

Harmony of the spheres

Universal musical key

(The golden ratio and the Science of harmonics)



1st part: Introduction

If you love music, take a few minutes of your time and read attentively what is following and discover one of the greatest inventions based on a new musical perception. Everything started when the inventor associate together the diatonic scale and the chromatic scale by using numbers to indicate each degree (see Fig.1). By looking at the numbers that correspond to the intervals that constitute a Perfect Major Chord, you can see appear the legendary Fibonacci sequence (the golden section - PHI - or the divine proportion). With the discovery of a “Musical Universal Key”, M. Sylvain Lalonde, the inventor, demonstrates where this revolutionary easy approach method begin.

With the research of the harmony



The golden section influences the Western vision of the harmony
The sequence of Fibonacci... 1-1-2-3-5-8-13... applies to this rule

Ex: Perfect Majeur Chords: C,E,G,C

Tonic	Tone		Second	Tone		Third	Semitone	Tone		Fourth	Tone		Fifth	Tone		Sixth	Tone		Seventh	Semitone		Octave
	1	2		3	4		5	6	7		8	9		10	11		12	13				
1	C [#]	D ^b	2	D [#]	E ^b	3	E	F	F [#]	G ^b	4	G	G [#]	A ^b	5	A	A [#]	B ^b	6	B	7	C
C			D			E		F			G		G [#]		A		A [#]		B		C	
1	2	3	4	5	6	7	8	9	10	11	12	13										
Semitone		Semitone		Semitone		Semitone		Semitone		Semitone		Semitone		Semitone		Semitone		Semitone		Semitone		
A													B									

When $(A + B) / A = A / B$. The A / B ratio is then equal to the golden ratio.

$$8 / 5 = 1.6$$

Uclide d'Alexandrie

* For more details on natural harmonics see fig.6 & 7 section R&D
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2nd part: Diatonic scale vs Chromatic scale

12 Sounds = 12 Tones = 12 Tonalties

Let's look at the same graphics on a 360-degree platform.. The use of black and white is used to represent the notes of a piano, to help understand this new perception.

Select and print Fig. 3 (picture) cut the two discs, then cut down the 7 windows that correspond to the intervals on disc 1 (Item 32). Overlap disc 1 over the second disc (Item 30) and then position the 1st degree (“Tonic”) on C, you’ll get the “C-D-E-F-G-A-B” sequence.

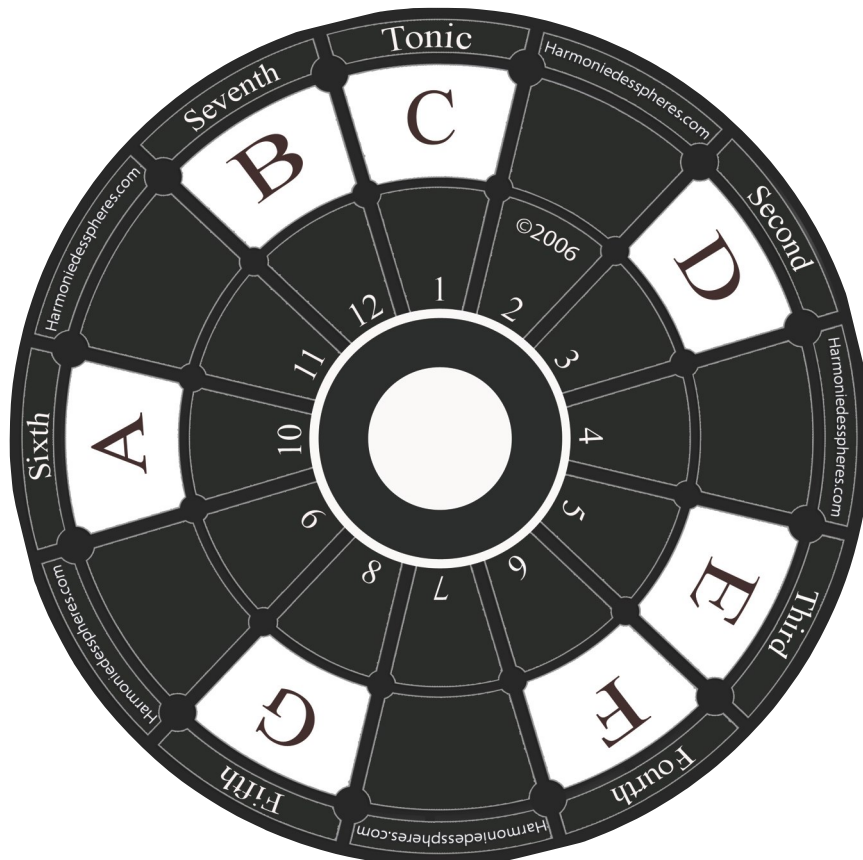
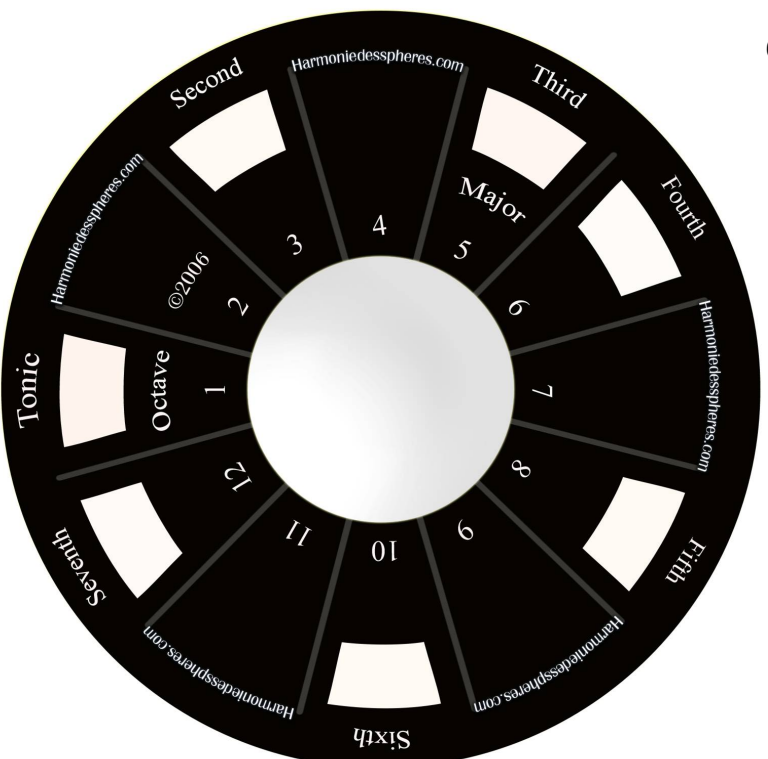


Fig.3



Disc 1
Item 32

Disc II
Item 30

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Now move the “Tonic” on the “Fifth”, the G, this way you obtain the alterations that constitutes the key frame of our tonal system and so on.
We call this:

« The Cycle of Fifths »

Ascending = Sharp order = F, C, G, D, A, E, B

Descending = Flat order = B, E, A, D, G, C, F

Fig.3B

Note that the order of flats is the opposite of sharps

order of #		F	C	G	D	A	E	B	order of b	
order of #		F#	C#	G#	D#	A#	E#	B#	order of b	
order of #		F#	C#	G#	D#	A#	E#	B	order of b	
order of #		F#	C#	G#	D#	A	E	B	order of b	
order of #		F#	C#	G#	D	A	E	B	order of b	
order of #		F#	C#	G	D	A	E	B	order of b	
order of #		F#	C	G	D	A	E	B	order of b	
order of #		F	C	G	D	A	E	B	order of b	
order of #		F	C	G	D	A	E ^b	B ^b	order of b	
order of #		F	C	G	D	A ^b	E ^b	B ^b	order of b	
order of #		F	C	G	D ^b	A ^b	E ^b	B ^b	order of b	
order of #		F	C	G ^b	D ^b	A ^b	E ^b	B ^b	order of b	
order of #		F	C ^b	G ^b	D ^b	A ^b	E ^b	B ^b	order of b	
order of #		F ^b	C ^b	G ^b	D ^b	A ^b	E ^b	B ^b	order of b	

Major Range

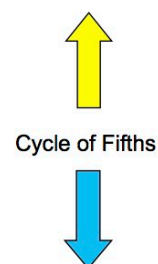


Fig.3d

Cycles des quintes

Cycles of fifths

	I	II	II	IV	V	VI	VII	
Quintes	* F							Fifth
Tierces	C	G	D	A	E	B	*	Third
Gamme	C	E	G	B	D	F	A	Range
	C	D	E	F	G	A	B	

* Selon l'ordre des dièses / orders of sharps

3rd part: the natural harmonics vs temperate

Each note is made of natural multiples called harmonics

At each degree of the scale, there is a three fundamental sound chord

The chords of three sounds consists of a fundamental
a third party (major or minor) and a fifth just.

« THE THIRD CYCLE »

« C, E, G, B, D, F, A »

Harmonie des sphères



Clé universelle musicale
Musique Instrument Digital Interface
Codes

I	II	III	IV	V	VI	VII	VIII
Major	Minor	Minor	Major	Major	Minor	Diminished	Major
Sol	La	Si	Do	Ré	Mi	H	Sol
						Fa	
Mi			La	Si			Mi
	Fa	Sol		Do	Ré		
Do	Ré	Mi	Fa	Sol	La	Si	Do
Just	Just	Just	Just	Just	Just	Just	Just

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Harmony of the spheres



Universal musical key
Music Instrument Digital Interface
Codes

I	II	III	IV	V	VI	VII	VIII
Major	Minor	Minor	Major	Major	Minor	Diminished	Major
G	A	B	C	D	E	H	G
						F	
E			A	B			E
	F	G		C	D		
C	D	E	F	G	A	B	C
Just	Just	Just	Just	Just	Just	Just	Just

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The notes of a chord can be duplicated at the octave or arpeggiated without
altering the identity of the chord.

You can select and print Fig.3c (Codex) in legal format.

Cut the two parts (A and B) according to the language you want.

Also cut the twenty-four (24) windows (Part A) that correspond to the

« Music intervals »

I degree	C, E, G
II degree	D, F, A
III degree	E, G, B
IV degree	F, A, C
V degree	G, B, D
VI degree	A, C, E
VII degree	B, D, F
VIII degree	C, E, G

Then superimpose part A on part B and position the 1st degree on the C, you will obtain at each degree the notes of all the chords.

You can change the tone as you wish,

The results will be the same.

P.S. You can also use an ABS tube with a diameter of
1.5 inch or 3.81 cm to make it circular shape.

Fig.3c (Codex)

P
A
R
T
I
E
A

Harmonie des sphères



Clé universelle musicale
Musique Instrument Digital Interface
Codex

I	II	III	IV	V	VI	VII	VIII
Majeur	mineur	mineur	Majeur	Majeur	mineur	Diminuer	Majeur
Sol	La	Si	Do	Ré	Mi	H Fa	Sol
Mi	Fa	Sol	La	Si	Do	Ré	Mi
Do	Ré	Mi	Fa	Sol	La	Si	Do
Ton	Ton	Demi-ton	Ton	Ton	Ton	Ton	Demi-ton

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Harmony of the spheres



Universal musical key
Music Instrument Digital Interface
Codex

I	II	III	IV	V	VI	VII	VIII
Majeur	mineur	mineur	Majeur	Majeur	mineur	Diminish	Majeur
G	A	B	C	D	E	H F	G
E	F	G	A	B	C	D	E
C	D	E	F	G	A	B	C
Tone	Tone	Semi-tone	Tone	Tone	Tone	Tone	Semi-tone

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P
A
R
T
I
E
B

Do	Ré	Mi	Fa	Sol	La	Si	Do
Si	Ré ^b	Mi ^b	Fa ^b	Sol ^b	La ^b	Si ^b	Do
Do	Do	Ré	Mi	Fa	Sol	La	Si
La	Si	Do	Ré	Mi	Fa	Sol	La
Sol	La	Si	Do	Ré	Mi	Fa	Sol
Fa	Sol	La	Si	Do	Ré	Mi	Fa
Mi	Sol	La	Si	Do	Ré	Mi	Fa
Ré	Fa	Sol	La	Si	Do	Ré	Mi
Do	Ré	Mi	Fa	Sol	La	Si	Do
Si	Do	Ré	Mi	Fa	Sol	La	Si
La	Si	Do	Ré	Mi	Fa	Sol	La
Sol	La	Si	Do	Ré	Mi	Fa	Sol
Fa	Sol	La	Si	Do	Ré	Mi	Fa
Mi	Sol	La	Si	Do	Ré	Mi	Fa
Ré	Fa	Sol	La	Si	Do	Ré	Mi
Do	Ré	Mi	Fa	Sol	La	Si	Do

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P
A
R
T
A

P
A
R
T
B

C	D	E	F	G	A	B	C
B	D ^b	E ^b	F ^b	G ^b	A ^b	B ^b	C
C	C	D	E	F	G	A	B
A	C	B	D	E	F	G	A
G	A	B	C	D	E	F	G
F	G	A	B	C	D	E	F
E	G ^b	A ^b	B ^b	C ^b	D ^b	E ^b	F
D	E	F	G	A	B	C	D
C	D	E	F	G	A	B	C
B	D ^b	E ^b	F ^b	G ^b	A ^b	B ^b	C
A	C	D	E	F	G	A	B
G	A	B	C	D	E	F	G
F	G	A	B	C	D	E	F
E	G ^b	A ^b	B ^b	C ^b	D ^b	E ^b	F
D	E	F	G	A	B	C	D
C	D	E	F	G	A	B	C

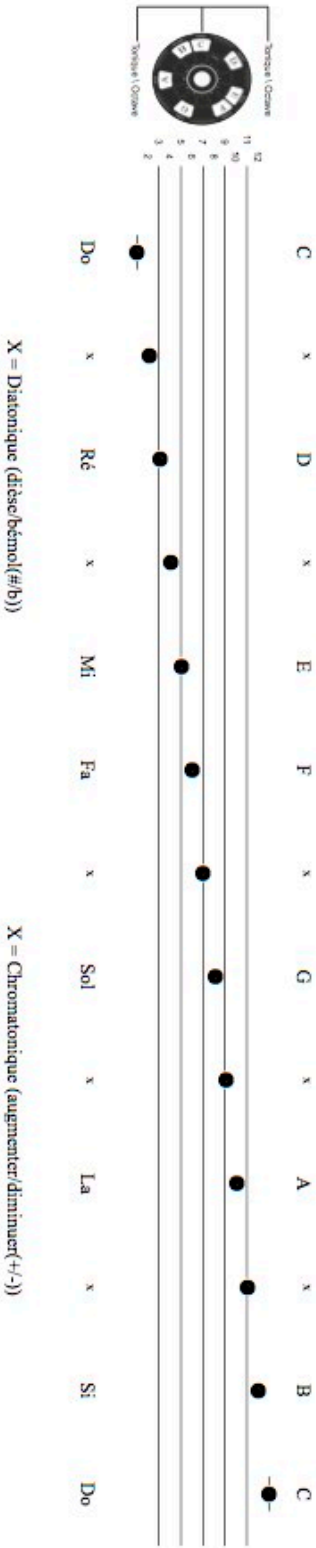
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Harmony of the spheres



Fig.4

Musical universal key
Musical Instrument Digital Interface



Select and print at legal format the Fig.4b (image) then cut the two rulers along the lines shown and also cut the eight (8) windows that correspond to the intervals of music.

Then superimpose the part of the center on the top of the rule that suits you and position the 1st degree (Tonic) on the C, you will obtain the sequence

“ C-D-E-F-G-A-B-C ”

You can repeat the exercise in fig.3
or simply move the ruler by tone or semitone.

What is important here is that no matter the tone (tonal height) in which you play, the intervals will always be the same :

Major (which constitute the key frame of our tonal system) or minor.



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Cut

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To fold

C

B

B^b_{A[#]}

A^b_{G[#]}

G^b_{F[#]}

F^b_{D[#]}

E^b_{C[#]}

C

B

B^b_{A[#]}

A^b_{G[#]}

G^b_{F[#]}

F^b_{D[#]}

E^b_{C[#]}

C

To fold

C

B

B^b_{A[#]}

A^b_{G[#]}

G^b_{F[#]}

F^b_{D[#]}

E^b_{C[#]}

C

B

B^b_{A[#]}

A^b_{G[#]}

G^b_{F[#]}

F^b_{D[#]}

E^b_{C[#]}

C

Use a plastic ruler as a support print the sheet in legal size

Cut

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Clé universelle musicale

Octave

Couper

Septième

Couper

Sixième

Couper

Quinte

Couper

Quarte

Couper

Tierce

Couper

Seconde

Couper

Tonique

Couper

Solfège

Universal musical Key

Octave

Cut

Seventh

Cut

Sixth

Cut

Fifth

Cut

Fourth

Cut

Third

Cut

Second

Cut

Tonic

Cut

Solfège

Above the ruler

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Plier

Do

Si

Si^b_{La[#]}

La^b_{Sol[#]}

Sol^b_{Fa[#]}

Fa^b_{Mi[#]}

Mi^b_{Ré[#]}

Ré^b_{Do[#]}

Do

Si

Si^b_{La[#]}

La^b_{Sol[#]}

Sol^b_{Fa[#]}

Fa^b_{Mi[#]}

Mi^b_{Ré[#]}

Ré^b_{Do[#]}

Do

Do

Si

Si^b_{La[#]}

La^b_{Sol[#]}

Sol^b_{Fa[#]}

Fa^b_{Mi[#]}

Mi^b_{Ré[#]}

Ré^b_{Do[#]}

Do

Si

Si^b_{La[#]}

La^b_{Sol[#]}

Sol^b_{Fa[#]}

Fa^b_{Mi[#]}

Mi^b_{Ré[#]}

Ré^b_{Do[#]}

Do

Utiliser une règle en plastique comme support imprimer la feuille en format légal

Couper

Fig.4b

Tempered scale and various frequency of A

Fig.5b



HDS temperate scale Hz															
Progression %										5,94630943592953					
HDS	C	D			E	F		G		A		B		C	HDS
Do ¹²	16744	17739,688	18794,545	19912,127	21096,164	22350,607	23679,643	25087,708	26579,501	28160	29834,481	31608,531	33488	Do ¹³	
Do ¹¹	8372	8869,844	9397,273	9956,063	10548,082	11175,303	11839,822	12543,854	13289,750	14080	14917,240	15804,266	16744	Do ¹²	
Do ¹⁰	4186	4434,922	4698,636	4978,032	5274,041	5587,652	5919,911	6271,927	6644,875	7040	7458,620	7902,133	8372	Do ¹¹	
Do ⁹	2093	2217,461	2349,318	2489,016	2637,020	2793,826	2959,955	3135,963	3322,438	3520	3729,310	3951,066	4186	Do ¹⁰	
Do ⁸	1046,50	1108,731	1174,659	1244,508	1318,510	1396,913	1479,978	1567,982	1661,219	1760	1864,655	1975,533	2093	Do ⁹	
Do ⁷	523,25	554,365	587,330	622,254	659,255	698,456	739,989	783,991	830,609	880	932,328	987,767	1046,50	Do ⁸	
Do ⁶	261,63	277,1826	293,66	311,13	329,63	349,23	369,99	392,00	415,30	440	466,16	493,88	523,25	Do ⁷	
Do ⁵	130,81	138,59	146,83	155,56	164,81	174,61	185,00	196,00	207,65	220,00	233,08	246,94	261,63	Do ⁶	
Do ⁴	65,41	69,30	73,42	77,78	82,41	87,31	92,50	98,00	103,83	110,00	116,54	123,47	130,81	Do ⁵	
Do ³	32,70	34,65	36,71	38,89	41,20	43,65	46,25	49,00	51,91	55,00	58,27	61,74	65,41	Do ⁴	
Do ²	16,35	17,32	18,35	19,45	20,60	21,83	23,12	24,50	25,96	27,50	29,14	30,87	32,70	Do ³	
Do ¹	8,18	8,66	9,18	9,72	10,30	10,91	11,56	12,25	12,98	13,75	14,57	15,43	16,35	Do ²	

Champ auditif

440,000000000000000000000000000000

HDS temperate scale Hz																
Progression %										5,94630943592953						
HDS	C	D			E		F		G		A		B		C	HDS
Do ¹²	16820,15	17820,32	18879,97	20002,64	21192,06	22452,20	23787,28	25201,74	26700,32	28288,00	29970,09	31752,21	33640,29	Do ¹³		
Do ¹¹	8410,07	8910,16	9439,99	10001,32	10596,03	11226,10	11893,64	12600,87	13350,16	14144,00	14985,05	15876,10	16820,15	Do ¹²		
Do ¹⁰	4205,04	4455,08	4719,99	5000,66	5298,01	5613,05	5946,82	6300,44	6675,08	7072,00	7492,52	7938,05	8410,07	Do ¹¹		
Do ⁹	2102,52	2227,54	2360,00	2500,33	2649,01	2806,53	2973,41	3150,22	3337,54	3536,00	3746,26	3969,03	4205,04	Do ¹⁰		
Do ⁸	1051,26	1113,77	1180,00	1250,16	1324,50	1403,26	1486,70	1575,11	1668,77	1768,00	1873,13	1984,51	2102,52	Do ⁹		
Do ⁷	525,630	556,89	590,00	625,08	662,25	701,63	743,35	787,55	834,38	884,00	936,57	992,26	1051,26	Do ⁸		
Do ⁶	262,815	278,44	295,00	312,54	331,13	350,82	371,68	393,78	417,19	442	468,28	496,13	525,630	Do ⁷		
Do ⁵	131,41	139,22	147,50	156,27	165,56	175,41	185,84	196,89	208,60	221,00	234,14	248,06	262,815	Do ⁶		
Do ⁴	65,70	69,61	73,75	78,14	82,78	87,70	92,92	98,44	104,30	110,50	117,07	124,03	131,41	Do ⁵		
Do ³	32,85	34,81	36,87	39,07	41,39	43,85	46,46	49,22	52,15	55,25	58,54	62,02	65,70	Do ⁴		
Do ²	16,43	17,40	18,44	19,53	20,70	21,93	23,23	24,61	26,07	27,63	29,27	31,01	32,85	Do ³		
Do ¹	8,213	8,70	9,22	9,77	10,35	10,96	11,61	12,31	13,04	13,81	14,63	15,50	16,43	Do ²		

Champ auditif

442,000000000000000000000000000000

HDS temperate scale Hz															
Progression %										5,94630943592953					
HDS	C	D		E		F		G		A		B		C	HDS
Do ¹²	16896	17900,96	18965,40	20093,15	21287,95	22553,79	23894,91	25315,78	26821,13	28416	30105,70	31895,88	33793	Do ¹³	
Do ¹¹	8448	8950,48	9482,70	10046,57	10643,97	11276,90	11947,46	12657,89	13410,57	14208	15052,85	15947,94	16896	Do ¹²	
Do ¹⁰	4224	4475,24	4741,35	5023,29	5321,99	5638,45	5973,73	6328,94	6705,28	7104	7526,43	7973,97	8448	Do ¹¹	
Do ⁹	2112	2237,62	2370,68	2511,64	2660,99	2819,22	2986,86	3164,47	3352,64	3552	3763,21	3986,99	4224	Do ¹⁰	
Do ⁸	1056	1118,81	1185,34	1255,82	1330,50	1409,61	1493,43	1582,24	1676,32	1776	1881,61	1993,49	2112	Do ⁹	
Do ⁷	528	559,40	592,67	627,91	665,25	704,81	746,72	791,12	838,16	888	940,80	996,75	1056	Do ⁸	
Do ⁶	264	279,70	296,33	313,96	332,62	352,40	373,36	395,56	419,08	444	470,40	498,37	528	Do ⁷	
Do ⁵	132	139,85	148,17	156,98	166,31	176,20	186,68	197,78	209,54	222	235,20	249,19	264	Do ⁶	
Do ⁴	66	69,93	74,08	78,49	83,16	88,10	93,34	98,89	104,77	111	117,60	124,59	132	Do ⁵	
Do ³	33	34,96	37,04	39,24	41,58	44,05	46,67	49,44	52,39	55,50	58,80	62,30	66	Do ⁴	
Do ²	16,50	17,48	18,52	19,62	20,79	22,03	23,33	24,72	26,19	27,75	29,40	31,15	33	Do ³	
Do ¹	8,25	8,74	9,26	9,81	10,39	11,01	11,67	12,36	13,10	13,88	14,70	15,57	16,50	Do ²	

Champ auditif

444,000000000000000000000000000000

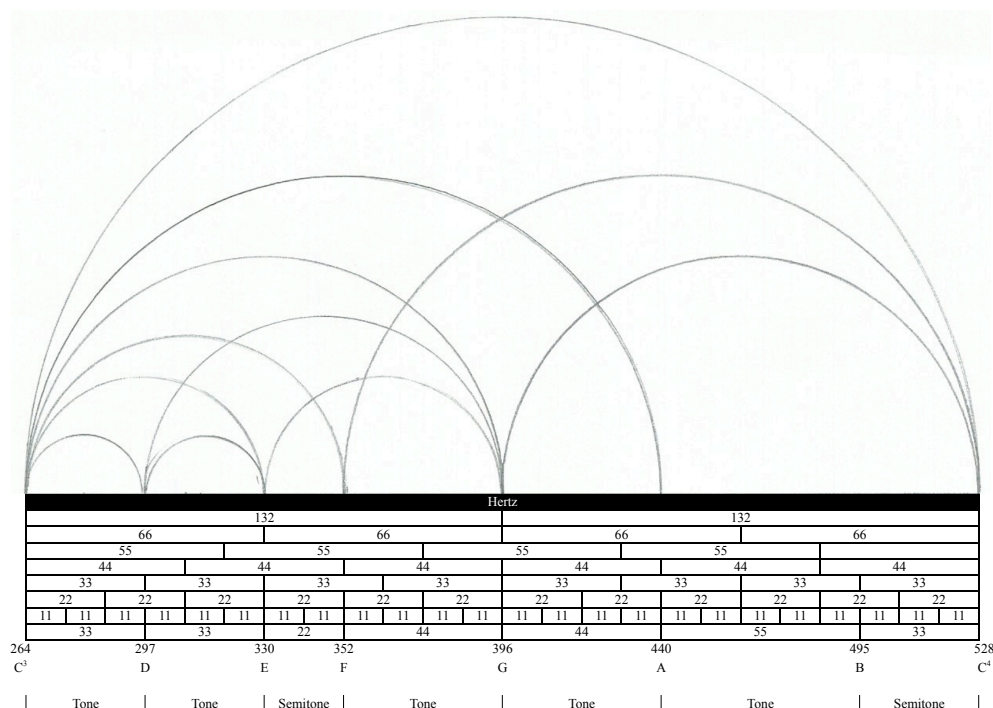
*** For more details on temperate scale see the section R/D

Pythagore and the harmony of the spheres

Fig.7

HARMONY OF THE SPHERES

MUSICAL UNIVERSAL KEY



HDS Universal Proportion

1,125	1,111	1,06666667	1,125	1,111	1,125	1,06666667
1,250	1,250	1,250				
1,500	1,33333333	1,66666667	1,2	1,500	1,6	1,875
1,33333333	1,500	1,6	1,875	1,06666667		

HDS Fraction Pythagorean

1 1/8	1 1/4	1 1/3	1 1/2	1 2/3	1 7/8	2
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For more details on natural harmonics see the section R/D

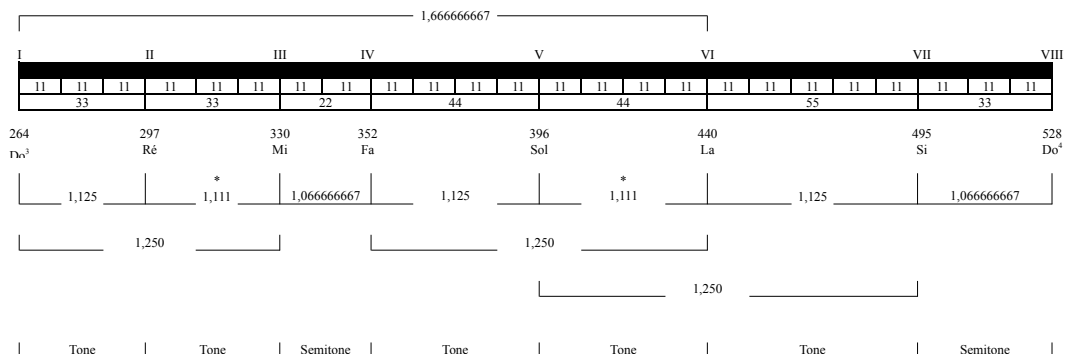
« Natural Harmonics »

Fig.7a



NATURAL HARMONICS

Starting from the fact that the natural resonance (harmonics) of each note are relatively all multiples of each of them and the frequency (Hz) is given by the simple arithmetic operation of fundamental sound F^0 multiplication by the rank number of it



II	X	=
11	1	11
11	2	22
11	3	33
11	4	44
11	5	55
11	6	66
11	7	77
11	8	88
11	9	99
11	10	110
11	11	121
11	12	132
11	13	143
11	14	154
11	15	165
11	16	176
11	17	187
11	18	198
11	19	209
11	20	220
11	21	231
11	22	242
11	23	253

Octave	11	24	264	C	1
	11	25	275		2
	11	26	286		3
Second	11	27	297	D	4
	11	28	308		5
	11	29	319		6
Third	11	30	330	E	7
	11	31	341		8
Fourth	11	32	352	F	9
	11	33	363		10
	11	34	374		11
	11	35	385		12
Fifth	11	36	396	G	13
	11	37	407		14
	11	38	418		15
	11	39	429		16
Sixth	11	40	440	A	17
	11	41	451		18
	11	42	462		19
	11	43	473		20
	11	44	484		21
Seventh	11	45	495	B	22
	11	46	506		23
	11	47	517		24
Octave	11	48	528	C	25

For more details on natural harmonics see figures 6 and 7 section R/D

Note that the ratio between A 440 Hz and C 264 Hz has a proportion of

$$1.66666666666667$$

$$\text{either: } 440/264 = 1.66666666666667$$

this proportion will never change ... whatever the frequency chosen:

$$\dots 328 - 426,7 - 432 - 440 - 442 - 444 \dots$$

it's a good way to find your C

then divide it by 24 to get what I call the unit of measure.

P: S. The tuning frequency of A at 426.7 Hz also called Scientific range
or Range of physicists, with a Do at 256 Hz

$$\text{either : } 426.666666666667 / 256 = 1.66666666666667.$$

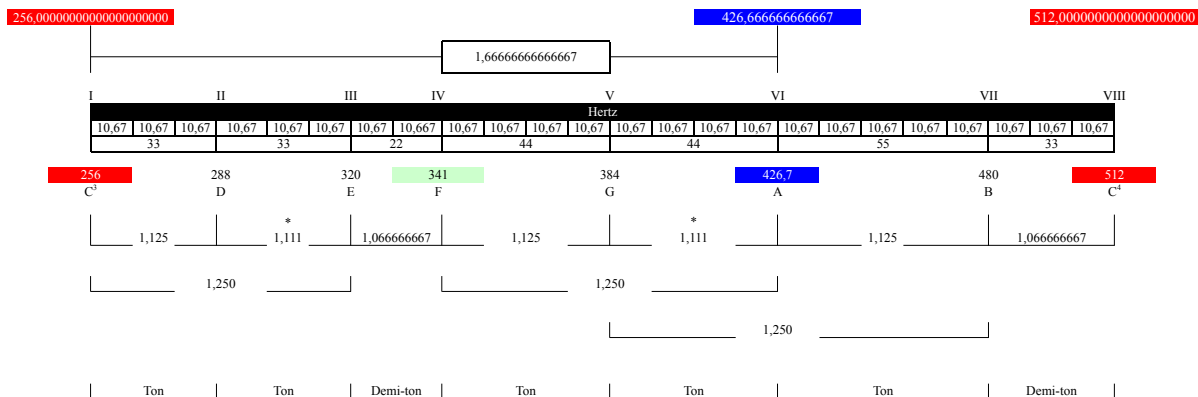
Fig.7f



NATURAL HARMONICS

426,7 Hz

Starting from the fact that the natural resonance (harmonics) of each note are relatively all multiples of each of them and the frequency (Hz) is given by the simple arithmetic operation of fundamental sound F0 multiplication by the rank number of it



10,6666666666667

10,67 X =

10,67	1	10,67
10,67	2	21,33
10,67	3	32
10,67	4	42,67
10,67	5	53,33
10,67	6	64
10,67	7	74,67
10,67	8	85,33
10,67	9	96
10,67	10	106,7
10,67	11	117,3
10,67	12	128
10,67	13	138,7
10,67	14	149,3
10,67	15	160
10,67	16	170,7
10,67	17	181,3
10,67	18	192
10,67	19	202,7
10,67	20	213,3
10,67	21	224
10,67	22	234,7
10,67	23	245,3

Octave	10,67	24	256	C	1
	10,67	25	266,7		2
	10,67	26	277,3		3
Seconde	10,67	27	288	D	4
	10,67	28	298,7		5
	10,67	29	309,3		6
Tierce	10,67	30	320	E	7
	10,67	31	330,7		8
Quarte	10,67	32	341,3	F	9
	10,67	33	352		10
	10,67	34	362,7		11
	10,67	35	373,3		12
Quinte	10,67	36	384	G	13
	10,67	37	394,7		14
	10,67	38	405,3		15
	10,67	39	416		16
Sixième	10,67	40	426,7	A	17
	10,67	41	437,3		18
	10,67	42	448		19
	10,67	43	458,7		20
	10,67	44	469,3		21
Septième	10,67	45	480	B	22
	10,67	46	490,7		23
	10,67	47	501,3		24
Octave	10,67	48	512	C	25

341,333333333334

426,666666666667

For more details on natural harmonics see figures 6 and 7 section R/D

Fig.7H



LES HARMONIQUES NATURELLES - NATURAL HARMONICS

F 302	C 264	G 391,111	D 293,333																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
<table> <tr><td>1</td><td>14,6666667</td><td>1</td><td>16,2962963</td><td>1</td><td>18,2222222</td><td>1</td><td>19,5555556</td></tr> <tr><td>2</td><td>29,3333333</td><td>2</td><td>32,5925926</td><td>2</td><td>36,4444444</td><td>2</td><td>39,1111111</td></tr> <tr><td>3</td><td>44</td><td>3</td><td>48,8888889</td><td>3</td><td>54,6666667</td><td>3</td><td>58,6666667</td></tr> <tr><td>4</td><td>58,6666667</td><td>4</td><td>64,5185185</td><td>4</td><td>72,2222222</td><td>4</td><td>78,2222222</td></tr> <tr><td>5</td><td>72,5333333</td><td>5</td><td>81,4814815</td><td>5</td><td>88,8888889</td><td>5</td><td>96,1111111</td></tr> <tr><td>6</td><td>86,3333333</td><td>6</td><td>97,7777778</td><td>6</td><td>107,3333333</td><td>6</td><td>116,3333333</td></tr> <tr><td>7</td><td>100,6666667</td><td>7</td><td>114,0740741</td><td>7</td><td>125,5555556</td><td>7</td><td>135,5555556</td></tr> <tr><td>8</td><td>117,3333333</td><td>8</td><td>130,7878788</td><td>8</td><td>144,4444444</td><td>8</td><td>155,5555556</td></tr> <tr><td>9</td><td>135</td><td>9</td><td>148,6666667</td><td>9</td><td>160</td><td>9</td><td>172</td></tr> <tr><td>10</td><td>148,6666667</td><td>10</td><td>162,962963</td><td>10</td><td>177,7777778</td><td>10</td><td>190,0000000</td></tr> <tr><td>11</td><td>164,3333333</td><td>11</td><td>179,2592593</td><td>11</td><td>194,4444444</td><td>11</td><td>208,8888889</td></tr> <tr><td>12</td><td>176</td><td>12</td><td>195,5555556</td><td>12</td><td>212,2222222</td><td>12</td><td>228</td></tr> <tr><td>13</td><td>190,6666667</td><td>13</td><td>212,4514518</td><td>13</td><td>231,1111111</td><td>13</td><td>248,8888889</td></tr> <tr><td>14</td><td>205,3333333</td><td>14</td><td>228,1481483</td><td>14</td><td>251,1111111</td><td>14</td><td>270,0000000</td></tr> <tr><td>15</td><td>220</td><td>15</td><td>244,4444444</td><td>15</td><td>272,2222222</td><td>15</td><td>294,4444444</td></tr> <tr><td>16</td><td>234,6666667</td><td>16</td><td>268,7407407</td><td>16</td><td>295,5555556</td><td>16</td><td>320,0000000</td></tr> <tr><td>17</td><td>249,3333333</td><td>17</td><td>277,0787878</td><td>17</td><td>309,6666667</td><td>17</td><td>336,6666667</td></tr> <tr><td>18</td><td>264</td><td>18</td><td>293,3333333</td><td>18</td><td>320</td><td>18</td><td>352</td></tr> <tr><td>19</td><td>278,6666667</td><td>19</td><td>309,6296296</td><td>19</td><td>332,2222222</td><td>19</td><td>368,8888889</td></tr> <tr><td>20</td><td>293,3333333</td><td>20</td><td>325,9259259</td><td>20</td><td>344,4444444</td><td>20</td><td>384</td></tr> <tr><td>21</td><td>308</td><td>21</td><td>342,2222222</td><td>21</td><td>358,6666667</td><td>21</td><td>400</td></tr> <tr><td>22</td><td>322,6666667</td><td>22</td><td>358,5181818</td><td>22</td><td>374,0000000</td><td>22</td><td>416</td></tr> <tr><td>23</td><td>337,3333333</td><td>23</td><td>374,8148148</td><td>23</td><td>391,1111111</td><td>23</td><td>432</td></tr> <tr><td>24</td><td>352</td><td>24</td><td>391,1111111</td><td>24</td><td>407,4074074</td><td>24</td><td>448</td></tr> <tr><td>25</td><td>366,6666667</td><td>25</td><td>407,4074074</td><td>25</td><td>423,7037037</td><td>25</td><td>464</td></tr> <tr><td>26</td><td>381,3333333</td><td>26</td><td>423,7037037</td><td>26</td><td>440,0000000</td><td>26</td><td>480</td></tr> <tr><td>27</td><td>396</td><td>27</td><td>440,0000000</td><td>27</td><td>456,2962963</td><td>27</td><td>496</td></tr> <tr><td>28</td><td>410,6666667</td><td>28</td><td>456,2962963</td><td>28</td><td>472,5925926</td><td>28</td><td>512</td></tr> <tr><td>29</td><td>425,3333333</td><td>29</td><td>472,5925926</td><td>29</td><td>488,8888889</td><td>29</td><td>528</td></tr> <tr><td>30</td><td>440</td><td>30</td><td>488,8888889</td><td>30</td><td>505,1851852</td><td>30</td><td>544</td></tr> <tr><td>31</td><td>454,6666667</td><td>31</td><td>505,1851852</td><td>31</td><td>521,4814815</td><td>31</td><td>560</td></tr> <tr><td>32</td><td>469,3333333</td><td>32</td><td>521,4814815</td><td>32</td><td>537,7777778</td><td>32</td><td>576</td></tr> <tr><td>33</td><td>484</td><td>33</td><td>537,7777778</td><td>33</td><td>554,0740741</td><td>33</td><td>592</td></tr> <tr><td>34</td><td>498,6666667</td><td>34</td><td>554,0740741</td><td>34</td><td>570,3703704</td><td>34</td><td>608</td></tr> <tr><td>35</td><td>513,3333333</td><td>35</td><td>570,3703704</td><td>35</td><td>586,6666667</td><td>35</td><td>624</td></tr> <tr><td>36</td><td>528,0000000</td><td>36</td><td>586,6666667</td><td>36</td><td>602,9629629</td><td>36</td><td>640</td></tr> <tr><td>37</td><td>542,6666667</td><td>37</td><td>602,9629629</td><td>37</td><td>619,2592593</td><td>37</td><td>656</td></tr> <tr><td>38</td><td>557,3333333</td><td>38</td><td>619,2592593</td><td>38</td><td>635,5555556</td><td>38</td><td>672</td></tr> <tr><td>39</td><td>572</td><td>39</td><td>635,5555556</td><td>39</td><td>651,8518519</td><td>39</td><td>688</td></tr> <tr><td>40</td><td>586,6666667</td><td>40</td><td>651,8518519</td><td>40</td><td>668,1481483</td><td>40</td><td>704</td></tr> <tr><td>41</td><td>601,3333333</td><td>41</td><td>668,1481483</td><td>41</td><td>684,4444444</td><td>41</td><td>720</td></tr> <tr><td>42</td><td>615,6666667</td><td>42</td><td>684,4444444</td><td>42</td><td>700,7407407</td><td>42</td><td>736</td></tr> <tr><td>43</td><td>630,0000000</td><td>43</td><td>700,7407407</td><td>43</td><td>716,7407407</td><td>43</td><td>752</td></tr> <tr><td>44</td><td>644,3333333</td><td>44</td><td>716,7407407</td><td>44</td><td>732,7777778</td><td>44</td><td>768</td></tr> <tr><td>45</td><td>658,6666667</td><td>45</td><td>732,7777778</td><td>45</td><td>748,2962963</td><td>45</td><td>784</td></tr> <tr><td>46</td><td>673,0000000</td><td>46</td><td>748,2962963</td><td>46</td><td>763,8256326</td><td>46</td><td>800</td></tr> <tr><td>47</td><td>687,3333333</td><td>47</td><td>763,8256326</td><td>47</td><td>779,3703704</td><td>47</td><td>816</td></tr> <tr><td>48</td><td>701,6666667</td><td>48</td><td>779,3703704</td><td>48</td><td>794,9259259</td><td>48</td><td>832</td></tr> </table>	1	14,6666667	1	16,2962963	1	18,2222222	1	19,5555556	2	29,3333333	2	32,5925926	2	36,4444444	2	39,1111111	3	44	3	48,8888889	3	54,6666667	3	58,6666667	4	58,6666667	4	64,5185185	4	72,2222222	4	78,2222222	5	72,5333333	5	81,4814815	5	88,8888889	5	96,1111111	6	86,3333333	6	97,7777778	6	107,3333333	6	116,3333333	7	100,6666667	7	114,0740741	7	125,5555556	7	135,5555556	8	117,3333333	8	130,7878788	8	144,4444444	8	155,5555556	9	135	9	148,6666667	9	160	9	172	10	148,6666667	10	162,962963	10	177,7777778	10	190,0000000	11	164,3333333	11	179,2592593	11	194,4444444	11	208,8888889	12	176	12	195,5555556	12	212,2222222	12	228	13	190,6666667	13	212,4514518	13	231,1111111	13	248,8888889	14	205,3333333	14	228,1481483	14	251,1111111	14	270,0000000	15	220	15	244,4444444	15	272,2222222	15	294,4444444	16	234,6666667	16	268,7407407	16	295,5555556	16	320,0000000	17	249,3333333	17	277,0787878	17	309,6666667	17	336,6666667	18	264	18	293,3333333	18	320	18	352	19	278,6666667	19	309,6296296	19	332,2222222	19	368,8888889	20	293,3333333	20	325,9259259	20	344,4444444	20	384	21	308	21	342,2222222	21	358,6666667	21	400	22	322,6666667	22	358,5181818	22	374,0000000	22	416	23	337,3333333	23	374,8148148	23	391,1111111	23	432	24	352	24	391,1111111	24	407,4074074	24	448	25	366,6666667	25	407,4074074	25	423,7037037	25	464	26	381,3333333	26	423,7037037	26	440,0000000	26	480	27	396	27	440,0000000	27	456,2962963	27	496	28	410,6666667	28	456,2962963	28	472,5925926	28	512	29	425,3333333	29	472,5925926	29	488,8888889	29	528	30	440	30	488,8888889	30	505,1851852	30	544	31	454,6666667	31	505,1851852	31	521,4814815	31	560	32	469,3333333	32	521,4814815	32	537,7777778	32	576	33	484	33	537,7777778	33	554,0740741	33	592	34	498,6666667	34	554,0740741	34	570,3703704	34	608	35	513,3333333	35	570,3703704	35	586,6666667	35	624	36	528,0000000	36	586,6666667	36	602,9629629	36	640	37	542,6666667	37	602,9629629	37	619,2592593	37	656	38	557,3333333	38	619,2592593	38	635,5555556	38	672	39	572	39	635,5555556	39	651,8518519	39	688	40	586,6666667	40	651,8518519	40	668,1481483	40	704	41	601,3333333	41	668,1481483	41	684,4444444	41	720	42	615,6666667	42	684,4444444	42	700,7407407	42	736	43	630,0000000	43	700,7407407	43	716,7407407	43	752	44	644,3333333	44	716,7407407	44	732,7777778	44	768	45	658,6666667	45	732,7777778	45	748,2962963	45	784	46	673,0000000	46	748,2962963	46	763,8256326	46	800	47	687,3333333	47	763,8256326	47	779,3703704	47	816	48	701,6666667	48	779,3703704	48	794,9259259	48	832	<table> <tr><td>1</td><td>11</td><td>1</td><td>11</td><td>1</td><td>11</td><td>1</td><td>11</td></tr> <tr><td>2</td><td>22</td><td>2</td><td>22</td><td>2</td><td>22</td><td>2</td><td>22</td></tr> <tr><td>3</td><td>33</td><td>3</td><td>33</td><td>3</td><td>33</td><td>3</td><td>33</td></tr> <tr><td>4</td><td>44</td><td>4</td><td>44</td><td>4</td><td>44</td><td>4</td><td>44</td></tr> <tr><td>5</td><td>55</td><td>5</td><td>55</td><td>5</td><td>55</td><td>5</td><td>55</td></tr> <tr><td>6</td><td>66</td><td>6</td><td>66</td><td>6</td><td>66</td><td>6</td><td>66</td></tr> <tr><td>7</td><td>77</td><td>7</td><td>77</td><td>7</td><td>77</td><td>7</td><td>77</td></tr> <tr><td>8</td><td>88</td><td>8</td><td>88</td><td>8</td><td>88</td><td>8</td><td>88</td></tr> <tr><td>9</td><td>99</td><td>9</td><td>99</td><td>9</td><td>99</td><td>9</td><td>99</td></tr> <tr><td>10</td><td>100</td><td>10</td><td>100</td><td>10</td><td>100</td><td>10</td><td>100</td></tr> <tr><td>11</td><td>121</td><td>11</td><td>121</td><td>11</td><td>121</td><td>11</td><td>121</td></tr> <tr><td>12</td><td>144</td><td>12</td><td>144</td><td>12</td><td>144</td><td>12</td><td>144</td></tr> <tr><td>13</td><td>169</td><td>13</td><td>169</td><td>13</td><td>169</td><td>13</td><td>169</td></tr> <tr><td>14</td><td>196</td><td>14</td><td>196</td><td>14</td><td>196</td><td>14</td><td>196</td></tr> <tr><td>15</td><td>225</td><td>15</td><td>225</td><td>15</td><td>225</td><td>15</td><td>225</td></tr> <tr><td>16</td><td>256</td><td>16</td><td>256</td><td>16</td><td>256</td><td>16</td><td>256</td></tr> <tr><td>17</td><td>289</td><td>17</td><td>289</td><td>17</td><td>289</td><td>17</td><td>289</td></tr> <tr><td>18</td><td>324</td><td>18</td><td>324</td><td>18</td><td>324</td><td>18</td><td>324</td></tr> <tr><td>19</td><td>361</td><td>19</td><td>361</td><td>19</td><td>361</td><td>19</td><td>361</td></tr> <tr><td>20</td><td>400</td><td>20</td><td>400</td><td>20</td><td>400</td><td>20</td><td>400</td></tr> <tr><td>21</td><td>441</td><td>21</td><td>441</td><td>21</td><td>441</td><td>21</td><td>441</td></tr> <tr><td>22</td><td>484</td><td>22</td><td>484</td><td>22</td><td>484</td><td>22</td><td>484</td></tr> <tr><td>23</td><td>529</td><td>23</td><td>529</td><td>23</td><td>529</td><td>23</td><td>529</td></tr> <tr><td>24</td><td>576</td><td>24</td><td>576</td><td>24</td><td>576</td><td>24</td><td>576</td></tr> <tr><td>25</td><td>625</td><td>25</td><td>625</td><td>25</td><td>625</td><td>25</td><td>625</td></tr> <tr><td>26</td><td>676</td><td>26</td><td>676</td><td>26</td><td>676</td><td>26</td><td>676</td></tr> <tr><td>27</td><td>729</td><td>27</td><td>729</td><td>27</td><td>729</td><td>27</td><td>729</td></tr> <tr><td>28</td><td>784</td><td>28</td><td>784</td><td>28</td><td>784</td><td>28</td><td>784</td></tr> <tr><td>29</td><td>841</td><td>29</td><td>841</td><td>29</td><td>841</td><td>29</td><td>841</td></tr> <tr><td>30</td><td>900</td><td>30</td><td>900</td><td>30</td><td>900</td><td>30</td><td>900</td></tr> <tr><td>31</td><td>961</td><td>31</td><td>961</td><td>31</td><td>961</td><td>31</td><td>961</td></tr> <tr><td>32</td><td>1024</td><td>32</td><td>1024</td><td>32</td><td>1024</td><td>32</td><td>1024</td></tr> <tr><td>33</td><td>1089</td><td>33</td><td>1089</td><td>33</td><td>1089</td><td>33</td><td>1089</td></tr> <tr><td>34</td><td>1156</td><td>34</td><td>1156</td><td>34</td><td>1156</td><td>34</td><td>1156</td></tr> <tr><td>35</td><td>1225</td><td>35</td><td>1225</td><td>35</td><td>1225</td><td>35</td><td>1225</td></tr> <tr><td>36</td><td>1296</td><td>36</td><td>1296</td><td>36</td><td>1296</td><td>36</td><td>1296</td></tr> <tr><td>37</td><td>1369</td><td>37</td><td>1369</td><td>37</td><td>1369</td><td>37</td><td>1369</td></tr> <tr><td>38</td><td>1444</td><td>38</td><td>1444</td><td>38</td><td>1444</td><td>38</td><td>1444</td></tr> <tr><td>39</td><td>1521</td><td>39</td><td>1521</td><td>39</td><td>1521</td><td>39</td><td>1521</td></tr> <tr><td>40</td><td>1600</td><td>40</td><td>1600</td><td>40</td><td>1600</td><td>40</td><td>1600</td></tr> <tr><td>41</td><td>1681</td><td>41</td><td>1681</td><td>41</td><td>1681</td><td>41</td><td>1681</td></tr> <tr><td>42</td><td>1764</td><td>42</td><td>1764</td><td>42</td><td>1764</td><td>42</td><td>1764</td></tr> <tr><td>43</td><td>1849</td><td>43</td><td>1849</td><td>43</td><td>1849</td><td>43</td><td>1849</td></tr> <tr><td>44</td><td>1936</td><td>44</td><td>1936</td><td>44</td><td>1936</td><td>44</td><td>1936</td></tr> <tr><td>45</td><td>2025</td><td>45</td><td>2025</td><td>45</td><td>2025</td><td>45</td><td>2025</td></tr> <tr><td>46</td><td>2116</td><td>46</td><td>2116</td><td>46</td><td>2116</td><td>46</td><td>2116</td></tr> <tr><td>47</td><td>2209</td><td>47</td><td>2209</td><td>47</td><td>2209</td><td>47</td><td>2209</td></tr> <tr><td>48</td><td>2304</td><td>48</td><td>2304</td><td>48</td><td>2304</td><td>48</td><td>2304</td></tr> </table>	1	11	1	11	1	11	1	11	2	22	2	22	2	22	2	22	3	33	3	33	3	33	3	33	4	44	4	44	4	44	4	44	5	55	5	55	5	55	5	55	6	66	6	66	6	66	6	66	7	77	7	77	7	77	7	77	8	88	8	88	8	88	8	88	9	99	9	99	9	99	9	99	10	100	10	100	10	100	10	100	11	121	11	121	11	121	11	121	12	144	12	144	12	144	12	144	13	169	13	169	13	169	13	169	14	196	14	196	14	196	14	196	15	225	15	225	15	225	15	225	16	256	16	256	16	256	16	256	17	289	17	289	17	289	17	289	18	324	18	324	18	324	18	324	19	361	19	361	19	361	19	361	20	400	20	400	20	400	20	400	21	441	21	441	21	441	21	441	22	484	22	484	22	484	22	484	23	529	23	529	23	529	23	529	24	576	24	576	24	576	24	576	25	625	25	625	25	625	25	625	26	676	26	676	26	676	26	676	27	729	27	729	27	729	27	729	28	784	28	784	28	784	28	784	29	841	29	841	29	841	29	841	30	900	30	900	30	900	30	900	31	961	31	961	31	961	31	961	32	1024	32	1024	32	1024	32	1024	33	1089	33	1089	33	1089	33	1089	34	1156	34	1156	34	1156	34	1156	35	1225	35	1225	35	1225	35	1225	36	1296	36	1296	36	1296	36	1296	37	1369	37	1369	37	1369	37	1369	38	1444	38	1444	38	1444	38	1444	39	1521	39	1521	39	1521	39	1521	40	1600	40	1600	40	1600	40	1600	41	1681	41	1681	41	1681	41	1681	42	1764	42	1764	42	1764	42	1764	43	1849	43	1849	43	1849	43	1849	44	1936	44	1936	44	1936	44	1936	45	2025	45	2025	45	2025	45	2025	46	2116	46	2116	46	2116	46	2116	47	2209	47	2209	47	2209	47	2209	48	2304	48	2304	48	2304	48	2304	<table> <tr><td>1</td><td>16,2962963</td><td>1</td><td>16,2962963</td><td>1</td><td>16,2962963</td><td>1</td><td>16,2962963</td></tr> <tr><td>2</td><td>32,5925926</td><td>2</td><td>32,5925926</td><td>2</td><td>32,5925926</td><td>2</td><td>32,5925926</td></tr> <tr><td>3</td><td>48,8888889</td><td>3</td><td>48,8888889</td><td>3</td><td>48,8888889</td><td>3</td><td>48,8888889</td></tr> <tr><td>4</td><td>64,5185185</td><td>4</td><td>64,5185185</td><td>4</td><td>64,5185185</td><td>4</td><td>64,5185185</td></tr> <tr><td>5</td><td>81,4814815</td><td>5</td><td>81,4814815</td><td>5</td><td>81,4814815</td><td>5</td><td>81,4814815</td></tr> <tr><td>6</td><td>97,7777778</td><td>6</td><td>97,7777778</td><td>6</td><td>97,7777778</td><td>6</td><td>97,7777778</td></tr> <tr><td>7</td><td>114,0740741</td><td>7</td><td>114,0740741</td><td>7</td><td>114,0740741</td><td>7</td><td>114,0740741</td></tr> <tr><td>8</td><td>130,7878788</td><td>8</td><td>130,7878788</td><td>8</td><td>130,7878788</td><td>8</td><td>130,7878788</td></tr> <tr><td>9</td><td>148,6666667</td><td>9</td><td>148,6666667</td><td>9</td><td>148,6666667</td><td>9</td><td>148,6666667</td></tr> <tr><td>10</td><td>162,962963</td><td>10</td><td>162,962963</td><td>10</td><td>162,962963</td><td>10</td><td>162,962963</td></tr> <tr><td>11</td><td>179,2592593</td><td>11</td><td>179,2592593</td><td>11</td><td>179,2592593</td><td>11</td><td>179,2592593</td></tr> <tr><td>12</td><td>195,5555556</td><td>12</td><td>195,5555556</td><td>12</td><td>195,5555556</td><td>12</td><td>195,5555556</td></tr> <tr><td>13</td><td>212,4514518</td><td>13</td><td>212,4514518</td><td>13</td><td>212,4514518</td><td>13</td><td>212,4514518</td></tr> <tr><td>14</td><td>228,1481483</td><td>14</td><td>228,1481483</td><td>14</td><td>228,1481483</td><td>14</td><td>228,1481483</td></tr> <tr><td>15</td><td>244,4444444</td><td>15</td><td>244,4444444</td><td>15</td><td>244,4444444</td><td>15</td><td>244,4444444</td></tr> <tr><td>16</td><td>268,7407407</td><td>16</td><td>268,7407407</td><td>16</td><td>268,7407407</td><td>16</td><td>268,7407407</td></tr> <tr><td>17</td><td>277,0787878</td><td>17</td><td>277,0787878</td><td>17</td><td>277,0787878</td><td>17</td><td>277,0787878</td></tr> <tr><td>18</td><td>293,3333333</td><td>18</td><td>293,3333333</td><td>18</td><td>293,3333333</td><td>18</td><td>293,3333333</td></tr> <tr><td>19</td><td>309,6296296</td><td>19</td><td>309,6296296</td><td>19</td><td>309,6296296</td><td>19</td><td>309,6296296</td></tr> <tr><td>20</td><td>325,9259259</td><td>20</td><td>325,9259259</td><td>20</td><td>325,9259259</td><td>20</td><td>325,9259259</td></tr> <tr><td>21</td><td>342,2222222</td><td>21</td><td>342,2222222</td><td>21</td><td>342,2222222</td><td>21</td><td>342,2222222</td></tr> <tr><td>22</td><td>358,5181818</td><td>22</td><td>358,5181818</td><td>22</td><td>358,5181818</td><td>22</td><td>358,5181818</td></tr> <tr><td>23</td><td>374,8148148</td><td>23</td><td>374,8148148</td><td>23</td><td>374,8148148</td><td>23</td><td>374,8148148</td></tr> <tr><td>24</td><td>391,1111111</td><td>24</td><td>391,1111111</td><td>24</td><td>391,1111111</td><td>24</td><td>391,1111111</td></tr> <tr><td>25</td><td>407,4074074</td><td>25</td><td>407,4074074</td><td>25</td><td>407,4074074</td><td>25</td><td>407,4074074</td></tr> <tr><td>26</td><td>423,7037037</td><td>26</td><td>423,7037037</td><td>26</td><td>423,7037037</td><td>26</td><td>423,7037037</td></tr> <tr><td>27</td><td>440,0000000</td><td>27</td><td>440,0000000</td><td>27</td><td>440,0000000</td><td>27</td><td>440,0000000</td></tr> <tr><td>28</td><td>456,2962963</td><td>28</td><td>456,2962963</td><td>28</td><td>456,2962963</td><td>28</td><td>456,2962963</td></tr> <tr><td>29</td><td>472,5925926</td><td>29</td><td>472,5925926</td><td>29</td><td>472,5925926</td><td>29</td><td>472,5925926</td></tr> <tr><td>30</td><td>488,8888889</td><td>30</td><td>488,8888889</td><td>30</td><td>488,8888889</td><td>30</td><td>488,8888889</td></tr> <tr><td>31</td><td>505,1851852</td><td>31</td><td>505,1851852</td><td>31</td><td>505,1851852</td><td>31</td><td>505,1851852</td></tr> <tr><td>32</td><td>521,4814815</td><td>32</td><td>521,4814815</td><td>32</td><td>521,4814815</td><td>32</td><td>521,4814815</td></tr> <tr><td>33</td><td>537,7777778</td><td>33</td><td>537,7777778</td><td>33</td><td>537,7777778</td><td>33</td><td>537,7777778</td></tr> <tr><td>34</td><td>554,0740741</td><td>34</td><td>554,0740741</td><td>34</td><td>554,0740741</td><td>34</td><td>554,0740741</td></tr> <tr><td>35</td><td>570,3703704</td><td>35</td><td>570,3703704</td><td>35</td><td>570,3703704</td><td>35</td><td>570,3703704</td></tr> <tr><td>36</td><td>586,6666667</td><td>36</td><td>586,6666667</td><td>36</td><td>586,6666667</td><td>36</td><td>586,6666667</td></tr> <tr><td>37</td><td>602,9629629</td><td>37</td><td>602,9629629</td><td>37</td><td>602,9629629</td><td>37</td><td>602,9629629</td></tr> <tr><td>38</td><td>619,2592593</td><td>38</td><td>619,2592593</td><td>38</td><td>619,2592593</td><td>38</td><td>619,2592593</td></tr> <tr><td>39</td><td>635,5555556</td><td>39</td><td>635,5555556</td><td>39</td><td>635,5555556</td><td>39</td><td>635,5555556</td></tr> <tr><td>40</td><td>651,8518519</td><td>40</td><td>651,8518519</td><td>40</td><td>651,8518519</td><td>40</td><td>651,8518519</td></tr> <tr><td>41</td><td>668,1481483</td><td>41</td><td>668,1481483</td><td>41</td><td>668,1481483</td><td>41</td><td>668,1481483</td></tr> <tr><td>42</td><td>684,4444444</td><td>42</td><td>684,4444444</td><td>42</td><td>684,4444444</td><td>42</td><td>684,4444444</td></tr> <tr><td>43</td><td>700,7407407</td><td>43</td><td>700,7407407</td><td>43</td><td>700,7407407</td><td>43</td><td>700,7407407</td></tr> <tr><td>44</td><td>716,7407407</td><td>44</td><td>716,7407407</td><td>44</td><td>716,7407407</td><td>44</td><td>716,7407407</td></tr> <tr><td>45</td><td>732,7777778</td><td>45</td><td>732,7777778</td><td>45</td><td>732,7777778</td><td>45</td><td>732,7777778</td></tr> <tr><td>46</td><td>748,2962963</td><td>46</td><td>748,2962963</td><td>46</td><td>748,2962963</td><td>46</td><td>748,2962963</td></tr> <tr><td>47</td><td>763,8256326</td><td>47</td><td>763,8256326</td><td>47</td><td>763,8256326</td><td>47</td><td>763,8256326</td></tr> <tr><td>48</td><td>779,3703704</td><td>48</td><td>779,3703704</td><td>48</td><td>779,3703704</td><td>48</td><td>779,3703704</td></tr> 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<tr><td>1</td><td>12,2222222</td><td>1</td><td>12,2222222</td><td>1</td><td>12,2222222</td><td>1</td><td>12,2222222</td></tr> <tr><td>2</td><td>24,4444444</td><td>2</td><td>24,4444444</td><td>2</td><td>24,4444444</td><td>2</td><td>24,44444</td></tr></table>	1	12,2222222	1	12,2222222	1	12,2222222	1	12,2222222	2	24,4444444	2	24,4444444	2	24,4444444	2	24,44444
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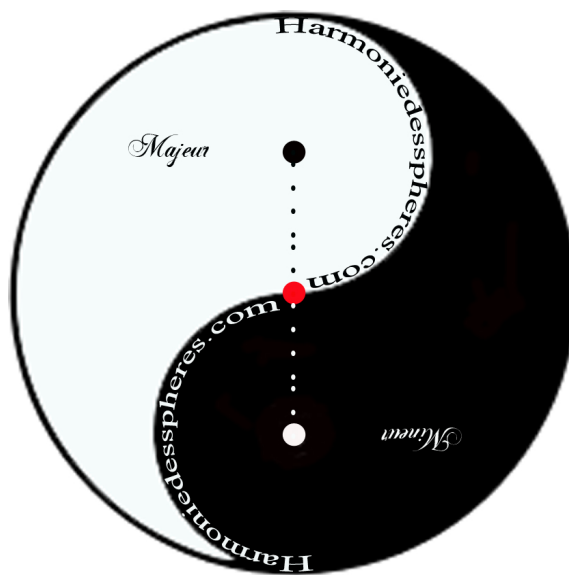
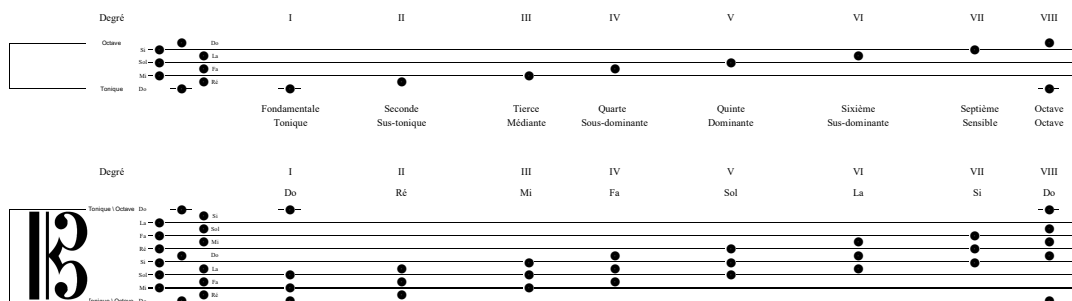
Fig.8

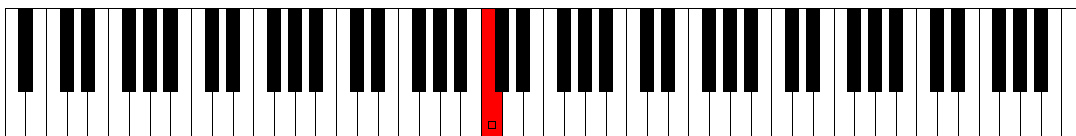
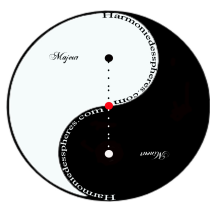
Harmonie des sphères



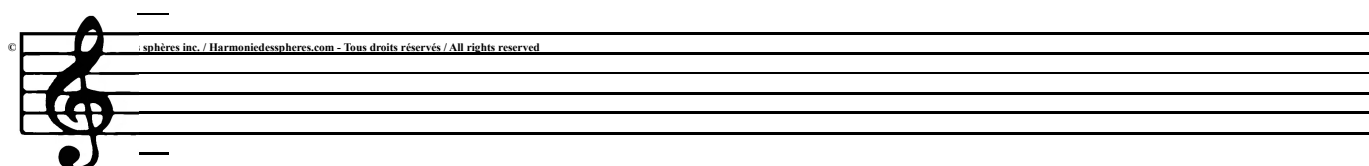
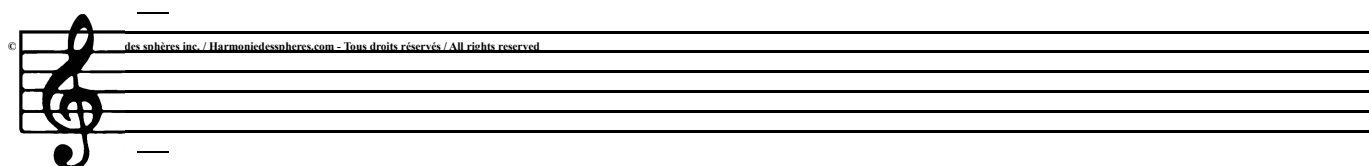
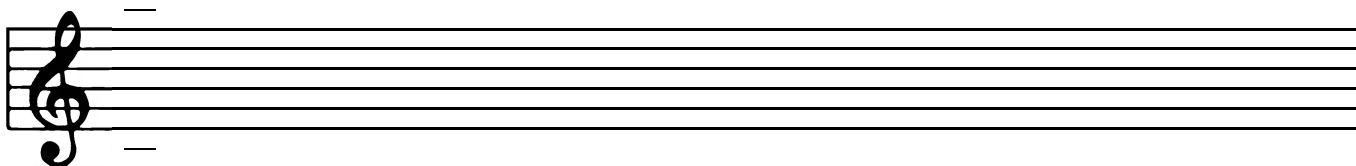
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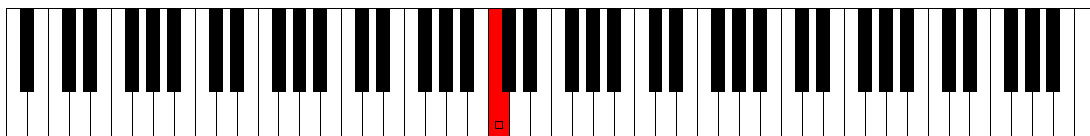
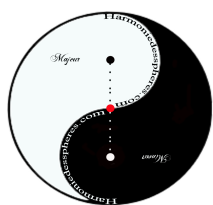
Le Diatonisme





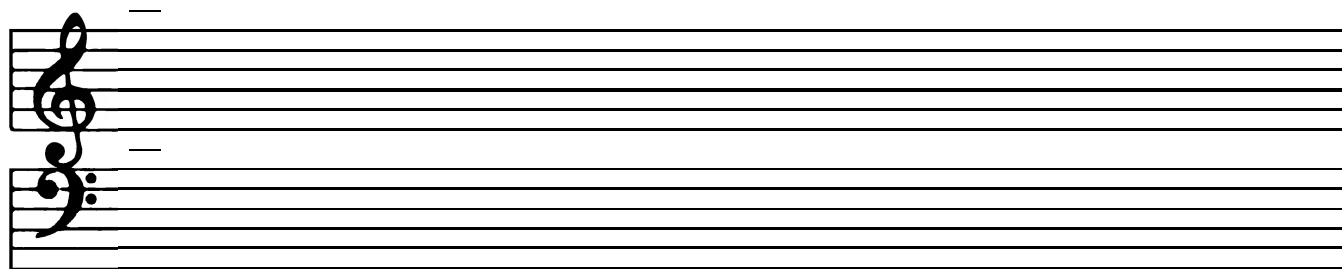
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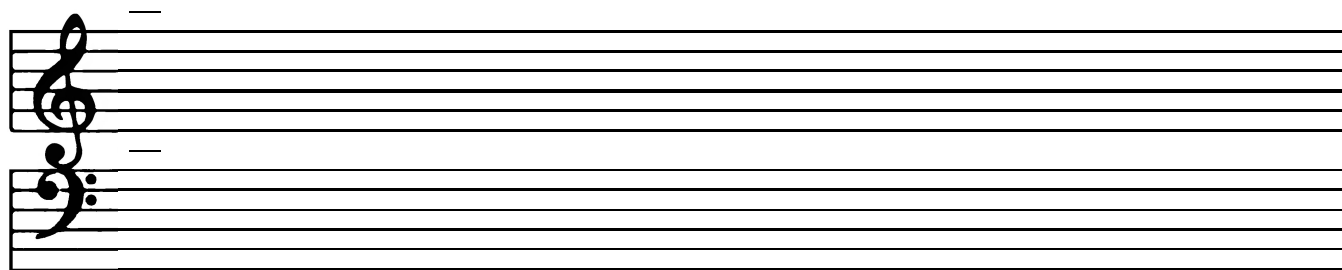


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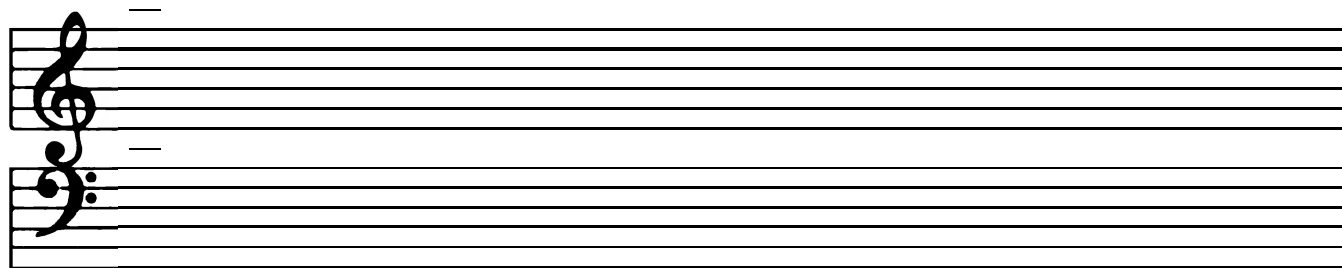
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Harmonie des sphères inc.

Mission

Promote the universal musical key throughout the world,
research and develop simple and accessible applications
to all, in order to facilitate the understanding of musical notions.

« Music it's of space-time »

Sylvain Lalonde founding president : Harmonie des sphères inc.

To contact us : sylvain.lalonde@me.com

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In memory of an exceptional mind

« Life is not a mystery but a science undisclosed »

« The Genesis of reality, Bernard de Montréal »

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