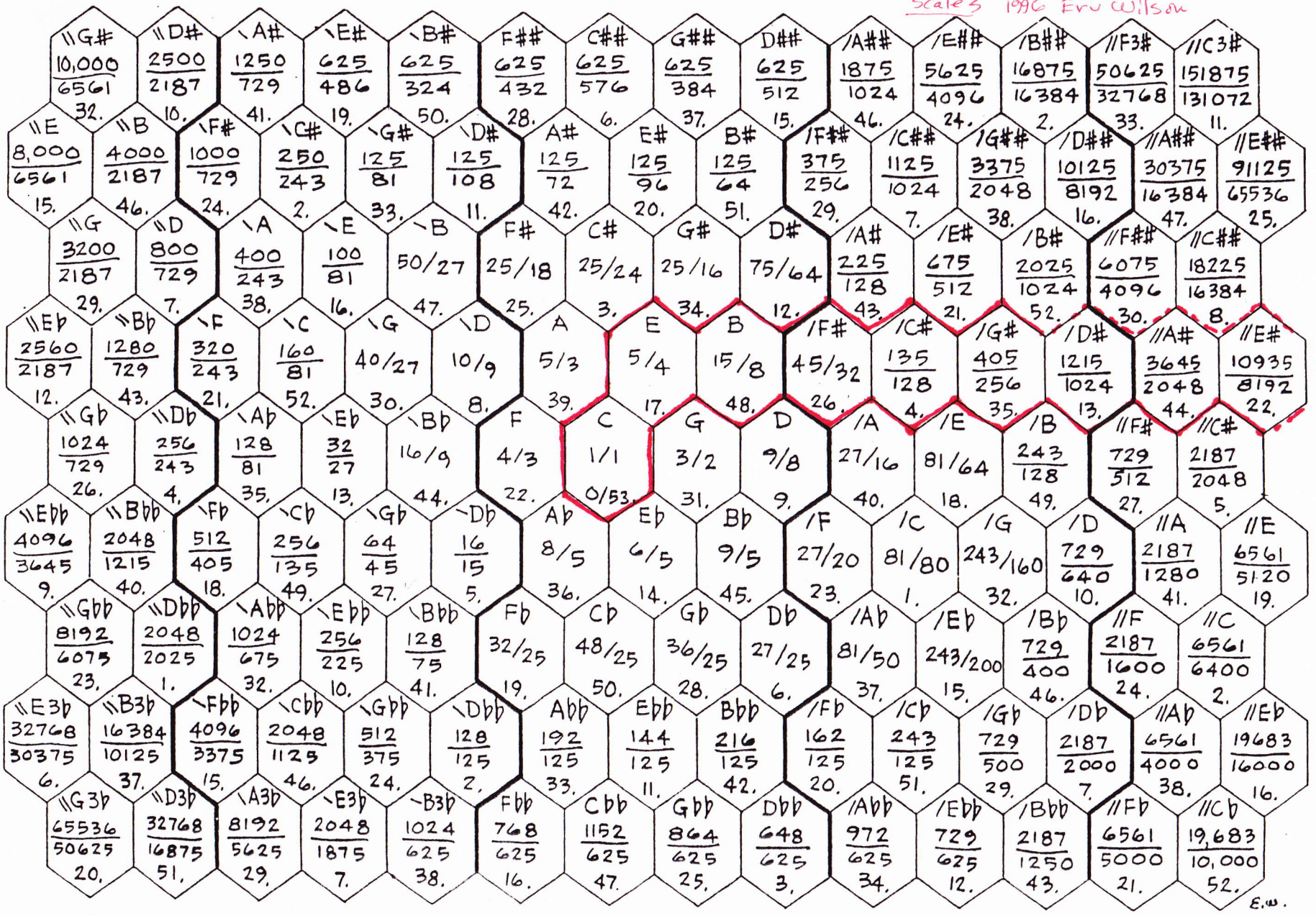
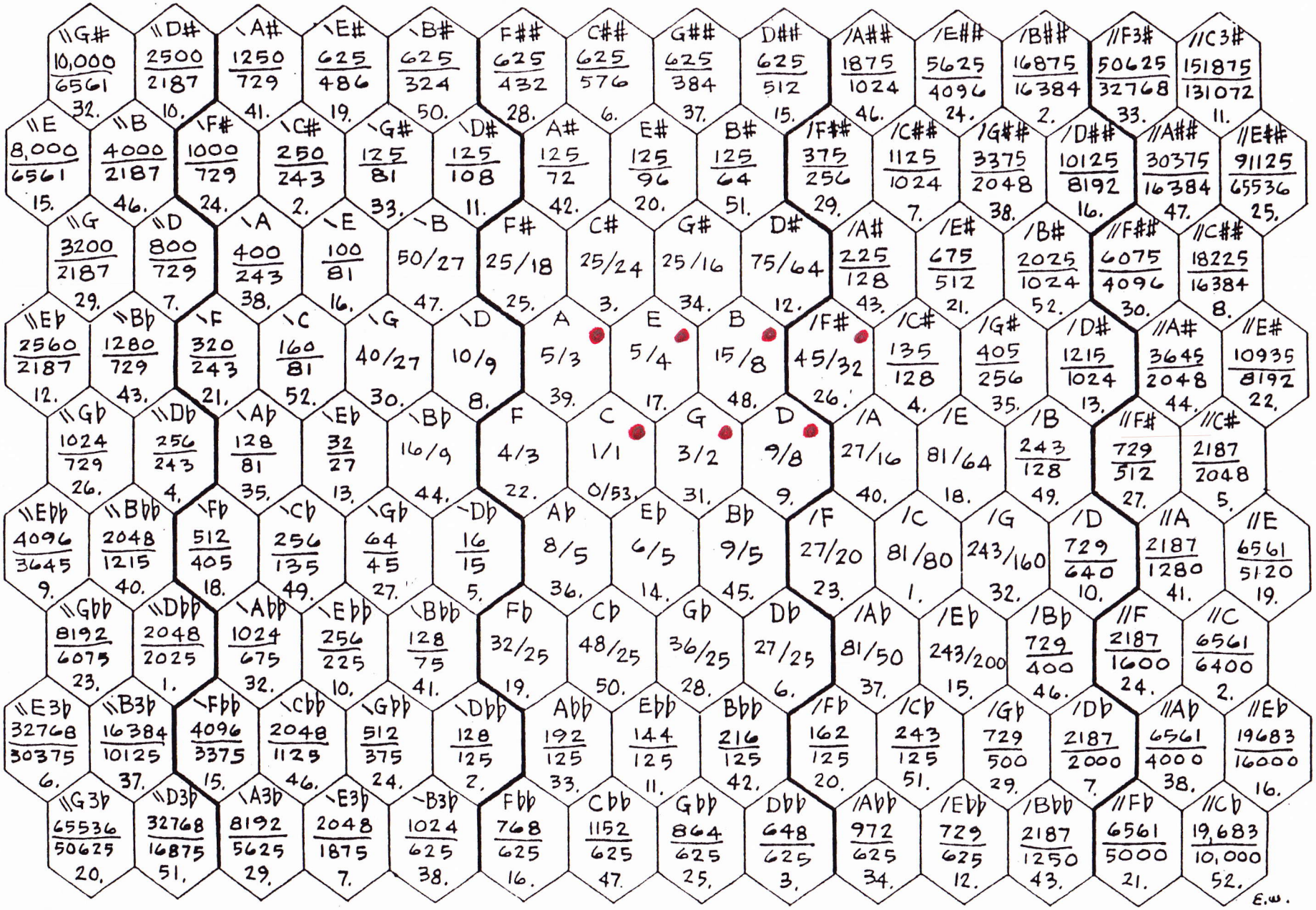


Figure # 1

Major-Minor Triadic Lattice for 53
(redrawn from 1942 original)

Kalyan



E.w.

Figure # 1

Major-Minor Triadic Lattice for 53
(redrawn from 1942 original)

2. Bilawal

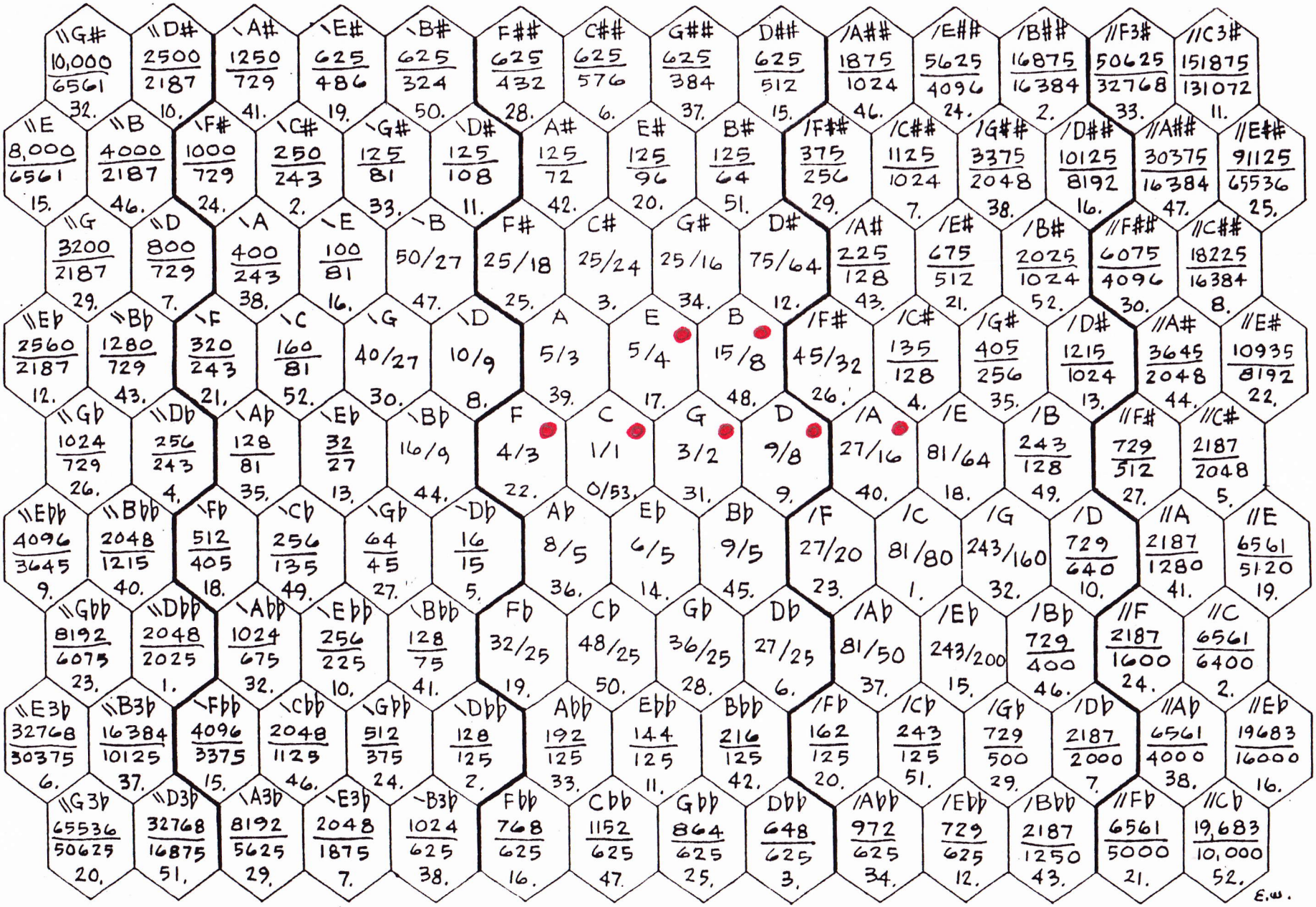
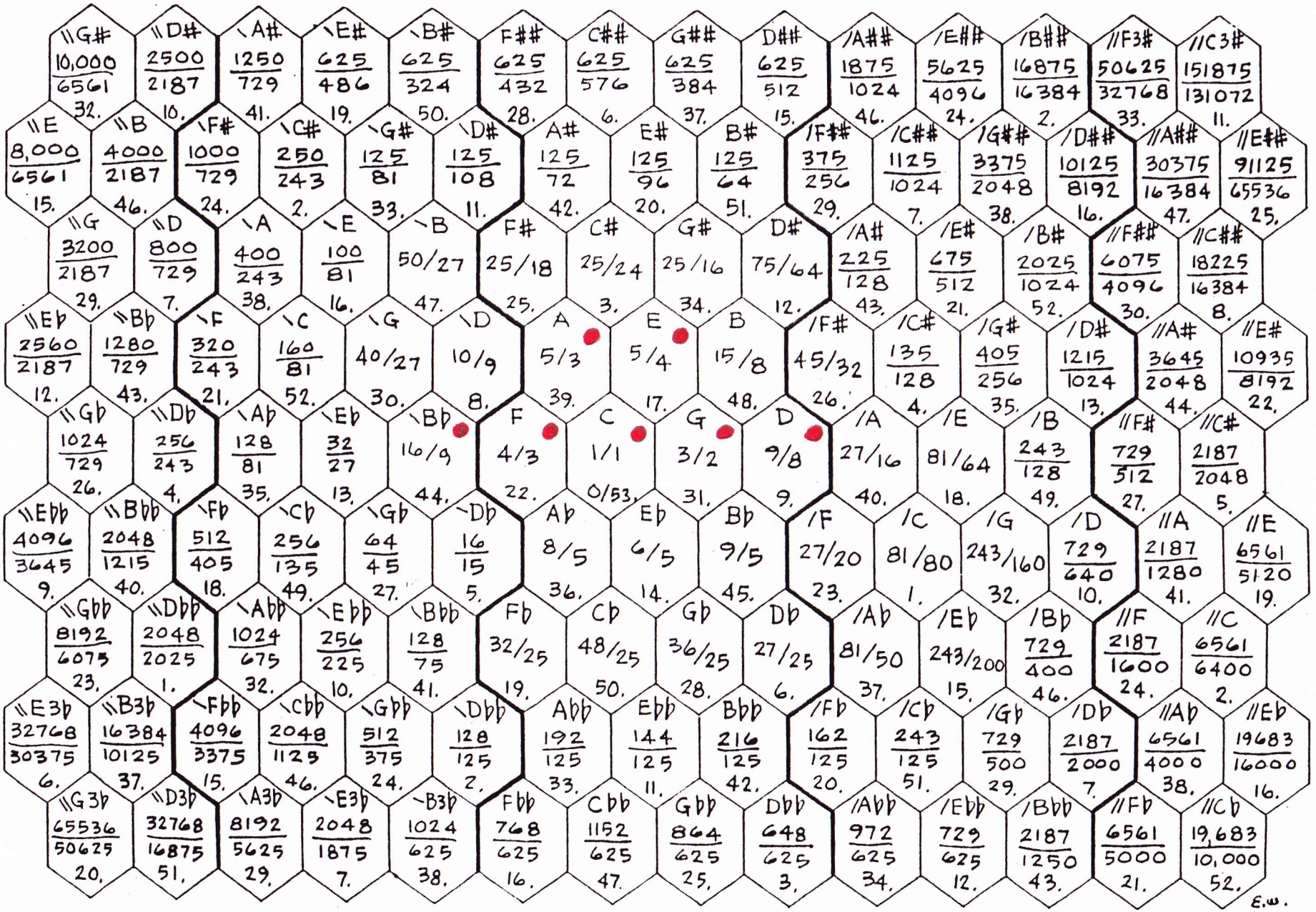


Figure # 1

Major-Minor Triadic Lattice for 53
(redrawn from 1942 original)

3. Khamaj



E.w.

Figure #1

Major-Minor Triadic Lattice for 53
(redrawn from 1942 original)

4. Old Kafi

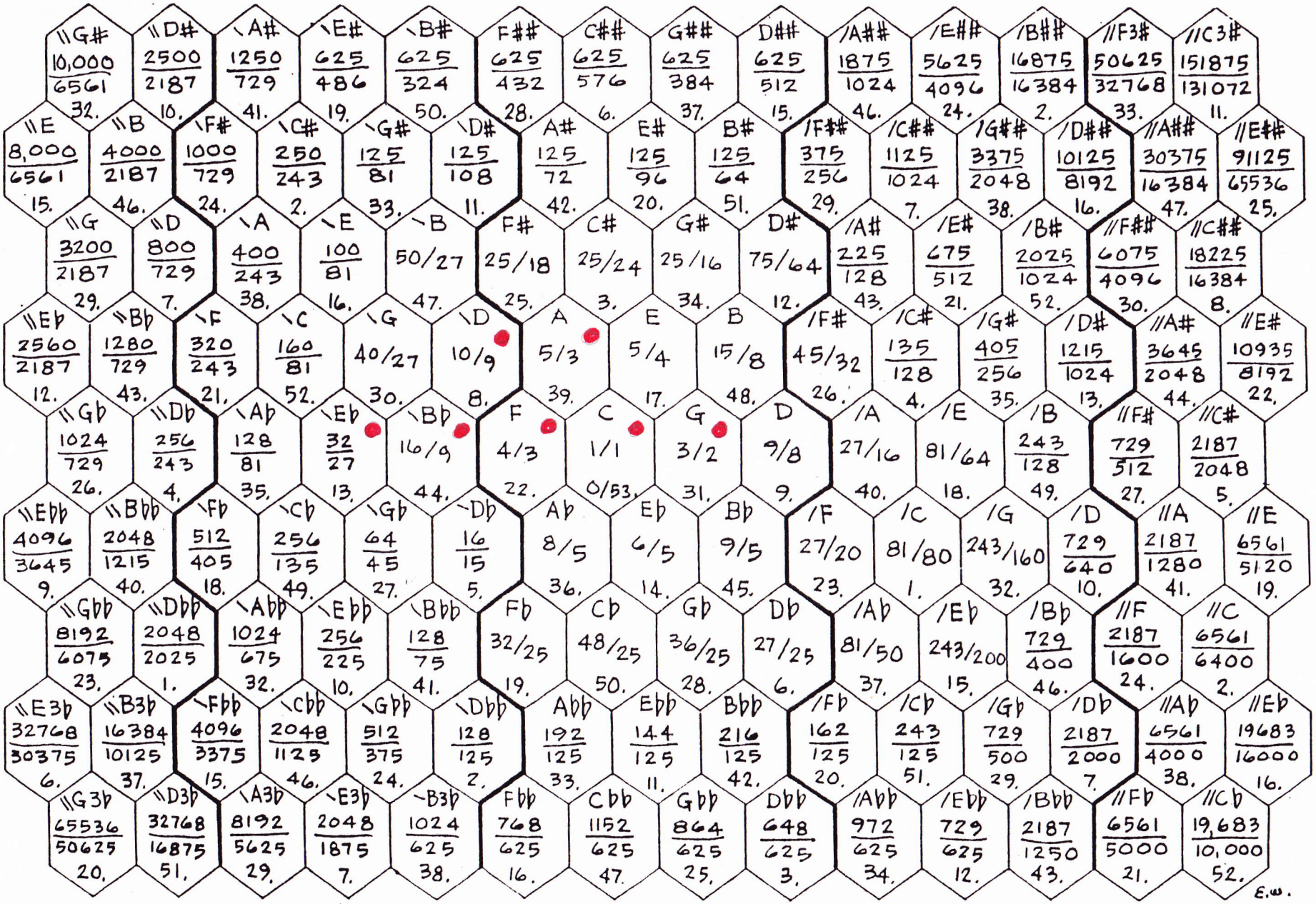


Figure # 1

Major-Minor Triadic Lattice for 53
(redrawn from 1942 original)

5. Kafi

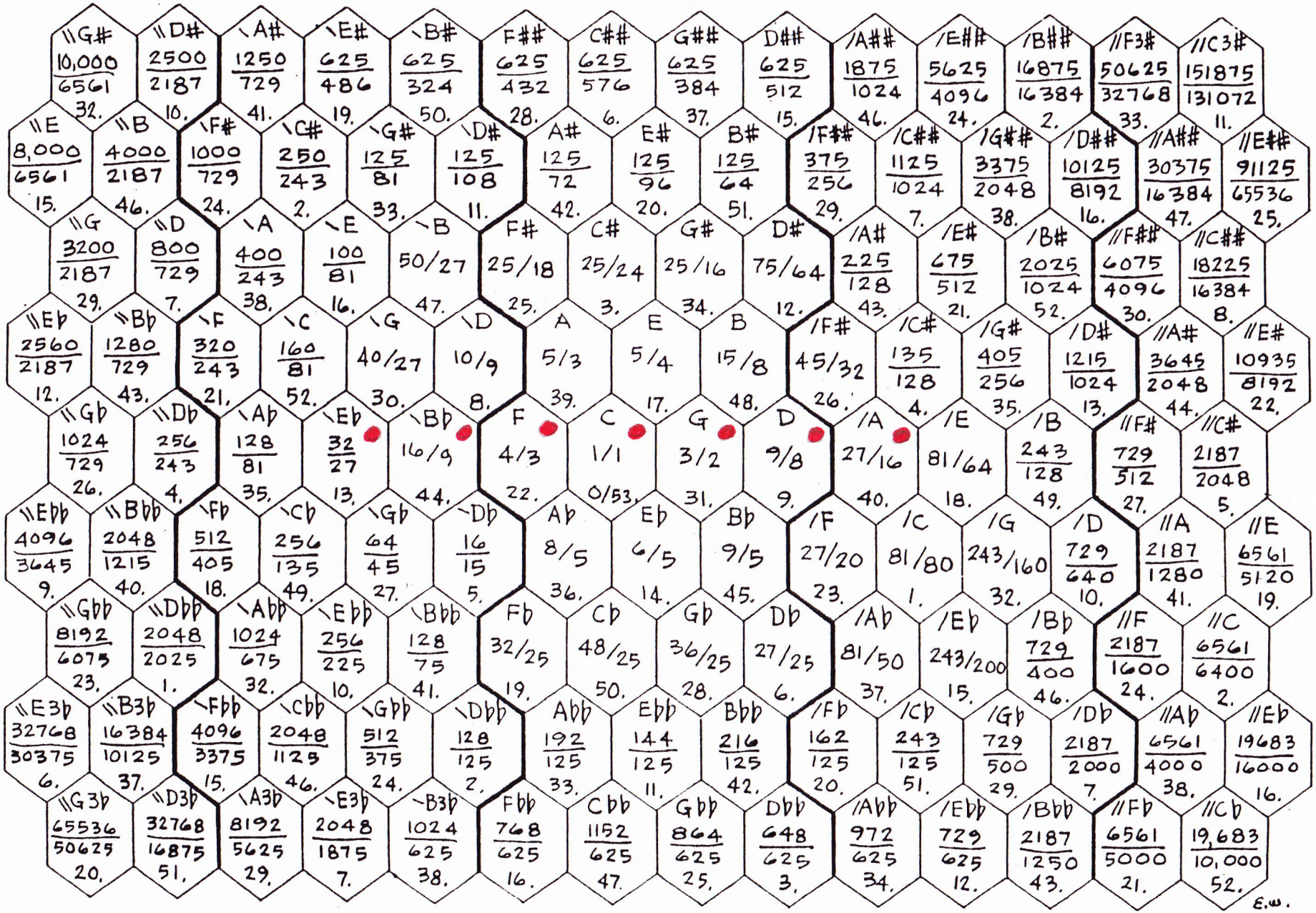
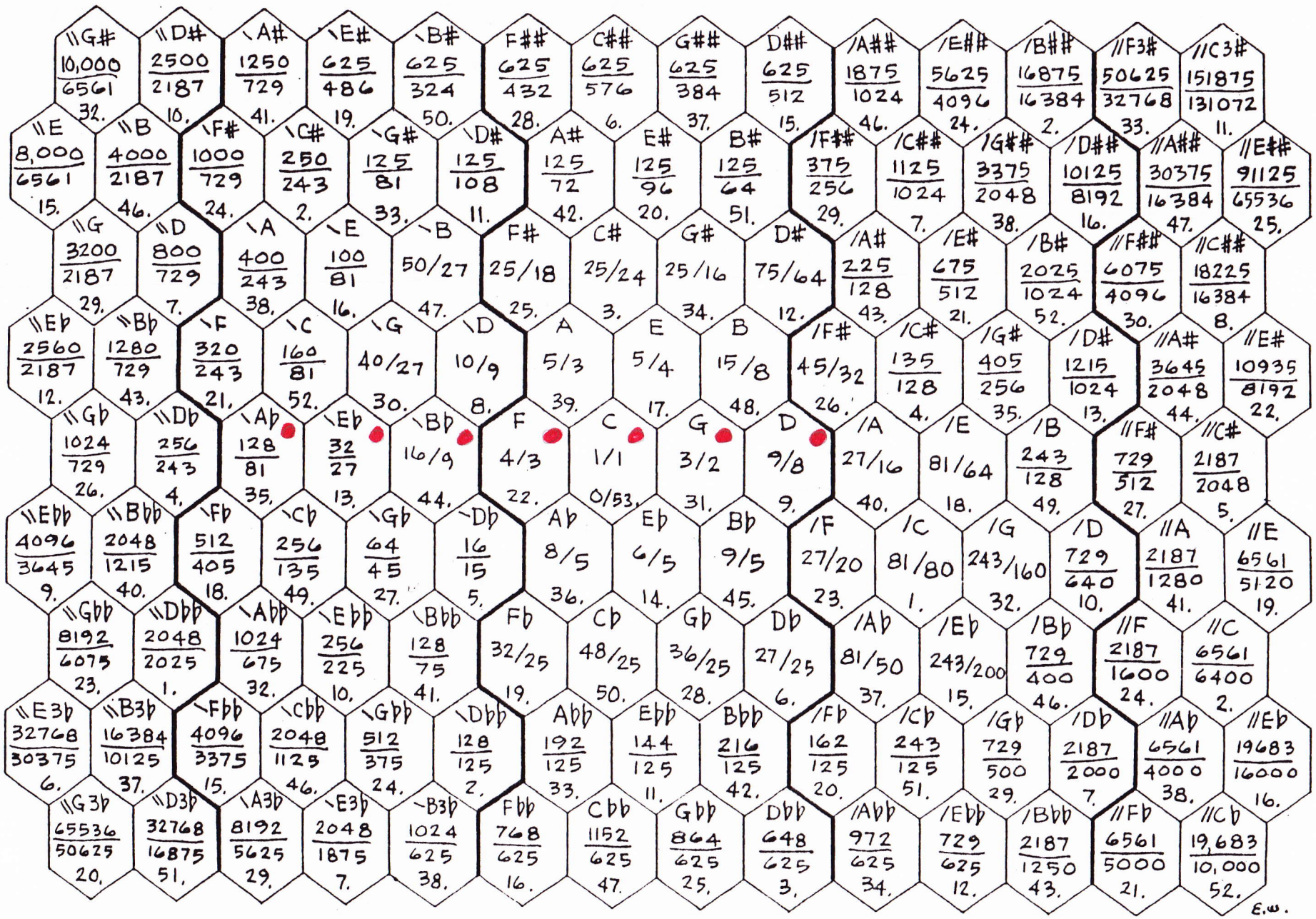


Figure # 1

Major-Minor Triadic Lattice for 53
(redrawn from 1942 original)

6. Asawari



E.W.

Figure # 1

Major-Minor Triadic Lattice for 53
(redrawn from 1942 original)

7. Bhairavi

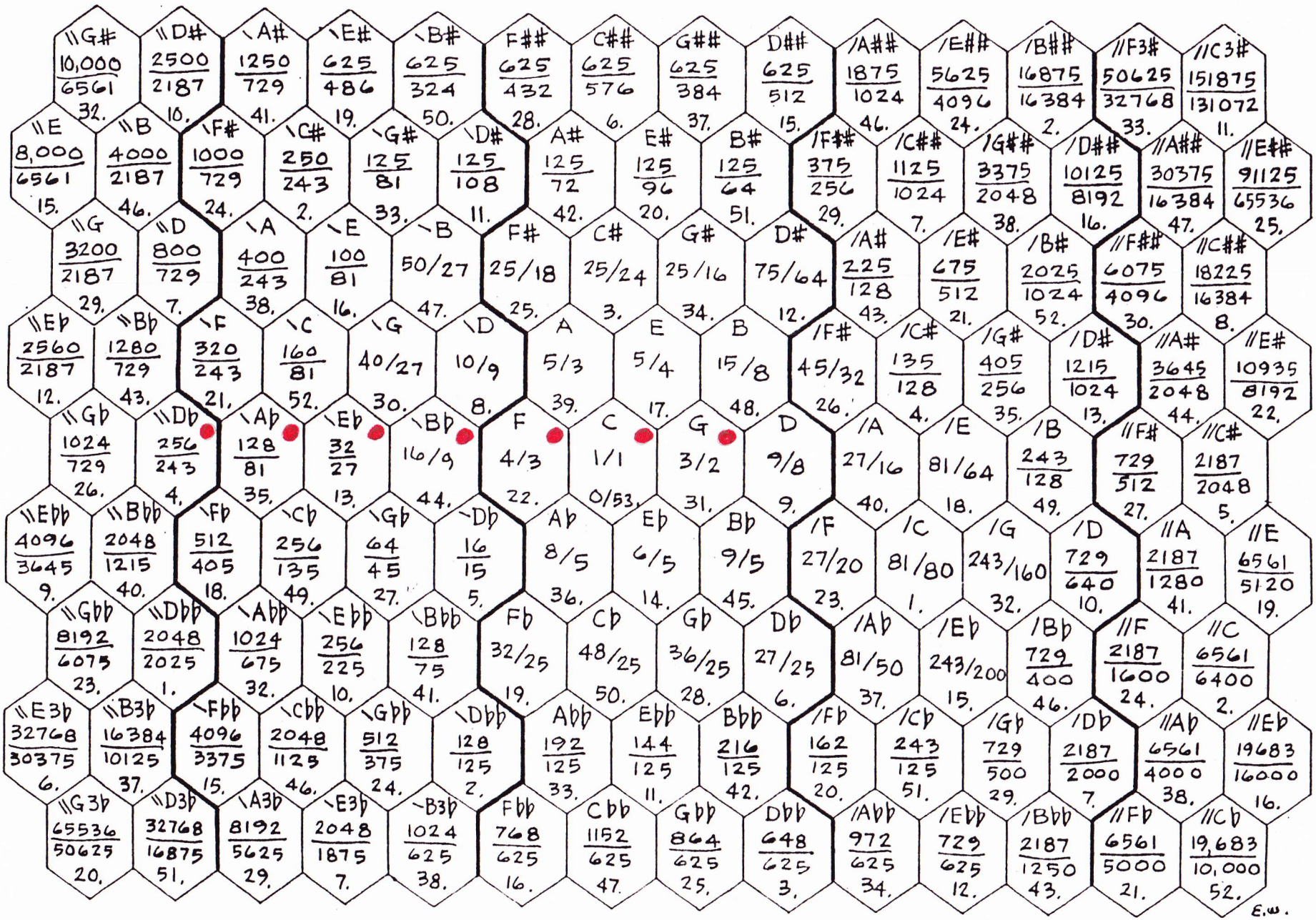


Figure # 1

Major-Minor Triadic Lattice for 53
(redrawn from 1942 original)

8. Marwa

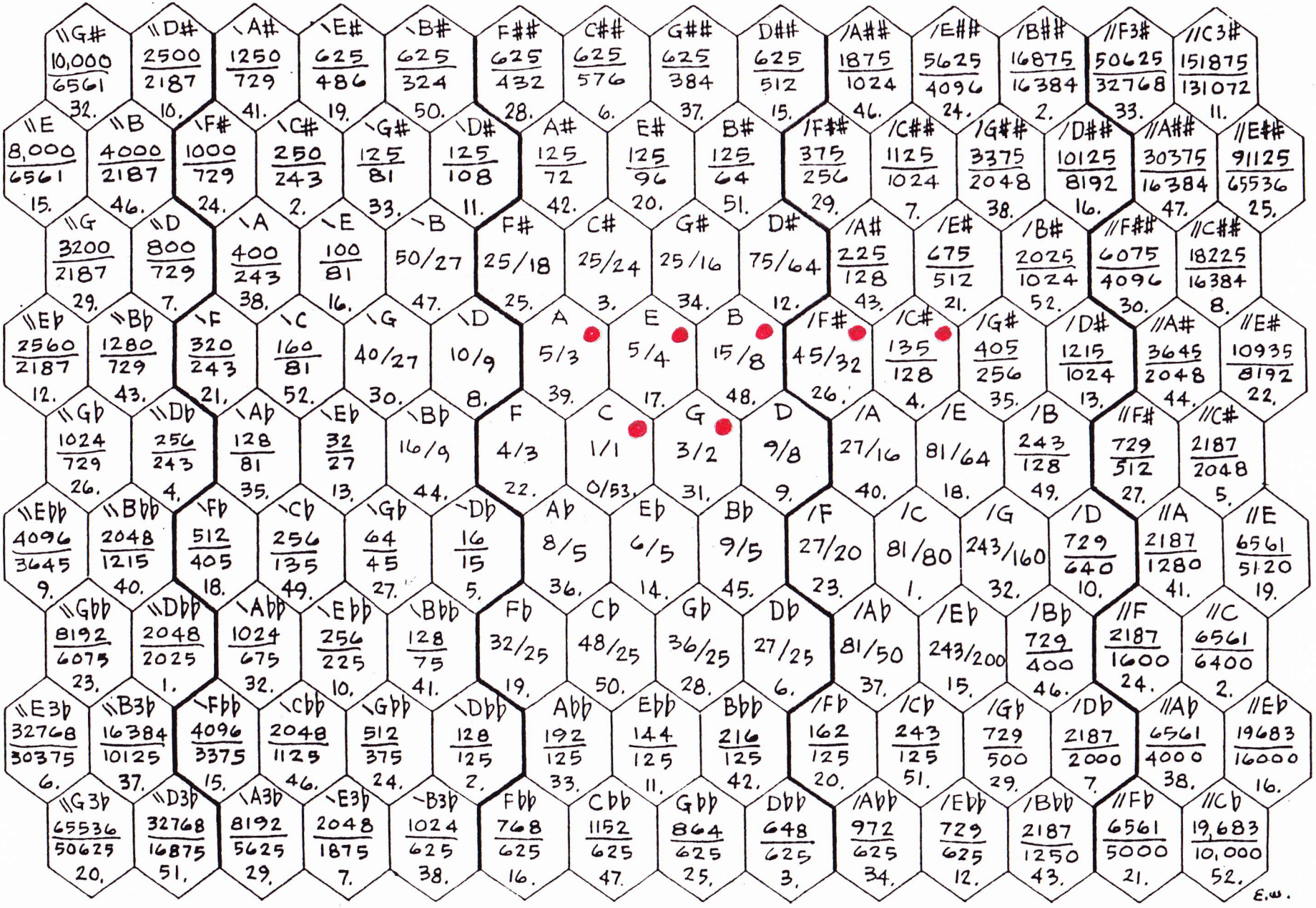


Figure # 1

Major-Minor Triadic Lattice for 53
(redrawn from 1942 original)

9. Purvi

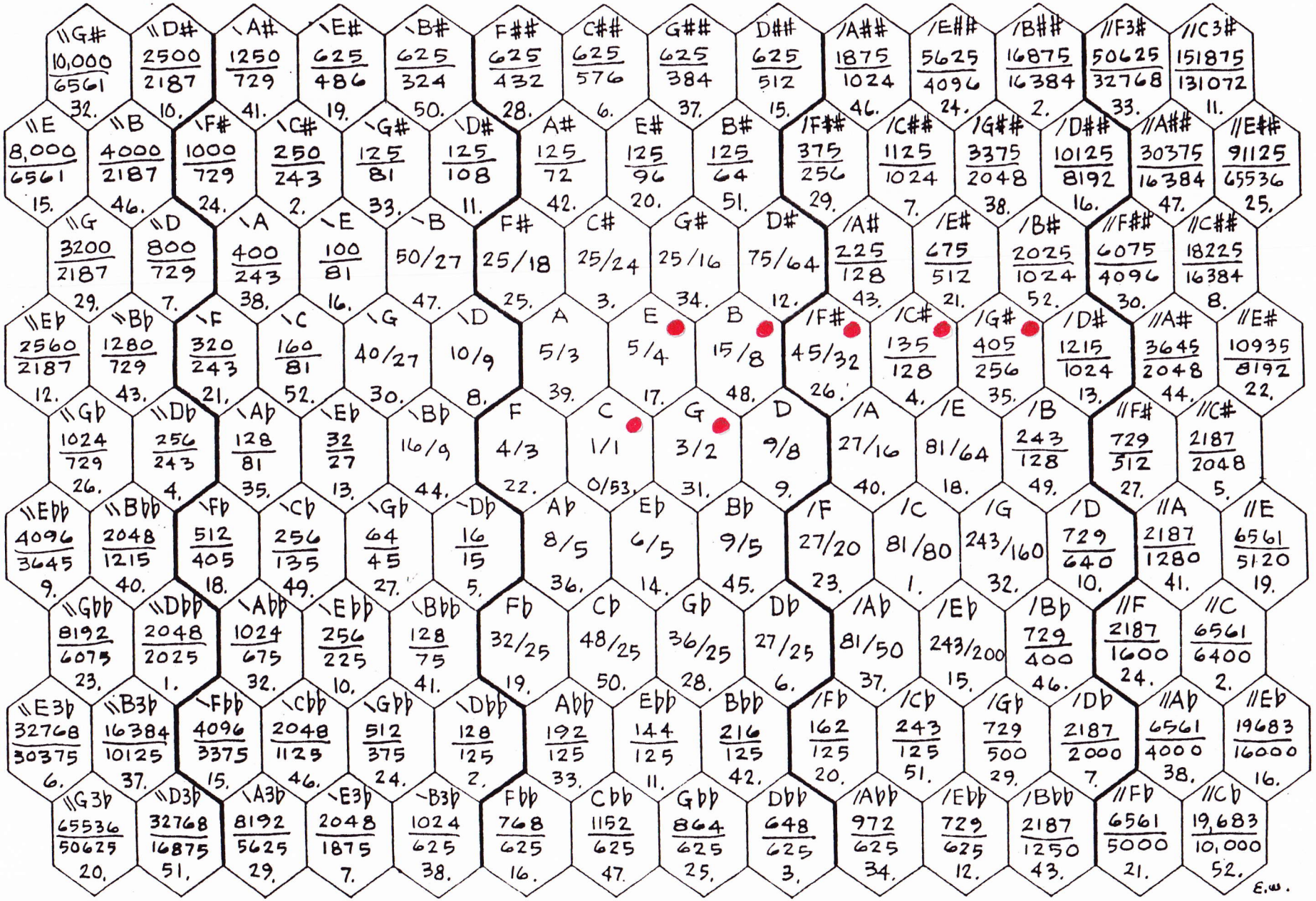


Figure # 1

Major-Minor Triadic Lattice for 53
(redrawn from 1942 original)

10. Lalit$_2$

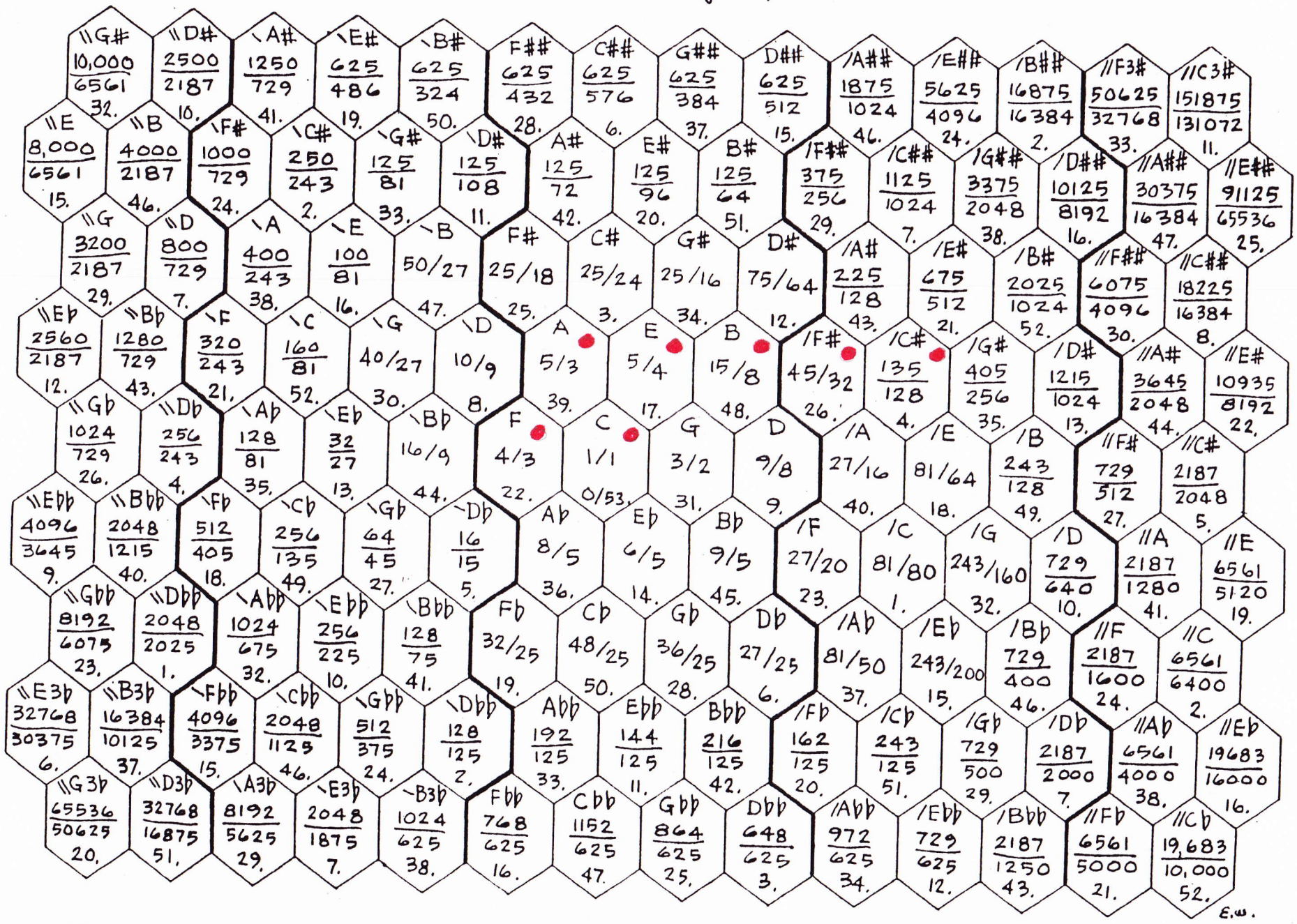


Figure # 1

Major-Minor Triadic Lattice for 53
(redrawn from 1942 original)

11. Todi

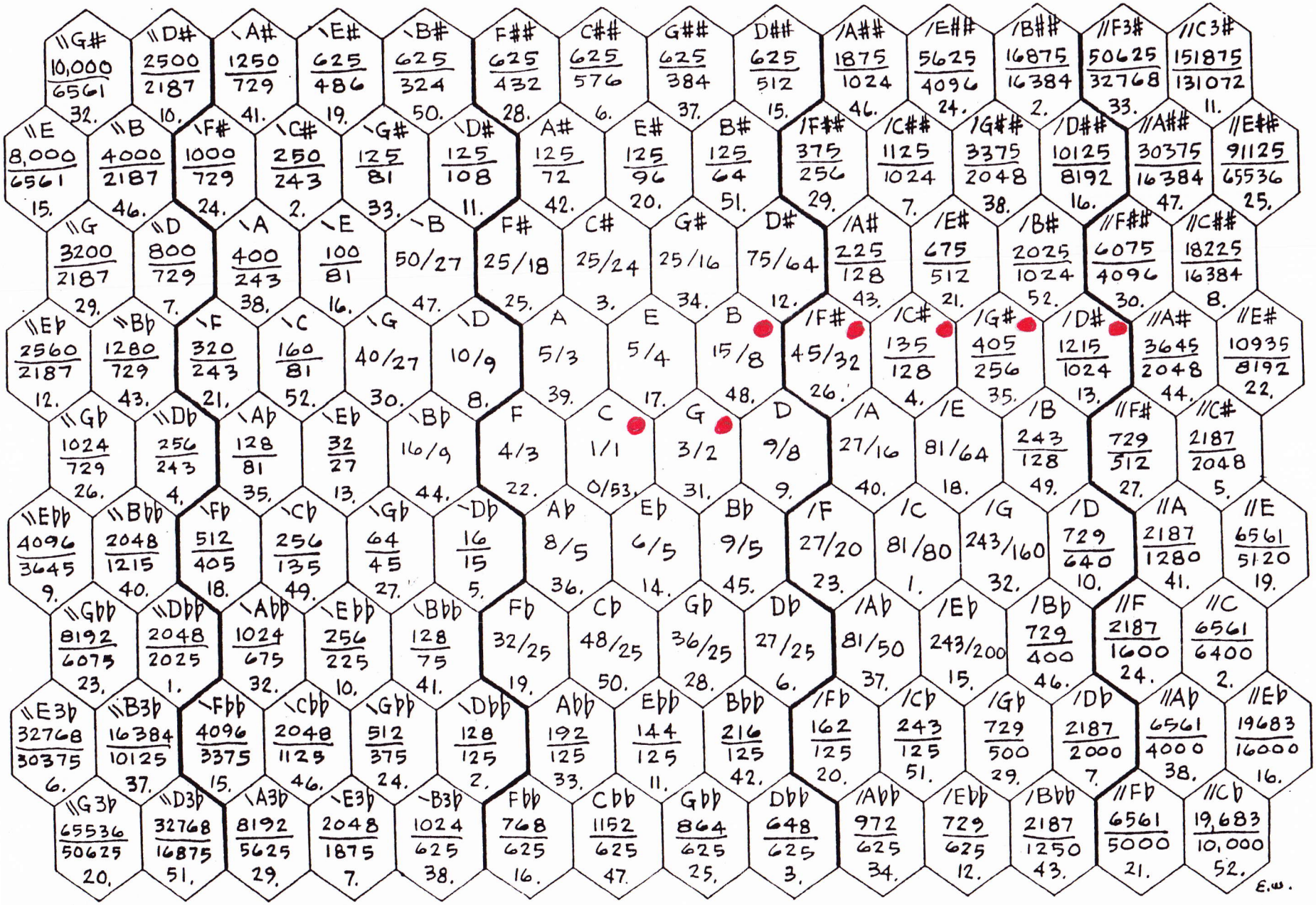
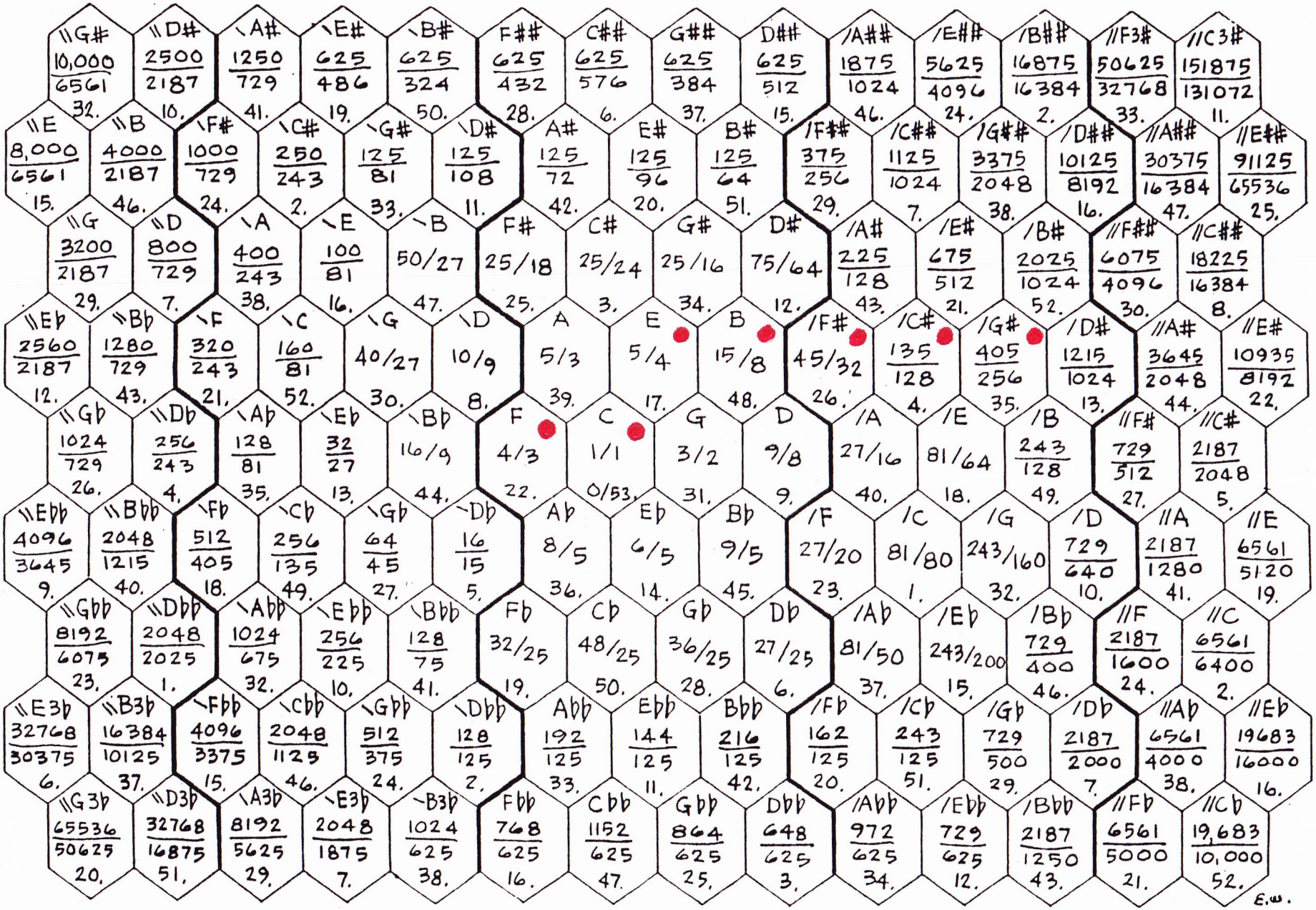


Figure # 1

Major-Minor Triadic Lattice for 53

(redrawn from 1942 original)

12. Lalit



E.W.

Figure # 1

Major-Minor Triadic Lattice for 53
(redrawn from 1942 original)

13. No Name

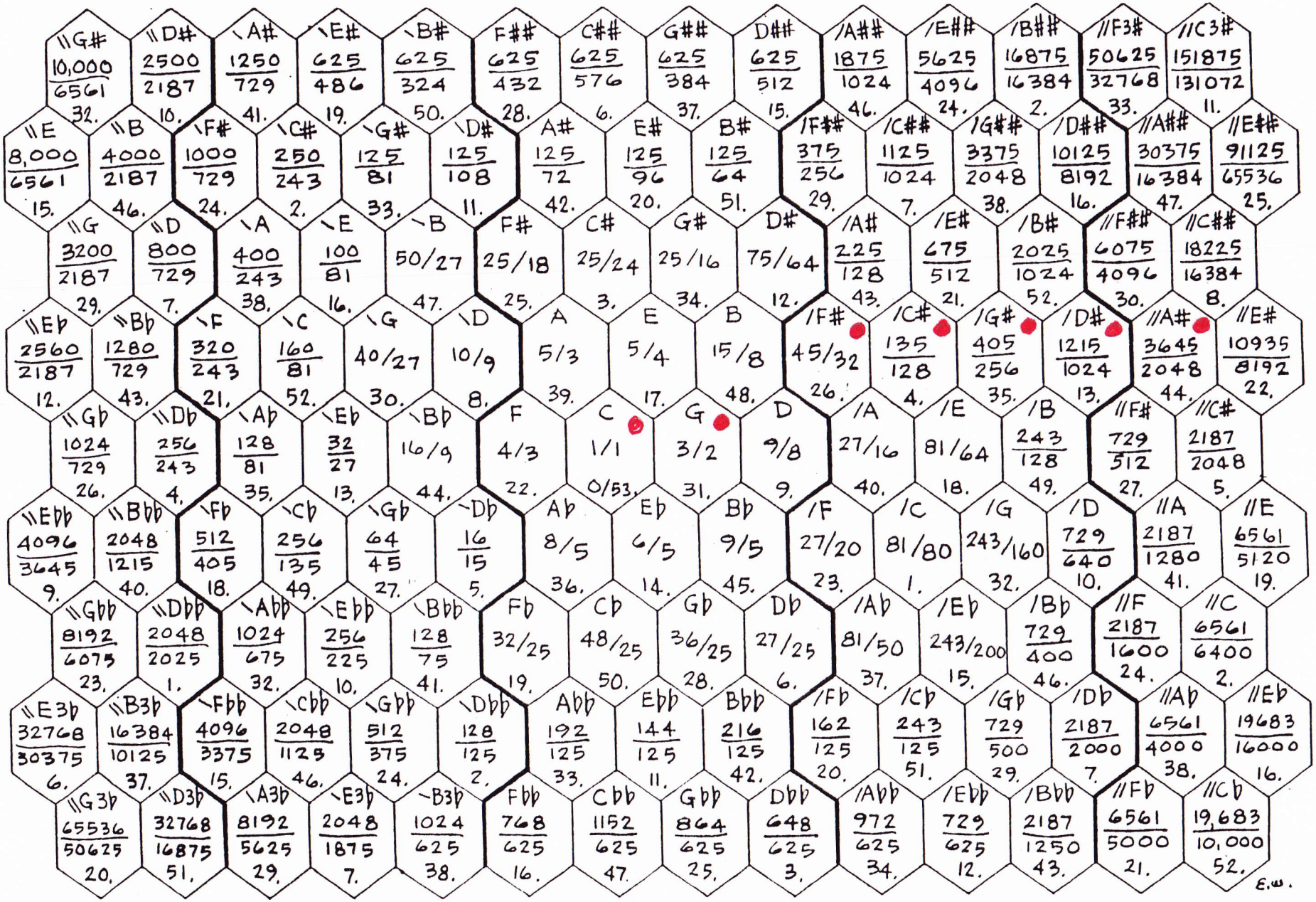


Figure # 1

Major-Minor Triadic Lattice for 53
(redrawn from 1942 original)

14. Anand Bhairav

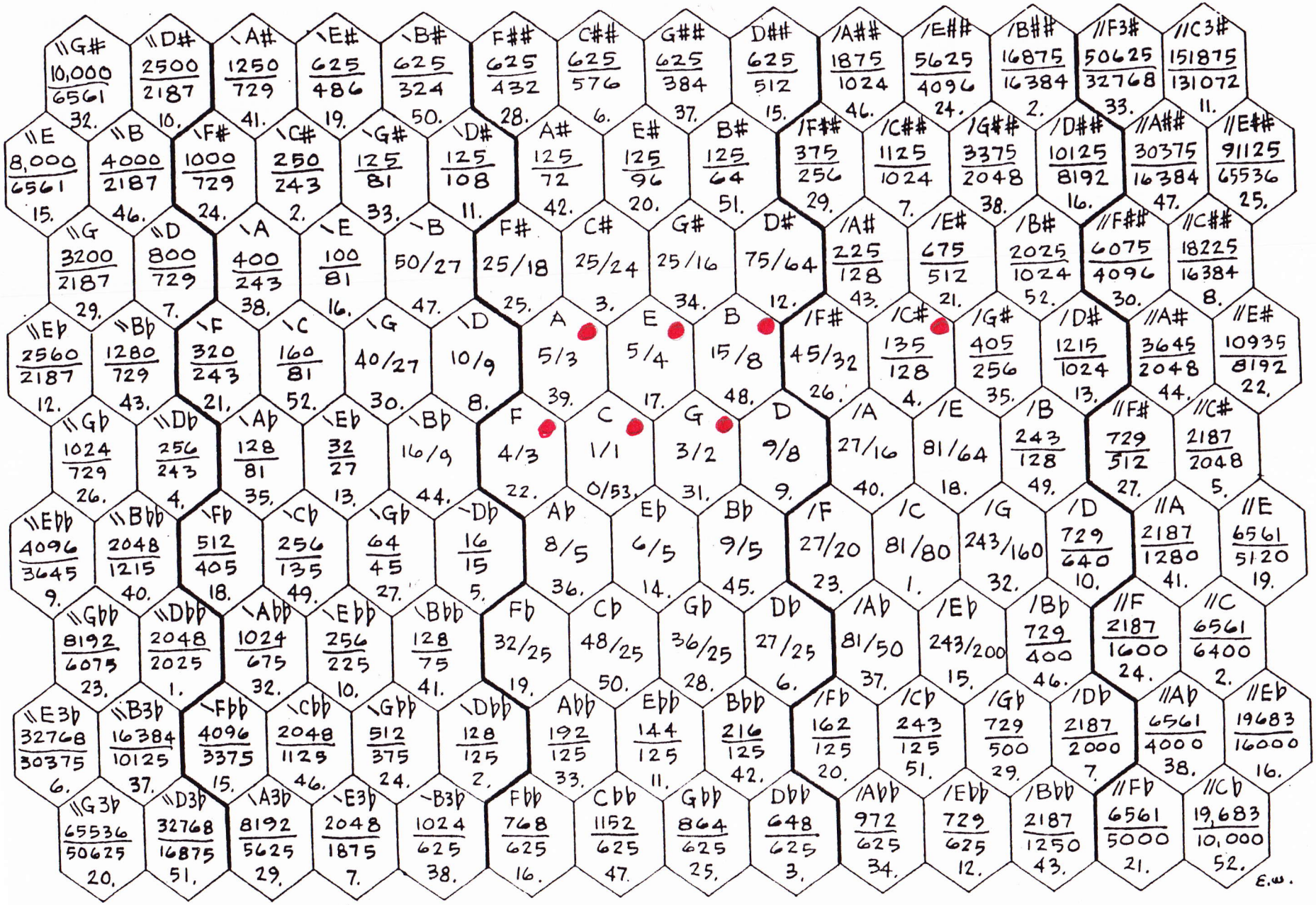


Figure # 1

Major-Minor Triadic Lattice for 53
(redrawn from 1942 original)

15. Bhairav

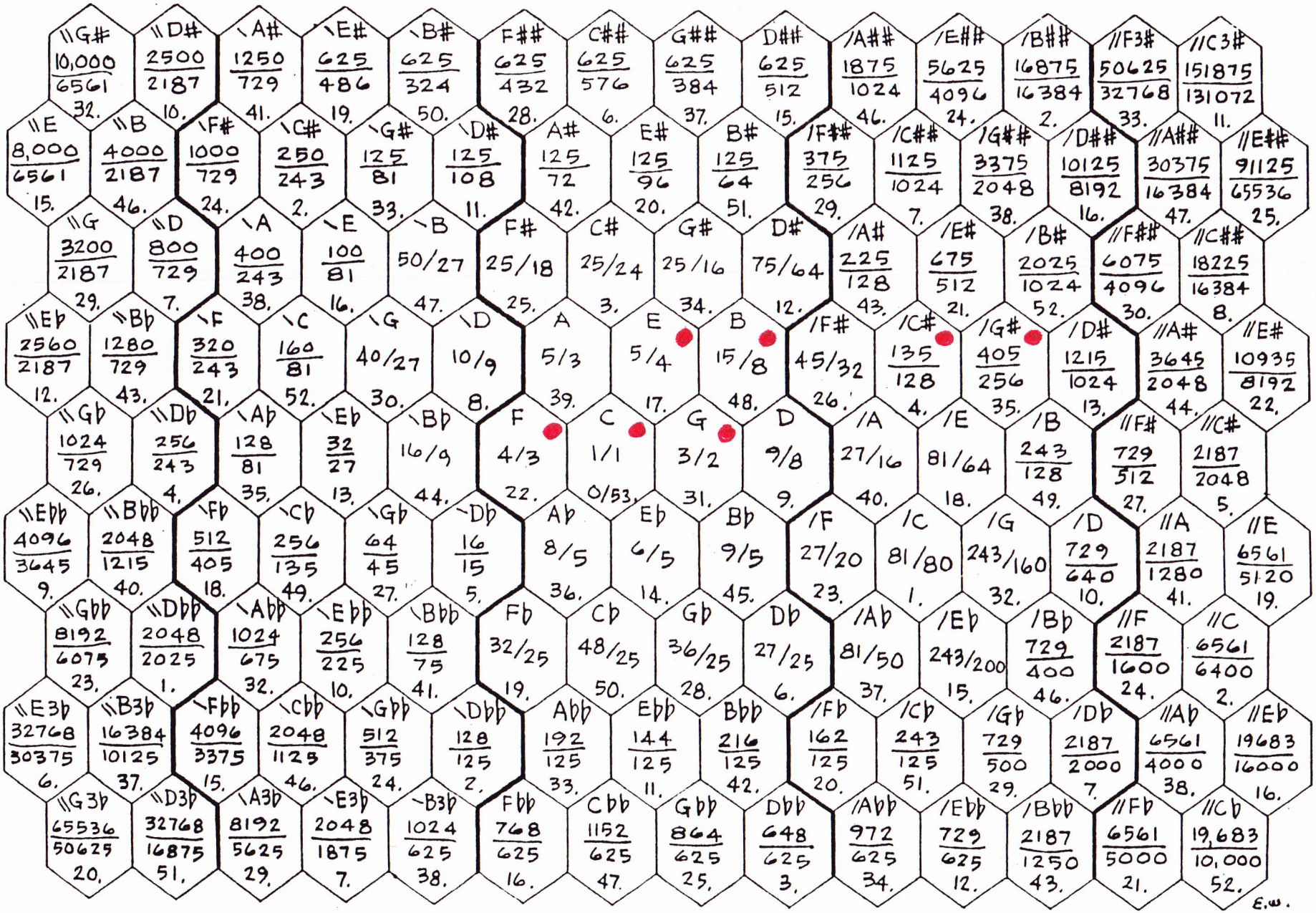


Figure # 1

Major-Minor Triadic Lattice for 53
(redrawn from 1942 original)

16. Jogiya Todi

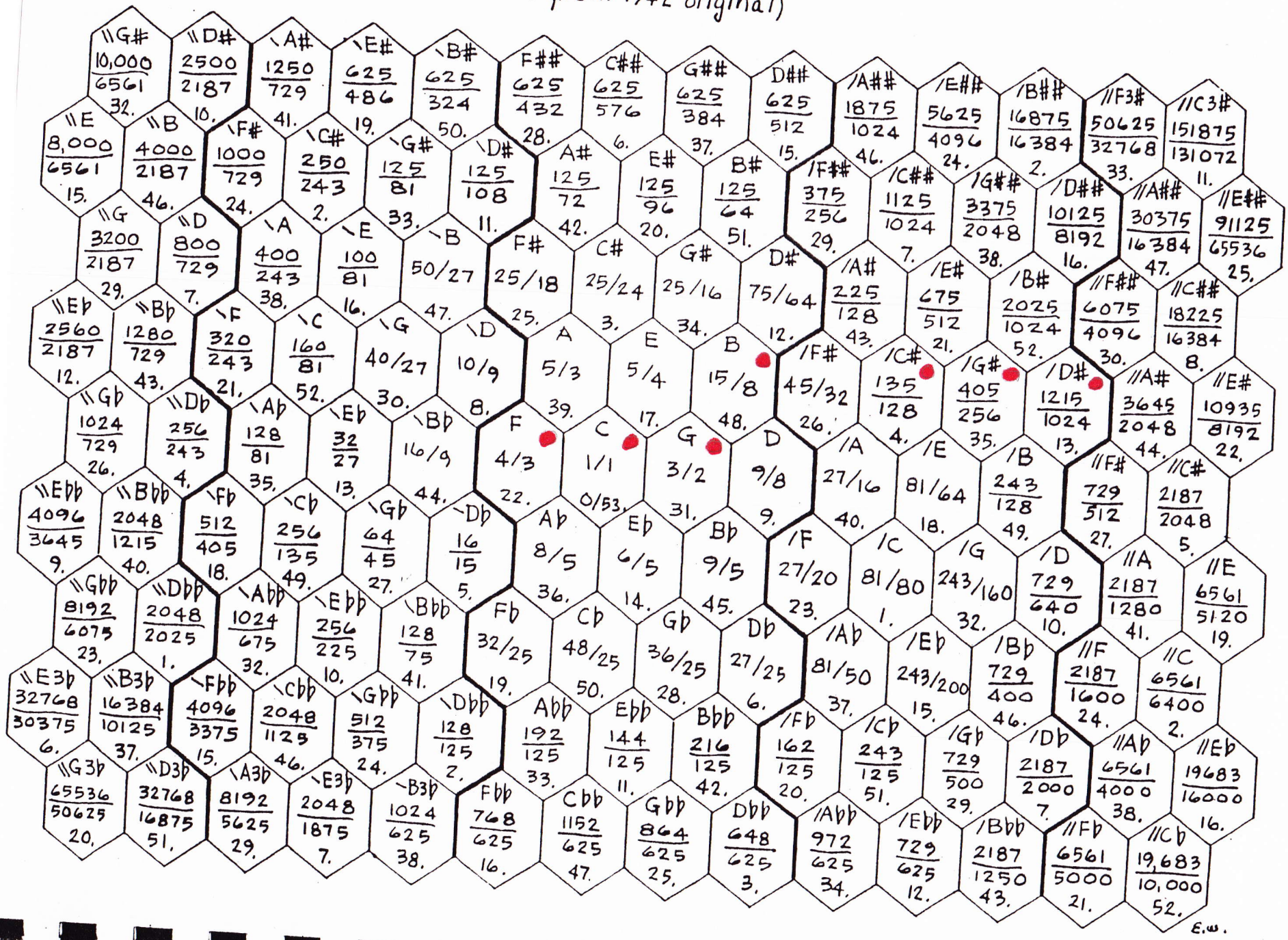


Figure # 1

Major-Minor Triadic Lattice for 53
(redrawn from 1942 original)

17. Madhubanti

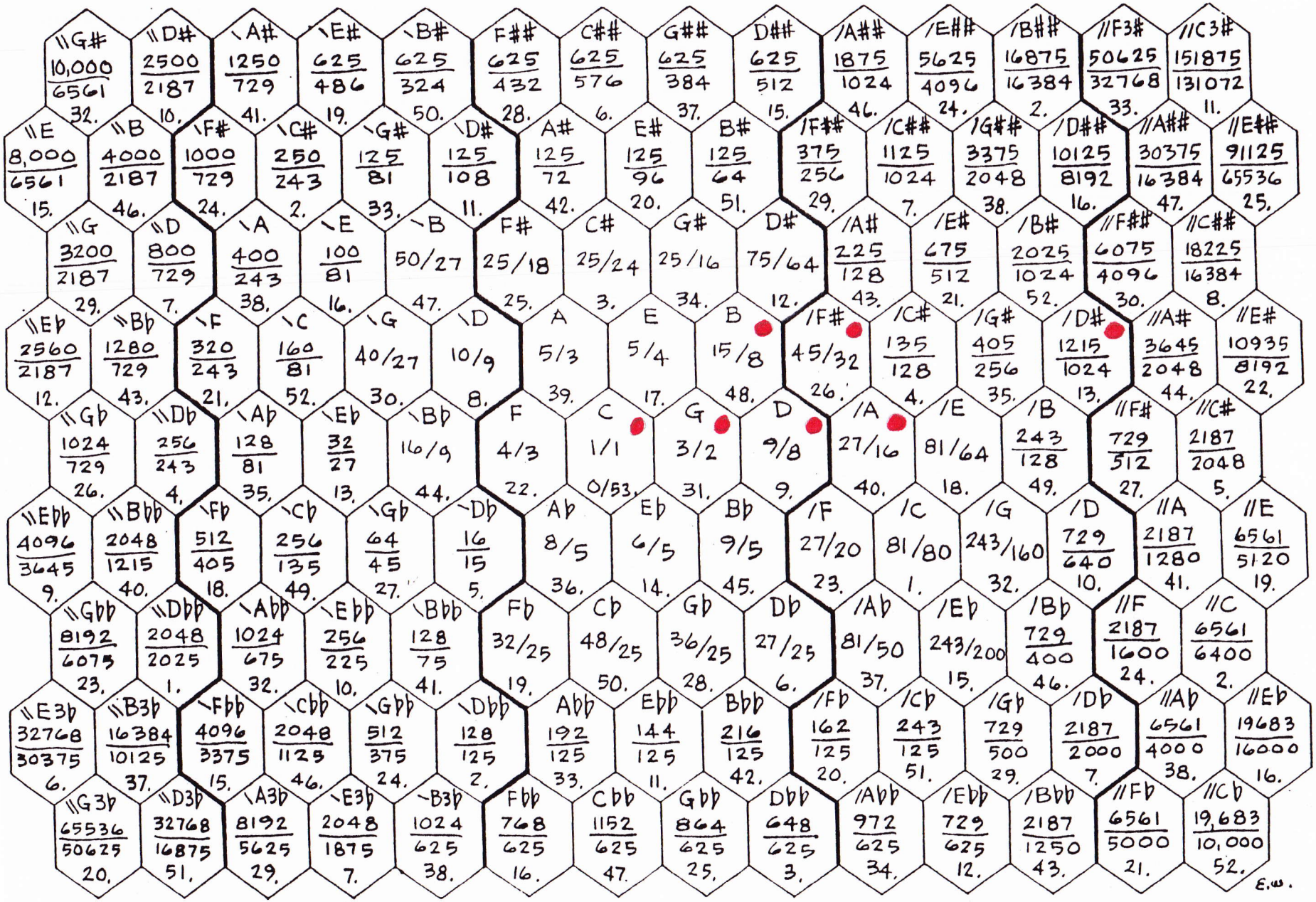
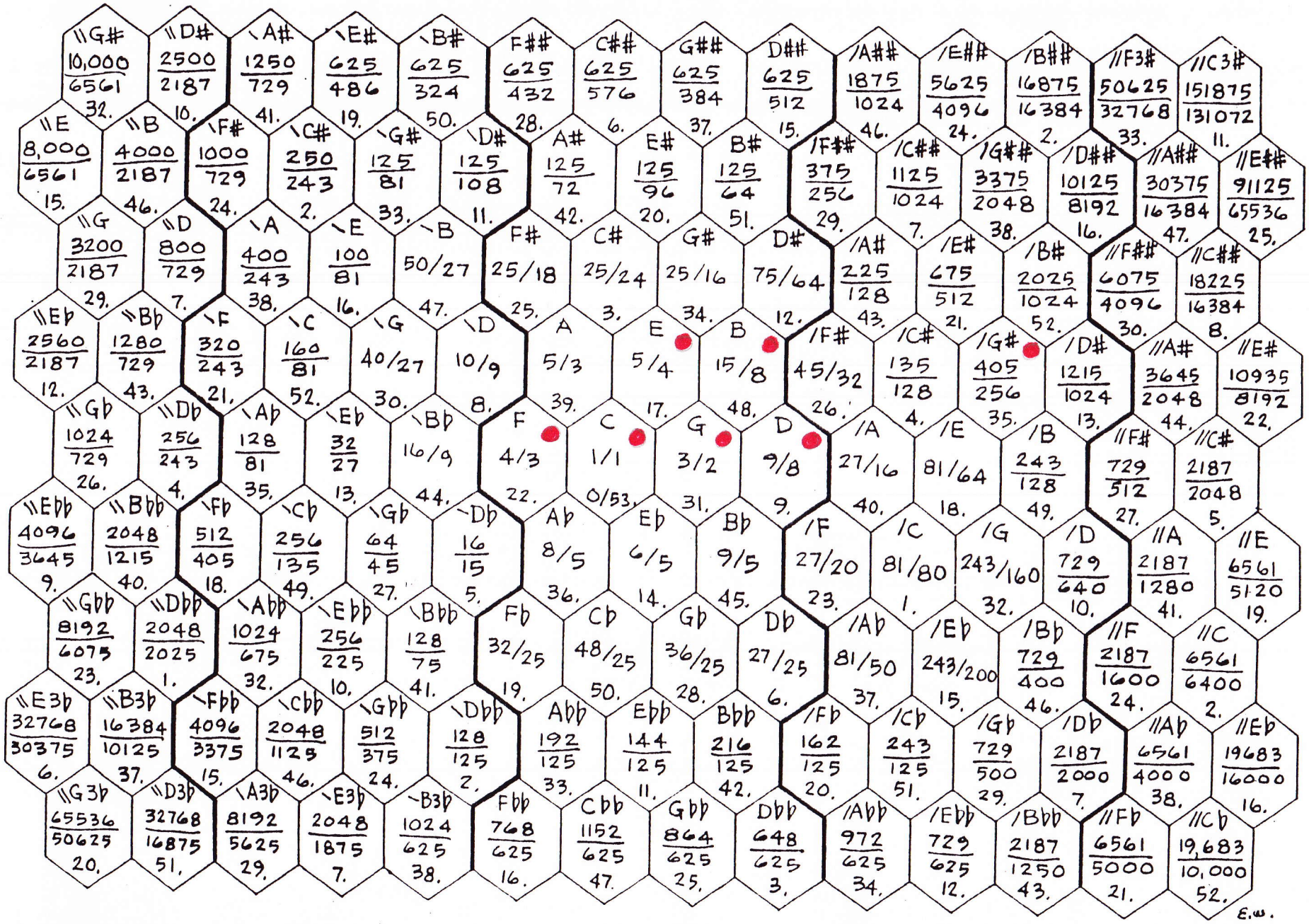


Figure # 1

Major-Minor Triadic Lattice for 53
(redrawn from 1942 original)

18. Nat Bhairav



25/16 128/81

$\frac{128}{81} \times \frac{16}{25} = \frac{2048}{2025}$

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
	Sa		Ra	Ri		Ru	Re		Ga	Gi		Gu	Ge		Ma	Mi		Mu	Me		Pa		Dha	Dhi		Dhu	Dhe		Na	Ni		Nu	Ne		Sa
1.	○	Kalyan					○					○						○			○					○						○			○
2.	○	Bilawal					○					○			○						○						○					○			○
3.	○	Khamaj					○					○			○						○					×	○		○						○
4.	○	Kafi				×	○		○						○						○					×	○		○						○
5.	○	Asawari					○		○						○						○		○						○						○
6.	○	Bhairavi	○						○						○						○		○						○						○
1.	○	Champakali					○					○	○	17	17	14	15	○			○					○	○		○	○					○
2.	○						○		×	○				17	14	17	15	○			○					×	○		×						○
3.	○						○		×	○				17	14	15	17	○			○			○					×	○					○
4.	○			○						○								○			○			○					×	○					○
5.	○	Madhubanti					○			○								○			○					×	○					○			○
6.	○			○						○								○			○			○								○			○
7.	○	Todi		○						○								○			○			○								○			○
8.	○						○					○						○			○			○								○			○
9.	○	Purvi		○								○						○			○			○								○			○
10.	○	Marwa		○								○						○			○					○						○			○
11.	○	Patdeep					○			○					○						○						○					○			○
12.	○	Chandra Kanada					○			○					○						○			○								○			○
13.	○	Jogiya Todi		○						○					○						○			○								○			○
14.	○	Nat Bhairav					○					○			○						○			○								○			○
15.	○	Bhairav		○								○			○						○			○								○			○
16.	○	Anand Bhairav		○								○			○						○					○						○			○
17.	○	Mohan Kauns					○					○			○						○			○					○						○
18.	○	Basant Mukhari		○								○			○						○			○					○						○
19.	○	Ahir Bhairav		○								○			○						○					○			○						○
20.	○	Parameswari	○						○						○						○					○			○						○
1.	○						○	17	11	17	12	17	14	14	○			○			○			○					○						○
2.	○			○				17	11	17	12	14	17	14	○			○			○			○					○						○
3.	○			○				17	11	17	14	12	17	14	○			○			○					○			○						○