CHAPTER XII

CONCERNING THE MODES AND SYSTEMS WITHIN THE DIATONIC-CHROMATIC GENUS

1. After discussing the consonances of the diatonic-chromatic kind, it shall be agreed to be consider the successions of the consonances. But since the succession of consonances must be adapted to the mode of the music, it appears wiser initially to enumerate the modes and to establish how we may present the rules, according to which it will be required to link the consonances together in some mode. Indeed with the limits established, within which we must remain in connecting the consonances, it will be easier to establish the standard of the music and to form a musical composition.

2. Since a musical mode shall be nothing other than the exponent of a series of consonances and the exponent of the mode includes within itself the exponents of the individual consonances, it is evident the exponent of the mode cannot be exceedingly simple ; for otherwise there may be an insufficient variety in the consonances available. For this reason we may reject these exponents 2^n, $2^n \cdot 3$, $2^n \cdot 3^2$, $2^n \cdot 3 \cdot 5$, $2^n \cdot 5^2$ as inadequate for the modes requiring to be designated, and we will begin with a more composite treatment.

3. But since the exponent of the mode must be contained in the diatonic-chromatic kind, of which the exponent is $2^n \cdot 3^3 \cdot 5^2$, we will have the six following modes, the exponents of which will be :

$$\text{I. } 2^n \cdot 3^3, \qquad \text{IV. } 2^n \cdot 3^3 \cdot 5,$$
$$\text{II. } 2^n \cdot 3^2 \cdot 5, \qquad \text{V. } 2^n \cdot 3^2 \cdot 5^2$$
$$\text{III. } 2^n \cdot 3 \cdot 5^2, \qquad \text{VI. } 2^n \cdot 3^3 \cdot 5^2$$

For although the diatonic-chromatic genus may extend beyond the exponent $2^n \cdot 3^3 \cdot 5^2$, yet the mode cannot become more composite, since neither should it be imperceptible, nor truly since then should it be required for different notes used in the same mode to be expressed by the same key; which would be intolerable.

4. But when the modes may be changed repeatedly in the whole musical work and they may become transformed from these modes into other modes, then the exponent of the whole work without loss of harmony, in which the exponents of all the modes may be contained, can be arranged greater than $2^n \cdot 3^3 \cdot 5^2$. and thus will be able to rise to $2^n \cdot 3^7 \cdot 5^2$. On account of which it will be required to establish this rule for all musical

works parts, so that whatever mode may be present in the exponent $2^n \cdot 3^3 \cdot 5^2$, truly the exponent of the whole work cannot be arranged greater than $2^n \cdot 3^7 \cdot 5^2$.

5. Of the six modes examined the first three are exceedingly simple and therefore are less likely to find a place in music today, since they do not allow so much variety, of such a kind as music may delight at this time. Yet meanwhile for plain singing and simpler melodies they may be able to be used even now, except for the first, in which neither a third nor sixth may be found. But the second mode is suited well enough for simple and cheerful melodies, which agree with the easier consonances being expressed and that itself is used more often by musicians. The third mode, even if it may occur most rarely, yet equally may be able to be used fittingly in simple melodies of this kind.

6. But the whole of modern music is understood to be in the three latter modes. For the modes, which musicians are accustomed to use, are all held as kinds in these three modes. Certainly that mode which is accustomed to be called hard [*i.e.* major] by musicians, pertains to our fourth mode, truly the soft [*i.e.* minor] is referred to our fifth mode. But chiefly today's music in the modes of its works is accustomed to be composed from both the hard and sort modes, which must be referred to the sixth mode, and this is seen mainly in modern works.

7. These modes, just as we have expressed these without indices, all have the note *F* for the base, which is indicated either by unity or by a power of two. But any mode can be transposed, so that the base may be transferred to another tone, so that certainly the mode does not change in its nature. Therefore these transpositions of the modes, which are accustomed to occur most often in music, we will call variations of the modes, which we will indicate by the indices with the adjoining exponents, thus so that the base shall be designated, to which the mode is referred. Thus if the index were 3, the base of the mode will be the note C; and with the index being 5, the base will be A, just as understood from the preceding discussions.

8. Again we will call the variation *pure*, if the exponent of the mode together with the index were contained in the true exponent of the kind of diatonic-chromatic exponent, which is $2^n \cdot 3^3 \cdot 5^2$. But if the exponent with the index were more composite than $2^n \cdot 3^3 \cdot 5^2$ and yet may be contained in $2^n \cdot 3^7 \cdot 5^2$, then that variation will be called *impure* by us, because the musical notes of the kind are not exact, but only agree approximately. But indeed lest this variation may not be contained in this exponent $2^n \cdot 3^7 \cdot 5^2$, that justly will be able to be considered as forbidden and contrary to harmony.

9. Therefore the first mode, of which the exponent is $2^n \cdot 3^3$, truly will have three pure variations, of which the bases will be F, A, C*s*, but it allows 12 impure variations, which with its bases will be the following :

$2^n\cdot 3^3(3)$,	$2^n\cdot 3^3(3^2)$,	$2^n\cdot 3^3(3^3)$,	$2^n\cdot 3^3(3^4)$,
C	G	D	*A*
$2^n\cdot 3^3(3\cdot 5)$,	$2^n\cdot 3^3(3^2\cdot 5)$,	$2^n\cdot 3^3(3^3\cdot 5)$,	$2^n\cdot 3^3(3^4\cdot 5)$,
E	H	F*s*	*Cs*
$2^n\cdot 3^3(3\cdot 5^2)$,	$2^n\cdot 3^3(3^2\cdot 5^2)$,	$2^n\cdot 3^3(3^3\cdot 5^2)$,	$2^n\cdot 3^3(3^4\cdot 5^4)$,
G*s*	*Cs*	B	*F*

where the secondary tones *A, Cs, F* have been expressed by a cursive character.

10. Therefore in the following table of the individual modes we have expressed all the variations both pure as well as impure, and for each variation we have inserted the key, by which the base may be indicated. But since all such variations allow consonances as well, and with these as it is expedite to know, which variations shall be pure and which impure, in this table not only the variations of the modes, but also of all the consonances has been put in place to be seen.

Mode I. $2^n\cdot 3$	Mode II. $2^n\cdot 5$	Mode III. $2^n\cdot 3^2$	Mode IV. $2^n\cdot 3\cdot 5$
Pure variations	*Pure variations*	*Pure variations*	*Pure variations*
$2^n\cdot 3(1)$ F	$2^n\cdot 5(1)$ F	$2^n\cdot 3^2(1)$ F	$2^n\cdot 3\cdot 5(1)$ F
$2^n\cdot 3(3)$ C	$2^n\cdot 5(3)$ C	$2^n\cdot 3^2(3)$ C	$2^n\cdot 3\cdot 5(3)$ C
$2^n\cdot 3(5)$ A	$2^n\cdot 5(5)$ A	$2^n\cdot 3^2(5)$ A	$2^n\cdot 3\cdot 5(5)$ A
$2^n\cdot 3(3^2)$ G	$2^n\cdot 5(3^2)$ G	$2^n\cdot 3^2(3\cdot 5)$ E	$2^n\cdot 3\cdot 5(3^2)$ G
$2^n\cdot 3(3\cdot 5)$ E	$2^n\cdot 5(3\cdot 5)$ E	$2^n\cdot 3^2(5^2)$ C*s*	$2^n\cdot 3\cdot 5(3\cdot 5)$ E
$2^n\cdot 3(5^2)$ C*s*	$2^n\cdot 5(3^2)$ D	$2^n\cdot 3^2(3\cdot 5^2)$ G*s*	$2^n\cdot 3\cdot 5(3^2\cdot 5)$ H
$2^n\cdot 3(3^2\cdot 5)$ H	$2^n\cdot 5(3^2\cdot 5)$ H		
$2^n\cdot 3(3\cdot 5^2)$ G*s*	$2^n\cdot 5(3^3\cdot 5)$ F*s*		
$2^n\cdot 3(3^2\cdot 5^2)$ D*s*			
Impure variations	*Impure variations*	*Impure variations*	*Impure variations*
$2^n\cdot 3(3^3)$ D	$2^n\cdot 5(3^4)$ *A*	$2^n\cdot 3^2(3^2)$ G	$2^n\cdot 3\cdot 5(3^3)$ D
$2^n\cdot 3(3^4)$ A	$2^n\cdot 5(3^5)$ *E*	$2^n\cdot 3^2(3^5)$ D	$2^n\cdot 3\cdot 5(3^3\cdot 5)$ F*s*
$2^n\cdot 3(3^3\cdot 5)$ F*s*	$2^n\cdot 5(3^4\cdot 5)$ *Cs*	$2^n\cdot 3^2(3^2\cdot 5)$ H	$2^n\cdot 3\cdot 5(3^4)$ *A*
$2^n\cdot 3(3^5)$ *E*	$2^n\cdot 5(3^6)$ H	$2^n\cdot 3^2(3^4)$ *A*	$2^n\cdot 3\cdot 5(3^4\cdot 5)$ *Cs*
$2^n\cdot 3(3^4\cdot 5)$ *Cs*	$2^n\cdot 5(3^5\cdot 5)$ *Gs*	$2^n\cdot 3^2(3^3\cdot 5)$ F*s*	$2^n\cdot 3\cdot 5(3^5)$ *E*
$2^n\cdot 3(3^3\cdot 5^2)$ B	$2^n\cdot 5(3^7)$ *Fs*	$2^n\cdot 3^2(3^2\cdot 5^2)$ D*s*	$2^n\cdot 3\cdot 5(3^5\cdot 5)$ G*s*

$2^n \cdot 3(3^6)$ *H*	$2^n \cdot 5(3^6 \cdot 5)$ *Ds*	$2^n \cdot 3^2(3^5)$ *E*	$2^n \cdot 3 \cdot 5(3^6)$ *H*
$2^n \cdot 3(3^5 \cdot 5)$ *Gs*	$2^n \cdot 5(3^7 \cdot 5)$ *B*	$2^n \cdot 3^2(3^4 \cdot 5)$ *Cs*	$2^n \cdot 3 \cdot 5(3^4 \cdot 5)$ *Ds*
$2^n \cdot 3(3^4 \cdot 5^2)$ *F*		$2^n \cdot 3^2(3^3 \cdot 5^2)$ *B*	
$2^n \cdot 3(3^6 \cdot 5)$ *Ds*		$2^n \cdot 3^2(3^5 \cdot 5)$ *Gs*	
$2^n \cdot 3(3^5 \cdot 5^2)$ *C*		$2^n \cdot 3^2(3^4 \cdot 5^2)$ *F*	
$2^n \cdot 3(3^6 \cdot 5^2)$ *G*		$2^n \cdot 3^2(3^5 \cdot 5^2)$ *C*	

Mode V.

$2^n \cdot 5^2$

Pure variations	*Impure variations*
$2^n \cdot 5^2(1)$ F	$2^n \cdot 5^2(3^4)$ A
$2^n \cdot 5^2(3)$ C	$2^n \cdot 5^2(3^5)$ E
$2^n \cdot 5^2(3^2)$ G	$2^n \cdot 5^2(3^6)$ *H*
$2^n \cdot 5^2(3^3)$ D	$2^n \cdot 5^2(3^7)$ *Fs*

Mode I.	Mode II.	Mode III.	Mode IV.
$2^n \cdot 3^3$	$2^n \cdot 3^2 \cdot 5$	$2^n \cdot 3 \cdot 5^2$	$2^n \cdot 3^3 \cdot 5$
Pure variations	*Pure variations*	*Pure variations*	*Pure variations*
$2^n \cdot 3^2(1)$ F	$2^n \cdot 3^2 \cdot 5(1)$ F	$2^n \cdot 3 \cdot 5^2(1)$ F	$2^n \cdot 3 \cdot 5(1)$ F
$2^n \cdot 3^2(5)$ A	$2^n \cdot 3^2 \cdot 5(3)$ C	$2^n \cdot 3 \cdot 5^2(3)$ C	$2^n \cdot 3^3 \cdot 5(5)$ A
$2^n \cdot 3^3(5^2)$ Cs	$2^n \cdot 3^2 \cdot 5(5)$ A	$2^n \cdot 3 \cdot 5^2(3^2)$ G	
	$2^n \cdot 3^2 \cdot 5(3 \cdot 5)$		
Impure variations	*Impure variations*	*Impure variations*	*Impure variations*
$2^n \cdot 3^3(3)$ C	$2^n \cdot 3^2 \cdot 5(3^2)$ G	$2^n \cdot 3 \cdot 5^2(3^3)$ D	$2^n \cdot 3^3 \cdot 5(3)$ C
$2^n \cdot 3^3(3 \cdot 5)$ E	$2^n \cdot 3^2 \cdot 5(3^2 \cdot 5)$ H	$2^n \cdot 3 \cdot 5^2(3^4)$ *A*	$2^n \cdot 3^3 \cdot 5(3 \cdot 5)$ E
$2^n \cdot 3^3(3 \cdot 5^2)$ Gs	$2^n \cdot 3^2 \cdot 5(3^3)$ D	$2^n \cdot 3 \cdot 5^2(3^5)$ E	$2^n \cdot 3^3 \cdot 5(3^2)$ G
$2^n \cdot 3^3(3^2)$ G	$2^n \cdot 3^2 \cdot 5(3^3 \cdot 5)$ Fs	$2^n \cdot 3 \cdot 5^2(3^6)$ H	$2^n \cdot 3^3 \cdot 5(3^2 \cdot 5)$ H
$2^n \cdot 3^3(3^2 \cdot 5)$ H	$2^n \cdot 3^2 \cdot 5(3^4)$ *A*		$2^n \cdot 3^3 \cdot 5(3^3)$ D
$2^n \cdot 3^3(3^2 \cdot 5^2)$ Ds	$2^n \cdot 3^2 \cdot 5(3^4 \cdot 5)$ *Cs*		$2^n \cdot 3^3 \cdot 5(3^3 \cdot 5)$ Fs

$2^n\cdot 3^3(3^3)$ D	$2^n\cdot 3^2\cdot 5(3^5)$ *E*		$2^n\cdot 3^3\cdot 5(3^4)$ A
$2^n\cdot 3^3(3^3\cdot 5)$ Fs	$2^n\cdot 3^2\cdot 5(3^5\cdot 5)$ *Gs*		$2^n\cdot 3^3\cdot 5(3^4\cdot 5)$ *Cs*
$2^n\cdot 3^3(3^4)$ *A*			
$2^n\cdot 3^3(3^4\cdot 5)$ *Cs*			
$2^n\cdot 3^3(3^4\cdot 5^2)$ F			

	Mode V	Mode VI	
	$2^n\cdot 3^2\cdot 5^2$	$2^n\cdot 3^3\cdot 5^2$	
	Pure variations	*Pure variations*	
	$2^n\cdot 3^2\cdot 5^2(1)$ F	$2^n\cdot 3^3\cdot 5^2(1)$ F	
	Impure variations	*Impure variations*	
	$2^n\cdot 3^2\cdot 5^2(3^2)$ G	$2^n\cdot 3^3\cdot 5^2(3)$ C	
	$2^n\cdot 3^2\cdot 5^2(3^3)$ D	$2^n\cdot 3^3\cdot 5^2(3^2)$ G	
	$2^n\cdot 3^2\cdot 5^2(3^4)$ A	$2^n\cdot 3^3\cdot 5^2(3^3)$ D	
	$2^n\cdot 3^2\cdot 5^2(3^5)$ *E*	$2^n\cdot 3^3\cdot 5^2(3^4)$ *A*	

11. Therefore from this table it is understood, how many variations may be allowed both pure as well as impure, equally how many consonances and how many modes may be applied to correctly tuned instruments. Thus it is apparent the harmonic triad, which is contained in the exponent $2^n\cdot 3\cdot 5$, to have six pure and eight impure variations ; yet of which three of the impure variations agree with three of the pure ones , since the secondary bases of *A*, *E* and *H* now will stand out in the pure as primary, thus so that only five may be considered impure, of which the bases are: D, *Fs*, *Cs*, *Ds* et *Gs*. Then also both pure as well as impure transpositions of the modes may be determined from this table and it may be apparent at once by how great an interval a given melody may be allowed to be transposed, so that it may remain pure, or may emerge impure; and for which cases also it may become forbidden. Therefore what may be said about one single variation of this same kind, that will be easy to transfer to all the remaining ones.

12. After the variations of different modes, any modes of this kind are required to be considered, which arise, if in place of an indefinite power of two definite powers of the mode may be substituted. Thus the species of the mode $2^n\cdot 3^3\cdot 5$ will be expressed by the following exponents

$$3^3\cdot 5,\ 2\cdot 3^3\cdot 5,\ 2^2\cdot 3^3\cdot 5,\ 2^3\cdot 3^3\cdot 5,\ 2^4\cdot 3^3\cdot 5, \text{ etc.}$$

clearly with the positive whole numbers 0, 1, 2, 3, 4 etc. being substituted in place of *n*. Moreover any kind of mode will have the same variations both pure as well as impure, which the mode itself has, with variations not from the power of two, which is present in the exponent of the mode, but rather from the numbers that may be determined from the indices 3 and 5, which remain unchanged in the species.

13. Species of the same mode differ amongst themselves on account of the degree of pleasure [conferred on the listener], to which they pertain. Indeed thus the simpler of each species of the mode will be had, where a small number is substituted in place of *n*. Thus the simplest species of any mode will be had , if there may be put $n = 0$; but it shall become composite by one grade more by putting $n = 1$; it will rise by two grades on putting $n = 2$ and thus so on: just as from these which above are concerned with finding the greatest degree of listener pleasure, for which it can be understood, it is required to refer to some determined exponent.

14. Indeed the number of species of any kind in itself may be considered to be infinite on account of the innumerable determined values, which may be substituted in place of *n*. But with the exception, since these which occur in the senses, shall reject an infinite number, and the interval between the lowest bass and the highest treble of the notes will determine the number of species in any mode. For any mode within itself includes a given number of primitive notes, which by increasing the number *n* often are repeated in different octaves, thus so that if the same note now may occur in all the octaves, on multiplying by the final number *n* no further diversity may be able to be introduced.

15. So that this may be may become clearer, it is required to note each modum to have its primitive notes, which are expressed by odd numbers, from which on being multiplied by 2 or powers of the same the remaining to be derived may arise. So that therefore the greater were the power of two, by which it may be multiplied, there more derived tones arise from the same primitive tone ; and finally the fixed number of octaves thus is filled by these tones, so that, even if the power of two may be increased further, yet more tones cannot be found. Moreover this will become quite apparent from the following tables.

16. The third variation of any kind both of mode as well as species applies to the adjustment required to be received into the system of notes in musical instruments, which commonly is accustomed to contain four octaves, in which the deepest tone may be designated by the character C and the highest by $\bar{\bar{c}}$. Therefore sounds of any mode and species must be contained between these limits, which certainly are required to be expressed in instruments ; thus so that tones both deeper than C as well as tones more acute than $\bar{\bar{c}}$ may be rejected as useless. But these collections of tones of any kind contained between the said we will call a system of this species.

17. But with more modes the same species can be included and filled within that fixed interval of the sounds of the same mode, just as the tone F may express other and yet other

powers of two. For if there may be put $\mathrm{F}=1$, all the tones with numbers greater than 12 must be rejected; and if $\mathrm{F}=2$, only these tones will be able to be expressed, which will be contained between the numbers 2 and 24. Again if $\mathrm{F}=4$, suitable tones must lie within the limits 3 and 48, and if $\mathrm{F}=8$, the limits will be 6 et 96; and for other powers of two the limits will be had in a similar manner, by which the key F is expressed.

l8. Therefore the system of each kind of the modes is defined with the power of two given assumed requiring to signify the key F. And with this agreed on the same species often will have several systems with the same number, which will depend on several groups of notes. A system of notes of this kind, which contains given species determined by a given mode, is accustomed to be called *ambitus* by musicians, which determines these keys from the diatonic-chromatic kind, which may be allowed to be used in a given melody. Indeed musicians recognise a single ambitus for each modum, but it may be seen from the following, not any single mode, but also any of each kind of mode to allow several systems or ambitus, by which even now the music will be able to be varies wonderfully.

19. Therefore so that a complete understanding of everything concerning any species of mode and systems may be obtained, I have added the following table, in which I have set out thus the individual modes described above, so that for the individual keys F, I may examine the individual species of the same mode by their systems. Therefore in this table not only any species of mode may be prepared, which indeed are to be found in the interval of 4 octaves, but also all the systems, in which the keys have been designated by the customary signs.

Mode $2^n.3^3$ *species*	SYSTEMS
	If $\mathrm{F}=4$
$2^2.3^3$	$\mathrm{C}:\mathrm{F}:G:g:\bar{c}:\bar{g}:\bar{a}:\bar{g}$
$2^3.3^3$	$\mathrm{C}:\mathrm{F}:G:f:g:\bar{c}:\bar{g}:\bar{c}:\bar{a}:\bar{g}$
$2^4.3^3$	$\mathrm{C}:\mathrm{F}:G:f:g:\bar{c}:\bar{f}:\bar{g}:\bar{c}:\bar{a}:\bar{g}:\bar{c}$
$2^5.3^3$	$\mathrm{C}:\mathrm{F}:G:f:g:\bar{c}:\bar{f};\bar{g}:\bar{\bar{c}}:\bar{\bar{a}}:\bar{\bar{f}}:\bar{\bar{g}};\bar{\bar{\bar{c}}}.$
	If $\mathrm{F}=8$
$2^3.3^2$	$\mathrm{C}:\mathrm{F}:\mathrm{G}:c:g:\bar{c}:\bar{d}:\bar{g}:\bar{d}:\bar{g}$
$2^7.3^3$	$\mathrm{C}:\mathrm{F}:\mathrm{G}:c:f:g:\bar{c}:\bar{d}:\bar{g}:\bar{c}:\bar{d}:\bar{g}$
$2^5\cdot 3^3$	$\mathrm{C}:\mathrm{F}:\mathrm{G}:c:f:g:\bar{c}:\bar{d}:\bar{f}:\bar{g}:\bar{c}:\bar{d}:\bar{g}:\bar{c}$
$2^6\cdot 3^3$	$\mathrm{C}:\mathrm{F}:\mathrm{G}:c:f:g:\bar{c}:\bar{d}:\bar{f}:\bar{g}:\bar{c}:\bar{d}:\bar{f}:\bar{g};\bar{\bar{c}}.$

	If $\mathrm{F}=16$
$2^4.3^3$	$\mathrm{C}:\mathrm{F}:\mathrm{G}:c:d:g:\overline{c}:d:\overline{g}:\overline{d}:\overline{g}$
$2^5.3^3$	$\mathrm{C}:\mathrm{F}:\mathrm{G}:c:d:f:g:\overline{c}:\overline{d}:\overline{g}:\overline{c}:\overline{d}:\overline{g}$
$2^6.3^3$	$\mathrm{C}:\mathrm{F}:\mathrm{G}:c:d:f:g:\overline{c}:\overline{d}:\overline{f}:\overline{g}:\overline{c}:\overline{d}:\overline{g}:\overline{c}$
$2^7.3^3$	$\mathrm{C}:\mathrm{F}:\mathrm{G}:c:d:f:g:\overline{c}:\overline{d}:\overline{f}:\overline{g}:\overline{c}:\overline{d}:\overline{f}:\overline{g};\overline{\overline{c}}.$
	If $\mathrm{F}=32$
$2^4.3^3$	$\mathrm{C}:\mathrm{D}:\mathrm{F}:\mathrm{G}:c:d:g:\overline{c}:\overline{d}:\overline{g}:\overline{d}:\overline{g}$
$2^5.3^3$	$\mathrm{C}:\mathrm{D}:\mathrm{F}:\mathrm{G}:c:d:f:g:\overline{c}:\overline{d}:\overline{g}:\overline{c}:\overline{d}:\overline{g}$
$2^6.3^3$	$\mathrm{C}:\mathrm{D}:\mathrm{F}:\mathrm{G}:c:d:f:g:\overline{c}:\overline{d}:\overline{f}:\overline{g}:\overline{c}:\overline{d}:\overline{g}:\overline{c}$
$2^7.3^3$	$\mathrm{C}:\mathrm{D}:\mathrm{F}:\mathrm{G}:c:d:f:g:\overline{c}:\overline{d}:\overline{f}:\overline{g}:\overline{\overline{c}}:\overline{\overline{d}}:\overline{\overline{f}}:\overline{\overline{g}};\overline{\overline{\overline{c}}}.$

Mode $2^n.3^2\cdot 5$ *species*	SYSTEMS
	If $\mathrm{F}=1$
$3^2\cdot 5$	$\mathrm{F}:\overline{c}:\overline{a}:\overline{\overline{g}}$
$2.3^2\cdot 5$	$\mathrm{F}:f:\overline{c}:\overline{a}:\overline{\overline{c}}:\overline{\overline{g}}:\overline{\overline{a}}$
$2^2.3^2\cdot 5$	$\mathrm{F}:f:\overline{c}:\overline{f}:\overline{a}:\overline{\overline{c}}:\overline{\overline{g}}:\overline{\overline{a}};\overline{\overline{\overline{c}}}$
$2^3.3^2\cdot 5$	$\mathrm{F}:f:\overline{c}:\overline{f}:\overline{a}:\overline{\overline{c}}:\overline{\overline{f}}:\overline{\overline{g}}:\overline{\overline{a}};\overline{\overline{\overline{c}}}.$
	If $\mathrm{F}=2$
$3^2\cdot 5$	$c:a:\overline{g}:\overline{\overline{e}}$
$2.3^2\cdot 5$	$\mathrm{F}:c:a:\overline{c}:\overline{g}:\overline{a}:\overline{\overline{e}}:\overline{\overline{g}}$
$2^2.3^2\cdot 5$	$\mathrm{F}:c:f:a:\overline{c}:\overline{g}:\overline{a}:\overline{\overline{c}}:\overline{\overline{e}}:\overline{\overline{g}}:\overline{\overline{a}}$
$2^3.3^2\cdot 5$	$\mathrm{F}:c:f:a:\overline{c}:\overline{f}:\overline{g}:\overline{a}:\overline{\overline{c}}:\overline{\overline{e}}:\overline{\overline{g}}:\overline{\overline{a}}:\overline{\overline{\overline{c}}}.$
$2^4.3^2\cdot 5$	$\mathrm{F}:c:f:a:\overline{c}:\overline{f}:\overline{g}:\overline{a}:\overline{\overline{c}}:\overline{\overline{e}}:\overline{\overline{f}}:\overline{\overline{g}}:\overline{\overline{a}};\overline{\overline{\overline{c}}}.$
	If $\mathrm{F}=4$
$3^2.5$	$\mathrm{C}:\mathrm{A}:g:\overline{e}:\overline{\overline{h}}$
$2\cdot 3^2.5$	$\mathrm{C}:\mathrm{A}:c:g:a:\overline{e}:\overline{g}:\overline{\overline{e}}:\overline{\overline{h}}$

$2^2\cdot 3^2.5$	$C:F:A:c:g:a:\bar{c}:\bar{e}:\bar{g}:\bar{a}:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{h}}$
$2^3\cdot 3^2.5$	$C:F:A:c:f:g:a:\bar{c}:\bar{e}:\bar{g}:\bar{a}:\bar{\bar{c}}:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{a}}:\bar{\bar{h}}.$
$2^4\cdot 3^2.5$	$C:F:A:c:f:g:a:\bar{c}:\bar{e}:\bar{f}:\bar{g}:\bar{a}:\bar{\bar{c}}:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{a}}:\bar{\bar{h}}:\bar{\bar{\bar{c}}}$
$2^5\cdot 3^2.5$	$C:F:A:f:g:a:\bar{c}:\bar{e}:\bar{f}:\bar{g}:\bar{a}:\bar{\bar{c}}:\bar{\bar{e}}:\bar{\bar{f}}:\bar{\bar{g}}:\bar{\bar{a}}:\bar{\bar{h}};\bar{\bar{\bar{c}}}.$
	If $F=8$
$2\cdot 3^2.5$	$C:G:A:e:g:\bar{e}:\bar{h}:\bar{\bar{h}}$
$2^2\cdot 3^2.5$	$C:G:A:c:e:g:a:\bar{e}:\bar{h}:\bar{\bar{e}}:\bar{\bar{h}}$
$2^3\cdot 3^2.5$	$C:F:G:A:c:e:g:a:\bar{c}:\bar{e}:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{h}}$
$2^4\cdot 3^2.5$	$C:F:G:A:c:e:f:g:a:\bar{c}:\bar{e}:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{a}}:\bar{\bar{h}}$
$2^5\cdot 3^2.5$	$C:F:G:A:c:e:f:g:a:\bar{c}:\bar{e}:\bar{f}:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{a}}:\bar{\bar{h}}:\bar{\bar{\bar{c}}}$
$2^6\cdot 3^2.5$	$C:F:G:A:c:e:f:g:a:\bar{c}:\bar{e}:\bar{f}:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{e}}:\bar{\bar{f}}:\bar{\bar{g}}:\bar{\bar{a}}:\bar{\bar{h}};\bar{\bar{\bar{c}}}.$

	If $F=16$
$2^2\cdot 3^2.5$	$C:E:G:A:e:g:h:\bar{e}:\bar{h}:\bar{\bar{h}}$
$2^3\cdot 3^2.5$	$C:E:G:A:c:e:g:a:h:\bar{e}:\bar{g}:\bar{h}:\bar{\bar{e}}:\bar{\bar{h}}$
$2^4\cdot 3^2.5$	$C:E:F:G:A:c:e:g:a:h:\bar{c}:\bar{e}:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{h}}$
$2^5\cdot 3^2.5$	$C:E:F:G:A:c:e:f:g:a:h:\bar{c}:\bar{e}:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{a}}:\bar{\bar{h}}$
$2^6\cdot 3^2.5$	$C:E:F:G:A:c:e:f:g:a:h:\bar{c}:\bar{e}:\bar{f}:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{e}}:\bar{\bar{f}}:\bar{\bar{g}}:\bar{\bar{a}}:\bar{\bar{h}};\bar{\bar{\bar{c}}}.$
	If $F=32$
$2^3\cdot 3^2.5$	$C:E:G:A:H:e:g:h:\bar{e}:\bar{h}:\bar{\bar{h}}$
$2^4\cdot 3^2.5$	$C:E:G:A:H:c:e:g:a:h:\bar{e}:\bar{g}:\bar{h}:\bar{\bar{h}}$
$2^5\cdot 3^2.5$	$C:E:F:G:A:H:c:e:g:a:h:\bar{c}:\bar{e}:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{h}}$
$2^6\cdot 3^2.5$	$C:E:F:G:A:H:c:e:f:g:a:h:\bar{c}:\bar{e}:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{a}}:\bar{\bar{h}}$
$2^7\cdot 3^2.5$	$C:E:F:G:A:H:c:e:f:g:a:h:\bar{c}:\bar{e}:\bar{f}:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{a}}:\bar{\bar{h}}:\bar{\bar{\bar{c}}}$
$2^8\cdot 3^2.5$	$C:E:F:G:A:H:c:e:f:g:a:h:\bar{c}:\bar{e}:\bar{f}:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{f}}:\bar{\bar{a}}:\bar{\bar{h}};\bar{\bar{\bar{c}}}.$

Mode	SYSTEMS
$2^n\cdot 3\cdot 5^2$	

species	If F = 4
$3\cdot5^2$	$\mathrm{C}:\mathrm{A}:\overline{e}:\overline{c}s$
$2\cdot3\cdot5^2$	$\mathrm{C}:\mathrm{A}:c:a:\overline{e}:\overline{\overline{c}}s:\overline{\overline{e}}$
$2^2\cdot3\cdot5^2$	$\mathrm{C}:\mathrm{F}:\mathrm{A}:c:a:\overline{c}:\overline{e}:\overline{a}:\overline{\overline{c}}s:\overline{\overline{e}}$
$2^3\cdot3\cdot5^2$	$\mathrm{C}:\mathrm{F}:\mathrm{A}:c:f:a:\overline{c}:\overline{e}:\overline{a}:\overline{\overline{c}}:\overline{\overline{c}}s:\overline{\overline{e}}:\overline{\overline{a}}$
$2^4\cdot3\cdot5^2$	$\mathrm{C}:\mathrm{F}:\mathrm{A}:c:f:a:\overline{c}:\overline{e}:\overline{f}:\overline{a}:\overline{\overline{c}}:\overline{\overline{c}}s:\overline{\overline{e}}:\overline{\overline{a}}:\overline{\overline{\overline{c}}}$
$2^5\cdot3\cdot5^2$	$\mathrm{C}:\mathrm{F}:\mathrm{A}:c:f:a:\overline{c}:\overline{e}:\overline{f}:\overline{a}:\overline{\overline{c}}:\overline{\overline{c}}s:\overline{\overline{e}}:\overline{\overline{f}}:\overline{\overline{a}};\overline{\overline{\overline{c}}}.$

	If F = 8
$2\cdot3\cdot5^2$	$\mathrm{C}:\mathrm{A}:e:\overline{c}s:\overline{e}:\overline{\overline{c}}s:\overline{\overline{g}}s$
$2^2\cdot3\cdot5^2$	$\mathrm{C}:\mathrm{F}:\mathrm{A}:c:e:a:\overline{c}s:\overline{e}:\overline{\overline{c}}s:\overline{\overline{e}}:\overline{\overline{g}}s$
$2^3\cdot3\cdot5^2$	$\mathrm{C}:\mathrm{F}:\mathrm{A}:c:e:a:\overline{c}:\overline{c}s:\overline{e}:\overline{a}:\overline{\overline{c}}s:\overline{\overline{e}}:\overline{\overline{g}}s$
$2^4\cdot3\cdot5^2$	$\mathrm{C}:\mathrm{F}:\mathrm{A}:c:e:f:a:\overline{c}:\overline{c}s:\overline{e}:\overline{a}:\overline{\overline{c}}:\overline{\overline{c}}s:\overline{\overline{e}}:\overline{\overline{g}}s:\overline{\overline{a}}$
$2^5\cdot3\cdot5^2$	$\mathrm{C}:\mathrm{F}:\mathrm{A}:c:e:f:a:\overline{c}:\overline{c}s:\overline{e}:\overline{f}:\overline{a}:\overline{\overline{c}}:\overline{\overline{c}}s:\overline{\overline{g}}s:\overline{\overline{a}}:\overline{\overline{\overline{c}}}$
$2^6\cdot3\cdot5^2$	$\mathrm{C}:\mathrm{F}:\mathrm{A}:c:e:f:a:\overline{c}:\overline{c}s:\overline{e}:\overline{f}:\overline{a}:\overline{\overline{c}}:\overline{\overline{c}}s:\overline{\overline{e}}:\overline{\overline{f}}:\overline{\overline{g}}s:\overline{\overline{a}};\overline{\overline{\overline{c}}}.$

	If F = 16
$2^2\cdot3\cdot5^2$	$\mathrm{C}:\mathrm{E}:\mathrm{A}:cs:e:\overline{e}s:\overline{e}:\overline{g}s:\overline{c}s:\overline{g}s$
$2^3\cdot3\cdot5^2$	$\mathrm{C}:\mathrm{E}:\mathrm{A}:c:cs:e:a:\overline{c}s:\overline{e}:\overline{g}s:\overline{\overline{c}}s:\overline{\overline{e}}:\overline{\overline{g}}s$
$2^4\cdot3\cdot5^2$	$\mathrm{C}:\mathrm{E}:\mathrm{F}:\mathrm{A}:c:cs:e:a:\overline{c}:\overline{c}s:\overline{e}:\overline{g}s:\overline{a}:\overline{\overline{c}}s:\overline{\overline{e}}:\overline{\overline{g}}s$
$2^5\cdot3\cdot5^2$	$\mathrm{C}:\mathrm{E}:\mathrm{F}:\mathrm{A}:c:cs:e:f:a:\overline{c}:\overline{c}s:\overline{e}:\overline{g}s:\overline{a}:\overline{\overline{c}}:\overline{\overline{c}}s:\overline{\overline{e}}:\overline{\overline{g}}s:\overline{\overline{a}}$
$2^6\cdot3\cdot5^2$	$\mathrm{C}:\mathrm{E}:\mathrm{F}:\mathrm{A}:c:cs:e:f:a:\overline{c}:\overline{c}s:\overline{e}:\overline{f}:\overline{g}s:\overline{a}:\overline{\overline{c}}:\overline{\overline{c}}s:\overline{\overline{e}}:\overline{\overline{g}}s:\overline{\overline{a}}:\overline{\overline{\overline{c}}}$
$2^7\cdot3\cdot5^2$	$\mathrm{C}:\mathrm{E}:\mathrm{F}:\mathrm{A}:c:cs:e:f:a:\overline{c}:\overline{c}s:\overline{e}:\overline{f}:\overline{g}s:\overline{a}:\overline{\overline{c}}:\overline{\overline{c}}s:\overline{\overline{e}}:\overline{\overline{f}}:\overline{\overline{g}}s:\overline{\overline{a}};\overline{\overline{\overline{c}}}.$

	If F = 32
$2^3\cdot3\cdot5^2$	$\mathrm{C}:Cs:\mathrm{E}:\mathrm{A}:cs:e:gs:\overline{c}s:\overline{e}:\overline{g}s:\overline{\overline{c}}s:\overline{\overline{g}}s$
$2^4\cdot3\cdot5^2$	$\mathrm{C}:Cs:\mathrm{E}:\mathrm{A}:c:cs:e:gs:a:\overline{c}s:\overline{e}:\overline{g}s:\overline{\overline{c}}s:\overline{\overline{e}}:\overline{\overline{g}}s$
$2^5\cdot3\cdot5^2$	$\mathrm{C}:Cs:\mathrm{E}:\mathrm{F}:\mathrm{A}:c:cs:e:gs:a:\overline{c}:\overline{c}s:\overline{e}:\overline{g}s:\overline{a}:\overline{\overline{c}}s:\overline{\overline{e}}:\overline{\overline{g}}s$
$2^6\cdot3\cdot5^2$	$\mathrm{C}:\mathrm{C}s:\mathrm{E}:\mathrm{F}:\mathrm{A}:c:cs:e:f:gs:a:\overline{c}:\overline{c}s:\overline{e}:\overline{g}s:\overline{a}:\overline{\overline{c}}:\overline{\overline{c}}s:\overline{\overline{e}}:\overline{\overline{g}}s:\overline{\overline{a}}$
$2^7\cdot3\cdot5^2$	$\mathrm{C}:\mathrm{C}s:\mathrm{E}:\mathrm{F}:\mathrm{A}:c:cs:e:f:gs:a:\overline{c}:\overline{c}s:\overline{e}:\overline{f}:\overline{g}s:\overline{a}:\overline{\overline{c}}:\overline{\overline{c}}s:\overline{\overline{e}}:\overline{\overline{g}}s:\overline{\overline{a}}:\overline{\overline{\overline{c}}}$
$2^8\cdot3\cdot5^2$	$\mathrm{C}:\mathrm{C}s:\mathrm{E}:\mathrm{F}:\mathrm{A}:c:cs:e:f:gs:a:\overline{c}:\overline{c}s:\overline{e}:\overline{f}:\overline{g}s:\overline{a}:\overline{\overline{c}}:\overline{\overline{c}}s:\overline{\overline{e}}:\overline{\overline{f}}:\overline{\overline{g}}s:\overline{\overline{a}};\overline{\overline{\overline{c}}}.$

	If F = 64
$2^4\cdot 3\cdot 5^2$	$C : Cs : E : Gs : A : cs : e : gs : \overline{c}s : \overline{e} : \overline{g}s : \overline{\overline{c}}s : \overline{\overline{g}}s$
$2^5\cdot 3\cdot 5^2$	$C : Cs : E : Gs : A : c : cs : e : gs : a : \overline{c}s : \overline{e} : \overline{g}s : \overline{\overline{c}}s : \overline{\overline{e}} : \overline{\overline{g}}s$
$2^6\cdot 3\cdot 5^2$	$C : Cs : E : F : Gs : A : c : cs : e : gs : a : \overline{c} : \overline{c}s : \overline{e} : \overline{g}s : \overline{a} : \overline{\overline{c}}s : \overline{\overline{e}} : \overline{\overline{g}}s$
$2^7\cdot 3\cdot 5^2$	$C : Cs : E : F : Gs : A : c : cs : e : f : gs : a : \overline{c} : \overline{c}s : \overline{e} : \overline{g}s : \overline{a} : \overline{\overline{c}} : \overline{\overline{c}}s : \overline{\overline{e}} : \overline{\overline{g}}s : \overline{\overline{a}}$
$2^8\cdot 3\cdot 5^2$	$C : Cs : E : F : Gs : A : c : cs : e : f : gs : a : \overline{c} : \overline{c}s : \overline{e} : \overline{f} : \overline{g}s : \overline{a} : \overline{\overline{c}} : \overline{\overline{c}}s : \overline{\overline{e}} : \overline{\overline{g}}s : \overline{\overline{a}} : \overline{\overline{c}}$
$2^9\cdot 3\cdot 5^2$	$C : Cs : E : F : Gs : A : c : cs : e : f : gs : a : \overline{c} : \overline{c}s : \overline{e} : \overline{f} : \overline{g}s : \overline{a} : \overline{\overline{c}} : \overline{\overline{c}}s : \overline{\overline{e}} : \overline{\overline{f}} : \overline{\overline{g}}s : \overline{\overline{a}} ; \overline{\overline{\overline{c}}}.$

Mode $2^n\cdot 3^3\cdot 5$ *Species*	SYSTEMS
	If F = 4
$3^3\cdot 5$	$C : A : g : \overline{e} : \overline{a} : \overline{h}$
$2\cdot 3^3\cdot 5$	$C : A : c : g : a : \overline{e} : \overline{g} : \overline{a} : \overline{e} : \overline{h}$
$2^2\cdot 3^3\cdot 5$	$C : F : A : c : g : a : \overline{c} : \overline{e} : \overline{g} : \overline{a} : \overline{d} : \overline{\overline{e}} : \overline{\overline{g}} : \overline{\overline{h}}$
$2^3\cdot 3^3\cdot 5$	$C : F : A : c : f : g : a : \overline{c} : \overline{e} : \overline{g} : \overline{a} : \overline{\overline{c}} : \overline{\overline{d}} : \overline{\overline{e}} : \overline{\overline{g}} : \overline{\overline{a}} : \overline{\overline{h}}$
$2^4\cdot 3^3\cdot 5$	$C : F : A : c : f : g : a : \overline{c} : \overline{e} : \overline{f} : \overline{g} : \overline{a} : \overline{\overline{c}} : \overline{\overline{d}} : \overline{\overline{e}} : \overline{\overline{g}} : \overline{\overline{a}} : \overline{\overline{h}}$
$2^5\cdot 3^3\cdot 5$	$C : F : A : c : f : g : a : \overline{c} : \overline{e} : \overline{f} : \overline{g} : \overline{a} : \overline{\overline{c}} : \overline{\overline{d}} : \overline{\overline{e}} : \overline{\overline{f}} : \overline{\overline{g}} : \overline{\overline{a}} : \overline{\overline{h}} ; \overline{\overline{\overline{c}}}.$
	If F = 8
$2\cdot 3^3\cdot 5$	$C : G : A : e : g : \overline{d} : \overline{e} : \overline{h} : \overline{\overline{d}} : \overline{\overline{h}}$
$2^2\cdot 3^3\cdot 5$	$C : G : A : c : e : g : a : \overline{d} : \overline{e} : \overline{g} : \overline{h} : \overline{\overline{d}} : \overline{\overline{e}} : \overline{\overline{h}}$
$2^3\cdot 3^3\cdot 5$	$C : F : G : A : c : e : g : a : \overline{c} : \overline{d} : \overline{e} : \overline{g} : \overline{a} : \overline{h} : \overline{\overline{d}} : \overline{\overline{e}} : \overline{\overline{g}} : \overline{\overline{h}}$
$2^4\cdot 3^3\cdot 5$	$C : F : G : A : c : e : f : g : a : \overline{c} : \overline{d} : \overline{e} : \overline{g} : \overline{a} : \overline{h} : \overline{\overline{c}} : \overline{\overline{d}} : \overline{\overline{e}} : \overline{\overline{g}} : \overline{\overline{a}} : \overline{\overline{h}}$
$2^5\cdot 3^3\cdot 5$	$C : F : G : A : c : e : f : g : a : \overline{c} : \overline{d} : \overline{e} : \overline{f} : \overline{g} : \overline{a} : \overline{h} : \overline{\overline{c}} : \overline{\overline{d}} : \overline{\overline{e}} : \overline{\overline{g}} : \overline{\overline{a}} : \overline{\overline{h}} : \overline{\overline{\overline{c}}}$
$2^6\cdot 3^3\cdot 5$	$C : F : G : A : c : e : f : g : a : \overline{c} : \overline{d} : \overline{e} : \overline{f} : \overline{g} : \overline{a} : \overline{h} : \overline{\overline{c}} : \overline{\overline{d}} : \overline{\overline{e}} : \overline{\overline{f}} : \overline{\overline{g}} : \overline{\overline{a}} : \overline{\overline{h}} ; \overline{\overline{\overline{c}}}.$
	If F = 16
$2^2\cdot 3^3\cdot 5$	$C : E : G : A : d : e : g : h : d : \overline{e} : \overline{h} : \overline{d} : \overline{f}s : \overline{\overline{h}}$
$2^3\cdot 3^3\cdot 5$	$C : E : G : A : c : d : e : g : a : h : \overline{d} : \overline{e} : \overline{g} : \overline{h} : \overline{\overline{d}} : \overline{\overline{e}} : \overline{\overline{f}}s : \overline{\overline{h}}$
$2^4\cdot 3^3\cdot 5$	$C : E : F : G : A : c : d : e : g : a : h : \overline{c} : \overline{d} : \overline{e} : \overline{g} : \overline{a} : \overline{h} : \overline{\overline{d}} : \overline{\overline{e}} : \overline{\overline{f}}s : \overline{\overline{g}} : \overline{\overline{h}}$
$2^5\cdot 3^3\cdot 5$	$C : E : F : G : A : c : d : e : f : g : a : h : \overline{c} : \overline{d} : \overline{e} : \overline{g} : \overline{a} : \overline{h} : \overline{\overline{d}} : \overline{\overline{e}} : \overline{\overline{f}}s : \overline{\overline{g}} : \overline{\overline{a}} : \overline{\overline{h}}$
$2^6\cdot 3^3\cdot 5$	$C : E : F : G : A : c : d : e : f : g : a : h : \overline{c} : \overline{d} : \overline{e} : \overline{g} : \overline{a} : \overline{h} : \overline{\overline{c}} : \overline{\overline{d}} : \overline{\overline{e}} : \overline{\overline{f}}s : \overline{\overline{g}} : \overline{\overline{a}} : \overline{\overline{h}} : \overline{\overline{\overline{c}}}$

$2^7\cdot 3^3\cdot 5$	$C:E:F:G:A:c:d:e:f:g:a:h:\bar{c}:\bar{d}:\bar{e}:\bar{f}:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{d}}:\bar{\bar{e}}:\bar{\bar{f}}:\bar{\bar{f}}s:\bar{\bar{g}}:\bar{\bar{a}}:\bar{\bar{h}};\bar{\bar{\bar{c}}}$

If $F=32$

$2^3\cdot 3^3\cdot 5$	$C:D:E:G:A:H:d:e:g:h:\bar{d}:\bar{e}:\bar{f}s:\bar{h}:\bar{\bar{d}}:\bar{\bar{e}}:\bar{\bar{f}}s:\bar{\bar{h}}$
$2^4\cdot 3^3\cdot 5$	$C:D:E:G:A:H:c:d:e:g:h:\bar{d}:\bar{e}:\bar{f}s:\bar{g}:\bar{h}:\bar{\bar{d}}:\bar{\bar{e}}:\bar{\bar{f}}s:\bar{\bar{h}}$
$2^5\cdot 3^3\cdot 5$	$C:D:E:G:A:H:c:d:e:g:a:h:\bar{c}:\bar{d}:\bar{e}:\bar{f}s:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{d}}:\bar{\bar{e}}:\bar{\bar{f}}s:\bar{\bar{g}}:\bar{\bar{h}}$
$2^6\cdot 3^3\cdot 5$	$C:D:E:G:A:H:c:d:e:f:g:a:h:\bar{c}:\bar{d}:\bar{e}:\bar{f}s:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{d}}:\bar{\bar{e}}:\bar{\bar{f}}s:\bar{\bar{g}}:\bar{\bar{d}}:\bar{\bar{h}}$
$2^7\cdot 3^3\cdot 5$	$C:E:F:G:A:H:c:d:e:f:g:a:h:\bar{c}:\bar{d}:\bar{e}:\bar{f}:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{d}}:\bar{\bar{e}}:\bar{\bar{f}}:\bar{\bar{f}}s:\bar{\bar{g}}:\bar{\bar{a}}:\bar{\bar{h}}:\bar{\bar{\bar{c}}}$
$2^8\cdot 3^3\cdot 5$	$C:E:F:G:A:H:c:d:e:f:g:a:h:a:\bar{c}:\bar{d}:\bar{e}:\bar{f}:\bar{f}s:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{d}}:\bar{\bar{e}}:\bar{\bar{f}}:\bar{\bar{f}}s:\bar{\bar{g}}$ $:\bar{\bar{a}}:\bar{\bar{h}};\bar{\bar{\bar{c}}}.$

If $F=64$

$2^4\cdot 3^3\cdot 5$	$C:D:E:G:A:H:d:e:fs:g:h:\bar{d}:\bar{e}:\bar{f}s:\bar{h}:\bar{\bar{d}}:\bar{\bar{f}}s:\bar{\bar{h}}$
$2^5\cdot 3^3\cdot 5$	$C:D:E:G:A:H:c:d:e:fs:g:a:h:\bar{d}:\bar{e}:\bar{f}s:\bar{g}:\bar{h}:\bar{\bar{d}}:\bar{\bar{e}}:\bar{\bar{f}}s:\bar{\bar{h}}$
$2^6\cdot 3^3\cdot 5$	$C:D:E:G:A:H:c:d:e:fs:g:a:h:\bar{c}:\bar{d}:\bar{e}:\bar{f}s:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{d}}:\bar{\bar{e}}:\bar{\bar{f}}s:\bar{\bar{g}}:\bar{\bar{h}}$
$2^7\cdot 3^3\cdot 5$	$C:D:E:G:A:H:c:d:e:fs:g:a:h:\bar{c}:\bar{d}:\bar{e}:\bar{f}s:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{d}}:\bar{\bar{e}}:\bar{\bar{f}}s:\bar{\bar{g}}:\bar{\bar{a}}:\bar{\bar{h}}$
$2^8\cdot 3^3\cdot 5$	$C:D:E:G:A:H:c:d:e:fs:g:a:h:\bar{c}:\bar{d}:\bar{e}:\bar{f}:\bar{f}s:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{d}}:\bar{\bar{e}}:\bar{\bar{f}}s:\bar{\bar{g}}:\bar{\bar{a}}$ $:\bar{\bar{h}}:\bar{\bar{\bar{c}}}$
$2^9\cdot 3^3\cdot 5$	$C:D:E:G:A:H:c:d:e:f:fs:g:a:h:\bar{c}:\bar{d}:\bar{e}:\bar{f}:\bar{f}s:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{d}}:\bar{\bar{e}}:\bar{\bar{f}}s:\bar{\bar{g}}$ $:\bar{\bar{a}}:\bar{\bar{h}};\bar{\bar{\bar{c}}}.$

If $F=128$

$2^5\cdot 3^3\cdot 5$	$C:D:E:Fs:G:A:H:d:e:fs:g:h:\bar{d}:\bar{e}:\bar{f}s:\bar{g}:\bar{h}:\bar{\bar{d}}:\bar{\bar{f}}s:\bar{\bar{h}}$
$2^6\cdot 3^3\cdot 5$	$C:D:E:Fs:G:A:H:c:d:e:fs:g:a:h:\bar{d}:\bar{e}:\bar{f}s:\bar{g}:\bar{h}:\bar{\bar{d}}:\bar{\bar{e}}:\bar{\bar{f}}s:\bar{\bar{h}}$
$2^7\cdot 3^3\cdot 5$	$C:D:E:F:Fs:G:A:H:c:d:e:fs:g:a:h:\bar{c}:\bar{d}:\bar{e}:\bar{f}s:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{d}}:\bar{\bar{e}}:\bar{\bar{f}}s:\bar{\bar{g}}:\bar{\bar{h}}$
$2^8\cdot 3^3\cdot 5$	$C:D:E:Fs:G:A:H:c:d:e:f:fs:g:a:h:\bar{c}:\bar{d}:\bar{e}:\bar{f}s:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{d}}:\bar{\bar{e}}:\bar{\bar{f}}s$ $:\bar{\bar{g}}:\bar{\bar{a}}:\bar{\bar{h}}$
$2^9\cdot 3^3\cdot 5$	$C:D:E:Fs:G:A:H:c:d:e:f:fs:g:a:h:\bar{c}:\bar{d}:\bar{e}:\bar{f}:\bar{f}s:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{d}}:\bar{\bar{e}}:\bar{\bar{f}}s:\bar{\bar{g}}$ $:\bar{\bar{a}}:\bar{\bar{h}}:\bar{\bar{\bar{c}}}$
$2^{10}\cdot 3^3\cdot 5$	$C:D:E:F:Fs:G:A:H:c:d:e:f:fs:g:a:h:\bar{c}:\bar{d}:\bar{e}:\bar{f}:\bar{f}s:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{d}}:\bar{\bar{e}}:\bar{\bar{f}}s:\bar{\bar{g}}$ $:\bar{\bar{a}}:\bar{\bar{h}};\bar{\bar{\bar{c}}}.$

Mode $2^n \cdot 3^2 \cdot 5^2$	SYSTEMS
Species	If $\mathrm{F} = 4$
$3^2 \cdot 5^2$	$\mathrm{C:A}:g:\bar{e}:\bar{\bar{c}}s:\bar{\bar{h}}$
$2 \cdot 3^2 \cdot 5^2$	$\mathrm{C:A}:c:g:a:\bar{e}:\bar{g}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{h}}$
$2^2 \cdot 3^2 \cdot 5^2$	$\mathrm{C:F:A}:c:g:a:\bar{c}:\bar{e}:\bar{g}:\bar{a}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{h}}$
$2^3 \cdot 3^2 \cdot 5^2$	$\mathrm{C:F:A}:c:f:g:a:\bar{c}:\bar{e}:\bar{g}:\bar{a}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{a}}:\bar{\bar{h}}$
$2^4 \cdot 3^2 \cdot 5^2$	$\mathrm{C:F:A}:c:f:g:a:\bar{c}:\bar{e}:\bar{f}:\bar{g}:\bar{a}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{a}}:\bar{\bar{h}}:\bar{\bar{\bar{c}}}$
$2^5 \cdot 3^2 \cdot 5^2$	$\mathrm{C:F:A}:c:f:g:a:\bar{c}:\bar{e}:\bar{f}:\bar{g}:\bar{a}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{d}}:\bar{\bar{e}}:\bar{\bar{f}}:\bar{\bar{g}}:\bar{\bar{a}}:\bar{\bar{h}};\bar{\bar{\bar{c}}}.$
	If $\mathrm{F} = 8$
$3^2 \cdot 5^2$	$\mathrm{G}:e:\bar{c}s:\bar{h}:\bar{\bar{g}}s$
$2 \cdot 3^2 \cdot 5^2$	$\mathrm{C:G:A}:e:g:\bar{c}s:\bar{e}:\bar{g}:\bar{\bar{c}}s:\bar{\bar{g}}s:\bar{\bar{h}}$
$2^2 \cdot 3^2 \cdot 5^2$	$\mathrm{C:G:A}:c:e:g:a:\bar{c}s:\bar{e}:\bar{g}:h:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{g}}s:\bar{\bar{h}}$
$2^3 \cdot 3^2 \cdot 5^2$	$\mathrm{C:F:G:A}:c:e:g:a:\bar{c}:\bar{c}s:\bar{e}:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{g}}s:\bar{\bar{h}}$
$2^4 \cdot 3^2 \cdot 5^2$	$\mathrm{C:F:G:A}:c:e:g:a:\bar{c}:\bar{c}s:\bar{e}:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{g}}s:\bar{\bar{a}}:\bar{\bar{h}}$
$2^5 \cdot 3^2 \cdot 5^2$	$\mathrm{C:F:G:A}:c:e:f:g:a:\bar{c}:\bar{c}s:\bar{e}:\bar{f}:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{g}}s:\bar{\bar{a}}:\bar{\bar{h}}:\bar{\bar{\bar{c}}}$
$2^6 \cdot 3^2 \cdot 5^2$	$\mathrm{C:F:G:A}:c:e:f:g:a:\bar{c}:\bar{c}s:\bar{e}:\bar{f}:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{f}}:\bar{\bar{g}}:\bar{\bar{g}}s:\bar{\bar{a}}:\bar{\bar{h}};\bar{\bar{\bar{c}}}.$
	If $\mathrm{F} = 16$
$2 \cdot 3^2 \cdot 5^2$	$\mathrm{E:G}:cs:e:h:\bar{c}s:\bar{g}s:\bar{h}:\bar{\bar{g}}s$
$2^2 \cdot 3^2 \cdot 5^2$	$\mathrm{C:E:G:A}:cs:e:g:h:\bar{c}s:\bar{e}:\bar{g}s:\bar{h}:\bar{\bar{c}}s:\bar{\bar{g}}s:\bar{\bar{h}}$
$2^3 \cdot 3^2 \cdot 5^2$	$\mathrm{C:E:G:A}:c:cs:e:g:a:h:\bar{c}s:\bar{e}:\bar{g}s:\bar{h}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{g}}s:\bar{\bar{h}}$
$2^4 \cdot 3^2 \cdot 5^2$	$\mathrm{C:E:F:G:A}:c:cs:e:g:a:h:\bar{c}:\bar{c}s:\bar{e}:\bar{g}:\bar{g}s:\bar{a}:\bar{h}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{g}}s:\bar{\bar{h}}$
$2^5 \cdot 3^2 \cdot 5^2$	$\mathrm{C:E:F:G:A}:c:cs:e:f:g:a:h:\bar{c}:\bar{c}s:\bar{e}:\bar{g}:\bar{g}s:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{g}}s:\bar{\bar{a}}:\bar{\bar{h}}$

$2^6\cdot 3^2\cdot 5^2$	$\mathrm{C}:\mathrm{E}:\mathrm{F}:\mathrm{G}:\mathrm{A}:c:cs:e:f:g:a:h:\bar{c}:\bar{c}s:\bar{e}:\bar{f}:\bar{g}:\bar{g}s:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{g}}s:\bar{\bar{a}}:\bar{\bar{h}}:\bar{\bar{\bar{c}}}$
$2^7\cdot 3^2\cdot 5^2$	$\mathrm{C}:\mathrm{E}:\mathrm{F}:\mathrm{G}:\mathrm{A}:c:cs:e:f:g:a:h:\bar{c}:\bar{c}s:\bar{e}:\bar{f}:\bar{g}:\bar{g}s:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{f}}:\bar{\bar{g}}:\bar{\bar{g}}s:\bar{\bar{a}}:\bar{\bar{h}};\bar{\bar{\bar{c}}}$

If $\mathrm{F}=32$

$2^2\cdot 3^2\cdot 5^2$	$\mathrm{C}s:\mathrm{E}:\mathrm{G}:\mathrm{H}:cs:e:gs:h:\bar{c}s:\bar{g}s:\bar{h}:\bar{d}s:\bar{g}s$
$2^3\cdot 3^2\cdot 5^2$	$\mathrm{C}s:\mathrm{E}:\mathrm{G}:\mathrm{A}:\mathrm{H}:cs:e:gs:h:\bar{c}s:\bar{g}s:\bar{h}:\bar{\bar{c}}s:\bar{\bar{g}}s:\bar{\bar{h}}$
$2^4\cdot 3^2\cdot 5^2$	$\mathrm{C}s:\mathrm{E}:\mathrm{G}:\mathrm{A}:\mathrm{H}:cs:e:g:gs:a:h:\bar{c}s:\bar{e}:\bar{g}:\bar{g}s:\bar{h}:\bar{\bar{c}}s:\bar{\bar{d}}s:\bar{\bar{e}}:\bar{\bar{g}}s:\bar{\bar{h}}$
$2^5\cdot 3^2\cdot 5^2$	$\mathrm{C}s:\mathrm{E}:\mathrm{G}:\mathrm{A}:\mathrm{H}:c:cs:e:g:gs:a:h:\bar{c}:\bar{c}s:\bar{e}:\bar{g}:\bar{g}s:\bar{d}:\bar{h}:\bar{\bar{c}}s:\bar{\bar{d}}s:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{g}}s:\bar{\bar{h}}$
$2^6\cdot 3^2\cdot 5^2$	$\mathrm{C}s:\mathrm{E}:\mathrm{F}:\mathrm{G}:\mathrm{A}:\mathrm{H}:c:cs:e:f:g:gs:a:h:\bar{c}:\bar{c}s:\bar{e}:\bar{g}:\bar{g}s:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{d}}s:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{g}}s:\bar{\bar{a}}:\bar{\bar{h}}$
$2^7\cdot 3^2\cdot 5^2$	$\mathrm{C}s:\mathrm{E}:\mathrm{F}:\mathrm{G}:\mathrm{A}:\mathrm{H}:c:cs:e:f:g:gs:a:h:\bar{c}:\bar{c}s:\bar{e}:\bar{f}:\bar{g}:\bar{g}s:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{d}}s:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{g}}s:\bar{\bar{a}}:\bar{\bar{h}}:\bar{\bar{\bar{c}}}$
$2^8\cdot 3^2\cdot 5^2$	$\mathrm{C}s:\mathrm{E}:\mathrm{F}:\mathrm{G}:\mathrm{A}:\mathrm{H}:c:cs:e:f:g:gs:a:h:\bar{c}:\bar{c}s:\bar{e}:\bar{f}:\bar{g}:\bar{g}s:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{d}}s:\bar{\bar{e}}:\bar{\bar{f}}:\bar{\bar{g}}:\bar{\bar{g}}s:\bar{\bar{a}}:\bar{\bar{h}};\bar{\bar{\bar{c}}}.$

If $\mathrm{F}=64$

$2^3\cdot 3^2\cdot 5^2$	$\mathrm{C}s:\mathrm{E}:\mathrm{G}:\mathrm{G}s:\mathrm{H}:cs:e:gs:h:\bar{c}s:\bar{d}s:\bar{g}s:\bar{h}:\bar{d}s:\bar{g}s$
$2^4\cdot 3^2\cdot 5^2$	$\mathrm{C}s:\mathrm{E}:\mathrm{G}:\mathrm{G}s:\mathrm{H}:cs:e:g:gs:h:\bar{c}s:\bar{d}s:\bar{g}s:\bar{h}:\bar{\bar{c}}s:\bar{\bar{d}}s:\bar{\bar{g}}s:\bar{\bar{h}}$
$2^5\cdot 3^2\cdot 5^2$	$\mathrm{C}:\mathrm{C}s:\mathrm{E}:\mathrm{G}:\mathrm{G}s:\mathrm{H}:c:cs:e:g:gs:h:\bar{c}s:\bar{d}s:\bar{g}:\bar{g}s:\bar{h}:\bar{\bar{c}}s:\bar{\bar{d}}s:\bar{\bar{g}}s:\bar{\bar{h}}$
$2^6\cdot 3^2\cdot 5^2$	$\mathrm{C}:\mathrm{C}s:\mathrm{E}:\mathrm{F}:\mathrm{G}:\mathrm{G}s:\mathrm{H}:c:cs:e:g:gs:a:h:\bar{c}:\bar{c}s:\bar{d}:\bar{d}s:\bar{e}:\bar{g}:\bar{g}s:\bar{a}:\bar{h}:\bar{\bar{c}}s:\bar{\bar{d}}s:\bar{\bar{e}}:\bar{\bar{g}}s:\bar{\bar{h}}$
$2^7\cdot 3^2\cdot 5^2$	$\mathrm{C}:\mathrm{C}s:\mathrm{E}:\mathrm{F}:\mathrm{G}:\mathrm{G}s:\mathrm{A}:\mathrm{H}:c:cs:e:f:g:gs:a:h:\bar{c}:\bar{c}s:\bar{d}:\bar{d}s:\bar{e}:\bar{g}:\bar{g}s:\bar{a}:\bar{h}:\bar{\bar{c}}s:\bar{\bar{d}}s:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{g}}s:\bar{\bar{a}}:\bar{\bar{h}}$
$2^8\cdot 3^2\cdot 5^2$	$\mathrm{C}:\mathrm{C}s:\mathrm{E}:\mathrm{F}:\mathrm{G}:\mathrm{G}s:\mathrm{A}:\mathrm{H}:c:cs:e:f:g:gs:a:h:\bar{c}:\bar{c}s:\bar{d}s:\bar{e}:\bar{f}:\bar{g}:\bar{g}s:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{d}}s:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{g}}s:\bar{\bar{a}}:\bar{\bar{h}}:\bar{\bar{\bar{c}}}$
$2^9\cdot 3^2\cdot 5^2$	$\mathrm{C}:\mathrm{C}s:\mathrm{E}:\mathrm{F}:\mathrm{G}:\mathrm{G}s:\mathrm{A}:\mathrm{H}:c:cs:e:f:g:gs:a:h:\bar{c}:\bar{c}s:\bar{d}s:\bar{e}:\bar{f}:\bar{g}:\bar{g}s:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{d}}s:\bar{\bar{e}}:\bar{\bar{f}}:\bar{\bar{g}}:\bar{\bar{g}}s:\bar{\bar{a}}:\bar{\bar{h}};\bar{\bar{\bar{c}}}.$

If $\mathrm{F} = 128$

$2^4 \cdot 3^2 \cdot 5^2$	$\mathrm{C}s:\mathrm{E}:\mathrm{G}:\mathrm{G}s:\mathrm{H}:cs:ds:e:gs:h:\bar{c}s:\bar{d}s:\bar{g}s:\bar{h}:\bar{\bar{d}}s:\bar{\bar{g}}s$
$2^5 \cdot 3^2 \cdot 5^2$	$\mathrm{C}:\mathrm{C}s:\mathrm{E}:\mathrm{G}:\mathrm{G}s:\mathrm{H}:cs:ds:e:g:gs:h:\bar{c}s:\bar{d}s:\bar{e}:\bar{g}s:\bar{h}:\bar{\bar{d}}s:\bar{\bar{g}}s:\bar{\bar{h}}$
$2^6 \cdot 3^2 \cdot 5^2$	$\mathrm{C}:\mathrm{C}s:\mathrm{E}:\mathrm{G}:\mathrm{G}s:\mathrm{H}:c:cs:ds:e:g:gs:a:h:\bar{c}s:\bar{d}s:\bar{e}:\bar{g}:\bar{g}s:\bar{h}:\bar{\bar{c}}s:\bar{\bar{d}}s$ $:\bar{\bar{e}}:\bar{\bar{g}}s:\bar{\bar{h}}$
$2^7 \cdot 3^2 \cdot 5^2$	$\mathrm{C}:\mathrm{C}s:\mathrm{E}:\mathrm{G}:\mathrm{G}s:\mathrm{H}:c:cs:ds:e:g:gs:a:h:\bar{c}:\bar{c}s:\bar{d}s:\bar{e}:\bar{g}:\bar{g}s:\bar{a}:\bar{h}$ $:\bar{\bar{c}}s:\bar{\bar{d}}s:\bar{\bar{e}}:\bar{\bar{g}}s:\bar{\bar{h}}$
$2^8 \cdot 3^2 \cdot 5^2$	$\mathrm{C}:\mathrm{C}s:\mathrm{E}:\mathrm{F}:\mathrm{G}:\mathrm{G}s:\mathrm{A}:\mathrm{H}:c:cs:ds:e:f:g:gs:a:h:\bar{c}:\bar{c}s:\bar{d}s:\bar{e}:\bar{g}:\bar{g}s:\bar{a}:\bar{h}$ $:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{d}}s:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{g}}s:\bar{\bar{a}}:\bar{\bar{h}}$
$2^9 \cdot 3^2 \cdot 5^2$	$\mathrm{C}:\mathrm{C}s:\mathrm{E}:\mathrm{F}:\mathrm{G}:\mathrm{G}s:\mathrm{A}:\mathrm{H}:c:cs:ds:e:f:g:gs:a:h:\bar{c}:\bar{c}s:\bar{d}s:\bar{e}:\bar{f}:\bar{g}:\bar{g}s$ $:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{d}}s:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{g}}s:\bar{\bar{a}}:\bar{\bar{h}}:\bar{\bar{c}}$
$2^{10} \cdot 3^2 \cdot 5^2$	$\mathrm{C}:\mathrm{C}s:\mathrm{E}:\mathrm{F}:\mathrm{G}:\mathrm{G}s:\mathrm{A}:\mathrm{H}:c:cs:ds:e:f:g:gs:a:h:\bar{c}:\bar{c}s:\bar{d}s:\bar{e}:\bar{f}:\bar{g}:\bar{g}s$ $:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{d}}s:\bar{\bar{e}}:\bar{\bar{f}}:\bar{\bar{g}}:\bar{\bar{g}}s:\bar{\bar{a}}:\bar{\bar{h}};\bar{\bar{\bar{c}}}.$

If $\mathrm{F} = 256$

$2^5 \cdot 3^2 \cdot 5^2$	$\mathrm{C}s:\mathrm{D}s:\mathrm{E}:\mathrm{G}:\mathrm{G}s:\mathrm{H}:cs:ds:e:gs:h:\bar{c}s:\bar{d}s:\bar{g}s:\bar{h}:\bar{\bar{d}}s:\bar{\bar{g}}s$
$2^6 \cdot 3^2 \cdot 5^2$	$\mathrm{C}:\mathrm{C}s:\mathrm{D}s:\mathrm{E}:\mathrm{G}:\mathrm{G}s:\mathrm{A}:\mathrm{H}:cs:ds:e:g:gs:h:\bar{c}s:\bar{d}s:\bar{e}:\bar{g}s:\bar{h}:\bar{\bar{c}}s:\bar{\bar{d}}s:\bar{\bar{g}}s:\bar{\bar{h}}$
$2^7 \cdot 3^2 \cdot 5^2$	$\mathrm{C}:\mathrm{C}s:\mathrm{D}s:\mathrm{E}:\mathrm{F}:\mathrm{G}:\mathrm{G}s:\mathrm{A}:\mathrm{H}:c:cs:ds:e:g:gs:h:\bar{c}:\bar{c}s:\bar{d}s:\bar{e}:\bar{g}:\bar{g}s:\bar{h}$ $:\bar{\bar{c}}s:\bar{\bar{d}}s:\bar{e}:\bar{\bar{g}}s:\bar{\bar{h}}$
$2^8 \cdot 3^2 \cdot 5^2$	$\mathrm{C}:\mathrm{C}s:\mathrm{D}s:\mathrm{E}:\mathrm{F}:\mathrm{G}:\mathrm{G}s:\mathrm{A}:\mathrm{H}:c:cs:ds:e:g:gs:a:h:\bar{c}:\bar{c}s:\bar{d}s:\bar{e}:\bar{g}:\bar{g}s:a:\bar{h}$ $:\bar{\bar{c}}s:\bar{\bar{d}}s:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{g}}s:\bar{\bar{h}}$
$2^9 \cdot 3^2 \cdot 5^2$	$\mathrm{C}:\mathrm{C}s:\mathrm{D}s:\mathrm{E}:\mathrm{F}:\mathrm{G}:\mathrm{G}s:\mathrm{A}:\mathrm{H}:c:cs:ds:e:g:gs:a:h:\bar{c}:\bar{c}s:\bar{d}s:\bar{e}:\bar{g}:\bar{g}s:\bar{a}:\bar{h}$ $\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{d}}s:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{g}}s:\bar{\bar{a}}:\bar{\bar{h}}$
$2^{10} \cdot 3^2 \cdot 5^2$	$\mathrm{C}:\mathrm{C}s:\mathrm{D}s:\mathrm{E}:\mathrm{F}:\mathrm{G}:\mathrm{G}s:\mathrm{A}:\mathrm{H}:c:cs:ds:e:f:g:gs:a:h:\bar{c}:\bar{c}s:\bar{d}s:\bar{e}:\bar{f}:\bar{g}:$ $\bar{g}s:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{d}}s:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{g}}s:\bar{\bar{a}}:\bar{\bar{h}}:\bar{\bar{\bar{c}}}$
$2^{11} \cdot 3^2 \cdot 5^2$	$\mathrm{C}:\mathrm{C}s:\mathrm{D}s:\mathrm{E}:\mathrm{F}:\mathrm{G}:\mathrm{G}s:\mathrm{A}:\mathrm{H}:c:cs:ds:e:f:g:gs:a:h:\bar{c}:\bar{c}s:\bar{d}s:\bar{e}:\bar{f}:\bar{g}:$ $\bar{g}s:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{d}}s:\bar{\bar{e}}:\bar{\bar{f}}:\bar{\bar{g}}:\bar{\bar{g}}s:\bar{\bar{a}}:\bar{\bar{h}};\bar{\bar{\bar{c}}}.$

Mode	SYSTEMS
$2^n \cdot 3^3 \cdot 5^2$	

species	If $F = 4$
$3^3 \cdot 5^2$	$C : A : g : \bar{e} : \bar{c}\, s : \bar{d} : \bar{h}$
$2 \cdot 3^3 \cdot 5^2$	$C : A : c : g : a : \bar{e} : \bar{g} : \bar{\bar{c}}\, s : \bar{\bar{d}} : \bar{\bar{e}} : \bar{\bar{h}}$
$2^2 \cdot 3^3 \cdot 5^2$	$C : F : A : c : g : a : \bar{c} : \bar{e} : \bar{g} : \bar{a} : \bar{\bar{c}}\, s : \bar{\bar{d}} : \bar{\bar{e}} : \bar{\bar{g}} : \bar{\bar{h}}$
$2^3 \cdot 3^3 \cdot 5^2$	$C : F : A : c : f : g : a : \bar{c} : \bar{e} : \bar{g} : \bar{a} : \bar{\bar{c}}\, s : \bar{\bar{d}} : \bar{\bar{e}} : \bar{\bar{g}} : \bar{\bar{a}} : \bar{\bar{h}}$
$2^4 \cdot 3^3 \cdot 5^2$	$C : F : A : c : f : g : a : \bar{c} : \bar{e} : \bar{f} : \bar{g} : \bar{a} : \bar{\bar{c}} : \bar{\bar{c}}\, s : \bar{\bar{d}} : \bar{\bar{e}} : \bar{\bar{g}} : \bar{\bar{a}} : \bar{\bar{h}} : \bar{\bar{c}}$
$2^5 \cdot 3^3 \cdot 5^2$	$C : F : A : c : f : g : a : \bar{c} : \bar{e} : \bar{f} : \bar{g} : \bar{a} : \bar{\bar{c}} : \bar{\bar{c}}\, s : \bar{\bar{d}} : \bar{\bar{e}} : \bar{\bar{f}} : \bar{\bar{g}} : \bar{\bar{a}} : \bar{\bar{h}} ; \bar{\bar{\bar{c}}}.$
	If $F = 8$
$3^3 \cdot 5^2$	$G : e : \bar{c}\, s : \bar{d} : \bar{h} : \bar{\bar{g}}\, s$
$2 \cdot 3^3 \cdot 5^2$	$C : G : A : e : g : \bar{c}\, s : \bar{d} : \bar{e} : \bar{h} : \bar{\bar{c}}\, s : \bar{\bar{d}} : \bar{g}\, s : \bar{\bar{h}}$
$2^2 \cdot 3^3 \cdot 5^2$	$C : G : A : c : e : g : a : \bar{c}\, s : \bar{d} : \bar{e} : \bar{g} : \bar{h} : \bar{\bar{c}}\, s : \bar{\bar{d}} : \bar{\bar{e}} : \bar{\bar{g}}\, s : \bar{\bar{h}}$
$2^3 \cdot 3^3 \cdot 5^2$	$C : F : G : A : c : e : g : a : \bar{c}\, s : \bar{d} : \bar{e} : \bar{g} : \bar{a} : \bar{h} : \bar{\bar{c}}\, s : \bar{\bar{d}} : \bar{\bar{e}} : \bar{\bar{g}} : \bar{\bar{g}}\, s : \bar{\bar{h}}$
$2^4 \cdot 3^3 \cdot 5^2$	$C : F : G : A : c : e : g : a : \bar{c} : \bar{c}\, s : \bar{d} : \bar{e} : \bar{g} : \bar{a} : \bar{h} : \bar{\bar{c}} : \bar{\bar{c}}\, s : \bar{\bar{d}} : \bar{\bar{e}} : \bar{\bar{g}} : \bar{\bar{g}}\, s : \bar{\bar{a}} : \bar{\bar{h}}$
$2^5 \cdot 3^3 \cdot 5^2$	$C : F : G : A : c : e : f : g : a : \bar{c} : \bar{c}\, s : \bar{d} : \bar{e} : \bar{f} : \bar{g} : \bar{a} : \bar{h} : \bar{\bar{c}} : \bar{\bar{c}}\, s : \bar{\bar{d}} : \bar{\bar{e}} : \bar{\bar{g}} : \bar{\bar{g}}\, s : \bar{\bar{a}} : \bar{\bar{h}} : \bar{\bar{\bar{c}}}$
$2^6 \cdot 3^3 \cdot 5^2$	$C : F : G : A : c : e : f : g : a : \bar{c} : \bar{c}\, s : \bar{d} : \bar{e} : \bar{f} : \bar{g} : \bar{a} : \bar{h} : \bar{\bar{c}} : \bar{\bar{c}}\, s : \bar{\bar{d}} : \bar{\bar{e}} : \bar{\bar{f}} : \bar{\bar{g}} : \bar{\bar{g}}\, s : \bar{\bar{a}} : \bar{\bar{h}} : \bar{\bar{\bar{c}}}.$

20. Concerning musical compositions the following principles are required to be observed generally here. In the first place both a species and a system must be defined to be selected in which the composition may be made. Moreover with a determined system all the notes, which can occur in a musical composition, are defined thus, so that as long as you may use this system, other notes besides the assigned may not be used; unless perhaps the musical instrument may include either note lower than C , or higher than $\bar{\bar{\bar{c}}}$, in which case such notes will be able to be used, clearly as long as they may be present in the exponent of the species, which can be seen easily from the exponent.

21. Therefore initially the mode occurs in this table, of which the exponent is $2^n \cdot 3^3$, for the determination of which the note expressed by 3^3 or 27 must be present; therefore no system of this kind emerges for $F = 1$ nor for $F = 2$, since in these cases the note 27 may exceed the upper limit c . On this account the construction starts at once on putting $F = 4$, according to which hypothesis the note 3^3 is expressed by the key $\bar{\bar{d}}$; truly besides this note there is a need also for the note expressed by 1 or by a power of two, which does not lie in this interval, unless there shall be $n = 2$. Therefore the first system of this kind has the exponent $2^2 \cdot 3^3$ according to the hypothesis $F = 4$.

22. Moreover with $F = 4$ remaining this mode allows four systems, the exponents of which are $2^2 \cdot 3^3$, $2^3 \cdot 3^3$, $2^4 \cdot 3^3$ and $2^5 \cdot 3^8$, nor can an interval in more than four octaves

be given. For even if the exponent $2^6 \cdot 3^3$ may be taken yet these will produce sounds, which will correspond to the exponent $2^5 \cdot 3^3$, thus so that a different system may not arise. In a similar manner if there may be put $\mathrm{F} = 8$, four systems are obtained, and just as many on putting $\mathrm{F} = 16$ and $\mathrm{F} = 32$, where again the boundary is established ; for in the final system, the exponent of which is $2^8 \cdot 3^3$, now all the fundamental notes are present in the individual octaves and thus a greater system may not be given a composition.

23. Thus in the first mode, the exponent of which is $2^n \cdot 3^3$, all of 16 systems may appear, truly the second mode, the exponent of which is $2^n \cdot 3^2 \cdot 5$, will have 33 systems. Again of the third mode, the exponent of which is $2^n \cdot 3 \cdot 5^2$, the number of systems is 30. Hence it follows the fourth mode, the exponent of which is $2^n \cdot 3^3 \cdot 5$, by modern musicians used the most, in which 36 different systems are found 36. In the fifth mode, which is accustomed to be use equally most often, and which has the exponent $2^n \cdot 3^2 \cdot 5^2$, there are 48 systems. Finally the sixth composite and used in the works of the present musicians most often contains 66 diverse systems. Whereupon all these six modes together include 229 different systems.

24. Anyone who will contemplate the forms of all these systems more carefully, will observe in any of these octave intervals to be filled with notes in diverse ways, with the final of each mode of the system excepted, of which the individual octaves contain all the basic notes of the mode, and which have been filled to equal the number of notes. But other systems in the lowest octave, others in the middle, and others in the highest have been filled with more notes, from which the most suitable system for a given composition will be able to be selected. For anyone who may wish for the bass parts to be present in the melody, there is need for a system, in the octaves of which the notes occur most frequently; truly on the other hand the system will be used, in which the upper octaves of the notes have been filled up, by anyone who strives to arrange the maximum variation in the descant part. Yet also anyone who establishes the most strength in the middle voice, will find in an equal manner a system adapted for that purpose. But today's musicians are seen to have noticed this great distinction between the modes in a certain way, and led by experience rather than theory ; whereby this enumeration of ours will bring some help to them, as before they were suspected only of being confused.

CAPUT XII

DE MODIS ET SYSTEMATIBUS IN GENERE DIATONICO-CHROMATICO

1. Post consonantias generis diatonico-chromatici tractari conveniret de consonantiarum successione. Sed cum successio consonantiarum ad modum musicum sit accomodanda, consultius visum est ante modos enumerare atque exponere, quam regulas tradamus, secundum quas in quoque modo consonantias coniungere oporteat. Fixis enim terminis, intra quos in coniungendis consonantiis subsistere debemus, facilius erit normam compositionis explicare et concentum musicum formare.

2. Cum modus musicus nil aliud sit nisi exponens seriei consonantiarum atque exponens modi singularum consonantiarum exponentes in se complectatur, perspicuum est modi exponentem non nimis simplicem esse posse; alias enim non sufficiens varietas in consonantiis locum habere posset. Hanc ob rem hos exponentes $2^n,\ 2^n\cdot 3,\ 2^n\cdot 3^2,\ 2^n\cdot 3\cdot 5,\ \ 2^n\cdot 5^2$ tanquam inutiles ad modos designandos reiiciemus ac tractationem a magis compositis ordiemur.

3. Quia autem exponens modi in genere diatonico-chromatico, cuius exponens est $2^n\cdot 3^3\cdot 5^2$, debet esse contentus, sex sequentes habebimus modos, quorum exponentes erunt

$$\begin{array}{ll} \text{I. } 2^n\cdot 3^3, & \text{IV. } 2^n\cdot 3^3\cdot 5, \\ \text{II. } 2^n\cdot 3^2\cdot 5, & \text{V. } 2^n\cdot 3^2\cdot 5^2 \\ \text{III. } 2^n\cdot 3\cdot 5^2, & \text{VI. } 2^n\cdot 3^3\cdot 5^2 \end{array}$$

Quamvis enim genus diatonico-chromaticum latius pateat quam ad exponentem $2^n\cdot 3^3\cdot 5^2$, tamen modus non potest esse magis compositus, cum ne fiat imperceptibilis, tum vero ne in eodem modo eadem clavis ad duos diversos sonos exprimendos sit adhibenda; quod esset intolerabile.

4. Quando autem in integra opere musico modi subinde mutantur atque ex aliis modis in alios fiunt transitiones, tum sine harmoniae laesione exponens integri operis, in quo omnium modorum exponentes continentur, magis esse potest compositus quam $2^n\cdot 3^3\cdot 5^2$. atque adeo ad $2^n\cdot 3^7\cdot 5^2$ exsurgere poterit. Quamobrem pro componendis integris operibus musicis hanc legem stabilire oportebit, ut quisque modus in exponente $2^n\cdot 3^3\cdot 5^2$ contineatur, totius vero operis exponens non fiat magis compositus quam $2^n\cdot 3^7\cdot 5^2$.

5. Sex recensitorum modorum tres priores nimis sunt simplices et propterea in musica hodierna minus locum habere possunt, cum tantam varietatem, quali hoc tempore musica

delectatur, non admittant. Interim tamen ad concentus planos et melodias faciliores etiamnum adhiberi posseu t, praeter primum, in quo ne quidem tertiae et sextae locum habent. Secundus autem modus satis idoneus est ad modulationes simplices et hilares, quae consonantiis facilioribus constant, exprimendas et reipsa saepius a Musicis usurpatur. Tertius modus etiamsi rarissime occurrat, tamen pariter in huiusmodi planis modulationibus non incongrue adhiberi posset.

6. In tribus autem posterioribus modis universa musica hodierna comprehenditur. Modi enim, quibus Musici uti solent, omnes tanquam species in his tribus modis continentur. Namque qui modus a musicis durus vocari solet, is ad nostrum modum quartum pertinet, mollis vero ad nostrum quintum refertur. Potissimum autem hodierni musici in suis operibus modo uti solent composito ex duro et molli, qui ad sextum modum referri debet, isque in hodiernis operibus maxime conspicitur.

7. Modi hi, quemadmodum eos sine indicibus expressimus, omnes pro basi habent sonum *F*, qui unitate seu potestate binarii indicatur. Quilibet autem modus transponi potest, ut basis ad alium sonum transferatur, quo quidem modus in sua natura non mutatur. Has igitur modorum transpositiones, quae in musica frequentissime occurrere solent, variationes modorum vocabimus, quas indicibus cum exponentibus coniunctis indicabimus, ita ut index basin sit designaturus, ad quam ipse modus refertur. Sic si index fuerit 3, basis modi erit sonus C; et existente indice 5, basis erit A, prout ex praecedentibus intelligitur.

8. Variatio porro vocabitur *pura,* si exponens modi cum indice coniunctus in genuino generis diatonico-chromatici exponente fuerit contentus, qui est $2^n \cdot 3^3 \cdot 5^2$. Sin autem exponens modi cum indice fuerit magis compositus quam $2^n \cdot 3^3 \cdot 5^2$ et tamen in $2^n \cdot 3^7 \cdot 5^2$ contineatur, tum ea variatio *impura* nobis appellabitur, quia soni generis musici non exacte, sed tantum proxime congruunt. Quae autem variatio ne in hoc quidem exponente $2^n \cdot 3^7 \cdot 5^2$ continetur, ea iure pro illicita et harmoniae contraria haberi poterit.

9. Primus igitur modus, cuius exponens est $2^n \cdot 3^3$, tres habebit variationes puras nempe, quarum bases erunt F, A, C*s*, impuras autem variationes 12 admittet, quae cum suis basibus erunt sequentes:

$2^n \cdot 3^3(3)$,	$2^n \cdot 3^3(3^2)$,	$2^n \cdot 3^3(3^3)$,	$2^n \cdot 3^3(3^4)$,
C	G	D	*A*
$2^n \cdot 3^3(3 \cdot 5)$,	$2^n \cdot 3^3(3^2 \cdot 5)$,	$2^n \cdot 3^3(3^3 \cdot 5)$,	$2^n \cdot 3^3(3^4 \cdot 5)$,
E	H	F*s*	*Cs*
$2^n \cdot 3^3(3 \cdot 5^2)$,	$2^n \cdot 3^3(3^2 \cdot 5^2)$,	$2^n \cdot 3^3(3^3 \cdot 5^2)$,	$2^n \cdot 3^3(3^4 \cdot 5^4)$,
G*s*	*Cs*	B	*F*

ubi soni secundarii *A, Cs, F* cursivo charactere sunt expressi.

10. In tabula ergo sequente singulorum modorum omnes variationes tam puras quam impuras expressimus atque pro quaque variatione clavem adscripsimus, qua basis indicatur. Quia autem tales variationes omnes quoque consonantiae admittunt atque de iis etiam nosse expedit, quaenam variationes sint purae et quae impurae, in hac tabula non solum variationes modorum, sed etiam consonantiarum omnium ob oculos ponere visum est.

Modus I.	Modus II.	Modus III.	Modus IV.
$2^n\cdot 3$	$2^n\cdot 5$	$2^n\cdot 3^2$	$2^n\cdot 3\cdot 5$
Variationes purae	*Variationes purae*	*Variationes purae*	*Variationes purae*
$2^n\cdot 3(1)$ F	$2^n\cdot 5(1)$ F	$2^n\cdot 3^2(1)$ F	$2^n\cdot 3\cdot 5(1)$ F
$2^n\cdot 3(3)$ C	$2^n\cdot 5(3)$ C	$2^n\cdot 3^2(3)$ C	$2^n\cdot 3\cdot 5(3)$ C
$2^n\cdot 3(5)$ A	$2^n\cdot 5(5)$ A	$2^n\cdot 3^2(5)$ A	$2^n\cdot 3\cdot 5(5)$ A
$2^n\cdot 3(3^2)$ G	$2^n\cdot 5(3^2)$ G	$2^n\cdot 3^2(3\cdot 5)$ E	$2^n\cdot 3\cdot 5(3^2)$ G
$2^n\cdot 3(3\cdot 5)$ E	$2^n\cdot 5(3\cdot 5)$ E	$2^n\cdot 3^2(5^2)$ C*s*	$2^n\cdot 3\cdot 5(3\cdot 5)$ E
$2^n\cdot 3(5^2)$ C*s*	$2^n\cdot 5(3^2)$ D	$2^n\cdot 3^2(3\cdot 5^2)$ G*s*	$2^n\cdot 3\cdot 5(3^2\cdot 5)$ H
$2^n\cdot 3(3^2\cdot 5)$ H	$2^n\cdot 5(3^2\cdot 5)$ H		
$2^n\cdot 3(3\cdot 5^2)$ G*s*	$2^n\cdot 5(3^3\cdot 5)$ F*s*		
$2^n\cdot 3(3^2\cdot 5^2)$ D*s*			
Variationes impurae	*Variationes impurae*	*Variationes impurae*	*Variationes impurae*
$2^n\cdot 3(3^3)$ D	$2^n\cdot 5(3^4)$ *A*	$2^n\cdot 3^2(3^2)$ G	$2^n\cdot 3\cdot 5(3^3)$ D
$2^n\cdot 3(3^4)$ A	$2^n\cdot 5(3^5)$ *E*	$2^n\cdot 3^2(3^5)$ D	$2^n\cdot 3\cdot 5(3^3\cdot 5)$ F*s*
$2^n\cdot 3(3^3\cdot 5)$ F*s*	$2^n\cdot 5(3^4\cdot 5)$ *Cs*	$2^n\cdot 3^2(3^2\cdot 5)$ H	$2^n\cdot 3\cdot 5(3^4)$ *A*
$2^n\cdot 3(3^5)$ *E*	$2^n\cdot 5(3^6)$ H	$2^n\cdot 3^2(3^4)$ *A*	$2^n\cdot 3\cdot 5(3^4\cdot 5)$ *Cs*
$2^n\cdot 3(3^4\cdot 5)$ *Cs*	$2^n\cdot 5(3^5\cdot 5)$ *Gs*	$2^n\cdot 3^2(3^3\cdot 5)$ F*s*	$2^n\cdot 3\cdot 5(3^5)$ *E*
$2^n\cdot 3(3^3\cdot 5^2)$ B	$2^n\cdot 5(3^7)$ *Fs*	$2^n\cdot 3^2(3^2\cdot 5^2)$ D*s*	$2^n\cdot 3\cdot 5(3^5\cdot 5)$ G*s*
$2^n\cdot 3(3^6)$ *H*	$2^n\cdot 5(3^6\cdot 5)$ *Ds*	$2^n\cdot 3^2(3^5)$ *E*	$2^n\cdot 3\cdot 5(3^6)$ *H*
$2^n\cdot 3(3^5\cdot 5)$ *Gs*	$2^n\cdot 5(3^7\cdot 5)$ *B*	$2^n\cdot 3^2(3^4\cdot 5)$ *Cs*	$2^n\cdot 3\cdot 5(3^4\cdot 5)$ *Ds*
$2^n\cdot 3(3^4\cdot 5^2)$ *F*		$2^n\cdot 3^2(3^3\cdot 5^2)$ *B*	
$2^n\cdot 3(3^6\cdot 5)$ *Ds*		$2^n\cdot 3^2(3^5\cdot 5)$ *Gs*	
$2^n\cdot 3(3^5\cdot 5^2)$ *C*		$2^n\cdot 3^2(3^4\cdot 5^2)$ *F*	

$2^n \cdot 3(3^6 \cdot 5^2)$ *G*	$2^n \cdot 3^2(3^5 \cdot 5^2)$ *C*

Modus V.

$2^n \cdot 5^2$

Variationes purae	*Variationes impurae*
$2^n \cdot 5^2(1)$ F	$2^n \cdot 5^2(3^4)$ A
$2^n \cdot 5^2(3)$ C	$2^n \cdot 5^2(3^5)$ E
$2^n \cdot 5^2(3^2)$ G	$2^n \cdot 5^2(3^6)$ *H*
$2^n \cdot 5^2(3^3)$ D	$2^n \cdot 5^2(3^7)$ *Fs*

Modus I.	Modus II.	Modus III.	Modus IV.
$2^n \cdot 3^3$	$2^n \cdot 3^2 \cdot 5$	$2^n \cdot 3 \cdot 5^2$	$2^n \cdot 3^3 \cdot 5$
Variationes purae	*Variationes purae*	*Variationes purae*	*Variationes purae*
$2^n \cdot 3^2(1)$ F	$2^n \cdot 3^2 \cdot 5(1)$ F	$2^n \cdot 3 \cdot 5^2(1)$ F	$2^n \cdot 3 \cdot 5(1)$ F
$2^n \cdot 3^2(5)$ A	$2^n \cdot 3^2 \cdot 5(3)$ C	$2^n \cdot 3 \cdot 5^2(3)$ C	$2^n \cdot 3^3 \cdot 5(5)$ A
$2^n \cdot 3^3(5^2)$ C*s*	$2^n \cdot 3^2 \cdot 5(5)$ A	$2^n \cdot 3 \cdot 5^2(3^2)$ G	
	$2^n \cdot 3^2 \cdot 5(3 \cdot 5)$		
Variationes impurae	*Variationes impurae*	*Variationes impurae*	*Variationes impurae*
$2^n \cdot 3^3(3)$ C	$2^n \cdot 3^2 \cdot 5(3^2)$ G	$2^n \cdot 3 \cdot 5^2(3^3)$ D	$2^n \cdot 3^3 \cdot 5(3)$ C
$2^n \cdot 3^3(3 \cdot 5)$ E	$2^n \cdot 3^2 \cdot 5(3^2 \cdot 5)$ H	$2^n \cdot 3 \cdot 5^2(3^4)$ *A*	$2^n \cdot 3^3 \cdot 5(3 \cdot 5)$ E
$2^n \cdot 3^3(3 \cdot 5^2)$ G*s*	$2^n \cdot 3^2 \cdot 5(3^3)$ D	$2^n \cdot 3 \cdot 5^2(3^5)$ E	$2^n \cdot 3^3 \cdot 5(3^2)$ G
$2^n \cdot 3^3(3^2)$ G	$2^n \cdot 3^2 \cdot 5(3^3 \cdot 5)$ F*s*	$2^n \cdot 3 \cdot 5^2(3^6)$ H	$2^n \cdot 3^3 \cdot 5(3^2 \cdot 5)$ H
$2^n \cdot 3^3(3^2 \cdot 5)$ H	$2^n \cdot 3^2 \cdot 5(3^4)$ *A*		$2^n \cdot 3^3 \cdot 5(3^3)$ D
$2^n \cdot 3^3(3^2 \cdot 5^2)$ D*s*	$2^n \cdot 3^2 \cdot 5(3^4 \cdot 5)$ *Cs*		$2^n \cdot 3^3 \cdot 5(3^3 \cdot 5)$ F*s*
$2^n \cdot 3^3(3^3)$ D	$2^n \cdot 3^2 \cdot 5(3^5)$ *E*		$2^n \cdot 3^3 \cdot 5(3^4)$ A
$2^n \cdot 3^3(3^3 \cdot 5)$ F*s*	$2^n \cdot 3^2 \cdot 5(3^5 \cdot 5)$ *Gs*		$2^n \cdot 3^3 \cdot 5(3^4 \cdot 5)$ *Cs*
$2^n \cdot 3^3(3^4)$ *A*			
$2^n \cdot 3^3(3^4 \cdot 5)$ *Cs*			

$2^n \cdot 3^3(3^4 \cdot 5^2)$ F			

	Modus V	Modus VI	
	$2^n \cdot 3^2 \cdot 5^2$	$2^n \cdot 3^3 \cdot 5^2$	
	Variationes purae	*Variationes purae*	
	$2^n \cdot 3^2 \cdot 5^2(1)$ F	$2^n \cdot 3^3 \cdot 5^2(1)$ F	
	Variationes impurae	*Variationes impurae*	
	$2^n \cdot 3^2 \cdot 5^2(3^2)$ G	$2^n \cdot 3^3 \cdot 5^2(3)$ C	
	$2^n \cdot 3^2 \cdot 5^2(3^3)$ D	$2^n \cdot 3^3 \cdot 5^2(3^2)$ G	
	$2^n \cdot 3^2 \cdot 5^2(3^4)$ A	$2^n \cdot 3^3 \cdot 5^2(3^3)$ D	
	$2^n \cdot 3^2 \cdot 5^2(3^5)$ *E*	$2^n \cdot 3^3 \cdot 5^2(3^4)$ *A*	

11. Ex hac igitur tabula intelligitur, quot variationes tam puras quam impuras quaelibet consonantia pariter ac quilibet modus in instrumenta recte attemperato admittat. Ita apparet triadem harmonicam, quae exponente $2^n \cdot 3 \cdot 5$ continetur, sex habere variationes puras et octo impuras; quarum tamen impurarum tres cum puris congruunt, quia bases secundariae *A*, *E* et *H* iam in puris tanquam primariae extiterunt, ita ut quinque tantum impurae sint censeu dae, quarum bases sunt: D, *Fs*, *Cs*, *Ds* et *Gs*. Deinde etiam transpositiones modorum ex hac tabula determinantur tam purae quam impurae atque statim apparet quanto intervallo datam modulationem transponere liceat, quo vel pura maneat, vel impura evadat; et quibus casibus etiam fiat illicita. Quae igitur de una modi cuiusdam variatione dicentur, ea ad omnes reliquas facile erit transferre.

12. Post variationes modorum diversae cuiuslibet modi species sunt considerandae, quae oriuntur, si loco indefinitae potestatis binarii in exponente modi potestates definitae substituantur. Ita modi $2^n \cdot 3^3 \cdot 5$ species sequentibus exponentibus exprimentur

$$3^3 \cdot 5,\ 2 \cdot 3^3 \cdot 5,\ 2^2 \cdot 3^3 \cdot 5,\ 2^3 \cdot 3^3 \cdot 5,\ 2^4 \cdot 3^3 \cdot 5, \text{ etc.}$$

substituendo scilicet loco *n* successive numeros integras affirmativos 0, 1, 2, 3, 4 etc. Quaelibet autem modi species easdem habet variationes tam puras quam impuras, quas ipse modus, cum variationes non ex potestate binarii, quae in exponente modi inest, sed tantum ex numeris indicibus 3 et 5 determinentur, qui in speciebus non immutantur.

13. Eiusdem modi species inter se differunt ratione graduum suavitatis, ad quos pertinent. Eo enim simplicior cuiusque modi species habetur, quo minor numerus loco *n* substituitur. Ita cuiuslibet modi species simplicissima prodit, si ponatur $n = 0$; uno autem gradu magis fit composita ponendo $n = 1$; duobusque gradibus ascendet ponendo $n = 2$ et ita porro: quemadmodum ex iis quae supra de inveniendo gradu suavitatis, ad quem quilibet exponens determinatus est referendus, intelligere licet.

14. Specierum quidem cuiusque modi numerus in se spectatus esset infinitus ob innumeros valores determinatos, qui loco *n* substitui posseu t. Sed praeterquam, quod ea, quae in seu sus occurrunt, numerum infinitum respuant, intervallum inter infimam gravitatem et supremum acumen sonorum fixum in quolibet modo specierum numerum determinat. Quilibet enim modus in se complectitur datum sonorum primitivorum numerum, qui augendo numerum *n* in variis octavis saepius repetuntur, ita ut si idem sonus iam in omnibus octavis occurrat, ulterior numeri *n* multiplicatio nullam amplius diversitatem inducere possit.

15. Quod quo clarius percipiatur, notandum est quemque modum suos habere sonos primitivos, qui numeris imparibus exprimuntur, ex quibus per 2 vel eiusdem potestates multiplicatis reliqui derivativi oriantur. Quo maior igitur fuerit potestas binarii, per quam fit multiplicatio, eo plures soni derivativi ex eodem primitivo nascentur; atque tandem fixus octavarum numerus his sonis ita replebitur, ut, etiamsi ultra augeretur potestas binarii, tamen plures soni locum invenire nequeant. Haec autem ex sequentibus tabulis distincte apparebunt.

16. Tertiam varietatem cuiusvis tam modi quam speciei affert accommodatio ad receptum in instrumentis musicis sonorum systema, quod vulgo quatuor octavas continere solet, in quibus gravissimus sonus hoc charactere C et acutissimus isto *c* designatur. Intra hos ergo limites soni cuiusvis modi et speciei, qui quidem in instrumentis sunt exprimendi, contenti esse debent; ita ut soni tam graviores quam C quam acutiores quam *c* tanquam inutiles sint reiiciendi. Congeries autem hae sonorum cuiusvis speciei intra dictos limites contentorum systema istius speciei nobis appellabitur.

17. Pluribus autem modis eadem species plerumque intra fixum illud sonorum intervallum includi potest, prout sonus F alia aliaque binarii potestate exprimitur. Nam si ponatur $\mathrm{F} = 1$, omnes soni maioribus numeris quam 12 expressi reiici debebunt; atque si $\mathrm{F} = 2$, ii tantum soni poterunt exprimi, qui inter numeros 2 et 24 continentur. Si porro $\mathrm{F} = 4$, soni idonei intra limites 3 et 48 interiacebunt, et si $\mathrm{F} = 8$, limites erunt 6 et 96; atque simili modo limites se habebunt pro aliis binarii potestatibus, quibus clavis F exprimitur.

l8 Systema ergo cuiusque modorum speciei definitur data binarii potestate ad clavem F significandam assumta. Atque hoc pacto eadem species saepe numero plura habebit systemata, quae variis sonorum congeriebus constabunt. Huiusmodi systema sonorum, quos data species dato modo determinata continet, a Musicis *ambitus* vocari solet, qui ex genere diatonico-chromatico eas determinat claves, quas in data modulatione adhibere licet. Ambitum quidem unicum pro quoque modo Musici agnoscunt, sed ex sequentibus perspicietur, non solum quemlibet modum, sed etiam quamvis cuiusque modi speciem plura admittere systemata seu ambitus, quibus musica etiamnum mirifice poterit variari.

19. Quo igitur completa omnium cuiuslibet modi specierum et systematum acquiratur notitia, sequentem adieci tabulam, in qua singulos supra descriptos modos ita evolvi, ut pro singulis clavis F exponentibus singulas eiusdem modi species cum suis systematibus recenseam. In hac ergo tabula non solum cuiusvis modi omnes species, quae quidem in intervallo 4 octavarum locum habent, comparent, sed etiam omnia systemata, in quibus claves notis consuetis sunt designatae.

Modi	SYSTEMATA
$2^n.3^3$	
species	Si $\mathrm{F}=4$
$2^2.3^3$	$\mathrm{C}:\mathrm{F}:G:g:\bar{c}:\bar{g}:\bar{a}:\bar{g}$
$2^3.3^3$	$\mathrm{C}:\mathrm{F}:G:f:g:\bar{c}:\bar{g}:\bar{c}:\bar{a}:\bar{g}$
$2^4.3^3$	$\mathrm{C}:\mathrm{F}:G:f:g:\bar{c}:\bar{f}:\bar{g}:\bar{c}:\bar{a}:\bar{g}:\bar{c}$
$2^5.3^3$	$\mathrm{C}:\mathrm{F}:G:f:g:\bar{c}:\bar{f};\bar{g}:\bar{\bar{c}}:\bar{\bar{a}}:\bar{\bar{f}}:\bar{\bar{g}};\bar{\bar{\bar{c}}}$.
	Si $\mathrm{F}=8$
$2^3.3^2$	$\mathrm{C}:\mathrm{F}:\mathrm{G}:c:g:\bar{c}:\bar{d}:\bar{g}:\bar{d}:\bar{g}$
$2^7.3^3$	$\mathrm{C}:\mathrm{F}:\mathrm{G}:c:f:g:\bar{c}:\bar{d}:\bar{g}:\bar{c}:\bar{d}:\bar{g}$
$2^5\cdot 3^3$	$\mathrm{C}:\mathrm{F}:\mathrm{G}:c:f:g:\bar{c}:\bar{d}:\bar{f}:\bar{g}:\bar{c}:\bar{d}:\bar{g}:\bar{c}$
$2^6\cdot 3^3$	$\mathrm{C}:\mathrm{F}:\mathrm{G}:c:f:g:\bar{c}:\bar{d}:\bar{f}:\bar{g}:\bar{c}:\bar{d}:\bar{f}:\bar{g};\bar{\bar{c}}$.
	Si $\mathrm{F}=16$
$2^4.3^3$	$\mathrm{C}:\mathrm{F}:\mathrm{G}:c:d:g:\bar{c}:d:\bar{g}:\bar{d}:\bar{g}$
$2^5.3^3$	$\mathrm{C}:\mathrm{F}:\mathrm{G}:c:d:f:g:\bar{c}:\bar{d}:\bar{g}:\bar{c}:\bar{d}:\bar{g}$
$2^6.3^3$	$\mathrm{C}:\mathrm{F}:\mathrm{G}:c:d:f:g:\bar{c}:\bar{d}:\bar{f}:\bar{g}:\bar{c}:\bar{d}:\bar{g}:\bar{c}$
$2^7.3^3$	$\mathrm{C}:\mathrm{F}:\mathrm{G}:c:d:f:g:\bar{c}:\bar{d}:\bar{f}:\bar{g}:\bar{c}:\bar{d}:\bar{f}:\bar{g};\bar{\bar{c}}$.
	Si $\mathrm{F}=32$
$2^4.3^3$	$\mathrm{C}:\mathrm{D}:\mathrm{F}:\mathrm{G}:c:d:g:\bar{c}:\bar{d}:\bar{g}:\bar{d}:\bar{g}$

$2^5.3^3$	$\mathrm{C}:\mathrm{D}:\mathrm{F}:\mathrm{G}:c:d:f:g:\bar{c}:\bar{d}:\bar{g}:\bar{c}:\bar{d}:\bar{g}$
$2^6.3^3$	$\mathrm{C}:\mathrm{D}:\mathrm{F}:\mathrm{G}:c:d:f:g:\bar{c}:\bar{d}:\bar{f}:\bar{g}:\bar{c}:\bar{d}:\bar{g}:\bar{c}$
$2^7.3^3$	$\mathrm{C}:\mathrm{D}:\mathrm{F}:\mathrm{G}:c:d:f:g:\bar{c}:\bar{d}:\bar{f}:\bar{g}:\bar{\bar{c}}:\bar{\bar{d}}:\bar{\bar{f}}:\bar{\bar{g}};\bar{\bar{\bar{c}}}.$

Modi	SYSTEMATA
$2^n.3^2\cdot 5$	
species	$\mathrm{Si\ \ F}=1$
$3^2\cdot 5$	$\mathrm{F}:\bar{c}:\bar{a}:\bar{\bar{g}}$
$2.3^2\cdot 5$	$\mathrm{F}:f:\bar{c}:\bar{a}:\bar{\bar{c}}:\bar{\bar{g}}:\bar{\bar{a}}$
$2^2.3^2\cdot 5$	$\mathrm{F}:f:\bar{c}:\bar{f}:\bar{a}:\bar{\bar{c}}:\bar{\bar{g}}:\bar{\bar{a}};\bar{\bar{\bar{c}}}$
$2^3.3^2\cdot 5$	$\mathrm{F}:f:\bar{c}:\bar{f}:\bar{a}:\bar{\bar{c}}:\bar{\bar{f}}:\bar{\bar{g}}:\bar{\bar{a}};\bar{\bar{\bar{c}}}.$
	$\mathrm{Si\ \ F}=2$
$3^2\cdot 5$	$c:a:\bar{g}:\bar{\bar{e}}$
$2.3^2\cdot 5$	$\mathrm{F}:c:a:\bar{c}:\bar{g}:\bar{a}:\bar{\bar{e}}:\bar{\bar{g}}$
$2^2.3^2\cdot 5$	$\mathrm{F}:c:f:a:\bar{c}:\bar{g}:\bar{a}:\bar{\bar{c}}:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{a}}$
$2^3.3^2\cdot 5$	$\mathrm{F}:c:f:a:\bar{c}:\bar{f}:\bar{g}:\bar{a}:\bar{\bar{c}}:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{a}}:\bar{\bar{\bar{c}}}\ .$
$2^4.3^2\cdot 5$	$\mathrm{F}:c:f:a:\bar{c}:\bar{f}:\bar{g}:\bar{a}:\bar{\bar{c}}:\bar{\bar{e}}:\bar{\bar{f}}:\bar{\bar{g}}:\bar{\bar{a}};\bar{\bar{\bar{c}}}.$
	$\mathrm{Si\ \ F}=4$
$3^2.5$	$\mathrm{C}:\mathrm{A}:g:\bar{e}:\bar{\bar{h}}$
$2\cdot 3^2.5$	$\mathrm{C}:\mathrm{A}:c:g:a:\bar{e}:\bar{g}:\bar{\bar{e}}:\bar{\bar{h}}$
$2^2\cdot 3^2.5$	$\mathrm{C}:\mathrm{F}:\mathrm{A}:c:g:a:\bar{c}:\bar{e}:\bar{g}:\bar{a}:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{h}}$
$2^3\cdot 3^2.5$	$\mathrm{C}:\mathrm{F}:\mathrm{A}:c:f:g:a:\bar{c}:\bar{e}:\bar{g}:\bar{a}:\bar{\bar{c}}:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{a}}:\bar{\bar{h}}\ .$
$2^4\cdot 3^2.5$	$\mathrm{C}:\mathrm{F}:\mathrm{A}:c:f:g:a:\bar{c}:\bar{e}:\bar{f}:\bar{g}:\bar{a}:\bar{\bar{c}}:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{a}}:\bar{\bar{h}}:\bar{\bar{\bar{c}}}$
$2^5\cdot 3^2.5$	$\mathrm{C}:\mathrm{F}:\mathrm{A}:f:g:a:\bar{c}:\bar{e}:\bar{f}:\bar{g}:\bar{a}:\bar{\bar{c}}:\bar{\bar{e}}:\bar{\bar{f}}:\bar{\bar{g}}:\bar{\bar{a}}:\bar{\bar{h}};\bar{\bar{\bar{c}}}.$
	$\mathrm{Si\ \ F}=8$
$2\cdot 3^2.5$	$\mathrm{C}:\mathrm{G}:\mathrm{A}:e:g:\bar{e}:\bar{h}:\bar{\bar{h}}$

$2^2 \cdot 3^2.5$	$\mathrm{C:G:A:}c:e:g:a:\bar{e}:\bar{h}:\bar{\bar{e}}:\bar{\bar{h}}$
$2^3 \cdot 3^2.5$	$\mathrm{C:F:G:A:}c:e:g:a:\bar{c}:\bar{e}:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{h}}$
$2^4 \cdot 3^2.5$	$\mathrm{C:F:G:A:}c:e:f:g:a:\bar{c}:\bar{e}:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{a}}:\bar{\bar{h}}$
$2^5 \cdot 3^2.5$	$\mathrm{C:F:G:A:}c:e:f:g:a:\bar{c}:\bar{e}:\bar{f}:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{a}}:\bar{\bar{h}}:\bar{\bar{\bar{c}}}$
$2^6 \cdot 3^2.5$	$\mathrm{C:F:G:A:}c:e:f:g:a:\bar{c}:\bar{e}:\bar{f}:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{e}}:\bar{\bar{f}}:\bar{\bar{g}}:\bar{\bar{a}}:\bar{\bar{h}};\bar{\bar{\bar{c}}}.$

	Si $\mathrm{F}=16$
$2^2 \cdot 3^2.5$	$\mathrm{C:E:G:A:}e:g:h:\bar{e}:\bar{h}:\bar{\bar{h}}$
$2^3 \cdot 3^2.5$	$\mathrm{C:E:G:A:}c:e:g:a:h:\bar{e}:\bar{g}:\bar{h}:\bar{\bar{e}}:\bar{\bar{h}}$
$2^4 \cdot 3^2.5$	$\mathrm{C:E:F:G:A:}c:e:g:a:h:\bar{c}:\bar{e}:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{h}}$
$2^5 \cdot 3^2.5$	$\mathrm{C:E:F:G:A:}c:e:f:g:a:h:\bar{c}:\bar{e}:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{a}}:\bar{\bar{h}}$
$2^6 \cdot 3^2.5$	$\mathrm{C:E:F:G:A:}c:e:f:g:a:h:\bar{c}:\bar{e}:\bar{f}:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{e}}:\bar{\bar{f}}:\bar{\bar{g}}:\bar{\bar{a}}:\bar{\bar{h}};\bar{\bar{\bar{c}}}.$
	Si $\mathrm{F}=32$
$2^3 \cdot 3^2.5$	$\mathrm{C:E:G:A:H:}e:g:h:\bar{e}:\bar{h}:\bar{\bar{h}}$
$2^4 \cdot 3^2.5$	$\mathrm{C:E:G:A:H:}c:e:g:a:h:\bar{e}:\bar{g}:\bar{h}:\bar{\bar{h}}$
$2^5 \cdot 3^2.5$	$\mathrm{C:E:F:G:A:H:}c:e:g:a:h:\bar{c}:\bar{e}:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{h}}$
$2^6 \cdot 3^2.5$	$\mathrm{C:E:F:G:A:H:}c:e:f:g:a:h:\bar{c}:\bar{e}:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{a}}:\bar{\bar{h}}$
$2^7 \cdot 3^2.5$	$\mathrm{C:E:F:G:A:H:}c:e:f:g:a:h:\bar{c}:\bar{e}:\bar{f}:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{a}}:\bar{\bar{h}}:\bar{\bar{\bar{c}}}$
$2^8 \cdot 3^2.5$	$\mathrm{C:E:F:G:A:H:}c:e:f:g:a:h:\bar{c}:\bar{e}:\bar{f}:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{f}}:\bar{\bar{a}}:\bar{\bar{h}};\bar{\bar{\bar{c}}}.$
Modi	SYSTEMATA
$2^n \cdot 3 \cdot 5^2$	
species	Si $\mathrm{F}=4$
$3 \cdot 5^2$	$\mathrm{C:A:}\bar{e}:\bar{c}s$
$2 \cdot 3 \cdot 5^2$	$\mathrm{C:A:}c:a:\bar{e}:\bar{\bar{c}}s:\bar{\bar{e}}$
$2^2 \cdot 3 \cdot 5^2$	$\mathrm{C:F:A:}c:a:\bar{c}:\bar{e}:\bar{a}:\bar{\bar{c}}s:\bar{\bar{e}}$
$2^3 \cdot 3 \cdot 5^2$	$\mathrm{C:F:A:}c:f:a:\bar{c}:\bar{e}:\bar{a}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{a}}$
$2^4 \cdot 3 \cdot 5^2$	$\mathrm{C:F:A:}c:f:a:\bar{c}:\bar{e}:\bar{f}:\bar{a}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{a}}:\bar{\bar{\bar{c}}}$
$2^5 \cdot 3 \cdot 5^2$	$\mathrm{C:F:A:}c:f:a:\bar{c}:\bar{e}:\bar{f}:\bar{a}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{f}}:\bar{\bar{a}};\bar{\bar{\bar{c}}}.$

	Si $F=8$
$2\cdot 3\cdot 5^2$	$C:A:e:\bar{c}s:\bar{e}:\bar{\bar{c}}s:\bar{\bar{g}}s$
$2^2\cdot 3\cdot 5^2$	$C:F:A:c:e:a:\bar{c}s:\bar{e}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{g}}s$
$2^3\cdot 3\cdot 5^2$	$C:F:A:c:e:a:\bar{c}:\bar{c}s:\bar{e}:\bar{a}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{g}}s$
$2^4\cdot 3\cdot 5^2$	$C:F:A:c:e:f:a:\bar{c}:\bar{c}s:\bar{e}:\bar{a}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{g}}s:\bar{\bar{a}}$
$2^5\cdot 3\cdot 5^2$	$C:F:A:c:e:f:a:\bar{c}:\bar{c}s:\bar{e}:\bar{f}:\bar{a}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{g}}s:\bar{\bar{a}}:\bar{\bar{\bar{c}}}$
$2^6\cdot 3\cdot 5^2$	$C:F:A:c:e:f:a:\bar{c}:\bar{c}s:\bar{e}:\bar{f}:\bar{a}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{f}}:\bar{\bar{g}}s:\bar{\bar{a}};\bar{\bar{\bar{c}}}.$

	Si $F=16$
$2^2\cdot 3\cdot 5^2$	$C:E:A:cs:e:\bar{e}s:\bar{e}:\bar{g}s:\bar{c}s:\bar{g}s$
$2^3\cdot 3\cdot 5^2$	$C:E:A:c:cs:e:a:\bar{c}s:\bar{e}:\bar{g}s:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{g}}s$
$2^4\cdot 3\cdot 5^2$	$C:E:F:A:c:cs:e:a:\bar{c}:\bar{c}s:\bar{e}:\bar{g}s:\bar{a}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{g}}s$
$2^5\cdot 3\cdot 5^2$	$C:E:F:A:c:cs:e:f:a:\bar{c}:\bar{c}s:\bar{e}:\bar{g}s:\bar{a}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{g}}s:\bar{\bar{a}}$
$2^6\cdot 3\cdot 5^2$	$C:E:F:A:c:cs:e:f:a:\bar{c}:\bar{c}s:\bar{e}:\bar{f}:\bar{g}s:\bar{a}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{g}}s:\bar{\bar{a}}:\bar{\bar{\bar{c}}}$
$2^7\cdot 3\cdot 5^2$	$C:E:F:A:c:cs:e:f:a:\bar{c}:\bar{c}s:\bar{e}:\bar{f}:\bar{g}s:\bar{a}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{f}}:\bar{\bar{g}}s:\bar{\bar{a}};\bar{\bar{\bar{c}}}.$
	Si $F=32$
$2^3\cdot 3\cdot 5^2$	$C:Cs:E:A:cs:e:gs:\bar{c}s:\bar{e}:\bar{g}s:\bar{\bar{c}}s:\bar{\bar{g}}s$
$2^4\cdot 3\cdot 5^2$	$C:Cs:E:A:c:cs:e:gs:a:\bar{c}s:\bar{e}:\bar{g}s:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{g}}s$
$2^5\cdot 3\cdot 5^2$	$C:Cs:E:F:A:c:cs:e:gs:a:\bar{c}:\bar{c}s:\bar{e}:\bar{g}s:\bar{a}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{g}}s$
$2^6\cdot 3\cdot 5^2$	$C:Cs:E:F:A:c:cs:e:f:gs:a:\bar{c}:\bar{c}s:\bar{e}:\bar{g}s:\bar{a}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{g}}s:\bar{\bar{a}}$
$2^7\cdot 3\cdot 5^2$	$C:Cs:E:F:A:c:cs:e:f:gs:a:\bar{c}:\bar{c}s:\bar{e}:\bar{f}:\bar{g}s:\bar{a}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{g}}s:\bar{\bar{a}}:\bar{\bar{\bar{c}}}$
$2^8\cdot 3\cdot 5^2$	$C:Cs:E:F:A:c:cs:e:f:gs:a:\bar{c}:\bar{c}s:\bar{e}:\bar{f}:\bar{g}s:\bar{a}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{f}}:\bar{\bar{g}}s:\bar{\bar{a}};\bar{\bar{\bar{c}}}.$
	Si $F=64$
$2^4\cdot 3\cdot 5^2$	$C:Cs:E:Gs:A:cs:e:gs:\bar{c}s:\bar{e}:\bar{g}s:\bar{\bar{c}}s:\bar{\bar{g}}s$
$2^5\cdot 3\cdot 5^2$	$C:Cs:E:Gs:A:c:cs:e:gs:a:\bar{c}s:\bar{e}:\bar{g}s:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{g}}s$
$2^6\cdot 3\cdot 5^2$	$C:Cs:E:F:Gs:A:c:cs:e:gs:a:\bar{c}:\bar{c}s:\bar{e}:\bar{g}s:\bar{a}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{g}}s$
$2^7\cdot 3\cdot 5^2$	$C:Cs:E:F:Gs:A:c:cs:e:f:gs:a:\bar{c}:\bar{c}s:\bar{e}:\bar{g}s:\bar{a}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{g}}s:\bar{\bar{a}}$
$2^8\cdot 3\cdot 5^2$	$C:Cs:E:F:Gs:A:c:cs:e:f:gs:a:\bar{c}:\bar{c}s:\bar{e}:\bar{f}:\bar{g}s:\bar{a}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{g}}s:\bar{\bar{a}}:\bar{\bar{c}}$

$2^9\cdot3\cdot5^2$	$\mathrm{C} : Cs : \mathrm{E} : \mathrm{F} : \mathrm{G}s : \mathrm{A} : c : cs : e : f : gs : a : \bar{c} : \bar{c}s : \bar{e} : \bar{f} : \bar{g}s : \bar{a} : \bar{\bar{c}} : \bar{\bar{c}}s : \bar{\bar{e}} : \bar{\bar{f}} : \bar{\bar{g}}s : \bar{\bar{a}} ; \bar{\bar{\bar{c}}}.$

Modi	SYSTEMATA
$2^n\cdot3^3\cdot5$	
Species	Si $\mathrm{F}=4$
$3^3\cdot5$	$\mathrm{C} : \mathrm{A} : g : \bar{e} : \bar{a} : \bar{h}$
$2\cdot3^3\cdot5$	$\mathrm{C} : \mathrm{A} : c : g : a : \bar{e} : \bar{g} : \bar{a} : \bar{e} : \bar{h}$
$2^2\cdot3^3\cdot5$	$\mathrm{C} : \mathrm{F} : \mathrm{A} : c : g : a : \bar{c} : \bar{e} : \bar{g} : \bar{a} : \bar{d} : \bar{\bar{e}} : \bar{\bar{g}} : \bar{\bar{h}}$
$2^3\cdot3^3\cdot5$	$\mathrm{C} : \mathrm{F} : \mathrm{A} : c : f : g : a : \bar{c} : \bar{e} : \bar{g} : \bar{a} : \bar{\bar{c}} : \bar{\bar{d}} : \bar{\bar{e}} : \bar{\bar{g}} : \bar{\bar{a}} : \bar{\bar{h}}$
$2^4\cdot3^3\cdot5$	$\mathrm{C} : \mathrm{F} : \mathrm{A} : c : f : g : a : \bar{c} : \bar{e} : \bar{f} : \bar{g} : \bar{a} : \bar{\bar{c}} : \bar{\bar{d}} : \bar{\bar{e}} : \bar{\bar{g}} : \bar{\bar{a}} : \bar{\bar{h}}$
$2^5\cdot3^3\cdot5$	$\mathrm{C} : \mathrm{F} : \mathrm{A} : c : f : g : a : \bar{c} : \bar{e} : \bar{f} : \bar{g} : \bar{a} : \bar{\bar{c}} : \bar{\bar{d}} : \bar{\bar{e}} : \bar{\bar{f}} : \bar{\bar{g}} : \bar{\bar{a}} : \bar{\bar{h}} ; \bar{\bar{\bar{c}}} .$
	Si $\mathrm{F}=8$
$2\cdot3^3\cdot5$	$\mathrm{C} : \mathrm{G} : \mathrm{A} : e : g : \bar{d} : \bar{e} : \bar{h} : \bar{\bar{d}} : \bar{\bar{h}}$
$2^2\cdot3^3\cdot5$	$\mathrm{C} : \mathrm{G} : \mathrm{A} : c : e : g : a : \bar{d} : \bar{e} : \bar{g} : \bar{h} : \bar{\bar{d}} : \bar{\bar{e}} : \bar{\bar{h}}$
$2^3\cdot3^3\cdot5$	$\mathrm{C} : \mathrm{F} : \mathrm{G} : \mathrm{A} : c : e : g : a : \bar{c} : \bar{d} : \bar{e} : \bar{g} : \bar{a} : \bar{h} : \bar{\bar{d}} : \bar{\bar{e}} : \bar{\bar{g}} : \bar{\bar{h}}$
$2^4\cdot3^3\cdot5$	$\mathrm{C} : \mathrm{F} : \mathrm{G} : \mathrm{A} : c : e : f : g : a : \bar{c} : \bar{d} : \bar{e} : \bar{g} : \bar{a} : \bar{h} : \bar{\bar{c}} : \bar{\bar{d}} : \bar{\bar{e}} : \bar{\bar{g}} : \bar{\bar{a}} : \bar{\bar{h}}$
$2^5\cdot3^3\cdot5$	$\mathrm{C} : \mathrm{F} : \mathrm{G} : \mathrm{A} : c : e : f : g : a : \bar{c} : \bar{d} : \bar{e} : \bar{f} : \bar{g} : \bar{a} : \bar{h} : \bar{\bar{c}} : \bar{\bar{d}} : \bar{\bar{e}} : \bar{\bar{g}} : \bar{\bar{a}} : \bar{\bar{h}} : \bar{\bar{\bar{c}}}$
$2^6\cdot3^3\cdot5$	$\mathrm{C} : \mathrm{F} : \mathrm{G} : \mathrm{A} : c : e : f : g : a : \bar{c} : \bar{d} : \bar{e} : \bar{f} : \bar{g} : \bar{a} : \bar{h} : \bar{\bar{c}} : \bar{\bar{d}} : \bar{\bar{e}} : \bar{\bar{f}} : \bar{\bar{g}} : \bar{\bar{a}} : \bar{\bar{h}} ; \bar{\bar{\bar{c}}}.$
	Si $\mathrm{F}=16$
$2^2\cdot3^3\cdot5$	$\mathrm{C} : \mathrm{E} : \mathrm{G} : \mathrm{A} : d : e : g : h : d : \bar{e} : \bar{h} : \bar{d} : \bar{f}s : \bar{\bar{h}}$
$2^3\cdot3^3\cdot5$	$\mathrm{C} : \mathrm{E} : \mathrm{G} : \mathrm{A} : c : d : e : g : a : h : \bar{d} : \bar{e} : \bar{g} : \bar{h} : \bar{\bar{d}} : \bar{\bar{e}} : \bar{\bar{f}}s : \bar{\bar{h}}$
$2^4\cdot3^3\cdot5$	$\mathrm{C} : \mathrm{E} : \mathrm{F} : \mathrm{G} : \mathrm{A} : c : d : e : g : a : h : \bar{c} : \bar{d} : \bar{e} : \bar{g} : \bar{a} : \bar{h} : \bar{\bar{d}} : \bar{\bar{e}} : \bar{\bar{f}}s : \bar{\bar{g}} : \bar{\bar{h}}$
$2^5\cdot3^3\cdot5$	$\mathrm{C} : \mathrm{E} : \mathrm{F} : \mathrm{G} : \mathrm{A} : c : d : e : f : g : a : h : \bar{c} : \bar{d} : \bar{e} : \bar{g} : \bar{a} : \bar{h} : \bar{\bar{d}} : \bar{\bar{e}} : \bar{\bar{f}}s : \bar{\bar{g}} : \bar{\bar{a}} : \bar{\bar{h}}$
$2^6\cdot3^3\cdot5$	$\mathrm{C} : \mathrm{E} : \mathrm{F} : \mathrm{G} : \mathrm{A} : c : d : e : f : g : a : h : \bar{c} : \bar{d} : \bar{e} : \bar{g} : \bar{a} : \bar{h} : \bar{\bar{c}} : \bar{\bar{d}} : \bar{\bar{e}} : \bar{\bar{f}}s : \bar{\bar{g}} : \bar{\bar{a}} : \bar{\bar{h}} : \bar{\bar{\bar{c}}}$
$2^7\cdot3^3\cdot5$	$\mathrm{C} : \mathrm{E} : \mathrm{F} : \mathrm{G} : \mathrm{A} : c : d : e : f : g : a : h : \bar{c} : \bar{d} : \bar{e} : \bar{f} : \bar{g} : \bar{a} : \bar{h} : \bar{\bar{c}} : \bar{\bar{d}} : \bar{\bar{e}} : \bar{\bar{f}} : \bar{\bar{f}}s : \bar{\bar{g}} : \bar{\bar{a}} : \bar{\bar{h}} ; \bar{\bar{\bar{c}}}$
	Si $\mathrm{F}=32$
$2^3\cdot3^3\cdot5$	$\mathrm{C} : \mathrm{D} : \mathrm{E} : \mathrm{G} : \mathrm{A} : \mathrm{H} : d : e : g : h : \bar{d} : \bar{e} : \bar{f}s : \bar{h} : \bar{\bar{d}} : \bar{\bar{e}} : \bar{\bar{f}}s : \bar{\bar{h}}$
$2^4\cdot3^3\cdot5$	$\mathrm{C} : \mathrm{D} : \mathrm{E} : \mathrm{G} : \mathrm{A} : \mathrm{H} : c : d : e : g : h : \bar{d} : \bar{e} : \bar{f}s : \bar{g} : \bar{h} : \bar{\bar{d}} : \bar{\bar{e}} : \bar{\bar{f}}s : \bar{\bar{h}}$
$2^5\cdot3^3\cdot5$	$\mathrm{C} : \mathrm{D} : \mathrm{E} : \mathrm{G} : \mathrm{A} : \mathrm{H} : c : d : e : g : a : h : \bar{c} : \bar{d} : \bar{e} : \bar{f}s : \bar{g} : \bar{a} : \bar{h} : \bar{\bar{d}} : \bar{\bar{e}} : \bar{\bar{f}}s : \bar{\bar{g}} : \bar{\bar{h}}$

$2^6 \cdot 3^3 \cdot 5$	$\mathrm{C:D:E:G:A:H:}c:d:e:f:g:a:h:\overline{c}:\overline{d}:\overline{e}:\overline{f}s:\overline{g}:\overline{a}:\overline{h}:\overline{\overline{d}}:\overline{\overline{e}}:\overline{\overline{f}}s:\overline{\overline{g}}:\overline{\overline{d}}:\overline{\overline{h}}$
$2^7 \cdot 3^3 \cdot 5$	$\mathrm{C:E:F:G:A:H:}c:d:e:f:g:a:h:\overline{c}:\overline{d}:\overline{e}:\overline{f}:\overline{g}:\overline{a}:\overline{h}:\overline{\overline{c}}:\overline{\overline{d}}:\overline{\overline{e}}:\overline{\overline{f}}:\overline{\overline{f}}s:\overline{\overline{g}}:\overline{\overline{a}}:\overline{\overline{h}}:\overline{\overline{\overline{c}}}$
$2^8 \cdot 3^3 \cdot 5$	$\mathrm{C:E:F:G:A:H:}c:d:e:f:g:a:h:a:\overline{c}:\overline{d}:\overline{e}:\overline{f}:\overline{f}s:\overline{g}:\overline{a}:\overline{h}:\overline{\overline{c}}:\overline{\overline{d}}:\overline{\overline{e}}:\overline{\overline{f}}:\overline{\overline{f}}s:\overline{\overline{g}}:\overline{\overline{a}}:\overline{\overline{h}};\overline{\overline{\overline{c}}}.$
	Si $\mathrm{F}=64$
$2^4 \cdot 3^3 \cdot 5$	$\mathrm{C:D:E:G:A:H:}d:e:fs:g:h:\overline{d}:\overline{e}:\overline{f}s:\overline{h}:\overline{\overline{d}}:\overline{\overline{f}}s:\overline{\overline{h}}$
$2^5 \cdot 3^3 \cdot 5$	$\mathrm{C:D:E:G:A:H:}c:d:e:fs:g:a:h:\overline{d}:\overline{e}:\overline{f}s:\overline{g}:\overline{h}:\overline{\overline{d}}:\overline{\overline{e}}:\overline{\overline{f}}s:\overline{\overline{h}}$
$2^6 \cdot 3^3 \cdot 5$	$\mathrm{C:D:E:G:A:H:}c:d:e:fs:g:a:h:\overline{c}:\overline{d}:\overline{e}:\overline{f}s:\overline{g}:\overline{a}:\overline{h}:\overline{\overline{d}}:\overline{\overline{e}}:\overline{\overline{f}}s:\overline{\overline{g}}:\overline{\overline{h}}$
$2^7 \cdot 3^3 \cdot 5$	$\mathrm{C:D:E:G:A:H:}c:d:e:fs:g:a:h:\overline{c}:\overline{d}:\overline{e}:\overline{f}s:\overline{g}:\overline{a}:\overline{h}:\overline{\overline{c}}:\overline{\overline{d}}:\overline{\overline{e}}:\overline{\overline{f}}s:\overline{\overline{g}}:\overline{\overline{a}}:\overline{\overline{h}}$
$2^8 \cdot 3^3 \cdot 5$	$\mathrm{C:D:E:G:A:H:}c:d:e:fs:g:a:h:\overline{c}:\overline{d}:\overline{e}:\overline{f}:\overline{f}s:\overline{g}:\overline{a}:\overline{h}:\overline{\overline{c}}:\overline{\overline{d}}:\overline{\overline{e}}:\overline{\overline{f}}s:\overline{\overline{g}}:\overline{\overline{a}}:\overline{\overline{h}}:\overline{\overline{\overline{c}}}$
$2^9 \cdot 3^3 \cdot 5$	$\mathrm{C:D:E:G:A:H:}c:d:e:f:fs:g:a:h:\overline{c}:\overline{d}:\overline{e}:\overline{f}:\overline{f}s:\overline{g}:\overline{a}:\overline{h}:\overline{\overline{c}}:\overline{\overline{d}}:\overline{\overline{e}}:\overline{\overline{f}}s:\overline{\overline{g}}:\overline{\overline{a}}:\overline{\overline{h}};\overline{\overline{\overline{c}}}.$
	Si $\mathrm{F}=128$
$2^5 \cdot 3^3 \cdot 5$	$\mathrm{C:D:E:Fs:G:A:H:}d:e:fs:g:h:\overline{d}:\overline{e}:\overline{f}s:\overline{g}:\overline{h}:\overline{\overline{d}}:\overline{\overline{f}}s:\overline{\overline{h}}$
$2^6 \cdot 3^3 \cdot 5$	$\mathrm{C:D:E:Fs:G:A:H:}c:d:e:fs:g:a:h:\overline{d}:\overline{e}:\overline{f}s:\overline{g}:\overline{h}:\overline{\overline{d}}:\overline{\overline{e}}:\overline{\overline{f}}s:\overline{\overline{h}}$
$2^7 \cdot 3^3 \cdot 5$	$\mathrm{C:D:E:F:Fs:G:A:H:}c:d:e:fs:g:a:h:\overline{c}:\overline{d}:\overline{e}:\overline{f}s:\overline{g}:\overline{a}:\overline{h}:\overline{\overline{d}}:\overline{\overline{e}}:\overline{\overline{f}}s:\overline{\overline{g}}:\overline{\overline{h}}$
$2^8 \cdot 3^3 \cdot 5$	$\mathrm{C:D:E:Fs:G:A:H:}c:d:e:f:fs:g:a:h:\overline{c}:\overline{d}:\overline{e}:\overline{f}s:\overline{g}:\overline{a}:\overline{h}:\overline{\overline{c}}:\overline{\overline{d}}:\overline{\overline{e}}:\overline{\overline{f}}s:\overline{\overline{g}}:\overline{\overline{a}}:\overline{\overline{h}}$
$2^9 \cdot 3^3 \cdot 5$	$\mathrm{C:D:E:Fs:G:A:H:}c:d:e:f:fs:g:a:h:\overline{c}:\overline{d}:\overline{e}:\overline{f}:\overline{f}s:\overline{g}:\overline{a}:\overline{h}:\overline{\overline{c}}:\overline{\overline{d}}:\overline{\overline{e}}:\overline{\overline{f}}s:\overline{\overline{g}}:\overline{\overline{a}}:\overline{\overline{h}}:\overline{\overline{\overline{c}}}$
$2^{10} \cdot 3^3 \cdot 5$	$\mathrm{C:D:E:F:Fs:G:A:H:}c:d:e:f:fs:g:a:h:\overline{c}:\overline{d}:\overline{e}:\overline{f}:\overline{f}s:\overline{g}:\overline{a}:\overline{h}:\overline{\overline{c}}:\overline{\overline{d}}:\overline{\overline{e}}:\overline{\overline{f}}s:\overline{\overline{g}}:\overline{\overline{a}}:\overline{\overline{h}};\overline{\overline{\overline{c}}}.$

Modi $2^n \cdot 3^2 \cdot 5^2$	SYSTEMATA
Species	Si $\mathrm{F}=4$
$3^2 \cdot 5^2$	$\mathrm{C:A:}g:\overline{e}:\overline{\overline{c}}s:\overline{\overline{h}}$
$2 \cdot 3^2 \cdot 5^2$	$\mathrm{C:A:}c:g:a:\overline{e}:\overline{g}:\overline{\overline{c}}s:\overline{\overline{e}}:\overline{\overline{h}}$

$2^2\cdot3^2\cdot5^2$	$\mathrm{C:F:A}:c:g:a:\bar{c}:\bar{e}:\bar{g}:\bar{a}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{h}}$
$2^3\cdot3^2\cdot5^2$	$\mathrm{C:F:A}:c:f:g:a:\bar{c}:\bar{e}:\bar{g}:\bar{a}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{a}}:\bar{\bar{h}}$
$2^4\cdot3^2\cdot5^2$	$\mathrm{C:F:A}:c:f:g:a:\bar{c}:\bar{e}:\bar{f}:\bar{g}:\bar{a}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{a}}:\bar{\bar{h}}:\bar{\bar{\bar{c}}}$
$2^5\cdot3^2\cdot5^2$	$\mathrm{C:F:A}:c:f:g:a:\bar{c}:\bar{e}:\bar{f}:\bar{g}:\bar{a}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{d}}:\bar{\bar{e}}:\bar{\bar{f}}:\bar{\bar{g}}:\bar{\bar{a}}:\bar{\bar{h}};\bar{\bar{\bar{c}}}.$

Si $\mathrm{F}=8$

$3^2\cdot5^2$	$\mathrm{G}:e:\bar{c}s:\bar{h}:\bar{\bar{g}}s$
$2\cdot3^2\cdot5^2$	$\mathrm{C:G:A}:e:g:\bar{c}s:\bar{e}:\bar{g}:\bar{\bar{c}}s:\bar{\bar{g}}s:\bar{\bar{h}}$
$2^2\cdot3^2\cdot5^2$	$\mathrm{C:G:A}:c:e:g:a:\bar{c}s:\bar{e}:\bar{g}:h:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{g}}s:\bar{\bar{h}}$
$2^3\cdot3^2\cdot5^2$	$\mathrm{C:F:G:A}:c:e:g:a:\bar{c}:\bar{c}s:\bar{e}:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{g}}s:\bar{\bar{h}}$
$2^4\cdot3^2\cdot5^2$	$\mathrm{C:F:G:A}:c:e:g:a:\bar{c}:\bar{c}s:\bar{e}:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{g}}s:\bar{\bar{a}}:\bar{\bar{h}}$
$2^5\cdot3^2\cdot5^2$	$\mathrm{C:F:G:A}:c:e:f:g:a:\bar{c}:\bar{c}s:\bar{e}:\bar{f}:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{g}}s:\bar{\bar{a}}:\bar{\bar{h}}:\bar{\bar{\bar{c}}}$
$2^6\cdot3^2\cdot5^2$	$\mathrm{C:F:G:A}:c:e:f:g:a:\bar{c}:\bar{c}s:\bar{e}:\bar{f}:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{f}}:\bar{\bar{g}}:\bar{\bar{g}}s:\bar{\bar{a}}:\bar{\bar{h}};\bar{\bar{\bar{c}}}.$

Si $\mathrm{F}=16$

$2\cdot3^2\cdot5^2$	$\mathrm{E:G}:cs:e:h:\bar{c}s:\bar{g}s:\bar{h}:\bar{\bar{g}}s$
$2^2\cdot3^2\cdot5^2$	$\mathrm{C:E:G:A}:cs:e:g:h:\bar{c}s:\bar{e}:\bar{g}s:\bar{h}:\bar{\bar{c}}s:\bar{\bar{g}}s:\bar{\bar{h}}$
$2^3\cdot3^2\cdot5^2$	$\mathrm{C:E:G:A}:c:cs:e:g:a:h:\bar{c}s:\bar{e}:\bar{g}s:\bar{h}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{g}}s:\bar{\bar{h}}$
$2^4\cdot3^2\cdot5^2$	$\mathrm{C:E:F:G:A}:c:cs:e:g:a:h:\bar{c}:\bar{c}s:\bar{e}:\bar{g}:\bar{g}s:\bar{a}:\bar{h}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{g}}s:\bar{\bar{h}}$
$2^5\cdot3^2\cdot5^2$	$\mathrm{C:E:F:G:A}:c:cs:e:f:g:a:h:\bar{c}:\bar{c}s:\bar{e}:\bar{g}:\bar{g}s:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{g}}s:\bar{\bar{a}}:\bar{\bar{h}}$
$2^6\cdot3^2\cdot5^2$	$\mathrm{C:E:F:G:A}:c:cs:e:f:g:a:h:\bar{c}:\bar{c}s:\bar{e}:\bar{f}:\bar{g}:\bar{g}s:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{g}}s$ $:\bar{\bar{a}}:\bar{\bar{h}}:\bar{\bar{\bar{c}}}$
$2^7\cdot3^2\cdot5^2$	$\mathrm{C:E:F:G:A}:c:cs:e:f:g:a:h:\bar{c}:\bar{c}s:\bar{e}:\bar{f}:\bar{g}:\bar{g}s:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{e}}:\bar{\bar{f}}:\bar{\bar{g}}:\bar{\bar{g}}s$ $:\bar{\bar{a}}:\bar{\bar{h}};\bar{\bar{\bar{c}}}$

Si $\mathrm{F}=32$

$2^2 \cdot 3^2 \cdot 5^2$	$\mathrm{C}s:\mathrm{E}:\mathrm{G}:\mathrm{H}:cs:e:gs:h:\bar{c}\,s:\bar{g}\,s:\bar{h}:\bar{d}\,s:\bar{g}\,s$
$2^3 \cdot 3^2 \cdot 5^2$	$\mathrm{C}s:\mathrm{E}:\mathrm{G}:\mathrm{A}:\mathrm{H}:cs:e:gs:h:\bar{c}\,s:\bar{g}\,s:\bar{h}:\bar{\bar{c}}\,s:\bar{\bar{g}}\,s:\bar{\bar{h}}$
$2^4 \cdot 3^2 \cdot 5^2$	$\mathrm{C}s:\mathrm{E}:\mathrm{G}:\mathrm{A}:\mathrm{H}:cs:e:g:gs:a:h:\bar{c}\,s:\bar{e}:\bar{g}:\bar{g}\,s:\bar{h}:\bar{\bar{c}}\,s:\bar{\bar{d}}\,s:\bar{\bar{e}}:\bar{\bar{g}}\,s:\bar{\bar{h}}$
$2^5 \cdot 3^2 \cdot 5^2$	$\mathrm{C}s:\mathrm{E}:\mathrm{G}:\mathrm{A}:\mathrm{H}:c:cs:e:g:gs:a:h:\bar{c}:\bar{c}\,s:\bar{e}:\bar{g}:\bar{g}\,s:\bar{d}:\bar{h}:\bar{\bar{c}}\,s:\bar{\bar{d}}\,s:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{g}}\,s:\bar{\bar{h}}$
$2^6 \cdot 3^2 \cdot 5^2$	$\mathrm{C}s:\mathrm{E}:\mathrm{F}:\mathrm{G}:\mathrm{A}:\mathrm{H}:c:cs:e:f:g:gs:a:h:\bar{c}:\bar{c}\,s:\bar{e}:\bar{g}:\bar{g}\,s:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{c}}\,s:\bar{\bar{d}}\,s:\bar{\bar{e}}$ $:\bar{\bar{g}}:\bar{\bar{g}}\,s:\bar{\bar{a}}:\bar{\bar{h}}$
$2^7 \cdot 3^2 \cdot 5^2$	$\mathrm{C}s:\mathrm{E}:\mathrm{F}:\mathrm{G}:\mathrm{A}:\mathrm{H}:c:cs:e:f:g:gs:a:h:\bar{c}:\bar{c}\,s:\bar{e}:\bar{f}:\bar{g}:\bar{g}\,s:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{c}}\,s:\bar{\bar{d}}\,s:\bar{\bar{e}}$ $:\bar{\bar{g}}:\bar{\bar{g}}\,s:\bar{\bar{a}}:\bar{\bar{h}}:\bar{\bar{\bar{c}}}$
$2^8 \cdot 3^2 \cdot 5^2$	$\mathrm{C}s:\mathrm{E}:\mathrm{F}:\mathrm{G}:\mathrm{A}:\mathrm{H}:c:cs:e:f:g:gs:a:h:\bar{c}:\bar{c}\,s:\bar{e}:\bar{f}:\bar{g}:\bar{g}\,s:\bar{a}:\bar{h}$ $:\bar{\bar{c}}:\bar{\bar{c}}\,s:\bar{\bar{d}}\,s:\bar{\bar{e}}:\bar{\bar{f}}:\bar{\bar{g}}:\bar{\bar{g}}\,s:\bar{\bar{a}}:\bar{\bar{h}};\bar{\bar{\bar{c}}}.$

Si $\mathrm{F}=64$

$2^3 \cdot 3^2 \cdot 5^2$	$\mathrm{C}s:\mathrm{E}:\mathrm{G}:\mathrm{G}s:\mathrm{H}:cs:e:gs:h:\bar{c}\,s:\bar{d}\,s:\bar{g}\,s:\bar{h}:\bar{d}\,s:\bar{g}\,s$
$2^4 \cdot 3^2 \cdot 5^2$	$\mathrm{C}s:\mathrm{E}:\mathrm{G}:\mathrm{G}s:\mathrm{H}:cs:e:g:gs:h:\bar{c}\,s:\bar{d}\,s:\bar{g}\,s:\bar{h}:\bar{\bar{c}}\,s:\bar{\bar{d}}\,s:\bar{\bar{g}}\,s:\bar{\bar{h}}$
$2^5 \cdot 3^2 \cdot 5^2$	$\mathrm{C}:\mathrm{C}s:\mathrm{E}:\mathrm{G}:\mathrm{G}s:\mathrm{H}:c:cs:e:g:gs:h:\bar{c}\,s:\bar{d}\,s:\bar{g}:\bar{g}\,s:\bar{h}:\bar{\bar{c}}\,s:\bar{\bar{d}}\,s:\bar{\bar{g}}\,s:\bar{\bar{h}}$
$2^6 \cdot 3^2 \cdot 5^2$	$\mathrm{C}:\mathrm{C}s:\mathrm{E}:\mathrm{F}:\mathrm{G}:\mathrm{G}s:\mathrm{H}:c:cs:e:g:gs:a:h:\bar{c}:\bar{c}\,s:\bar{d}:\bar{d}\,s:\bar{e}:\bar{g}:\bar{g}\,s:\bar{a}:$ $\bar{h}:\bar{\bar{c}}\,s:\bar{\bar{d}}\,s:\bar{\bar{e}}:\bar{\bar{g}}\,s:\bar{\bar{h}}$
$2^7 \cdot 3^2 \cdot 5^2$	$\mathrm{C}:\mathrm{C}s:\mathrm{E}:\mathrm{F}:\mathrm{G}:\mathrm{G}s:\mathrm{A}:\mathrm{H}:c:cs:e:f:g:gs:a:h:\bar{c}:\bar{c}\,s:\bar{d}:\bar{d}\,s:\bar{e}:\bar{g}:\bar{g}\,s:\bar{a}:$ $\bar{h}:\bar{\bar{c}}\,s:\bar{\bar{d}}\,s:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{g}}\,s:\bar{\bar{a}}:\bar{\bar{h}}$
$2^8 \cdot 3^2 \cdot 5^2$	$\mathrm{C}:\mathrm{C}s:\mathrm{E}:\mathrm{F}:\mathrm{G}:\mathrm{G}s:\mathrm{A}:\mathrm{H}:c:cs:e:f:g:gs:a:h:\bar{c}:\bar{c}\,s:\bar{d}\,s:\bar{e}:\bar{f}:\bar{g}:\bar{g}\,s:\bar{a}:$ $\bar{h}:\bar{\bar{c}}:\bar{\bar{c}}\,s:\bar{\bar{d}}\,s:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{g}}\,s:\bar{\bar{a}}:\bar{\bar{h}}:\bar{\bar{\bar{c}}}$
$2^9 \cdot 3^2 \cdot 5^2$	$\mathrm{C}:\mathrm{C}s:\mathrm{E}:\mathrm{F}:\mathrm{G}:\mathrm{G}s:\mathrm{A}:\mathrm{H}:c:cs:e:f:g:gs:a:h:\bar{c}:\bar{c}\,s:\bar{d}\,s:\bar{e}:\bar{f}:\bar{g}:\bar{g}\,s:\bar{a}:$ $\bar{h}:\bar{\bar{c}}:\bar{\bar{c}}\,s:\bar{\bar{d}}\,s:\bar{\bar{e}}:\bar{\bar{f}}:\bar{\bar{g}}:\bar{\bar{g}}\,s:\bar{\bar{a}}:\bar{\bar{h}};\bar{\bar{\bar{c}}}.$

Si $\mathrm{F}=128$

$2^4 \cdot 3^2 \cdot 5^2$	$\mathrm{C}s:\mathrm{E}:\mathrm{G}:\mathrm{G}s:\mathrm{H}:cs:ds:e:gs:h:\bar{c}\,s:\bar{d}\,s:\bar{g}\,s:\bar{h}:\bar{\bar{d}}\,s:\bar{\bar{g}}\,s$
$2^5 \cdot 3^2 \cdot 5^2$	$\mathrm{C}:\mathrm{C}s:\mathrm{E}:\mathrm{G}:\mathrm{G}s:\mathrm{H}:cs:ds:e:g:gs:h:\bar{c}\,s:\bar{d}\,s:\bar{e}:\bar{g}\,s:\bar{h}:\bar{\bar{d}}\,s:\bar{\bar{g}}\,s:\bar{\bar{h}}$

$2^6\cdot3^2\cdot5^2$	C : Cs : E : G : Gs : H : c : cs : ds : e : g : gs : a : h : $\bar{c}$ s : $\bar{d}$ s : $\bar{e}$: $\bar{g}$: $\bar{g}$ s : $\bar{h}$: $\bar{\bar{c}}$ s : $\bar{\bar{d}}$ s : $\bar{\bar{e}}$: $\bar{\bar{g}}$ s : $\bar{\bar{h}}$
$2^7\cdot3^2\cdot5^2$	C : Cs : E : G : Gs : H : c : cs : ds : e : g : gs : a : h : $\bar{c}$: $\bar{c}$ s : $\bar{d}$ s : $\bar{e}$: $\bar{g}$: $\bar{g}$ s : $\bar{a}$: $\bar{h}$: $\bar{\bar{c}}$ s : $\bar{\bar{d}}$ s : $\bar{\bar{e}}$: $\bar{\bar{g}}$ s : $\bar{\bar{h}}$
$2^8\cdot3^2\cdot5^2$	C : Cs : E : F : G : Gs : A : H : c : cs : ds : e : f : g : gs : a : h : $\bar{c}$: $\bar{c}$ s : $\bar{d}$ s : $\bar{e}$: $\bar{g}$: $\bar{g}$ s : $\bar{a}$: $\bar{h}$: $\bar{\bar{c}}$: $\bar{\bar{c}}$ s : $\bar{\bar{d}}$ s : $\bar{\bar{e}}$: $\bar{\bar{g}}$: $\bar{\bar{g}}$ s : $\bar{\bar{a}}$: $\bar{\bar{h}}$
$2^9\cdot3^2\cdot5^2$	C : Cs : E : F : G : Gs : A : H : c : cs : ds : e : f : g : gs : a : h : $\bar{c}$: $\bar{c}$ s : $\bar{d}$ s : $\bar{e}$: $\bar{f}$: $\bar{g}$: $\bar{g}$ s : $\bar{a}$: $\bar{h}$: $\bar{\bar{c}}$: $\bar{\bar{c}}$ s : $\bar{\bar{d}}$ s : $\bar{\bar{e}}$: $\bar{\bar{g}}$: $\bar{\bar{g}}$ s : $\bar{\bar{a}}$: $\bar{\bar{h}}$: $\bar{\bar{c}}$
$2^{10}\cdot3^2\cdot5^2$	C : Cs : E : F : G : Gs : A : H : c : cs : ds : e : f : g : gs : a : h : $\bar{c}$: $\bar{c}$ s : $\bar{d}$ s : $\bar{e}$: $\bar{f}$: $\bar{g}$: $\bar{g}$ s : $\bar{a}$: $\bar{h}$: $\bar{\bar{c}}$: $\bar{\bar{c}}$ s : $\bar{\bar{d}}$ s : $\bar{\bar{e}}$: $\bar{\bar{f}}$: $\bar{\bar{g}}$: $\bar{\bar{g}}$ s : $\bar{\bar{a}}$: $\bar{\bar{h}}$; $\bar{\bar{\bar{c}}}$.
	Si F = 256
$2^5\cdot3^2\cdot5^2$	Cs : Ds : E : G : Gs : H : cs : ds : e : gs : h : $\bar{c}$ s : $\bar{d}$ s : $\bar{g}$ s : $\bar{h}$: $\bar{\bar{d}}$ s : $\bar{\bar{g}}$ s
$2^6\cdot3^2\cdot5^2$	C:Cs : Ds : E : G : Gs : A : H : cs : ds : e : g : gs : h : $\bar{c}$ s : $\bar{d}$ s : $\bar{e}$: $\bar{g}$ s : $\bar{h}$: $\bar{\bar{c}}$ s : $\bar{\bar{d}}$ s : $\bar{\bar{g}}$ s : $\bar{\bar{h}}$
$2^7\cdot3^2\cdot5^2$	C:Cs : Ds : E : F : G : Gs : A : H : c : cs : ds : e : g : gs : h : $\bar{c}$: $\bar{c}$ s : $\bar{d}$ s : $\bar{e}$: $\bar{g}$: $\bar{g}$ s : $\bar{h}$: $\bar{\bar{c}}$ s : $\bar{\bar{d}}$ s : $\bar{e}$: $\bar{\bar{g}}$ s : $\bar{\bar{h}}$
$2^8\cdot3^2\cdot5^2$	C:Cs : Ds : E : F : G : Gs : A : H : c : cs : ds : e : g : gs : a : h : $\bar{c}$: $\bar{c}$ s : $\bar{d}$ s : $\bar{e}$: $\bar{g}$: $\bar{g}$ s : a : $\bar{h}$: $\bar{\bar{c}}$ s : $\bar{\bar{d}}$ s : $\bar{\bar{e}}$: $\bar{\bar{g}}$: $\bar{\bar{g}}$ s : $\bar{\bar{h}}$
$2^9\cdot3^2\cdot5^2$	C:Cs : Ds : E : F : G : Gs : A : H : c : cs : ds : e : g : gs : a : h : $\bar{c}$: $\bar{c}$ s : $\bar{d}$ s : $\bar{e}$: $\bar{g}$: $\bar{g}$ s : $\bar{a}$: $\bar{h}$ $\bar{\bar{c}}$: $\bar{\bar{c}}$ s : $\bar{\bar{d}}$ s : $\bar{\bar{e}}$: $\bar{\bar{g}}$: $\bar{\bar{g}}$ s : $\bar{\bar{a}}$: $\bar{\bar{h}}$
$2^{10}\cdot3^2\cdot5^2$	C:Cs : Ds : E : F : G : Gs : A : H : c : cs : ds : e : f : g : gs : a : h : $\bar{c}$: $\bar{c}$ s : $\bar{d}$ s : $\bar{e}$: $\bar{f}$: $\bar{g}$: $\bar{g}$ s : $\bar{a}$: $\bar{h}$: $\bar{\bar{c}}$: $\bar{\bar{c}}$ s : $\bar{\bar{d}}$ s : $\bar{\bar{e}}$: $\bar{\bar{g}}$: $\bar{\bar{g}}$ s : $\bar{\bar{a}}$: $\bar{\bar{h}}$: $\bar{\bar{\bar{c}}}$
$2^{11}\cdot3^2\cdot5^2$	C:Cs : Ds : E : F : G : Gs : A : H : c : cs : ds : e : f : g : gs : a : h : $\bar{c}$: $\bar{c}$ s : $\bar{d}$ s : $\bar{e}$: $\bar{f}$: $\bar{g}$: $\bar{g}$ s : $\bar{a}$: $\bar{h}$: $\bar{\bar{c}}$: $\bar{\bar{c}}$ s : $\bar{\bar{d}}$ s : $\bar{\bar{e}}$: $\bar{\bar{f}}$: $\bar{\bar{g}}$: $\bar{\bar{g}}$ s : $\bar{\bar{a}}$: $\bar{\bar{h}}$; $\bar{\bar{\bar{c}}}$.
Modi $2^n\cdot3^3\cdot5^2$ *species*	SYSTEMATA Si F = 4
$3^3\cdot5^2$	C : A : g : $\bar{e}$: $\bar{c}$ s : $\bar{d}$: $\bar{h}$

$2\cdot 3^3\cdot 5^2$	$\mathrm{C}:\mathrm{A}:c:g:a:\bar{e}:\bar{g}:\bar{\bar{c}}s:\bar{\bar{d}}:\bar{\bar{e}}:\bar{\bar{h}}$
$2^2\cdot 3^3\cdot 5^2$	$\mathrm{C}:\mathrm{F}:\mathrm{A}:c:g:a:\bar{c}:\bar{e}:\bar{g}:\bar{a}:\bar{\bar{c}}s:\bar{\bar{d}}:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{h}}$
$2^3\cdot 3^3\cdot 5^2$	$\mathrm{C}:\mathrm{F}:\mathrm{A}:c:f:g:a:\bar{c}:\bar{e}:\bar{g}:\bar{a}:\bar{\bar{c}}s:\bar{\bar{d}}:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{a}}:\bar{\bar{h}}$
$2^4\cdot 3^3\cdot 5^2$	$\mathrm{C}:\mathrm{F}:\mathrm{A}:c:f:g:a:\bar{c}:\bar{e}:\bar{f}:\bar{g}:\bar{a}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{d}}:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{a}}:\bar{\bar{h}}:\bar{\bar{c}}$
$2^5\cdot 3^3\cdot 5^2$	$\mathrm{C}:\mathrm{F}:\mathrm{A}:c:f:g:a:\bar{c}:\bar{e}:\bar{f}:\bar{g}:\bar{a}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{d}}:\bar{\bar{e}}:\bar{\bar{f}}:\bar{\bar{g}}:\bar{\bar{a}}:\bar{\bar{h}};\bar{\bar{\bar{c}}}.$
	Si $\mathrm{F}=8$
$3^3\cdot 5^2$	$\mathrm{G}:e:\bar{c}s:\bar{d}:\bar{h}:\bar{\bar{g}}s$
$2\cdot 3^3\cdot 5^2$	$\mathrm{C}:\mathrm{G}:\mathrm{A}:e:g:\bar{c}s:\bar{d}:\bar{e}:\bar{h}:\bar{\bar{c}}s:\bar{\bar{d}}:\bar{g}s:\bar{\bar{h}}$
$2^2\cdot 3^3\cdot 5^2$	$\mathrm{C}:\mathrm{G}:\mathrm{A}:c:e:g:a:\bar{c}s:\bar{d}:\bar{e}:\bar{g}:\bar{h}:\bar{\bar{c}}s:\bar{\bar{d}}:\bar{\bar{e}}:\bar{\bar{g}}s:\bar{\bar{h}}$
$2^3\cdot 3^3\cdot 5^2$	$\mathrm{C}:\mathrm{F}:\mathrm{G}:\mathrm{A}:c:e:g:a:\bar{c}s:\bar{d}:\bar{e}:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{c}}s:\bar{\bar{d}}:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{g}}s:\bar{\bar{h}}$
$2^4\cdot 3^3\cdot 5^2$	$\mathrm{C}:\mathrm{F}:\mathrm{G}:\mathrm{A}:c:e:g:a:\bar{c}:\bar{c}s:\bar{d}:\bar{e}:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{d}}:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{g}}s:\bar{\bar{a}}:\bar{\bar{h}}$
$2^5\cdot 3^3\cdot 5^2$	$\mathrm{C}:\mathrm{F}:\mathrm{G}:\mathrm{A}:c:e:f:g:a:\bar{c}:\bar{c}s:\bar{d}:\bar{e}:\bar{f}:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{d}}:\bar{\bar{e}}:\bar{\bar{g}}:\bar{\bar{g}}s:\bar{\bar{a}}:\bar{\bar{h}}:\bar{\bar{\bar{c}}}$
$2^6\cdot 3^3\cdot 5^2$	$\mathrm{C}:\mathrm{F}:\mathrm{G}:\mathrm{A}:c:e:f:g:a:\bar{c}:\bar{c}s:\bar{d}:\bar{e}:\bar{f}:\bar{g}:\bar{a}:\bar{h}:\bar{\bar{c}}:\bar{\bar{c}}s:\bar{\bar{d}}:\bar{\bar{e}}:\bar{\bar{f}}:\bar{\bar{g}}:\bar{\bar{g}}s:\bar{\bar{a}}:\bar{\bar{h}}:\bar{\bar{\bar{c}}}.$

20. Circa compositionem musicam vero hic generatim sequentia sunt observanda. Primo electo modo tam species quam systema definitum eligi debet, in quo compositio fiat. Determinato autem systemate omnes soni, qui in compositione musica hac occurrere possunt, definiuntur ita, ut quamdiu hoc systemate utaris, alios sonos praeter assignatos adhibere non liceat; nisi forte instrumentum musicum sonos vel C graviores, vel ipso $\bar{\bar{\bar{c}}}$ acutiores complectatur, quo casu etiam tales soni usurpari poterunt, quatenus scilicet in exponente speciei continentur, id quod ex ipso exponente facile videre licet.

21. Primum igitur in hac tabula occurrit modus, cuius exponens est $2^n\cdot 3^3$, ad cuius determinationem sonus per 3^3 seu 27 expressus adesse debet; nullum igitur huiusmodi systema existit pro $\mathrm{F}=1$ neque pro $\mathrm{F}=2$, cum his casibus sonus 27 supremum limitem c superaret. Hanc ob rem statim positum est $\mathrm{F}=4$, in qua hypothesi sonus 3^3 clave $\bar{\bar{d}}$ exprimitur; praeter hune vero sonum opus quoque est sono per 1 vel binarii potestatem expresso, qui in hoc intervallum non cadit, nisi sit $n=2$. Primum ergo huiusmodi systema habet exponentem $2^2\cdot 3^3$ in hypothesi $\mathrm{F}=4$.

22. Manente autem $\mathrm{F}=4$ iste modus quatuor admittit systemata, quorum exponentes sunt $2^2\cdot 3^3$, $2^3\cdot 3^3$, $2^4\cdot 3^3$ et $2^5\cdot 3^8$, nec plura in quatuor octavarum intervallo dari possunt. Nam etsi exponens accipiatur $2^6\cdot 3^3$ tamen illi ipsi soni prodibunt, qui exponenti $2^5\cdot 3^3$ responderunt, ita ut diversum systema non orirètur. Simili ratione si ponatur $\mathrm{F}=8$, quatuor habentur systemata, totidemque posito $\mathrm{F}=16$ atque $\mathrm{F}=32$, ubi iterum terminus

figitur; in ultimo enim systemate, cuius exponens est $2^8 \cdot 3^3$, iam in singulis octavis omnes soni primitivi adsunt ideoque systema magis compositum non datur.

23. Ita ergo primi modi, cuius exponens est $2^n \cdot 3^3$, omnino 16 extant systemata, secundus vero modus, cuius exponens est $2^n \cdot 3^2 \cdot 5$, systemata habet 33. Tertii porro modi, cuius exponens est $2^n \cdot 3 \cdot 5^2$, numerus systematum est 30. Hunc sequitur modus quartus, cuius exponens est $2^n \cdot 3^3 \cdot 5$, a Musicis hodiernis maxime usitatus, in quo 36 diversa systemata locum habent. In modo quinto, qui pariter saepissime usurpari solet et exponentem habet $2^n \cdot 3^2 \cdot 5^2$, systemata sunt 48. Sextus denique modus compositus et apud Musicos hodiernos maxime frequens 66 obtinet systemata diversa. Quocirca omnes hi sex modi coniunctim 229 diversa systemata complectuntur.

24. Qui formas omnium horum systematum attentius contemplabitur, observabit in quolibet eorum intervalla diapason diversimode sonis esse referta, exceptis ultimis cuiusque modi systematis, quorum singulae octavae omnes modi sonos primitivos continent atque aequali sonorum numero sunt repletae. Alia autem systemata in infima octava alia in mediis alia in suprema sonis magis sunt repleta, ex quo maxime idoneum systema pro dato concentu eligi poterit. Qui enim basso primarias partes in modulatione tribuere velit, systemate habet opus, in cuius infimis octavis soni frequentissime occurrant, contra vero systema, in quo supremae octavae sonis maxime sunt refertae, adhibebit, qui in discantu maximam varietatem collocare studet. Tandem etiam qui in mediis vocibus summam vim constituit, inveniet pari modo systemata ad institutum accommodata. Maximum autem hoc in modis discrimen hodierni Musici iam quodammodo animadvertisse videntur, experientia potius quam theoria ducti; quare haec nostra enumeratio ipsis non parum subsidii afferet, ex qua distincte perspicient, quod ante tantum confuse erant suspicati.