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A STUDY OF ROOT MOTION IN PASSAGES LEADING TO FINAL CADENCES IN SELECTED MASSES OF THE LATE SIXTEENTH CENTURY

DISSERTATION

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During the late sixteenth century, cadential formulae had become clearly established. The vertical combinations (chords) resulting from these cadential formulae resulted in numerous standardizations in the approach to the cadence. Consequently, a reasonable possibility exists that cadential formulae pointed the way toward the realization of chord progressions and chord relationships.

This study is concerned with the vertical combinations resulting from late sixteenth century cadential formulae and in passages immediately preceding these formulae. The investigation is limited to Masses dating from the last half of the sixteenth century and utilizes compositions from the following composers: Handl, Kerle, Lassus, Merulo, Monte, Palestrina, Victoria.

Based upon the belief that harmonic sequence emerged in an evolutionary manner, the purpose of this investigation is to determine the degree, if any, to which root motion was being organized in cadential passages in Masses. The study utilizes 321 cadential passages. Six sonorities (chords) from each passage were analyzed and the roots of each sonority were identified by a Roman numeral in accordance with Rameau's

Theory of Inversion as enunciated in his Traité de l'harmonie réduite à ses principes naturels. The chord roots were tabulated according to patterns containing three, four, five, and six chords respectively, a frequency of occurrence for each pattern was listed, and a percentage based upon the frequency of occurrence was calculated.

The concluding portion of the investigation determines types and percentages of root movement permeating each of the 321 cadential passages used in this study. Each root movement was classified according to one of three primary intervallic distances, i.e. fifth, third, second, and the resultant percentages were tabulated according to progressions involving three, four, five, and six chords respectively.

This study concludes that the progressions I-V-I and I-IV-I appear to be the only two root progressions receiving high enough percentages to be regarded as significant. These percentages are tempered by the fact that I-V-I and I-IV-I may be interpreted as repetitions of standardized cadential formulae found in the sixteenth century.

The study also concludes that root motion by fifth accounts for no less than 67.35 per cent of the root movements analyzed during the investigation. The percentage differential between root movement by fifth and root movement by second (the interval receiving the next highest percentage) at no time drops below 40.41 per cent. The evidence indicates that root movement by fifth does account

for the majority of the root motion analyzed in final cadential passages of Masses dating from the late sixteenth century. The percentage differential between root motion by second and root motion by third decreases as the chord progressions become longer. None of the differential percentages were judged to be high enough as to merit placing any significance of root motion by second over root motion by third.

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CHAPTER I

INTRODUCTION

The transition from Renaissance to Baroque has often been observed as one of the truly epochal periods in the history of music. With the year 1600 being arbitrarily set as the beginning of the Baroque, and considering the rather large concentration of musical events taking place at this time, one is led to the presumption that stylistic changes were beginning to materialize several years before the beginning of the seventeenth century. The fact is, "the conception of the nature and function of music that found its expression in the new forms was already present in the attitudes of progressive musicians who worked in the last half of the sixteenth century."[1]

Music historians have tended more and more to push back the boundary between the Renaissance and the Baroque toward the middle of the sixteenth century.[2] Using the fifty-year period between 1550 to 1600 as a reference, this dissertation represents an investigation into the transition that often serves as one of the basic demarcations between Renaissance

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[1]Claude Palisca, "The Beginnings of Baroque Music; Its Roots in Sixteenth Century Theory and Polemics," unpublished doctoral dissertation, Harvard University, Cambridge, Mass., 1951, Summary, p. 1.

[2]Ibid., p. vi.

and Baroque: the phenomenon in which chord progressions governed by modality begin to be governed by a system of chordal relations based on the attraction of a tonal center.

The prime impetus for selecting the material used in this investigation resulted from questions left unanswered after several years of teaching courses in counterpoint and harmony, and from those questions which arose from various attempts at analyzing music from the late sixteenth and seventeenth centuries. Some of these questions are reflected in the following statement by Lowinsky:

> The music of the sixteenth century was for the greatest part conceived within the framework of the church modes. Yet we meet with phenomena--indeed, with whole repertories--which do not fit into the traditional system of the eight modes but show, often in an astonishing manner, prefigurations of tonal and even atonal thinking.[3]

Music theorists began to give rules concerning the vertical distribution of three tones as early as the first half of the fourteenth century.[4] During the late fifteenth century, intervals favored in cadential chords became more firmly established, and by the last decade of that century, numerous theoretical treatises listed actual cadential formulae in the rules of composition.[5]

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[3]Edward E. Lowinsky, Tonality and Atonality in Sixteenth Century Music (Berkeley, 1962), p. 1.

[4]Helen E. Bush, "The Recognition of Chordal Formation by Early Music Theorists," Musical Quarterly, XXXII (April, 1946), 227.

[5]Ibid., pp. 231-232.

With the late sixteenth century, cadential formulae had now been clearly established. Considering the vertical combinations (chords) resulting from these cadential formulae, and considering the ample amount of information dealing with cadences which was supplied by late fifteenth and sixteenth century theorists, a very reasonable possibility exists that cadential formulae pointed the way toward the realization of chord progressions and chord relationships.

> In seeking the factors most responsible for the gradual dissolution of the modal system we arrive of necessity at the harmonic considerations embodied in the final cadential formulae. The close was always considered the determiner of the mode--this being a psychological necessity.[6] The approach to the close therefore is of primary importance; and since aesthetic considerations brought about numerous standardizations in this approach, composers and theorists were faced with the gradual unification of harmonic means which eventually were to be incorporated into a unified tonal system. Tonality is a vertical concept; modality is horizontal. Therefore we can understand the gradual evolution of the tonal medium most effectively through a survey of the harmonic trends depicted in the final cadence.[7]

It is not the purpose of this investigation to trace cadential development, per se; more precise delimitation of the subject will be presented later in this chapter. However, the study is concerned with the vertical combinations resulting from sixteenth century cadential formulae and most particularly

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[6]See Robert W. Wienpahl, "Modal Usage in Masses of the Fifteenth Century," Journal of the American Musicological Society, V (Spring, 1952), 37-52.

[7]Robert W. Wienpahl, "The Evolutionary Significance of Fifteenth Century Cadential Formulae," Journal of Music Theory, IV (November, 1960), 131.

in the passages immediately preceding these formulae. Based upon the belief that harmonic sequence (sometimes referred to as "functional harmony") emerged in an evolutionary manner, this thesis will determine through the study of root motion whether or not there is internal evidence which leads one to conclude that composers were organizing this music (consciously or unconsciously) in a degree which could be regarded as an ancestral precursor to "functional harmony."

Regarding the important subject of chordal progression during the years 1550 to 1600, the information presently available does not adequately determine whether the feeling for harmonic progression extended to the chords appearing immediately before the penultimate and final or was confined to just these last two vertical combinations. "Suffice it to say that the concept of chordal progression probably first developed here [at cadences] and was later incorporated in the sections between the cadences."[8]

In deference to the late fifteenth and sixteenth century theorists who codified important (and in many cases, exhaustive) material regarding cadences, it would seem these theorists had become increasingly aware of chordal formation along with the many possible vertical arrangements of voices at cadence points. However, "unlike [many of] the active composers who--even in Dunstable's time--possessed a feeling for harmony, the theorist persisted in regarding each voice

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[8]Bush, op. cit., p. 242.

as an entity in itself. In contrast to the contemporary composer, he was most conservative in his ideas and precepts."[9]

> In fact, it was not until the early eighteenth century that Rameau (1722), Fux (1725), and others formally recognized them [harmonies] as structural and compositional elements. This late recognition is all the more striking in view of the extensive use of simple chordal progressions in various periods of early music history [see Familiar Style] and, particularly, in view of the seventeenth century practice of thoroughbass, which is essentially harmonic in nature.[10]

The late recognition of harmony as a structural and compositional element by theorists serves to emphasize the primary significance of this paper. Historically, theoretical treatises have rarely (if ever) kept pace with the ideas being expressed in the music of the contemporary composer. Instead, the treatises most often suggest what had been the mode of thinking several years earlier. In spite of the fact that Rameau and others finally recognized harmony as a compositional element in the eighteenth century, no clear documentation has ever been offered as to the degree ecclesiastical music of the sixteenth century was being affected by the ancestral precursors of functional harmony. This lack of specific information is particularly true for the important years 1550 to 1600.

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[9] Ibid., pp. 242-243.

[10] "Harmony," Harvard Dictionary of Music, 2nd ed. (Cambridge, Mass., 1972).

Two studies, already cited in this chapter, can be recognized as having significant influence upon this investigation. The most recent study dealing with chordal progressions in sixteenth century music was conducted in 1961 by Edward Lowinsky.[11] Lowinsky's study traces the emergence and growth of eighteenth century tonality from Dunstable and Dufay, the frottola and villancico, to Josquin, the French chanson, the Italian cazonetta and balletto, and finally to the English madrigal and lute air. The study concludes that "in secular vocal music tonality emerged; but in the instrumental dance literature it had the strongest representation right from the beginning of the century."[12]

The principal conclusion of Lowinsky's work, therefore, is that the development of tonality is allied principally with the development of dance music, that is, with instrumental forms. It is Lowinsky's contention that ecclesiastical music was so intimately tied to plain chant, that the old modes reigned supreme. Consequently, the bulk of his study deals mostly with instrumental music and with the concept of "tonality."

A study conducted in 1946 by Helen Bush furnished much valuable information on chordal formation and the treatment of cadences particularly as they were recognized by early

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[11] Lowinsky, op. cit.

[12] Ibid., p. 75.

music theorists.[13] A great deal of chronological evidence is given which underlines the real service early theorists rendered in systematizing chordal structure. However, it was not the purpose of this study to trace cadential development and root motion, nor was there any attempt to furnish information regarding chordal relations.

Delimitations

An investigation usually implies a systematic search or inquiry in an attempt to learn the facts about something hidden, unique, or complex. With regard to music, an investigation will usually be capable of some form of analytical procedure. The resulting analysis, in turn, will yield findings that are significant. In order for the analytical procedure to be valid, it is obviously necessary to delimit the material to be investigated. Therefore, the present study is concerned only with passages leading to final cadences from Masses dating from the last half of the sixteenth century and only with composers associated and trained in the tradition of the Roman Catholic Church.[14] The following list results:

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[13]Bush, op. cit.

[14]The investigation is also limited to Masses which have been transcribed into modern notation.

Handl (known as Gallus). . . . 1550-1591
Kerle, Jacobus de. 1531-1591
Lassus 1532-1594
Merulo 1533-1604
Monte (de Monte) 1521-1603
Palestrina 1525-1594
Victoria . . . . . 1540-1611[15]

In the interest of gaining as complete a representation of examples as possible, the original desire was to gather approximately fifty passages leading to final cadences per composer. As the study progressed it was discovered that few significant root patterns were apparent past six chordal combinations. The final decision, therefore, was to limit each example to six chords, since this number seemed to represent the point after which no meaningful conclusions or percentages could be compiled.

The arbitrary number of fifty examples per composer likewise had to be adjusted downward to as low as thirty in the case (for example) of Merulo. Only six Masses were available for Claudio Merulo and also for Jacobus de Kerle--resulting in thirty and thirty-four examples respectively. The total number of examples per composer eventually resulted in the following:

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[15]By no means is this list intended to be inclusive of all the composers of Masses during the years 1550 to 1600. These particular composers were chosen because they are recognized masters of the style, and also because they represent the widest cross section of composers of Masses during this particular period of music history.

Composer	Total Number of Examples
Handl	48
Kerle	34
Lassus	52
Merulo	30
Monte	52
Palestrina	49
Victoria	56[16]

A problem arose (i.e. Palestrina) where the composer chose to utilize a commixtio just before the final cadence.[17] Several times the commixtio occurred during the final passages being used for the investigation. Since the purpose of this dissertation is to study root motion in relation to final cadences only, the chordal analysis of those examples involving a commixtio had to be limited strictly to the material affecting just the final cadence. This resulted in several examples showing analyses of only two to five chordal combinations--depending upon where the commixtio occurred. The Appendix to this paper, therefore, will show certain examples containing less than the six previously mentioned chord groups.

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[16]Those composers where the number of examples exceeds fifty was only the result of a desire to include all portions of the Masses being investigated. To have listed any less than the numbers given above would have meant excluding the final portions of the last Mass being studied. No particular preference was intended for any one composer over another.

[17]The term commixtio is used to describe a type of "modulation" in which a musical passage shifts to a different mode (e.g. Dorian to Mixolydian). The term mixtio is used to describe a "modulation" from an authentic mode to the plagal form of the same mode or vice versa (Aeolian to Hypoaeolian). See Samuel Scott, The Sacred Vocal Counterpoint of the Sixteenth Century (Denton, Texas, 1971), pp. 16-18.

The term "functional harmony" is generally applied to music of the so-called "common practice period" (ca. 1600-1900), and with regard to the late sixteenth century the term may be considered inappropriate. For the purpose of this study, no attempt will be made to imply that music of the late sixteenth century contained "functional harmony" nor will there even be any attempt to formulate a definition for the term. As stated earlier, it is the purpose of this study to investigate the degree, if any, to which composers were beginning to organize material leading to final cadences in Masses with respect to root motion anticipating the later more frankly harmonic period.

Definition of Terms

Chord

Even though most authorities agree that the music of the late sixteenth century was conceived on a linear basis, it is also recognized that composers were demonstrating careful attention to vertical sonorities as well. Harmony was determined by the relationship each of the upper voices maintained with the lowest sounding voice, usually the bass.[18] In accordance with long-standing tradition, the essential intervals above the lowest sounding voice tended to be consonant intervals, which in the sixteenth century resulted in the following: perfect unisons, perfect octaves, perfect

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[18]Bush, op. cit., p. 237.

fifths, major and minor thirds, major and minor sixths.[19] Analysis shows the great majority of these vertical combinations result in $\frac{5}{3}$ or $\frac{6}{3}$ configurations, complete or implied.[20] For purposes of this study, these vertical combinations will be called "chords" and their roots will be identified in accordance with the principles set forth later in this chapter.

The criteria for determining whether or not a certain vertical combination is a chord in many cases become quite subjective. Nevertheless, often the same criteria can be used for determining chords as are many times used for determining, e.g. intervals, various suspensions, and certain idiomatic devices used during the period under study.[21] Two very general principles seem to have direct bearing upon the determination of whether or not a specific vertical combination can be called a chord are as follows:

1. Agogic accent--a sonority which lasts for a full beat or more is more often to be heard as an actual chord

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[19]Scott, op. cit., pp. 43, 71.

[20]In addition to the above, the most common vertical combinations found in Masses of this period are: $\frac{8}{3}$, $\frac{8}{5}$, $\frac{8}{6}$, $\frac{8}{5}$, $\frac{3}{3}$, and $\frac{6}{5}$ (idiomatic $\frac{6}{5}$ chord). However, by far the most frequently found interval in this music is the interval of a third. Since the third tends to be so prevalent, the term "tertian" harmony may also be applied here.

[21]Cf. Ralph Dowden, "The Harmonic Interval of the Seventh in the Works of Representative Composers of Italian Madrigals, 1542-1614," unpublished doctoral dissertation, North Texas State University, Denton, Texas, 1976, pp. 6-8.

than is one in which the particular vertical combination in question lasts for only, e.g. a half beat.

2. Metric accent--a vertical combination sounding with the beat will more often be interpreted by the listener as being a chord than those combinations which appear off the beat.[22]

Cadence

The term "cadence" as it is used in this paper pertains only to the penultimate and final chords of a composition. Masses of the late sixteenth century generally display three types of cadences:

1. Full cadence (later known as the authentic cadence)--a progression from a major triad on the fifth degree of a mode to a major triad built on the final. Both chords are in root position.

2. Phrygian cadence--a progression consisting of a penultimate chord which may be in root position or (most often) in first inversion, with the bass rising the whole step or descending the half step to the final. The final chord is again major.

3. Plagal cadence--consisting of a penultimate triad (sometimes major, sometimes minor, depending upon the mode)

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[22]It should be noted that no inference is being made to "strong" or "weak" beats, since the concept of regularly recurring strong and weak beats did not exist in sacred music of the sixteenth century.

built on the note a perfect fourth above the final, progressing to a major triad on the final.[23]

Most standard counterpoint texts discuss each of these cadences in adequate detail. It will not be the purpose of this paper to elaborate any further on information that is commonly available. Suffice it to say, the majority of the cadences found in Masses of the sixteenth century are of the full or plagal variety.

Root

The term "root" will be identified in accordance with Jean Philippe Rameau's Theory of Inversion as enunciated in his Traité de l'harmonie réduite à ses principes naturels. Using Rameau's theory as a basis for definition, the root may or may not always be the lowest sounding note. However, again in accordance with Rameau, and with the fact that sixteenth century harmony was based upon the "tertian" system (previously mentioned), the root of a chord will always be the lowest sounding note when the respective members of a chord are arranged according to the interval of a third apart.

Explanation of Symbols

To facilitate analysis, the chords contained in each example are identified by Roman numerals. The Roman numerals are used merely to designate the scale degree upon which each

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[23]Arthur Tillman Merritt, Sixteenth-Century Polyphony (Cambridge, Mass., 1939), pp. 92-93.

chord is built with respect to the particular scale employed during the passage under investigation. It should be noted that the Roman numerals in no way infer chord quality (i.e. major, minor, diminished) or inversion, although inversion had to be taken into account in determining the root.

A horizontal line immediately following a Roman numeral indicates that the harmony was interpreted as extending into the succeeding sonorities until either a new harmony (chord) appears, or the conclusion of the passage is reached.

Parentheses surrounding an accidental are used to indicate musica ficta. In those cases where parentheses are not used in conjunction with an accidental, the assumption is that the particular accidental was not originally notated as musica ficta or at least the editor of the particular edition did not indicate it as such.

The reason for using parentheses to indicate the musica ficta, instead of placing the accidentals above the notes in the usual manner, can be explained by the fact that almost all of the examples contained in this dissertation represent condensations of the scores from which they were copied. As a consequence, most of the time two or more voices appear on one staff. The confusion created by placing the musica ficta above the staff is obvious, particularly in those examples that involve considerable voice crossing.

CHAPTER II

ANALYSIS OF ROOT MOVEMENT LEADING TO FINAL CADENCES

The hypothesis discussed in Chapter I asserting the belief that chordal progressions probably first developed at cadences served as the premise for computing the statistical evidence in this chapter. In order to investigate the degree, if any, to which root motion was being organized in material leading to final cadences of Masses, an analysis of root motion was undertaken for each of the examples contained in the Appendix. The resultant information was then read into an IBM 360/50 computer, utilizing PL/I computer language. The computer attained an accuracy of 99.98 per cent for each of the tables shown below--an accuracy obviously judged to be well within the limits of reliability.

In order for the reader to study the computer results in conjunction with the examples contained in the Appendix, some clarification regarding the Appendix itself is needed. A total of 321 chord progressions was read by the computer; however, the Appendix lists only 318. The reason for this discrepancy is that certain composers, e.g. Monte and Palestrina, utilize identical cadential material for more than one Mass movement. It is noted that in every case where the identical material is used, the repetition involves the next succeeding Mass movement, i.e. Sanctus and Benedictus,

Gloria and Credo. For purposes of the Appendix, it was considered redundant to include a musical example that had already been presented in the preceding movement of the same Mass.

The examples in the Appendix are grouped under subtitles identifying progressions of just three and four chords, even though six chords was the total number analyzed in the majority of the progressions. Subtitles identifying four chords were used to facilitate the grouping of such a large number of musical examples. It was discovered that the largest number of discernible patterns of root movement was most economically grouped under the four chord subtitles. The subtitles identifying just three chords were used only for those examples in which a commixtio occurred just before the final cadence.[1] The following four tables list root motion involving the final three, four, five, and six chords from cadential progressions shown in the Appendix (Tables I-IV respectively). Within each table, root progressions are listed from the highest to the lowest percentages of occurrence.

None of the tables reflect root motion in terms of ascending or descending movement. The progression I-V, for example, does not reveal whether the chord roots move from I up to V or from I down to V. The rationale underlying

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[1]See Chapter I, p. 9, for a discussion explaining why certain examples were analyzed with just three chords. The same discussion also explains why each of the tables in the present chapter lists a different total number of progressions.

the analysis of each progression is to describe root motion in terms of scale degree involvement, not ascending or descending movement. Furthermore, the 321 examples analyzed for this study reveal that 185 cadences are of the full (authentic) variety and 128 are of the plagal variety. The Masses from which the 321 examples were selected show a frequency of occurrence of the full cadence over the plagal cadence at a ratio of approximately three to two. This small disparity in favor of the full cadence is not considered to be significant enough to indicate clearly that the composers of these particular Masses show a distinct preference for the full cadence over the plagal cadence. Consequently, the analysis of root motion by fifth immediately preceding each final cadence will likewise not be concerned with ascending or descending motion. The same treatment will be afforded intervals involving seconds and thirds.

Table I lists progressions beginning with the antepenultimate chord of each final cadence. A total of 321 examples was analyzed in the compilation of Table I--virtually every example utilized in this study.

TABLE I

NUMERICAL AND PERCENTAGE FREQUENCIES OF SPECIFIC CADENTIAL PROGRESSIONS INVOLVING THREE CHORDS

Progression	Frequency of Occurrence	Percentage of all Root Progressions Involving Three Chords
I-V-I	112	34.89
I-IV-I	95	29.60
IV-V-I	55	17.13
VI-IV-I	23	7.17
VI-V-I	10	3.12
V-IV-I	5	1.56
II-V-I	4	1.25
VII/V-V-I	4	1.25
II-IV-I	3	.93
II-VII-I	3	.93
I-VII-I	2	.62
VI-VII-I	2	.62
III-IV-I	1	.31
IV-VII-I	1	.31
VII-IV-I	1	.31

The progressions I-V-I and I-IV-I form an aggregate total of 207 occurrences in Table I. The same progression patterns account for 64.49 per cent of all the root motion shown in this table. The 321 examples analyzed in the compilation of

Table I are grouped into fifteen progression patterns, which are listed in the first column. The first three patterns listed in this column account for an overwhelming 81.62 per cent of the root motion shown in Table I.

Table II lists root progressions involving cadential progressions of four chords. A total of 313 examples was analyzed in the compilation of this table, resulting in forty progression patterns (column one).

TABLE II

NUMERICAL AND PERCENTAGE FREQUENCIES OF SPECIFIC CADENTIAL PROGRESSIONS INVOLVING FOUR CHORDS

Progression	Frequency of Occurrence	Percentage of all Root Progressions Involving Four Chords
IV-I-IV-I	63	20.06
V-I-V-I	59	18.79
V-I-IV-I	24	7.64
IV-I-V-I	19	6.05
VI-IV-V-I	15	4.78
I-VI-IV-I	14	4.46
I-IV-V-I	13	4.14
VII-I-V-I	12	3.82
III-I-V-I	10	3.18
VII-IV-V-I	10	3.18
II-IV-V-I	8	2.55

TABLE II--Continued

Progression	Frequency of Occurrence	Percentage of all Root Progressions Involving Four Chords
VI-I-IV-I	6	1.91
V-IV-V-I	6	1.91
V-VI-IV-I	5	1.59
IV-VI-IV-I	4	1.27
VI-I-V-I	4	1.27
I-VI-V-I	3	.96
I-II-V-I	3	.96
III-IV-V-I	3	.96
VI-VII/V-V-I	3	.96
IV-II-VII-I	2	.64
II-I-VII-I	2	.64
IV-VI-V-I	2	.64
III-VI-V-I	2	.64
VI-V-IV-I	2	.64
II-I-V-I	2	.64
VII-VI-V-I	2	.64
VII-I-IV-I	2	.64
VII-VI-VII-I	2	.64
I-V-IV-I	1	.32
IV-II-IV-I	1	.32
V-II-IV-I	1	.32

TABLE II--Continued

Progression	Frequency of Occurrence	Percentage of all Root Progressions Involving Four Chords
II-IV-VII-I	1	.32
VI-II-VII-I	1	.32
I-II-IV-I	1	.32
VI-II-V-I	1	.32
V-VII/V-V-I	1	.32
VII-V-IV-I	1	.32
VI-VII-IV-I	1	.32
IV-V-IV-I	1	.32

Tables I and II show a significant degree of similarity as evidenced by the fact that the two highest percentages of both tables involve root motion of I-V-I and I-IV-I. In addition, the four progression patterns showing the highest frequencies of occurrence in Table II are once again patterns utilizing strictly the roots I, IV, and V. These four patterns account for 52.54 per cent of all the root motion listed in Table II. With the Roman numeral analysis now including two chord roots preceding the penultimate and final chords of each cadence, the number of patterns showing percentages of less than one per cent increases to twenty-four as compared to only seven in Table I (see column three).

It was stated earlier in this chapter that from the particular Masses utilized in this study, 185 cadences are of the full variety and 128 are of the plagal variety. The obvious predominance of root motion by fifth in Table I, therefore, comes as no surprise since it was known that the penultimate and final chords were already governed by this particular root motion. Consequently, it has often been felt that possibly the most significant observations can be found in these root progressions involving four or more chords. Table II continues to show the predominance of the V-I and IV-I progressions. With Table III, the progressions now involve five chords, utilizing 306 examples. The first column of Table III lists eighty-nine progression patterns, compared to forty and fifteen in Tables II and I respectively. It can be seen that with the inclusion of just one additional chord in each progression (now totaling five), the number of individual progression patterns increases significantly.

TABLE III

NUMERICAL AND PERCENTAGE FREQUENCIES OF SPECIFIC CADENTIAL PROGRESSIONS INVOLVING FIVE CHORDS

Progression	Frequency of Occurrence	Percentage of all Root Progressions Involving Five Chords
I-IV-I-IV-I	40	12.99
I-V-I-V-I	35	11.36

TABLE III--Continued

Progression	Frequency of Occurrence	Percentage of all Root Progressions Involving Five Chords
VI-IV-I-IV-I	17	5.52
V-I-VI-IV-I	13	4.22
I-V-I-IV-I	12	3.90
IV-V-I-IV-I	10	3.25
IV-V-I-V-I	9	2.92
II-V-I-V-I	7	2.27
VI-IV-I-V-I	7	2.27
V-VI-IV-V-I	6	1.95
VII-I-IV-V-I	6	1.95
VII-III-I-V-I	5	1.62
I-II-IV-V-I	4	1.30
VI-V-I-V-I	4	1.30
V-VII-IV-V-I	4	1.30
VII-IV-L-V-I	3	.97
I-V-IV-V-I	3	.97
III-VII-I-V-I	3	.97
II-VII-I-V-I	3	.97
I-VI-IV-V-I	3	.97
I-VII-IV-V-I	3	.97
VII-VI-IV-V-I	3	.97
IV-VII-I-V-I	3	.97

TABLE III--Continued

Progression	Frequency of Occurrence	Percentage of all Root Progressions Involving Five Chords
IV-I-IV-V-I	3	.97
II-IV-I-V-I	3	.97
I-IV-I-V-I	3	.97
V-IV-I-V-I	2	.65
IV-VI-I-IV-I	2	.65
III-V-IV-V-I	2	.65
II-VI-IV-V-I	2	.65
II-V-VI-IV-I	2	.65
I-VII-I-V-I	2	.65
V-I-II-V-I	2	.65
V-I-VI-V-I	2	.65
I-VI-I-IV-I	2	.65
V-III-IV-V-I	2	.65
I-V-VI-IV-I	2	.65
V-I-IV-V-I	2	.65
III-V-I-V-I	2	.65
II-III-I-V-I	2	.65
VII-IV-I-IV-I	2	.65
IV-VI-I-V-I	2	.65
VI-I-IV-V-I	2	.65
II-VII-I-IV-I	2	.65

TABLE III--Continued

Progression	Frequency of Occurrence	Percentage of all Root Progressions Involving Five Chords
IV-II-IV-V-I	2	.65
I-IV-VI-IV-I	2	.65
V-VI-VII/V-V-I	2	.65
II-IV-II-VII-I	1	.32
V-II-I-VII-I	1	.32
VI-I-V-IV-I	1	.32
I-IV-VI-V-I	1	.32
I-IV-II-IV-I	1	.32
II-V-IV-V-I	1	.32
V-II-IV-V-I	1	.32
II-I-VI-V-I	1	.32
IV-I-VI-IV-I	1	.32
V-VII-I-V-I	1	.32
I-V-II-IV-I	1	.32
VII-III-IV-V-I	1	.32
III-IV-I-IV-I	1	.32
V-III-VI-V-I	1	.32
III-VII-IV-V-I	1	.32
V-III-I-V-I	1	.32
V-VI-V-IV-I	1	.32
VII-IV-VI-IV-I	1	.32

TABLE III--Continued

Progression	Frequency of Occurrence	Percentage of all Root Progressions Involving Five Chords
VII-V-I-V-I	1	.32
IV-III-I-V-I	1	.32
V-IV-I-IV-I	1	.32
III-II-I-V-I	1	.32
IV-II-I-V-I	1	.32
I-II-IV-VII-I	1	.32
II-VI-I-IV-I	1	.32
II-VI-II-VII-I	1	.32
II-I-II-IV-I	1	.32
III-VI-II-V-I	1	.32
II-I-II-V-I	1	.32
I-VII-VI-V-I	1	.32
II-VII-VI-V-I	1	.32
II-VII-IV-V-I	1	.32
IV-VI-IV-V-I	1	.32
VII-IV-VI-V-I	1	.32
IV-VII-IV-V-I	1	.32
VII-II-V-VII-I	1	.32
II-VII-VI-VII-I	1	.32
III-IV-II-VII-I	1	.32
III-VII-VI-VII-I	1	.32

TABLE III--Continued

Progression	Frequency of Occurrence	Percentage of all Root Progressions Involving Five Chords
VII-VI-I-IV-I	1	.32
III-VI-I-V-I	1	.32
VI-V-I-IV-I	1	.32
IV-V-VII/V-V-I	1	.32
III-VI-VII/V-V-I	1	.32
VII/V-V-I-IV-I	1	.32
VII-V-VI-IV-I	1	.32
VI-VII-V-IV-I	1	.32
VI-IV-VI-IV-I	1	.32
I-VI-VII-IV-I	1	.32
I-VI-I-V-I	1	.32
V-IV-V-IV-I	1	.32
I-VI-V-IV-I	1	.32

Perhaps the most significant aspect of Table III is the number of percentages listed in column three that are less than one per cent. The number of progression patterns which individually account for less than one per cent of all root progressions involving five chords now totals eighty-four. The combined percentage of these eighty-four progression patterns accounts for only 40.96 per cent of the total root motion represented in Table III.

Percentages of root movement involving six chords are listed in Table IV. No attempt was made to extend the chordal analysis of each example past the number of chords represented in this table. It has been previously mentioned (Chapter I, p. 8) that as the study progressed, it was discovered that few significant root patterns were apparent past six chordal combinations, since this number seemed to represent the point after which no meaningful conclusions or percentages could be compiled.

TABLE IV

NUMERICAL AND PERCENTAGE FREQUENCIES OF SPECIFIC CADENTIAL PROGRESSIONS INVOLVING SIX CHORDS

Progression	Frequency of Occurrence	Percentage of all Root Progressions Involving Six Chords
V-I-IV-I-IV-I	25	8.22
IV-I-V-I-V-I	14	4.61
V-I-V-I-V-I	12	3.95
IV-I-IV-I-IV-I	12	3.95
I-VI-IV-I-IV-I	11	3.62
I-V-I-VI-IV-I	9	2.96
V-I-V-I-IV-I	5	1.64
I-IV-V-I-IV-I	5	1.64
IV-VII-III-I-V-I	4	1.32
I-V-VI-IV-V-I	4	1.32

TABLE IV--Continued

Progression	Frequency of Occurrence	Percentage of all Root Progressions Involving Six Chords
I-VI-IV-I-V-I	4	1.32
VII-I-V-I-IV-I	4	1.32
III-I-V-I-V-I	3	.99
III-VII-I-IV-V-I	3	.99
IV-VI-IV-I-IV-I	3	.99
IV-V-I-VI-IV-I	3	.99
V-IV-V-I-V-I	3	.99
VII-IV-V-I-V-I	3	.99
V-II-V-I-V-I	2	.66
V-VI-IV-I-V-I	2	.66
V-VII-IV-I-V-I	2	.66
VII-I-IV-I-IV-I	2	.66
VI-I-V-IV-V-I	2	.66
VI-II-V-VI-IV-I	2	.66
IV-I-VII-I-V-I	2	.66
VII-I-II-IV-V-I	2	.66
IV-II-V-I-V-I	2	.66
VI-IV-V-I-V-I	2	.66
VII-III-VII-I-V-I	2	.66
V-VI-V-I-V-I	2	.66
I-VII-VI-IV-V-I	2	.66

TABLE IV--Continued

Progression	Frequency of Occurrence	Percentage of all Root Progressions Involving Six Chords
I-V-I-IV-V-I	2	.66
I-IV-VII-I-V-I	2	.66
II-I-V-I-V-I	2	.66
VI-II-V-I-V-I	2	.66
VII-I-V-I-V-I	2	.66
I-VII-IV-I-IV-I	2	.66
V-VI-IV-I-IV-I	2	.66
IV-II-IV-II-VII-I	1	.33
V-VII-I-IV-V-I	1	.33
I-V-IV-I-V-I	1	.33
IV-I-V-I-IV-I	1	.33
V-IV-VI-I-IV-I	1	.33
VI-V-II-I-VII-I	1	.33
IV-VI-I-V-IV-I	1	.33
I-III-V-IV-V-I	1	.33
IV-I-IV-II-IV-I	1	.33
VI-II-V-IV-V-I	1	.33
III-II-VI-IV-V-I	1	.33
I-V-II-IV-V-I	1	.33
V-II-I-VI-V-I	1	.33
IV-V-VI-IV-V-I	1	.33

TABLE IV--Continued

Progression	Frequency of Occurrence	Percentage of all Root Progressions Involving Six Chords
I-IV-I-VI-IV-I	1	.33
IV-III-VII-I-V-I	1	.33
IV-V-VII-I-V-I	1	.33
II-VI-V-I-V-I	1	.33
I-V-I-II-V-I	1	.33
VI-IV-V-I-IV-I	1	.33
VII-V-I-VI-V-I	1	.33
III-I-V-II-IV-I	1	.33
V-IV-V-I-IV-I	1	.33
III-I-V-IV-V-I	1	.33
II-VII-III-IV-V-I	1	.33
VII-II-VII-I-V-I	1	.33
VI-III-IV-I-IV-I	1	.33
VI-I-VI-I-IV-I	1	.33
IV-V-III-VI-V-I	1	.33
III-V-VII-IV-V-I	1	.33
I-II-V-I-V-I	1	.33
IV-V-III-IV-V-I	1	.33
III-V-VI-IV-V-I	1	.33
II-VII-I-IV-V-I	1	.33
I-III-VII-IV-V-I	1	.33

TABLE IV--Continued

Progression	Frequency of Occurrence	Percentage of all Root Progressions Involving Six Chords
IV-VII-IV-I-V-I	1	.33
VII-V-II-I-V-I	1	.33
II-V-VI-V-IV-I	1	.33
II-V-III-IV-V-I	1	.33
III-IV-V-I-IV-I	1	.33
III-I-VI-IV-V-I	1	.33
III-I-II-IV-V-I	1	.33
III-I-VII-IV-V-I	1	.33
V-I-VI-IV-V-I	1	.33
VI-I-V-VI-IV-I	1	.33
VI-VII-IV-VI-IV-I	1	.33
VII-I-V-VI-IV-I	1	.33
V-VII-V-I-V-I	1	.33
V-IV-III-I-V-I	1	.33
I-V-IV-I-IV-I	1	.33
IV-V-I-II-V-I	1	.33
III-VII-III-I-V-I	1	.33
V-III-V-I-V-I	1	.33
IV-II-VII-I-V-I	1	.33
VI-III-II-I-V-I	1	.33
V-II-III-I-V-I	1	.33

TABLE IV--Continued

Progression	Frequency of Occurrence	Percentage of all Root Progressions Involving Six Chords
I-IV-II-I-V-I	1	.33
VI-I-II-IV-V-I	1	.33
V-IV-I-IV-V-I	1	.33
VI-I-V-I-V-I	1	.33
V-II-IV-I-V-I	1	.33
II-I-II-IV-VII-I	1	.33
III-VI-IV-I-IV-I	1	.33
I-II-VI-I-IV-I	1	.33
IV-II-VI-II-VII-I	1	.33
VI-II-I-II-IV-I	1	.33
II-I-VII-IV-V-I	1	.33
V-III-VI-II-V-I	1	.33
V-IV-VI-I-V-I	1	.33
I-II-VI-IV-V-I	1	.33
VII-I-VI-IV-V-I	1	.33
VII-I-IV-I-V-I	1	.33
I-V-VII-IV-V-I	1	.33
I-IV-I-IV-V-I	1	.33
IV-II-I-II-V-I	1	.33
IV-VI-I-IV-V-I	1	.33
II-I-VII-VI-V-I	1	.33

TABLE IV--Continued

Progression	Frequency of Occurrence	Percentage of all Root Progressions Involving Six Chords
I-V-I-VI-V-I	1	.33
I-VII-I-IV-V-I	1	.33
V-II-VII-VI-V-I	1	.33
V-II-VII-IV-V-I	1	.33
II-IV-VI-IV-V-I	1	.33
IV-VII-IV-VI-V-I	1	.33
II-IV-VII-IV-V-I	1	.33
VII-I-VII-IV-V-I	1	.33
II-VII-VI-IV-V-I	1	.33
I-VII-II-I-VII-I	1	.33
VI-II-VII-I-IV-I	1	.33
III-II-VII-VI-VII-I	1	.33
VI-III-IV-II-VII-I	1	.33
IV-III-VII-VI-VII-I	1	.33
II-VII-VI-I-IV-I	1	.33
I-III-V-I-V-I	1	.33
VI-IV-I-IV-V-I	1	.33
VI-II-IV-I-V-I	1	.33
I-VI-I-IV-V-I	1	.33
V-IV-II-IV-V-I	1	.33
II-IV-II-IV-V-I	1	.33

TABLE IV--Continued

Progression	Frequency of Occurrence	Percentage of all Root Progressions Involving Six Chords
VII-III-VI-I-V-I	1	.33
VII-IV-VII-I-V-I	1	.33
II-V-VII-IV-V-I	1	.33
IV-V-VII-IV-V-I	1	.33
V-II-VII-I-IV-I	1	.33
VI-V-I-VI-IV-I	1	.33
IV-I-IV-VI-IV-I	1	.33
II-VI-V-I-IV-I	1	.33
I-IV-V-VII/V-V-I	1	.33
VII-V-VI-VII/V-V-I	1	.33
II-V-VI-VII/V-V-I	1	.33
V-III-VI-VII/V-V-I	1	.33
V-VII/V-V-I-IV-I	1	.33
VI-VII-V-VI-IV-I	1	.33
III-VI-VII-V-IV-I	1	.33
V-VI-IV-VI-IV-I	1	.33
I-IV-VI-I-IV-I	1	.33
VI-I-VI-VII-IV-I	1	.33
VI-V-IV-I-V-I	1	.33
IV-I-IV-I-V-I	1	.33
V-I-IV-I-V-I	1	.33

TABLE IV--Continued

Progression	Frequency of Occurrence	Percentage of all Root Progressions Involving Six Chords
IV-I-VI-I-V-I	1	.33
I-II-VII-I-V-I	1	.33
IV-II-III-I-V-I	1	.33
IV-II-IV-I-V-I	1	.33
VI-I-V-I-IV-I	1	.33
VI-V-IV-V-IV-I	1	.33
III-I-V-I-IV-I	1	.33
I-VI-V-I-V-I	1	.33
II-IV-V-I-IV-I	1	.33
V-I-VI-I-IV-I	1	.33
VII-VI-IV-I-V-I	1	.33
VII-III-V-IV-V-I	1	.33
I-IV-VI-I-V-I	1	.33
V-I-VI-V-IV-I	1	.33
V-I-IV-VI-IV-I	1	.33
VII-IV-V-I-IV-I	1	.33

A total of 302 examples was involved in the compilation of Table IV. The first column lists progression patterns now totaling 173. None of the patterns exceeds nine per cent of the total root movement involving six chords. Regarding the progression patterns listed in the first column, 161 of these

patterns individually account for less than one per cent of the total root motion. This fact alone supports the judgment that extending the chordal analysis of each example past six vertical combinations would not result in any meaningful conclusions or percentages.

CHAPTER III

CONCLUSIONS

Summary of the Investigation

The study of vertical combinations in music of the late sixteenth century merits the careful scrutiny of the musical theorist. To study this music only from a horizontal or melodic basis is to ignore the fact that careful attention was being afforded vertical combinations, particularly at cadences, long before the advent of the seventeenth century. Furthermore, merely recognizing that the music of the sixteenth century was for the greatest part conceived within the framework of the Church modes, does not answer those questions pertaining to pieces which do not fit into the traditional system of the eight modes.

In seeking the factors most responsible for the gradual dissolution of the modal system, a very reasonable possibility exists that the vertical considerations embodied in the final cadential formulae pointed the way toward the realization of chord progressions and chord relationships. "Without a doubt, the largest single factor contributing to standardized vertical combinations is the final cadence."[1] With the final cadence functioning as the principal point of reference, this

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[1]Robert W. Wienpahl, "The Evolutionary Significance of Fifteenth Century Cadential Formulae," Journal of Music Theory, IV (November, 1960), p. 132.

investigation has sought to determine the degree, if any, to which root motion was being organized in material leading to final cadences in Masses.

The procedure utilized thus far has been to analyze the six vertical sonorities immediately preceding and including the penultimate and final of each cadence. The roots of each sonority ("chord") were then identified in accordance with Jean Philippe Rameau's Theory of Inversion as enunciated in his Traité de l'harmonie réduite à ses principes naturels (1722). To facilitate analysis of root motion, these "chords" were identified by a Roman numeral designating the position of each chord root in the particular scale employed in the passage under investigation. All of the chord roots were then tabulated according to progression patterns containing three, four, five, and six chords respectively. The frequency of occurrence for each pattern was listed, and finally a percentage based upon the frequency of occurrence was also calculated.

Classification of Root Movement

The succeeding and final portion of this paper is one which is essential to the ultimate purpose of this investigation. That is, it now becomes necessary to determine the specific types and percentages of root movement that permeate the progression patterns listed in Chapter II. In order to classify the data necessary for making such a determination, some additional discussion regarding root movement is necessary.

The following quotation is included in order to ensure clarification of certain terms which will be employed during the remainder of this study.

> Progression of chords, one to another, is always described in terms of root movements, that is, the intervallic distance between the roots of the two successive chords in question, regardless of the actual bass notes (inversions) used. These intervallic distances can only be three: the fifth, the third, and the second. The fourth, the sixth, and the seventh are merely the inversions of these (a root movement C up to G, a fifth, is the same as a root movement C down to G, a fourth), while progression by the same root note or its octave is static.[2]

Employing the three primary intervallic distances described above, root movements hereafter will be classified according to intervallic distances of fifth, third, and second. By classifying all root movements according to fifth, third, and second, the following tabulations result:

TABLE V

PERCENTAGES OF ROOT MOVEMENT INVOLVING PROGRESSIONS OF THREE CHORDS

Intervallic Classification of Root Movements	Percentage of All Root Movements Involving Three Chords
Fifth	81.93
Second	13.55
Third	4.51

Table V shows that in all of the examples containing at least three chords, root motion by fifth occurs in more than

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[2]Robert W. Ottman, Elementary Harmony, 2nd ed. (Englewood Cliffs, New Jersey, 1970), pp. 185-186.

eighty per cent of the examples. The percentage differential between root motion of a fifth compared to root motion of a second is 68.38 per cent. Root movement by third appears to be of comparatively little significance based upon the information contained in this table. Table VI shows root movement percentages involving four chords.

TABLE VI

PERCENTAGES OF ROOT MOVEMENT INVOLVING PROGRESSIONS OF FOUR CHORDS

Intervallic Classification of Root Movements	Percentage of All Root Movements Involving Four Chords
Fifth	75.38
Second	13.81
Third	10.79

Again, as in Table V, root movement by fifth dominates the percentages. The percentage differential between root motion of a fifth and root motion of a second now totals 61.57 per cent. Root motion by third has gained 6.28 per cent compared to the previous table.

TABLE VII

PERCENTAGES OF ROOT MOVEMENT INVOLVING PROGRESSIONS OF FIVE CHORDS

Intervallic Classification of Root Movements	Percentage of All Root Movements Involving Five Chords
Fifth	70.24
Second	15.96
Third	13.78

Table VII indicates that root motion by second and third continue to increase slightly, while motion by fifth drops by 5.14 per cent (although still predominant). Table VIII completes the tabulation with a listing of percentages involving six chords.

TABLE VIII

PERCENTAGES OF ROOT MOVEMENT INVOLVING PROGRESSIONS OF SIX CHORDS

Intervallic Classification of Root Movements	Percentage of All Root Movements Involving Six Chords
Fifth	68.35
Second	16.94
Third	15.70

Table VIII shows that although the progressions being analyzed now contain a total of six chords (four chords before the penultimate and final), root motion by fifth still accounts for the largest percentage of the root motion listed in this table. Root motion by third increased very slightly

compared to Table VII (1.92 per cent), and root motion by second increases even less (.98 per cent). The percentage differential between root motion by fifth and root motion by second now totals 50.41 per cent.

Final Evaluation

Based upon the tabulations presented in Chapter II, the following conclusions can be made:

1. In Table I, the progressions I-V-I and I-IV-I appear to be the only two root progressions receiving high enough percentages to be regarded as truly significant. These percentages, however, are tempered by the fact that common knowledge regarding cadences of this period indicates that V-I and IV-I already were considered essential in the majority of the standardized cadential formulae of the sixteenth century. Therefore, the progression I-V-I and I-IV-I may be interpreted as mere repetitions of the standardized cadential formulae.

2. The remaining tables of Chapter II indicate that, excluding the slight significance placed upon progressions containing I-V-I and I-IV-I, none of the remaining progressions receive a high enough percentage to be regarded as significant in terms of showing discernible patterns of chord sequence. In fact, with each succeeding table, the number of progressions each receiving less than one per cent (i.e. just one repetition) increases to such a degree that it becomes exceedingly difficult to apply significance to any one progression over any other progression.

The conclusion drawn from the foregoing evidence is that chord progressions (successions of one chord to another) in passages leading to final cadences of the late sixteenth century do not demonstrate any regularly recurring patterns of root movement (i.e. harmonic sequence).

Based upon the tabulations shown in the present chapter, the following conclusions can be drawn concerning root movements:

1. Root motion by fifth at no time accounts for less than 67.35 per cent of the total root movements analyzed during the course of this investigation. Indeed, the percentage differential between root movement by fifth and root movement by second (the interval receiving the next highest total percentage) at no time drops below 50.41 per cent. The conclusion drawn from the foregoing evidence is that root movement by fifth does indeed account for the majority of the root motion contained in passages leading to final cadences of Masses dating from the late sixteenth century. The term "majority" in fact, can be interpreted as meaning that the interval of a fifth accounts for at least sixty-five per cent of the root motion involving cadential passages totaling six chords, seventy per cent involving five chords, seventy-five per cent involving four chords, and finally eighty per cent involving at least three chords in the music examined.

2. The percentage differential between root motion by second and root motion by third decreases as the chord progressions become longer:

Table V (three chords) = 9.04 per cent

Table VI (four chords) = 3.02 per cent

Table VII (five chords) = 2.18 per cent

Table VIII (six chords) = 1.24 per cent

None of the above differential percentages were judged to be high enough to merit placing any significance on root motion by second over root motion by third. The conclusion drawn from these percentages, in other words, is that no particular preference for root movement by second or by third can be shown.

The fact that root motion by fifth accounts for such a high percentage of the total root motion analyzed in this investigation warrants consideration by the musical theorist. It is noted that tertian harmony, during the period 1450-1600, is described as having "roots of the triads moving preferably in modal sequence, e.g., I-II, I-III, I-VI, except at cadential points, where IV-I and V-I are commonly used."[3] The fact that this investigation shows root motion by fifth so clearly permeating even those progressions involving as many as six chords lends weight to the possibility that this music does indeed demonstrate, through the exploitation of root motion

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[3]"Harmony," Harvard Dictionary of Music, 2nd ed., (Cambridge, Mass., 1972).

by fifth, precursory evidence of the transition in which chord progressions governed by modality begin to be governed by a system of chordal relations based on the attraction of a tonal center. Two additional evolutionary steps are necessary to complete this transition:

1. Common knowledge regarding music written during the subsequent "common practice" period (ca. 1600-1900) is that "root movement down by fifth accounts for a large percentage and often a majority of the chord progressions in the music of most composers."[4] Therefore, the first step would involve music characterized by the clear exploitation of the descending fifth over the ascending fifth.

2. The final step would involve exploiting the descending fifth throughout the entire composition, rather than limiting root motion by descending fifth to passages leading to final cadences.

Areas for Further Study

Few investigations are all-inclusive; certainly the present investigation cannot be counted as such. Several areas relating to the present study are in need of further investigation before precise documentation of late sixteenth-century root motion can be formulated.

One particular study would involve investigating the extent to which the individual modes reflect precursory evidence

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[4]Ottman, op. cit., p. 186.

of functional harmony in relation to root motion. Can it be said that root motion by fifth permeates the Dorian mode more than, e.g., Lydian or Mixolydian, in the late sixteenth century?

Another area of investigation paralleling the present study would be to determine if similar percentages of root movement (i.e. percentages similar to those contained in this paper) can be found in passages preceding intermediate cadences as well as final cadences of Masses from this same period.

The individual Mass movements could be compared to determine if any one particular movement, e.g., Kyrie, Sanctus (possibly due to text considerations) received treatment different from the other movements, again with regard to root motion.

Finally, statistics relating to each individual composer are needed to ascertain which composer(s) shows the greatest propensity for utilizing root motion by fifth, and in particular, root motion by descending fifth.

APPENDIX

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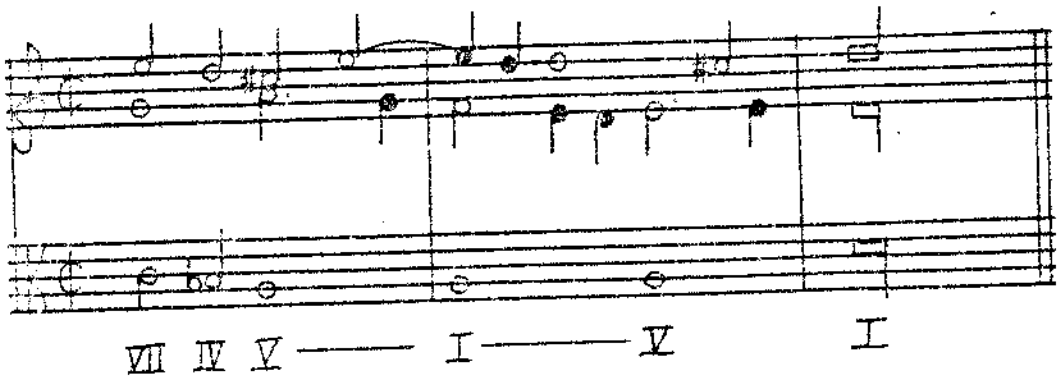
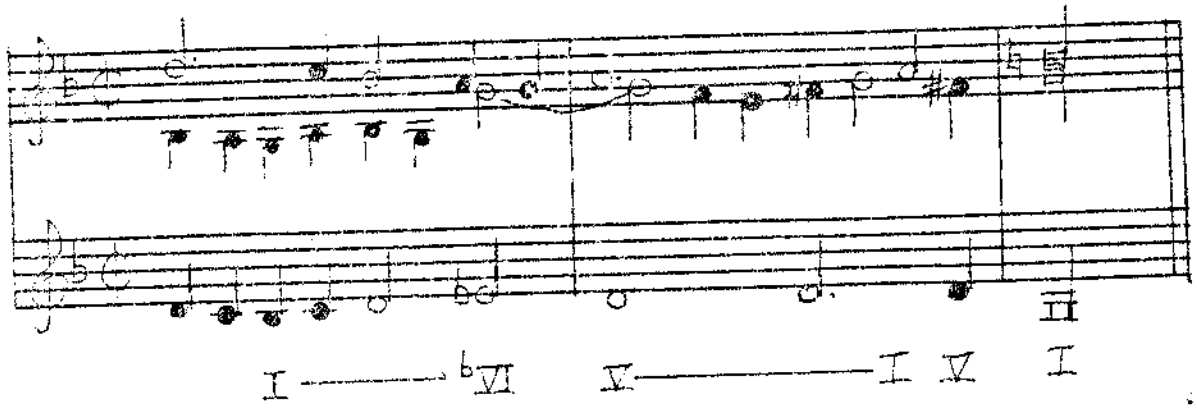
PROGRESSIONS CONCLUDING WITH V - I

V - I - V - I

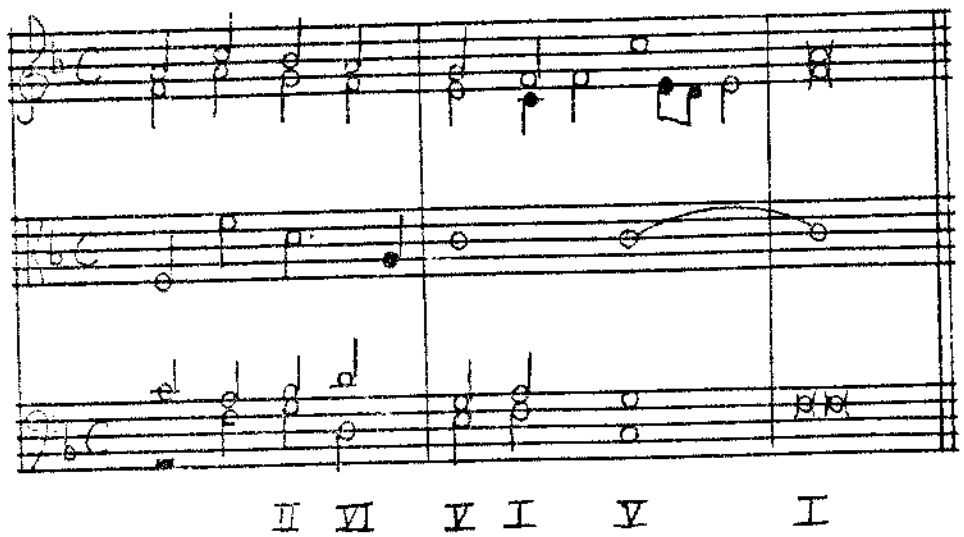
Ex. 1--Handl: Missa super Elisabeth Zachariae, Benedictus.



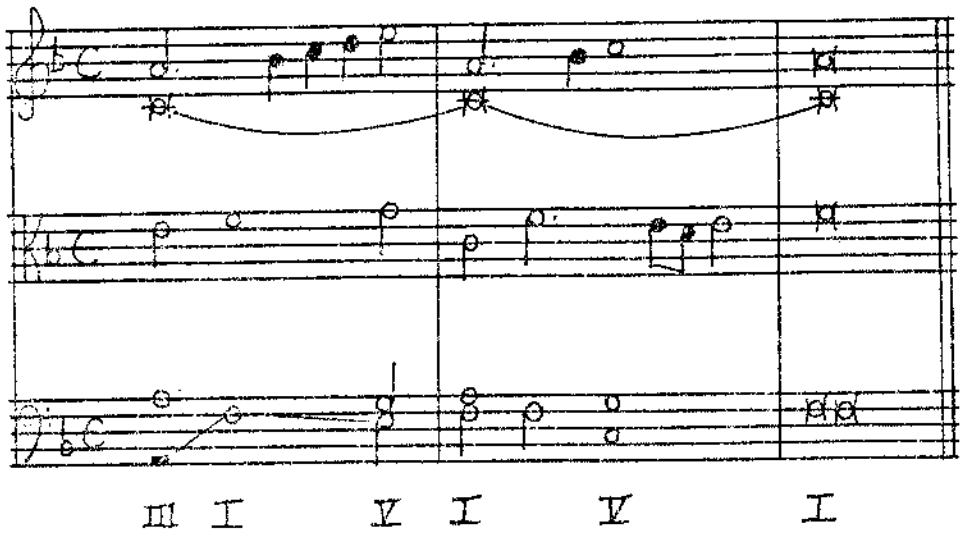
Ex. 2--Handl: Missa super Sancta Maria, Benedictus.



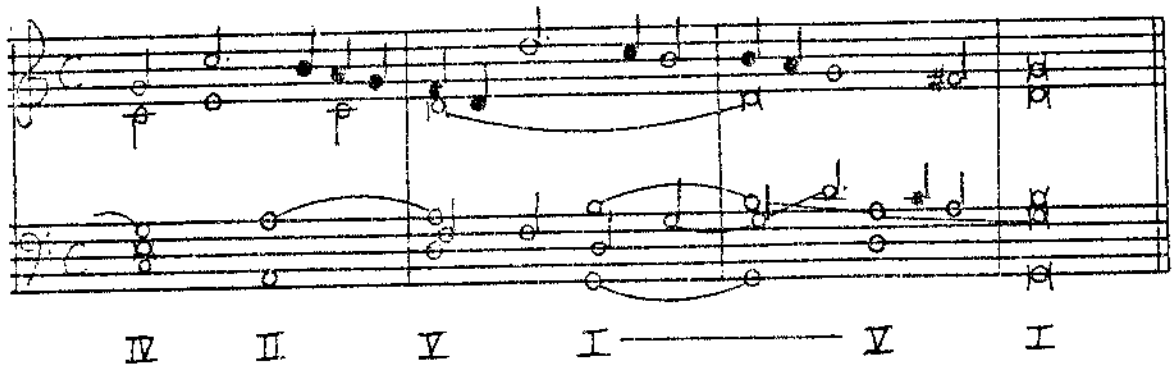
Ex. 3--Kerle: Missa De beata virgine, Sanctus.



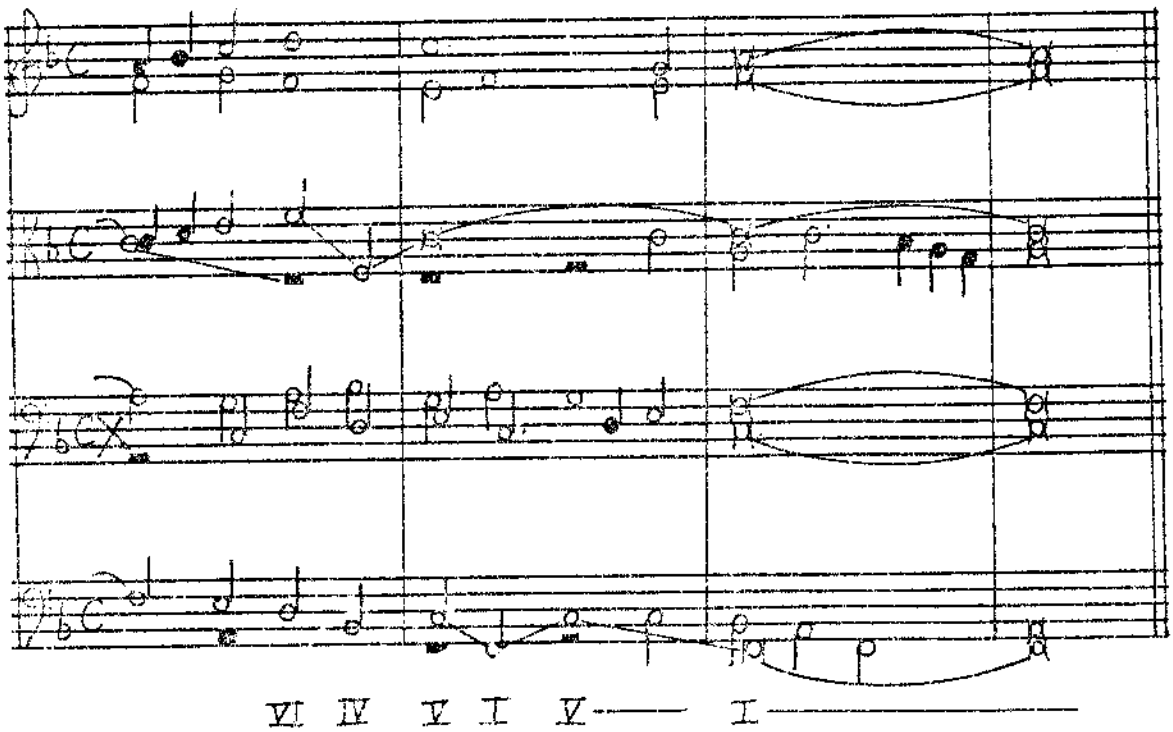
Ex. 4--Kerle: Missa De beata virgine, Agnus Dei.



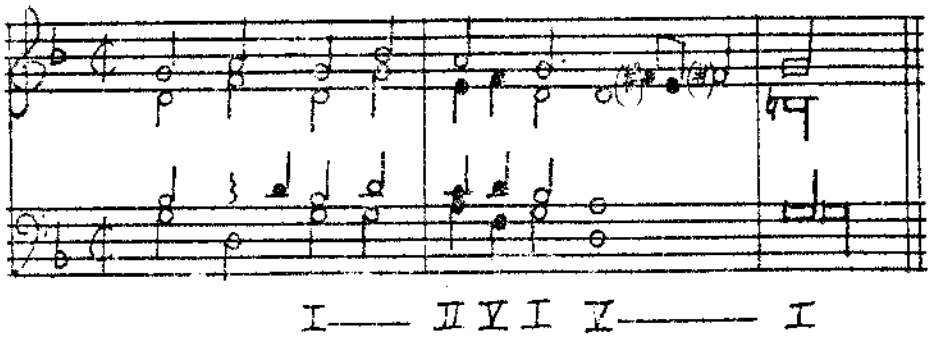
Ex. 5--Kerle: Missa lauda Sion salvatorem, Credo.



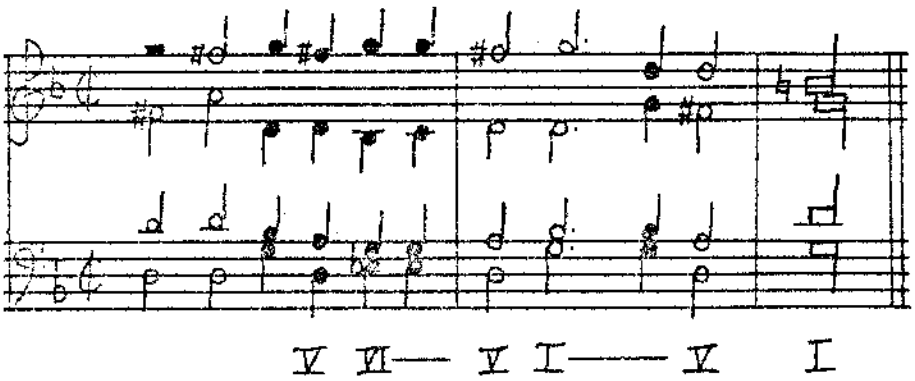
Ex. 6--Kerle: Missa resurrexit pastor bonus, Agnus Dei.



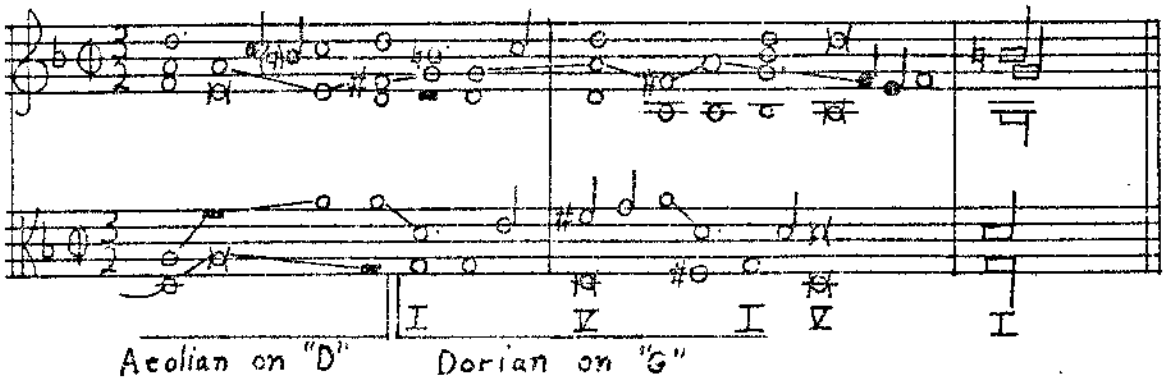
Ex. 7--Lassus: Missa super La la maistre Pierre, Agnus Dei.



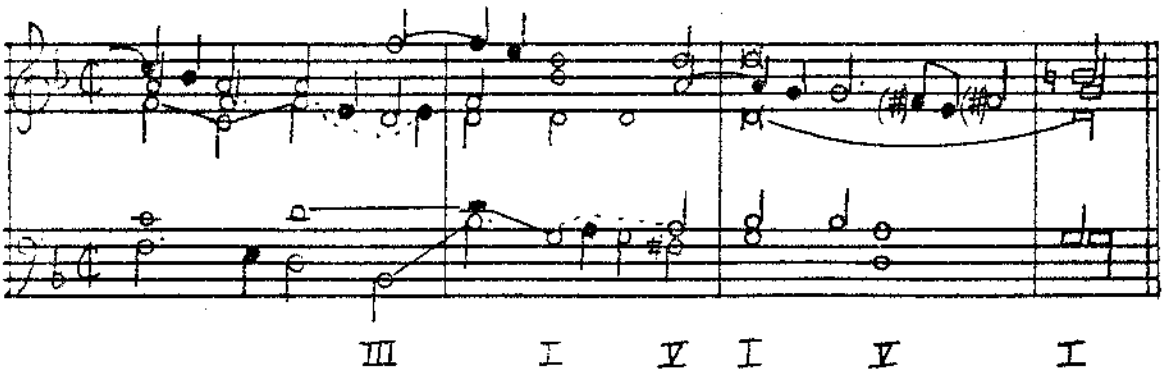
Ex. 8--Lassus: Missa super Frere Thibault, Gloria.



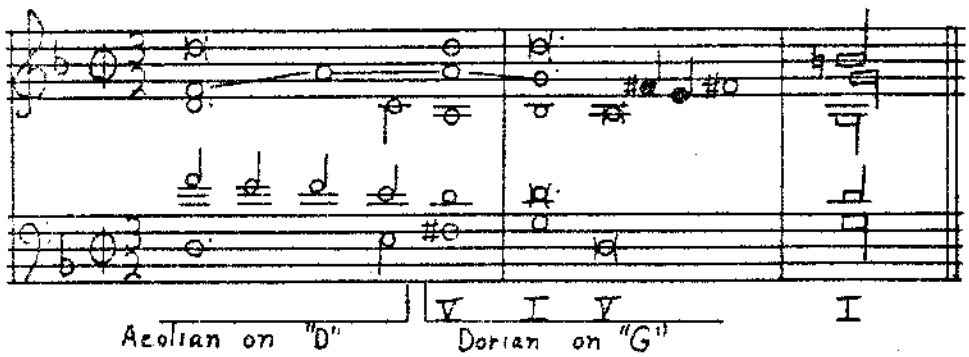
Ex. 9--Lassus: Missa super Le Berger et la Bergere, Sanctus.



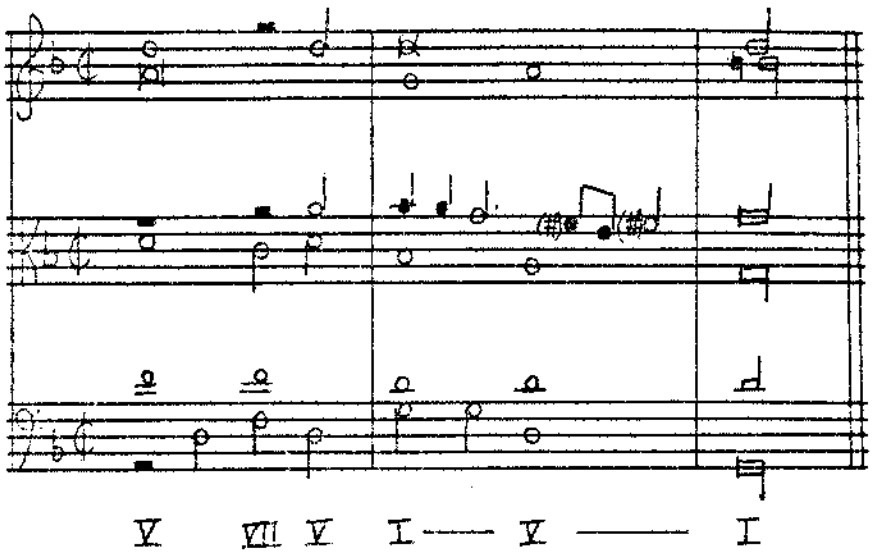
Ex. 10--Lassus: Missa super Le Berger et la Bergere, Agnus Dei.



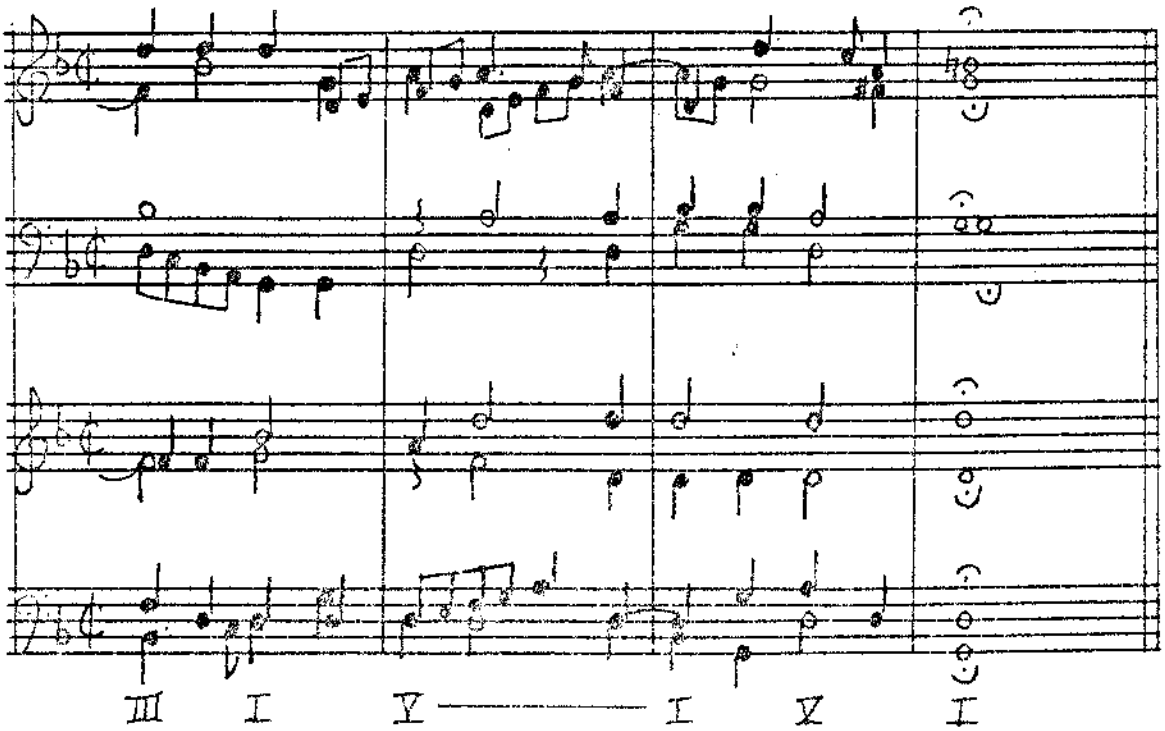
Ex. 11--Lassus: Missa super Triste depart, Sanctus.



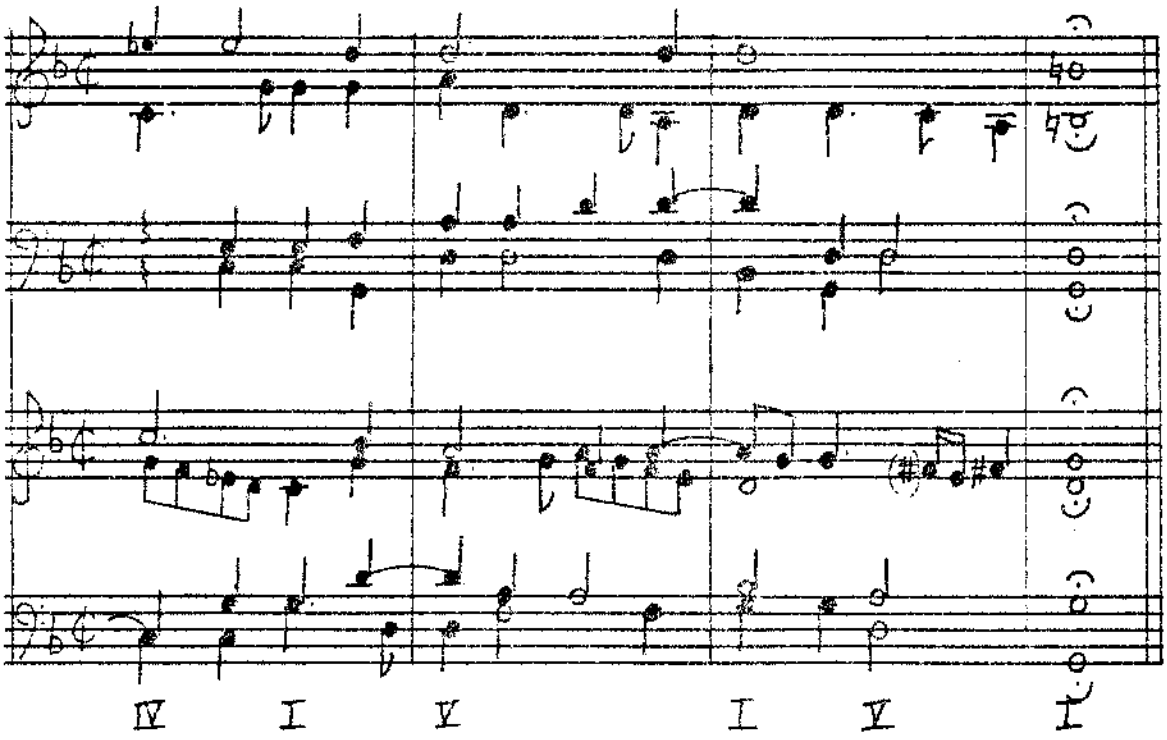
Ex. 12--Lassus: Missa super Jesus ist ein süsser Nam', Kyrie.



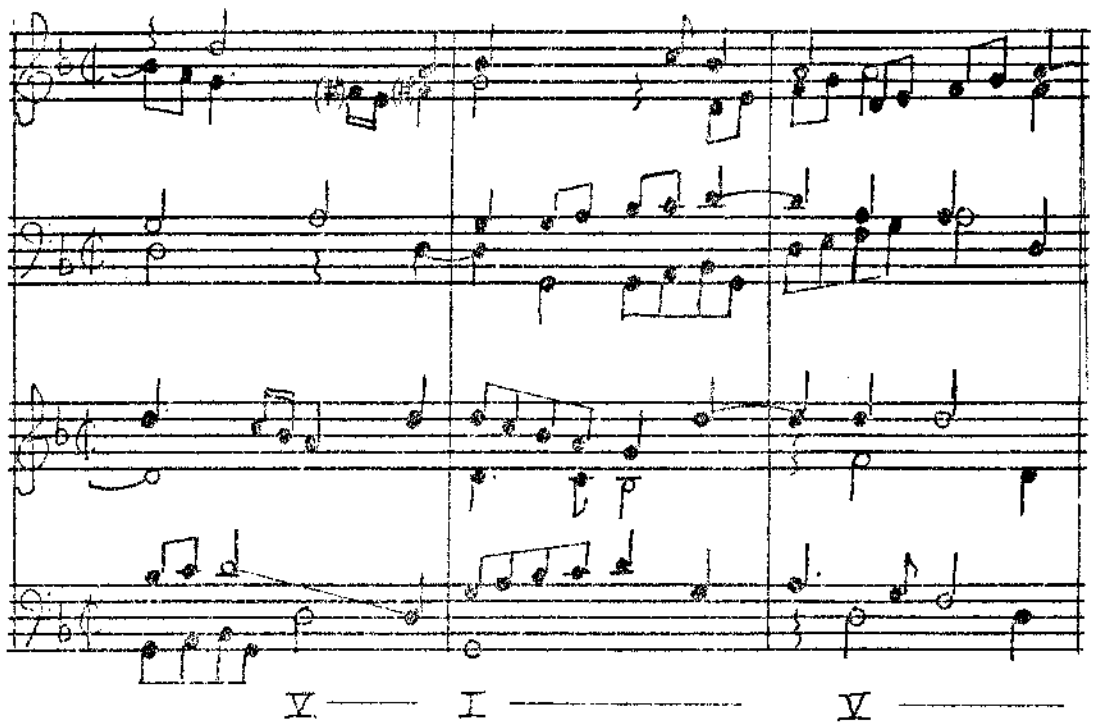
Ex. 13--Merulo: Missa Cara la vita mia, Kyrie.



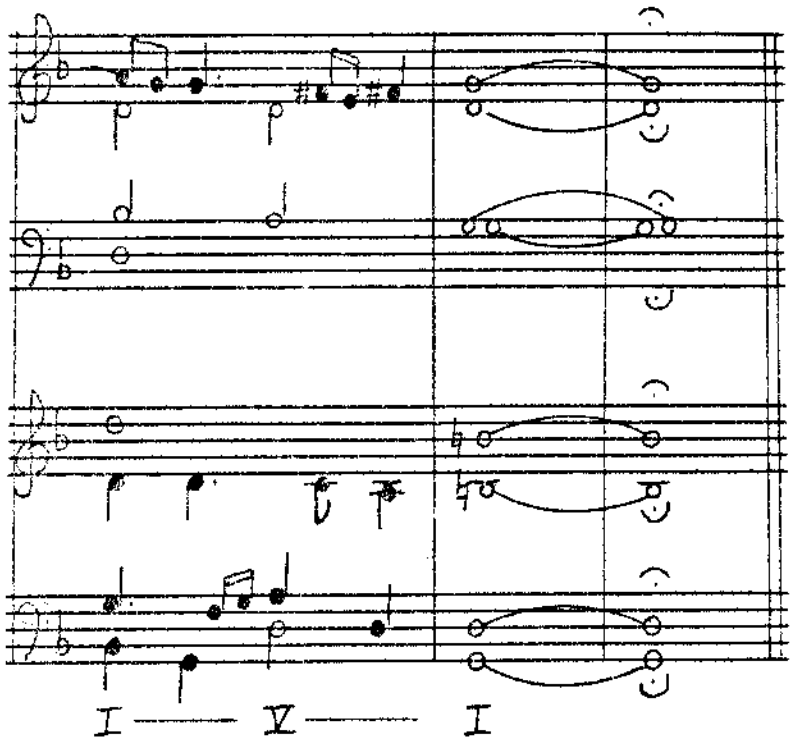
Ex. 14--Merulo: Missa Cara la vita mia, Gloria.



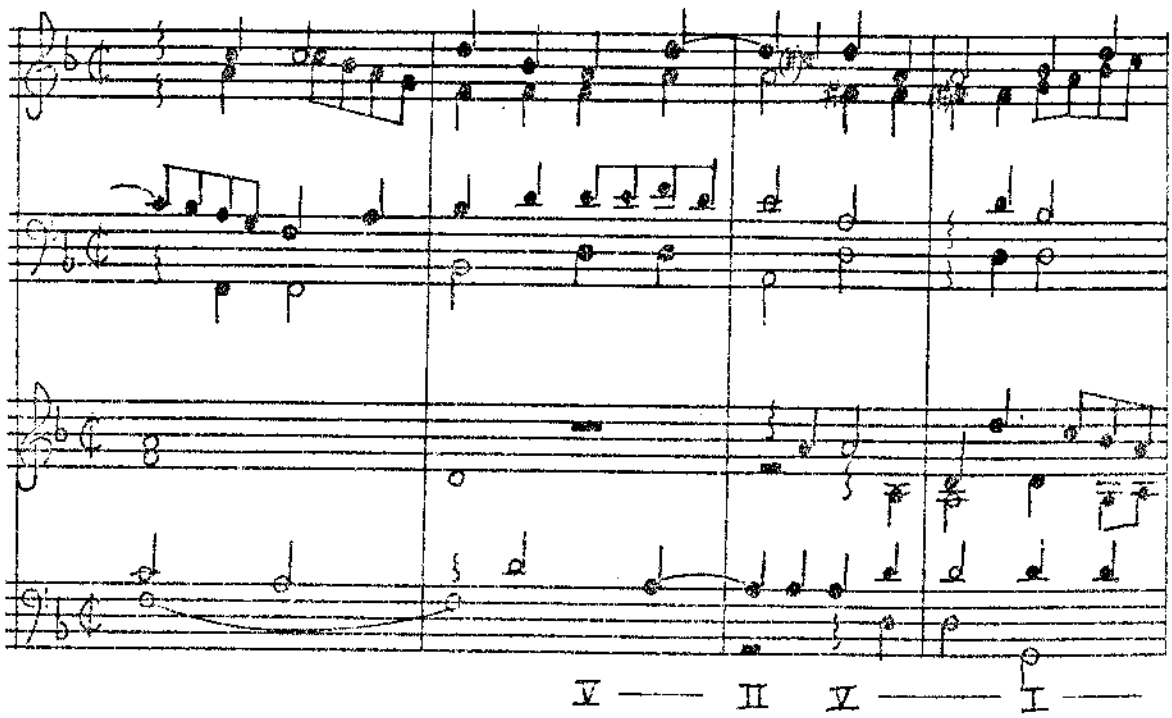
Ex. 15--Merulo: Missa Cara la vita mia, Credo.



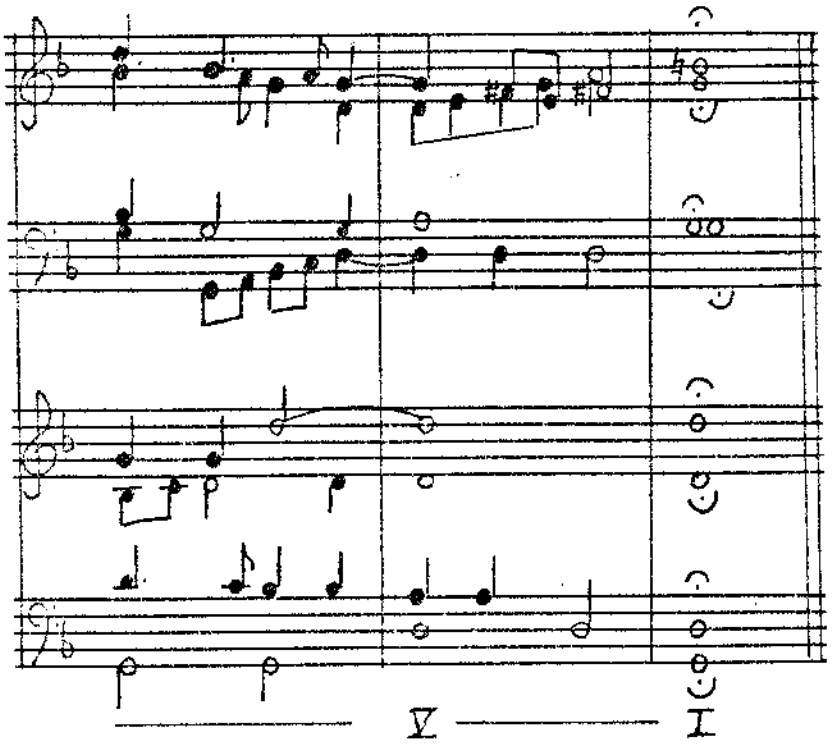
Ex. 15--Continued



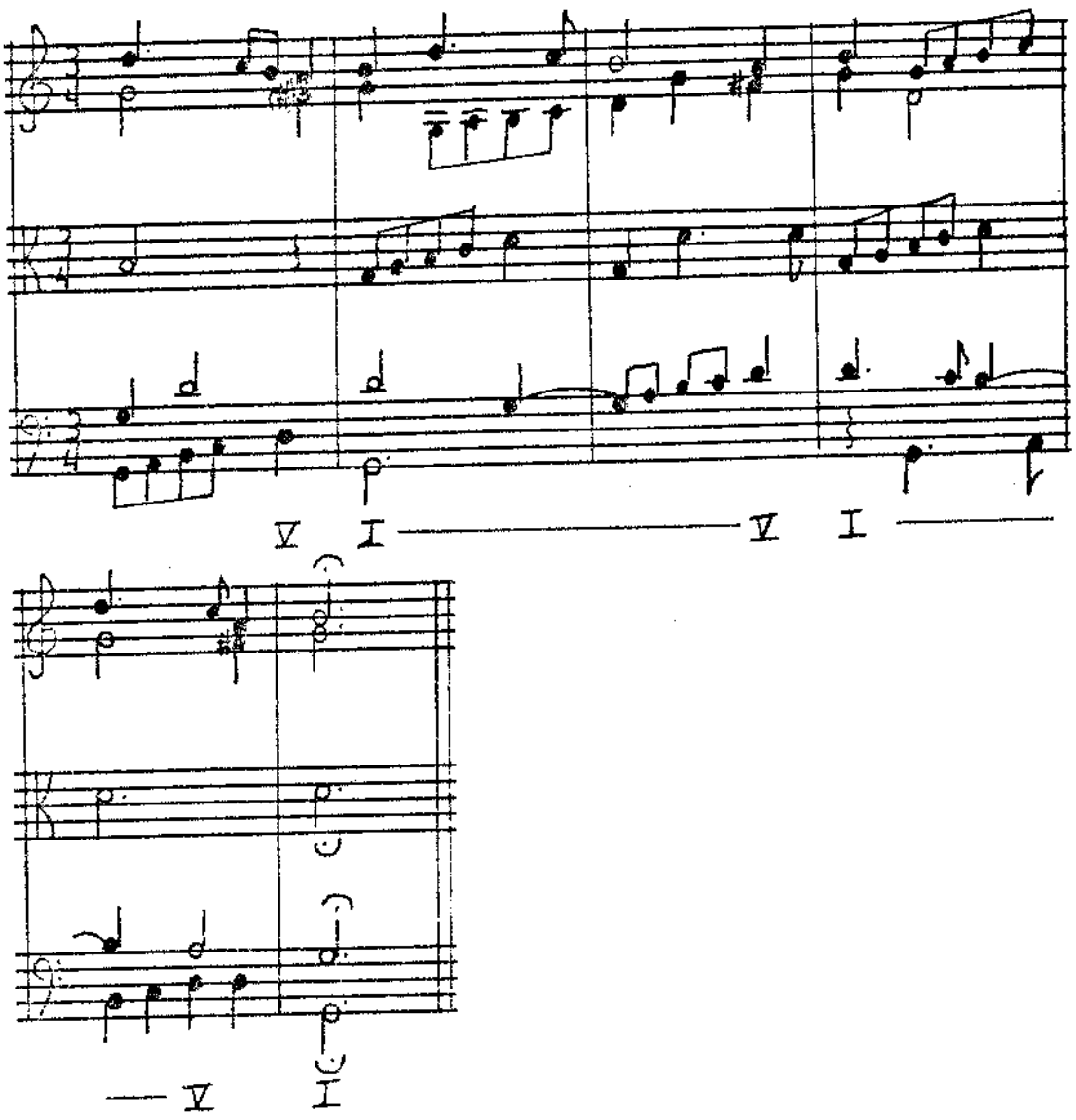
Ex. 16--Merulo: Missa Cara la vita mia, Sanctus.



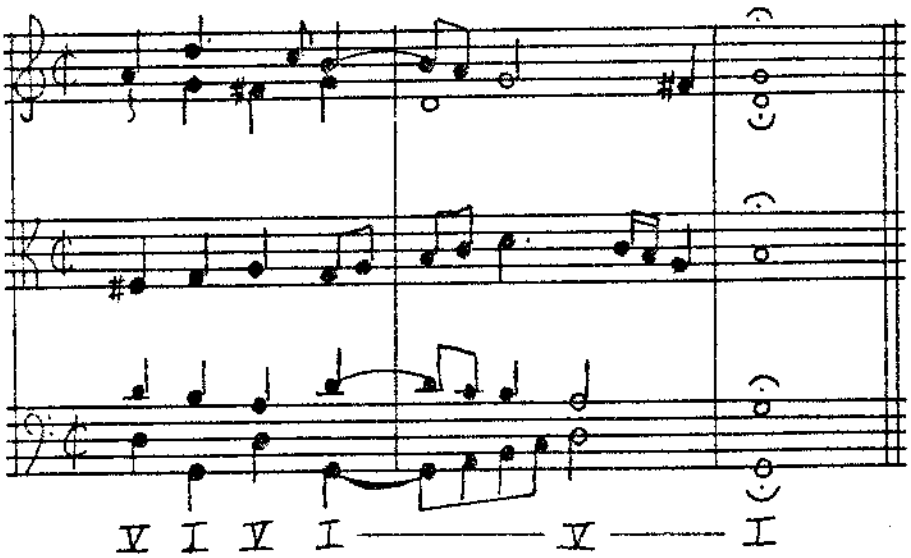
Ex. 16--Continued



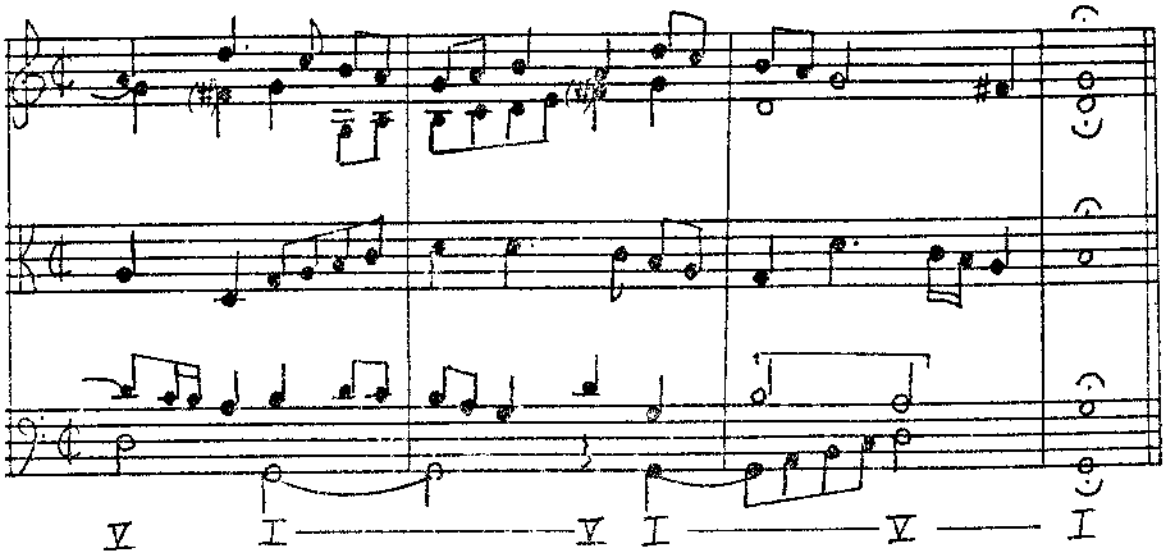
Ex. 17--Merulo: Missa Benedicta es coelorum Regina, Kyrie.



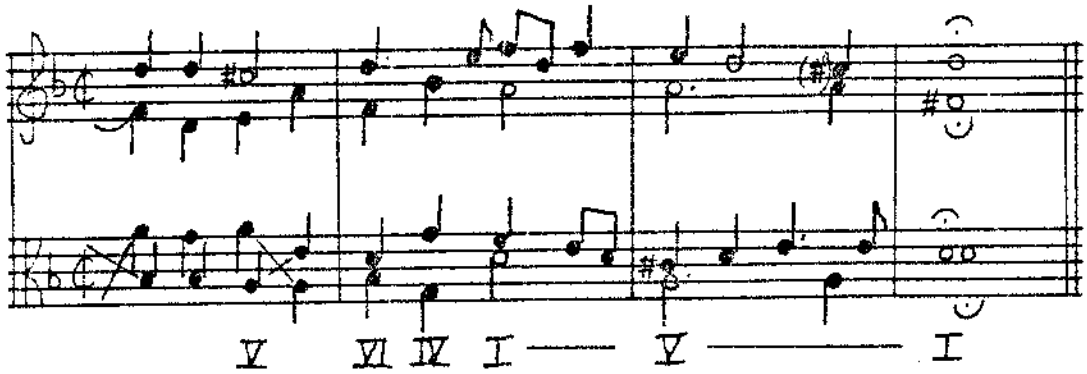
Ex. 18--Merulo: Missa Benedicta es coelorum Regina, Gloria.



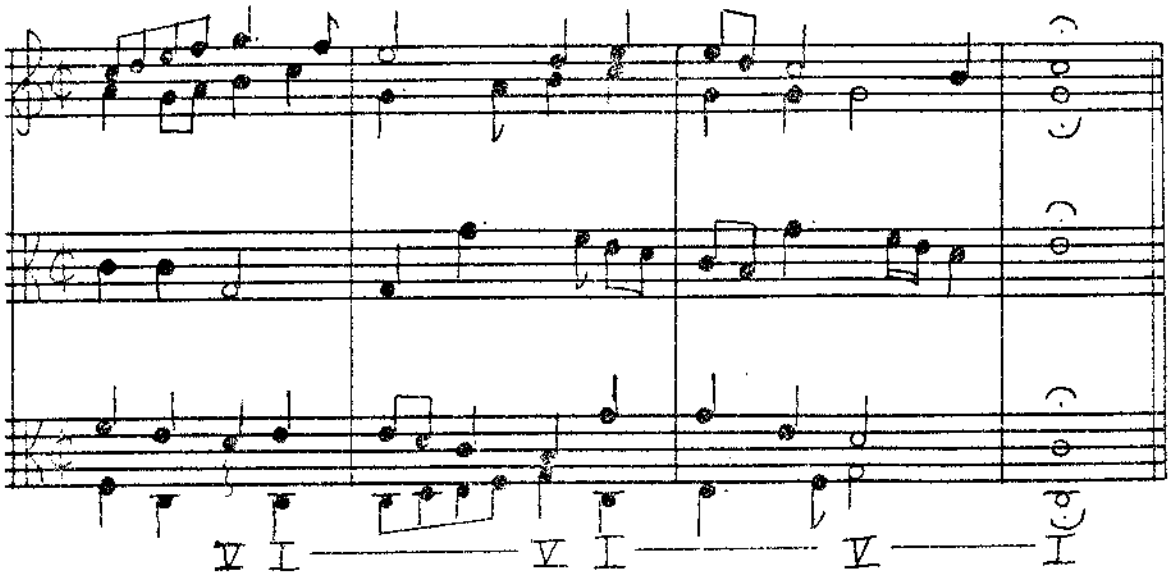
Ex. 19--Merulo: Missa Benedicta es coelorum Regina, Credo.



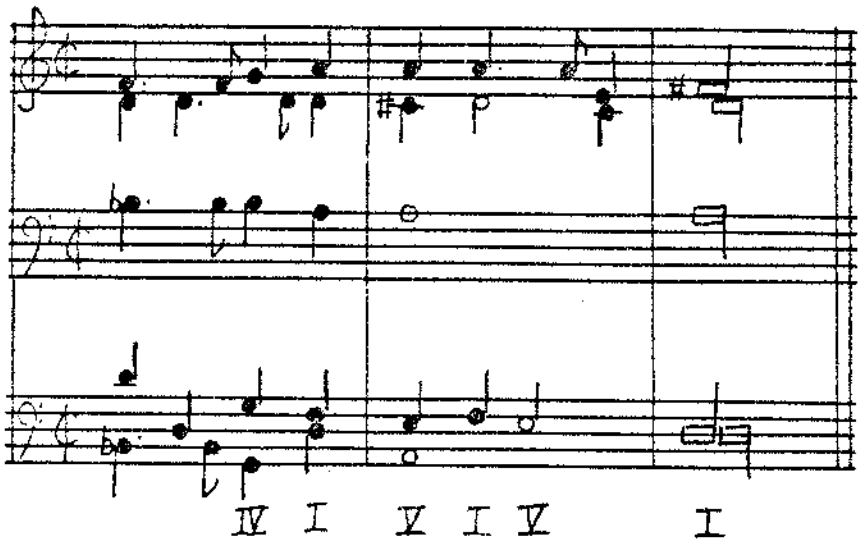
Ex. 20--Merulo: Missa Susanne un giour, Benedictus.



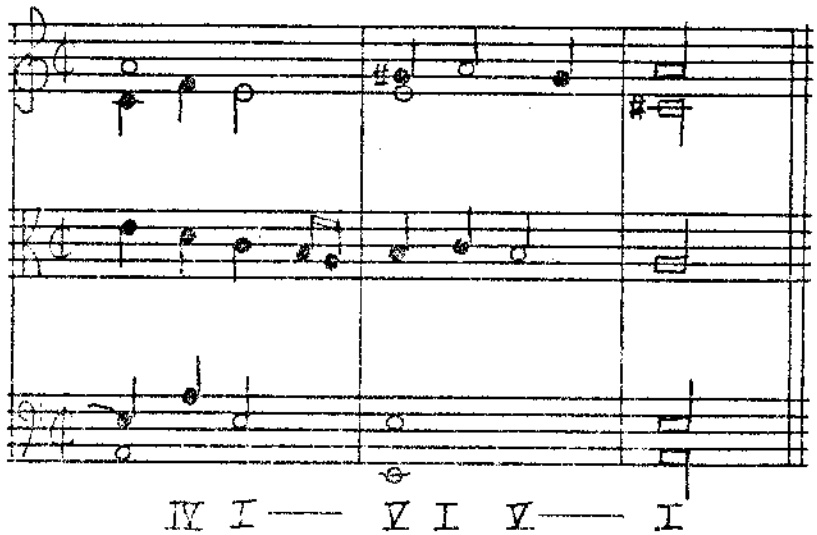
Ex. 21--Merulo: Missa Oncques amour, Agnus Dei.



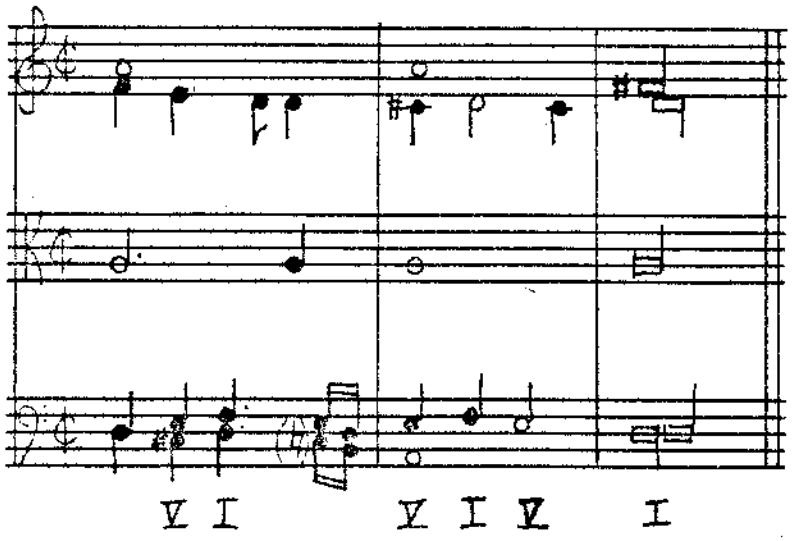
Ex. 22--Monte: Missa Ad te levavi oculos meos, Gloria.



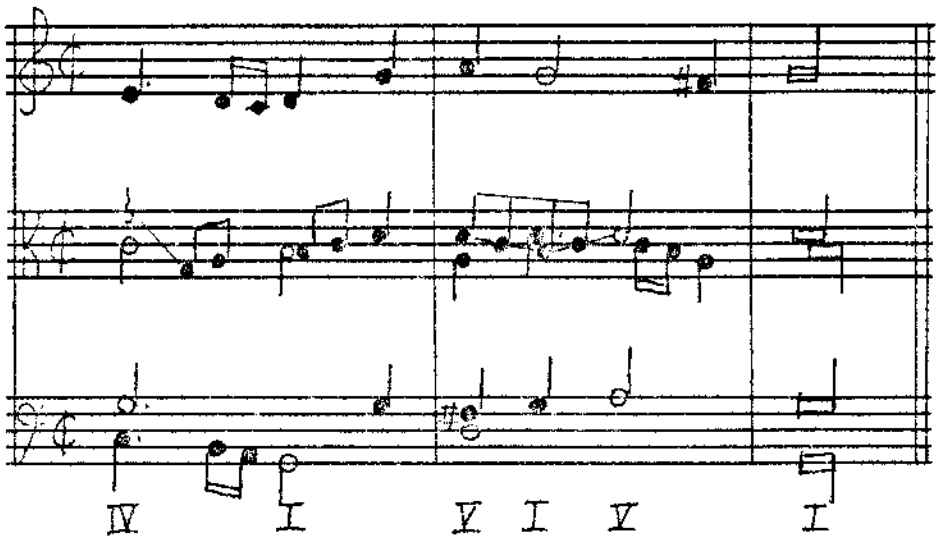
Ex. 23--Monte: Missa Ad te levavi oculos meos, Sanctus.



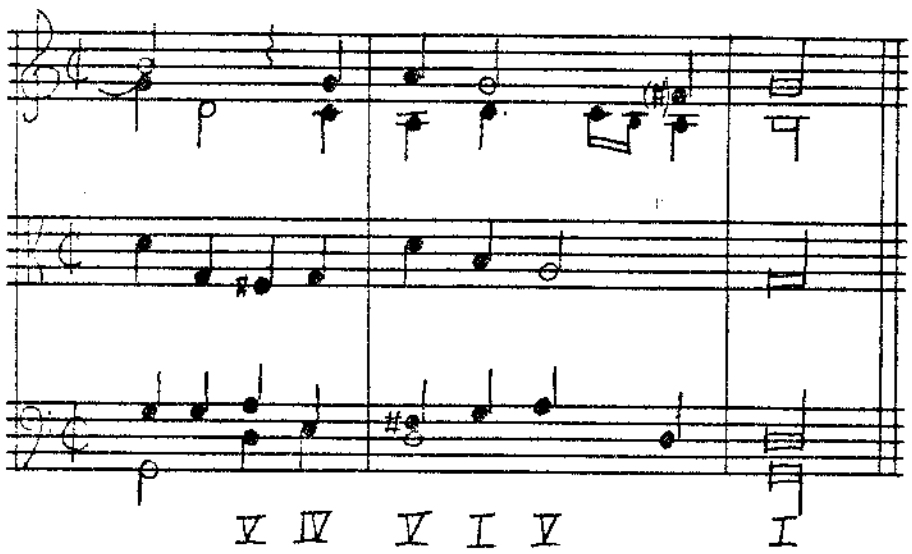
Ex. 24--Monte: Missa Ad te levavi oculos meos, Benedictus.



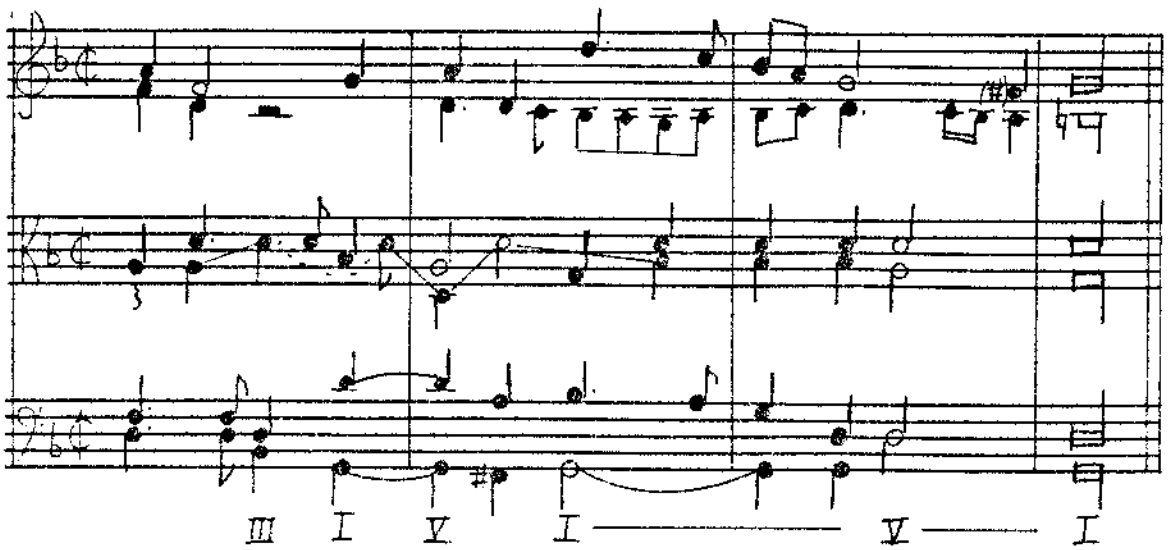
Ex. 25--Monte: Missa Emitte Domine, Gloria.



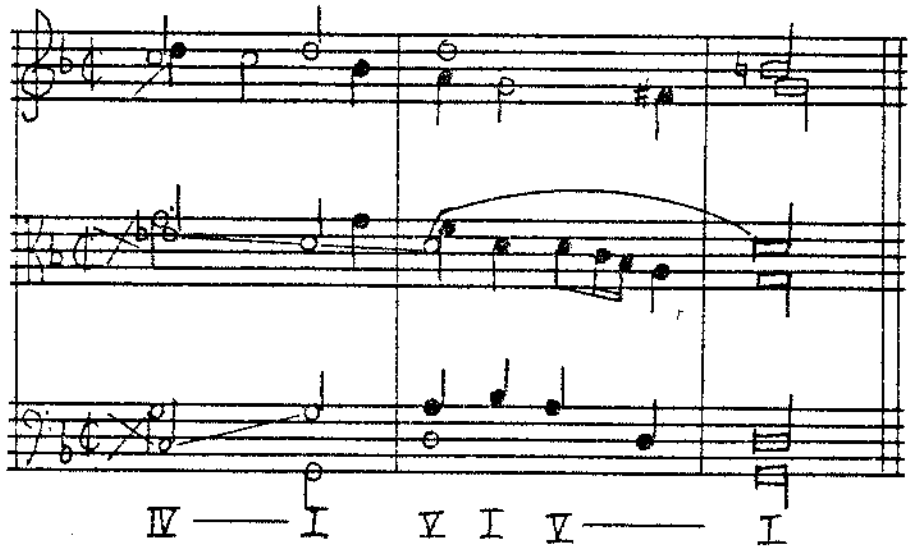
Ex. 26--Monte: Missa Emitte Domine, Sanctus and Benedictus.



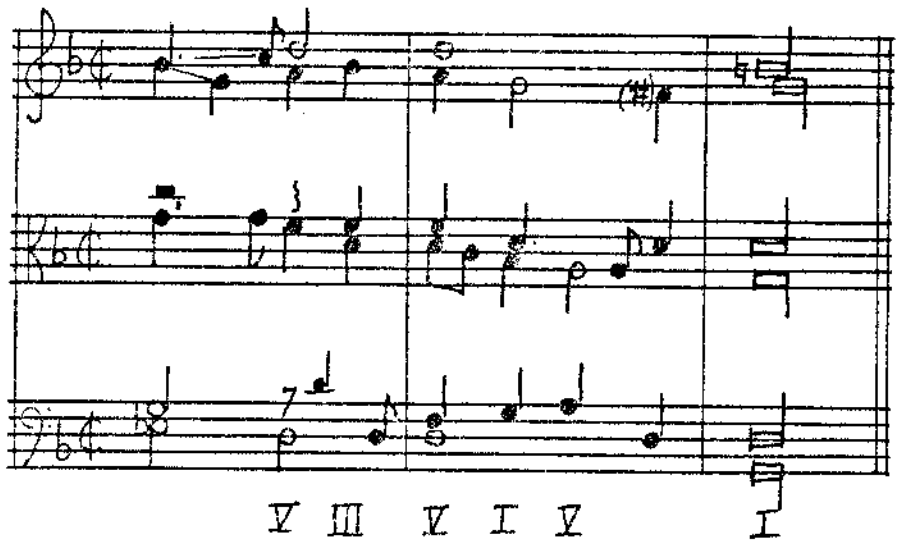
Ex. 27--Monte: Missa Si ambulavero, Gloria.



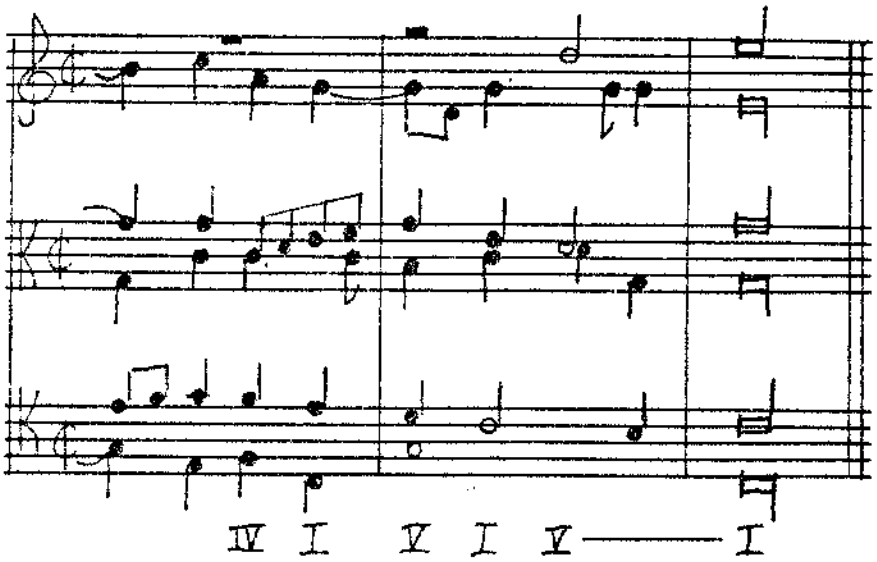
Ex. 28--Monte: Missa Si ambulavero, Sanctus and Benedictus.



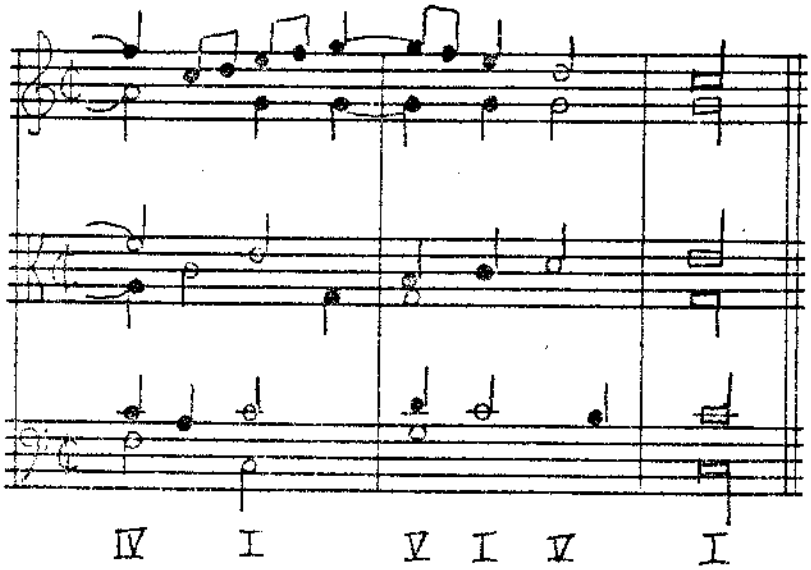
Ex. 29--Monte: Missa Si ambulavero, Agnus Dei.



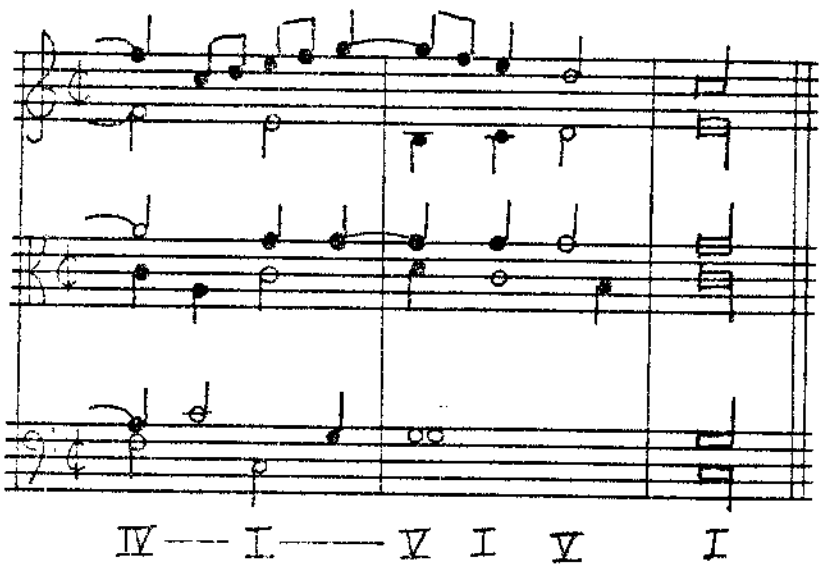
Ex. 30--Monte: Missa Deus Deus meus, Gloria.



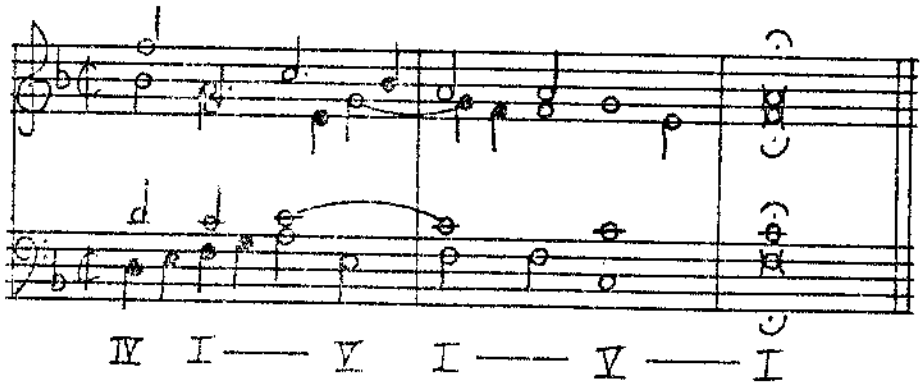
Ex. 31--Monte: Missa Deus Deus meus, Sanctus.



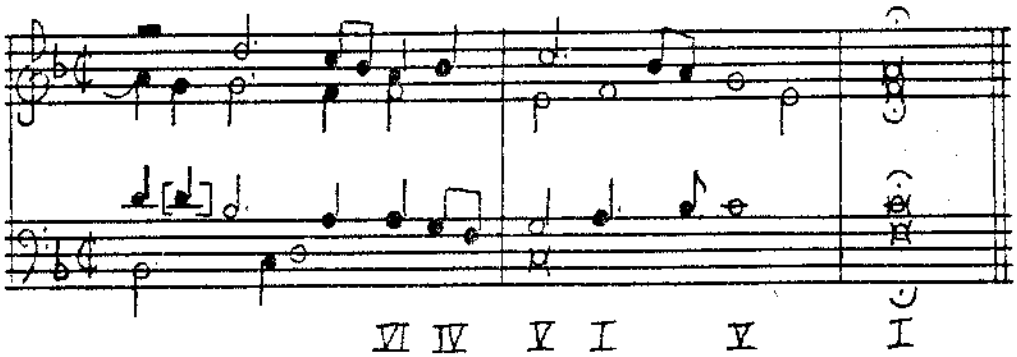
Ex. 32--Monte: Missa Deus Deus meus, Benedictus.



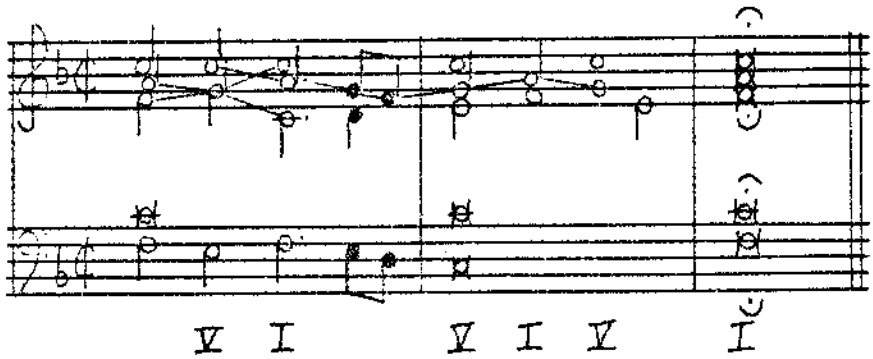
Ex. 33--Monte: Missa sine nomine, Kyrie.



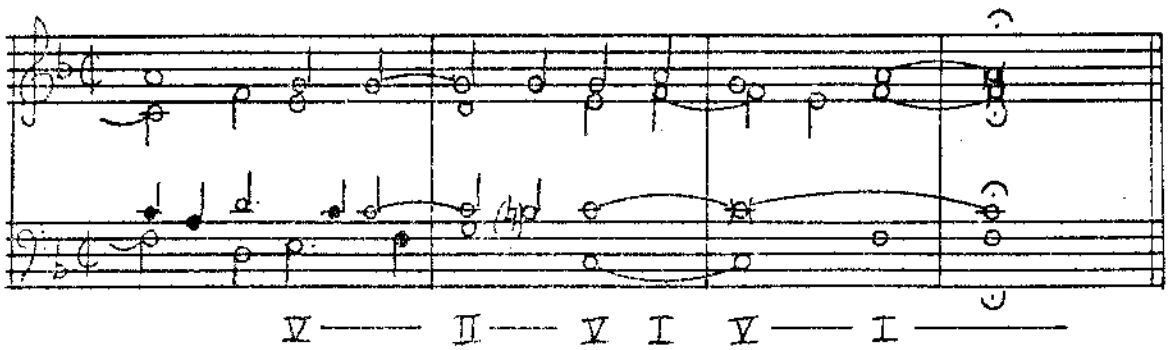
Ex. 34--Monte: Missa sine nomine, Credo.



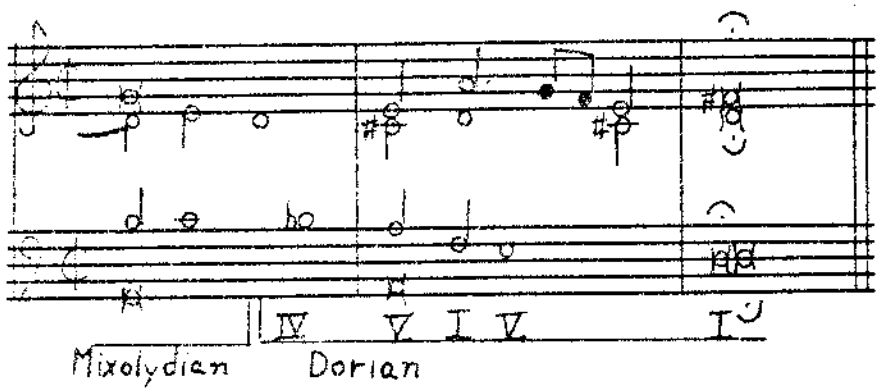
Ex. 35--Monte: Missa sine nomine, Sanctus and Benedictus.



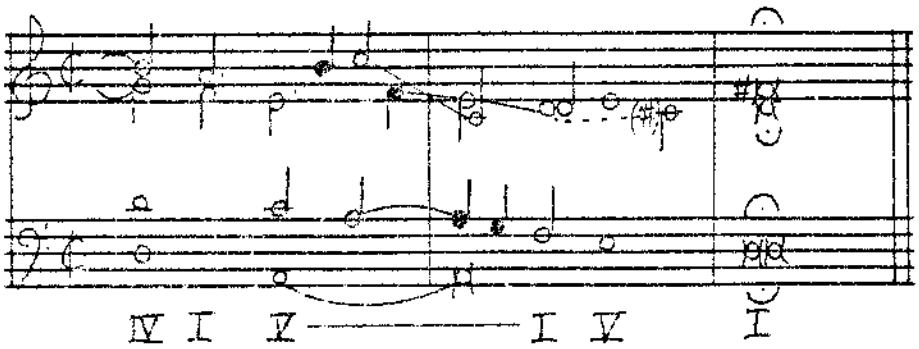
Ex. 36--Monte: Missa sine nomine, Agnus Dei.



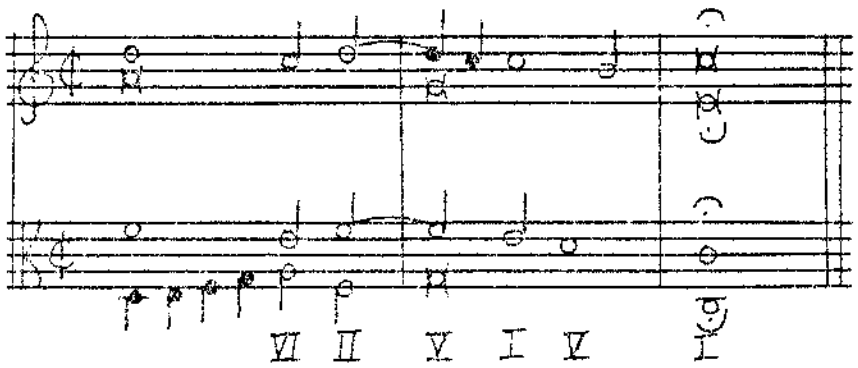
Ex. 37--Monte: Missa super Reviens vers moy, Gloria.



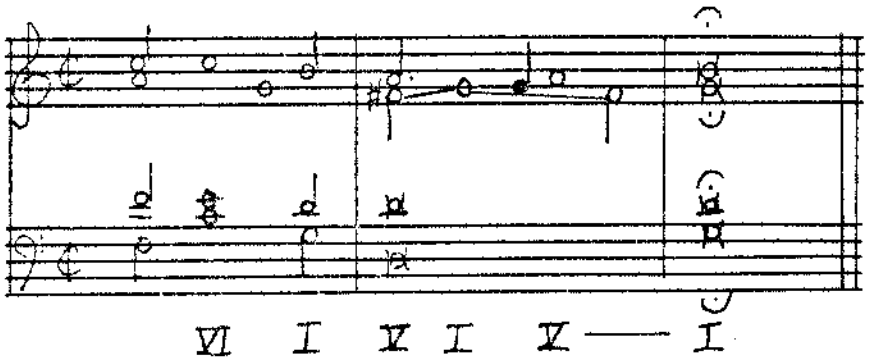
Ex. 38--Monte: Missa super Reviens vers moy, Agnus Dei.



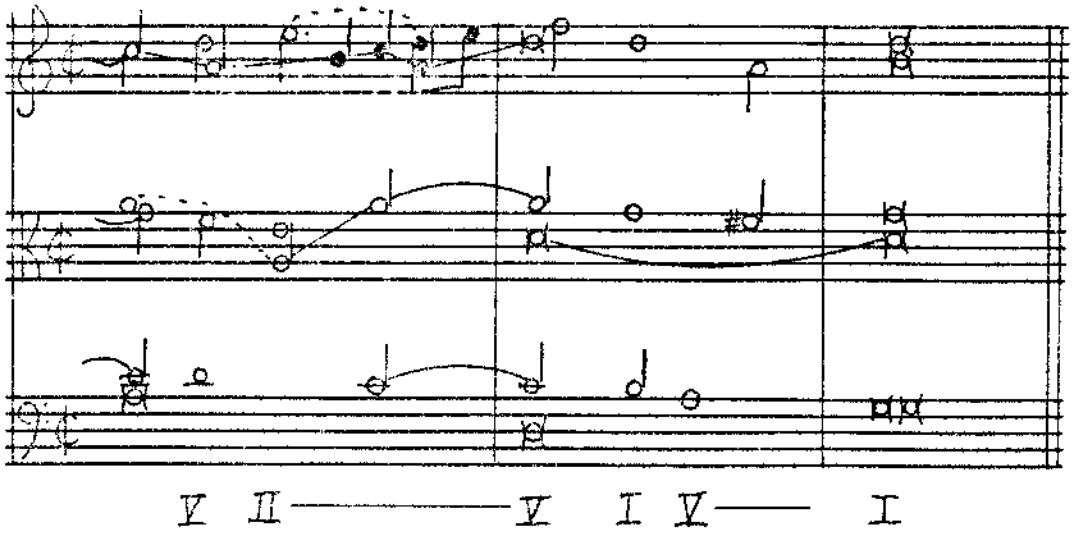
Ex. 39--Monte: Missa Quaternis vocibus, Gloria.



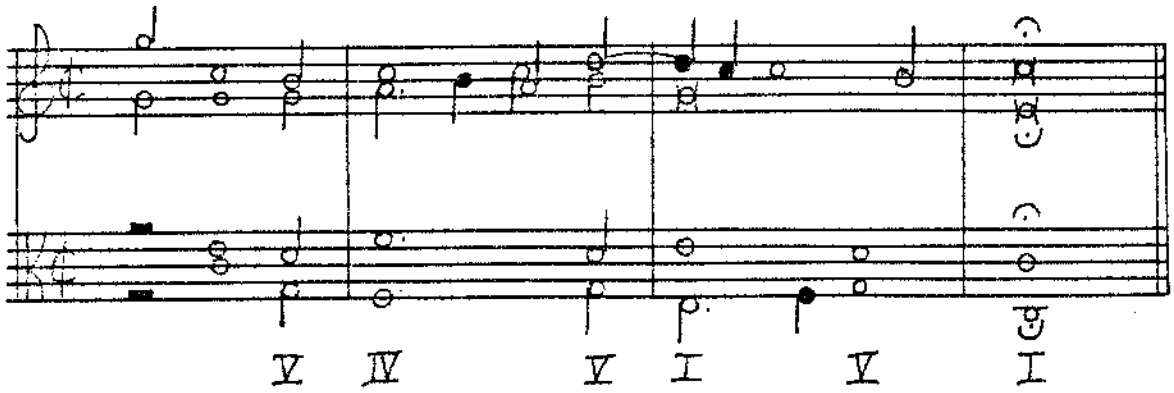
Ex. 40--Monte: Missa Quaternis vocibus, Sanctus.



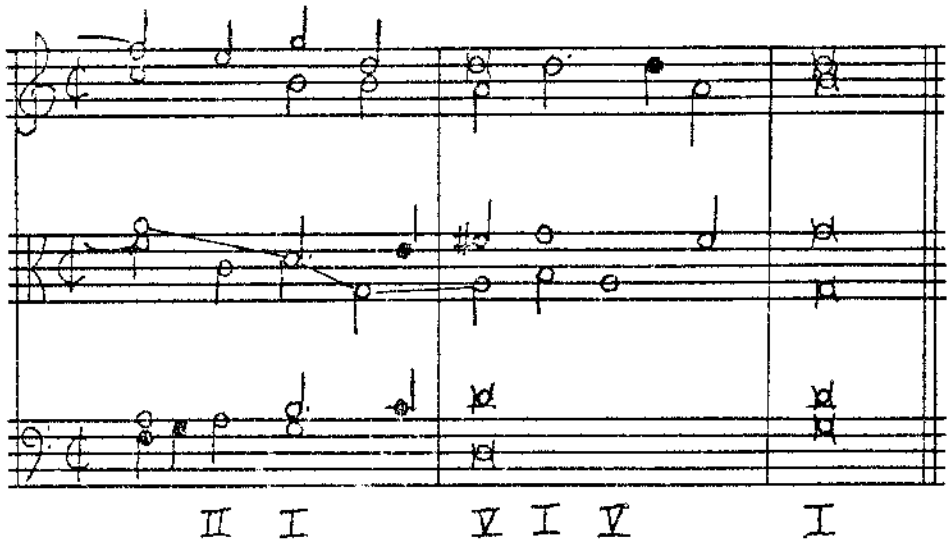
Ex. 41--Monte: Missa Quomodo dilexi, Kyrie.



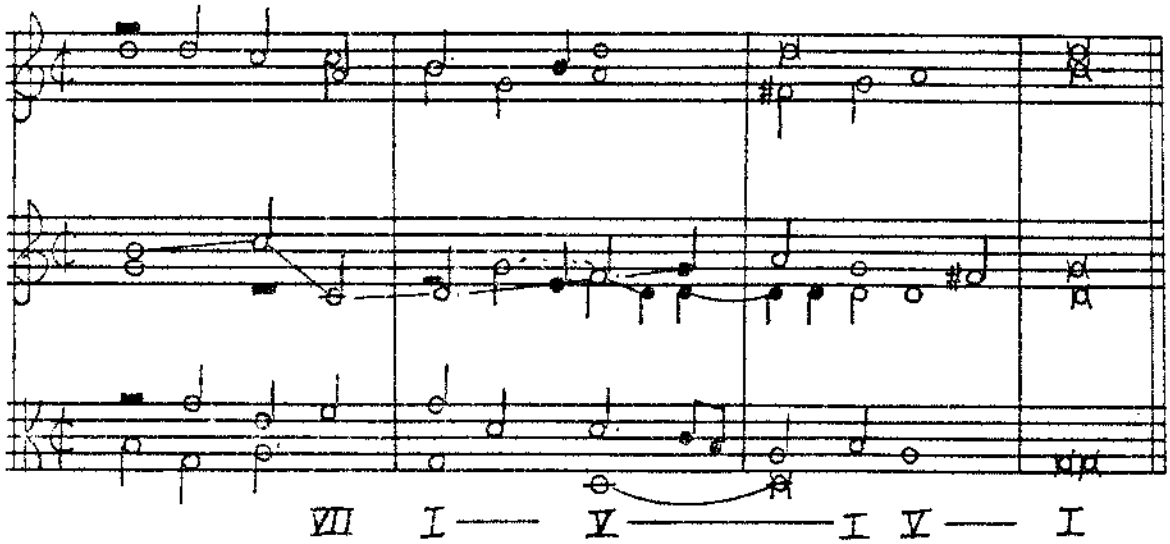
Ex. 42--Monte: Missa Quaternis vocibus, Agnus Dei.



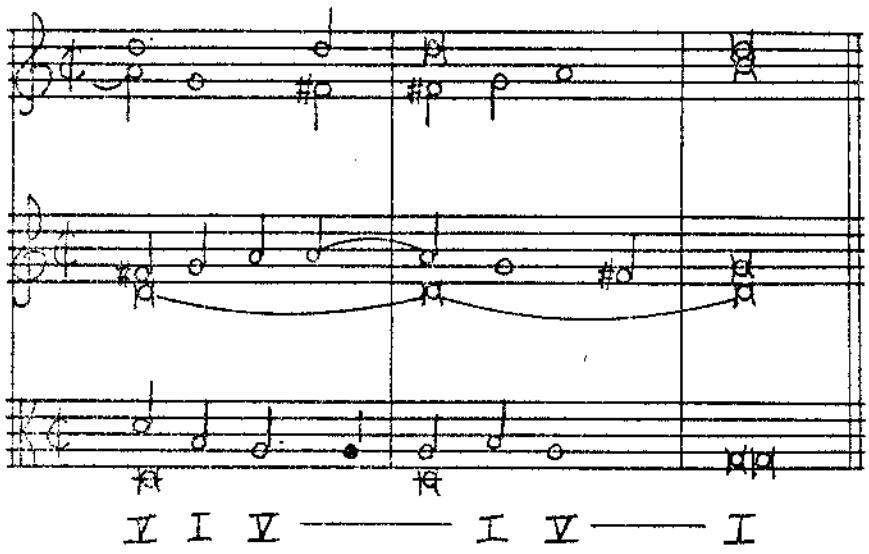
Ex. 43--Monte: Missa Quomodo dilexi, Gloria.



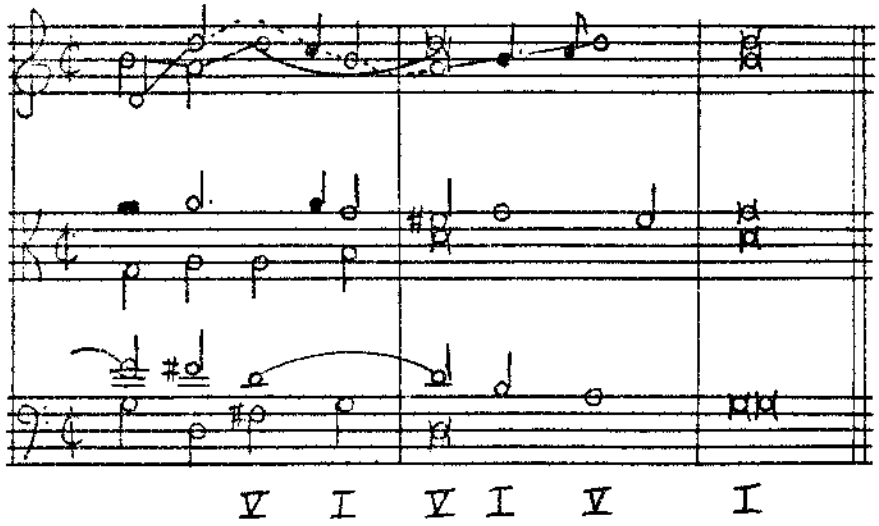
Ex. 44--Monte: Missa Quomodo dilexi, Credo.



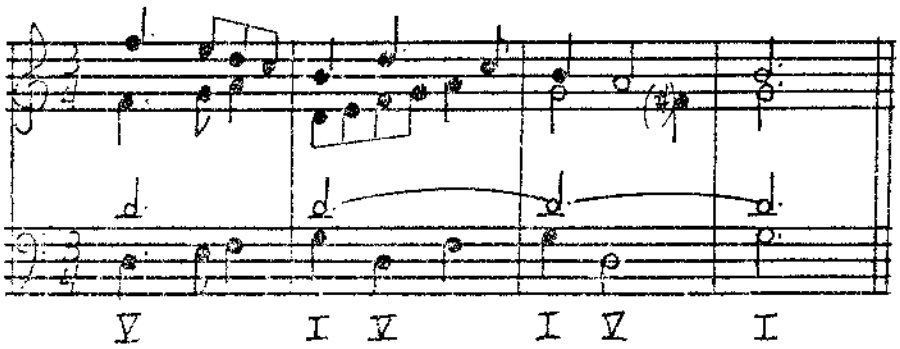
Ex. 45--Monte: Missa Quomodo dilexi, Sanctus.



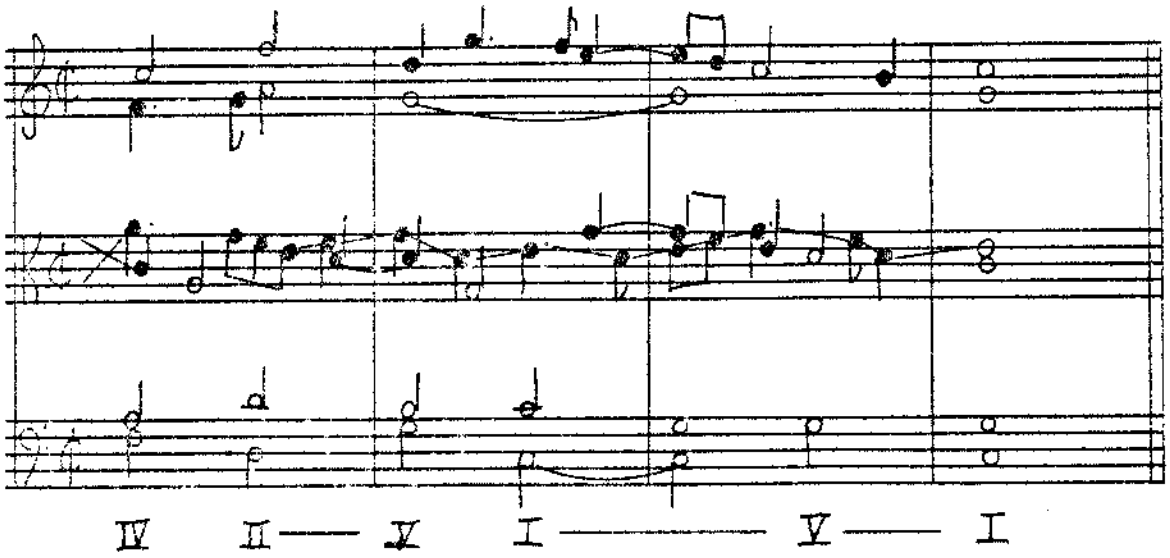
Ex. 46--Monte: Missa Quomodo dilexi, Agnus Dei.



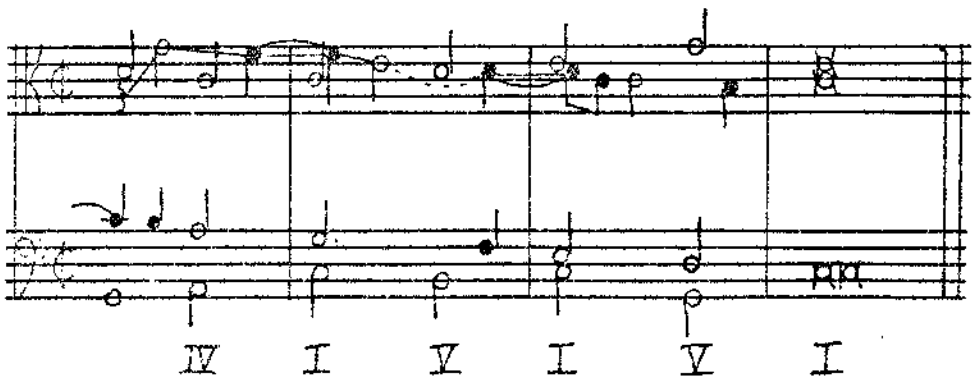
Ex. 47--Palestrina: Missa Ecce sacerdos magnus, Sanctus.



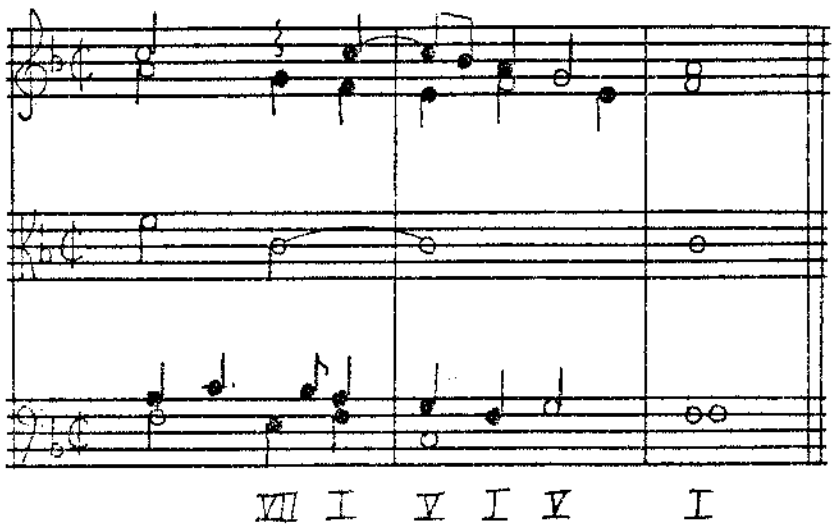
Ex. 48--Palestrina: Missa Papae Marcelli, Sanctus.



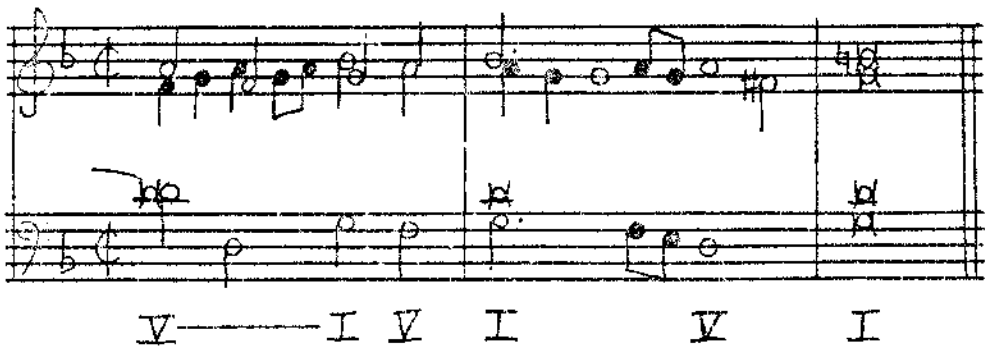
Ex. 49--Palestrina: Missa Jesu, nostra redemptio, Agnus Dei I.



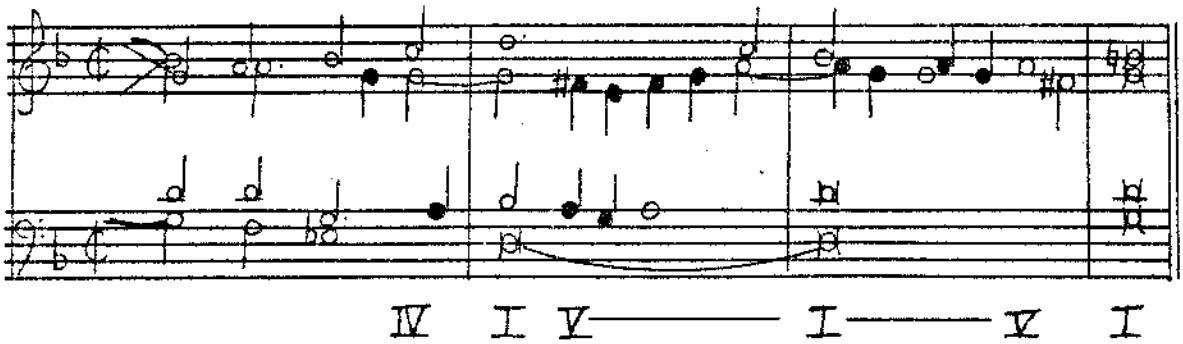
Ex. 50--Palestrina: Missa Regina coeli, Gloria.



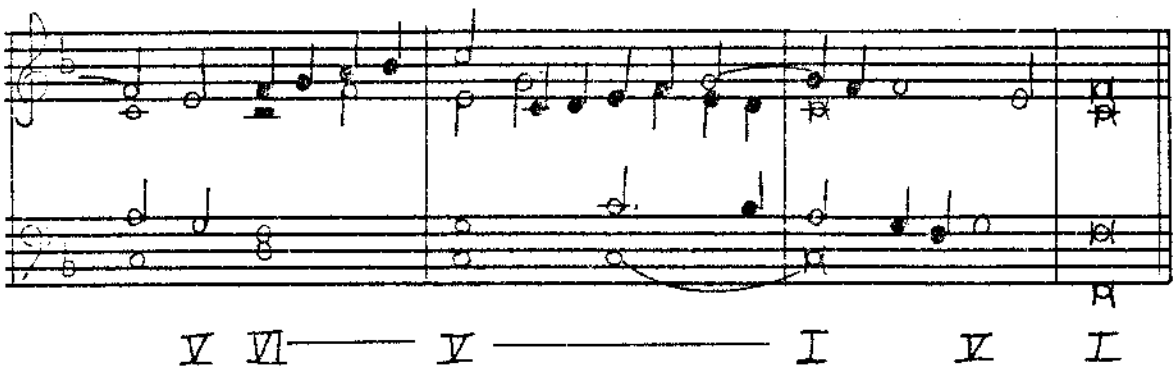
Ex. 51--Victoria: Missa Ave, maris stella . . ., Kyrie.



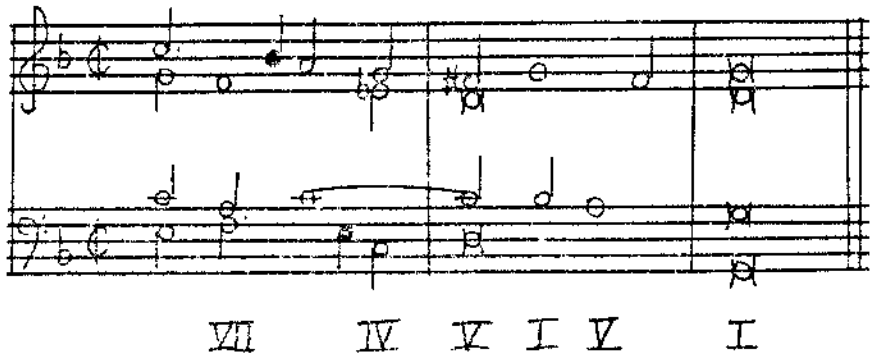
Ex. 52--Victoria: Missa Ave, maris stella . . ., Benedictus.



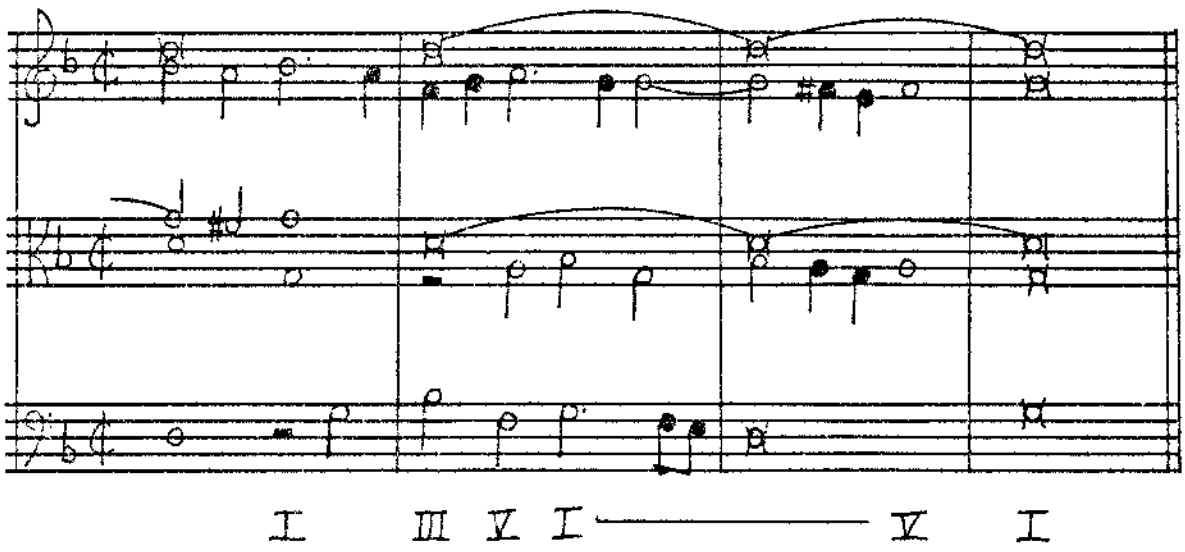
Ex. 53--Victoria: Missa Quam pulchri sunt, Credo.



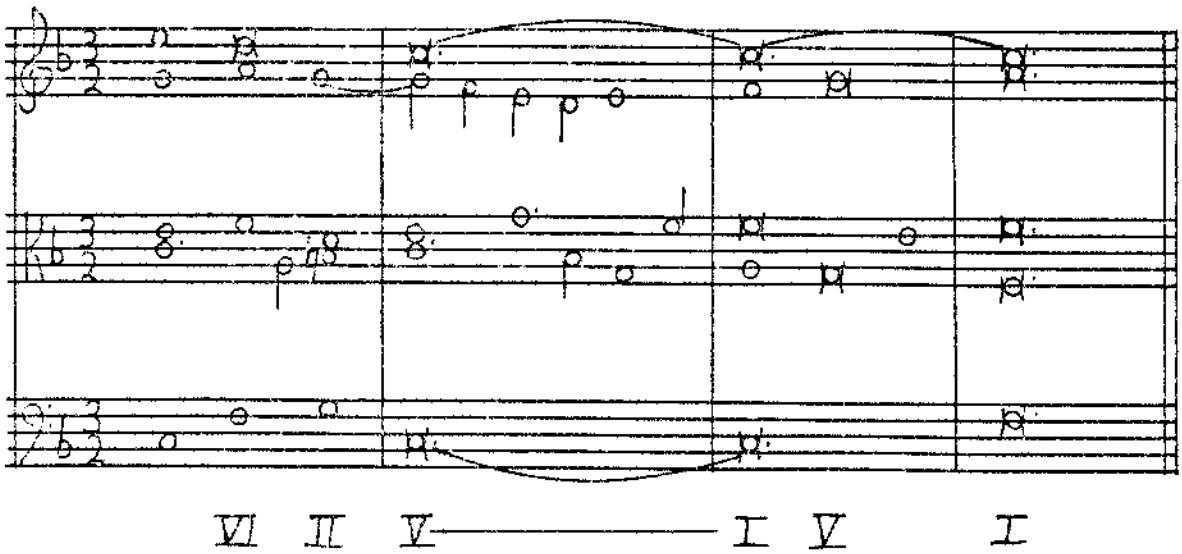
Ex. 54--Victoria: Missa O magnum mysterium, Kyrie.



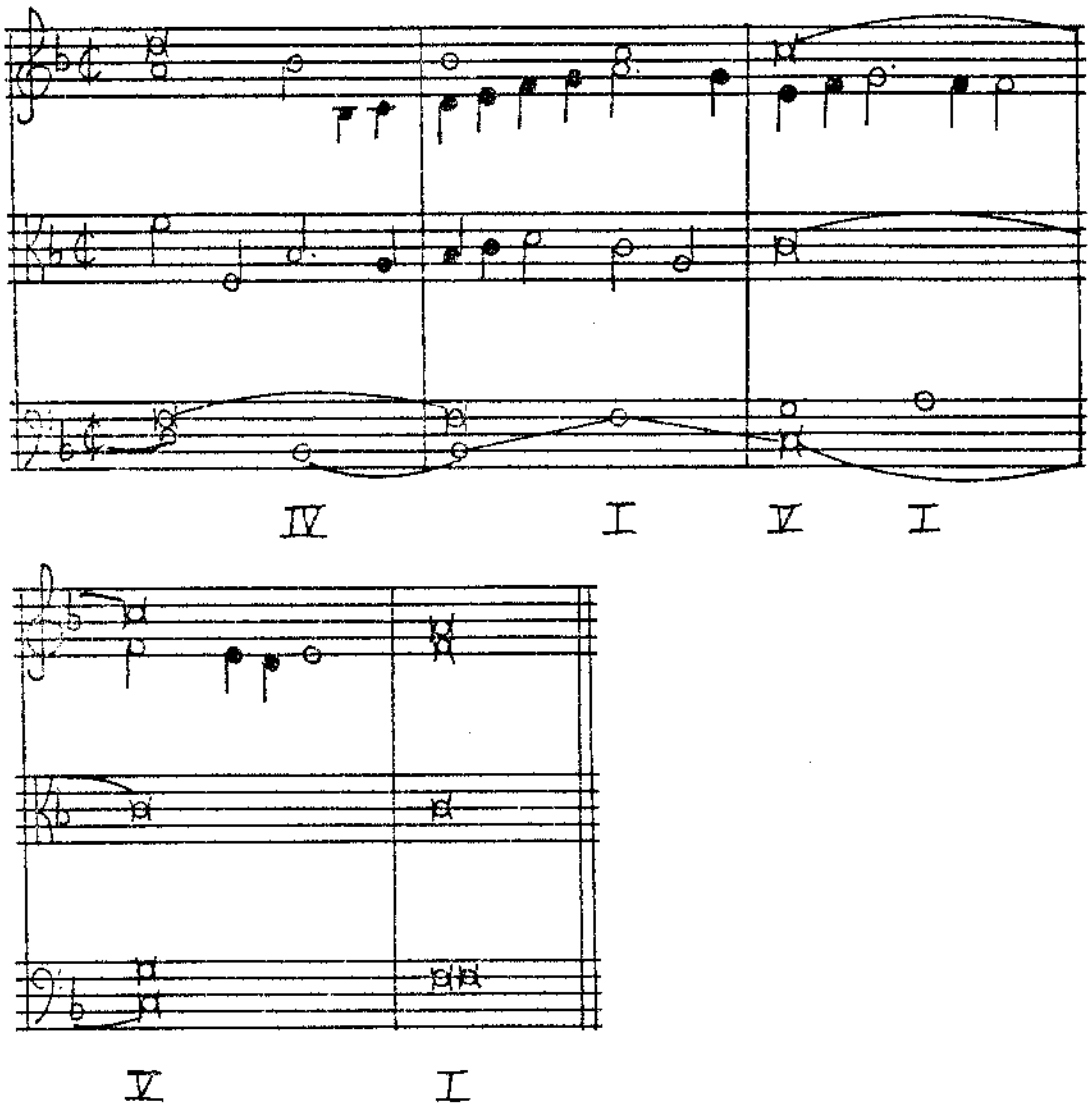
Ex. 55--Victoria: Missa de Beata Maria, Kyrie.



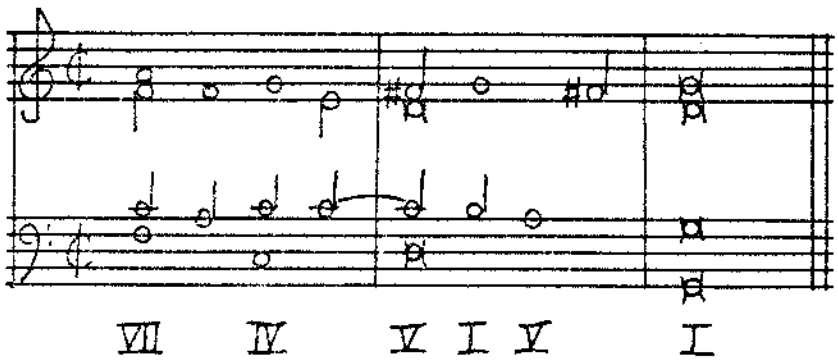
Ex. 56--Victoria: Missa de Beata Maria, Sanctus.



Ex. 57--Victoria: Missa de Beata Maria, Agnus Dei.



Ex. 58--Victoria: Missa pro Defunctis, Benedictus.



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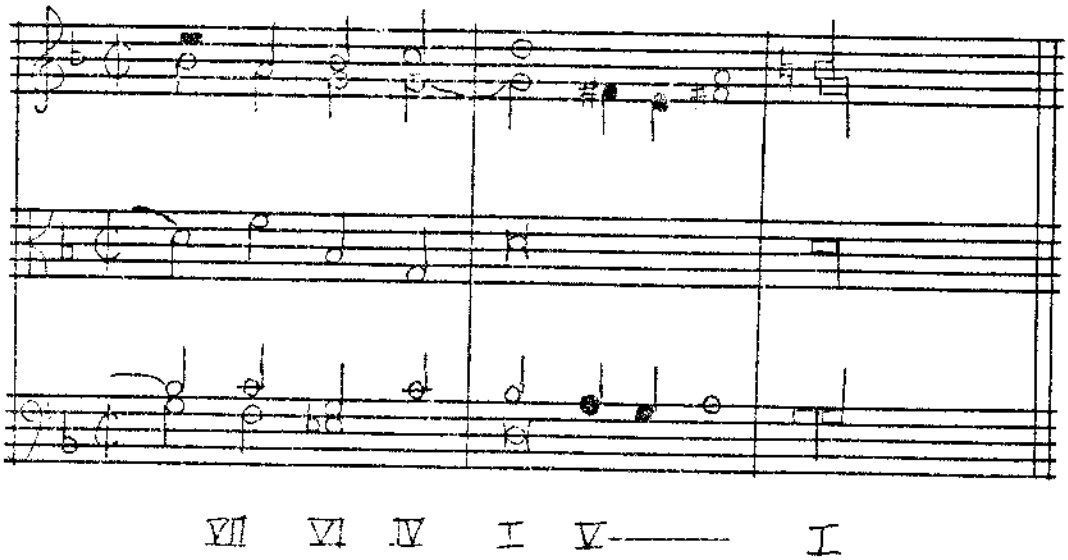
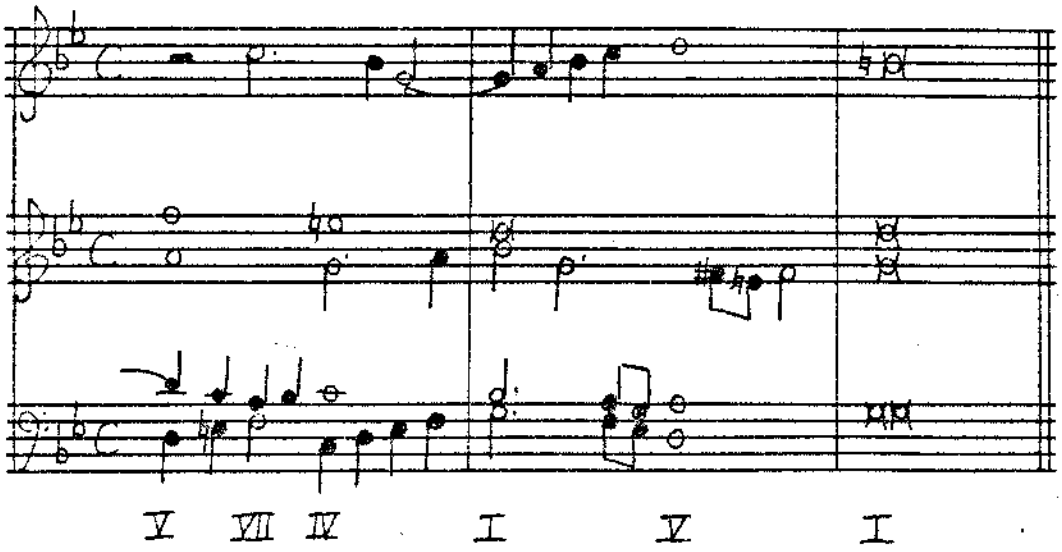
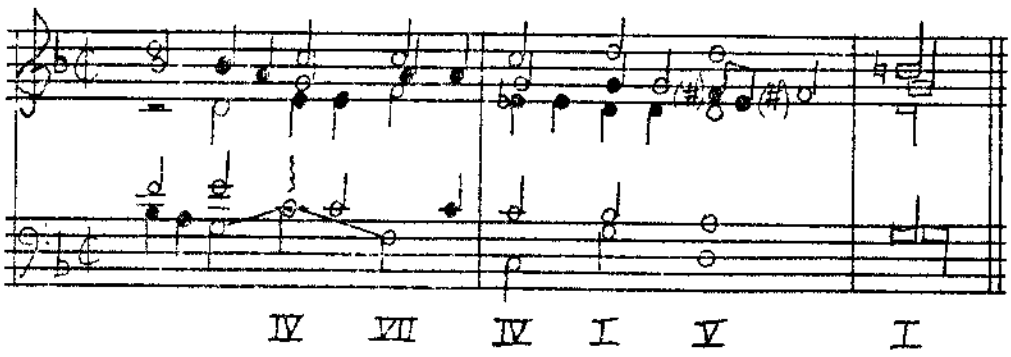
Ex. 59--Handl: Missa super Transeunte Domine, Kyrie.



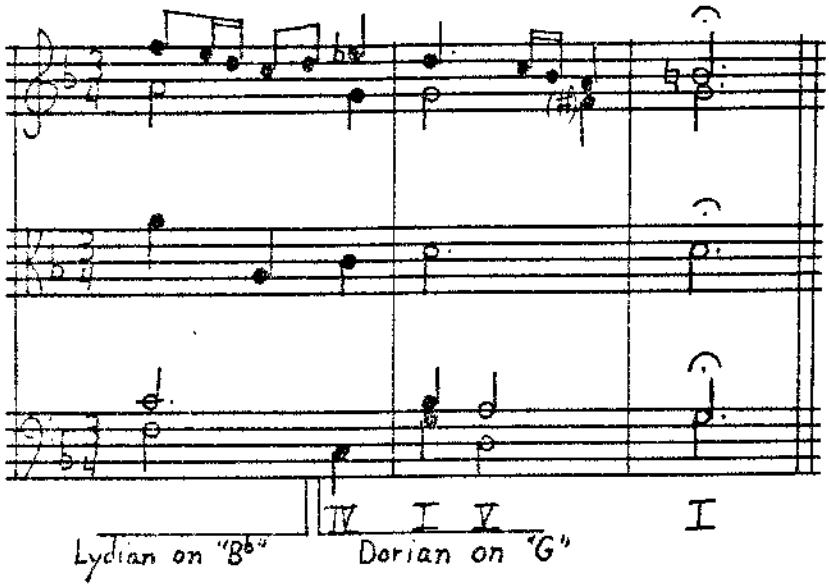
Ex. 60--Kerle: Missa De beata virgine, Credo.



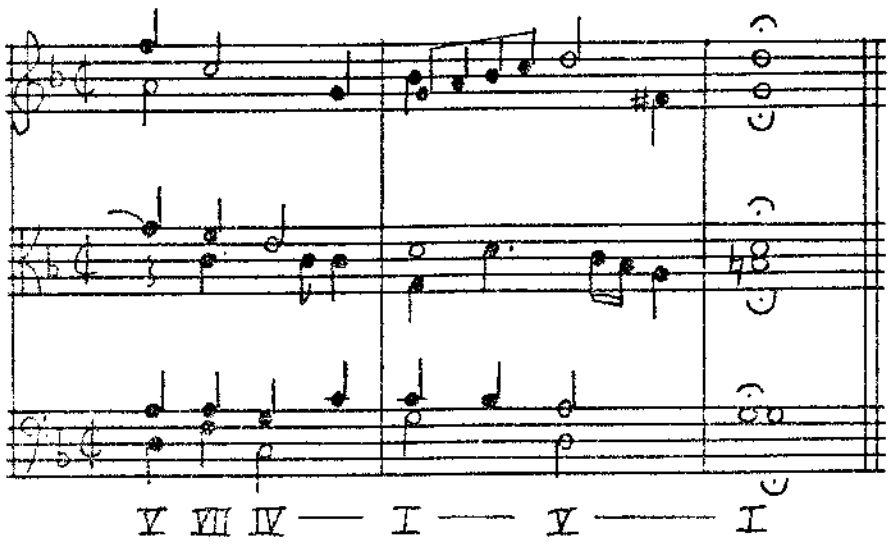
Ex. 61--Lassus: Missa super Le Berger et la Bergere, Gloria.



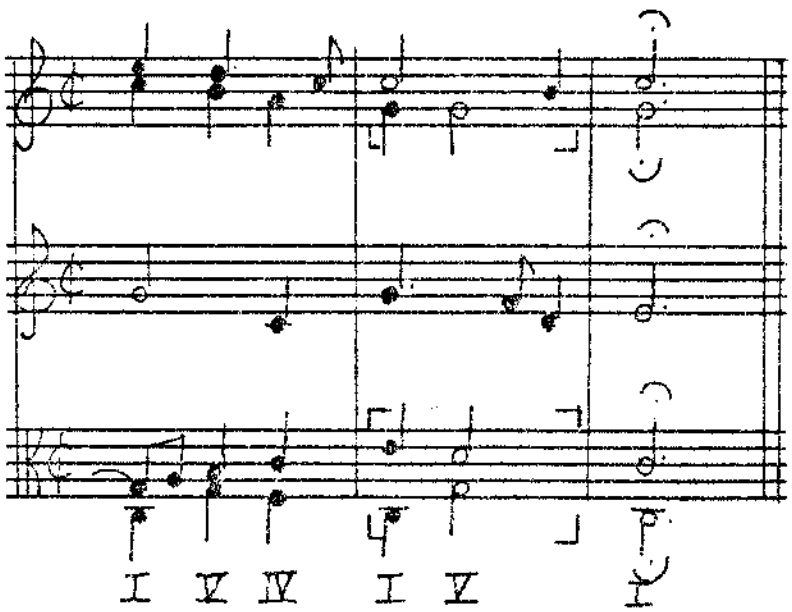
Ex. 62--Merulo: Missa Susanne un giour, Sanctus.



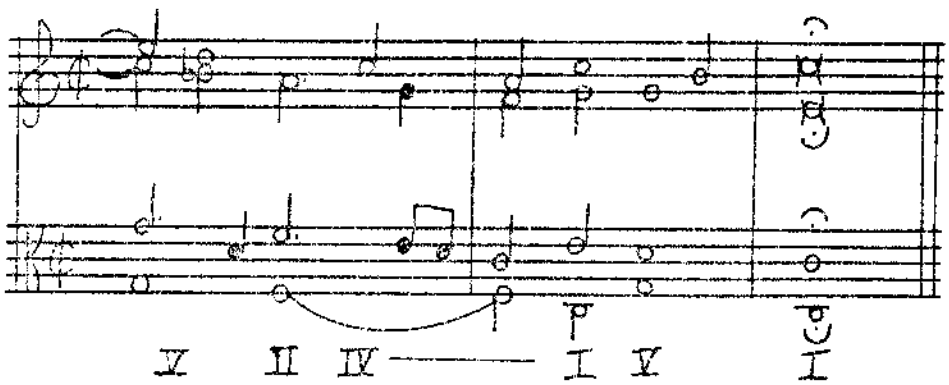
Ex. 63--Merulo: Missa Susanne un giour, Agnus Dei.



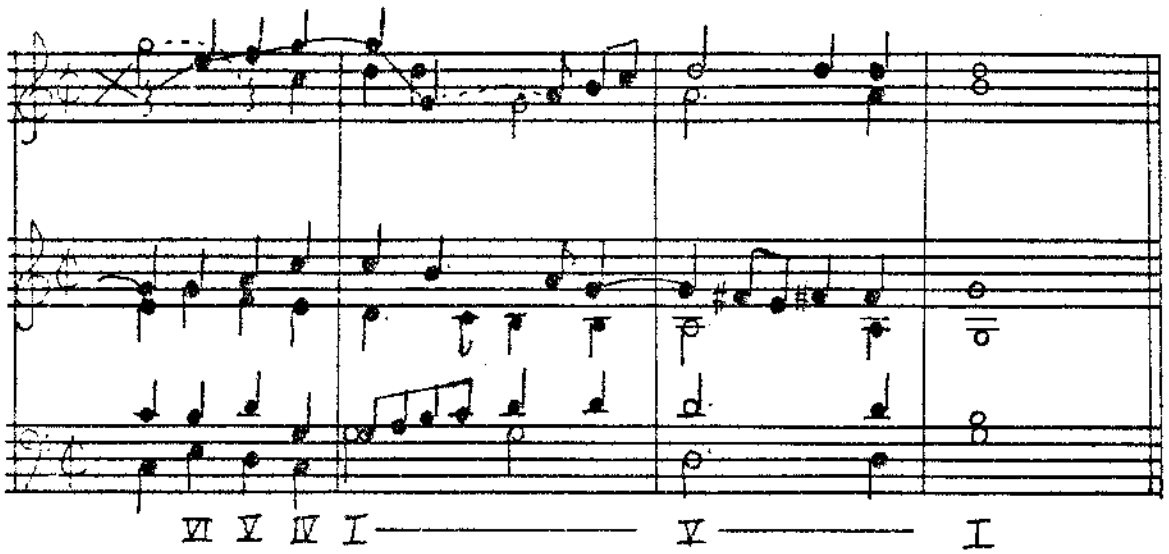
Ex. 64--Merulo: Missa Oncques amour, Sanctus.



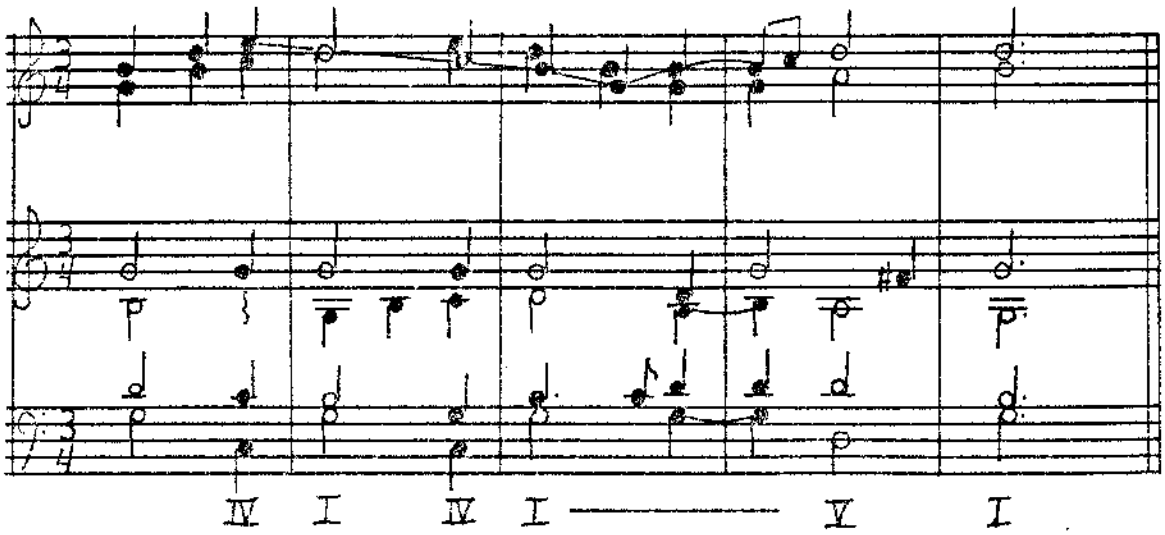
Ex. 65--Monte: Missa Quaternis vocibus, Benedictus.



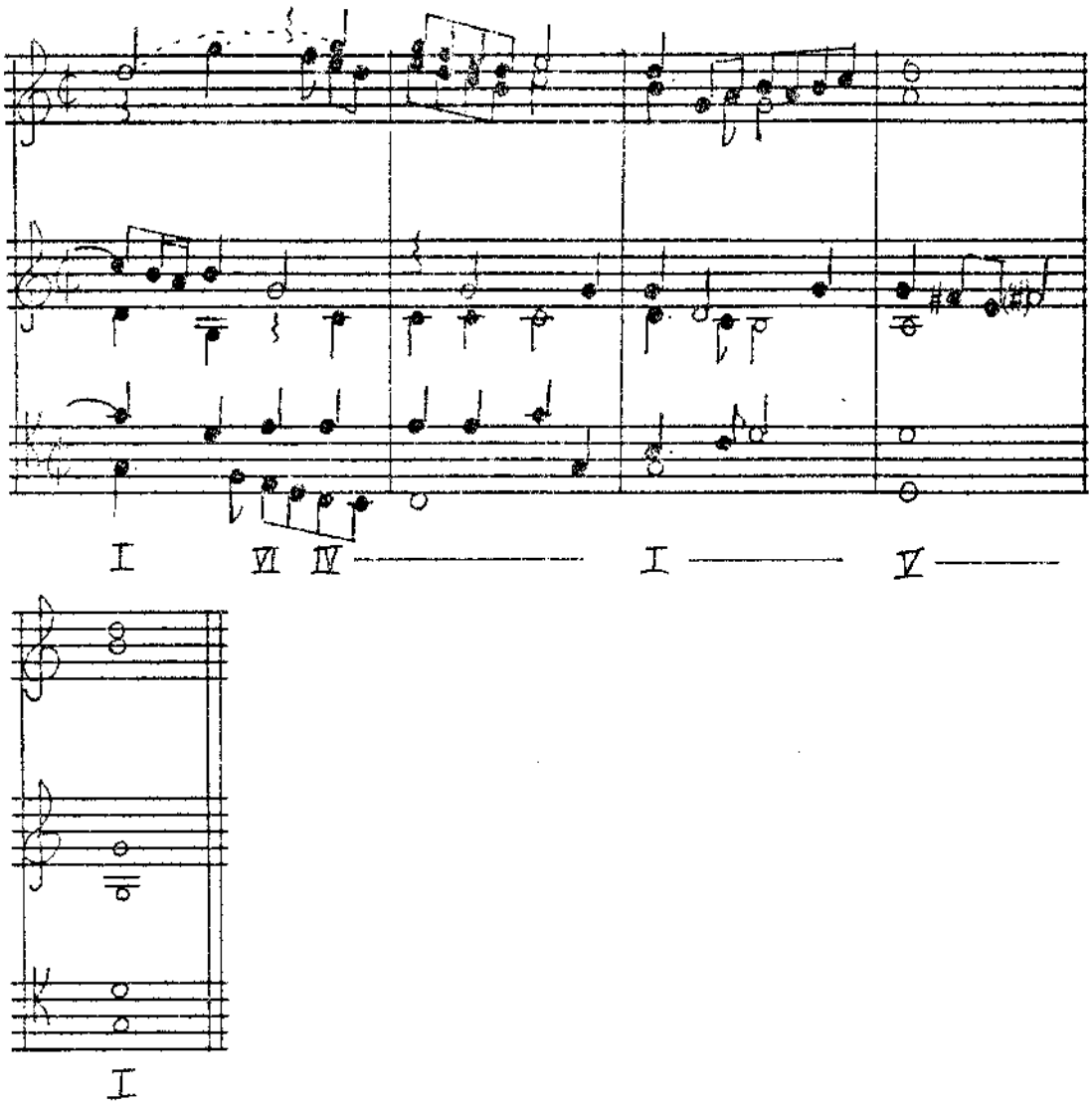
Ex. 66--Palestrina: Missa Assumpta est Maria, Kyrie.



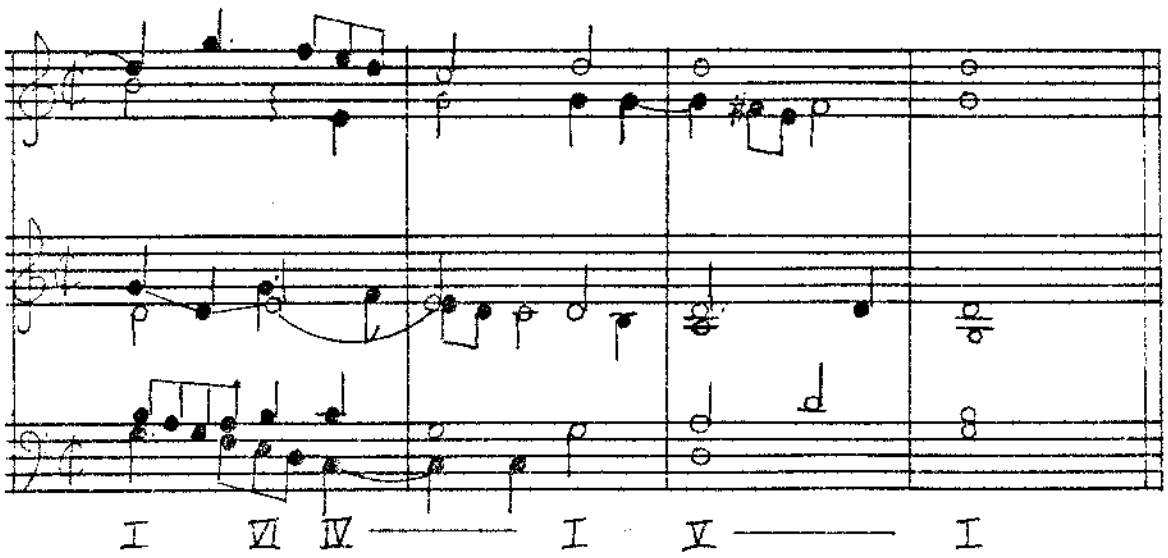
Ex. 67--Palestrina: Missa Assumpta est Maria, Benedictus.



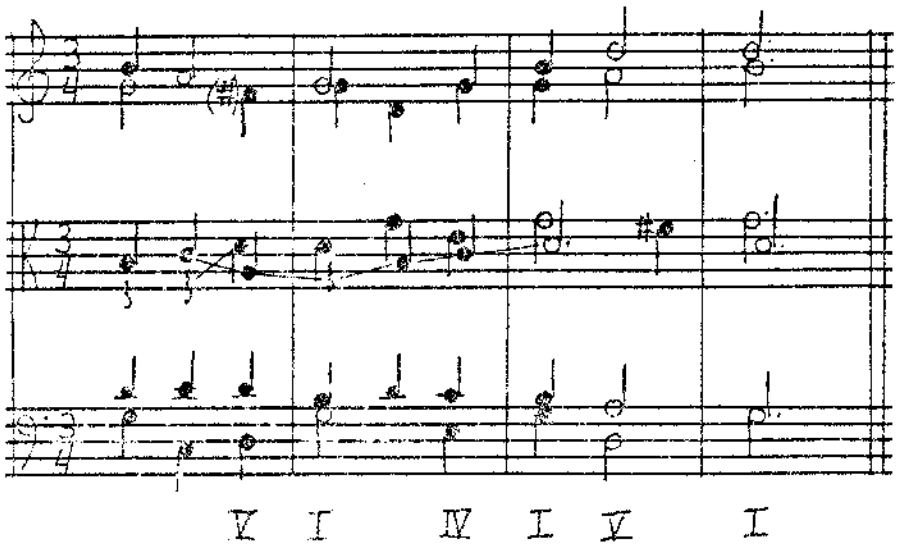
Ex. 68--Palestrina: Missa Assumpta est Maria, Agnus Dei.



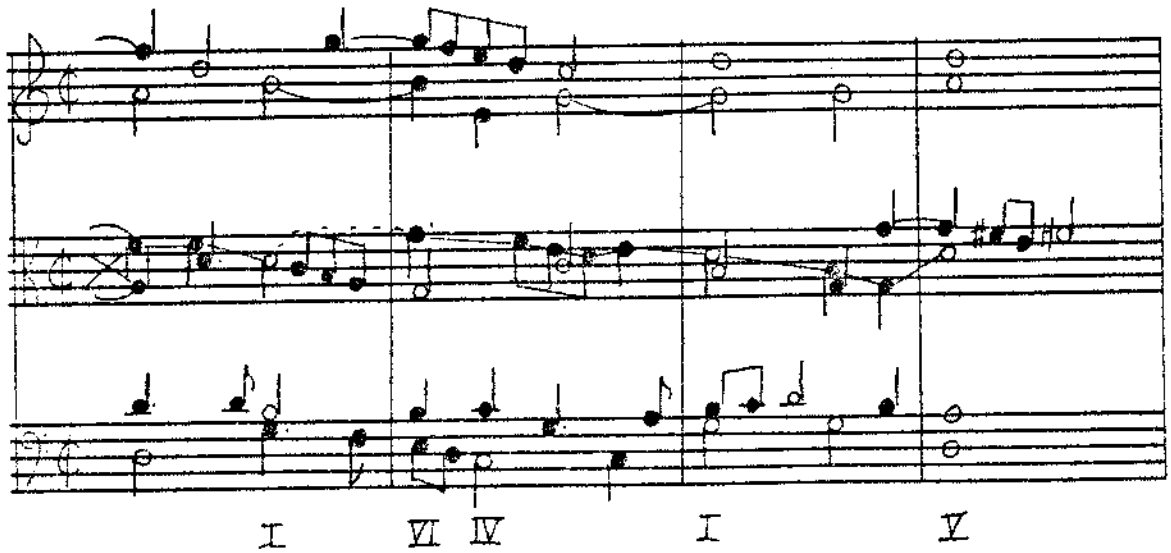
Ex. 69--Palestrina: Missa Ecce ego Joannes, Kyrie.

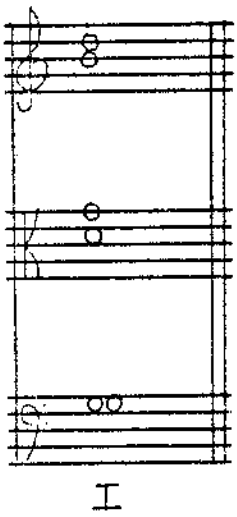


Ex. 70--Palestrina: Missa Ecce ego Joannes, Benedictus.

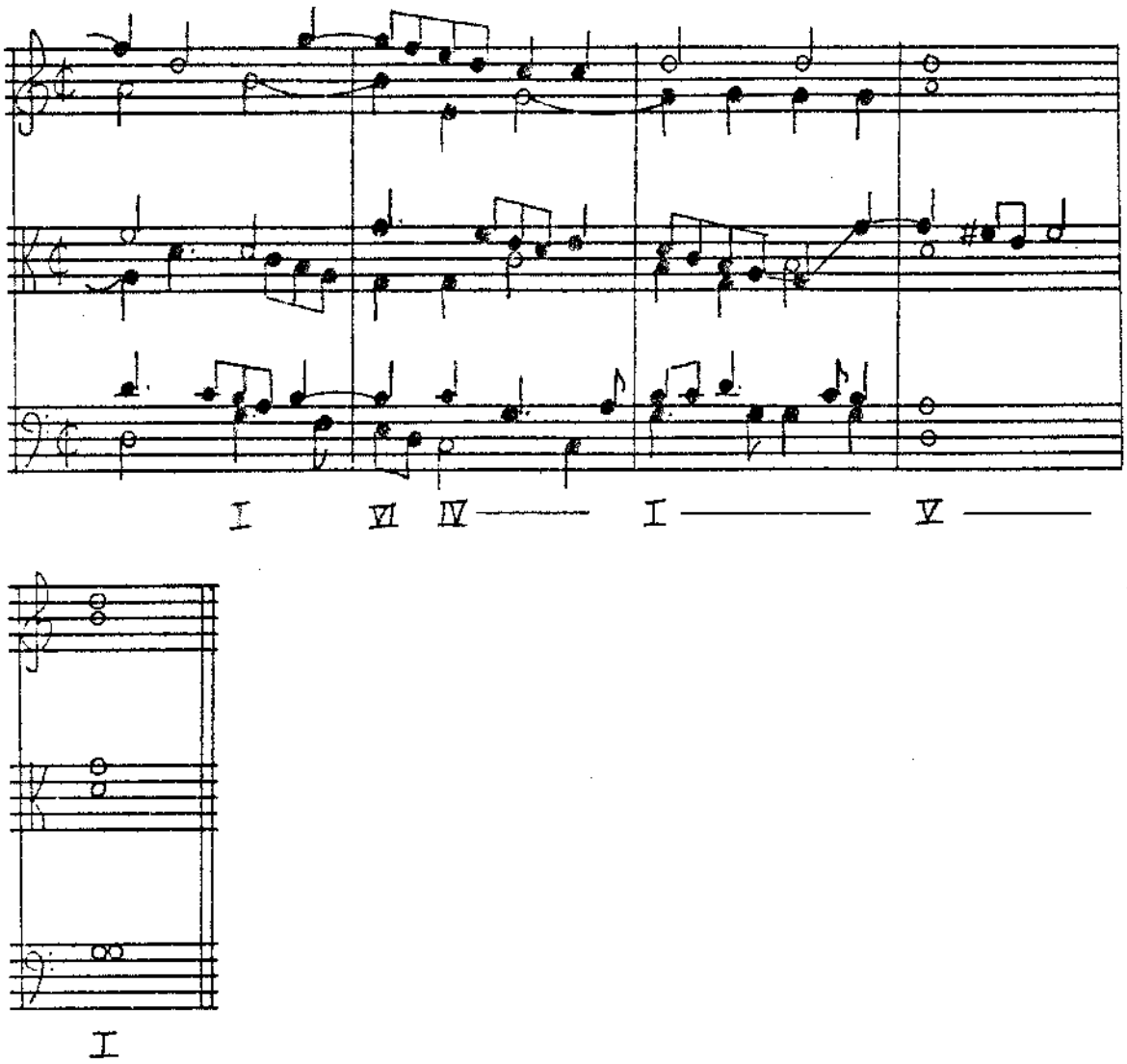


Ex. 71--Palestrina: Missa Ecce ego Joannes, Gloria and Credo.

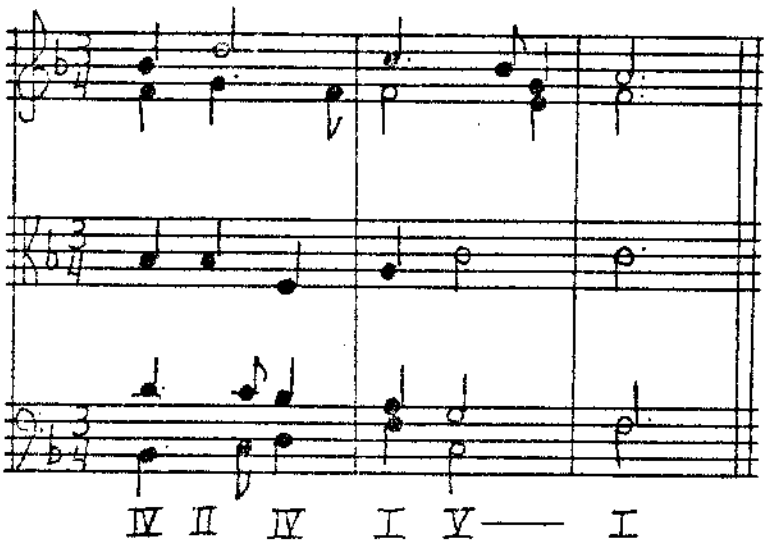




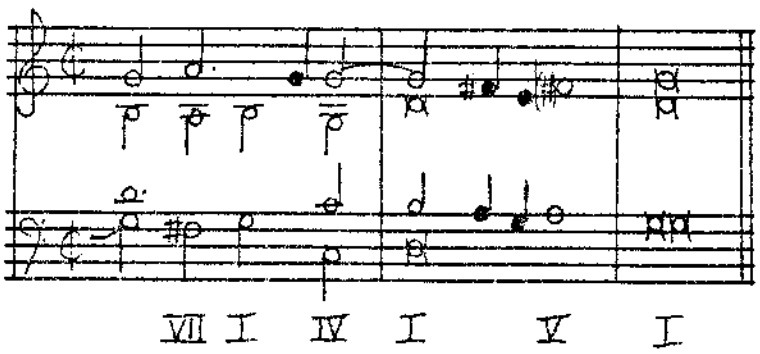
Ex. 72--Palestrina: Missa Ecce ego Joannes, Agnus Dei II.



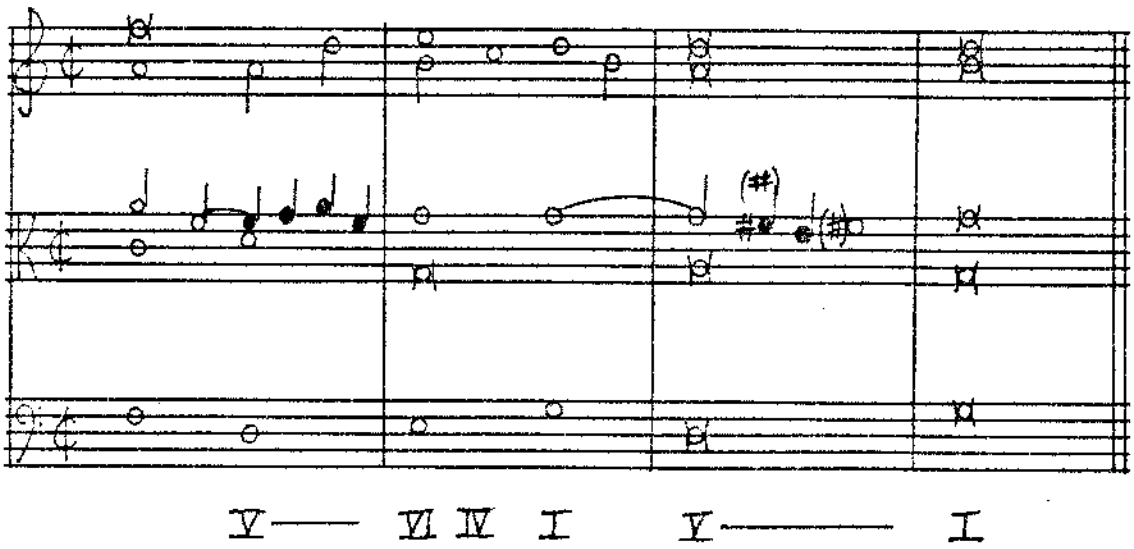
Ex. 73--Palestrina: Missa Regina coeli, Benedictus.



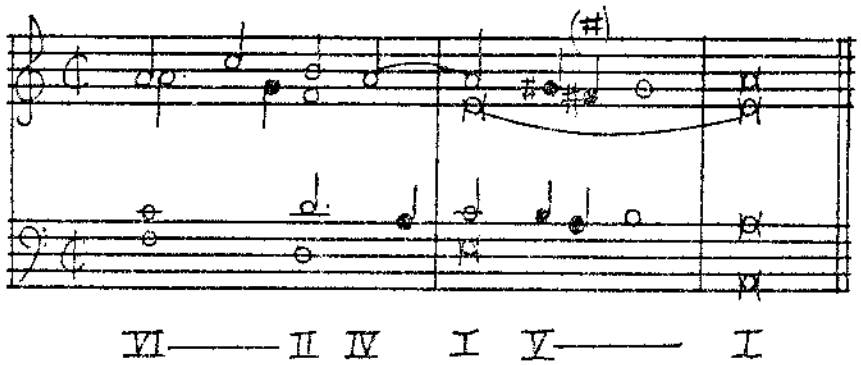
Ex. 74--Victoria: Missa Simile est regnum coelorum, Credo.



Ex. 75--Victoria: Missa pro Defunctis, Responsorium.



Ex. 76--Victoria: Missa pro Defunctis, Graduale.



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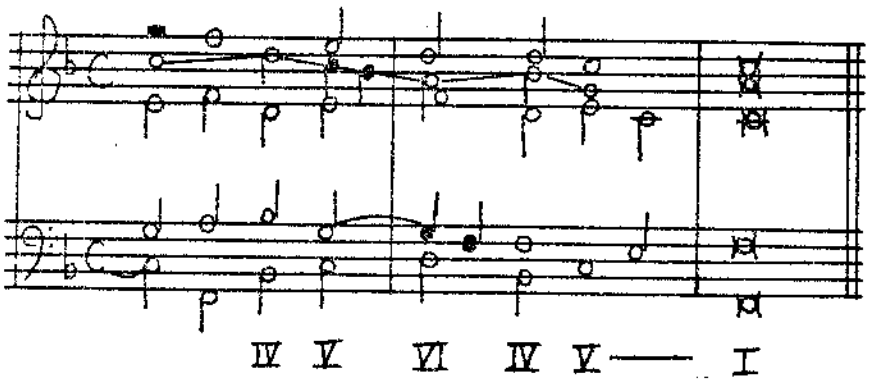
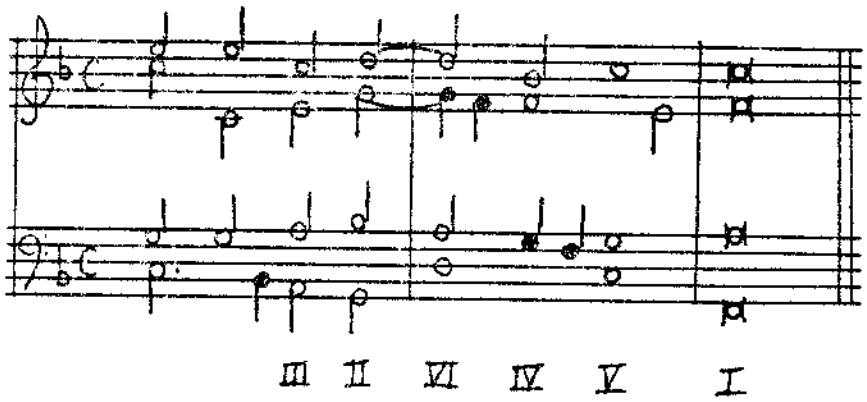
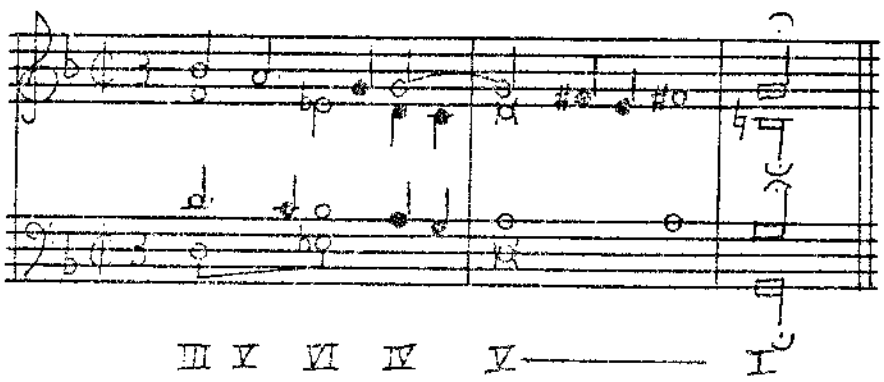
Ex. 77--Kerle: Missa Regina coeli, Agnus Dei.



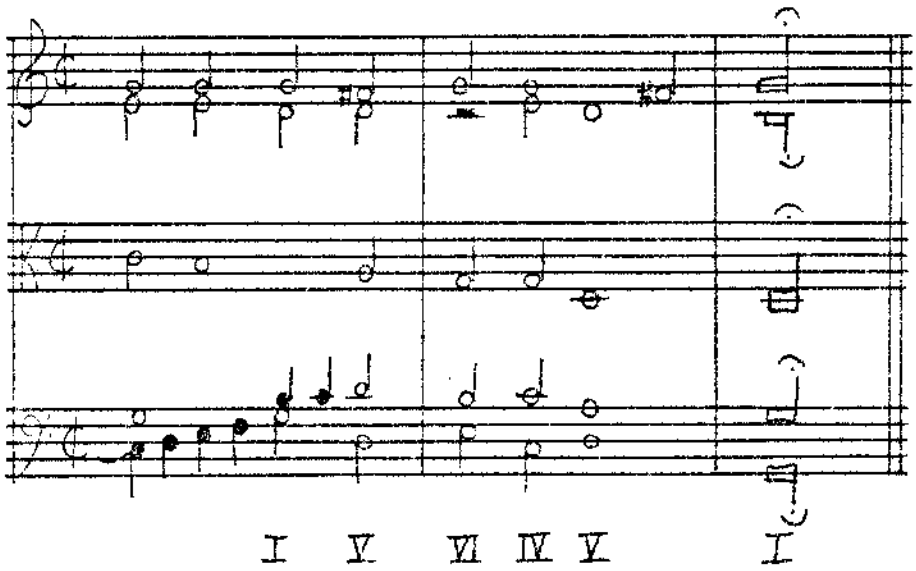
Ex. 78--Kerle: Missa Regina coeli, Gloria.



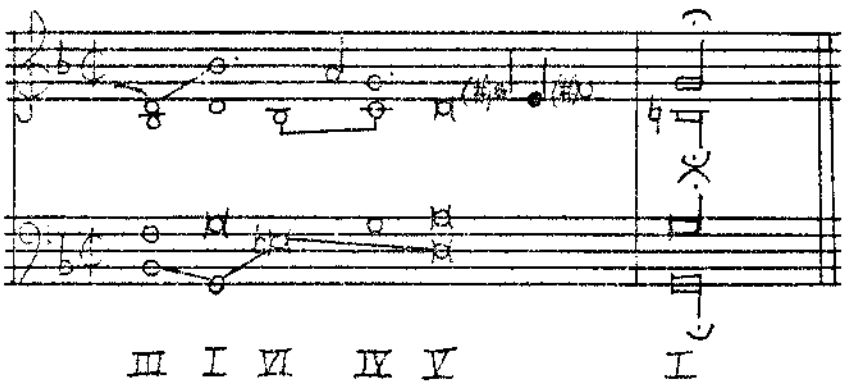
Ex. 79--Lassus: Missa super Frere Thibault, Credo.



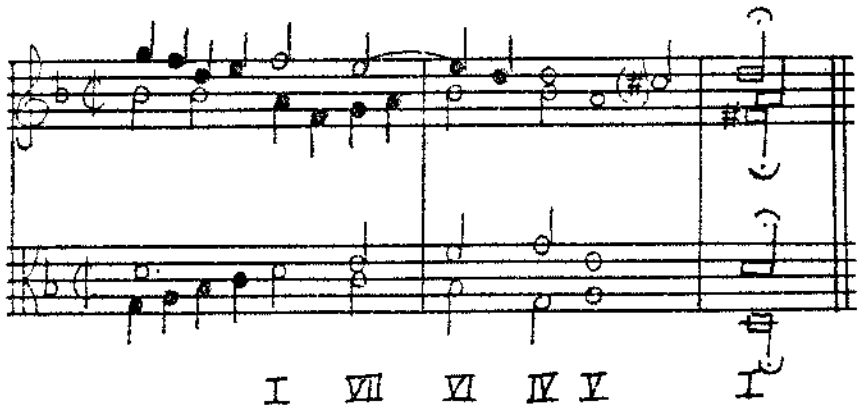
Ex. 80--Lassus: Missa super Ecce Maria, Kyrie.



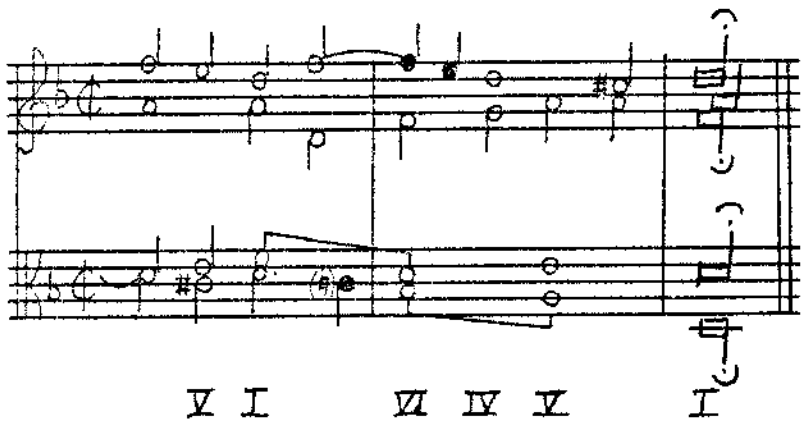
Ex. 81--Lassus: Missa Sesquialtera, Credo.



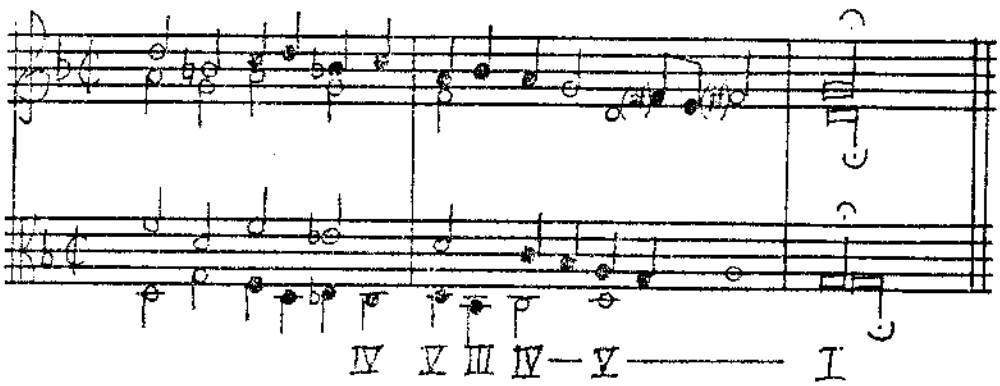
Ex. 82--Lassus: Missa super Je suis desheritee, Kyrie.



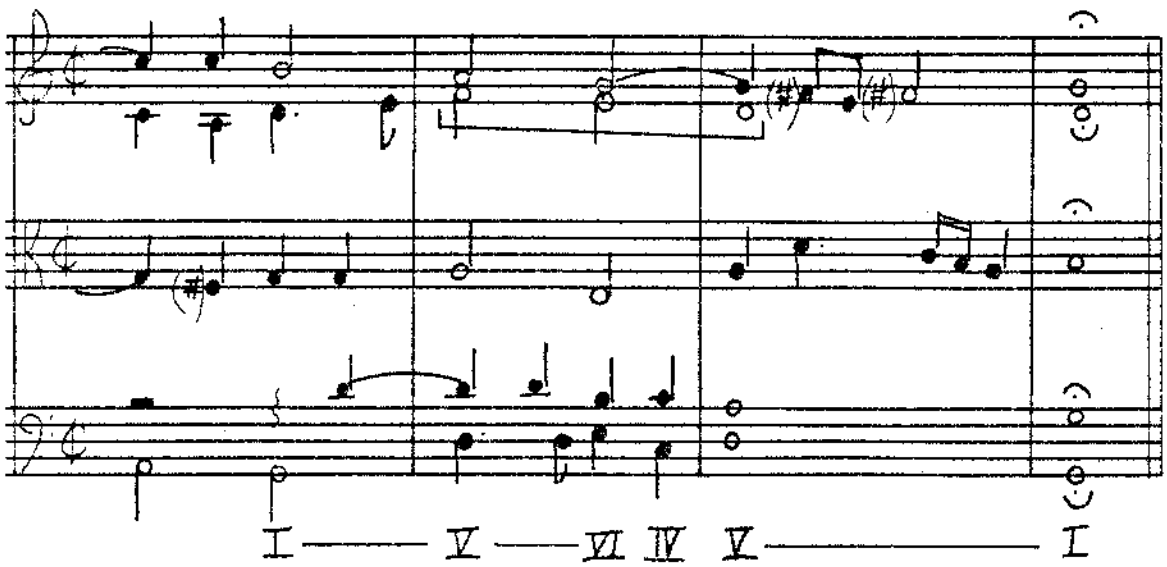
Ex. 83--Lassus: Missa super Je suis desheritee, Gloria.



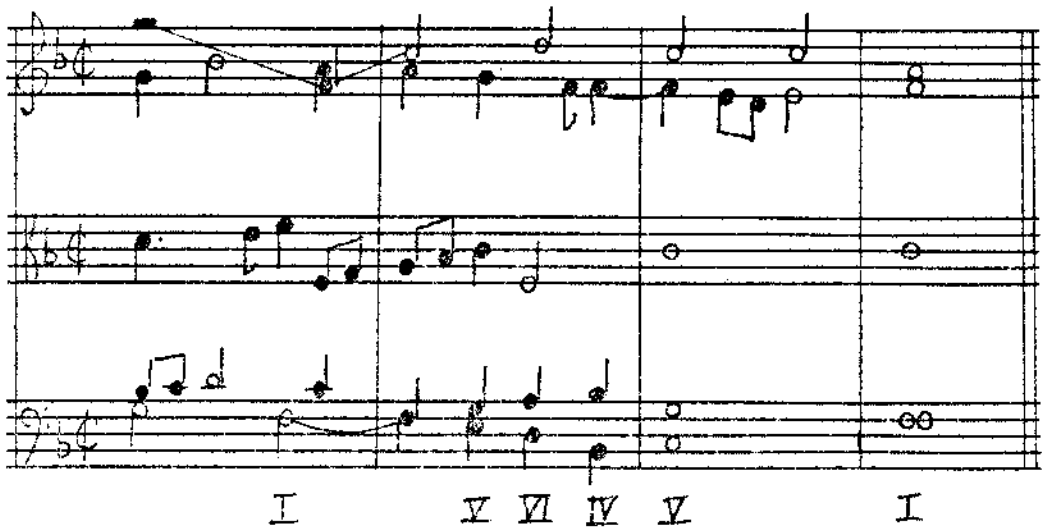
Ex. 84--Lassus: Missa super Frere Thibault, Kyrie.



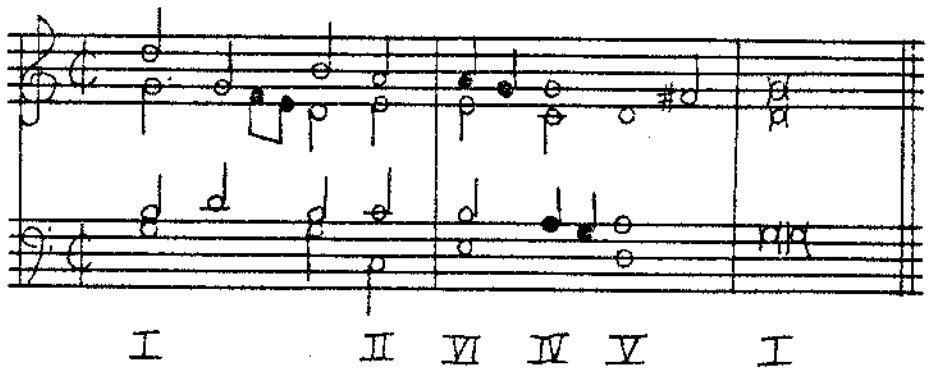
Ex. 85--Merulo: Missa Benedicta es coelorum Regina, Agnus Dei.



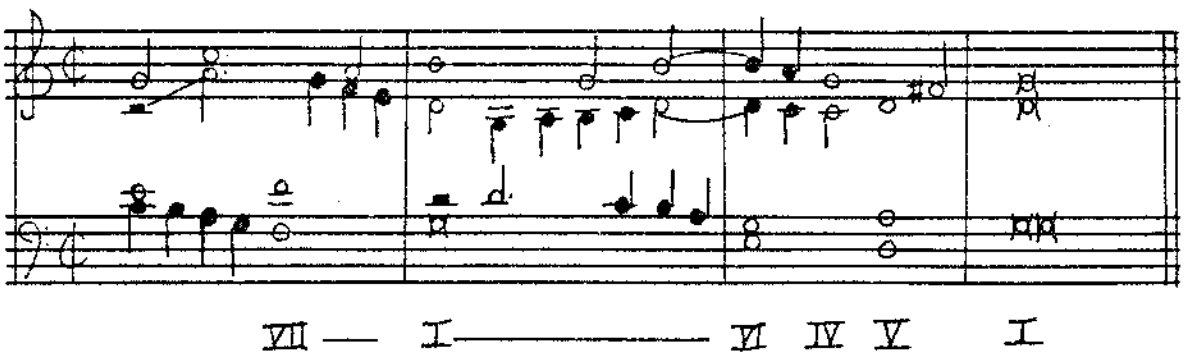
Ex. 86--Palestrina: Missa Regina coeli, Agnus Dei I.



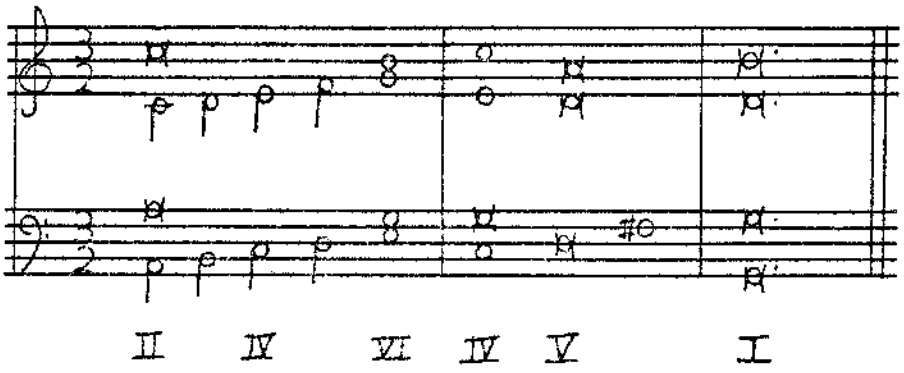
Ex. 87--Victoria: Missa Simile est regnum coelorum, Kyrie.



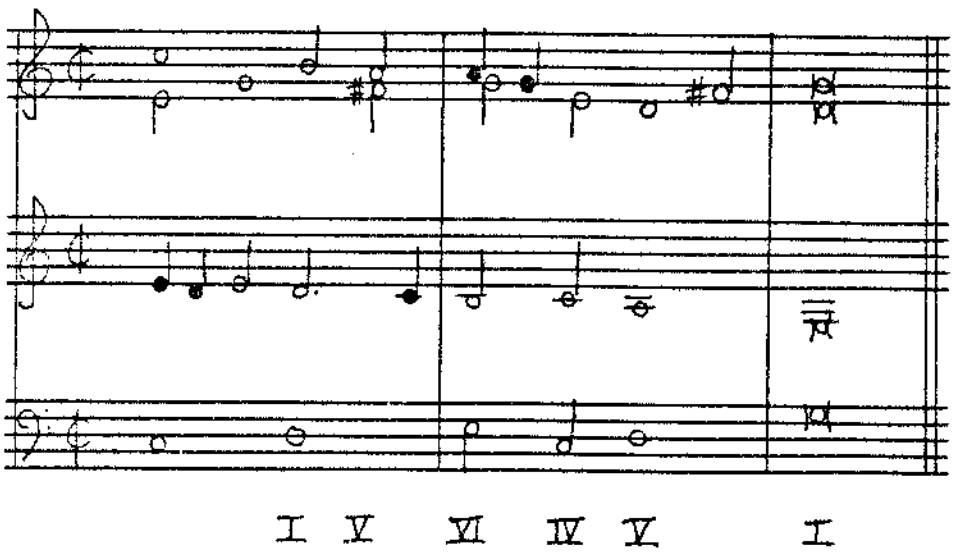
Ex. 88--Victoria: Missa Simile est regnum coelorum, Gloria.



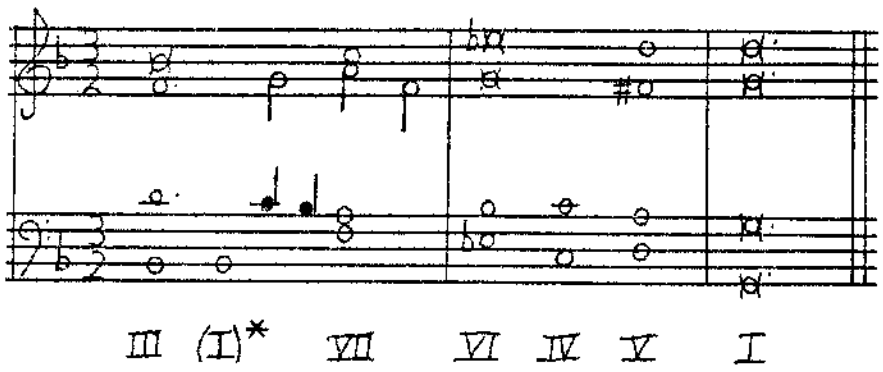
Ex. 89--Victoria: Missa O quam gloriosum, Sanctus.



Ex. 90--Victoria: Missa Simile est regnum coelorum, Agnus Dei I et II.

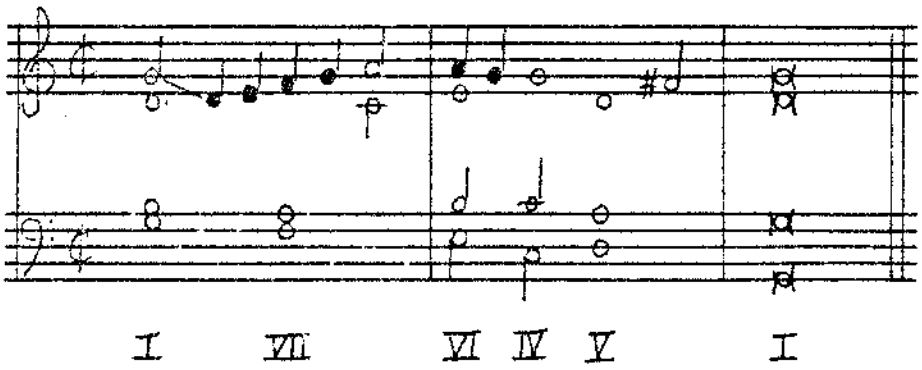


Ex. 91--Victoria: Missa O magnum mysterium, Sanctus.



*"G" in alto is interpreted as a passing tone.

Ex. 92--Victoria: Missa pro Defunctis, Agnus Dei.



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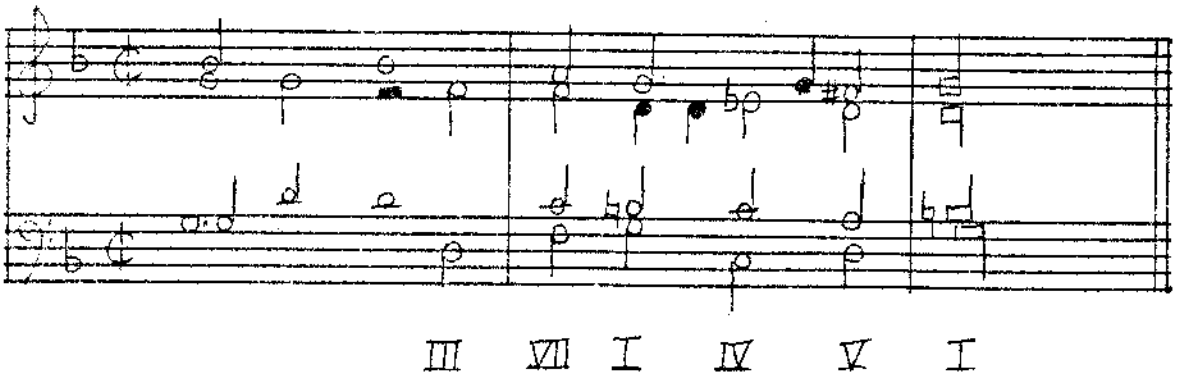
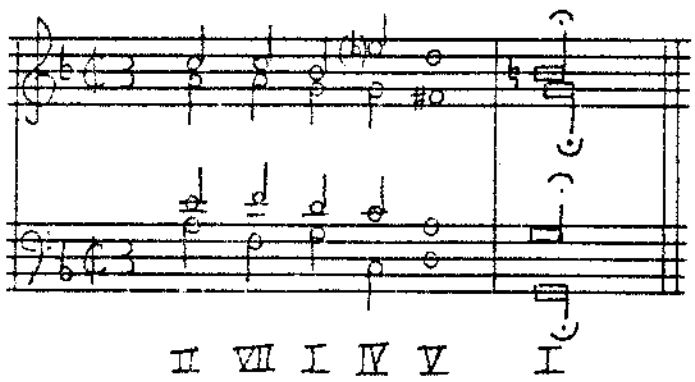
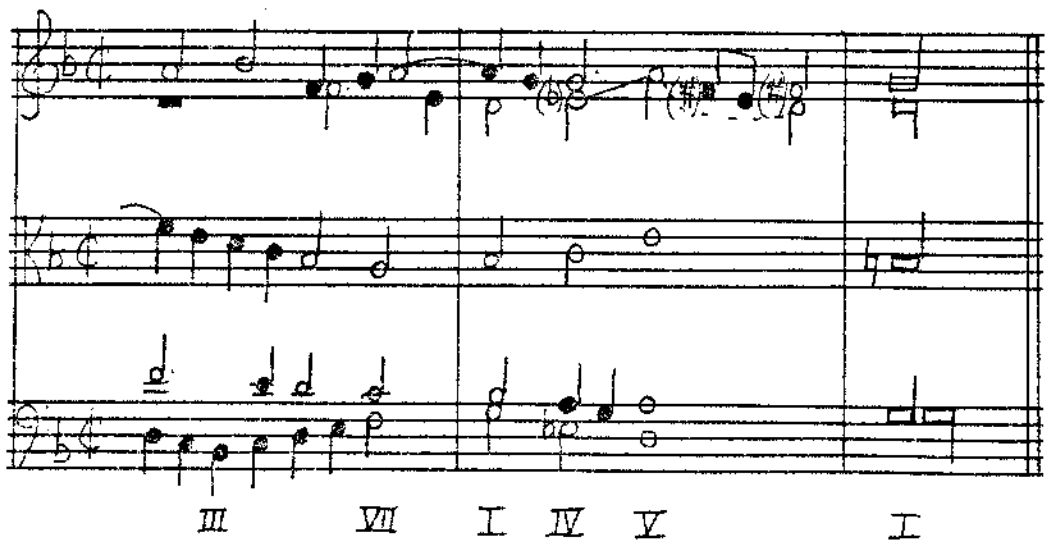
Ex. 93--Handl: Missa super Adesto dolori meo, Benedictus.



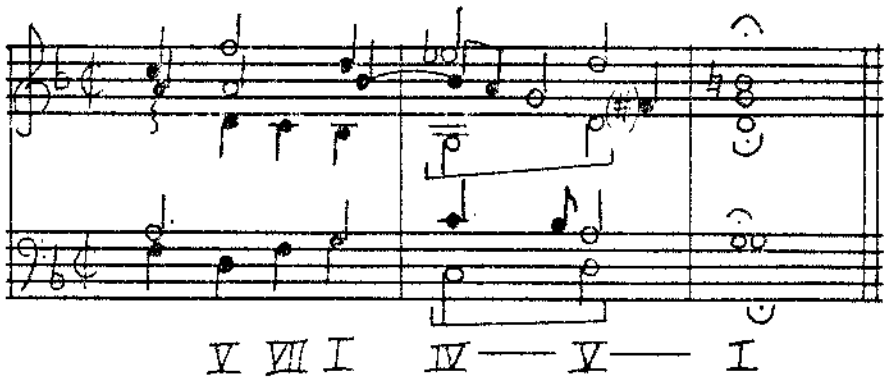
Ex. 94--Lassus: Missa super Frere Thibault, Sanctus.



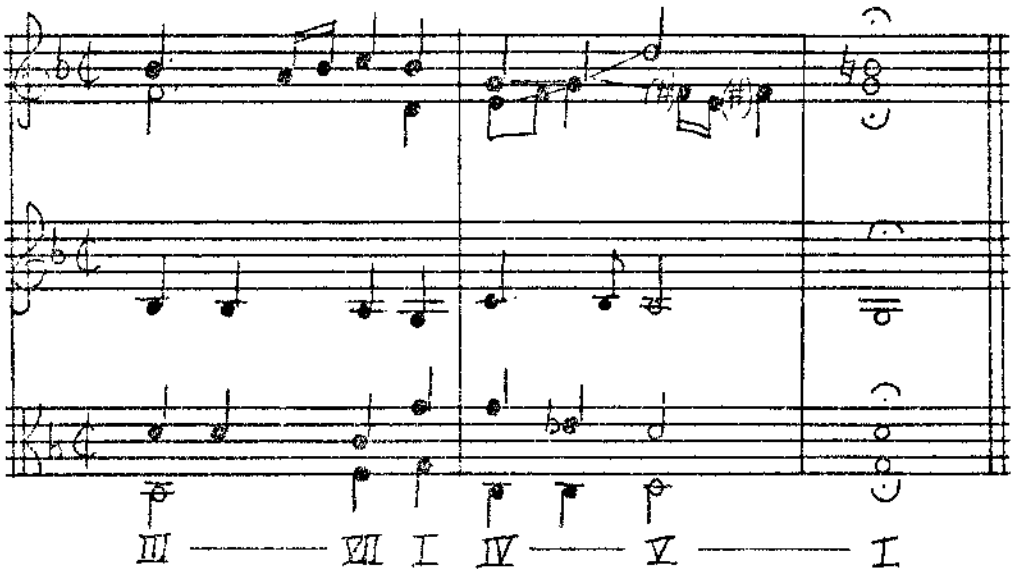
Ex. 95--Lassus: Missa super Le Berger et la Bergere, Kyrie.



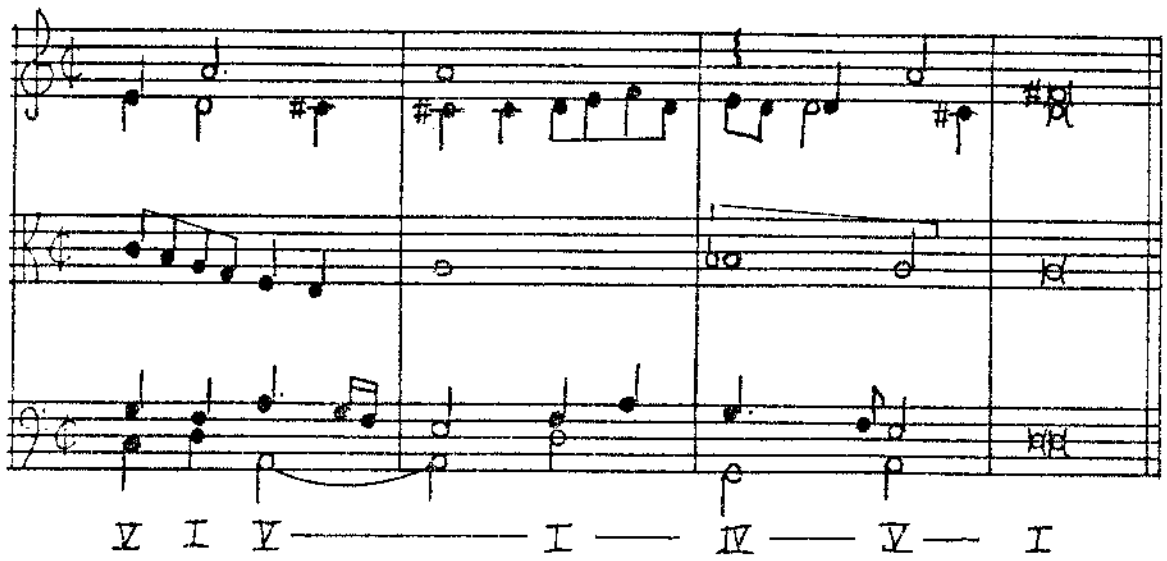
Ex. 96--Merulo: Missa Susanne un giour, Kyrie.



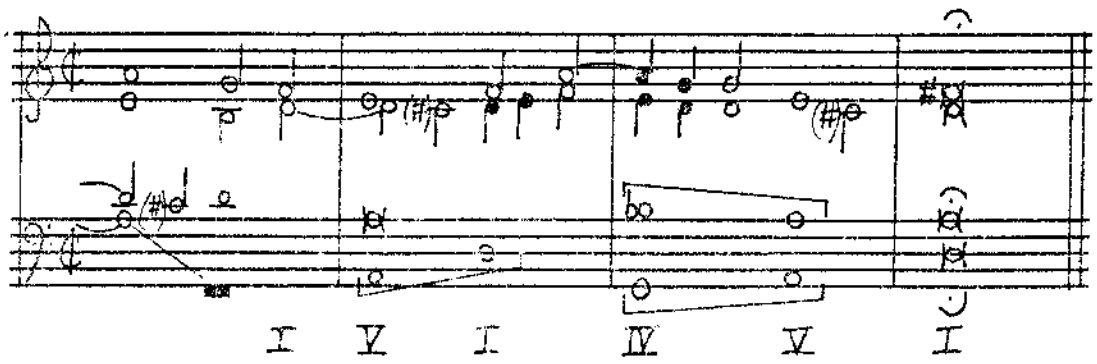
Ex. 97--Merulo: Missa Susanne un giour, Gloria.



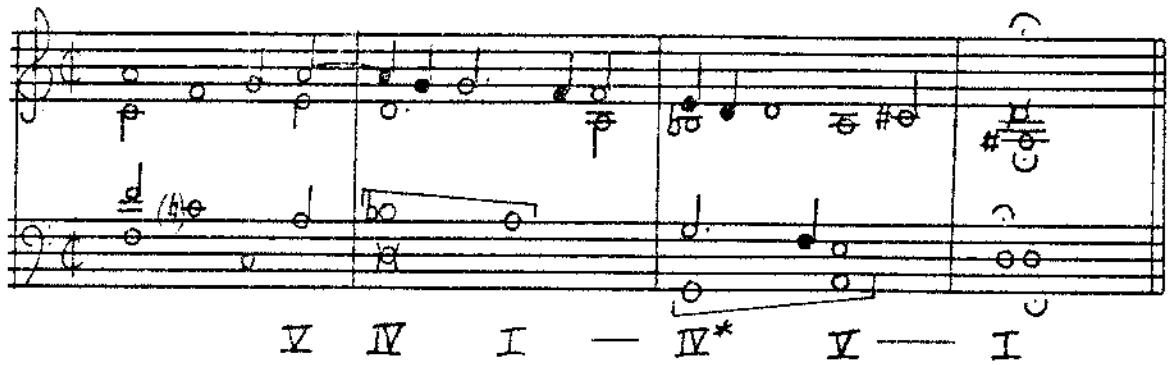
Ex. 98--Monte: Missa Ad te levavi oculos meos, Kyrie.



Ex. 99--Monte: Missa super Reviens vers moy, Credo.

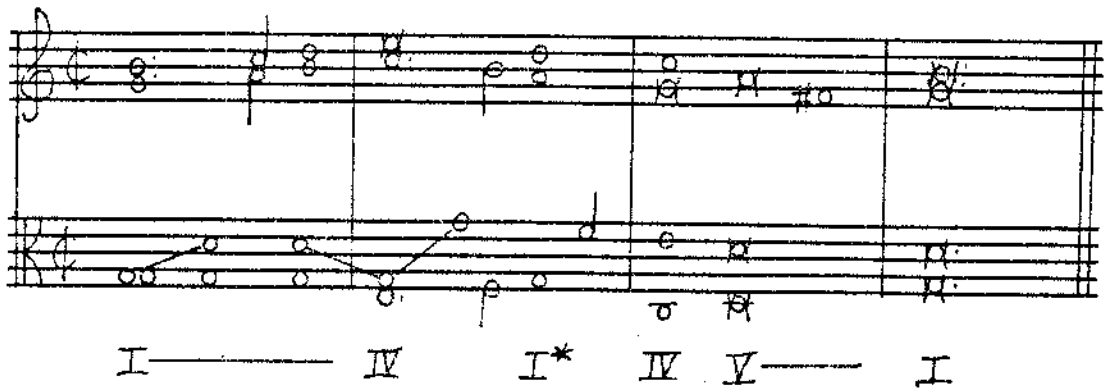


Ex. 100--Monte: Missa super Reviens vers moy, Benedictus.



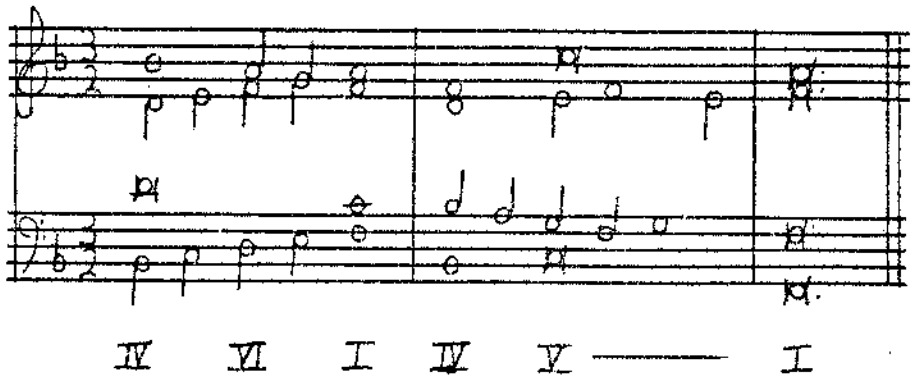
*"E" in soprano is interpreted as a passing tone.

Ex. 101--Victoria: Missa Simile est regnum coelorum, Sanctus.

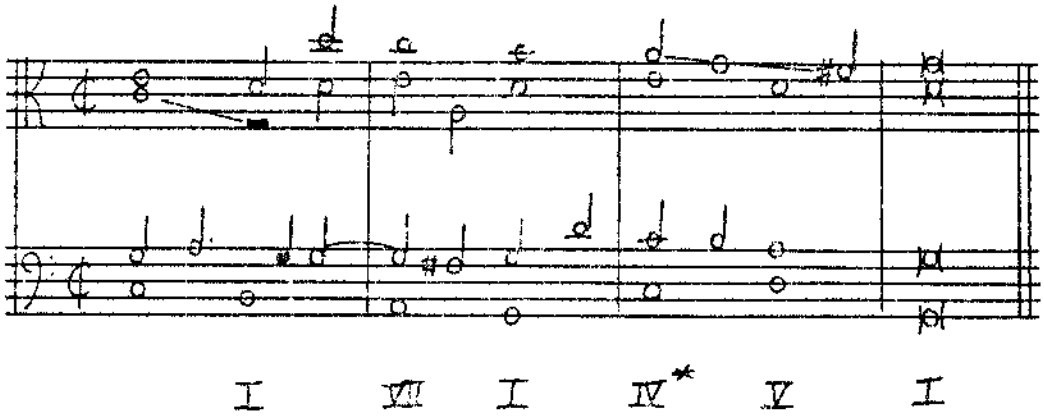


*The whole-note dissonance, "A" (alto) against "G" (bass), is considered irregular in this style.

Ex. 102--Victoria: Missa Quam pulchri sunt, Sanctus.

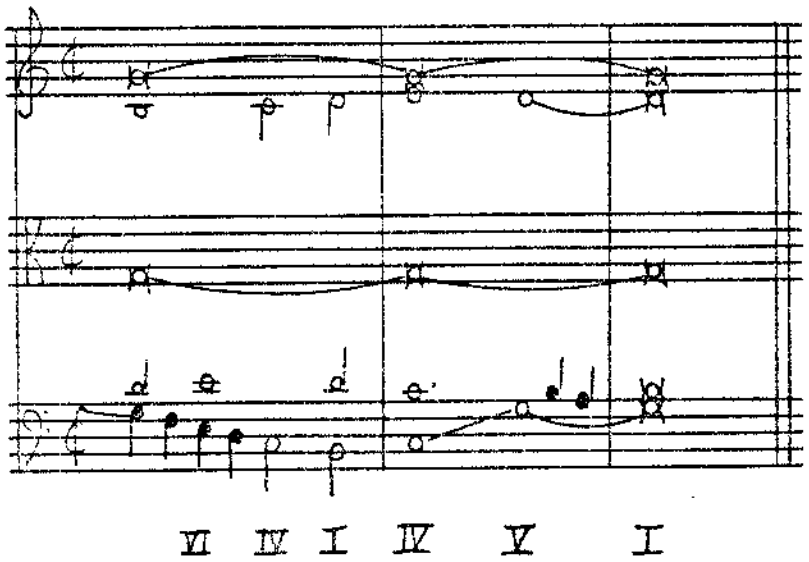


Ex. 103--Victoria: Missa O quam gloriosum, Kyrie.

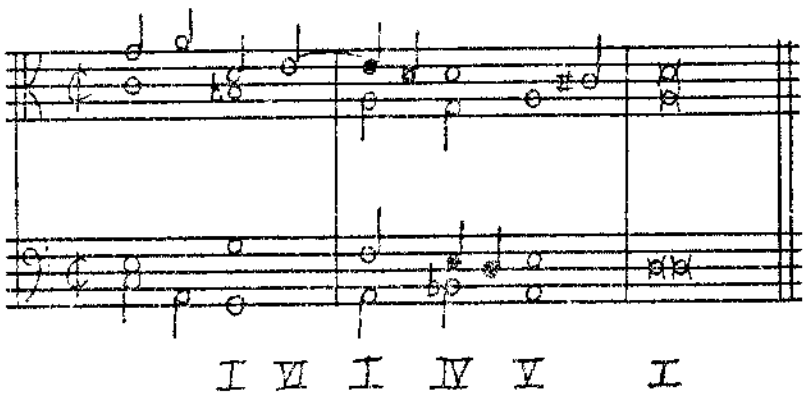


*The progression could read: II-IV-V-I. However, the harmonic rhythm of the example supports the analysis whereby "G" (soprano) and "B" (tenor) become accented and unaccented passing tones respectively.

Ex. 104--Victoria: Missa de Beata Maria, Gloria.

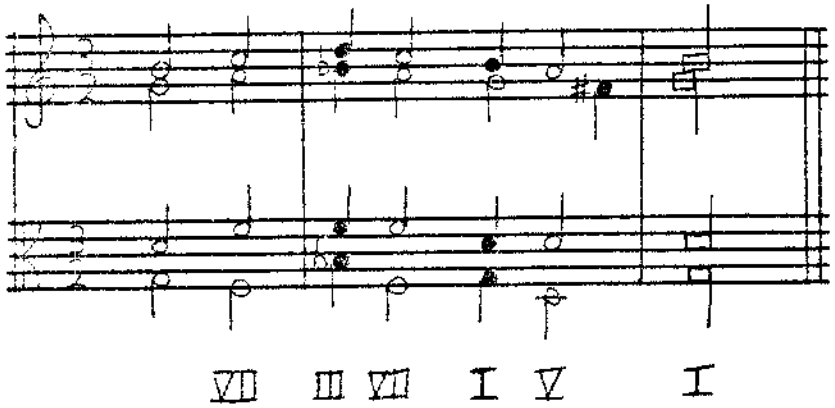


Ex. 105--Victoria: Missa pro Defunctis, Offertorium.

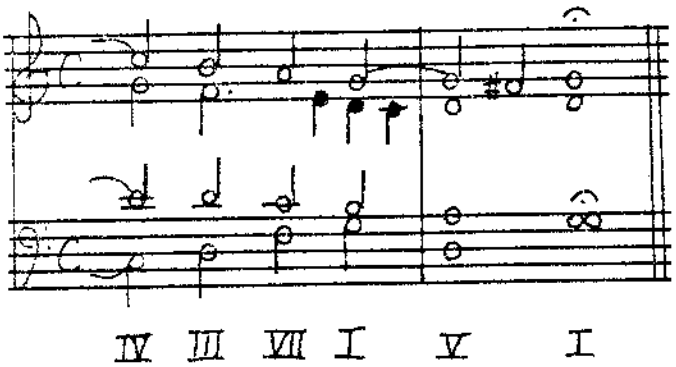


VII - I - V - I

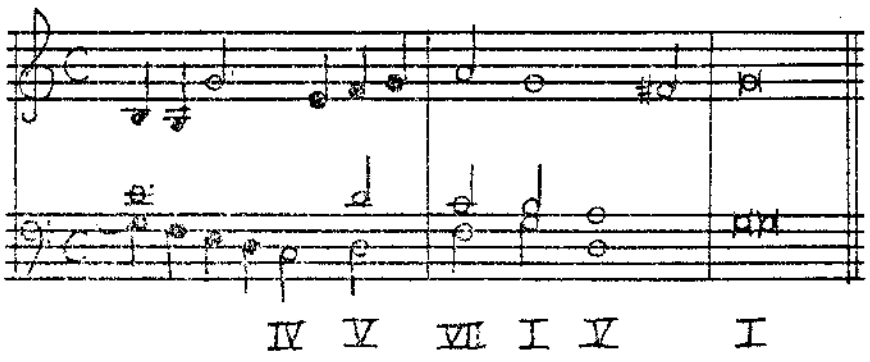
Ex. 106--Handl: Missa super Apri la fenestra, Benedictus.



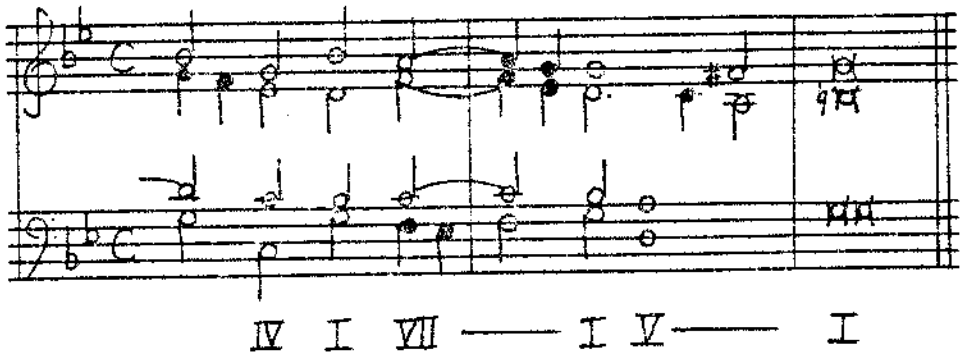
Ex. 107--Kerle: Missa Ut re mi fa sol la, Credo.



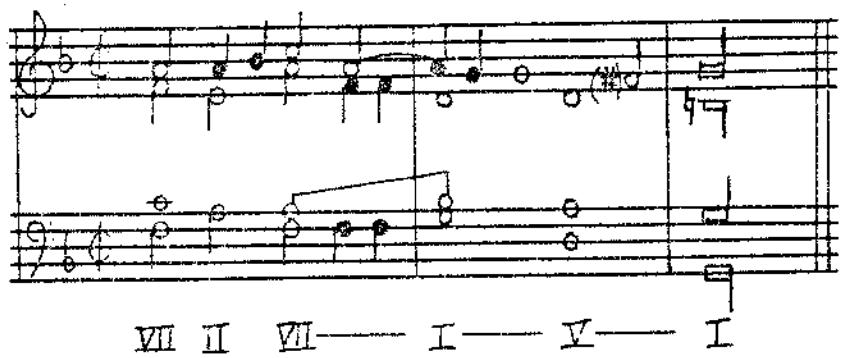
Ex. 108--Kerle: Missa Ut re mi fa sol la, Sanctus.



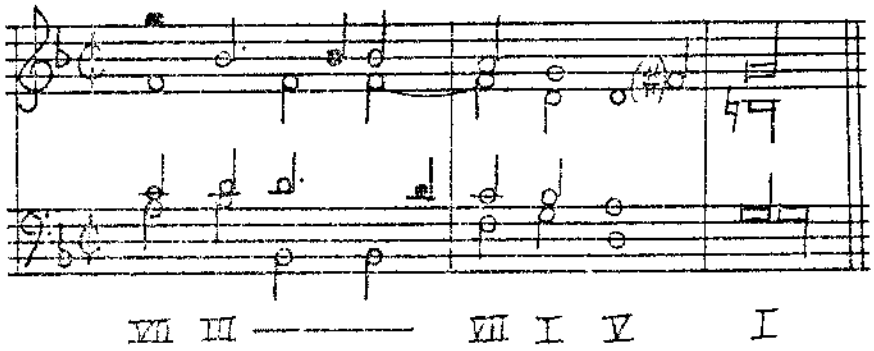
Ex. 109--Kerle: Missa De beata virgine, Kyrie.



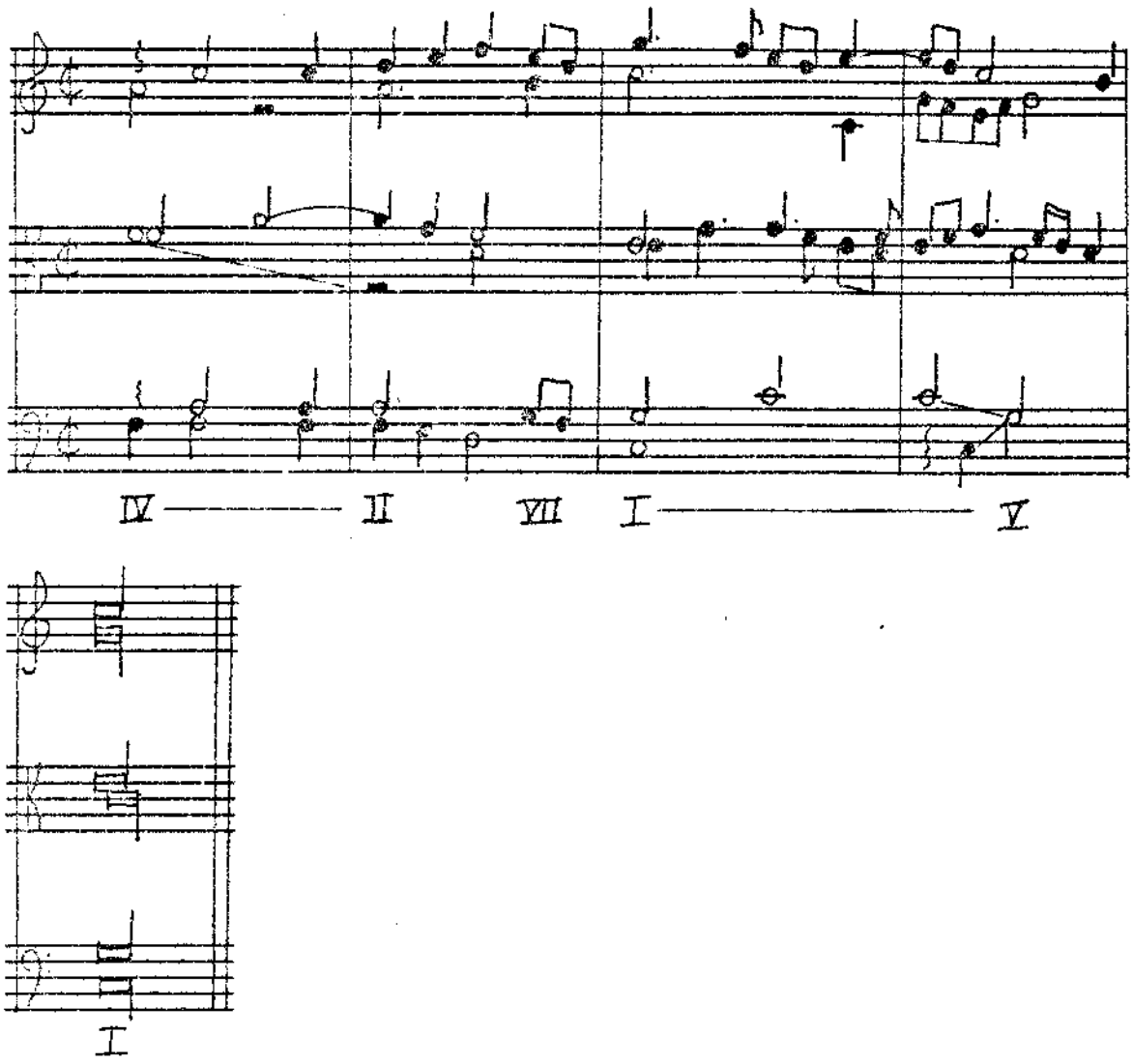
Ex. 110--Lassus: Missa super Ie ne menge poinct de porcq, Credo.



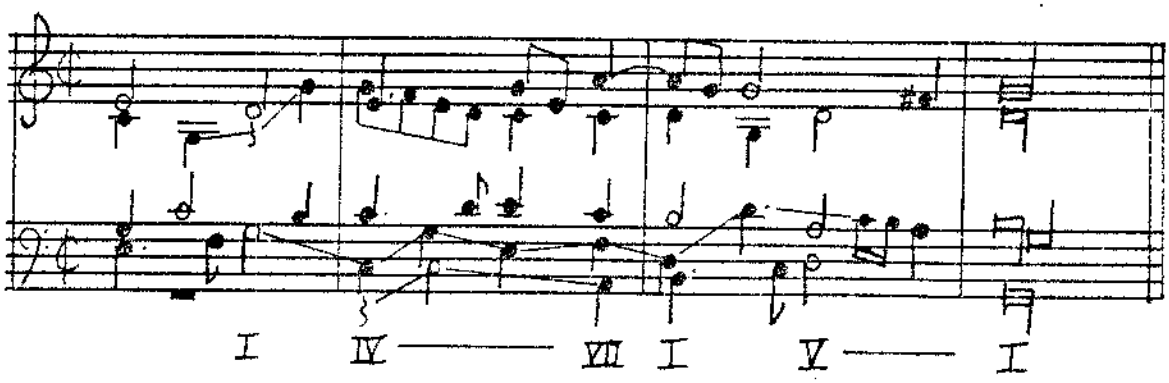
Ex. 111--Lassus: Missa super La la maistre Pierre, Kyrie.



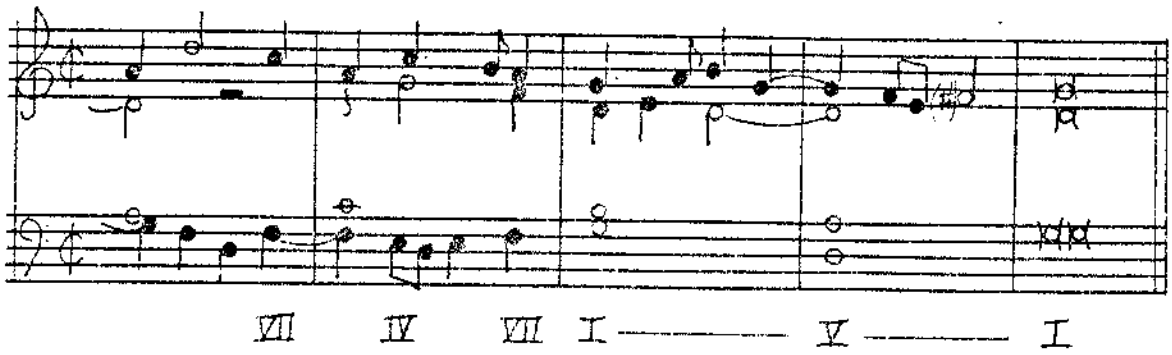
Ex. 112--Monte: Missa Deus Deus meus, Kyrie.



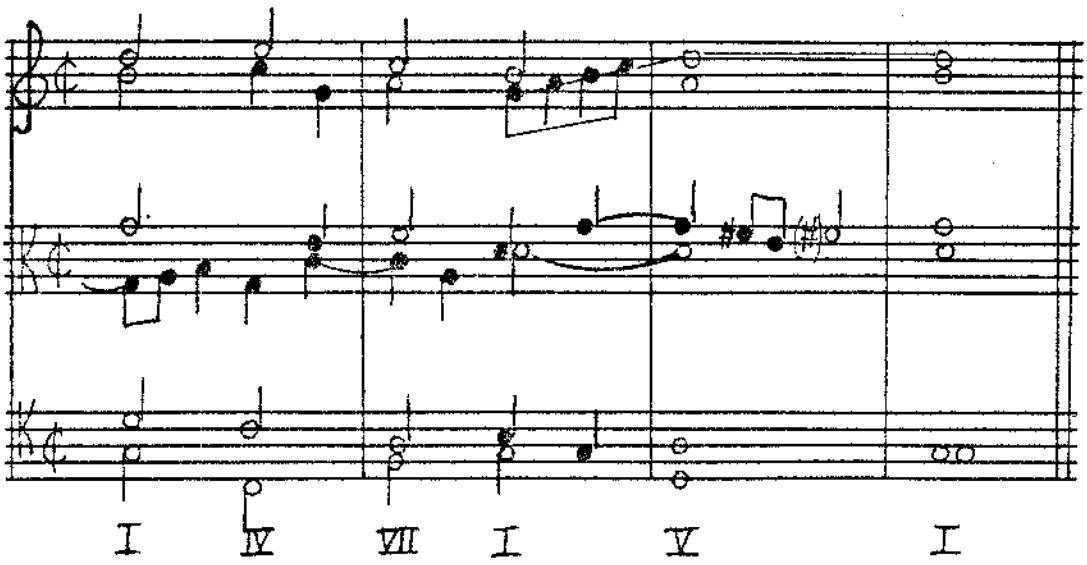
Ex. 113--Monte: Missa Emitte Domine, Agnus Dei.



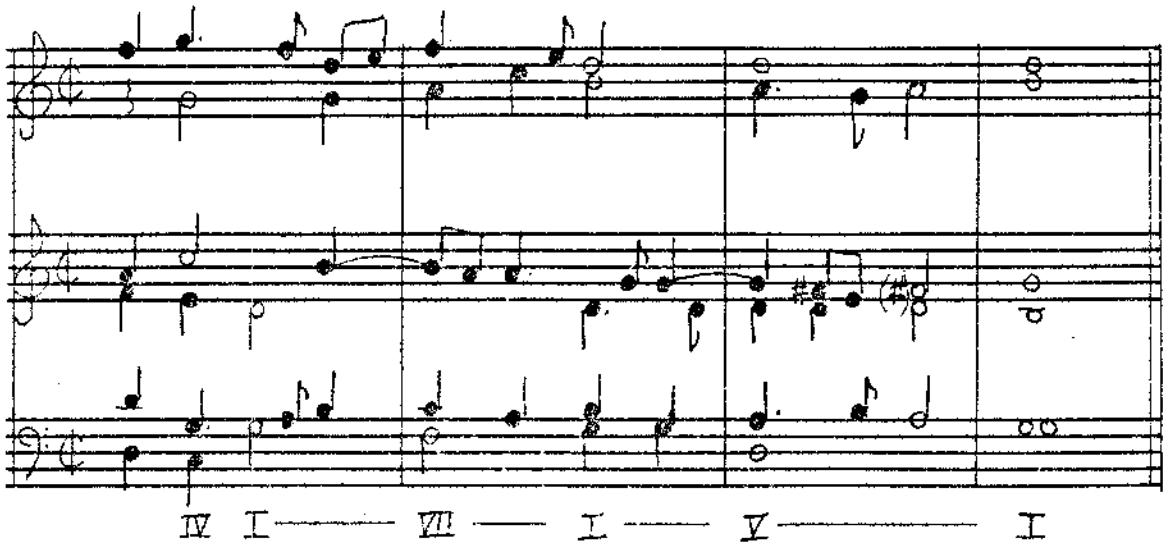
Ex. 114--Palestrina: Missa Ecce sacerdos magnus, Kyrie.



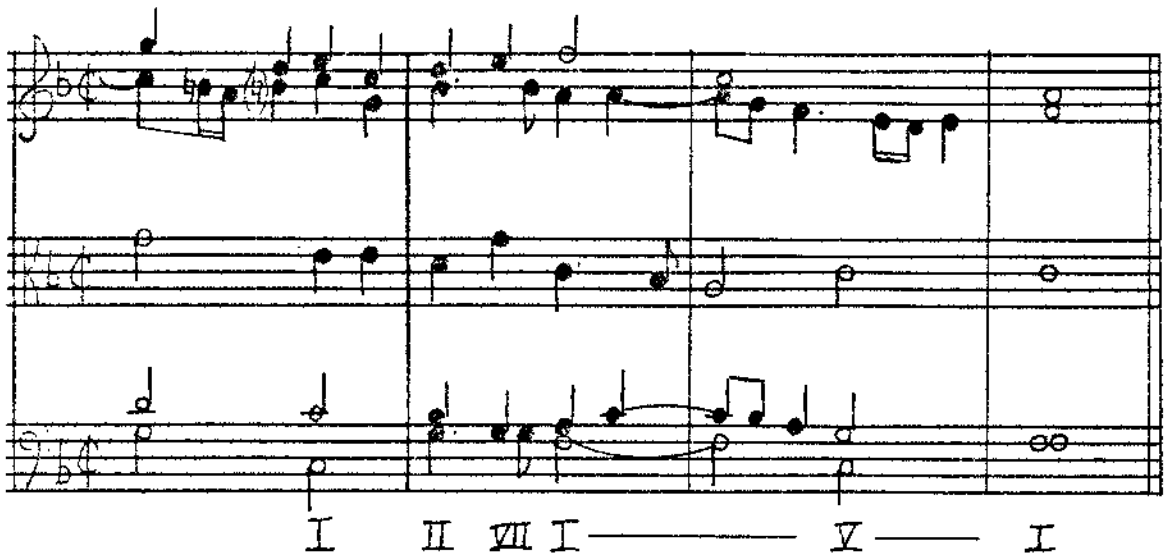
Ex. 115--Palestrina: Missa Assumpta est Maria, Sanctus.



Ex. 116--Palestrina: Missa Assumpta est Maria, Agnus Dei II.



Ex. 117--Palestrina: Missa Regina coeli, Credo.



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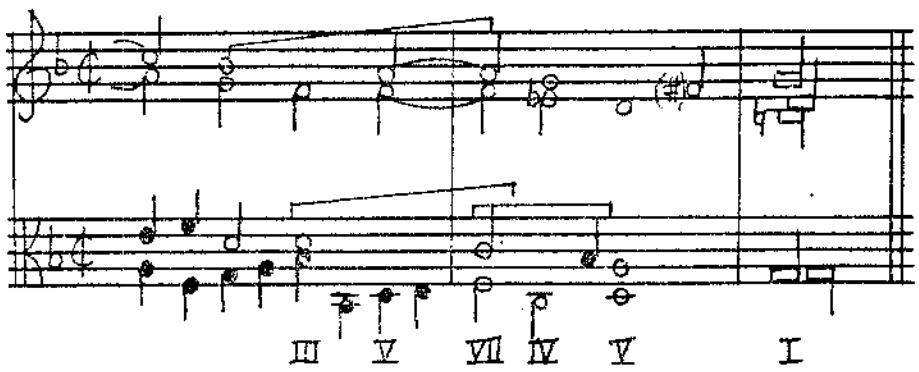
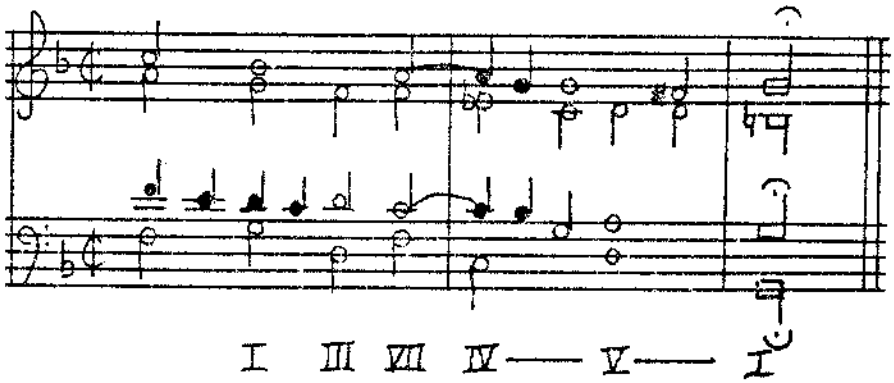
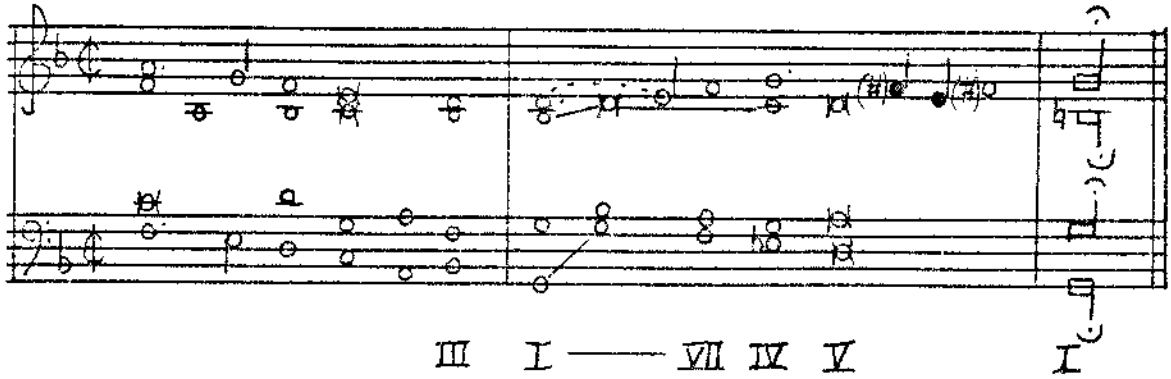
Ex. 118--Lassus: Missa super La la maistre Pierre, Sanctus.



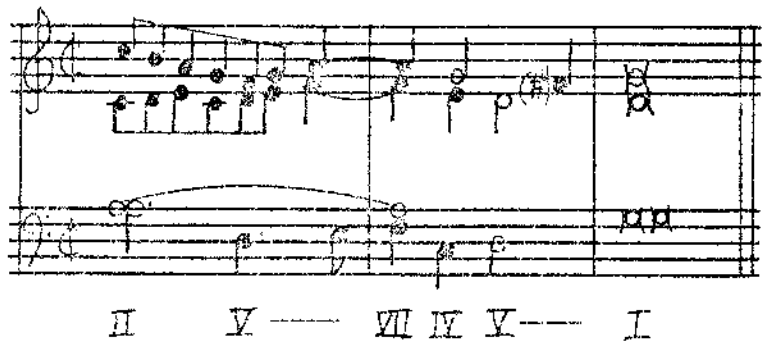
Ex. 119--Lassus: Missa super Frere Thibault, Agnus Dei.



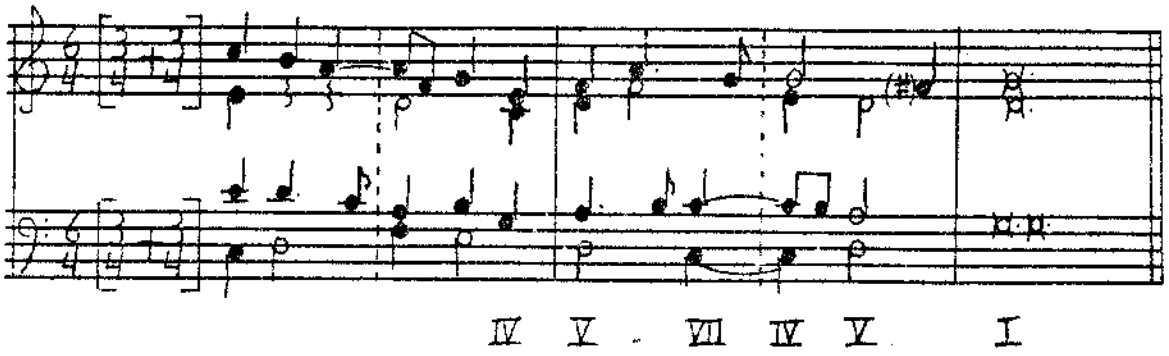
Ex. 120--Lassus: Missa Sesquialtera, Agnus Dei.



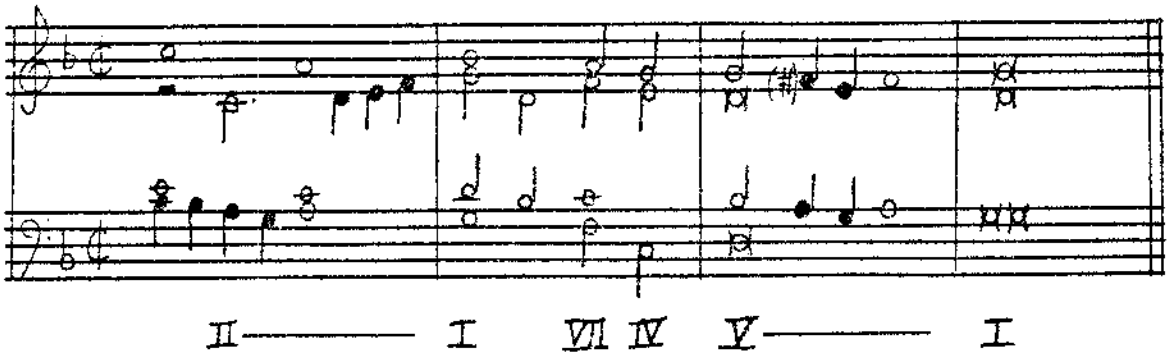
Ex. 121--Palestrina: Missa Ecce sacerdos magnus, Credo.



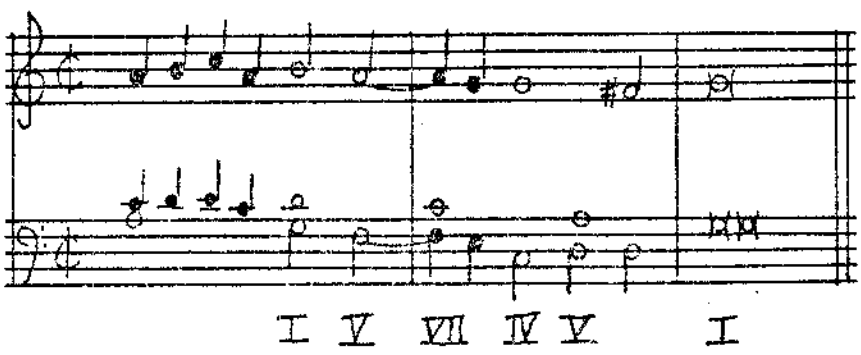
Ex. 122--Palestrina: Missa Ecce sacerdos magnus, Benedictus.



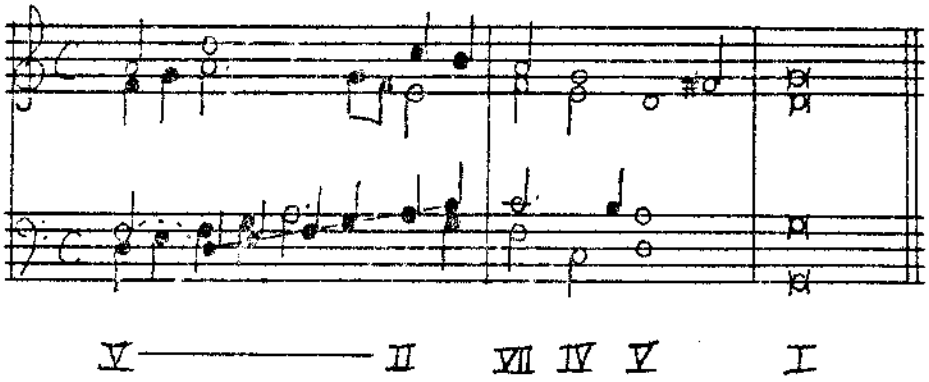
Ex. 123--Victoria: Missa Ave, maris stella . . ., Credo.



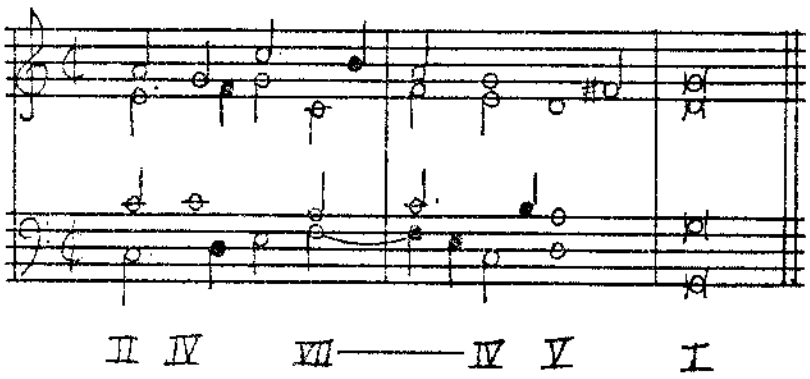
Ex. 124--Victoria: Missa Simile est regnum coelorum, Benedictus.



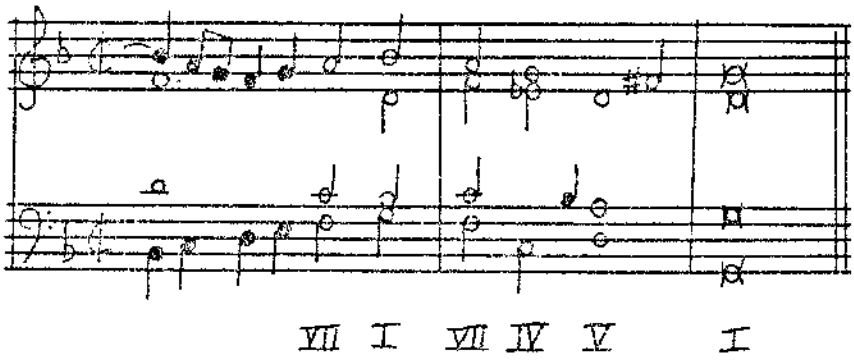
Ex. 125--Victoria: Missa O quam gloriosum, Credo.



Ex. 126--Victoria: Missa O quam gloriosum, Agnus Dei.

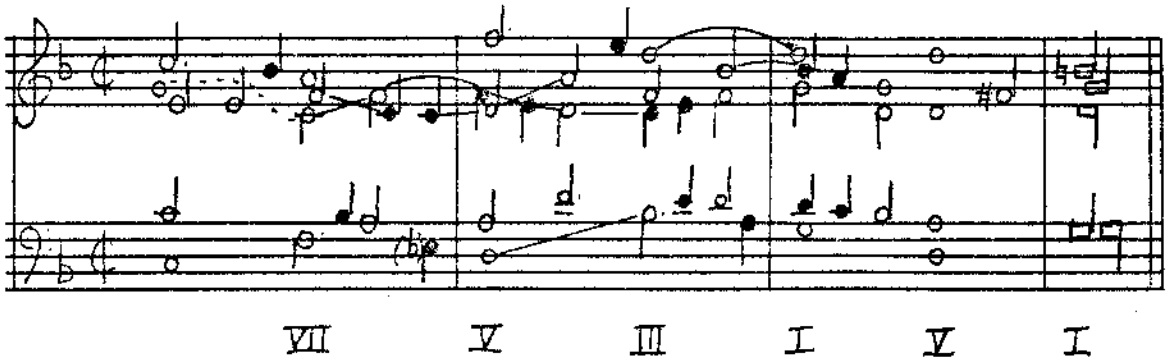


Ex. 127--Victoria: Missa O magnum mysterium, Gloria.

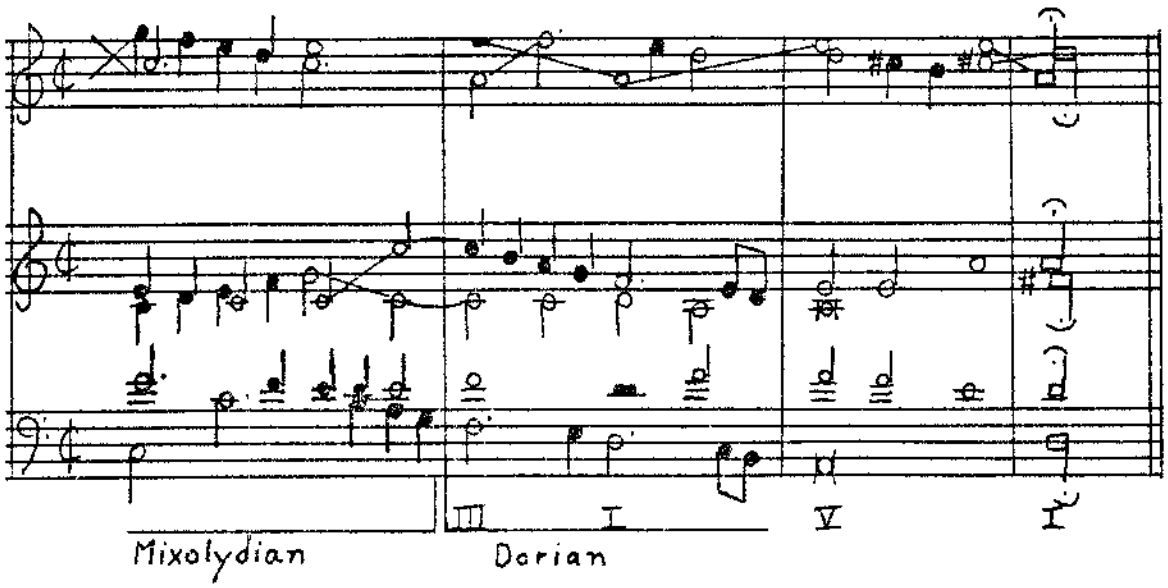


III - I - V - I

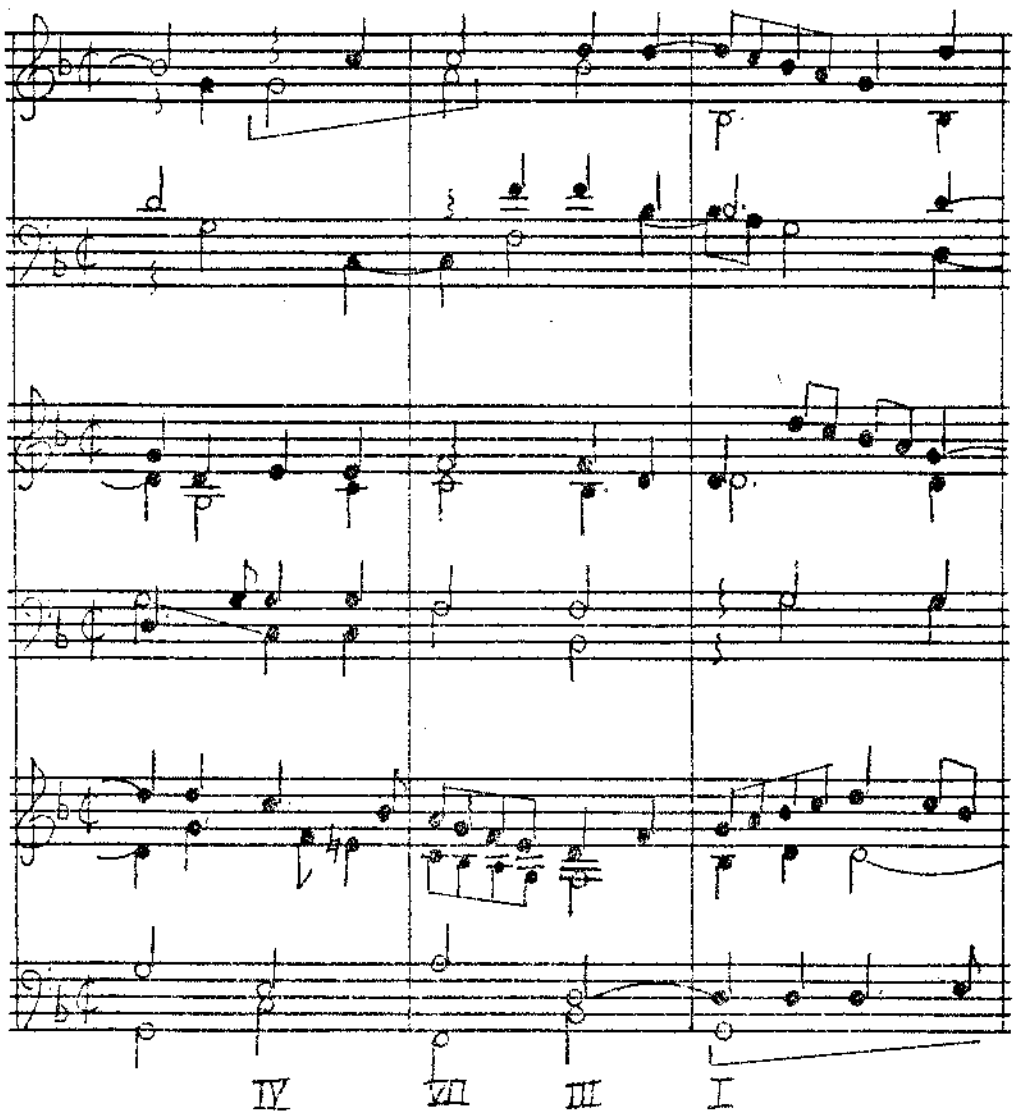
Ex. 128--Lassus: Missa super Le Berger et la Bergere, Credo.



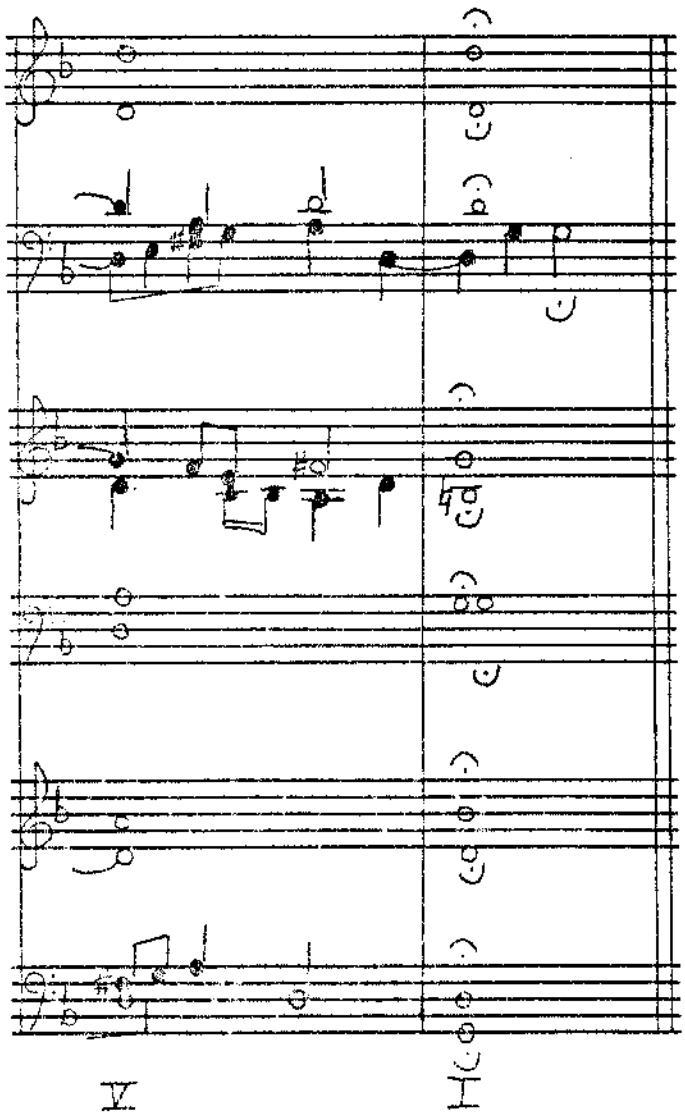
Ex. 129--Lassus: Missa Ad imitationem moduli Surge propera, Gloria.



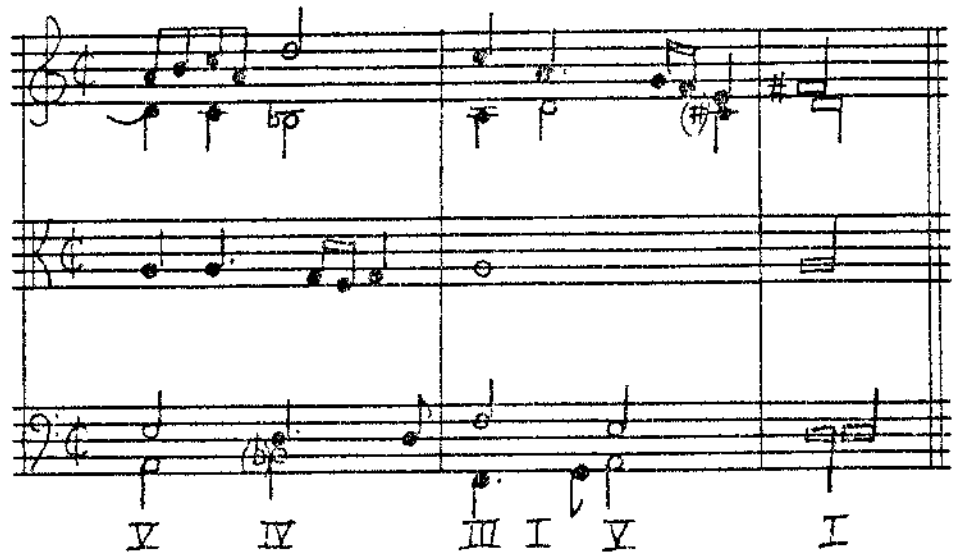
Ex. 130--Merulo: Missa Benedicam Dominum, Sanctus.



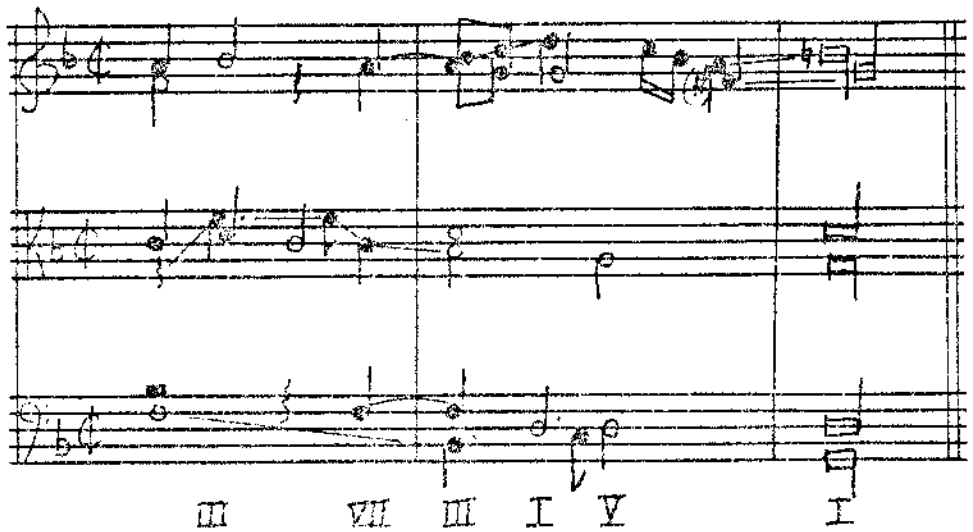
Ex. 130--Continued



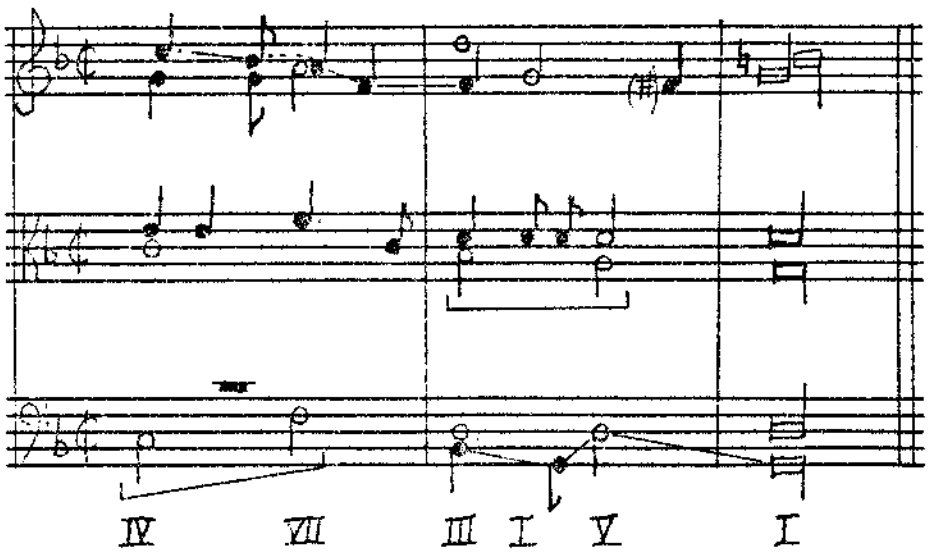
Ex. 131--Monte: Missa Ad te levavi oculos meos, Credo.



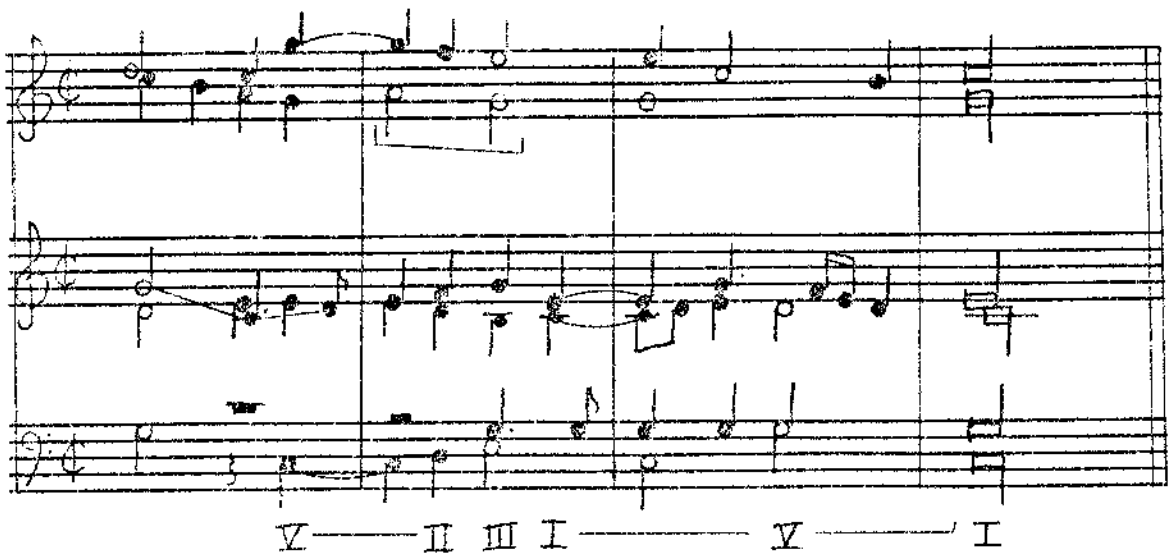
Ex. 132--Monte: Missa Si ambulavero, Kyrie.



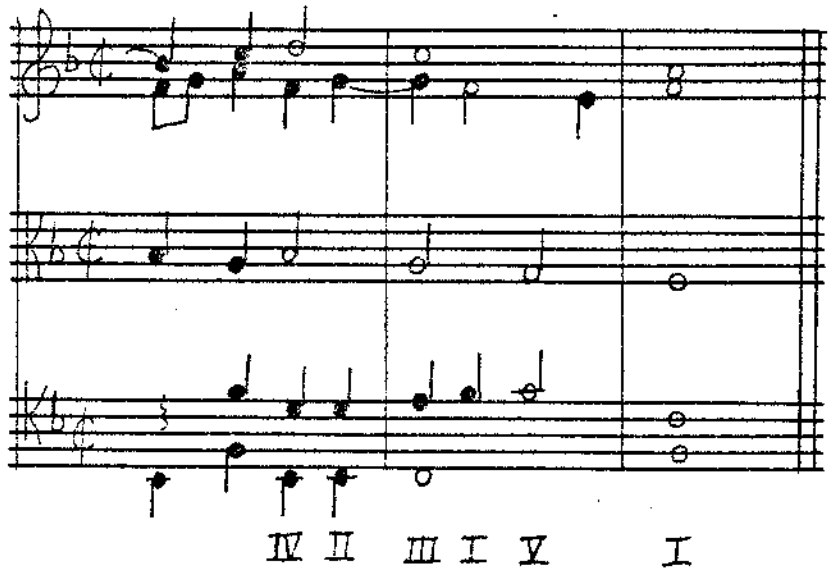
Ex. 133--Monte: Missa Si ambulavero, Credo.



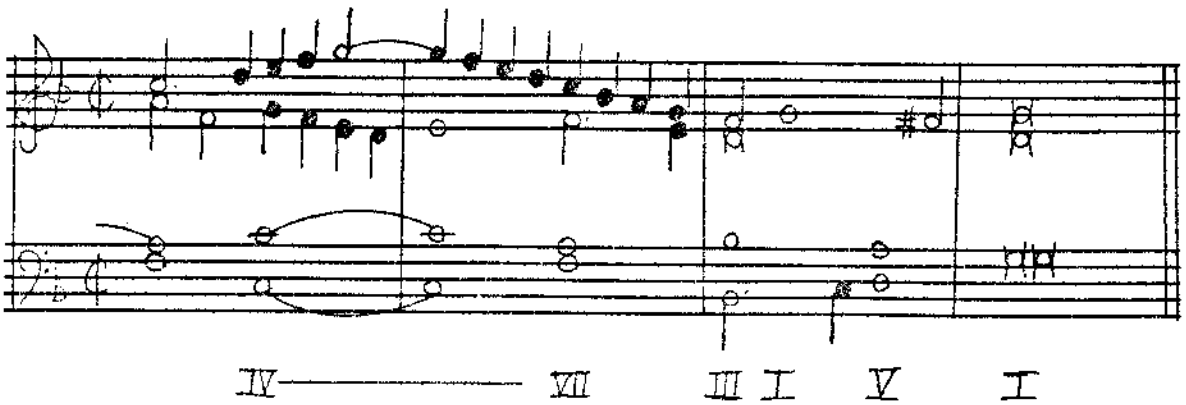
Ex. 134--Monte: Missa Deus Deus meus, Agnus Dei.



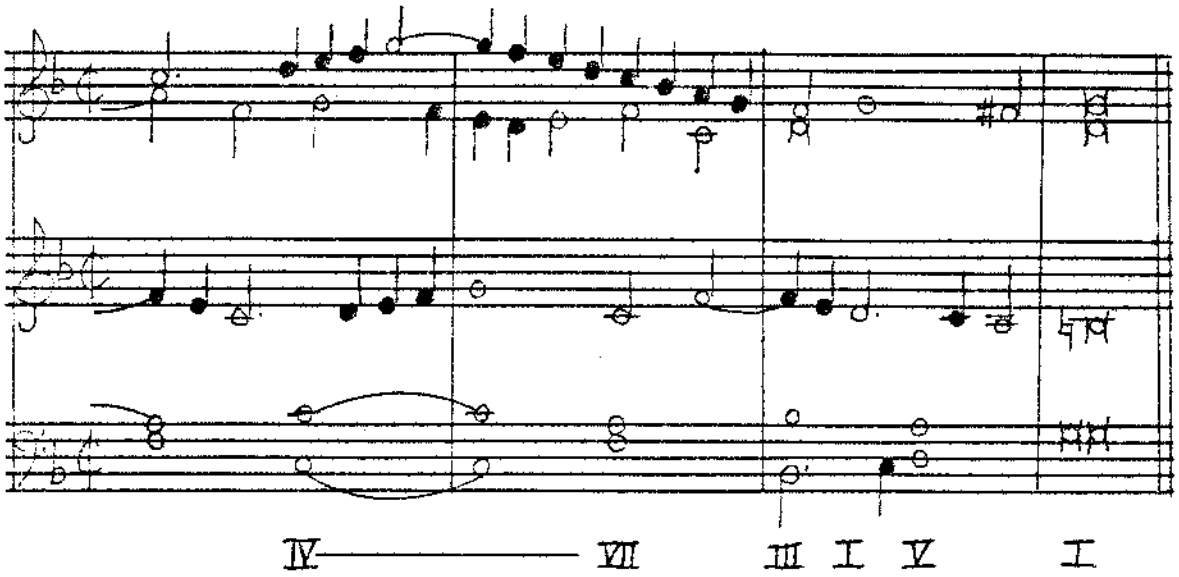
Ex. 135--Palestrina: Missa Regina coeli, Sanctus.



Ex. 136--Victoria: Missa Ave, maris stella . . ., Gloria.

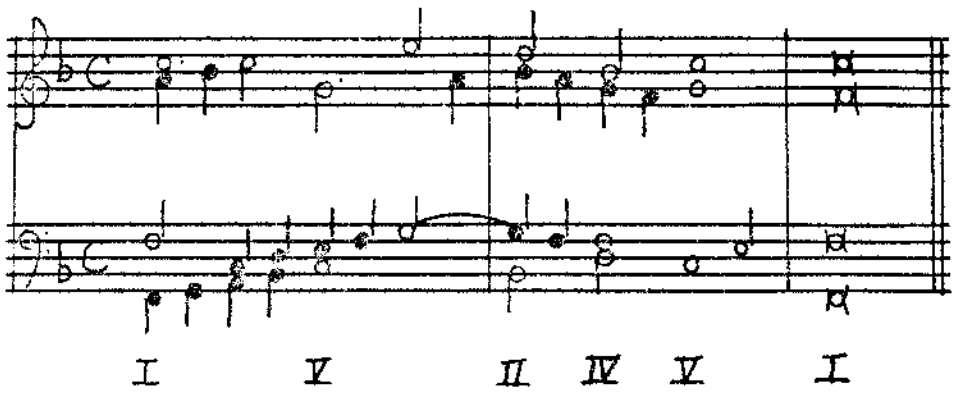


Ex. 137--Victoria: Missa Ave, maris stella . . ., Agnus Dei III.

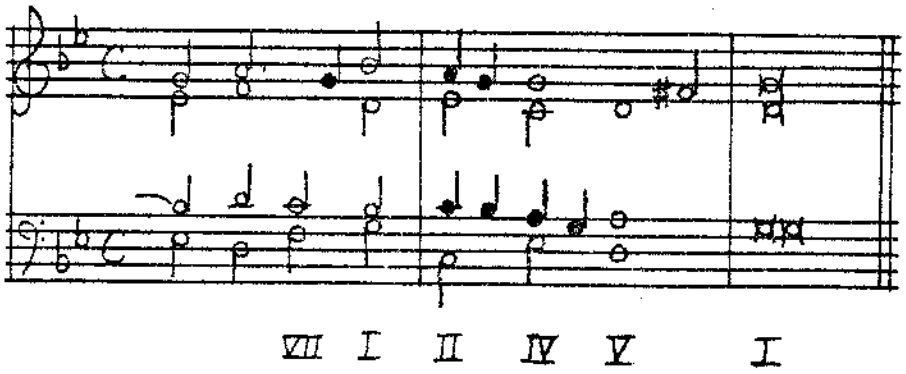


II - IV - V - I

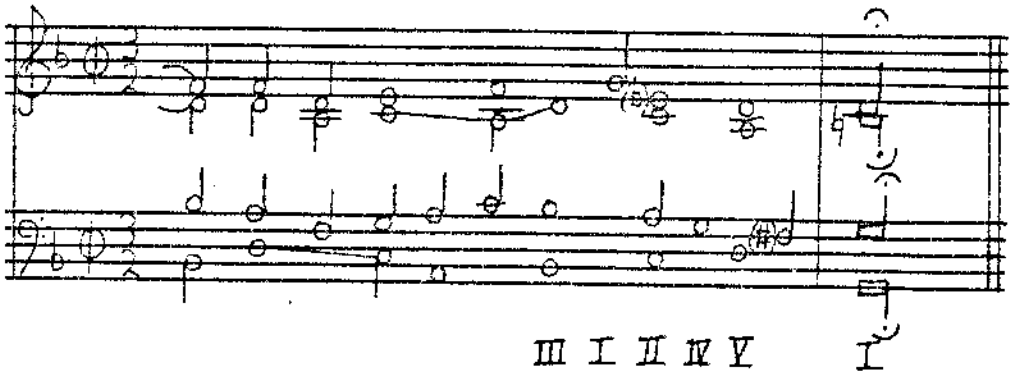
Ex. 138--Kerle: Missa Regina coeli, Credo.



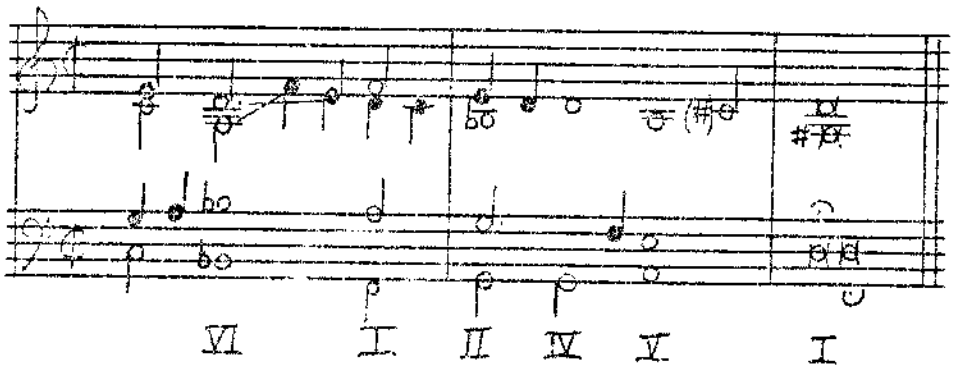
Ex. 139--Kerle: Missa De beata virgine, Gloria.



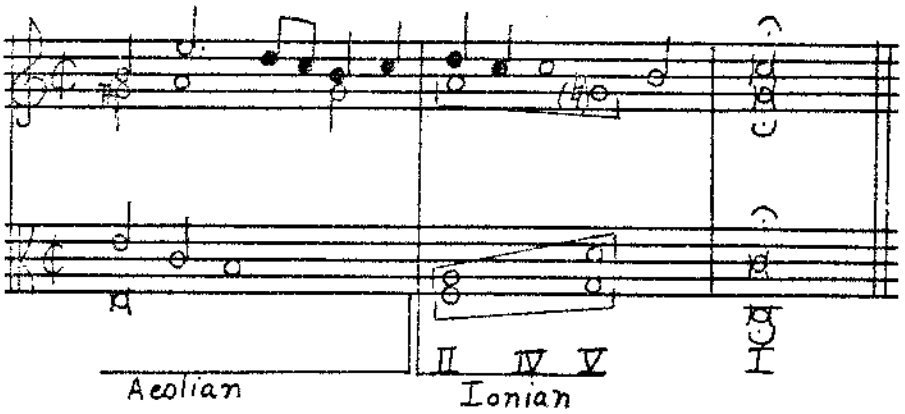
Ex. 140--Lassus: Missa Sesquialtera, Sanctus.



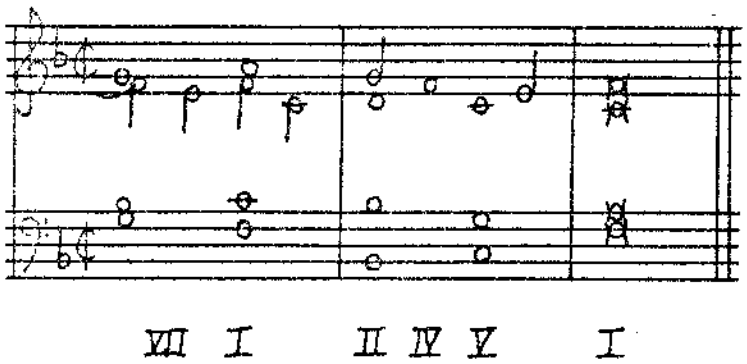
Ex. 141--Monte: Missa super Reviens vers moy, Kyrie.



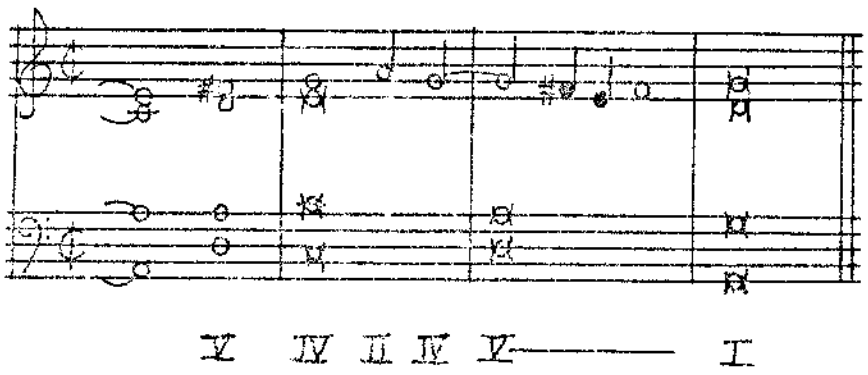
Ex. 142--Monte: Missa Quaternis vocibus, Credo.



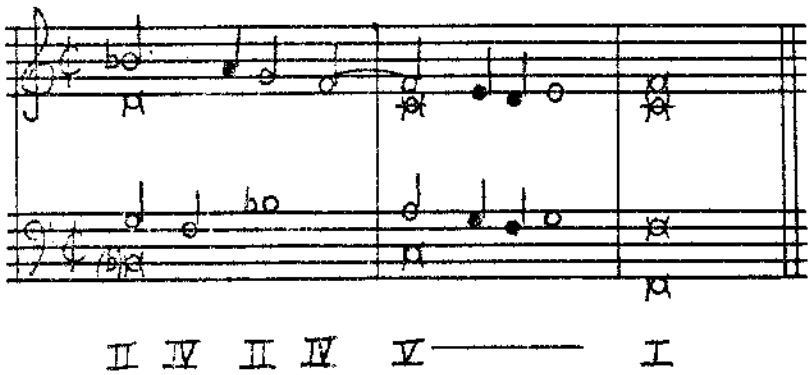
Ex. 143--Victoria: Missa pro Defunctis, Introit.



Ex. 144--Victoria: Missa pro Defunctis, Communio.

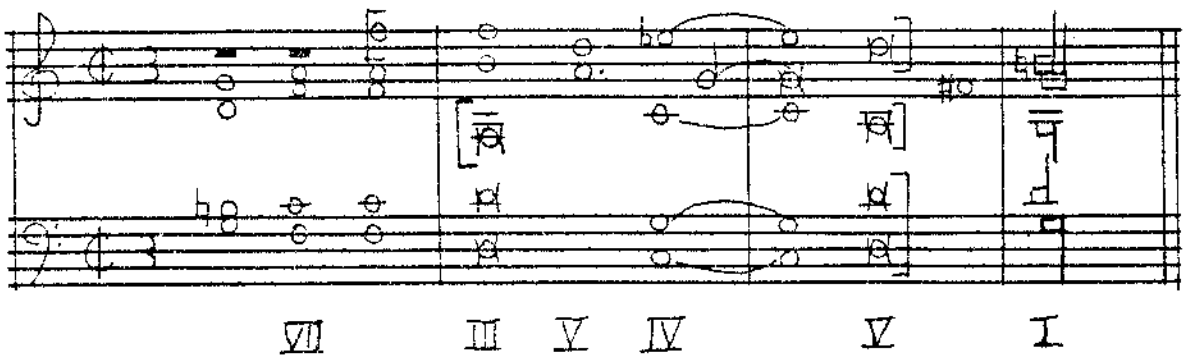


Ex. 145--Victoria: Missa pro Defunctis, Responsorium.

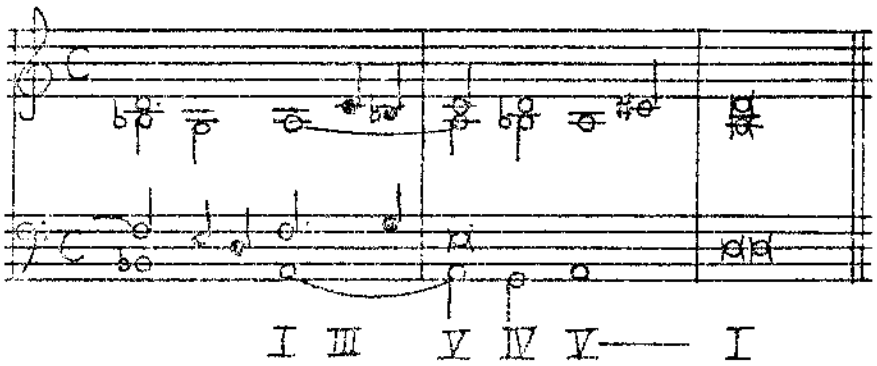


V - IV - V - I

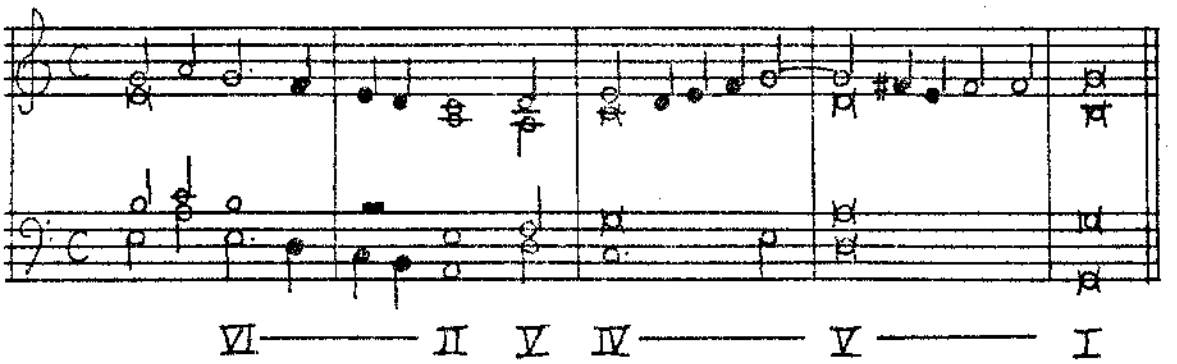
Ex. 146--Handl: Missa super Transeunte Domine, Gloria.



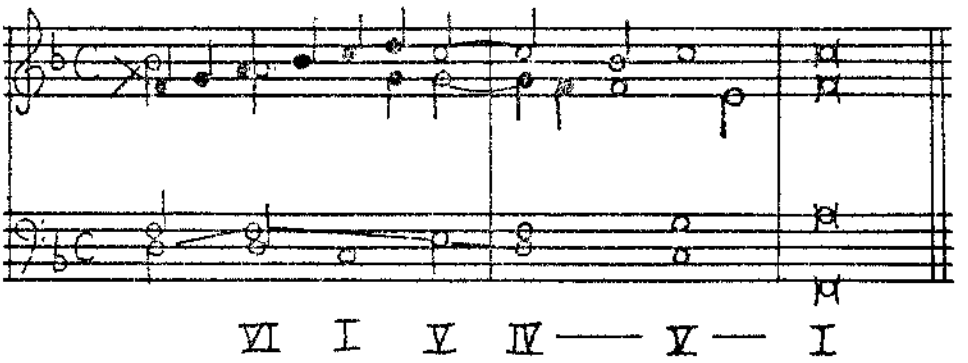
Ex. 147--Kerle: Missa pro Defunctis, Offertorium.



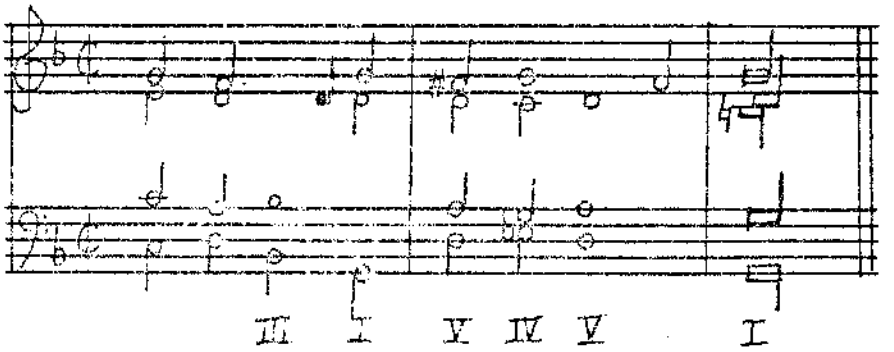
Ex. 148--Kerle: Missa pro Defunctis, Post Communio.



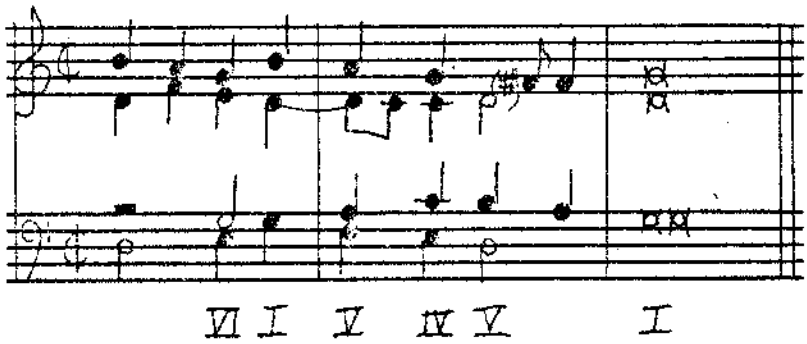
Ex. 149--Kerle: Missa Regina coeli, Kyrie.



Ex. 150--Lassus: Missa super Ie ne menge poinct de porcq, Kyrie.

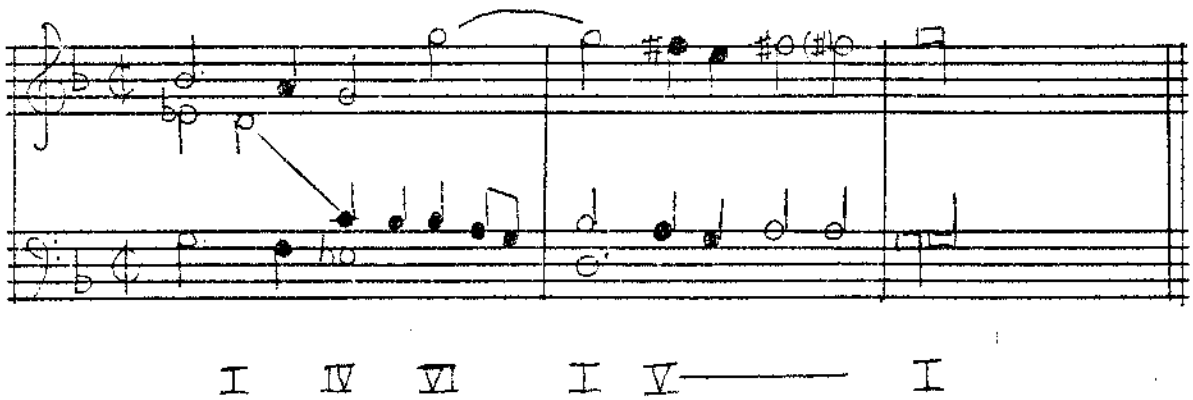


Ex. 151--Palestrina: Missa Ad fugam, Gloria.

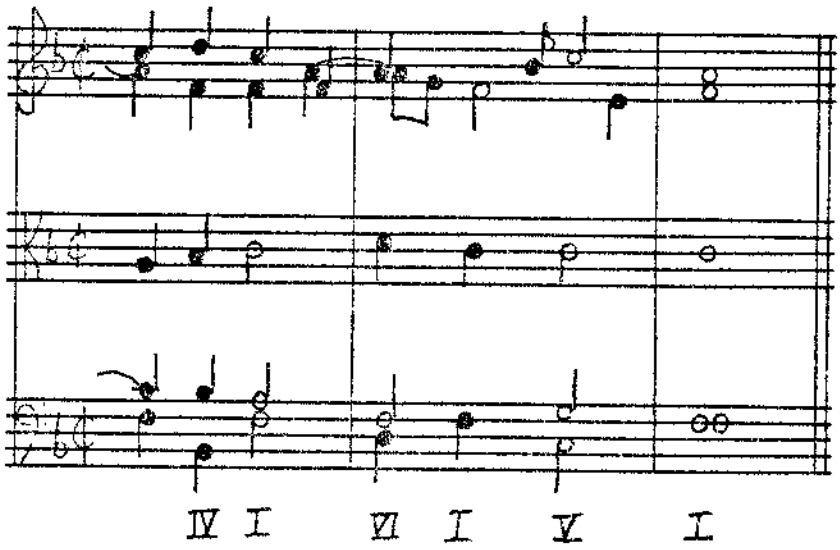


VI - I - V - I

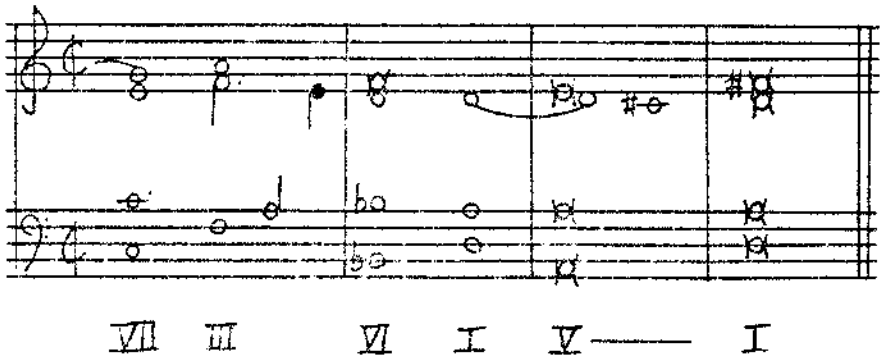
Ex. 152--Handl: Missa super Transeunte Domine, Benedictus.



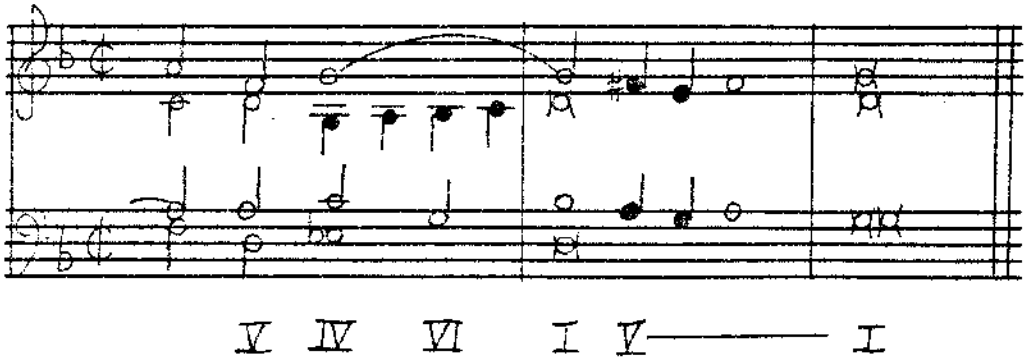
Ex. 153--Palestrina: Missa Regina coeli, Kyrie.



Ex. 154--Victoria: Missa pro Defunctis, Responsorium.

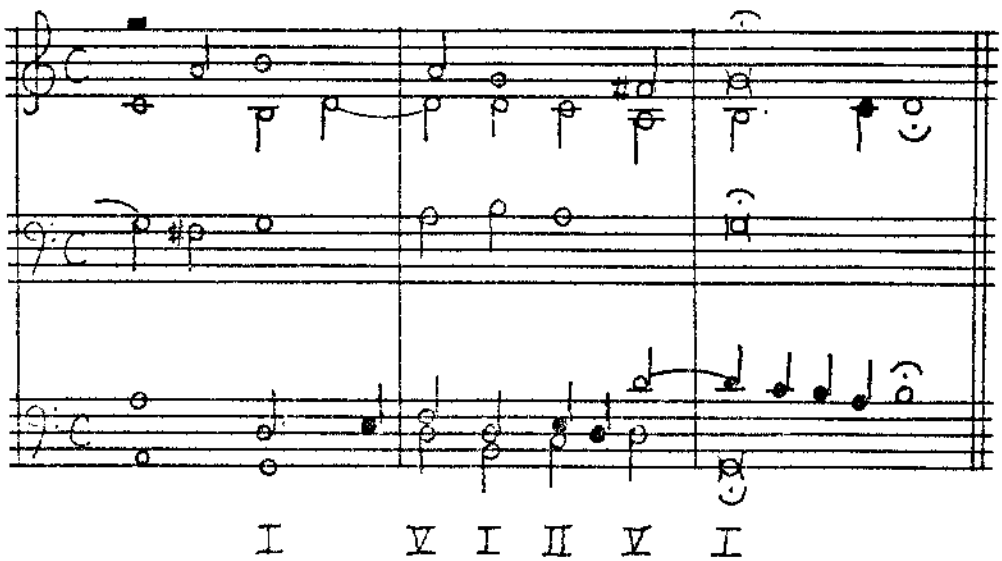


Ex. 155--Victoria: Missa Ave, maris stella . . ., Agnus Dei I et II.

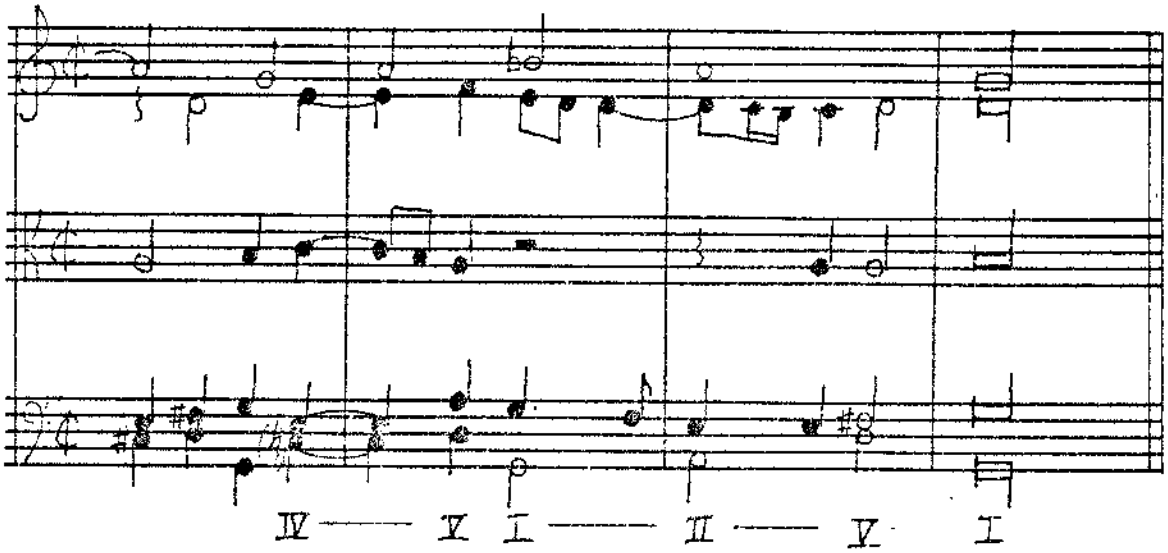


I - II - V - I

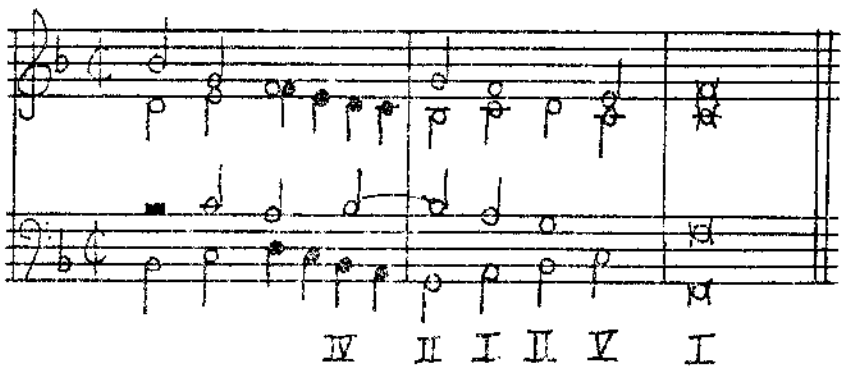
Ex. 156--Kerle: Missa lauda Sion salvatorem, Kyrie.



Ex. 157--Monte: Missa Emitte Domine, Kyrie.

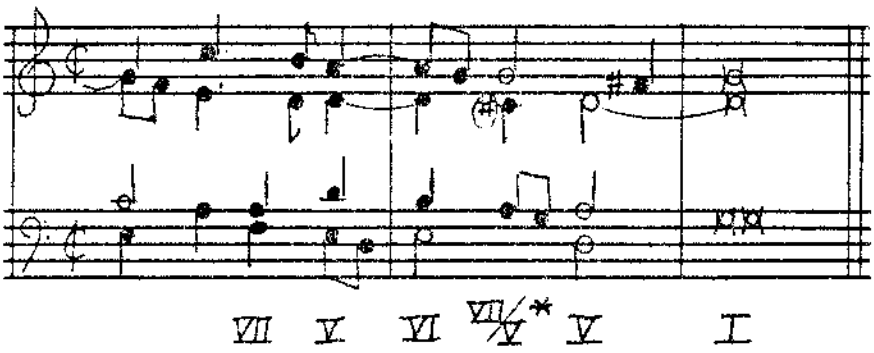


Ex. 158--Victoria: Missa Quam pulchri sunt, Kyrie.



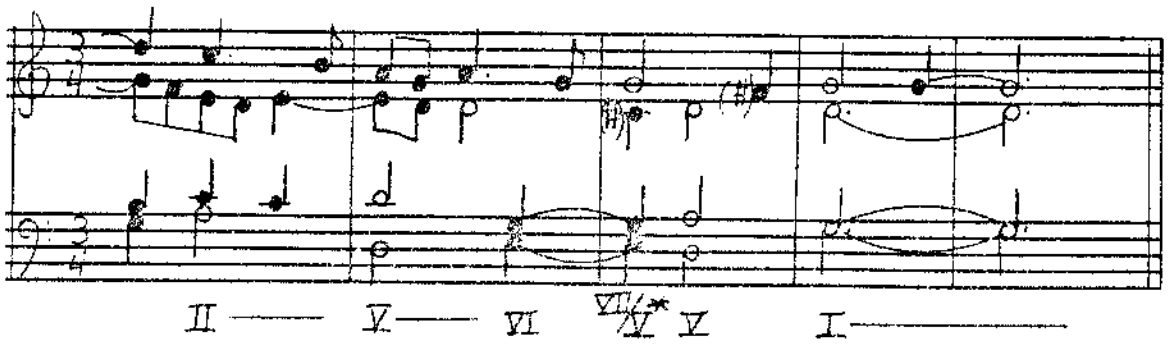
VI - VII/V - V - I

Ex. 159--Palestrina: Missa Ad fugam, Credo.

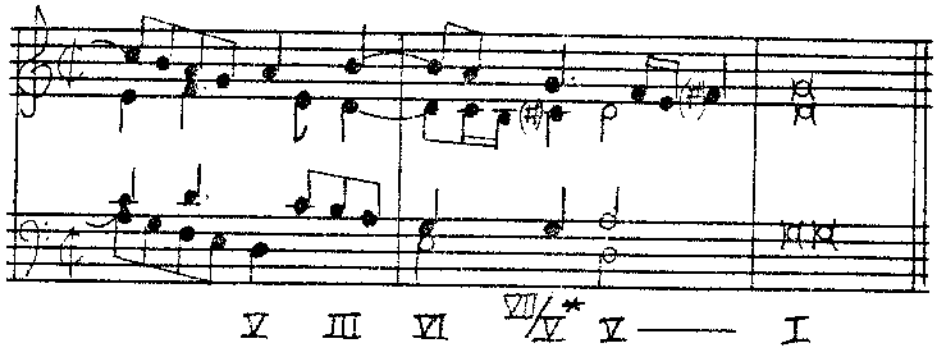


*VII of V: possible precursor to secondary dominant.

Ex. 160--Palestrina: Missa Ad fugam, Sanctus.

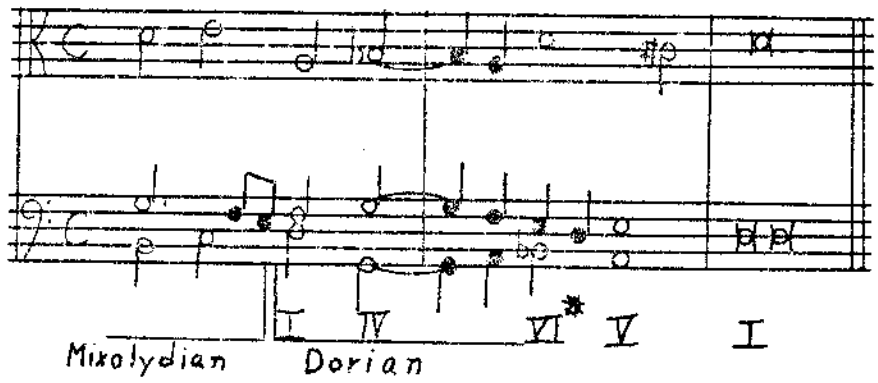


Ex. 161--Palestrina: Missa Ad fugam, Agnus Dei I.



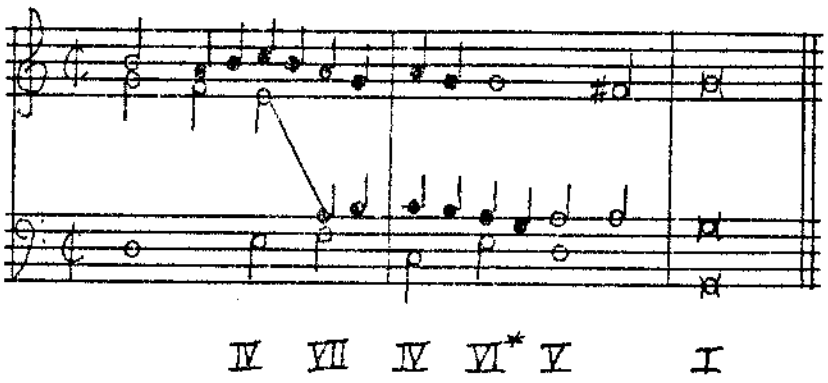
IV - VI - V - I

Ex. 162--Kerle: Missa pro Defunctis, Tractus.



*"E" in tenor is an accented passing tone.

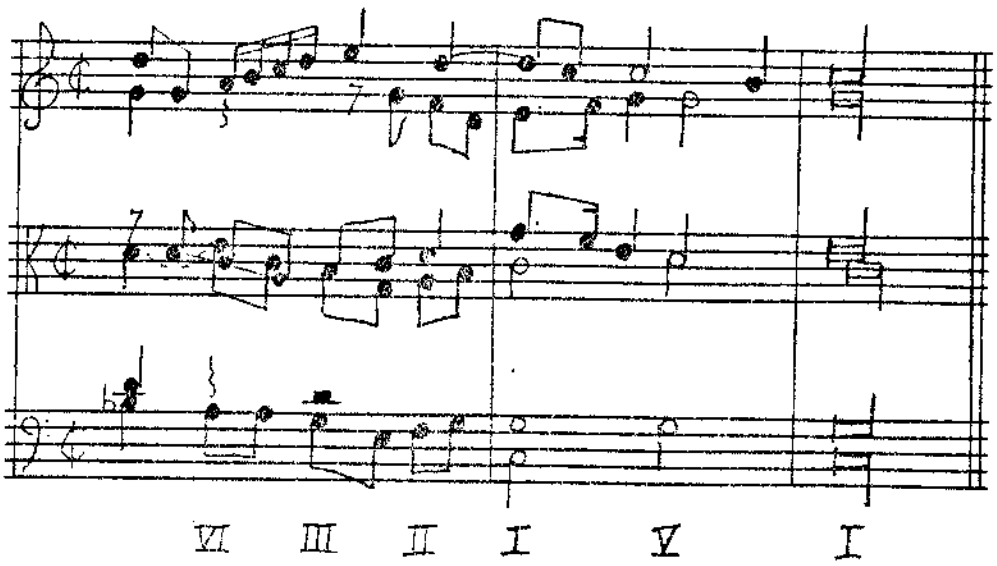
Ex. 163--Victoria: Missa O quam gloriosum, Benedictus.



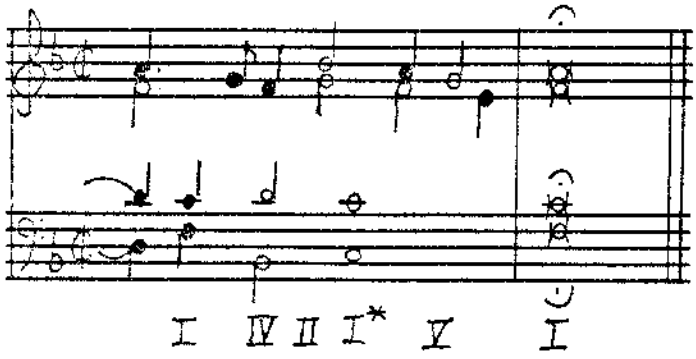
*"A" in tenor is an accented passing tone.

II - I - V - I

Ex. 164--Monte: Missa Deus Deus meus, Credo.



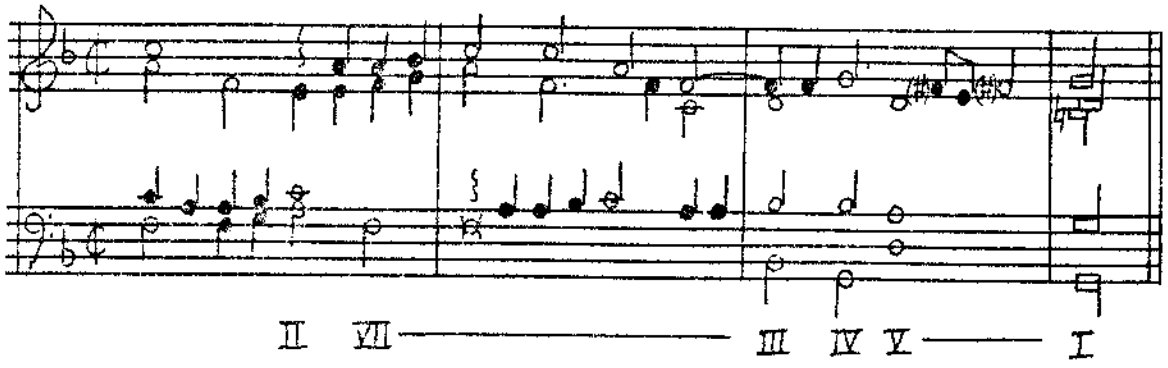
Ex. 165--Monte: Missa sine nomine, Gloria.



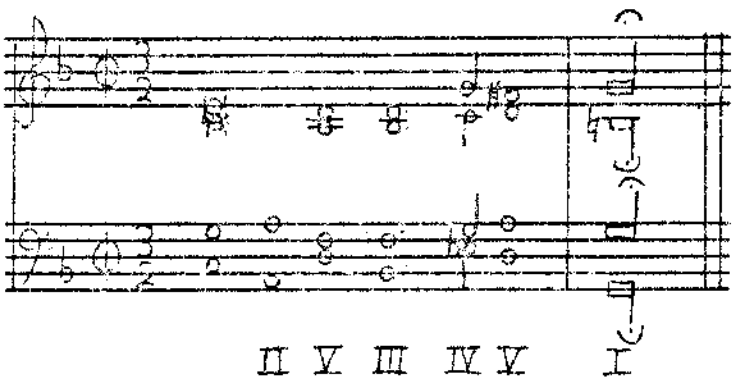
*Suspensions in soprano and alto, followed by a consonant fourth between bass and alto.

III - IV - V - I

Ex. 166--Lassus: Missa super Ie ne menge poinct de porcq, Gloria.

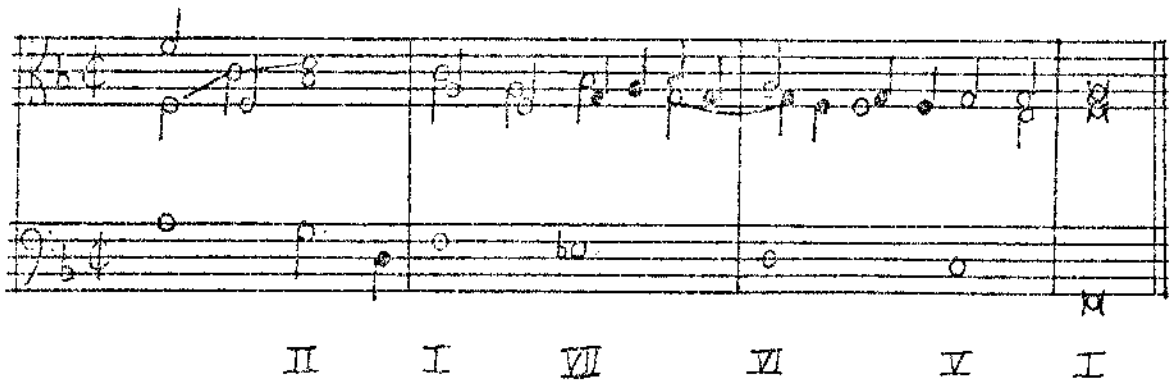


Ex. 167--Lassus: Missa Sesquialtera, Kyrie.

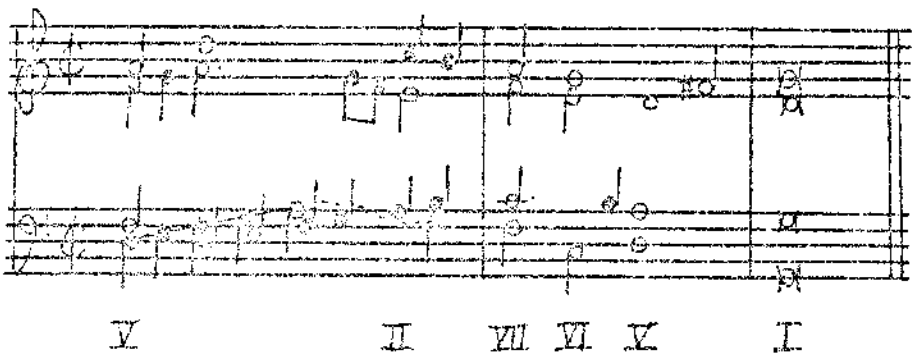


VII - VI - V - I

Ex. 168--Victoria: Missa Quam pulchri sunt, Benedictus.

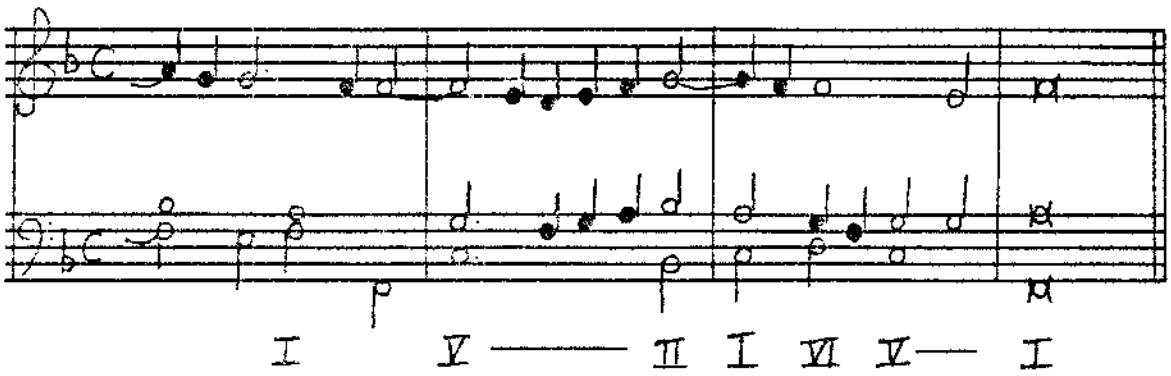


Ex. 169--Victoria: Missa O quam gloriosum, Gloria.

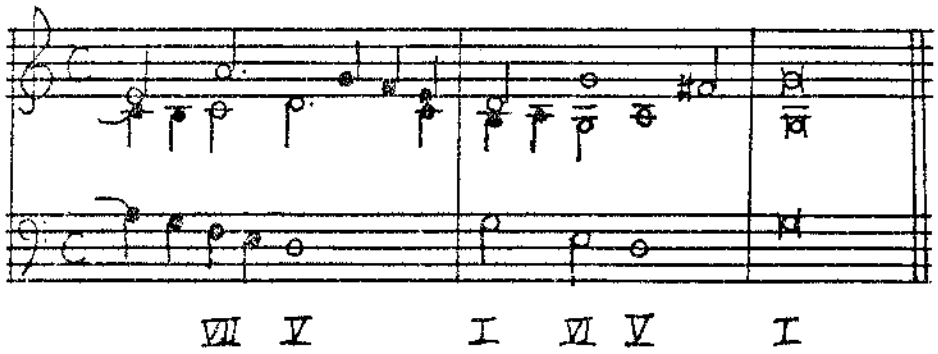


I - VI - V - I

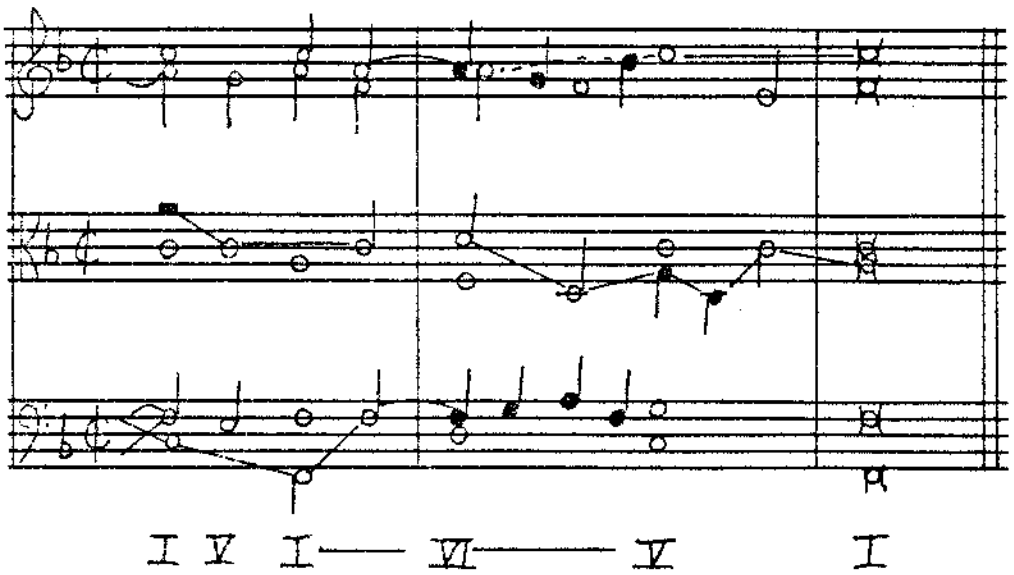
Ex. 170--Kerle: Missa Regina coeli, Sanctus.



Ex. 171--Kerle: Missa lauda Sion salvatorem, Sanctus.

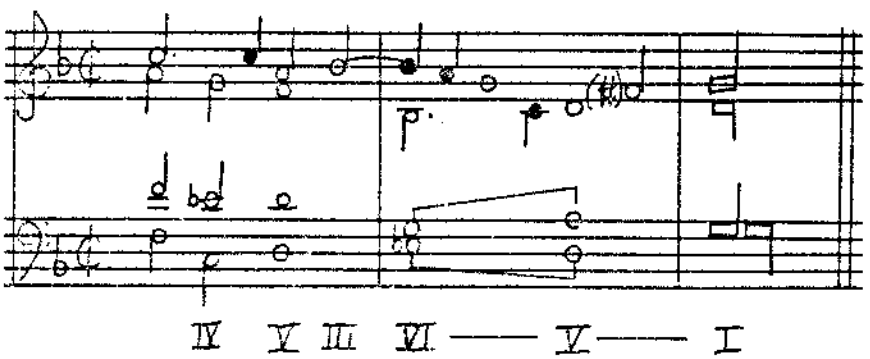


Ex. 172--Victoria: Missa Quam pulchri sunt, Agnus Dei III.

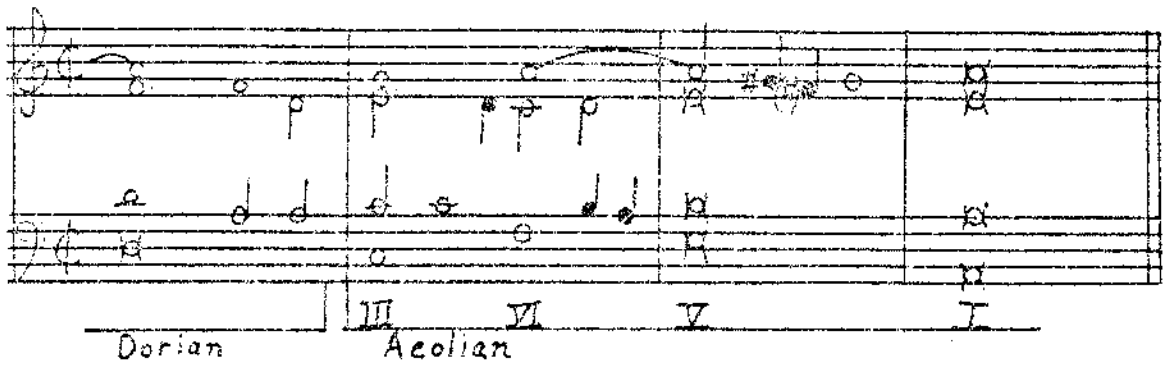


III - VI - V - I

Ex. 173--Lassus: Missa super La la maistre Pierre, Credo.

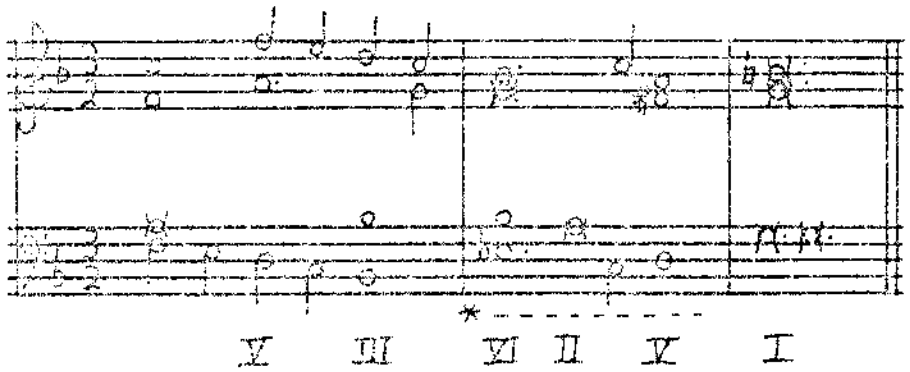


Ex. 174--Victoria: Missa pro Defunctis, Sanctus.



VI - II - V - I

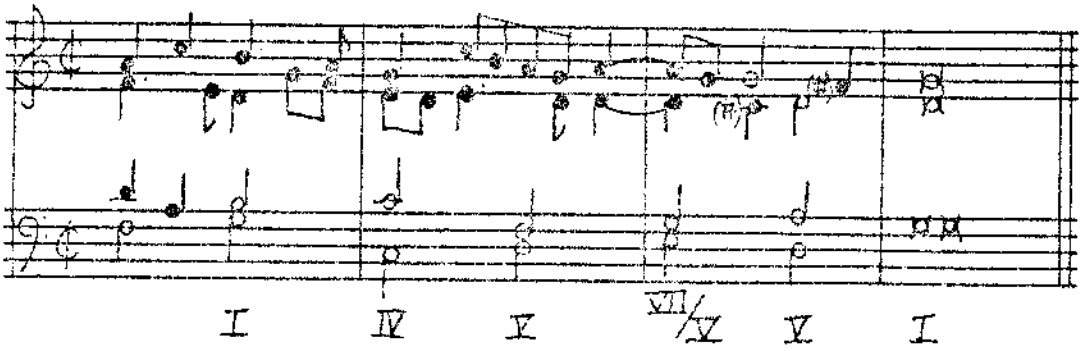
Ex. 175--Victoria: Missa Ave, maris stella . . ., Sanctus.



*Unusual voice-leading.

V - VII/V - V - I

Ex. 176--Palestrina: Missa Ad fugam, Kyrie.

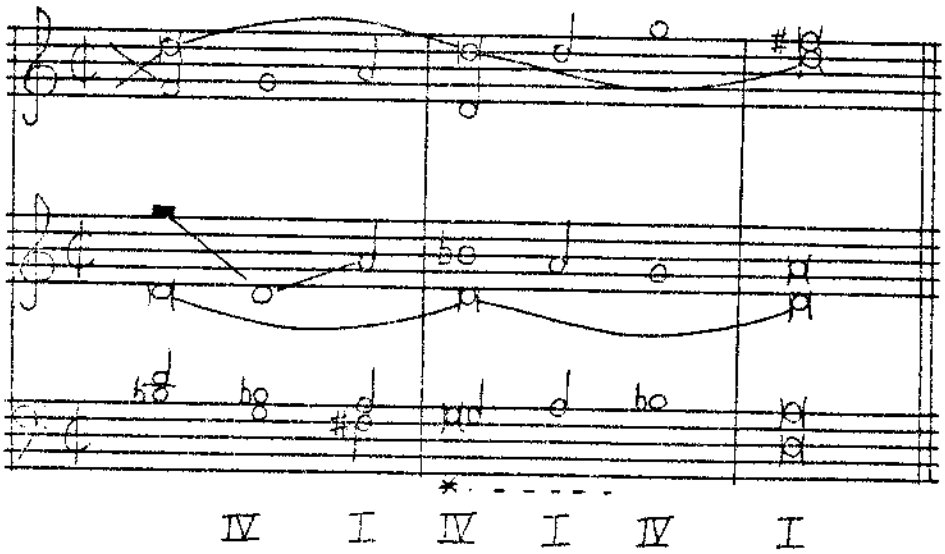


*VII of V: see Ex. 159.

PROGRESSIONS CONCLUDING WITH IV - I

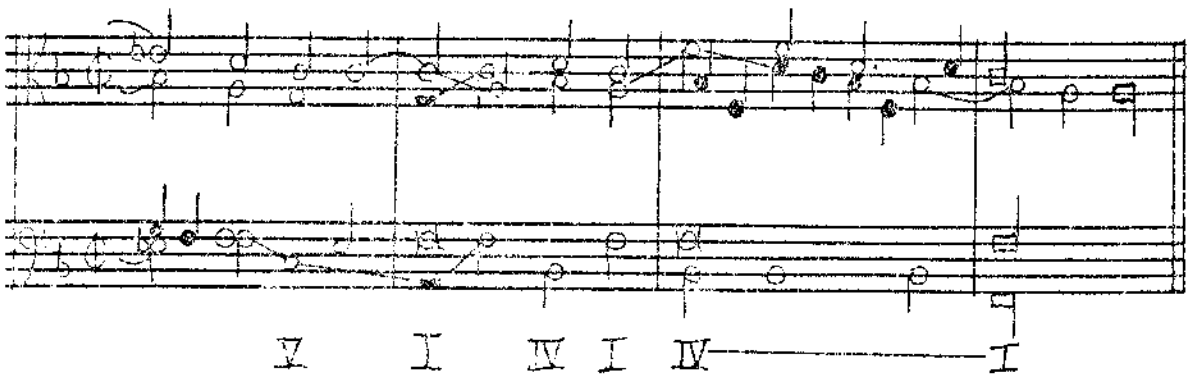
IV - I - IV - I

Ex. 177--Handl: Missa super Elisabeth Zachariae, Kyrie.

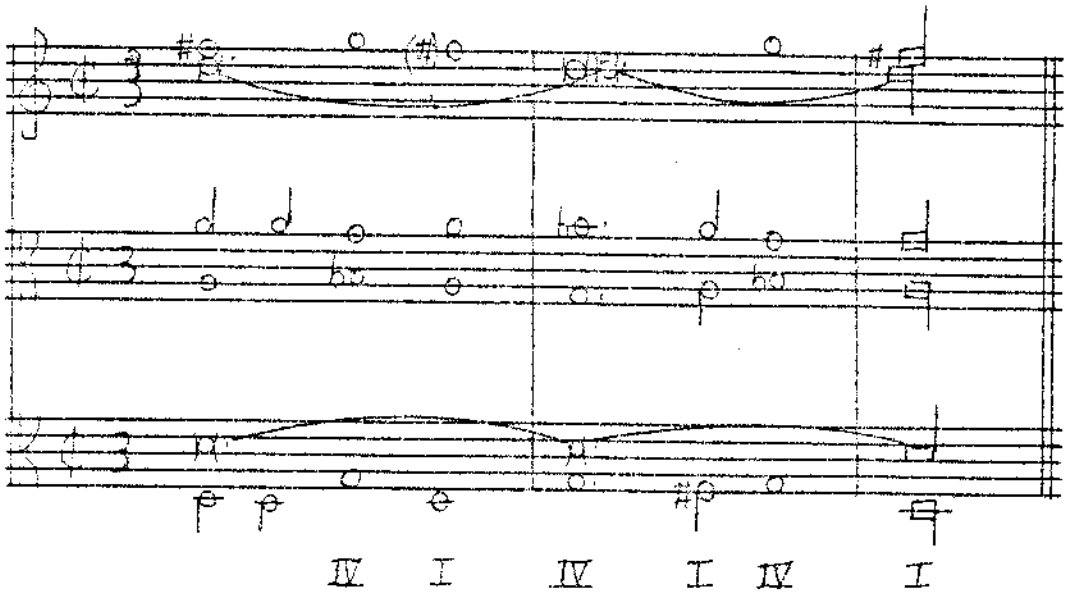


*Bass note "G" serves as a temporary pedal point.

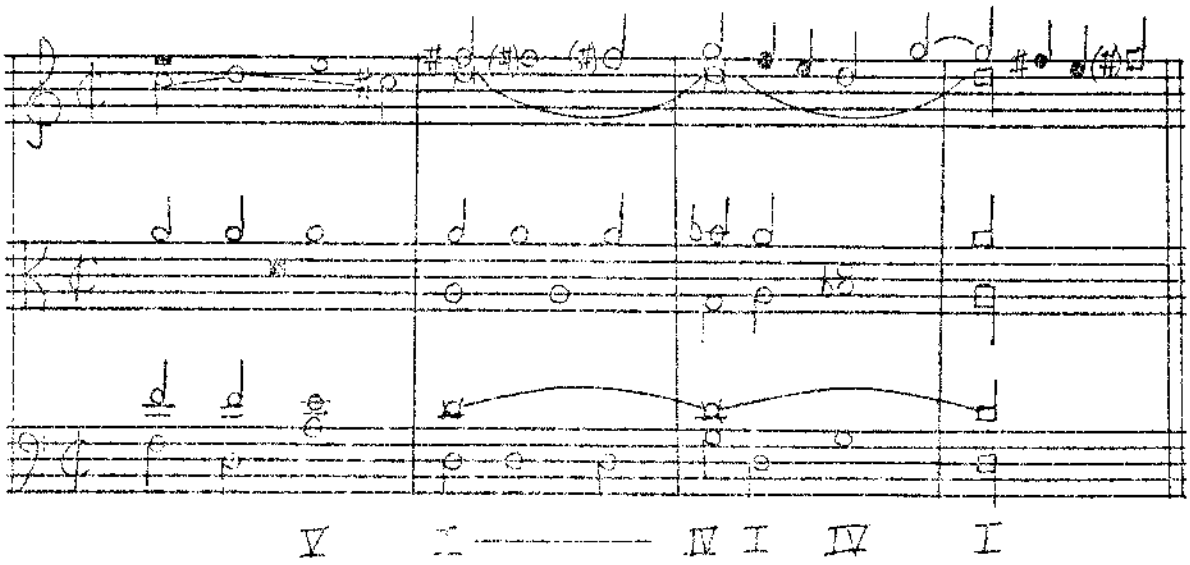
Ex. 178--Handl: Missa super Locutus est Dominus ad Moysen dicens, Benedictus.



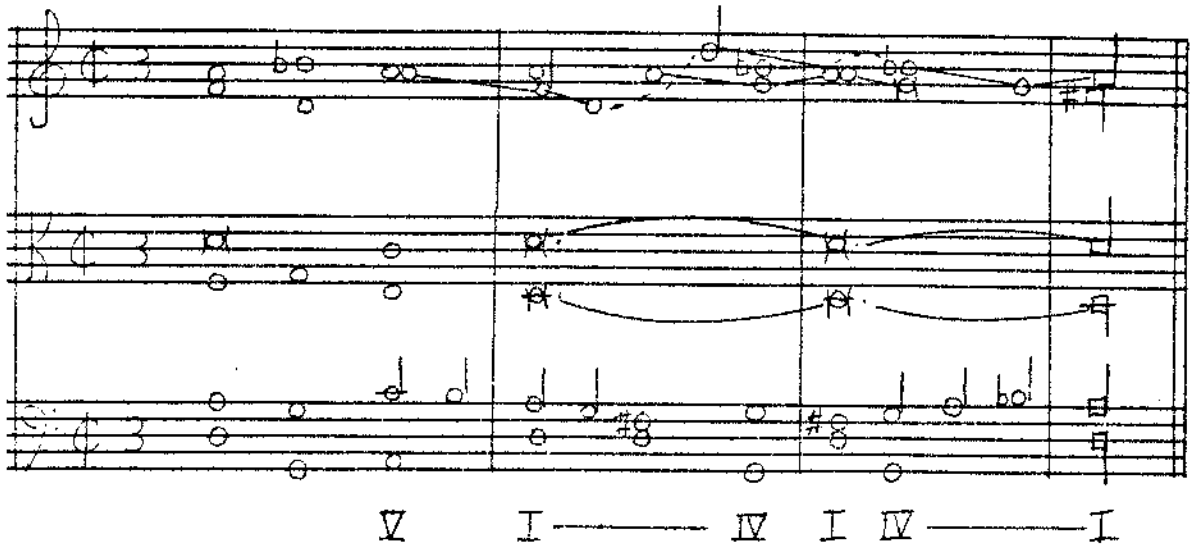
Ex. 179--Handl: Missa super Elisabeth Zachariae, Sanctus.



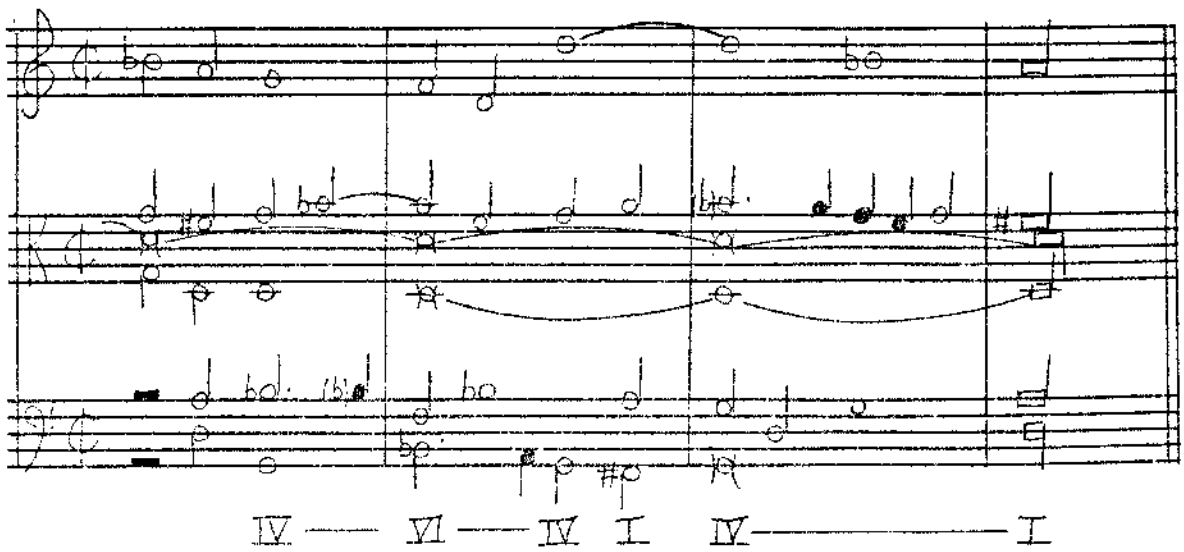
Ex. 180--Handl: Missa super Elisabeth Zachariae, Agnus Dei.



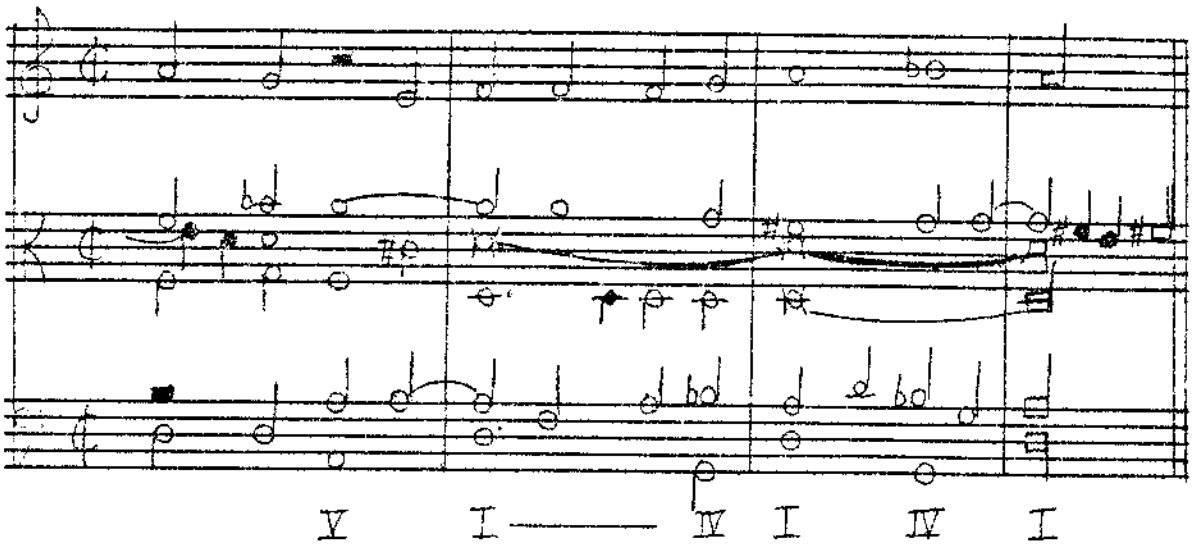
Ex. 181--Handl: Missa super Dorium, Kyrie.



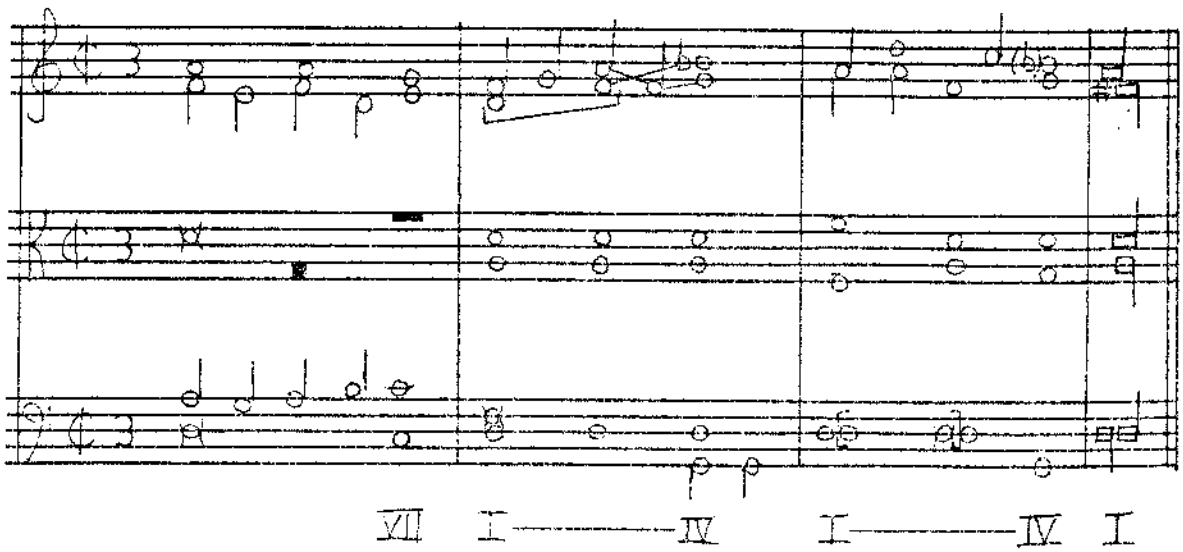
Ex. 182--Handl: Missa super Dorium, Gloria.



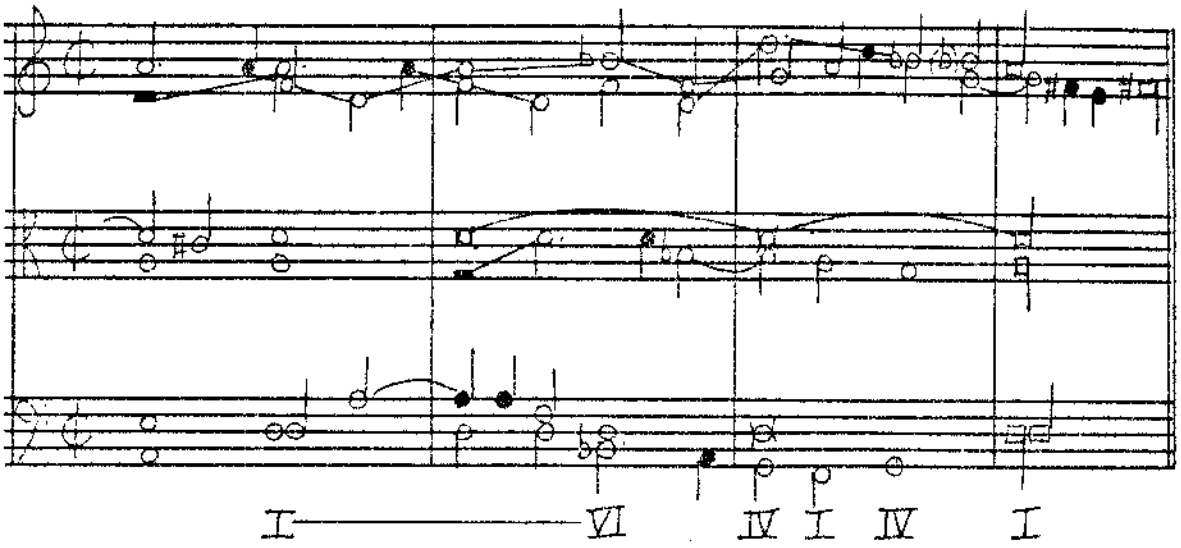
Ex. 183--Handl: Missa super Dorium, Credo.



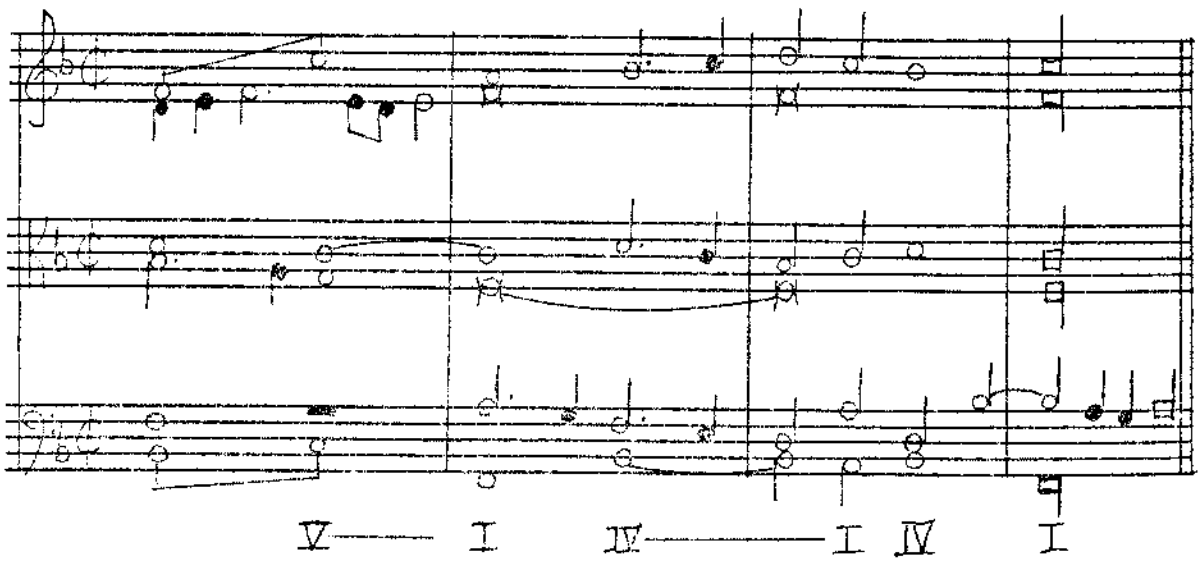
Ex. 184--Handl: Missa super Dorium, Sanctus.



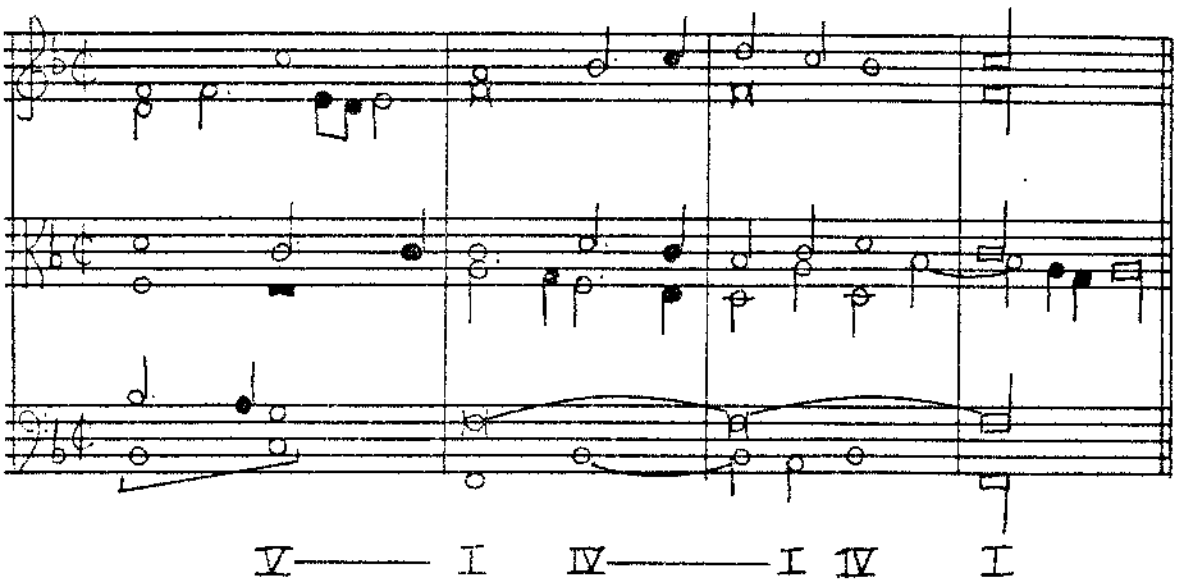
Ex. 185--Handl: Missa super Dorium, Agnus Dei.



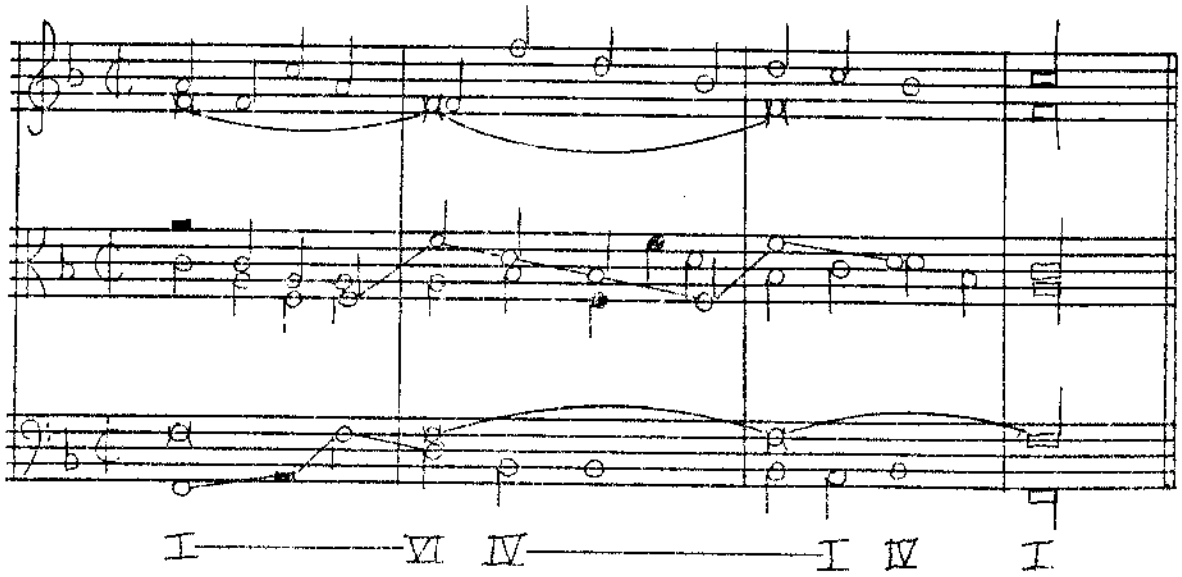
Ex. 186--Handl: Missa super Locutus est Dominus ad Moysen dicens, Gloria.



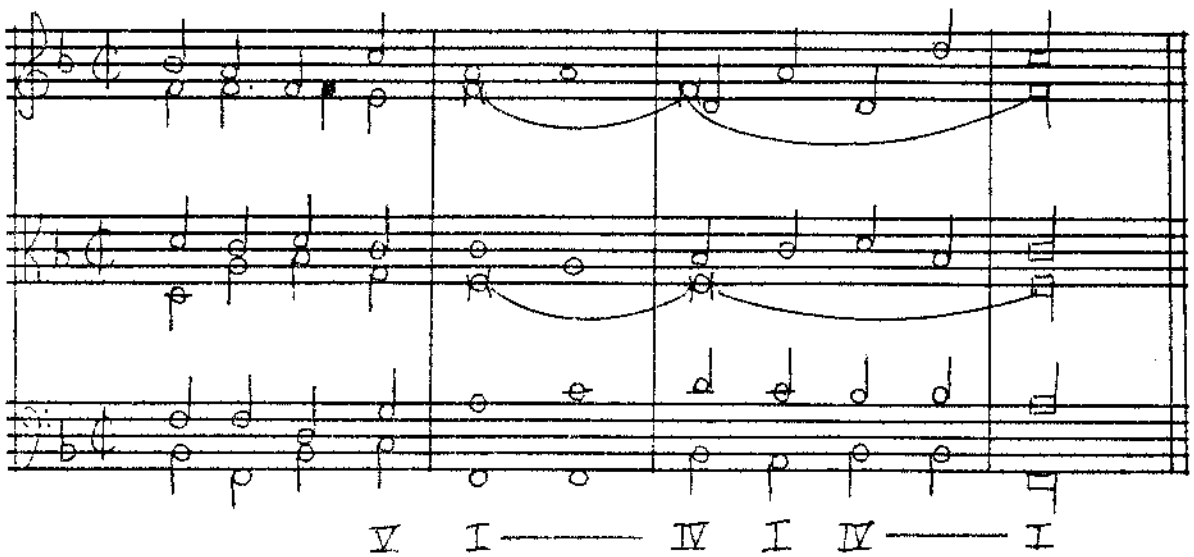
Ex. 187--Handl: Missa super Locutus est Dominus ad Moysen dicens, Credo.



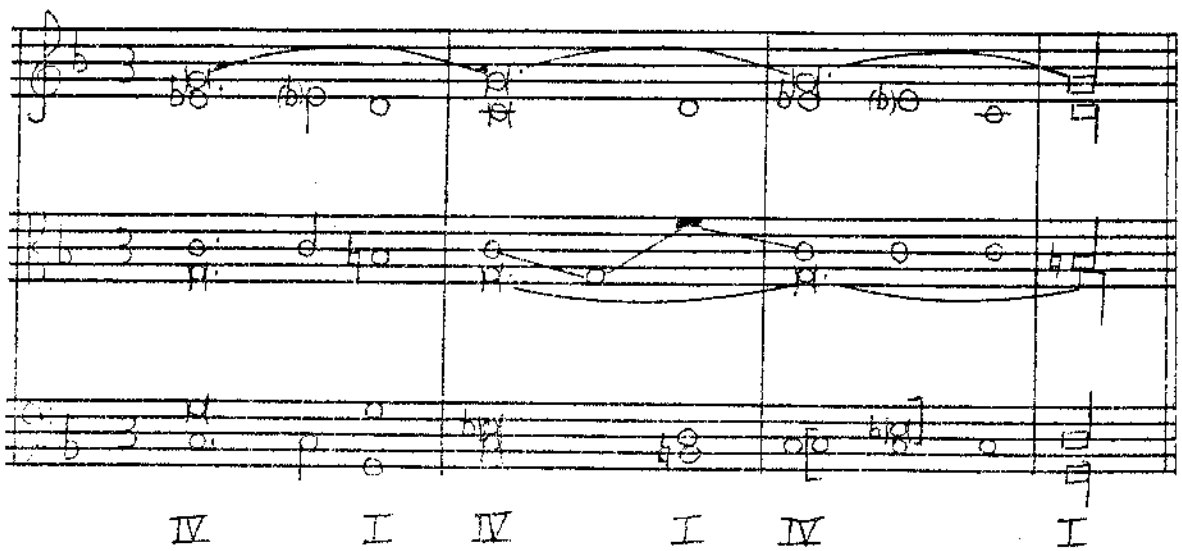
Ex. 188--Handl: Missa super Locutus est Dominus ad Moysen dicens, Sanctus.



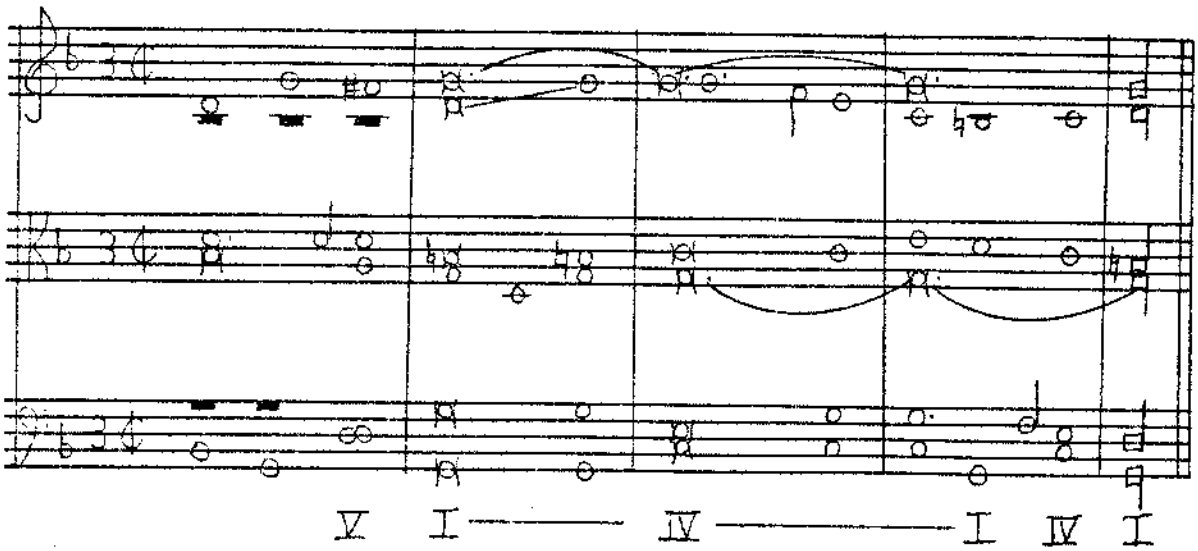
Ex. 189--Handl: Missa super Locutus est Dominus ad Moysen dicens, Agnus Dei.



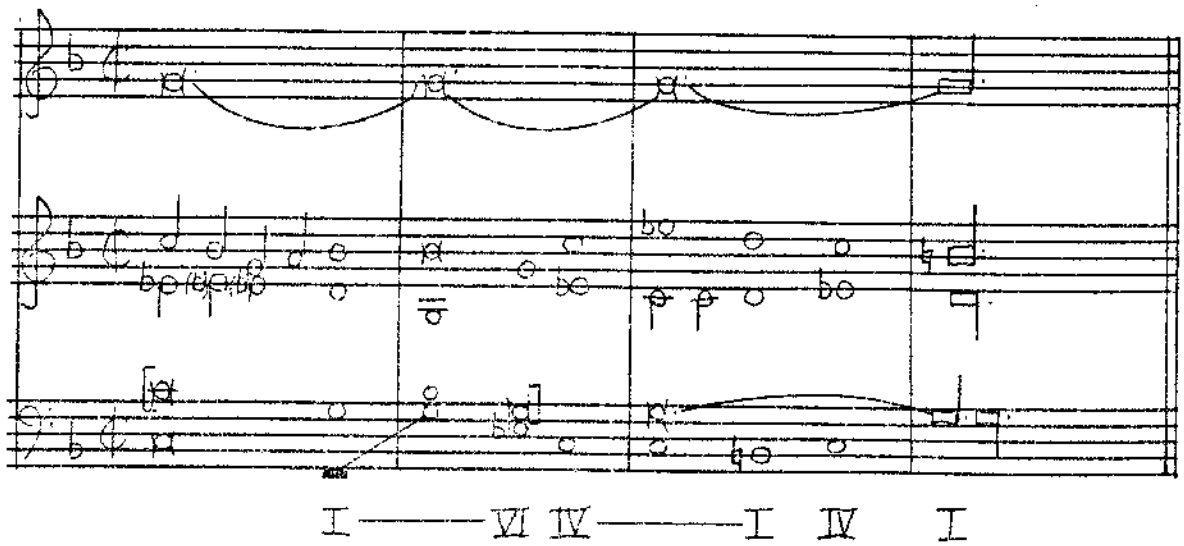
Ex. 190--Handl: Missa super Sancta Maria, Gloria.



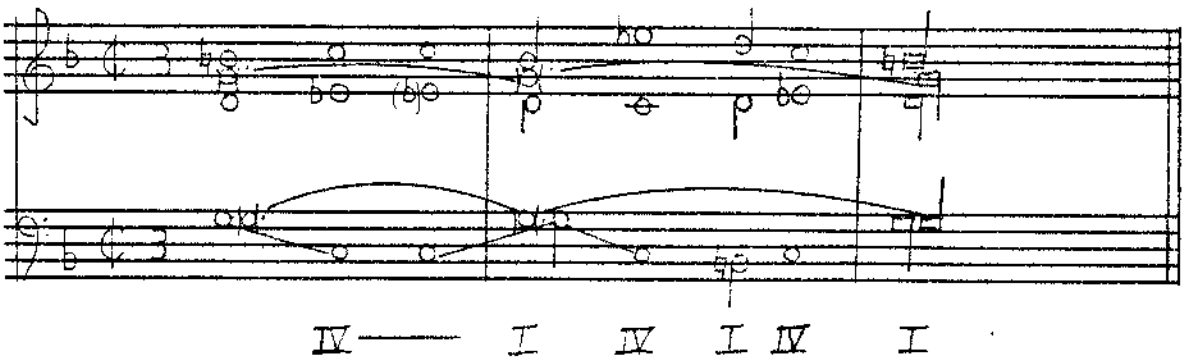
Ex. 191--Handl: Missa super Sancta Maria, Sanctus.



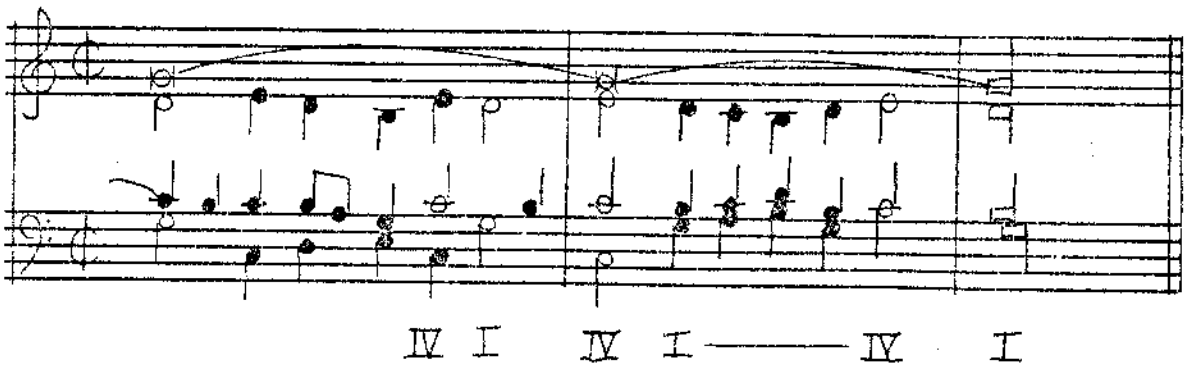
Ex. 192--Handl: Missa super Adesto dolori meo, Sanctus.



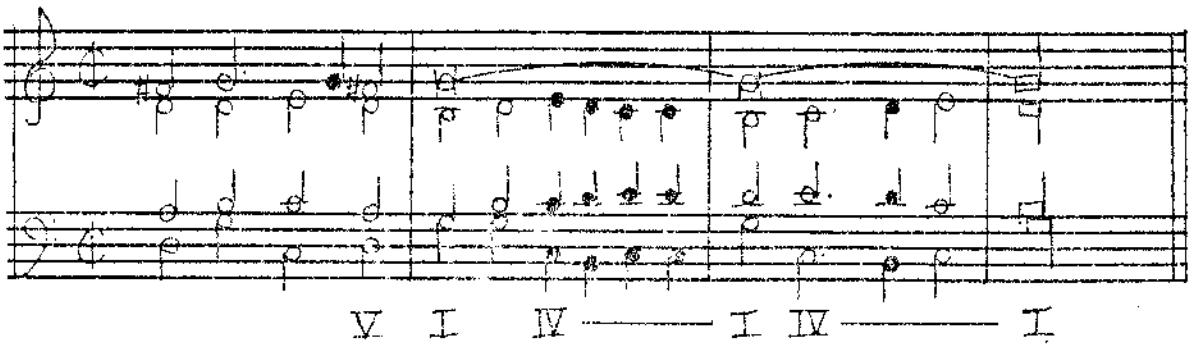
Ex. 193--Handl: Missa super Transeunte Domine, Sanctus.



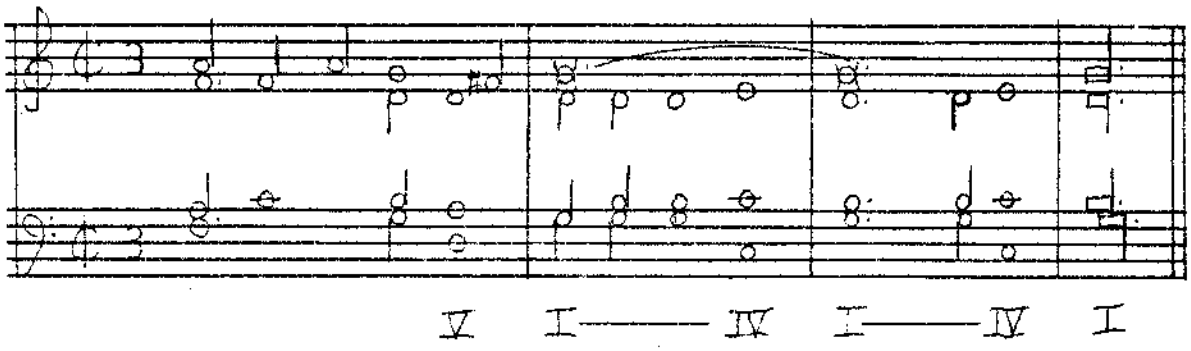
Ex. 194--Handl: Missa super Mixolydium, Credo.



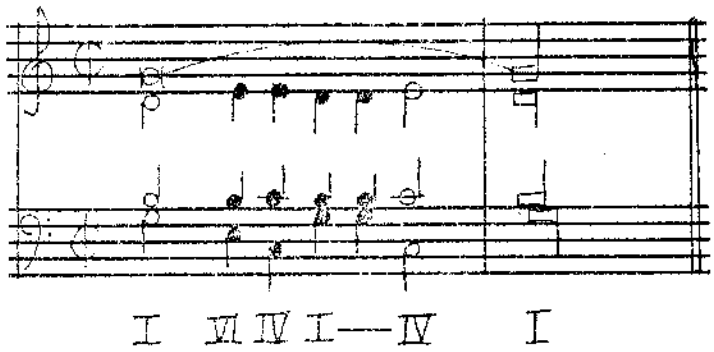
Ex. 195--Handl: Missa super Mixolydium, Gloria.



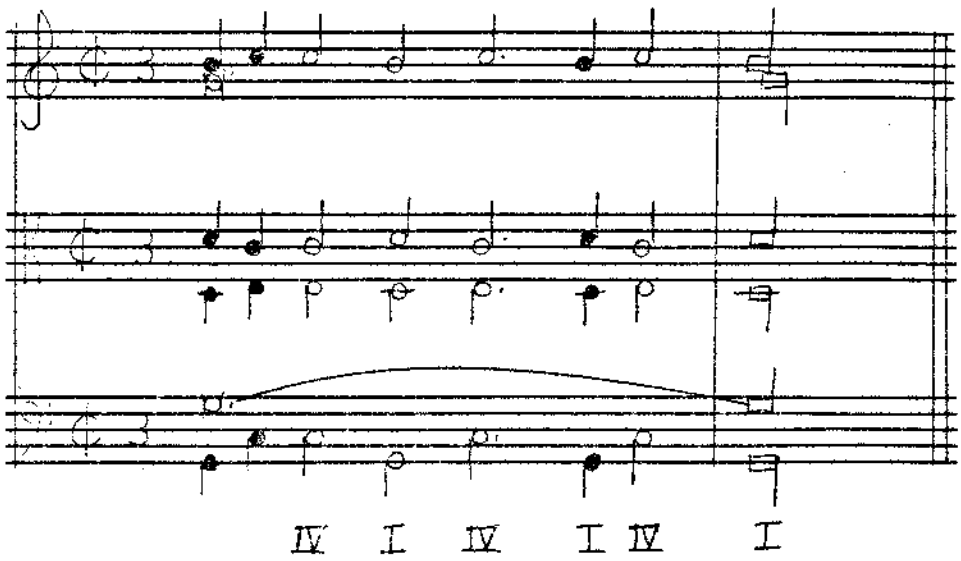
Ex. 196--Handl: Missa super Mixolydium, Sanctus.



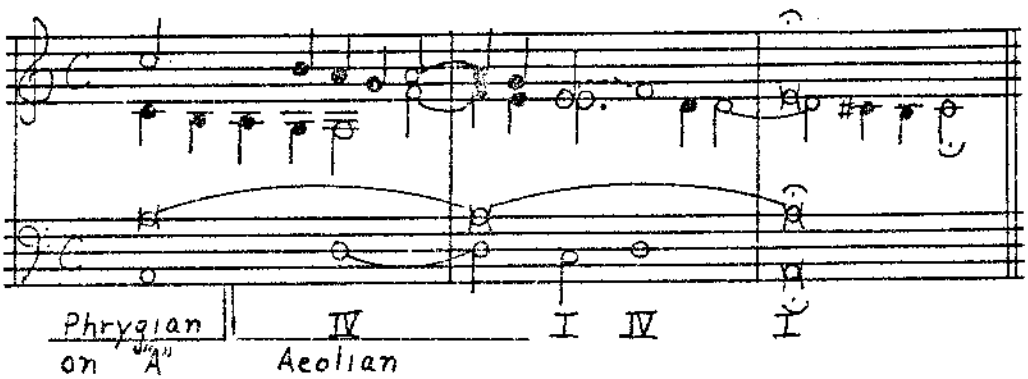
Ex. 197--Handl: Missa super Mixolydium, Agnus Dei.



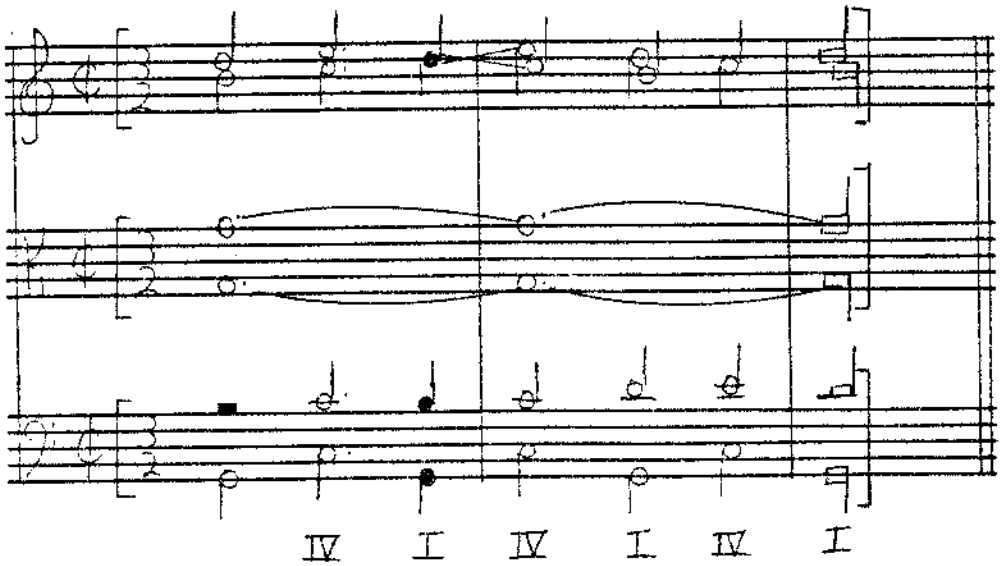
Ex. 200--Handl: Missa super Apri la fenestra, Sanctus.



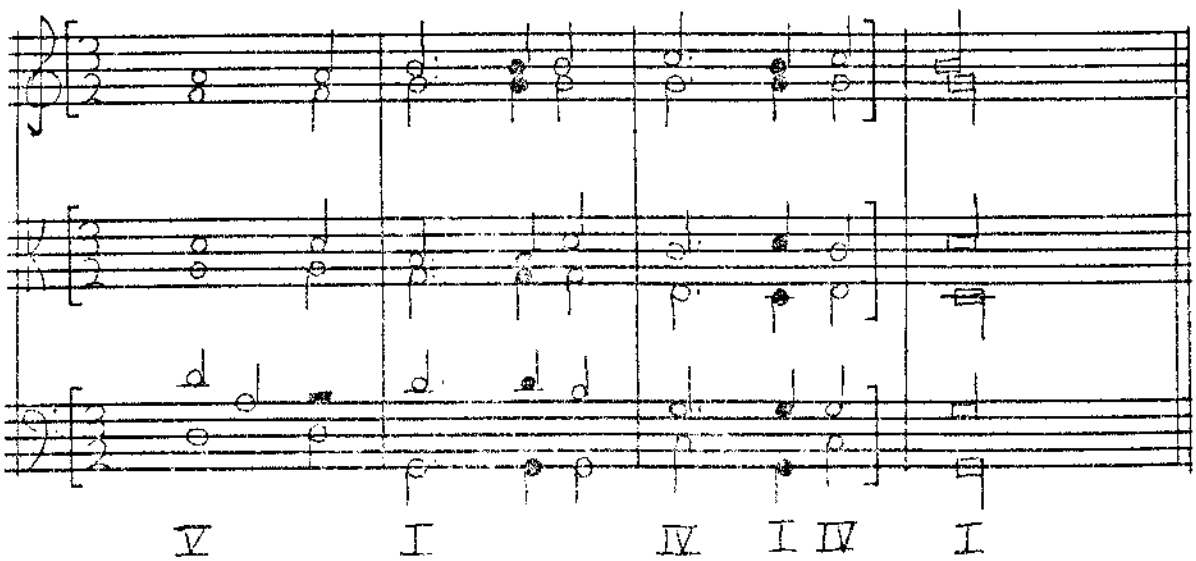
Ex. 201--Kerle: Missa pro Defunctis, Sanctus.



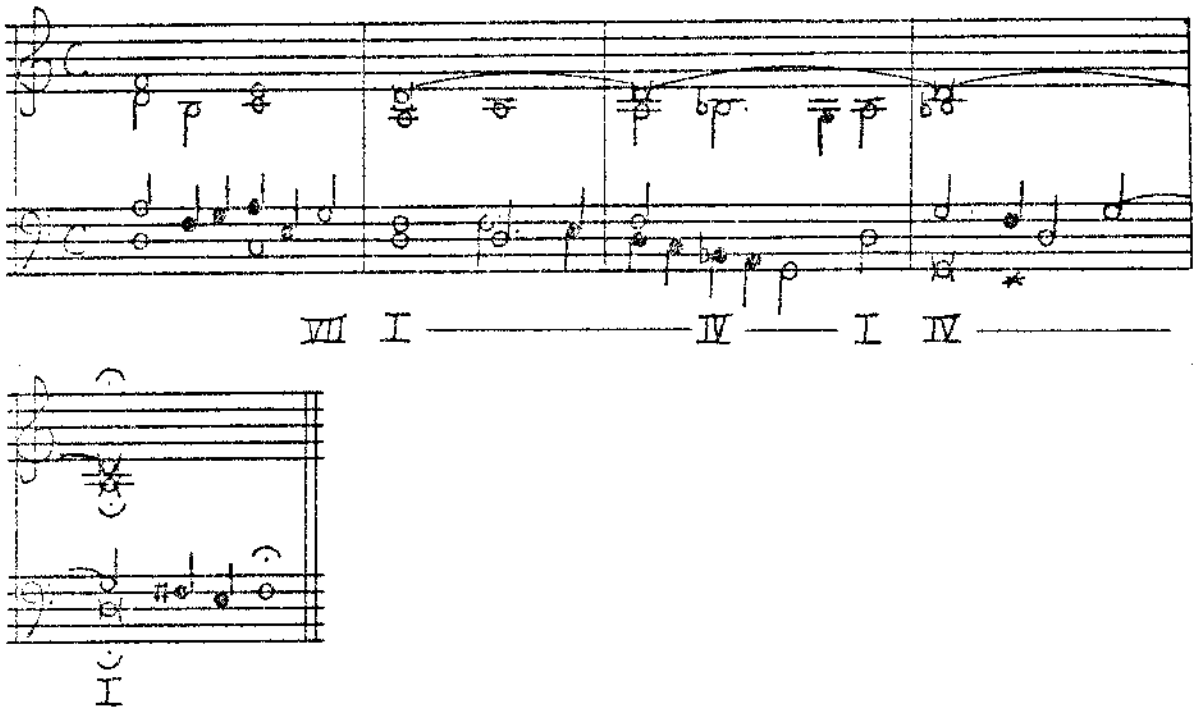
Ex. 198--Handl: Missa super Apri la fenestra, Kyrie.



Ex. 199--Handl: Missa super Apri la fenestra, Credo.

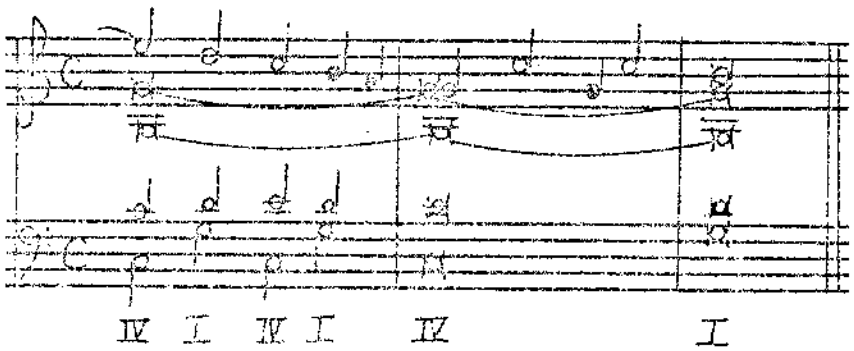


Ex. 202--Kerle: Missa pro Defunctis, Responsorium.

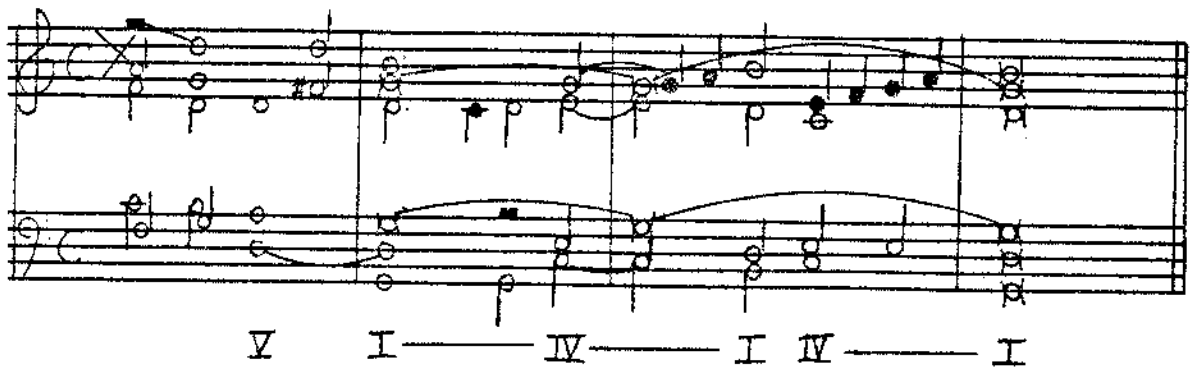


*Tenor note "F" represents a dissonant cambiata.

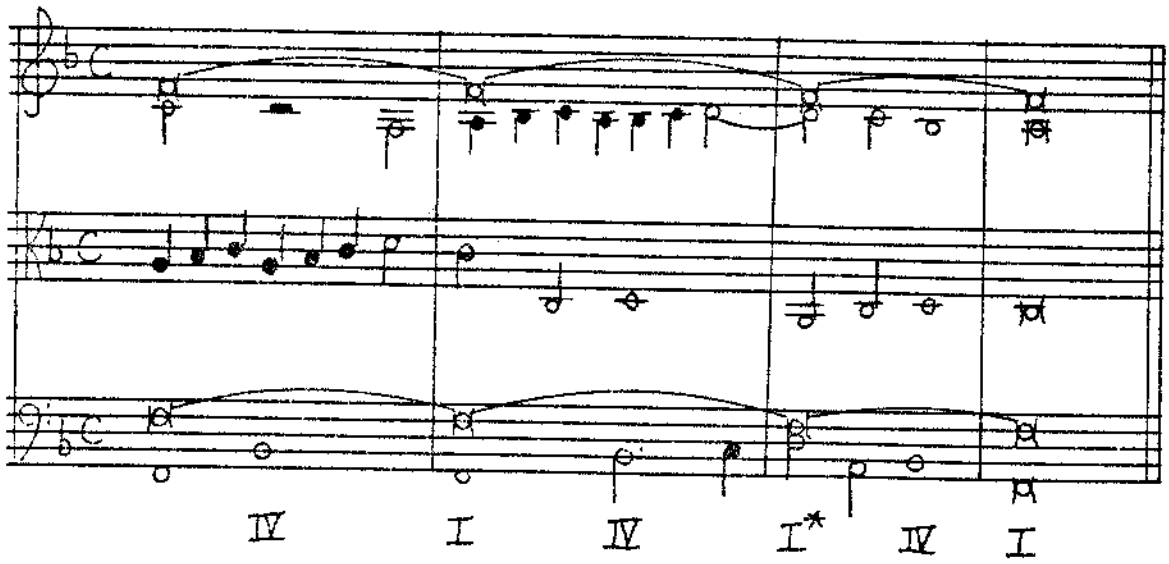
Ex. 203--Kerle: Missa Ut re mi fa sol la, Agnus Dei.



Ex. 204--Kerle: Missa lauda Sion salvatorem, Agnus Dei.

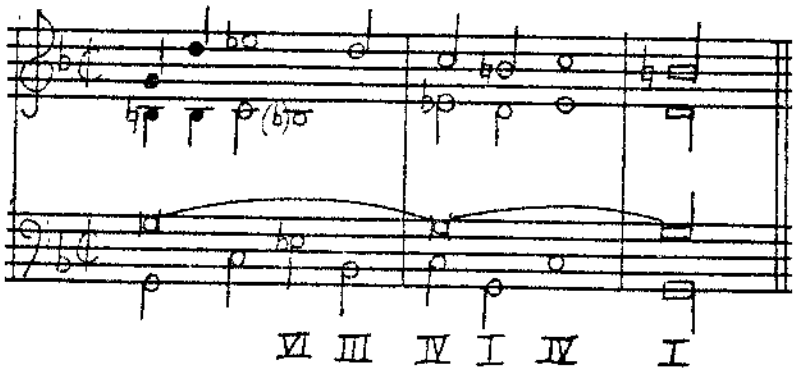


Ex. 205--Kerle: Missa resurrexit pastor bonus, Kyrie.

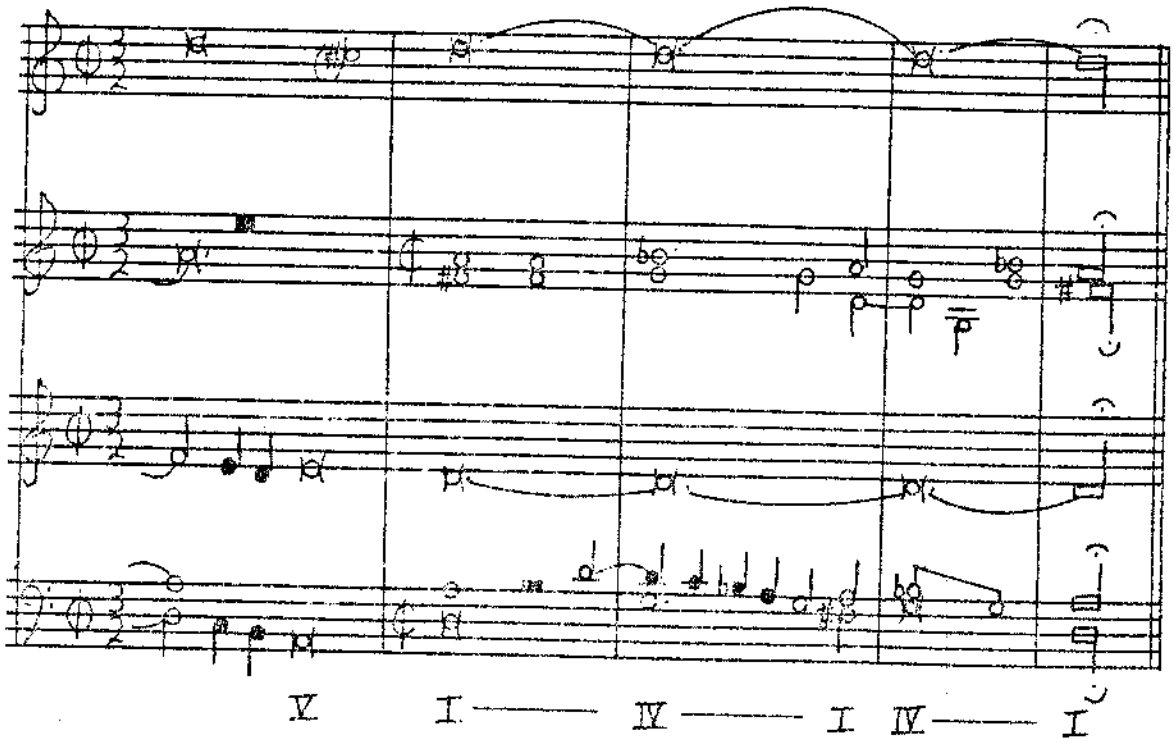


*Bass clef "D" is very questionable as a chord tone. Alto voice leads to the conclusion that both "D's" are types of suspensions, thus weakening the possibility of interpreting this chord as an irregular six-four.

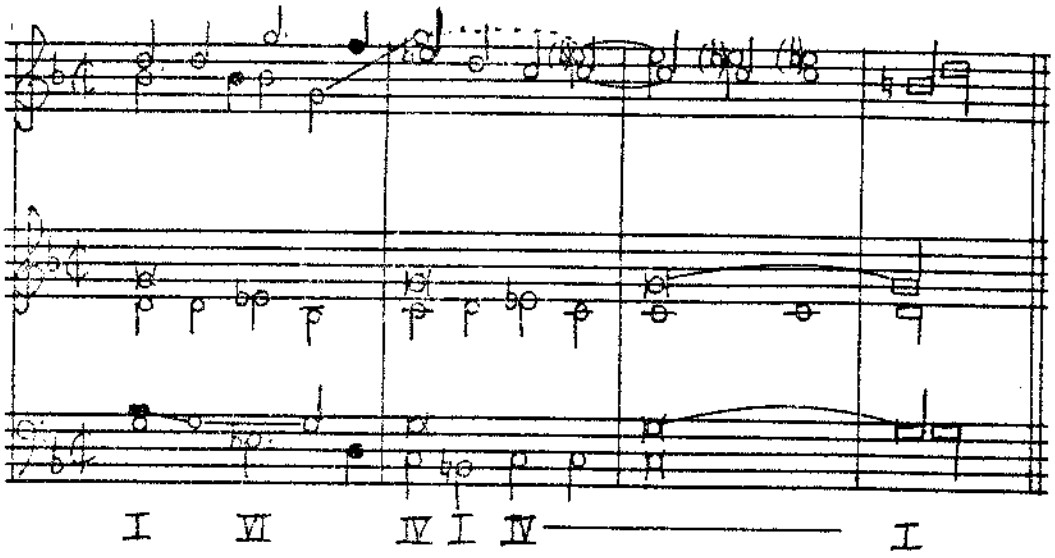
Ex. 206--Lassus: Missa super Ie ne menge poinct de porcq, Sanctus.



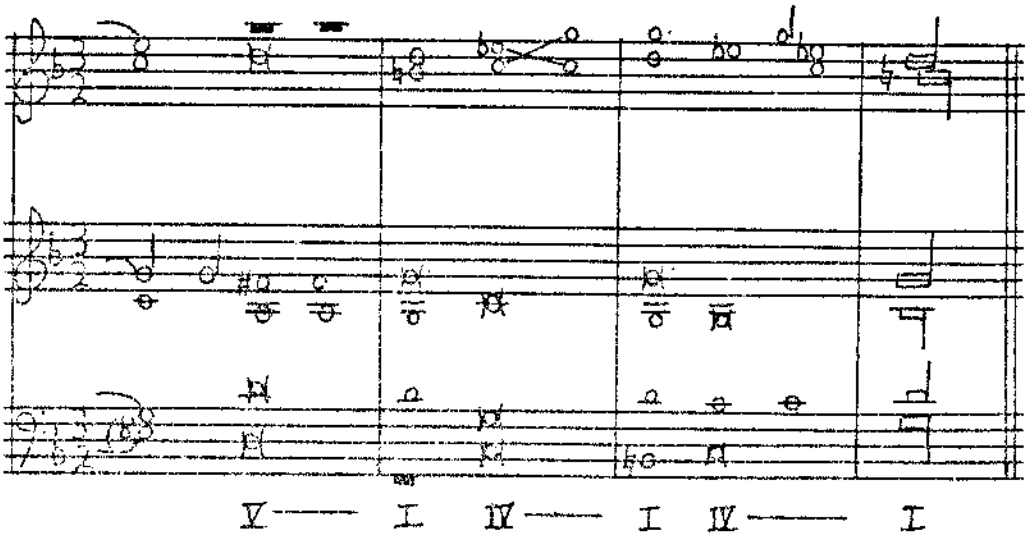
Ex. 207--Lassus: Missa ad imitationem moduli Surge propera, Sanctus.



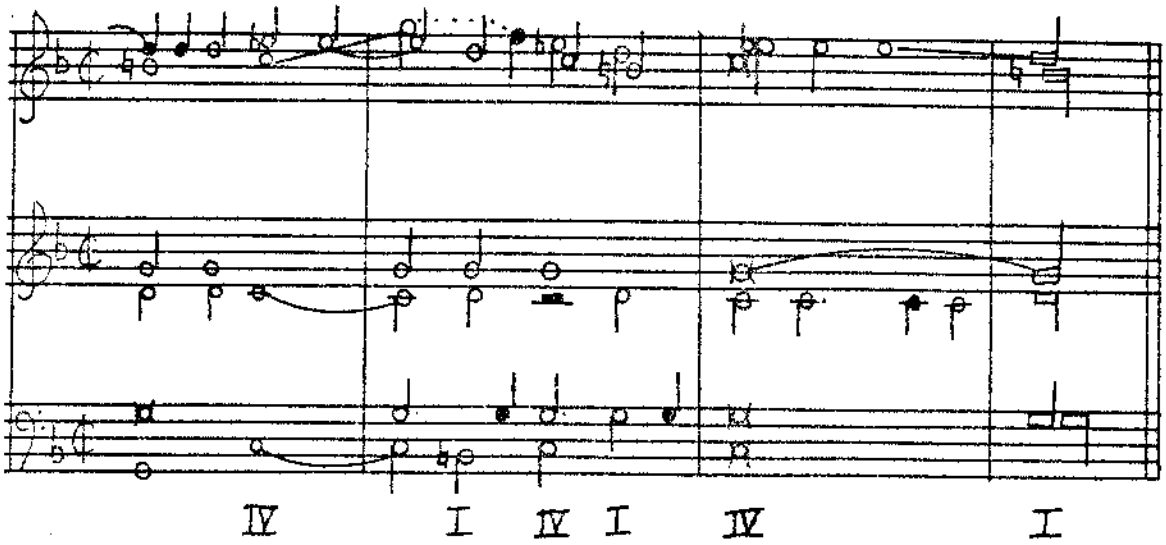
Ex. 208--Lassus: Missa super Jesus ist ein süsser Nam', Gloria.



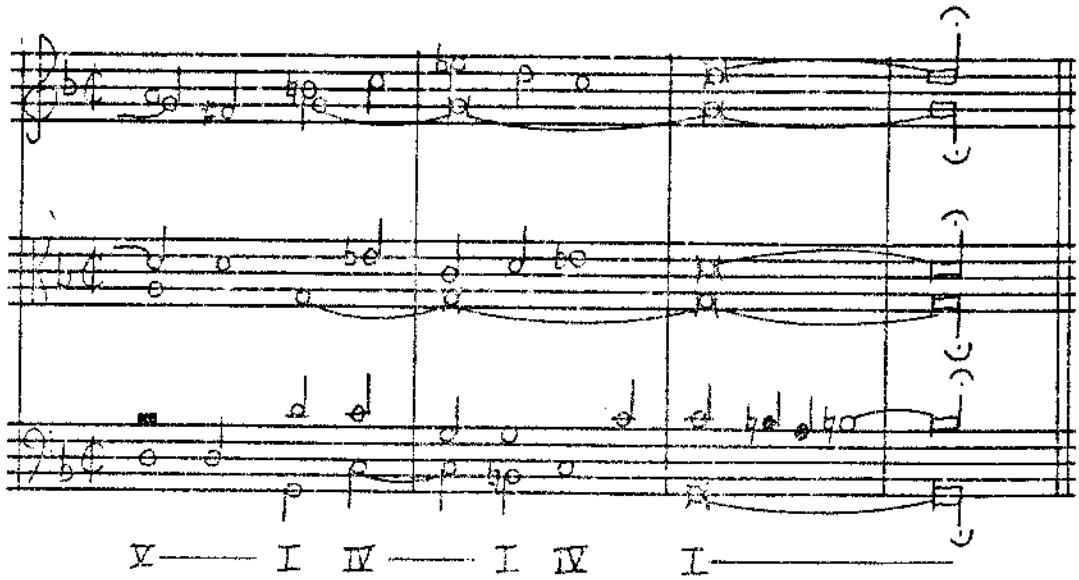
Ex. 209--Lassus: Missa super Jesus ist ein süsser Nam', Sanctus.



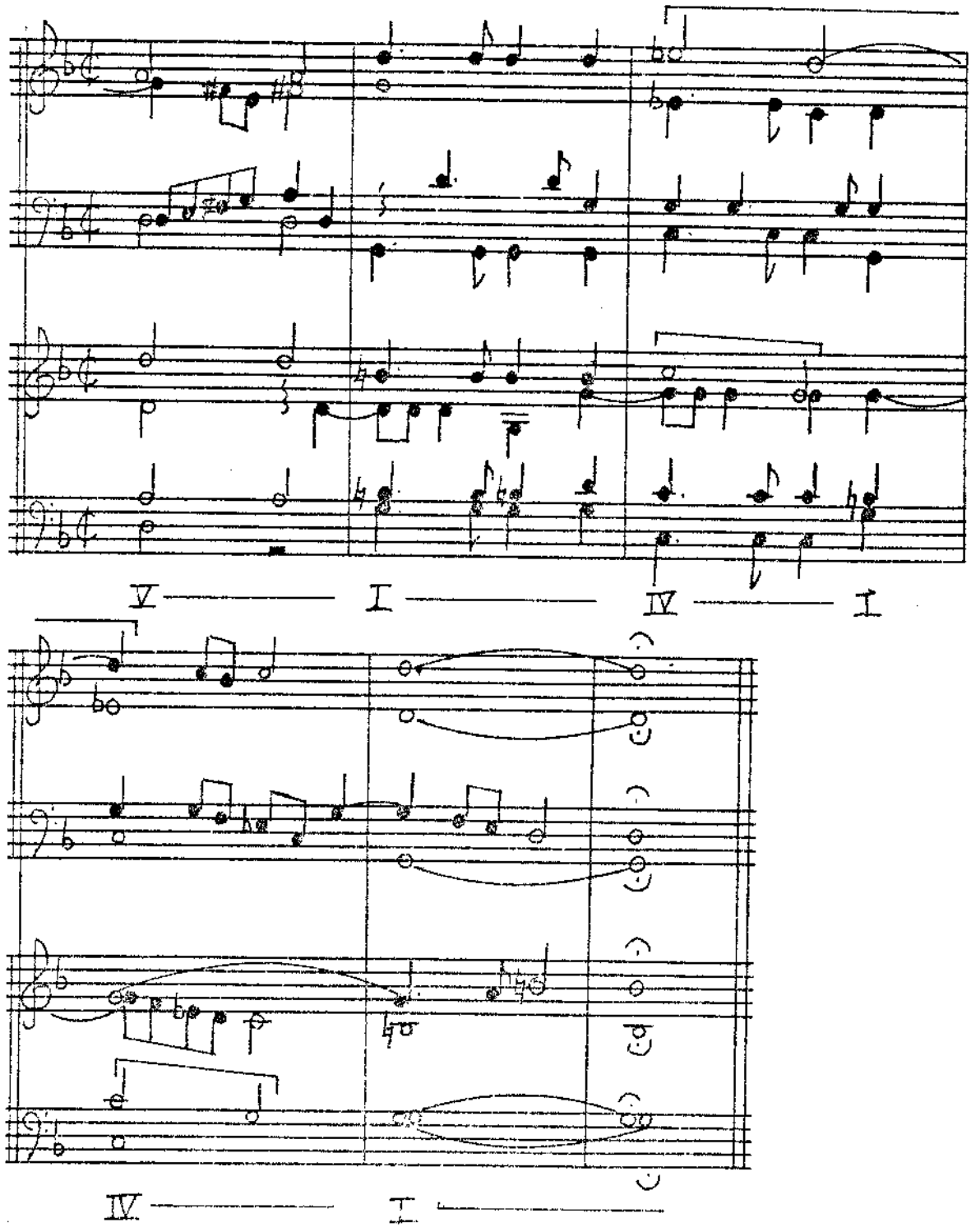
Ex. 210--Lassus: Missa super Jesus ist ein süsser Nam', Agnus Dei.



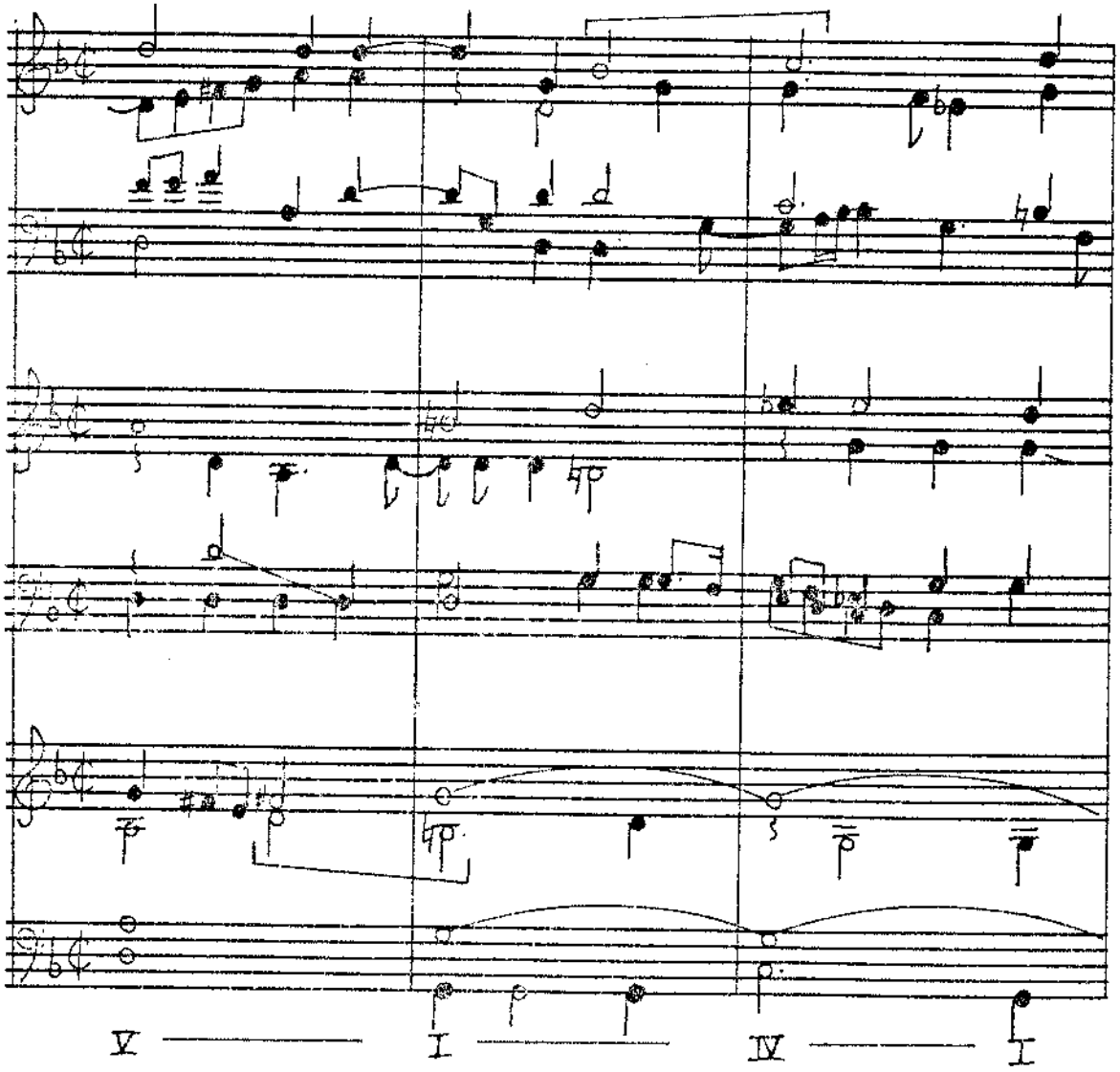
Ex. 211--Lassus: Missa super In principio, Sanctus.



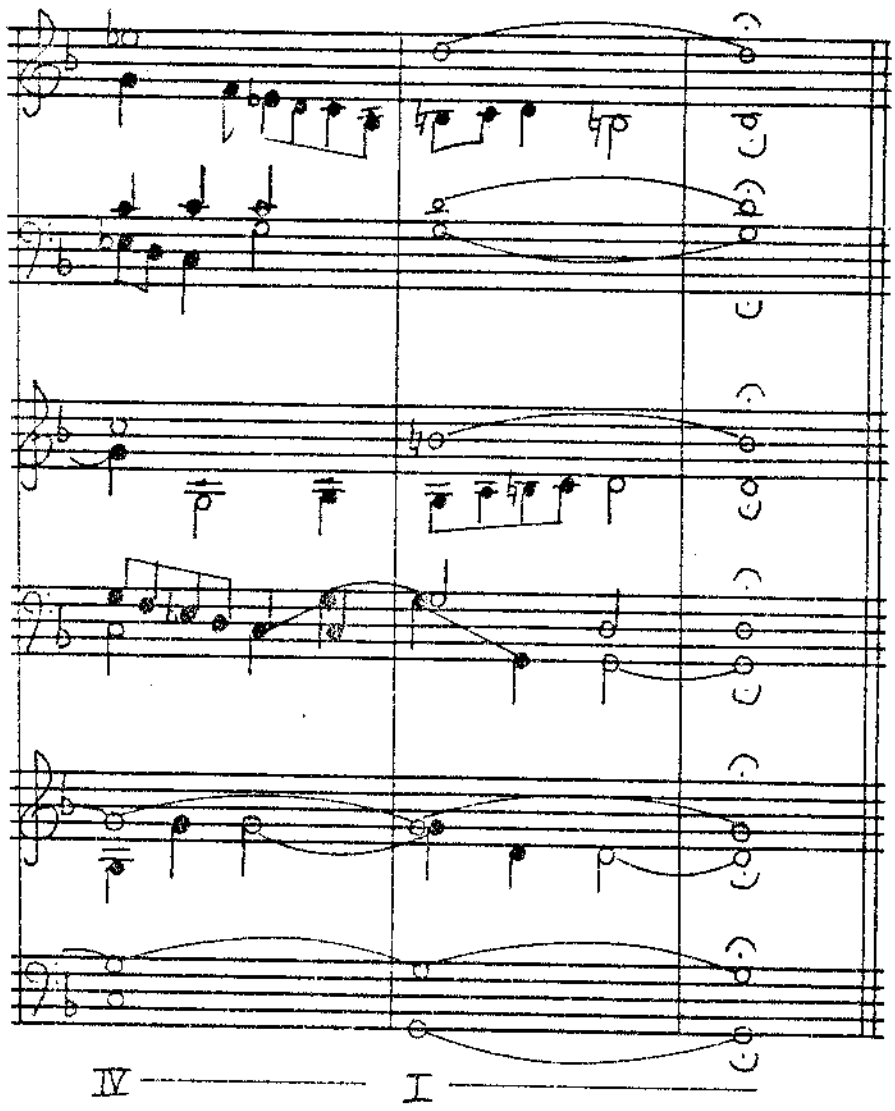
Ex. 212--Merulo: Missa Cara la vita mia, Agnus Dei.



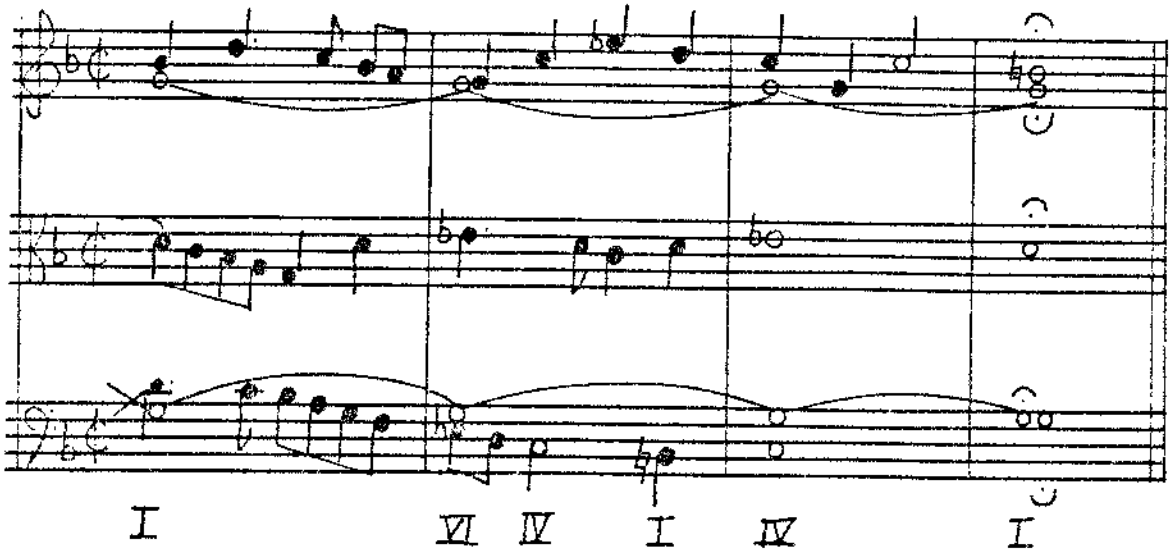
Ex. 213--Merulo: Missa Benedicam Dominum, Agnus Dei.



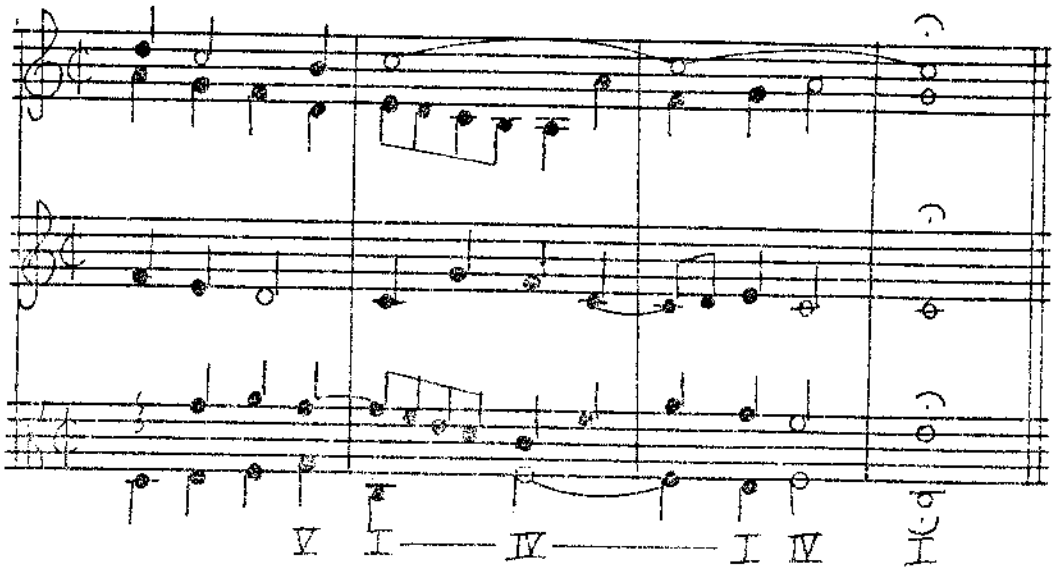
Ex. 213--Continued



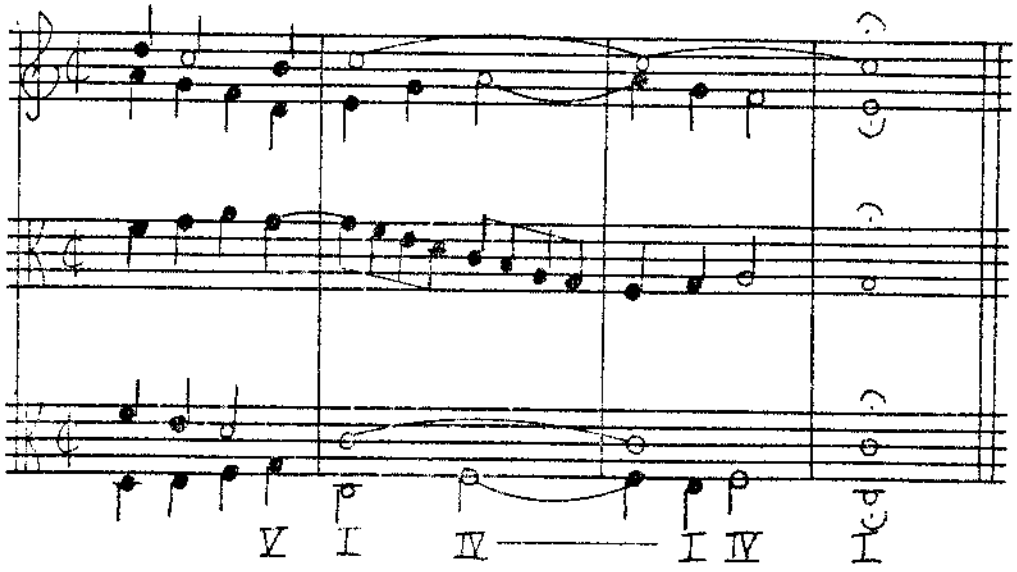
Ex. 214--Merulo: Missa Susanne un giour, Credo.



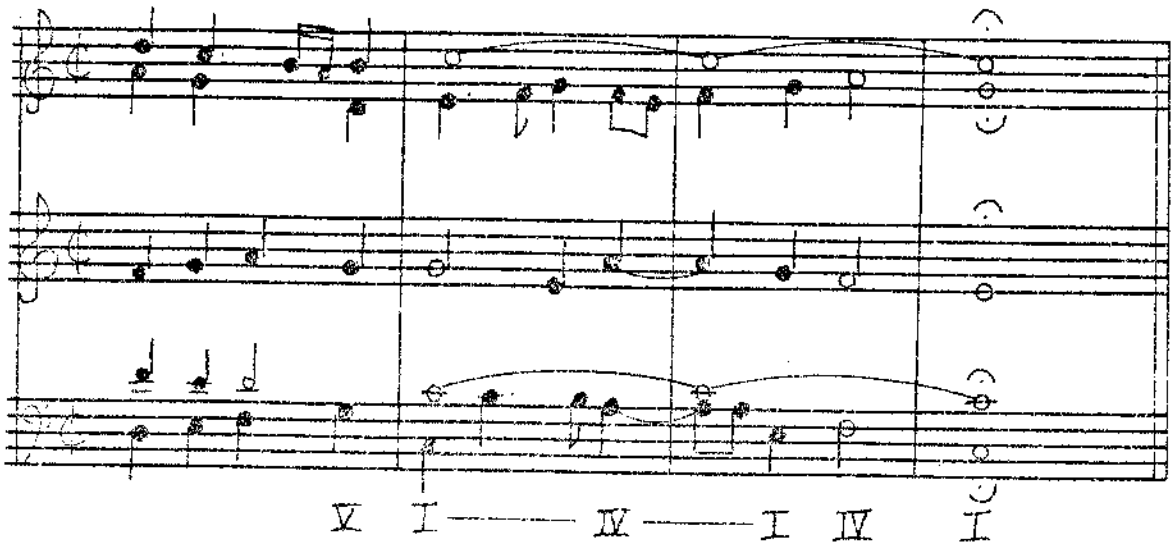
Ex. 215--Merulo: Missa Oncques amour, Kyrie.



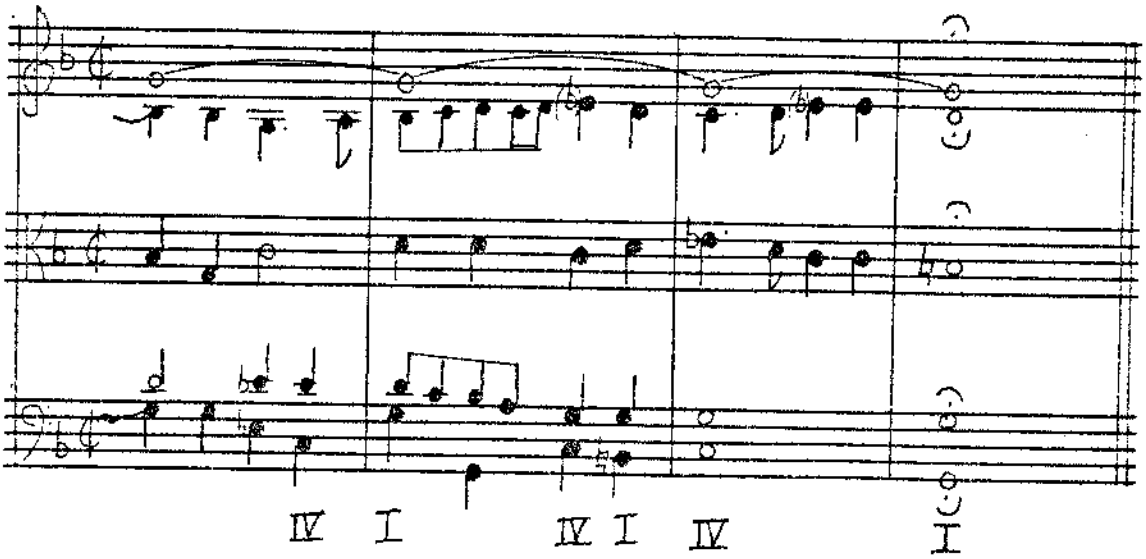
Ex. 216--Merulo: Missa Oncques amour, Gloria.



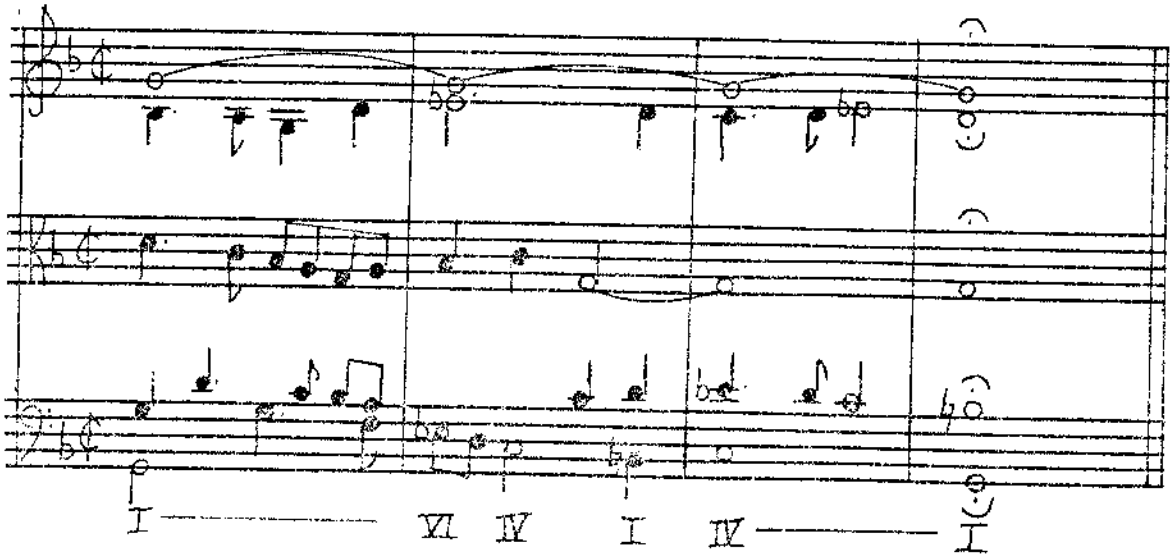
Ex. 217--Merulo: Missa Oncques amour, Credo.



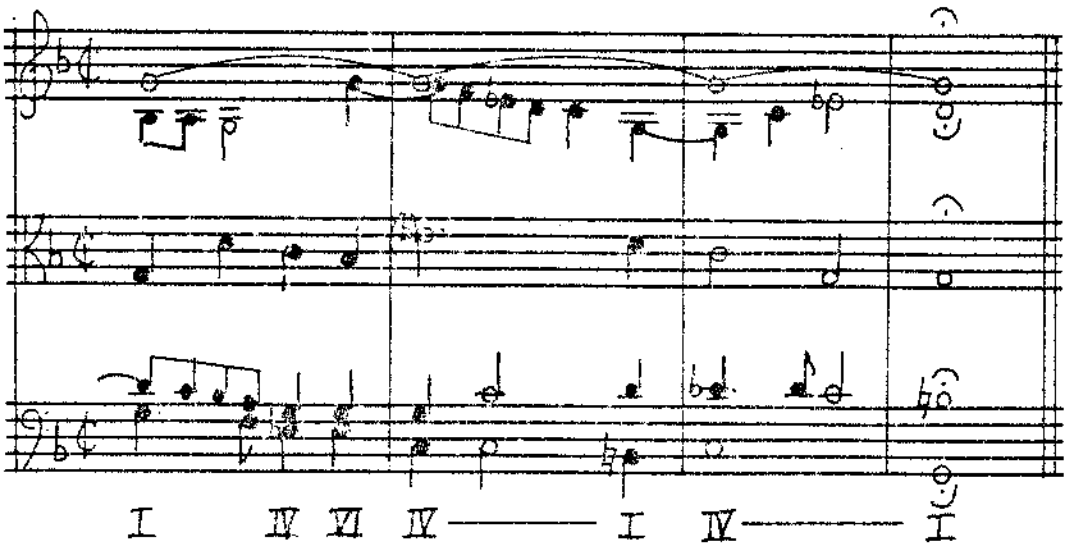
Ex. 218--Merulo: Missa Aspice Domine, Kyrie.



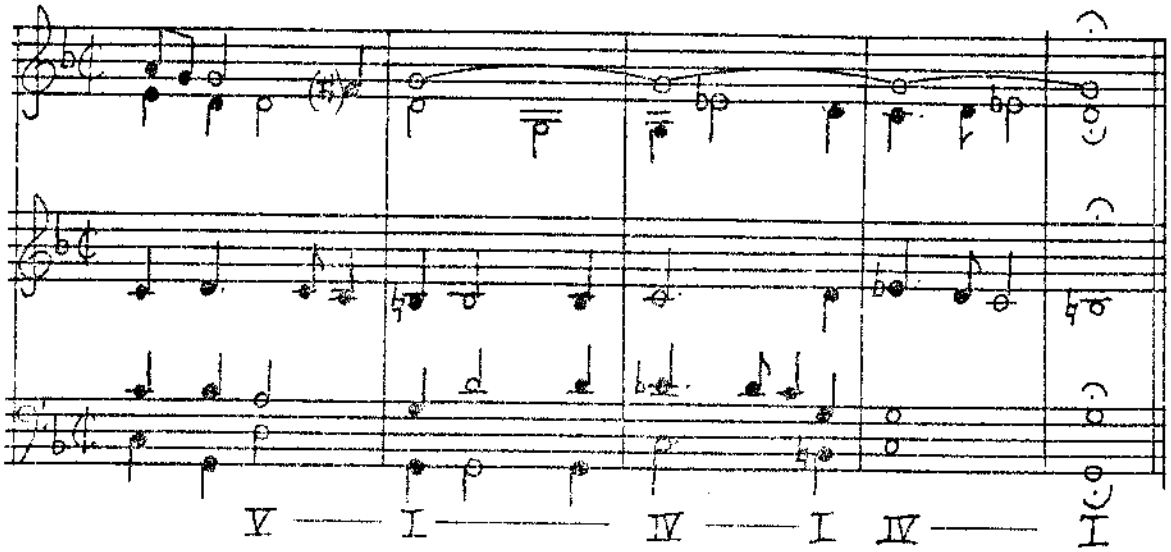
Ex. 219--Merulo: Missa Aspice Domine, Gloria.



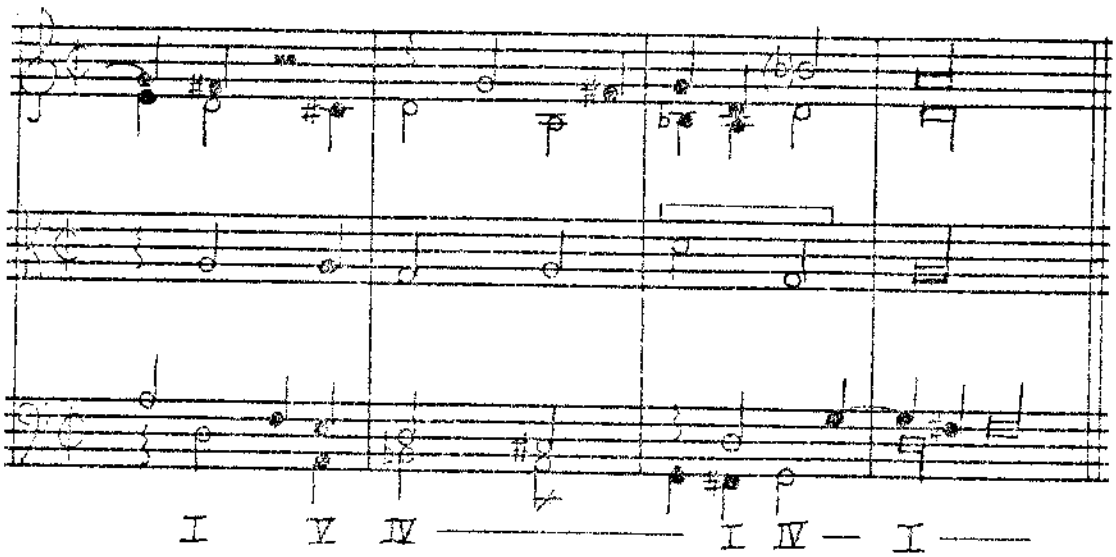
Ex. 220--Merulo: Missa Aspice Domine, Credo.



Ex. 221--Merulo: Missa Aspice Domine, Agnus Dei.

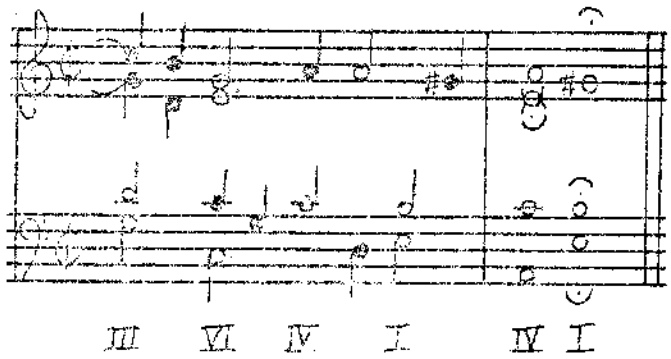


Ex. 222--Monte: Missa Ad te levavi oculos meos, Agnus Dei.

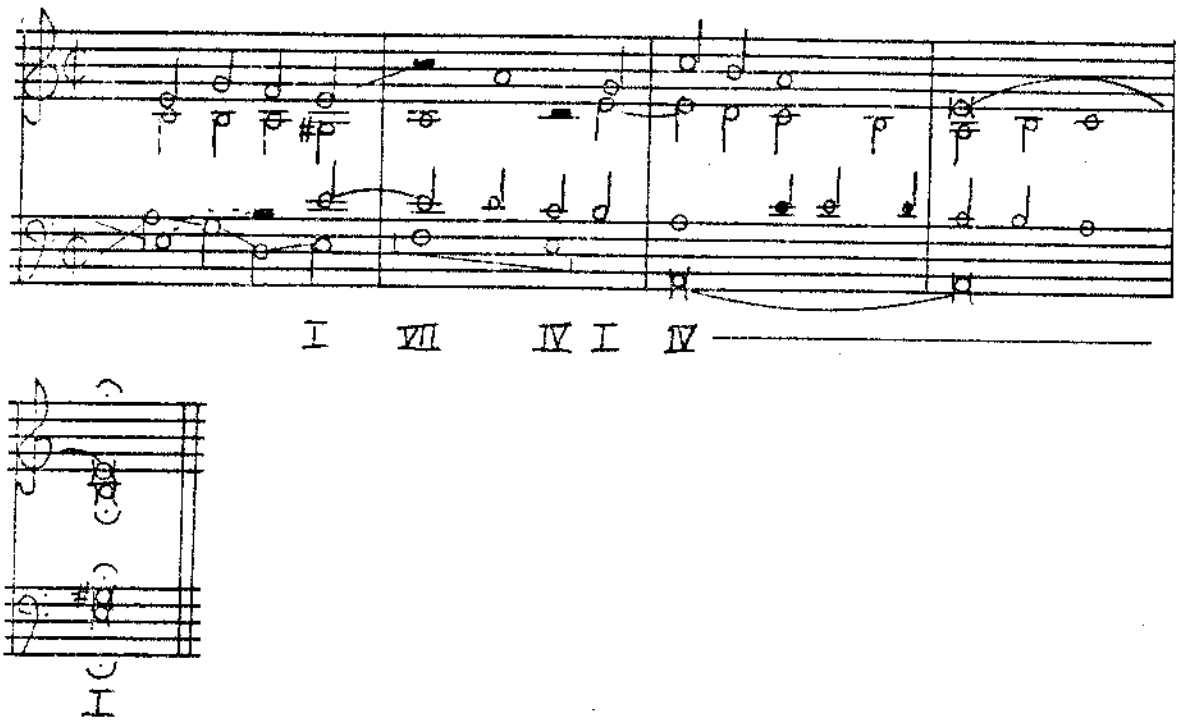


*A III chord is possible here except for the irregular use of an "F#" as an essential tone in the Dorian mode.

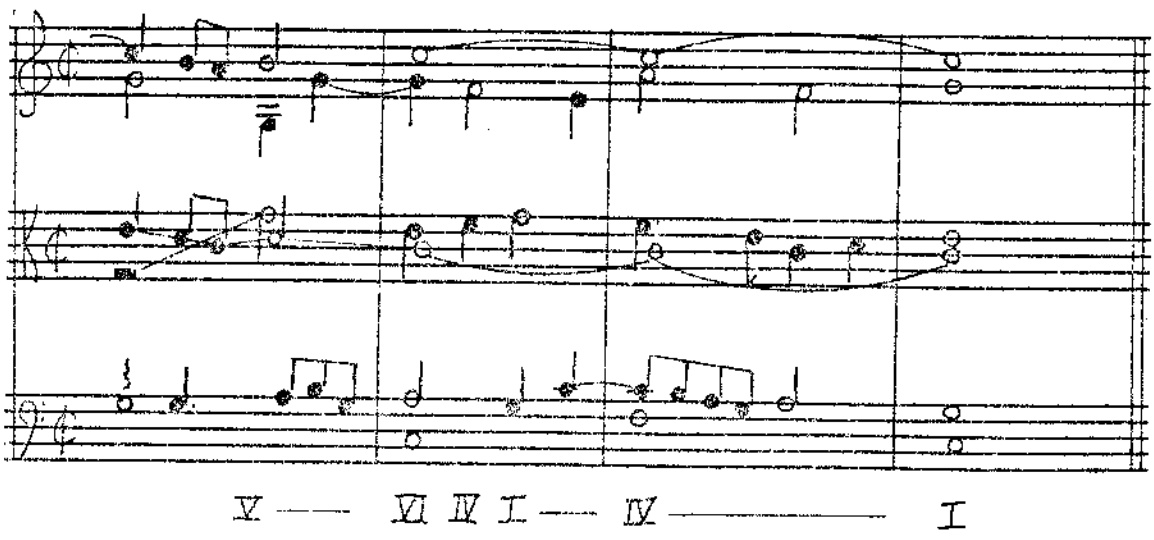
Ex. 223--Monte: Missa super Anchor che col partire, Gloria.



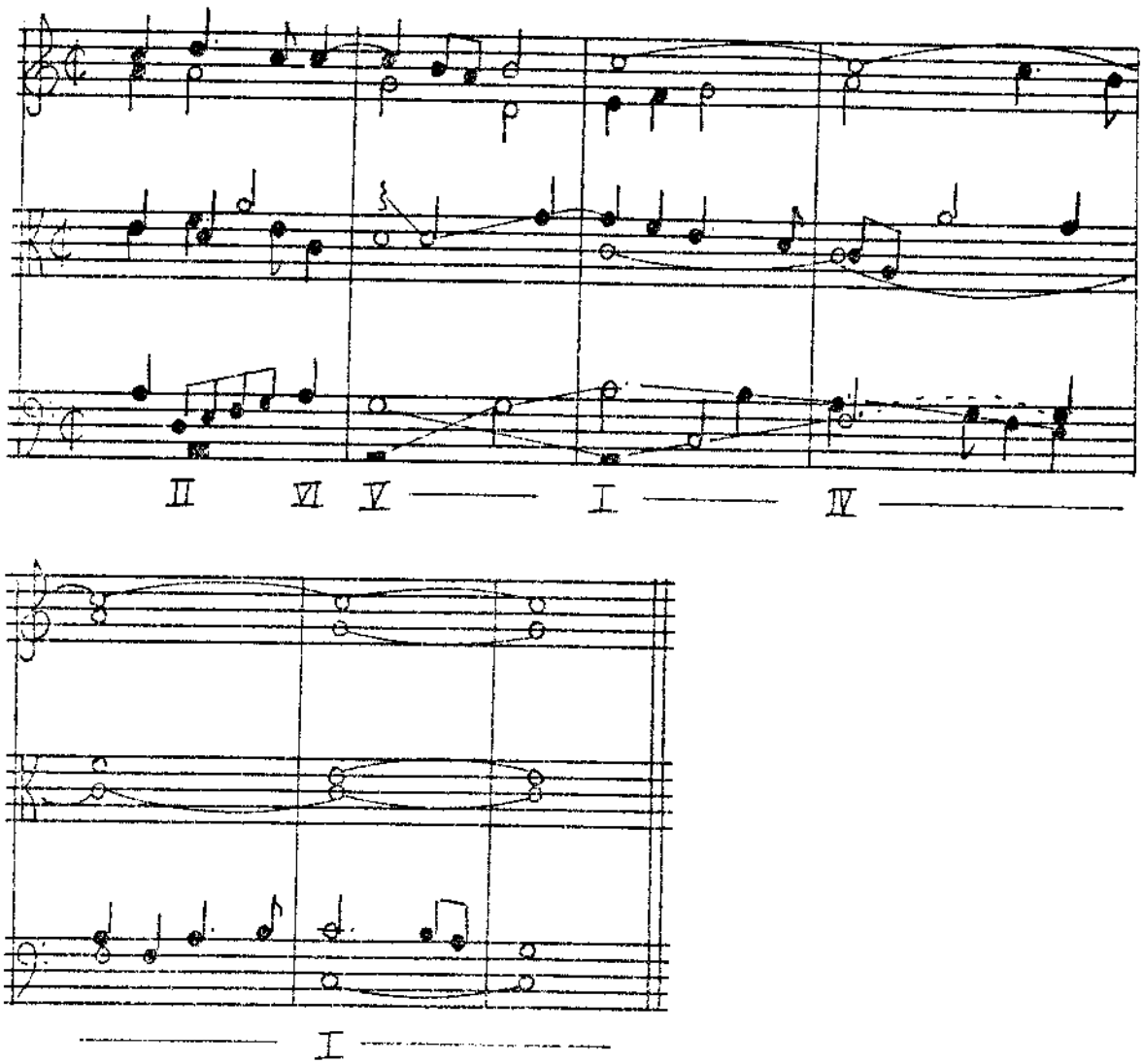
Ex. 224--Monte: Missa super Anchor che col partire, Agnus Dei.



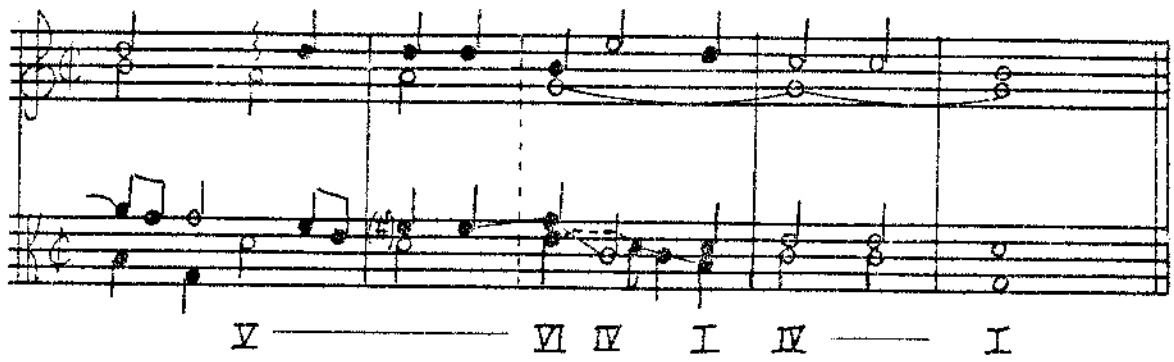
Ex. 225--Palestrina: Missa Papae Marcelli, Kyrie.



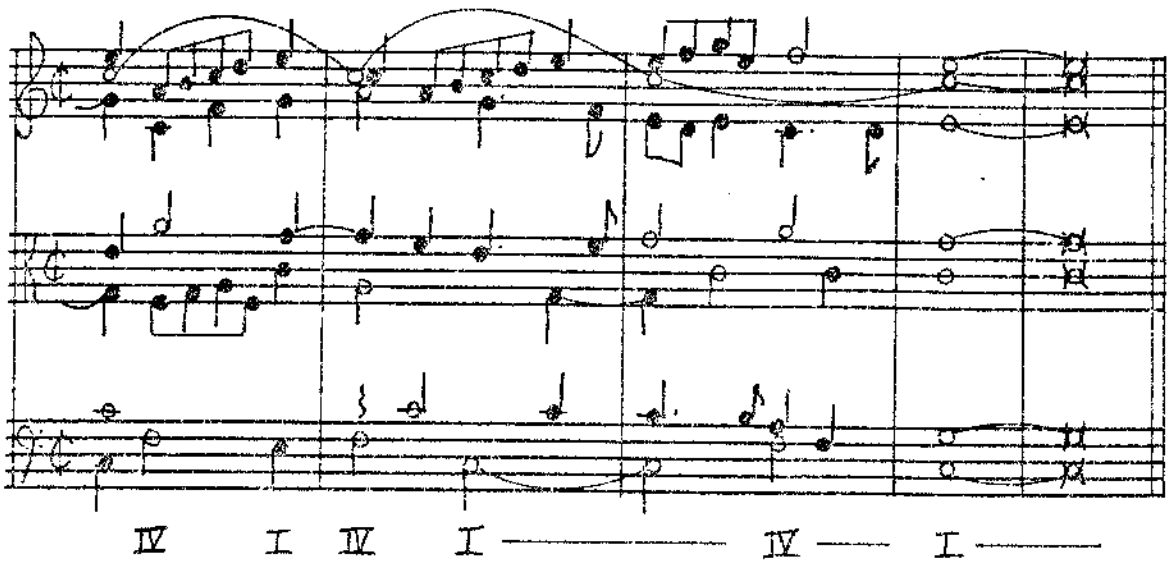
Ex. 226--Palestrina: Missa Papae Marcelli, Gloria.



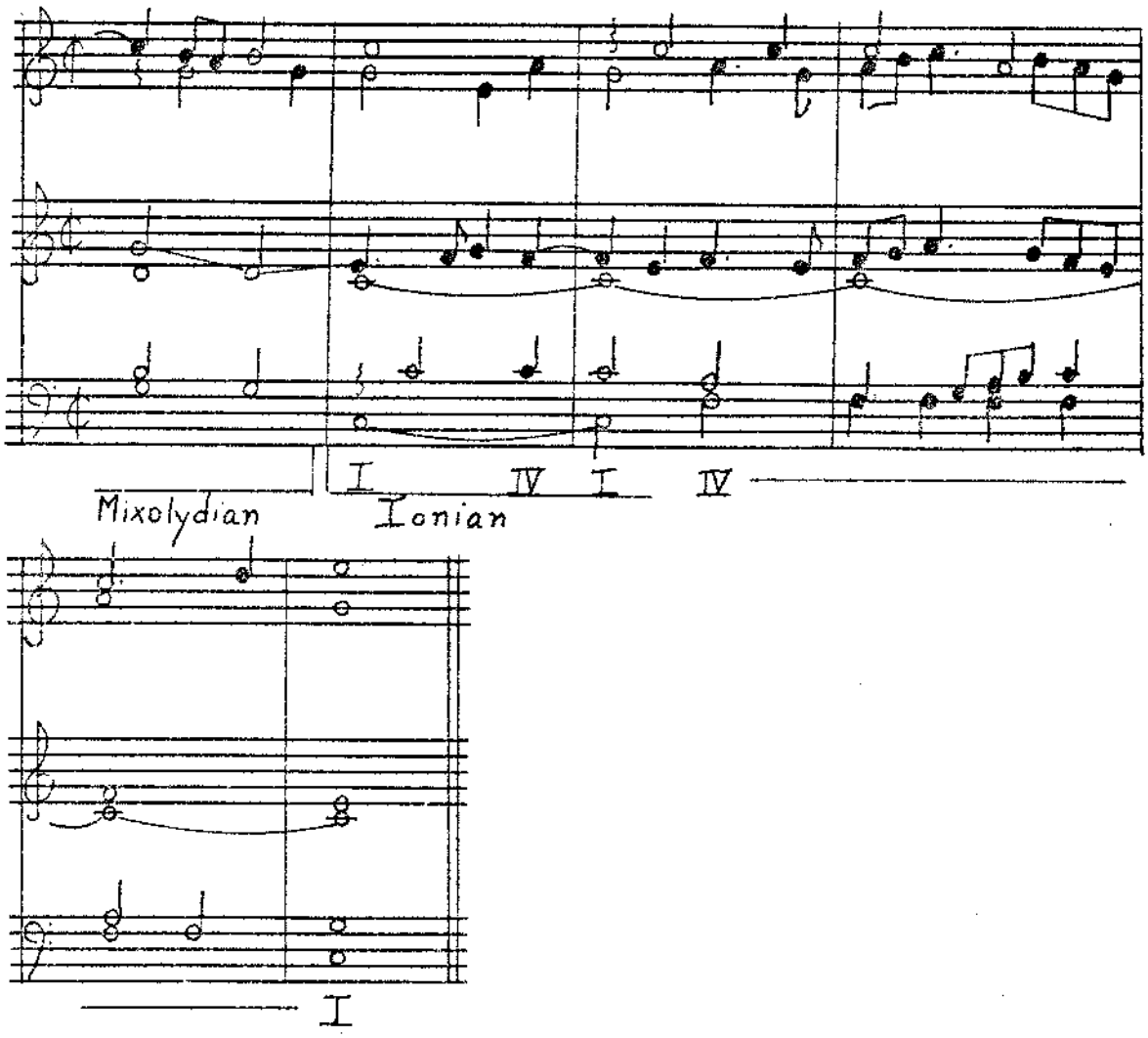
Ex. 227--Palestrina: Missa Papae Marcelli, Benedictus.



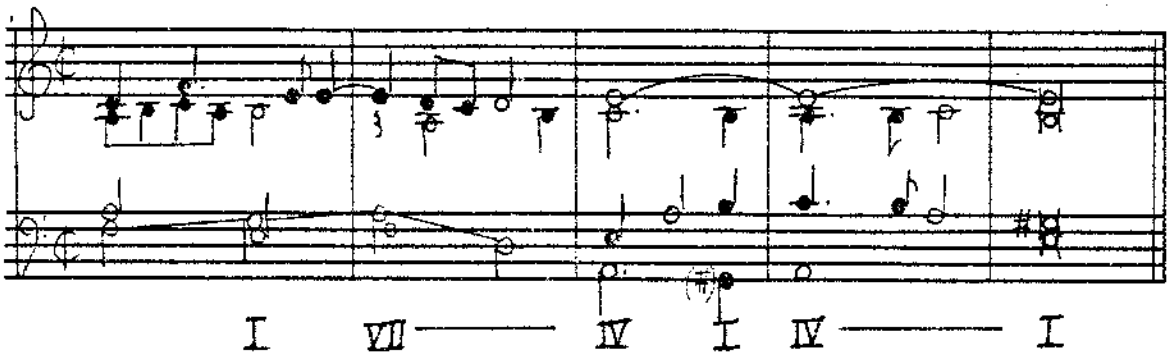
Ex. 228--Palestrina: Missa Papae Marcelli, Agnus Dei II.



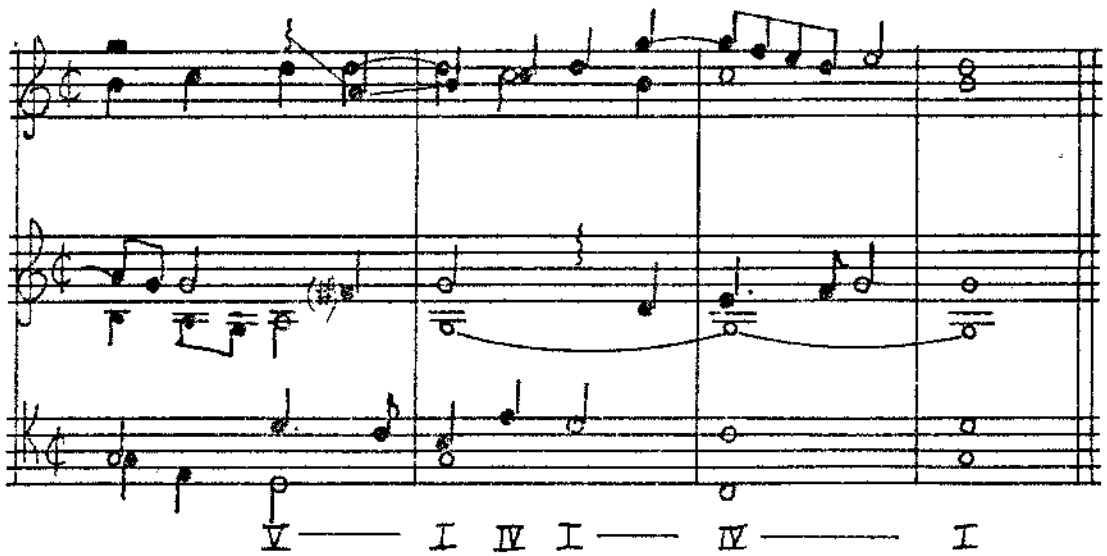
Ex. 229--Palestrina: Missa Papae Marcelli, Agnus Dei I.



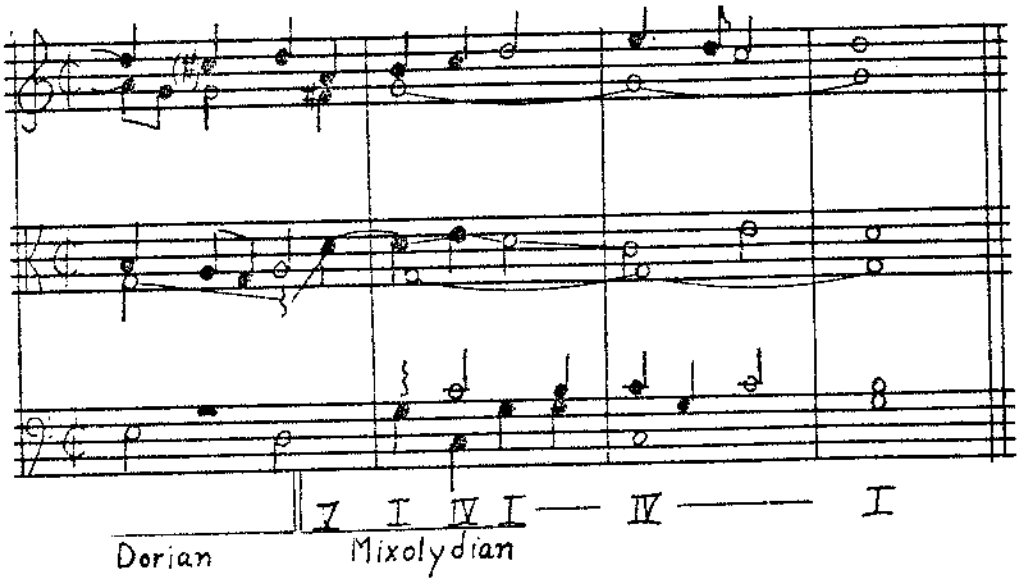
Ex. 230--Palestrina: Missa Jesu, nostra redemptio, Sanctus.



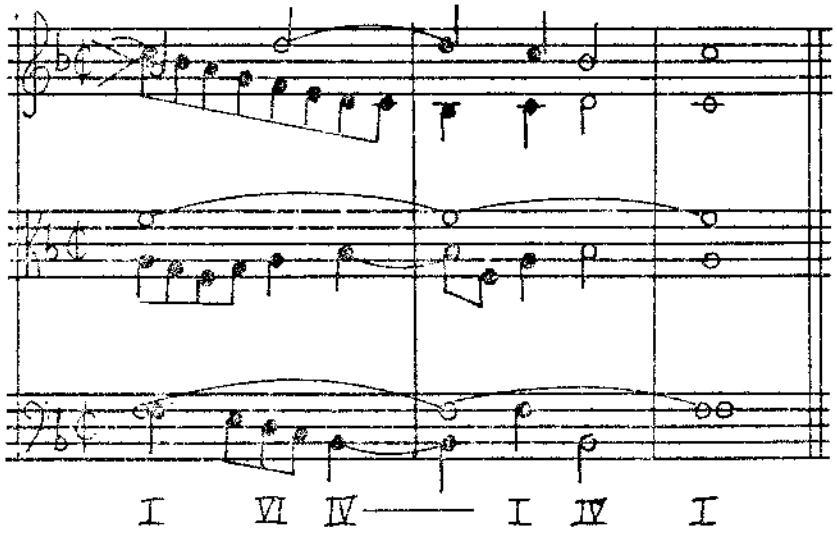
Ex. 231--Palestrina: Missa Assumpta est Maria, Credo.



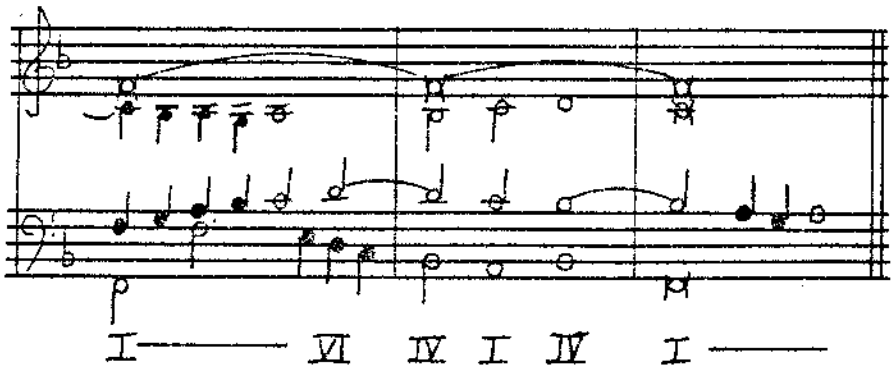
Ex. 232--Palestrina: Missa Ecce ego Joannes, Agnus Dei I.



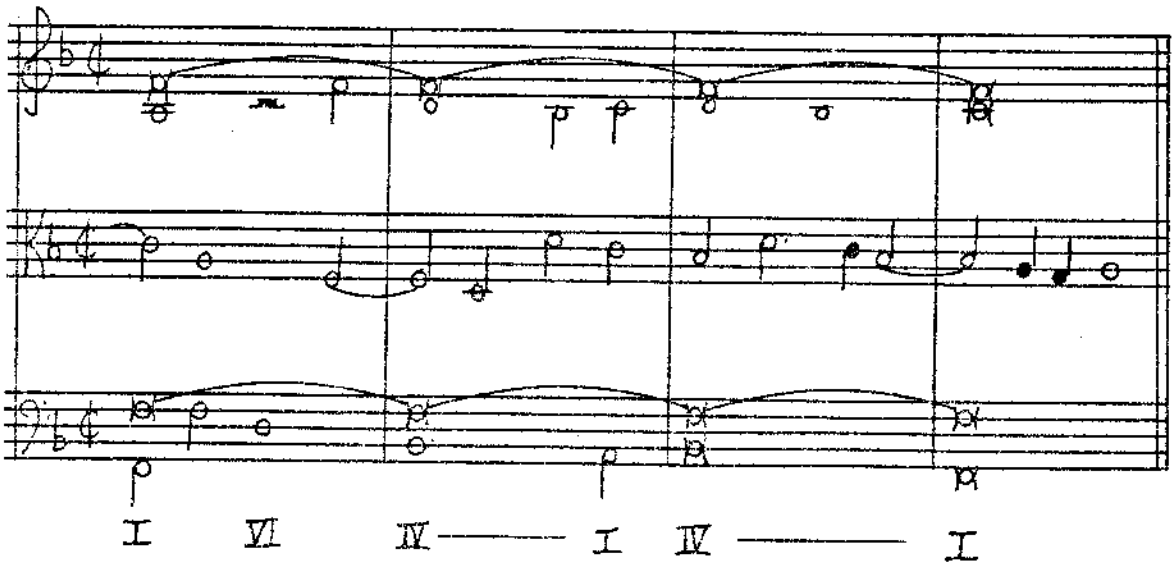
Ex. 233--Palestrina: Missa Regina coeli, Agnus Dei II.



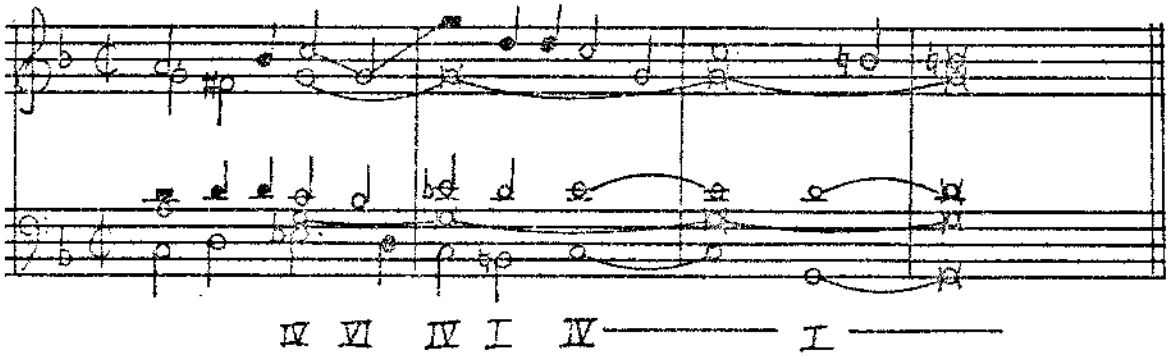
Ex. 234--Victoria: Missa Quam pulchri sunt, Gloria.



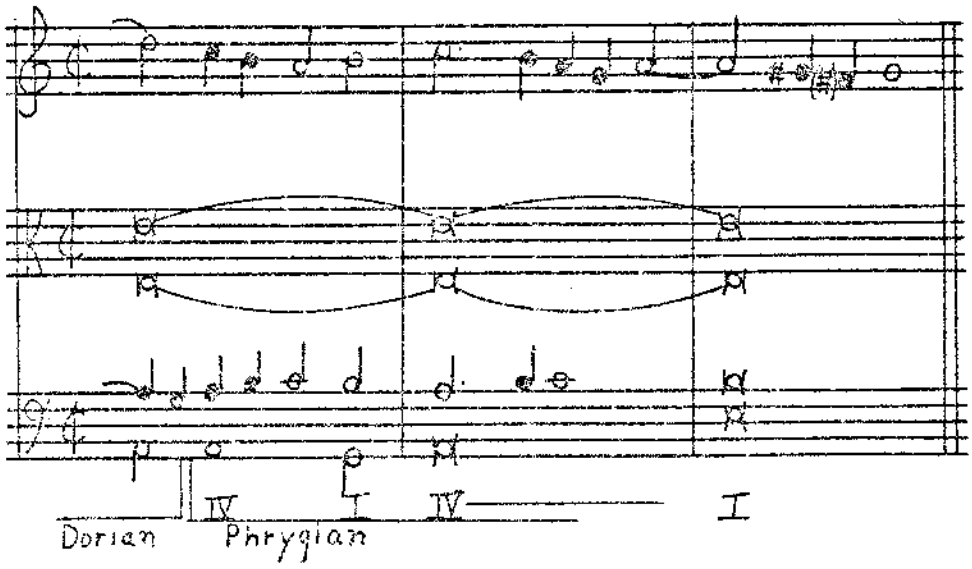
Ex. 235--Victoria: Missa Quam pulchri sunt, Agnus Dei I et II.



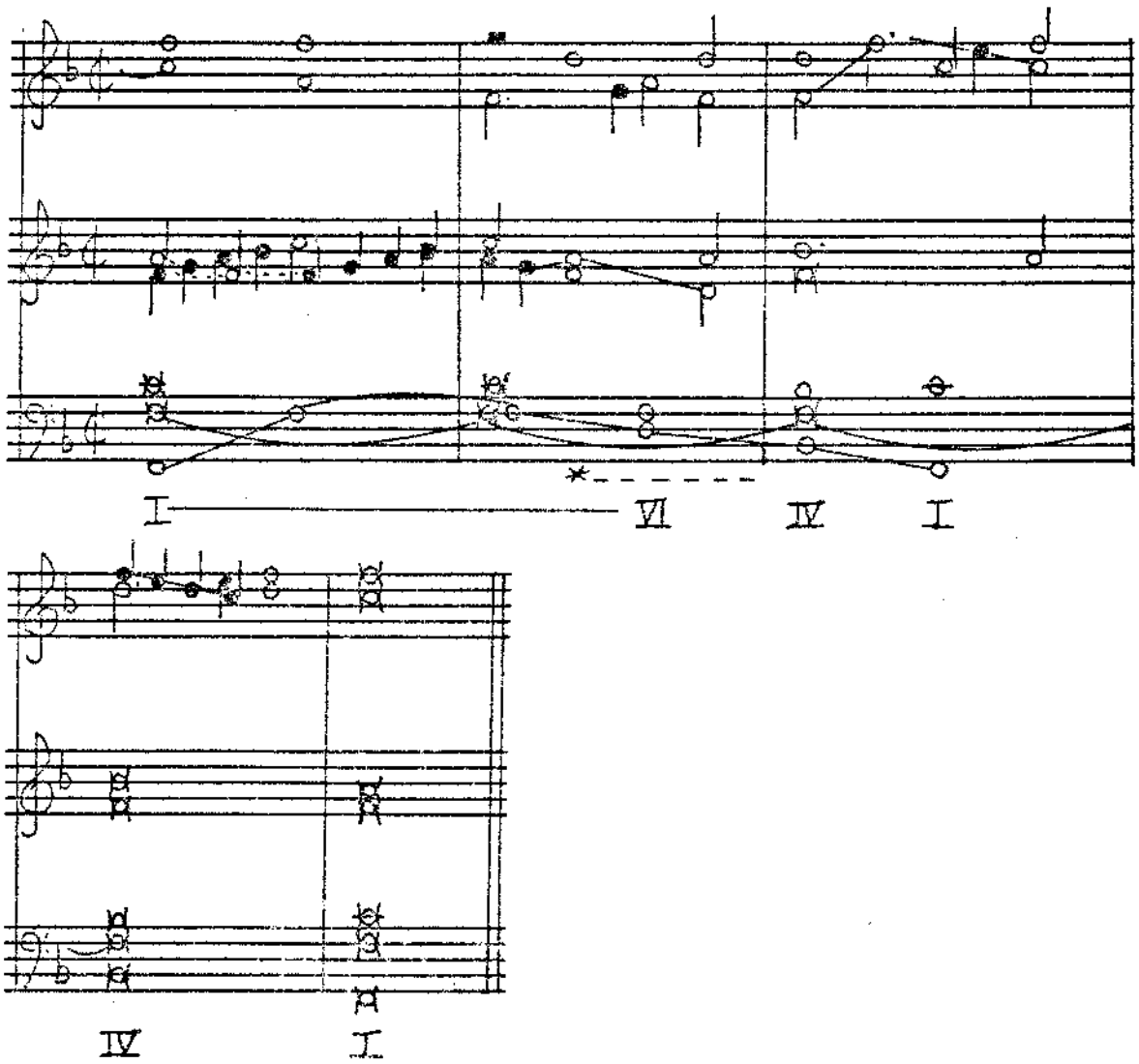
Ex. 236--Victoria: Missa O magnum mysterium, Agnus Dei.



Ex. 237--Victoria: Missa de Beata Maria, Credo.

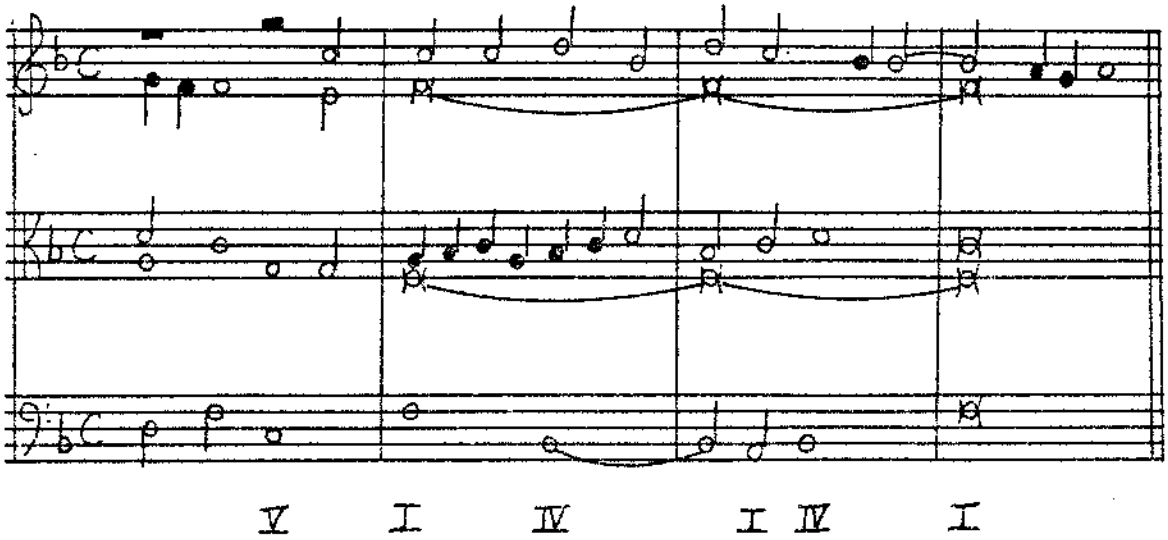


Ex. 238--Victoria: Missa de Beata Maria, Agnus Dei III.

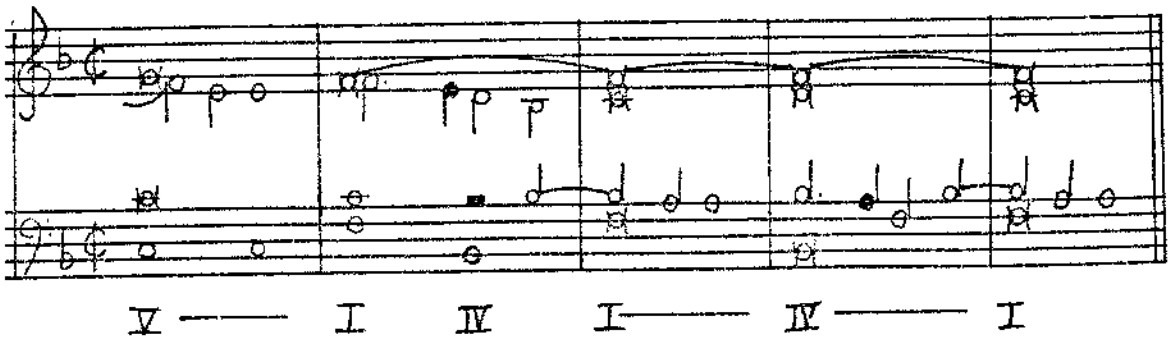


*"C" (bass clef) on second beat becomes a suspension, resolving in the next measure.

Ex. 239--Victoria: Missa de Beata Maria, Benedictus.



Ex. 240--Victoria: Missa pro Defunctis, Kyrie.



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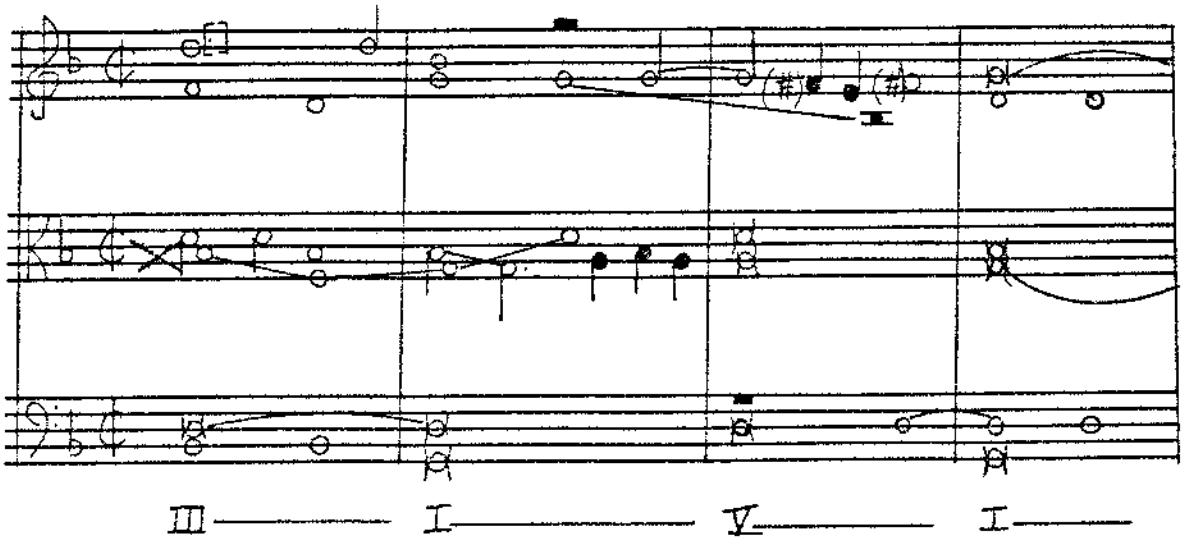
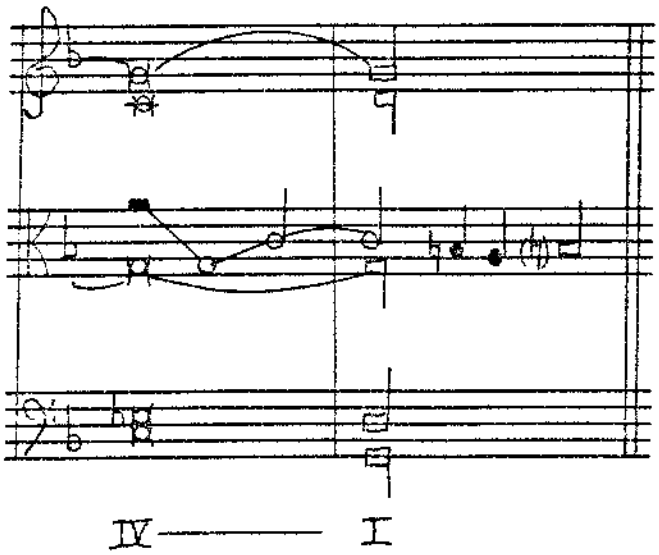
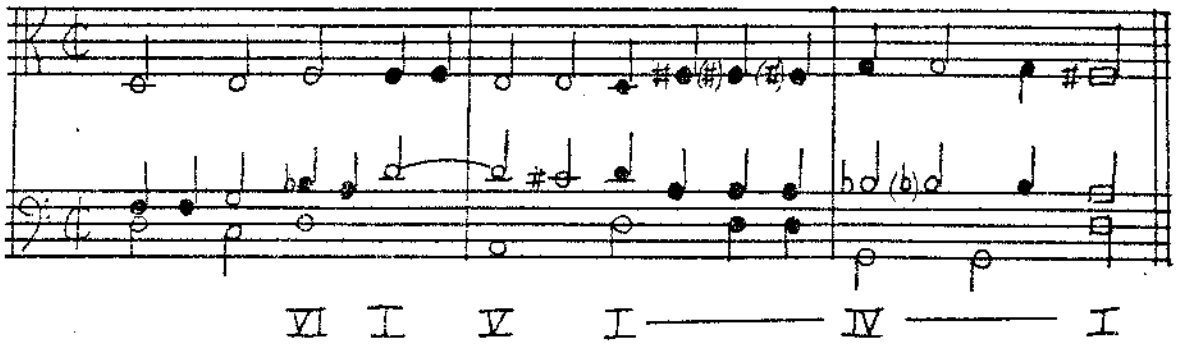
Ex. 241--Handl: Missa super Sancta Maria, Credo.

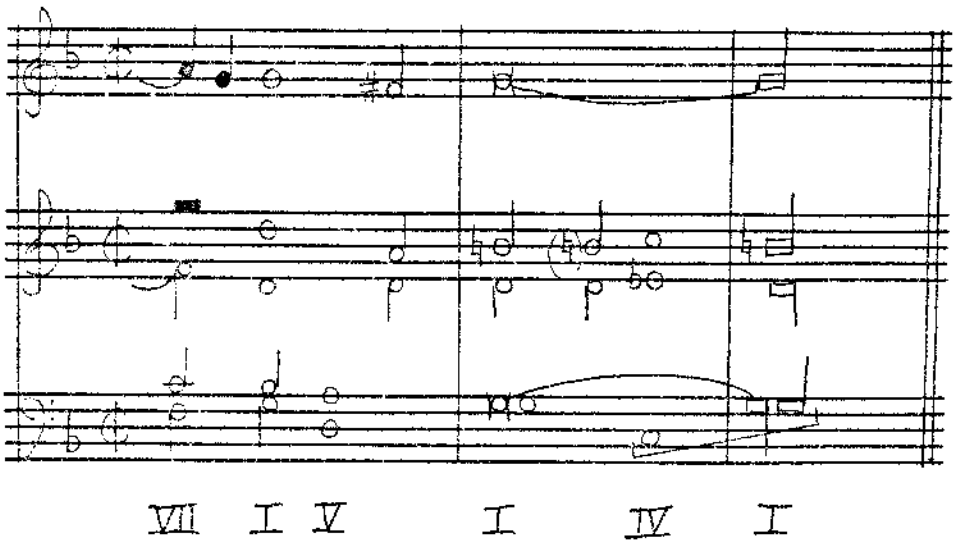




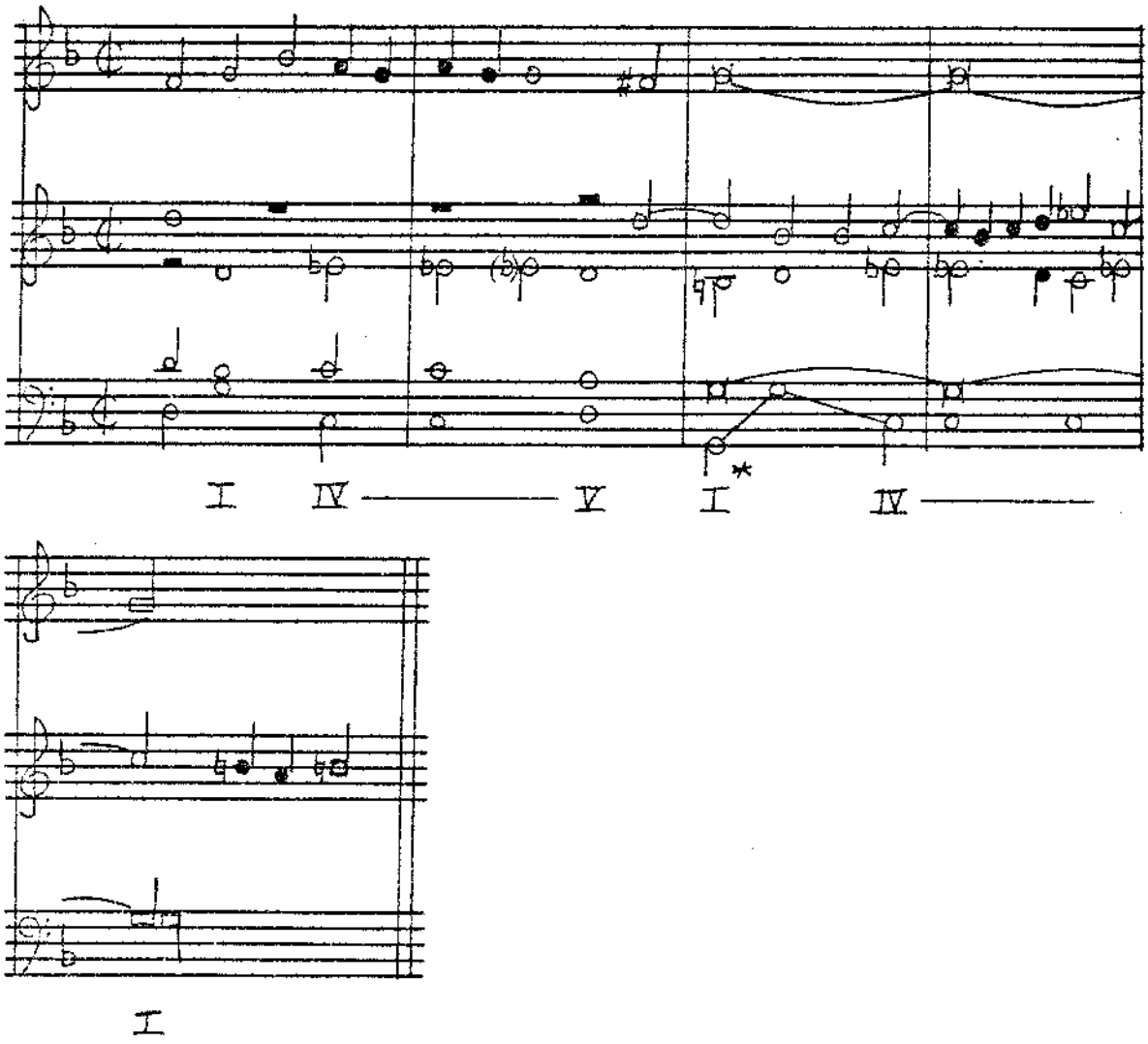
Ex. 242--Handl: Missa super Dorium, Benedictus.



Ex. 243--Handl: Missa super Adesto dolori meo, Kyrie.

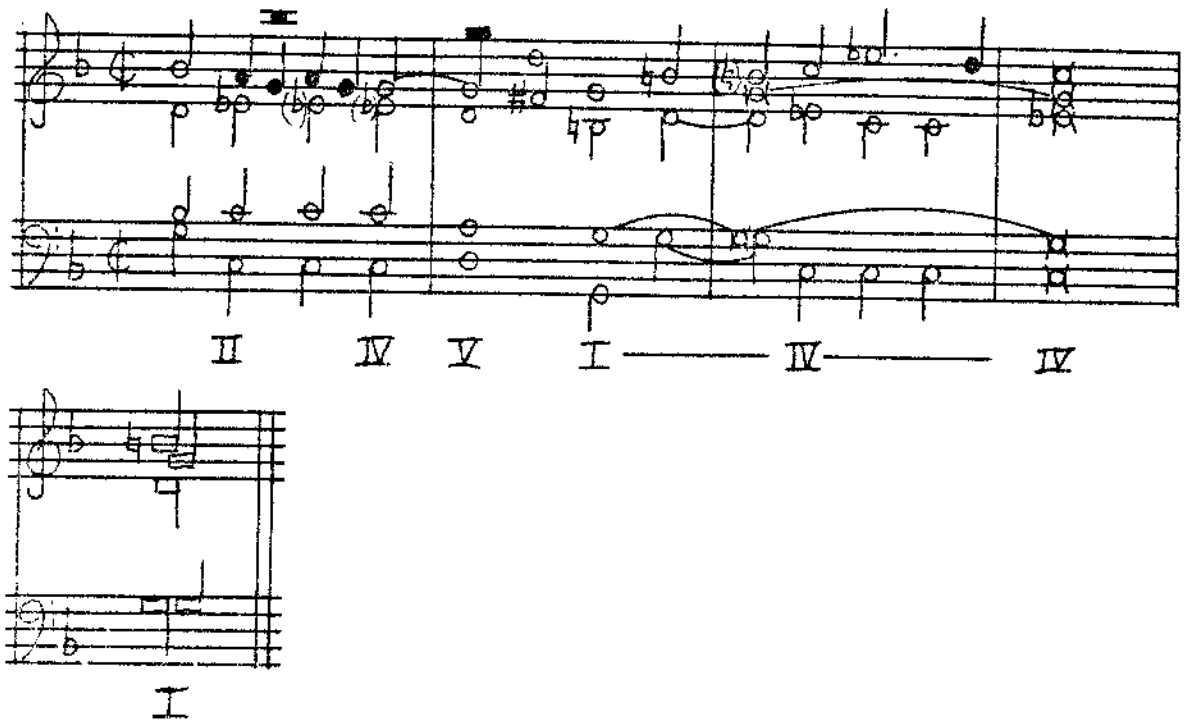


Ex. 244--Handl: Missa super Adesto dolori meo, Credo.

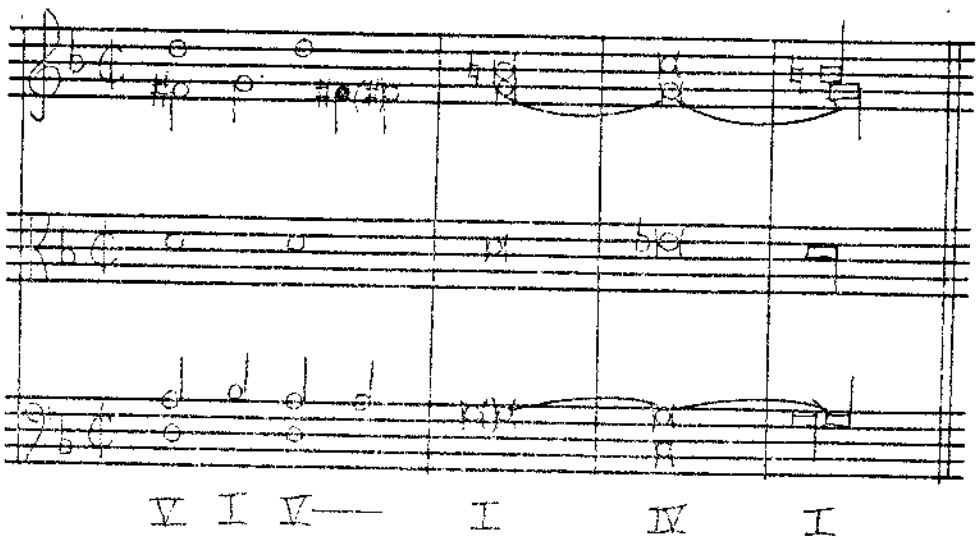


*Cross-relation ($B^{\natural}$-$B^{\flat}$) was notated as such in the edition from which example was taken.

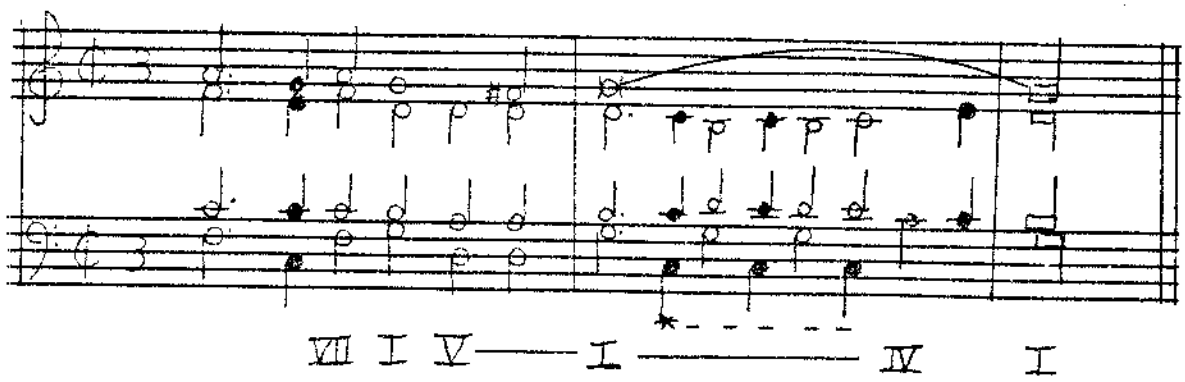
Ex. 245--Handl: Missa super Adesto dolori meo, Gloria.



Ex. 246--Handl: Missa super Transeunte Domine, Credo.

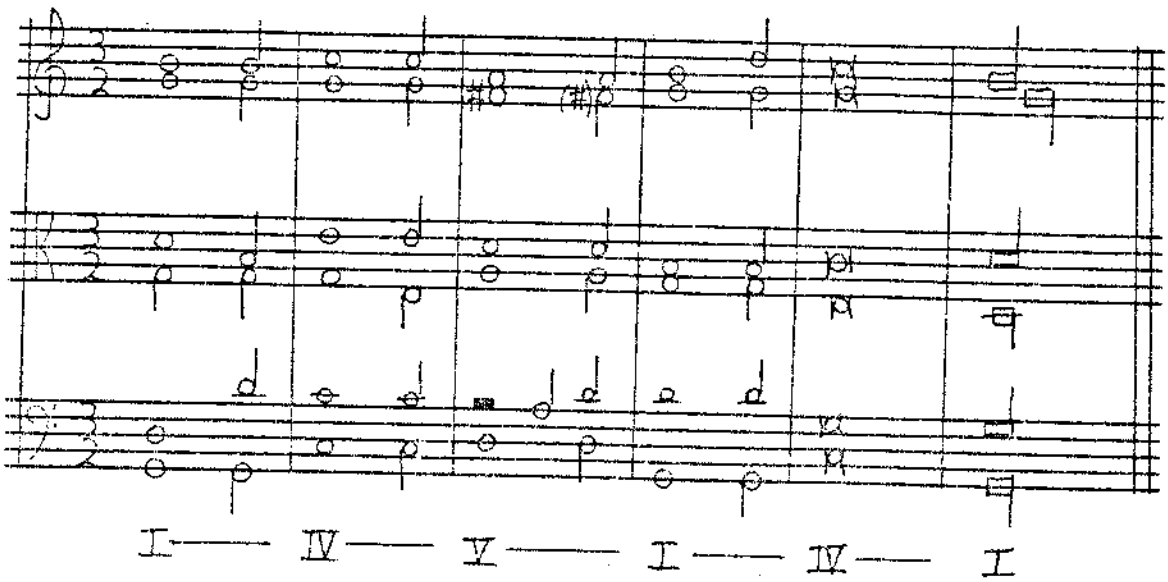


Ex. 247--Handl: Missa super Mixolydium, Kyrie.

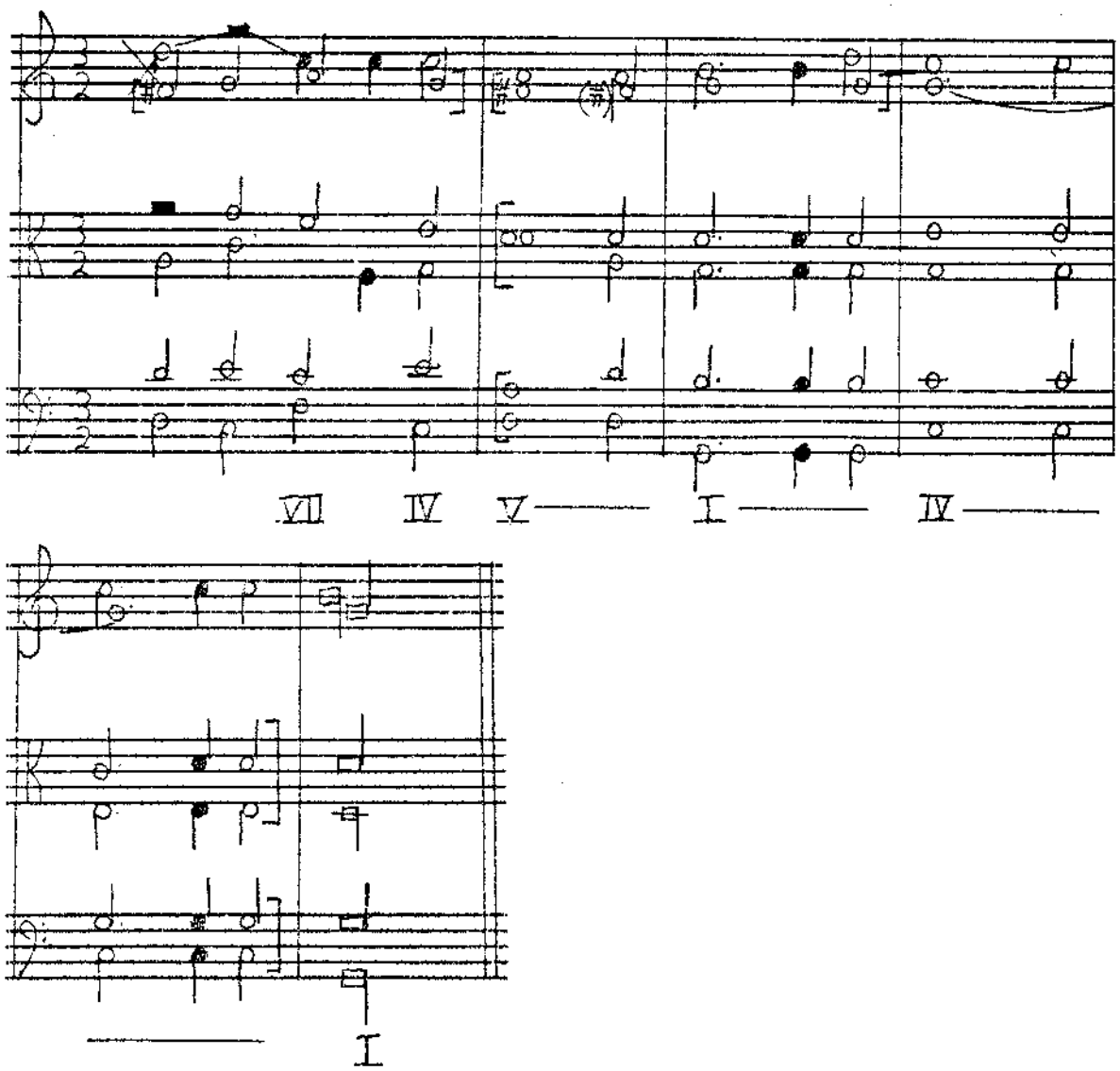


*Somewhat unusual for this style.

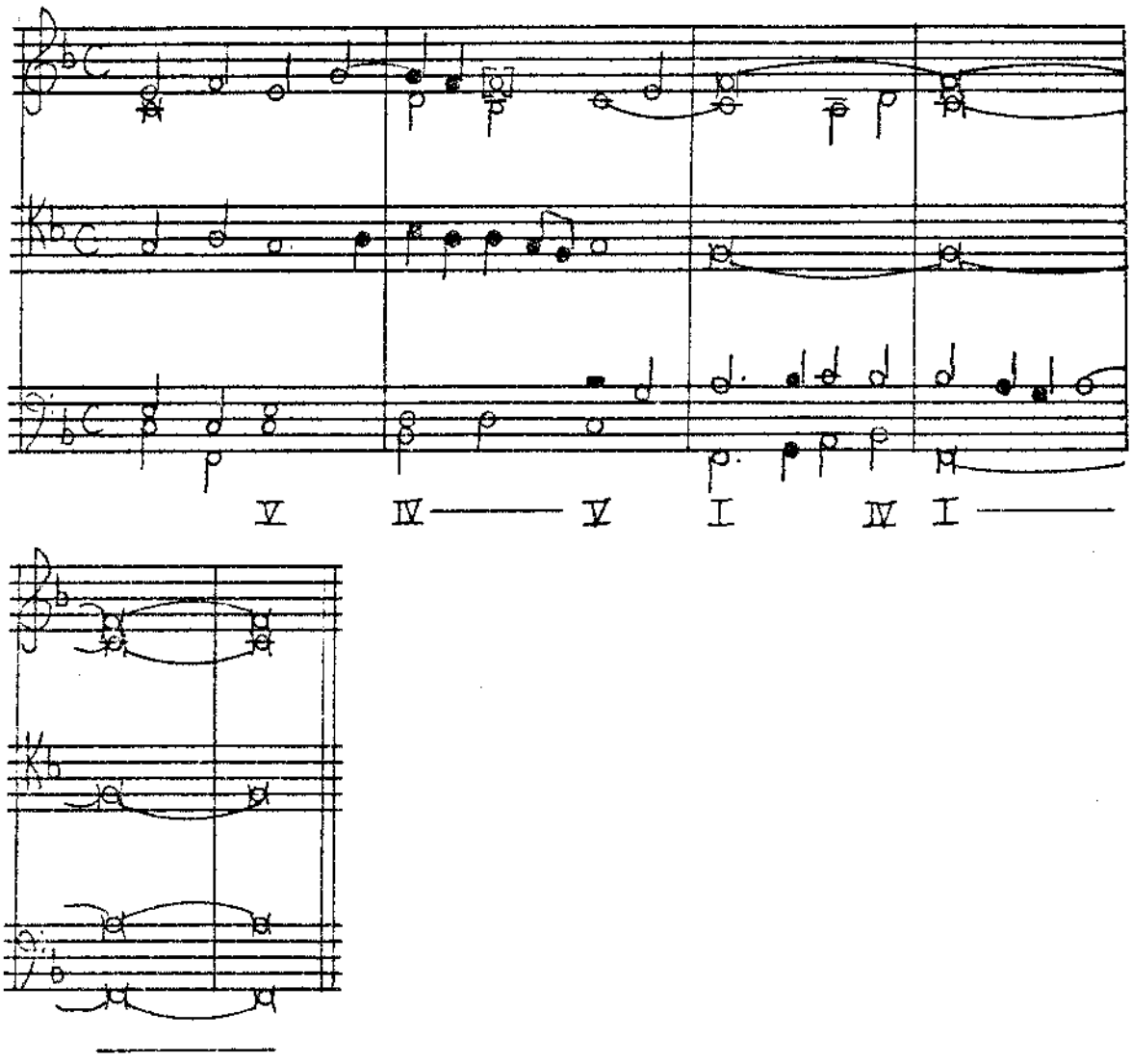
Ex. 248--Handl: Missa super Apri la fenestra, Agnus Dei.



Ex. 249--Handl: Missa super Apri la fenestra, Kyrie.

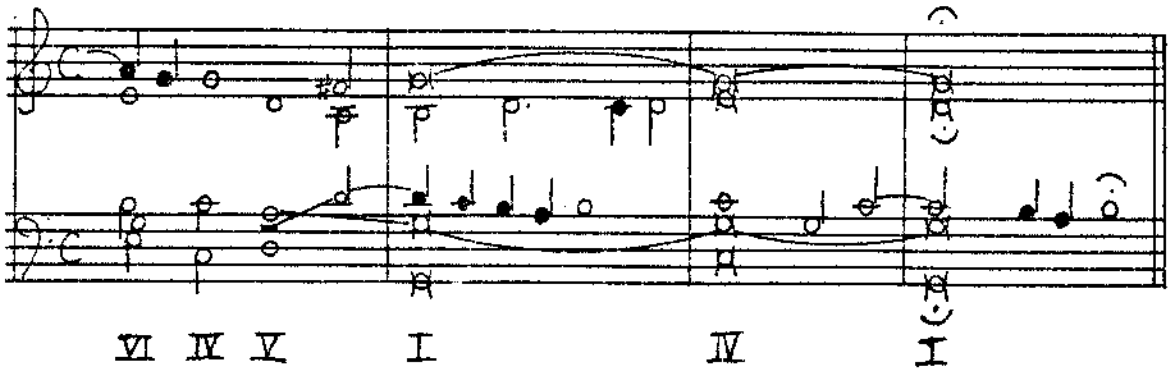


Ex. 250--Kerle: Missa resurrexit pastor bonus, Credo.

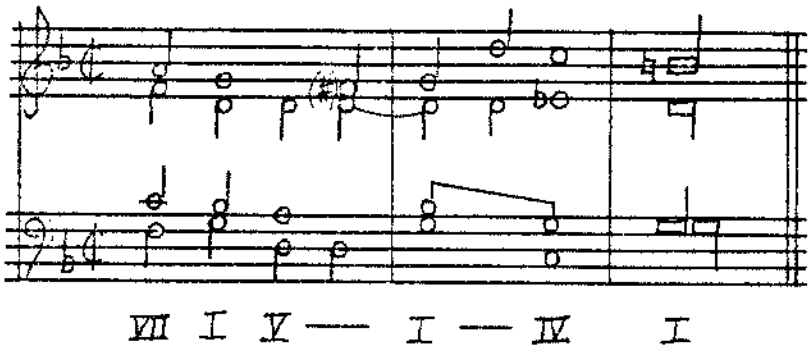


*Irregular $\frac{6}{5}$ chord. Parallel fifths between bass and tenor, second and third beats.

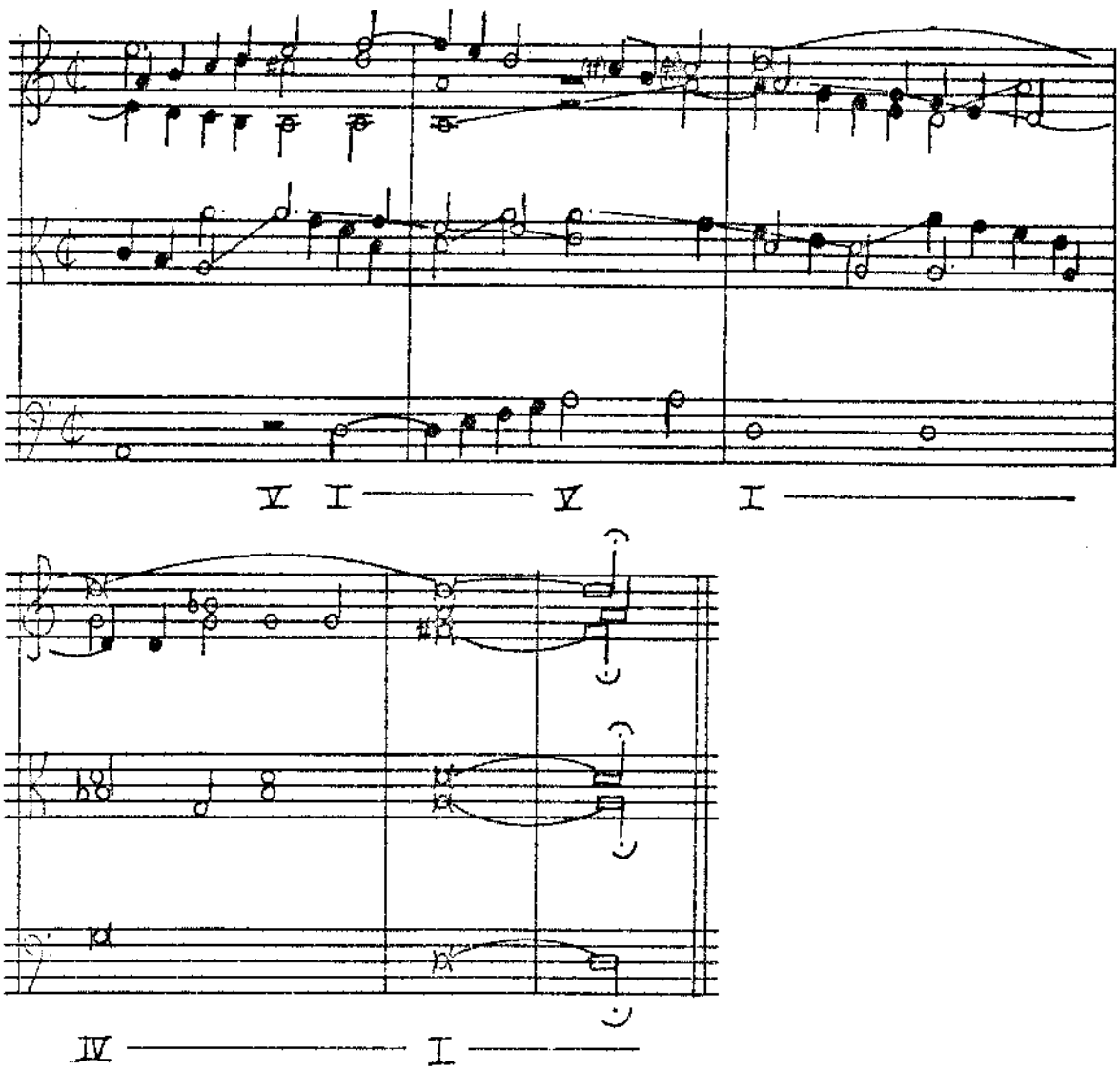
Ex. 251--Kerle: Missa lauda Sion salvatorem, Gloria.



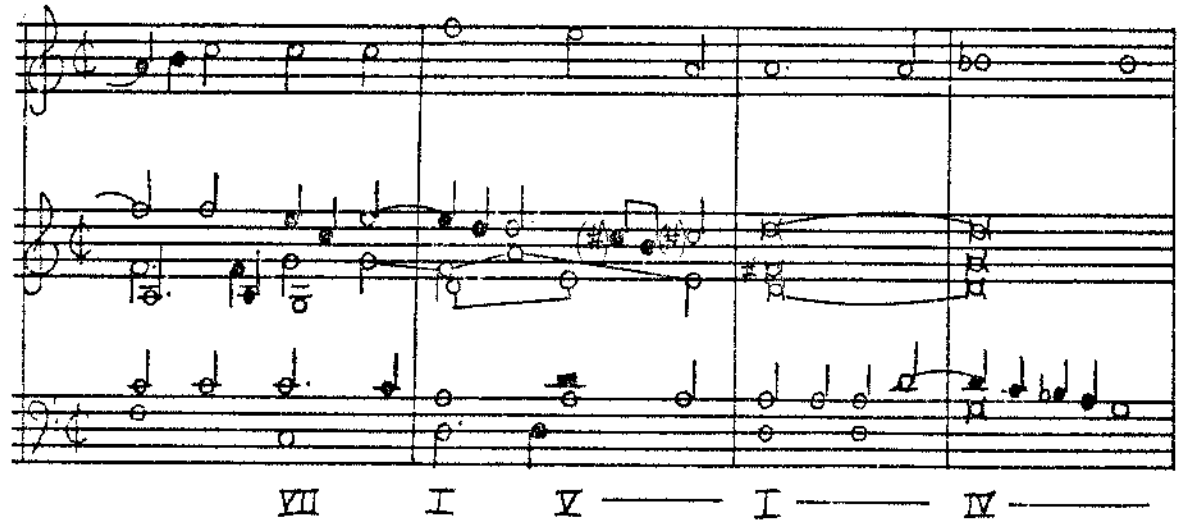
Ex. 252--Lassus: Missa super La la maistre Pierre, Gloria.

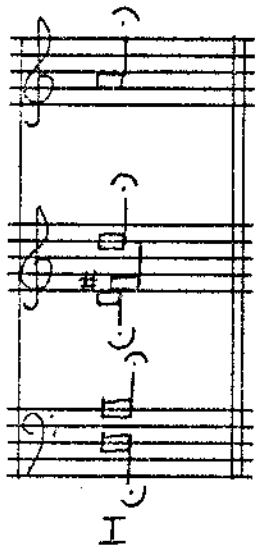


Ex. 253--Lassus: Missa ad imitationem moduli Surge propera, Kyrie.

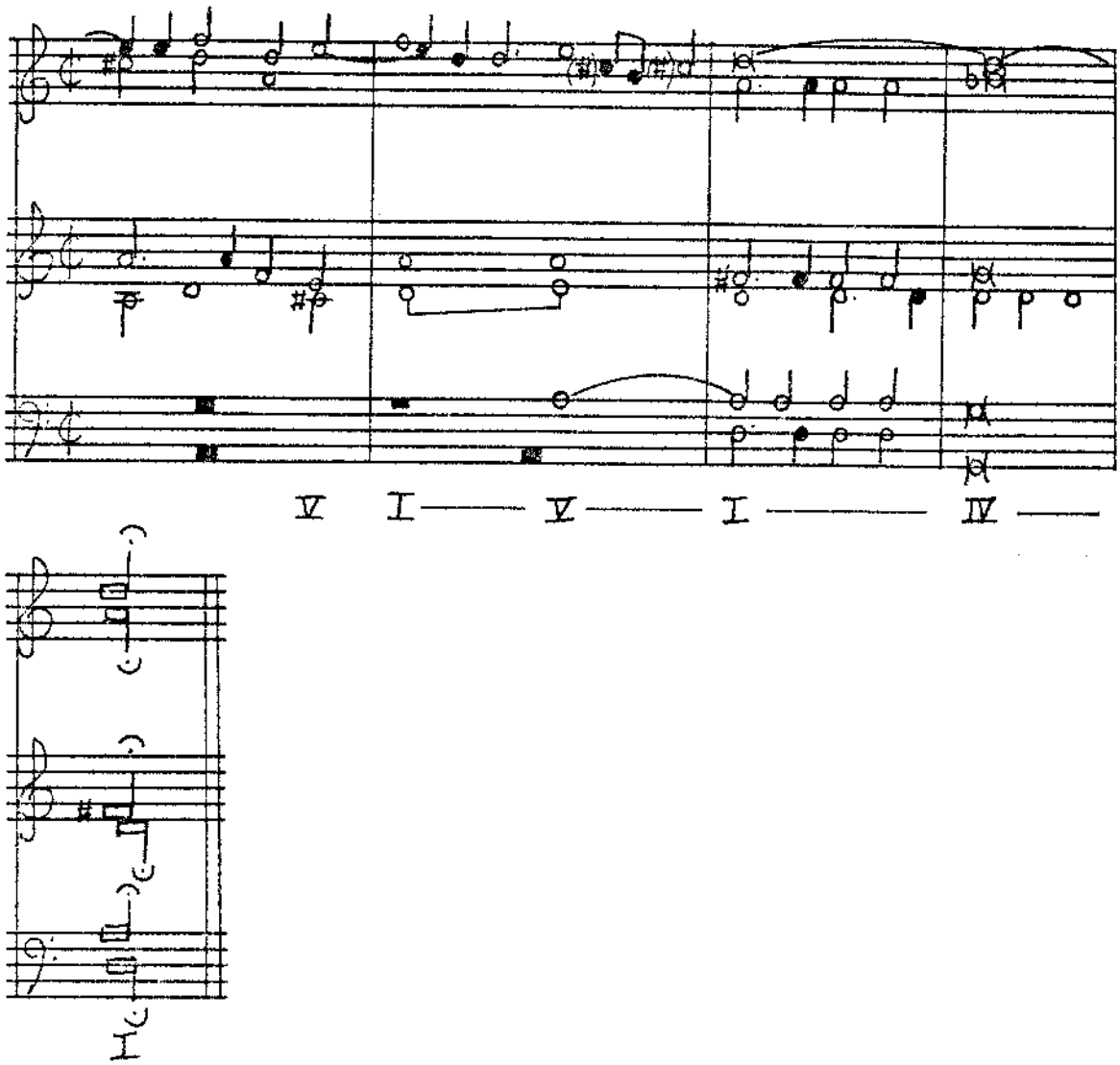


Ex. 254--Lassus: Missa ad imitationem moduli Surge propera, Credo.

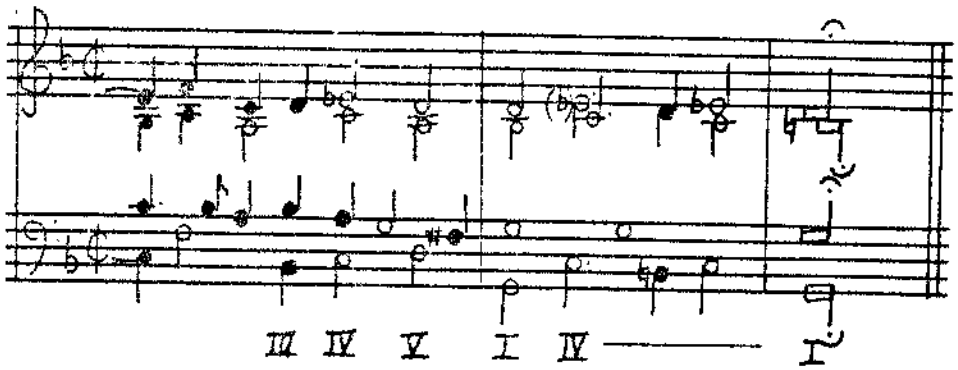




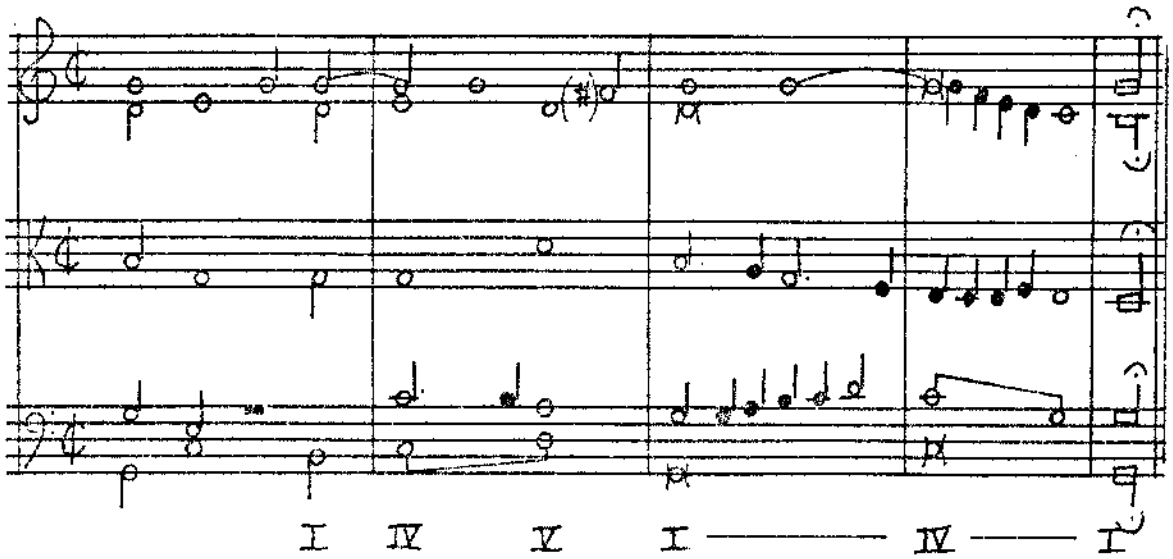
Ex. 255--Lassus: Missa ad imitationem moduli Surge propera, Agnus Dei.



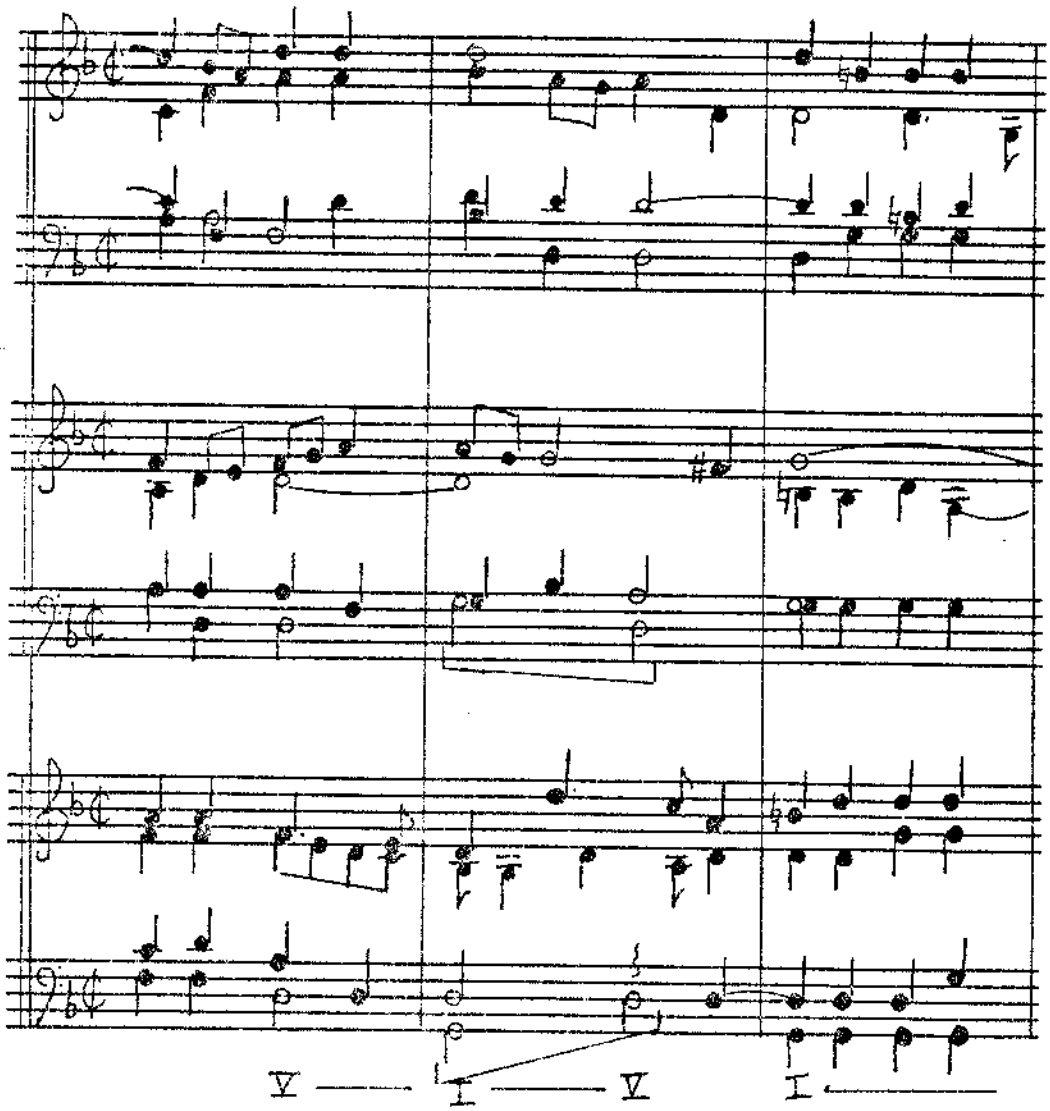
Ex. 256--Lassus: Missa Sesquialtera, Gloria.



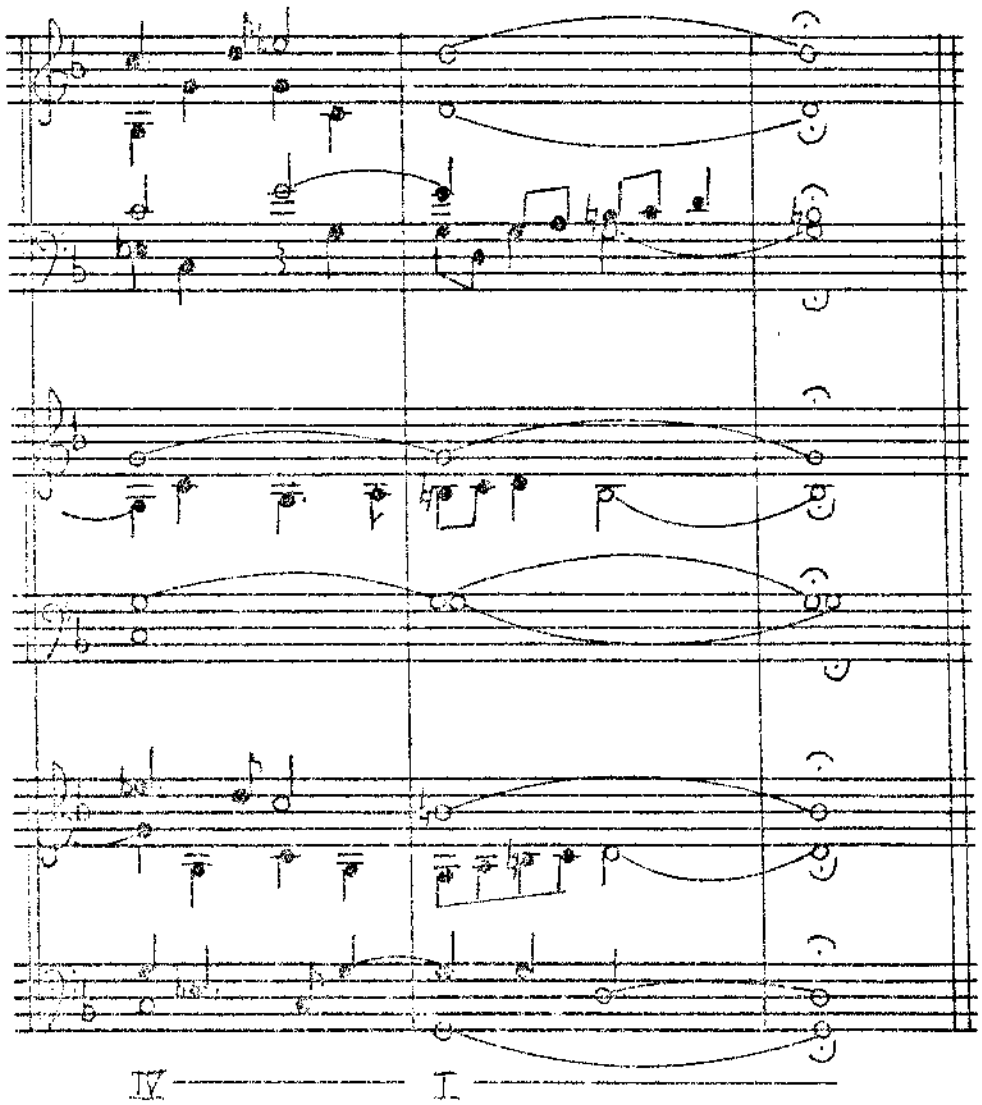
Ex. 257--Lassus: Missa super Ecce Maria, Gloria.



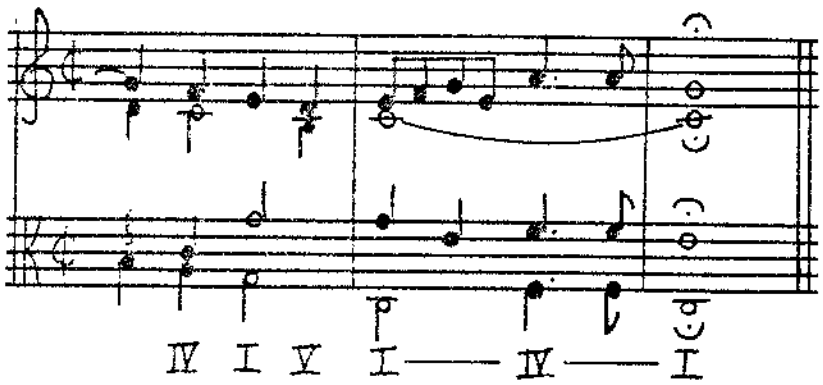
Ex. 258--Merulo: Missa Benedicam Dominum, Kyrie.



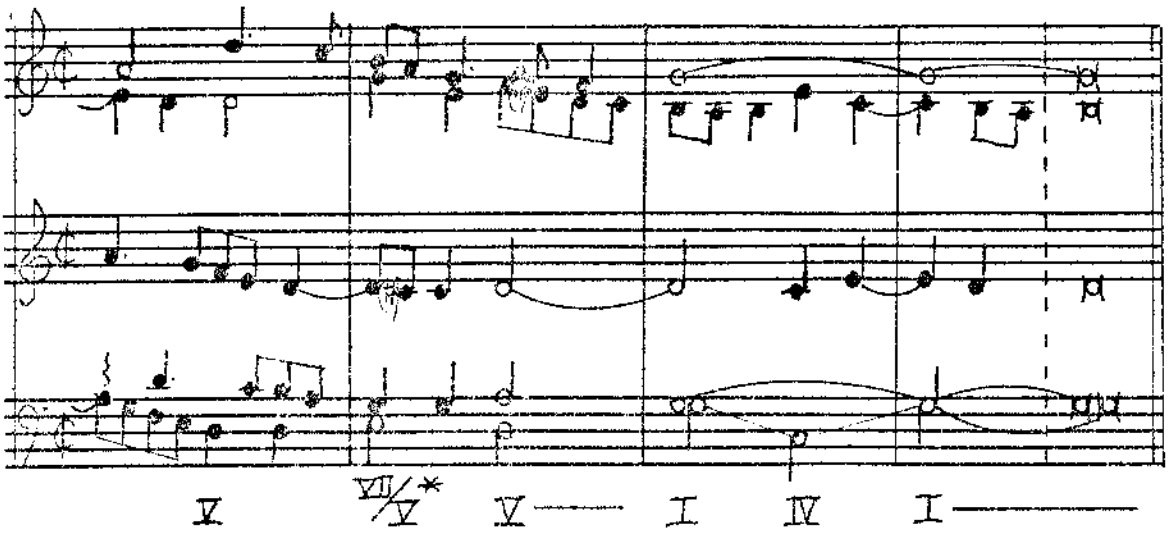
Ex. 258--Continued



Ex. 259--Merulo: Missa Oncques amour, Benedictus.

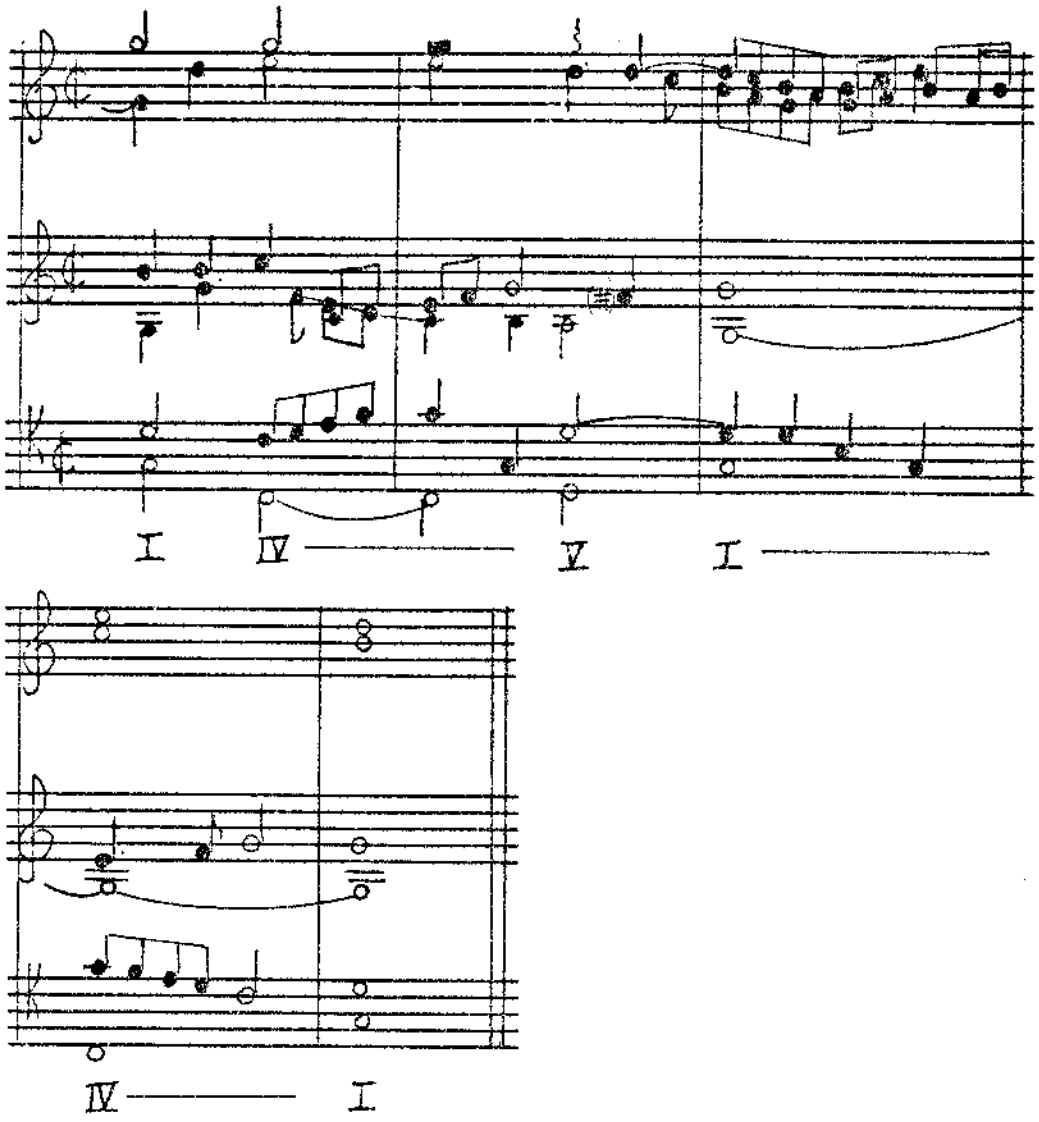


Ex. 260--Palestrina: Missa Ad fugam, Agnus Dei II.

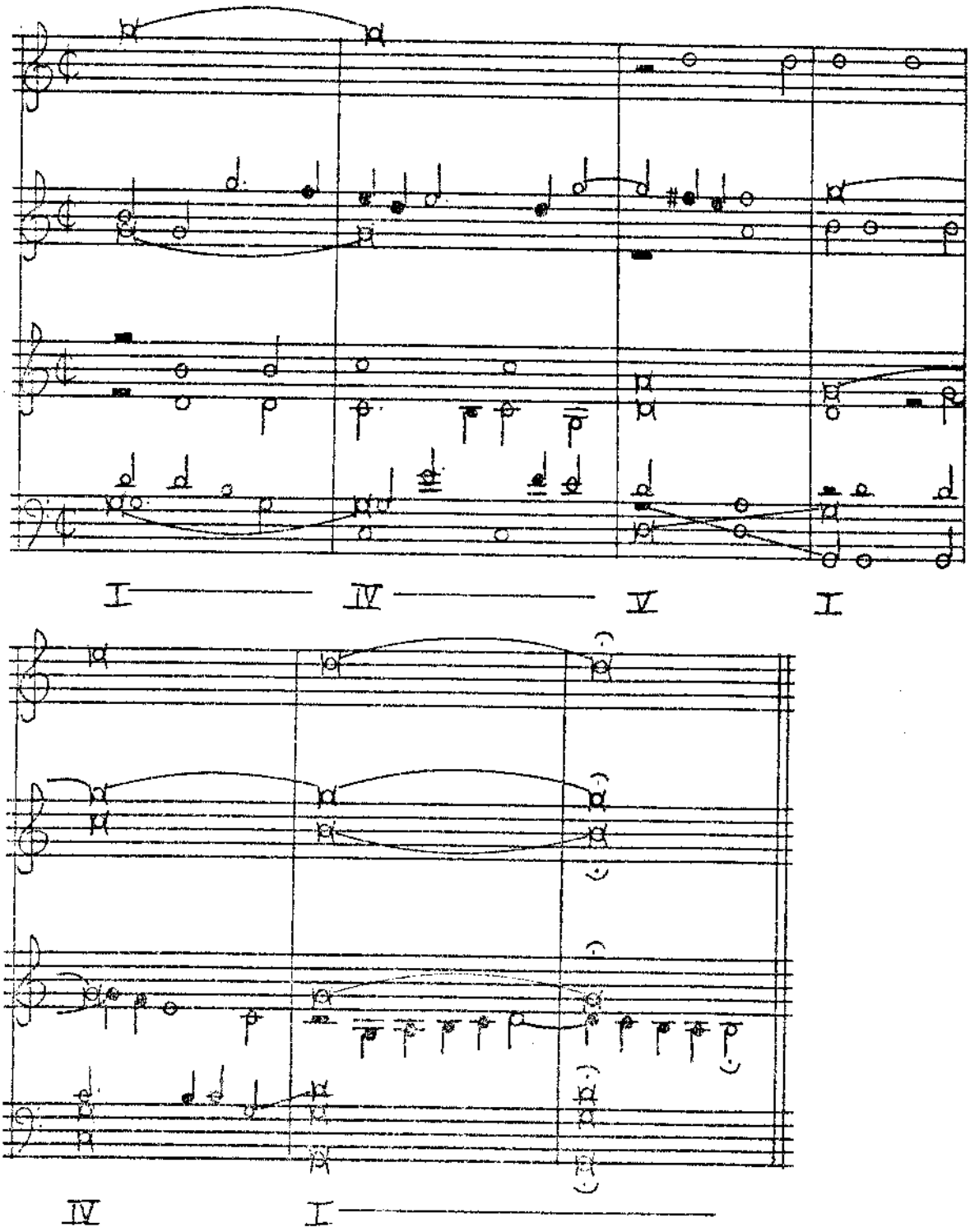


*VII of V--se Ex. 159.

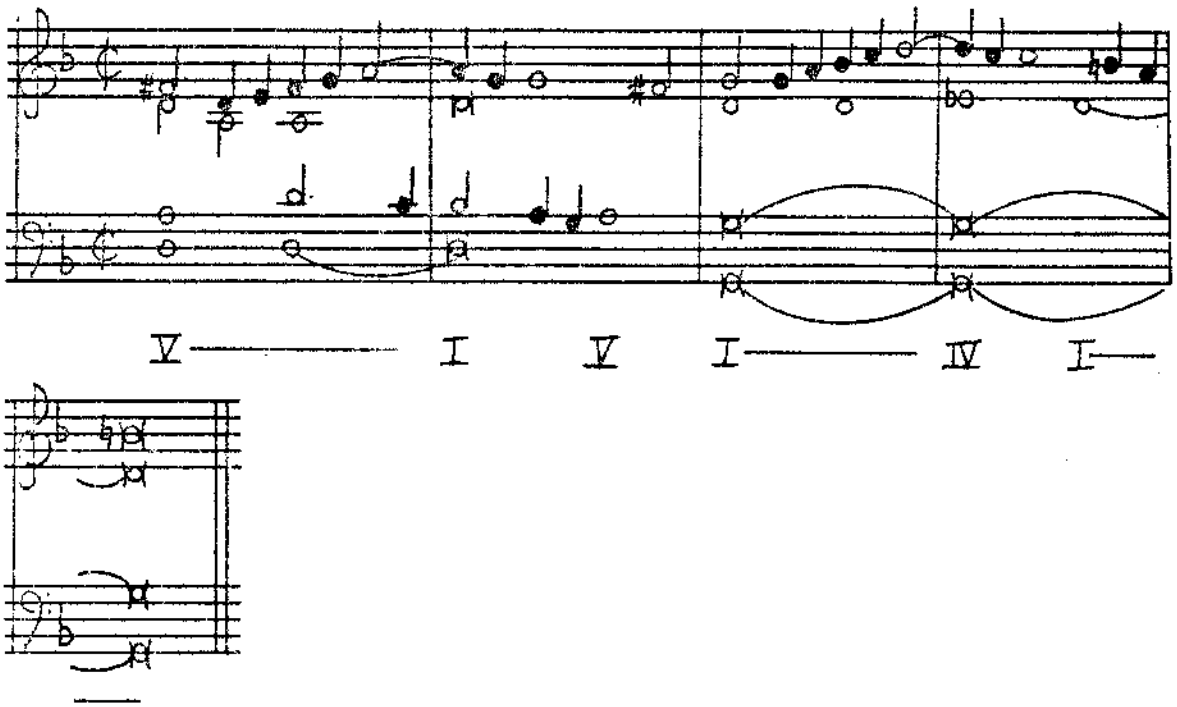
Ex. 261--Palestrina: Missa Assumpta est Maria, Gloria.



Ex. 262--Victoria: Missa Simile est regnum coelorum, Agnus Dei III.



Ex. 263--Victoria: Missa O magnum mysterium, Credo.



*"G" in soprano is a consonant fourth.

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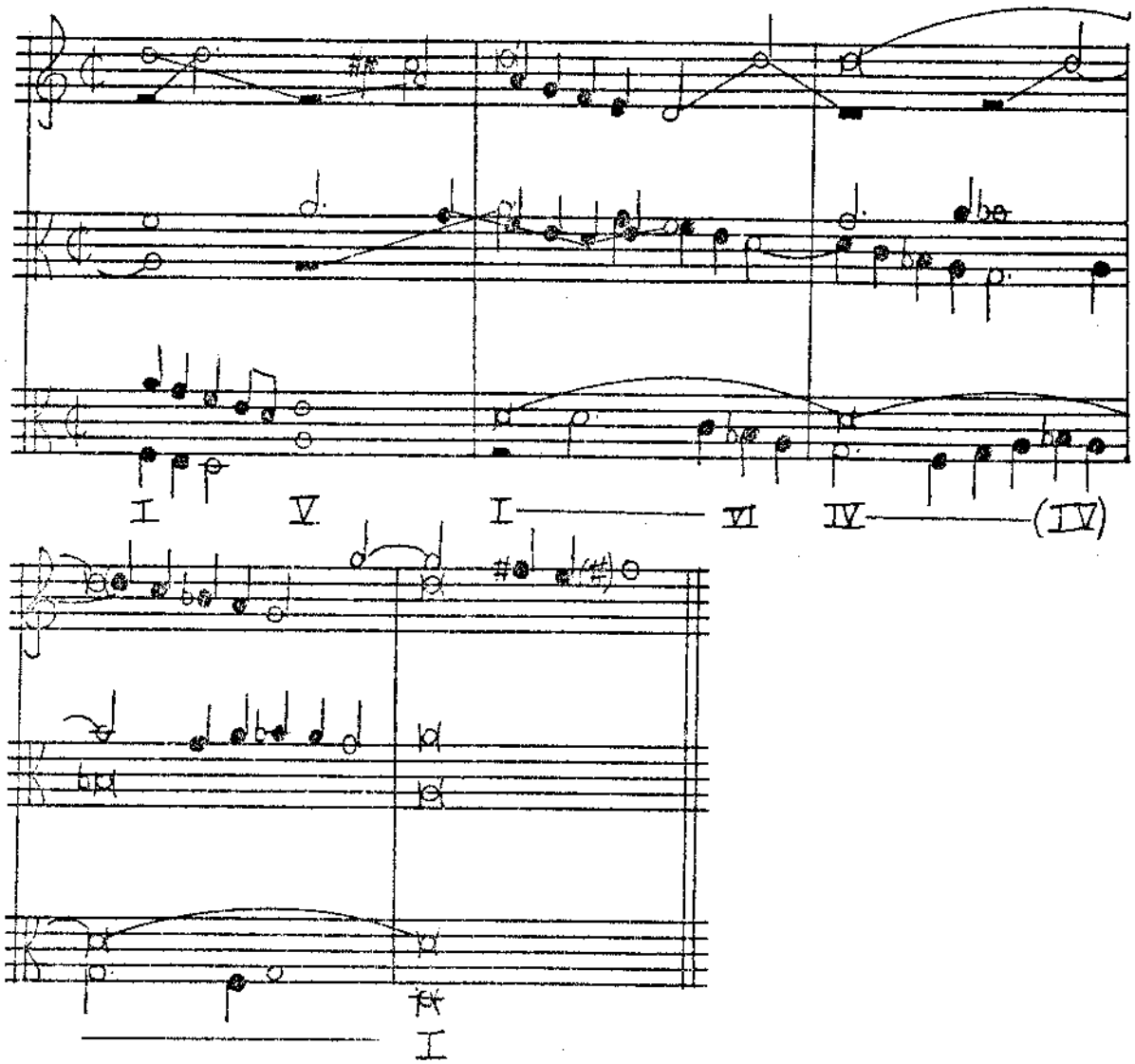
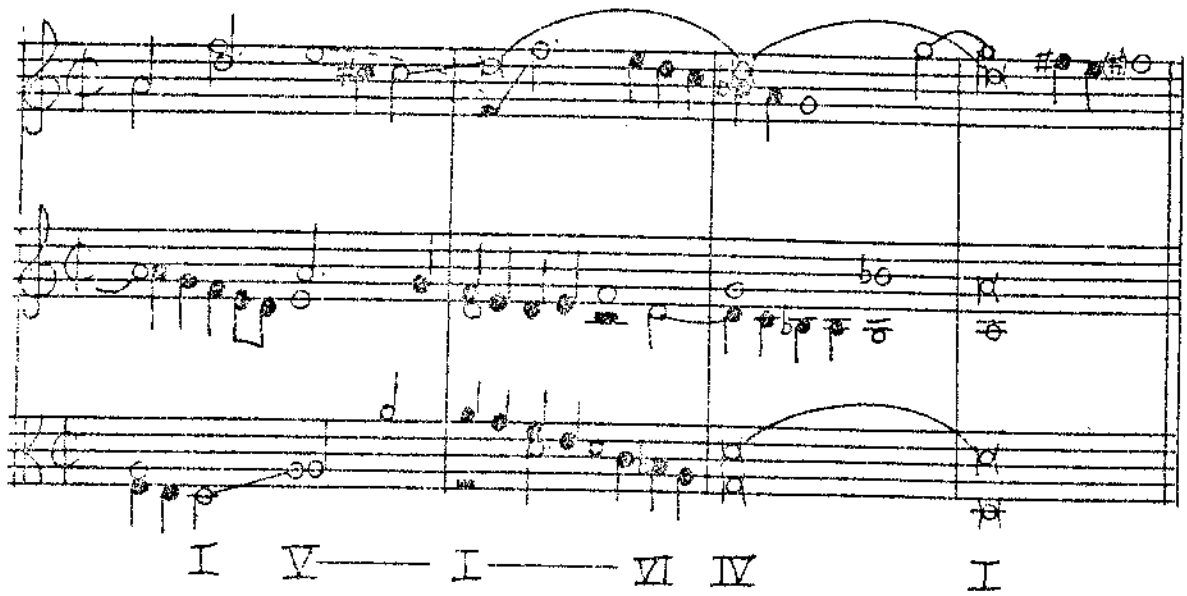
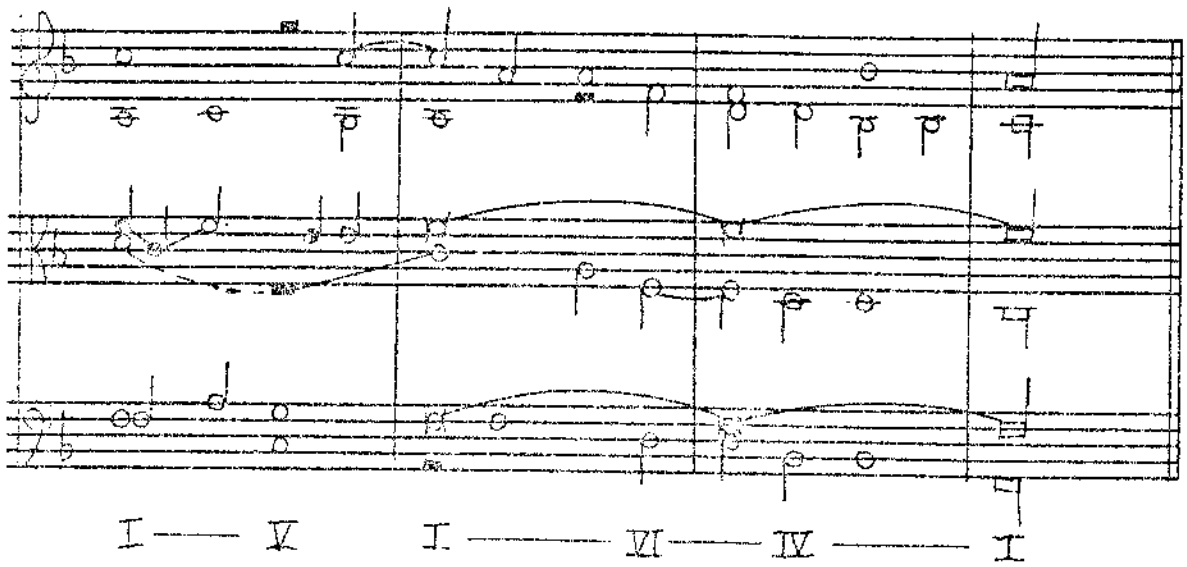
Ex. 264--Handl: Missa super Elisabeth Zachariae, Gloria.



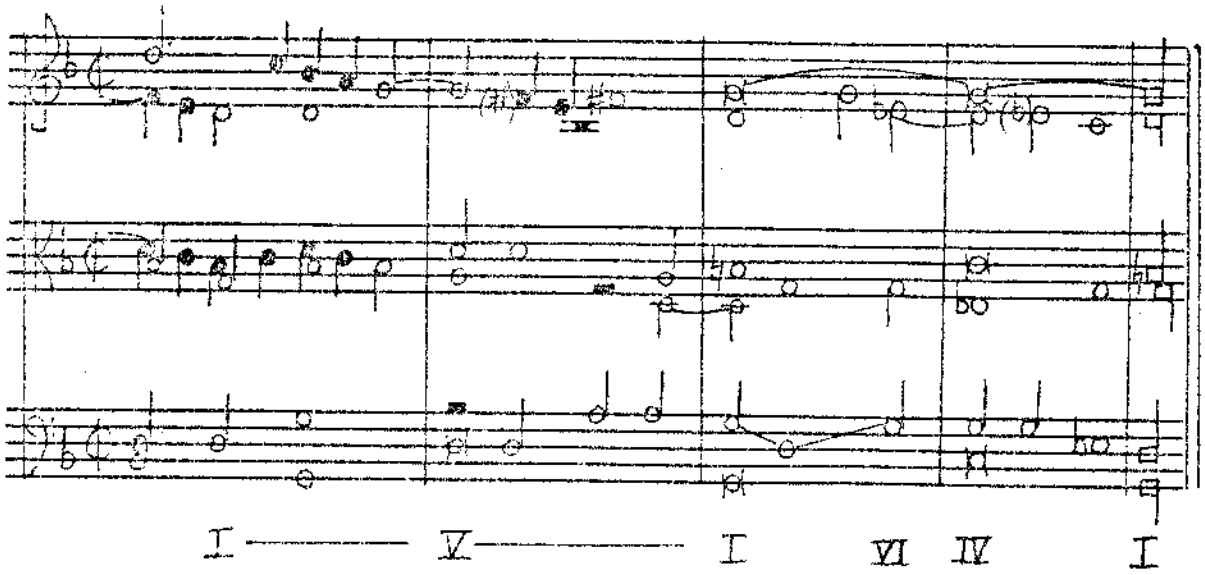
Ex. 265--Handl: Missa super Elisabeth Zachariae, Credo.



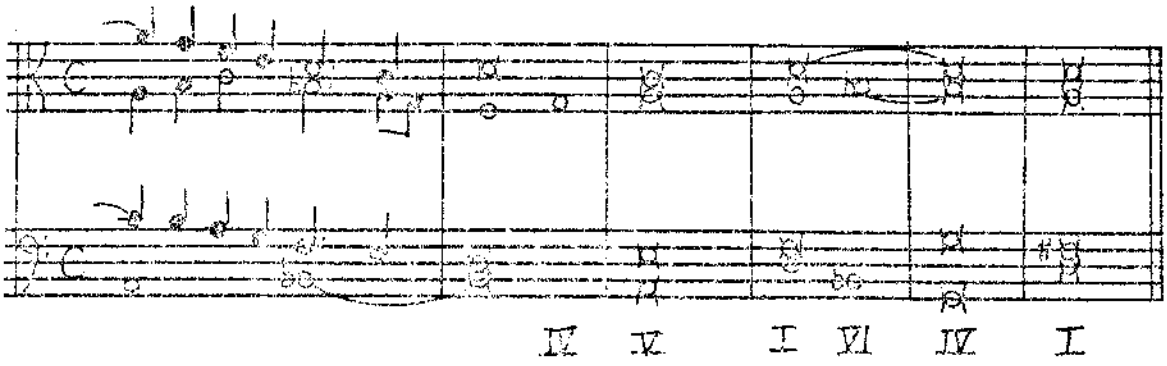
Ex. 266--Handl: Missa super Locutus est Dominus ad Moysen dicens, Kyrie.



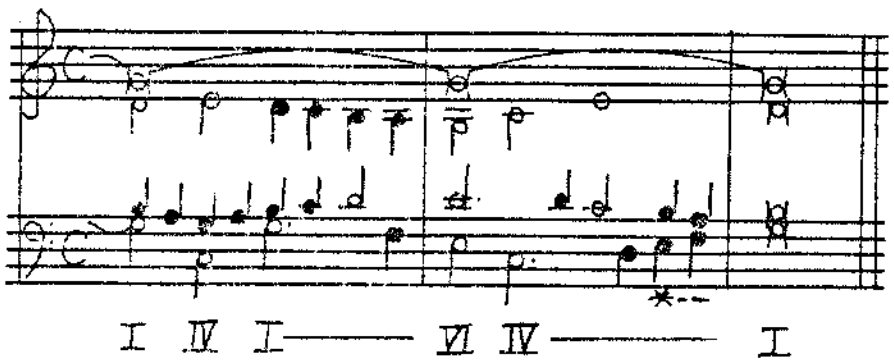
Ex. 267--Handl: Missa super Sancta Maria, Agnus Dei.



Ex. 268--Kerle: Missa pro Defunctis, Sequentia.

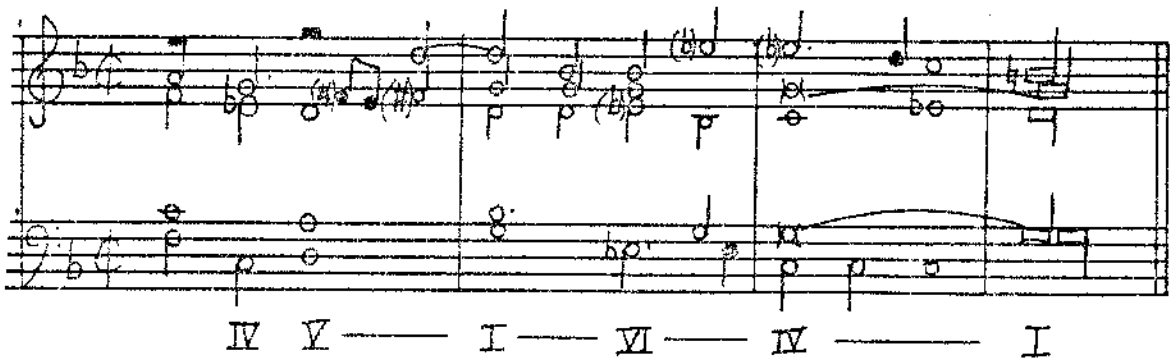


Ex. 269--Kerle: Missa Ut re mi fa sol la, Kyrie.

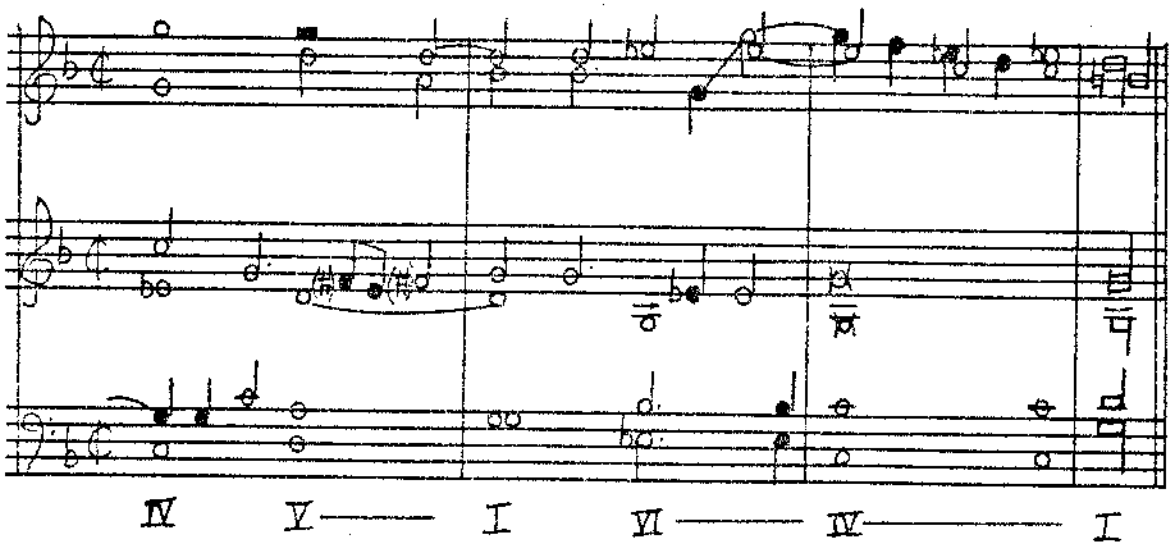


*Passing tones.

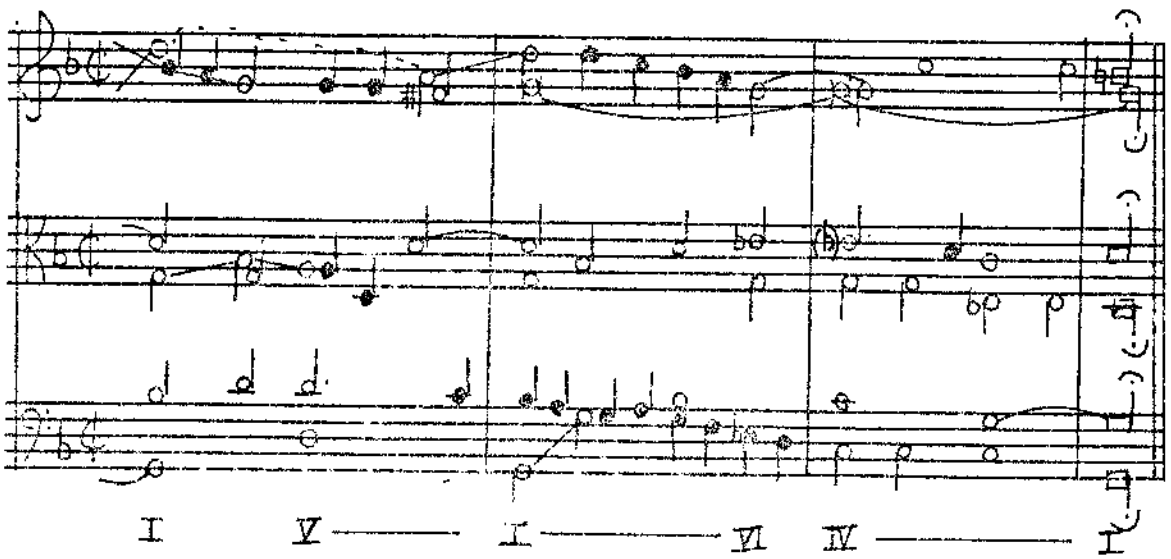
Ex. 270--Lassus: Missa super Triste depart, Agnus Dei.



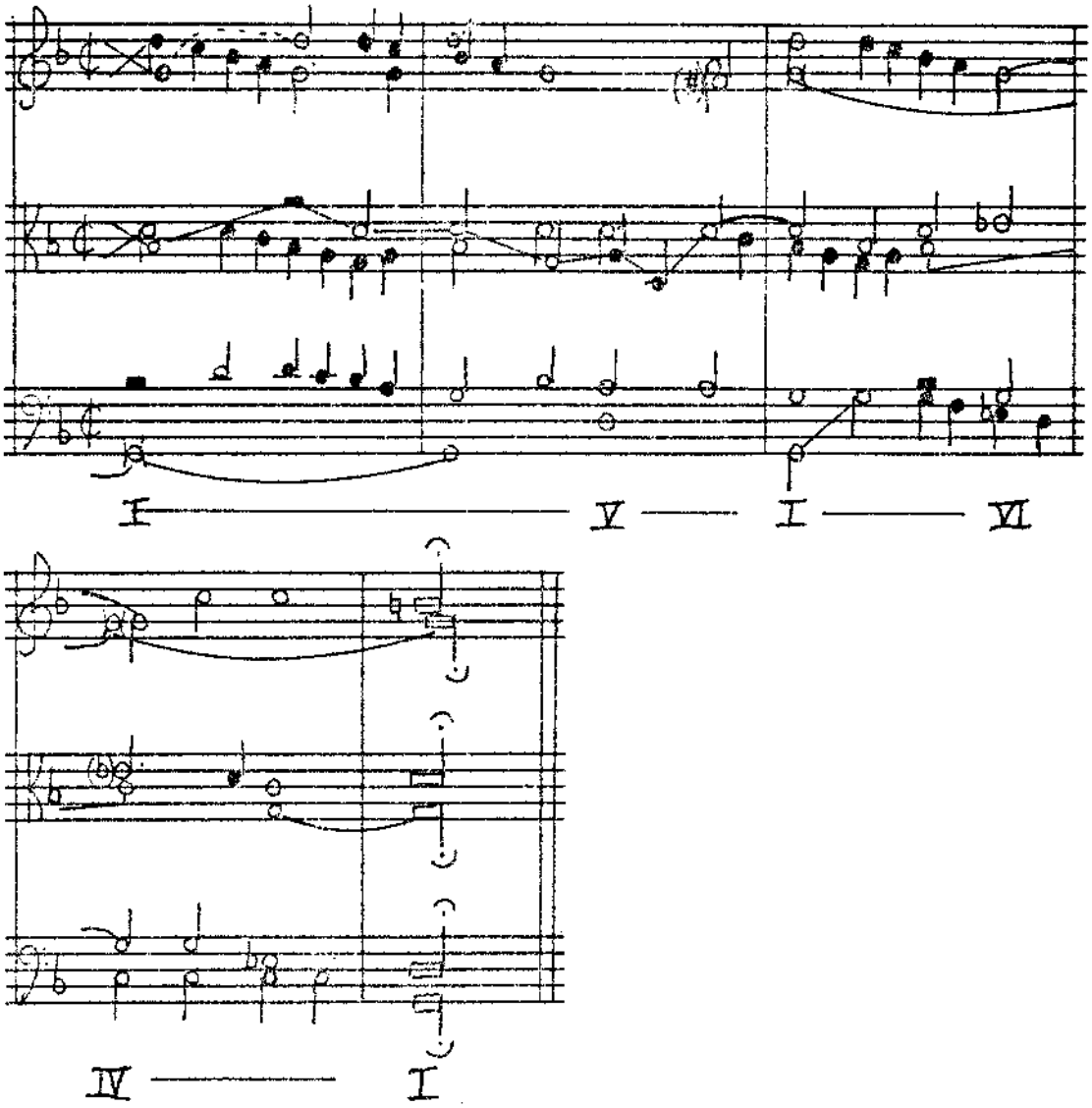
Ex. 271--Lassus: Missa super Jesus ist ein süsser Nam', Credo.



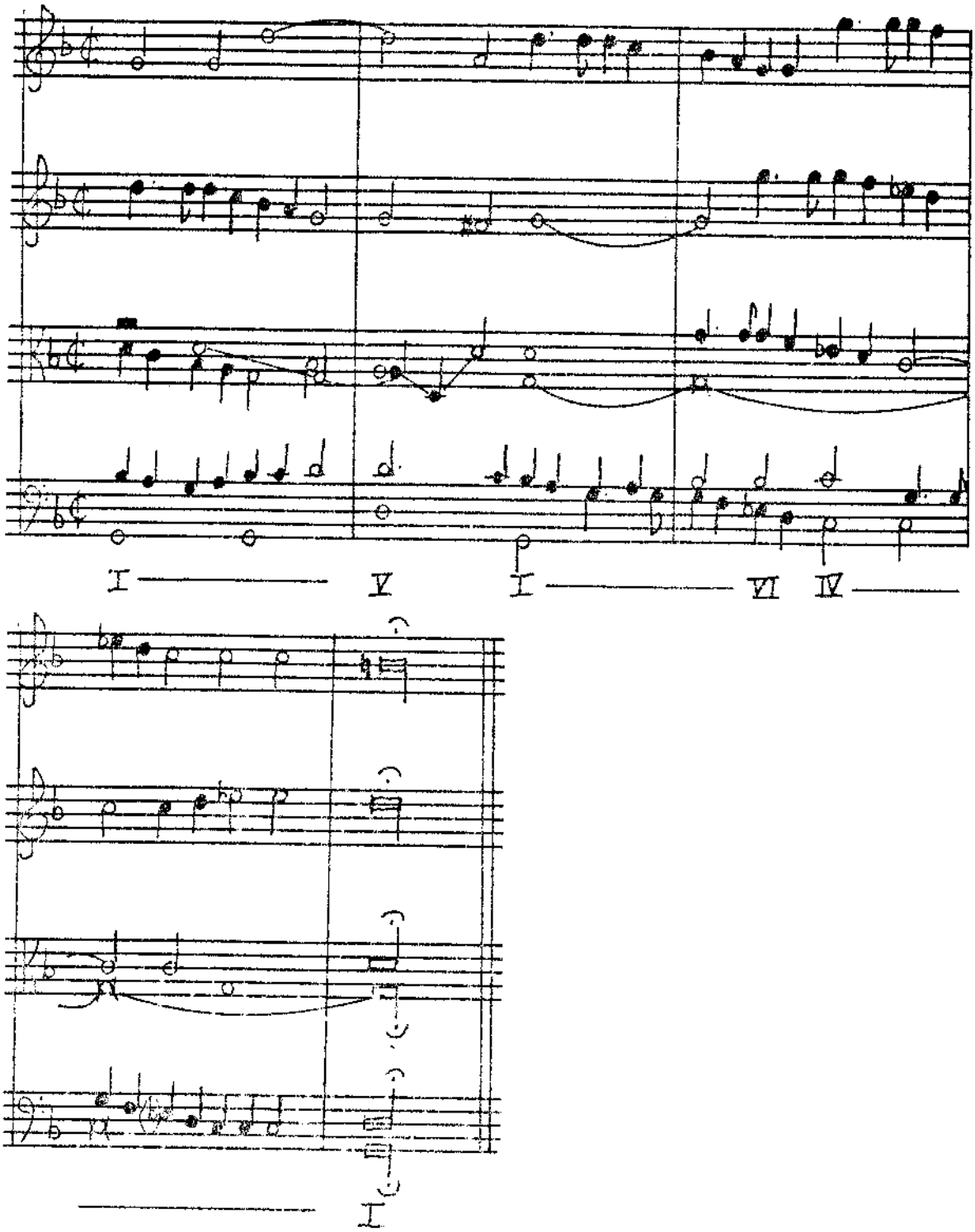
Ex. 272--Lassus: Missa super In principio, Kyrie.



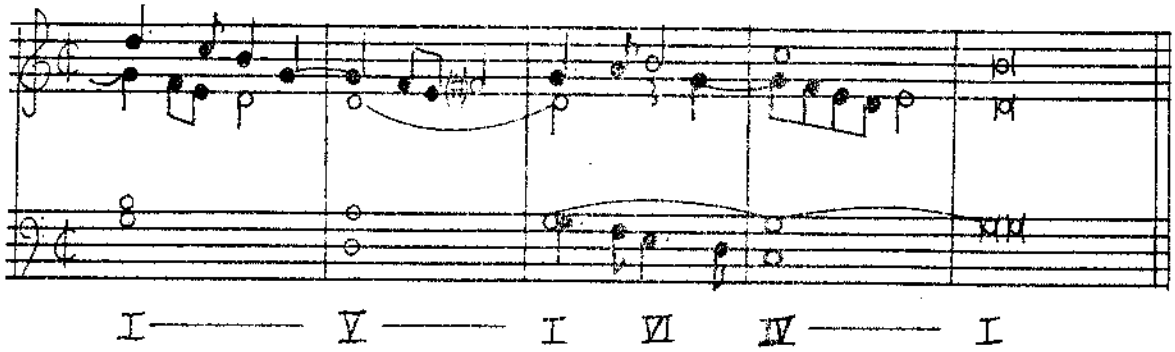
Ex. 273--Lassus: Missa super In principio, Gloria.



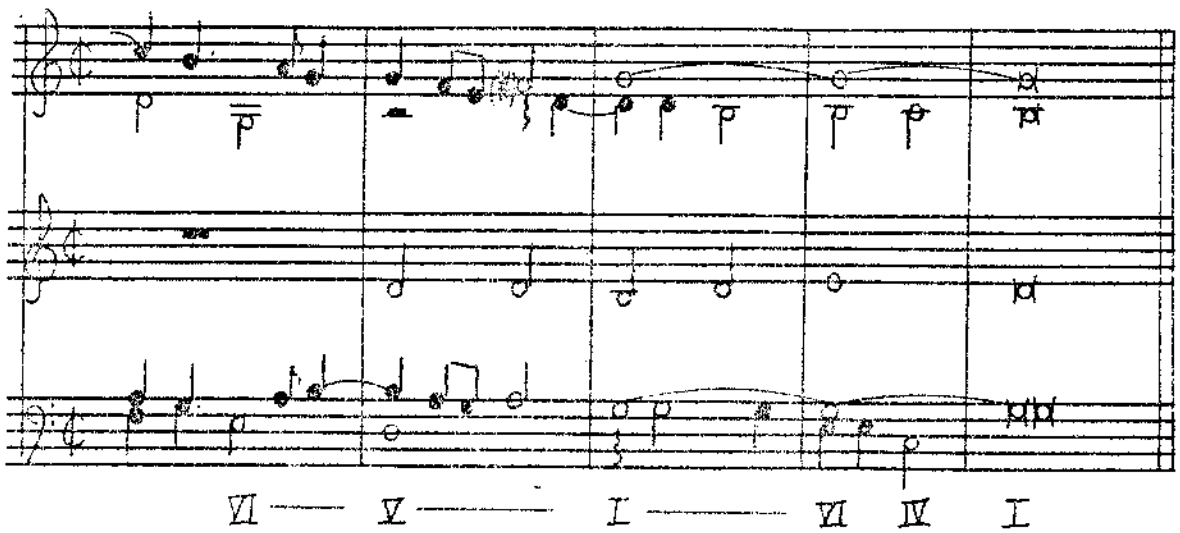
Ex. 274--Lassus: Missa super In principio, Agnus Dei.



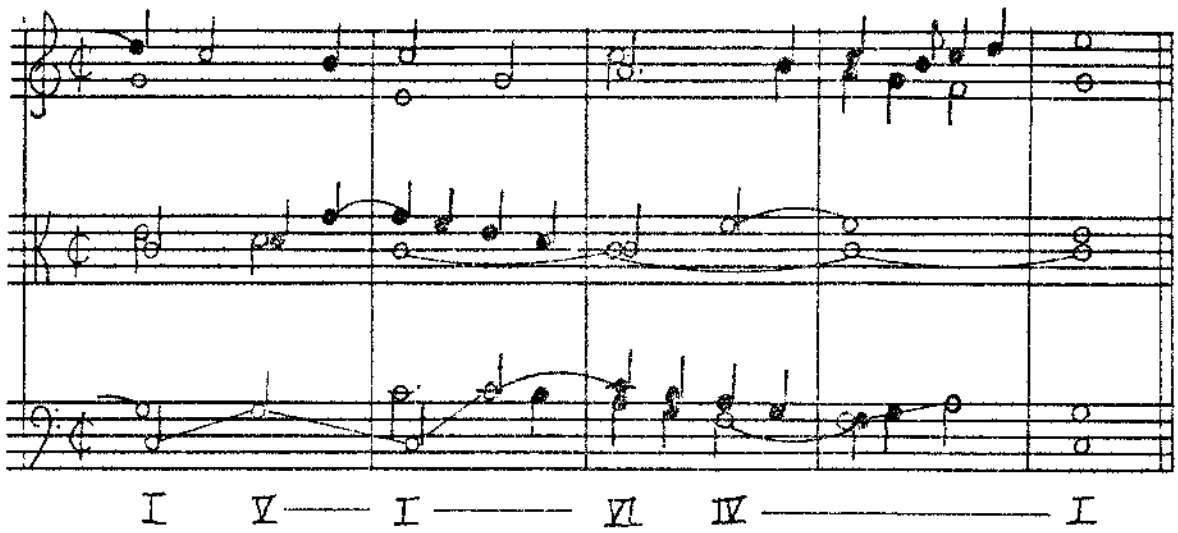
Ex. 275--Palestrina: Missa Ecce sacerdos magnus, Gloria.



Ex. 276--Palestrina: Missa Ecce sacerdos magnus, Agnus Dei II.



Ex. 277--Palestrina: Missa Papae Marcelli, Credo.



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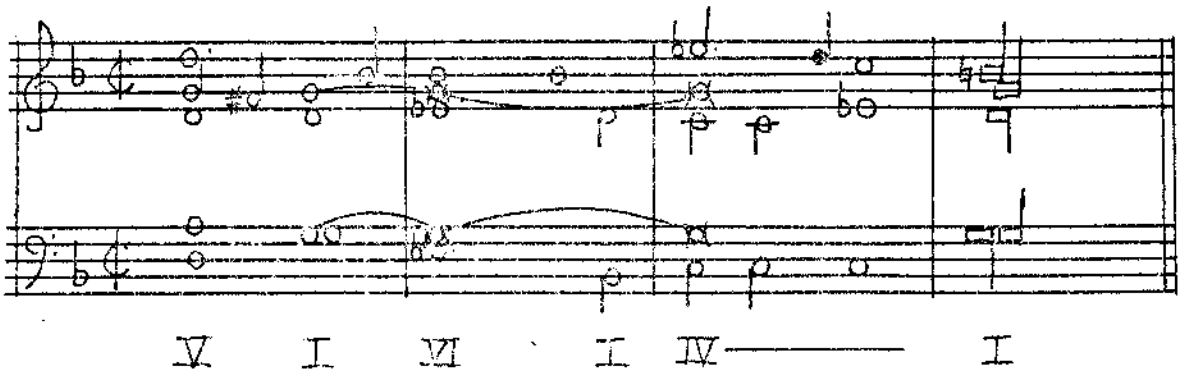
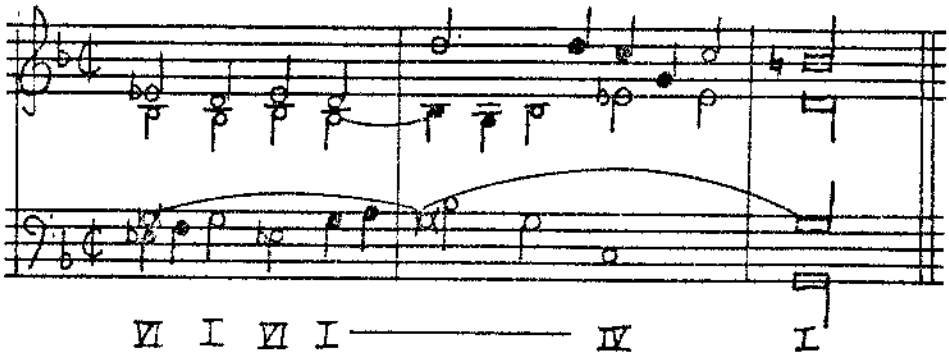
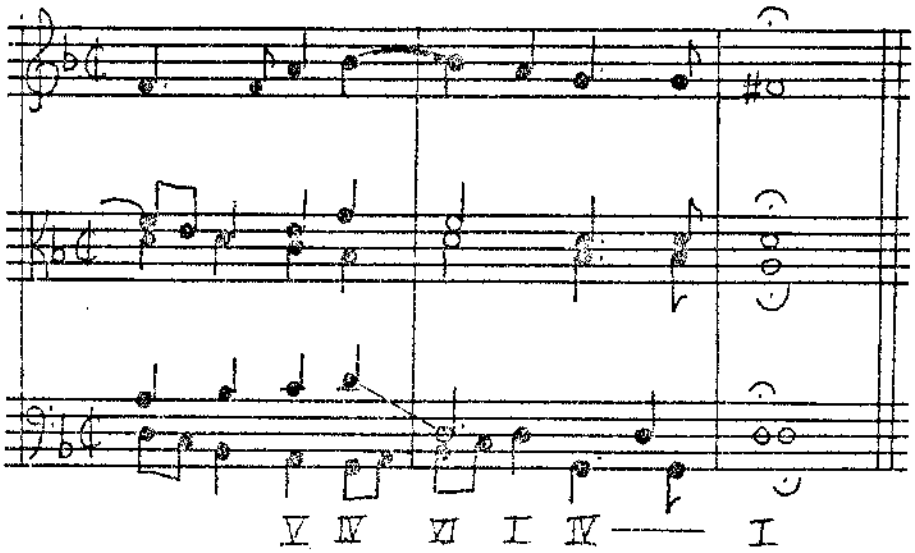
Ex. 278--Handl: Missa super Adesto dolori meo, Agnus Dei.



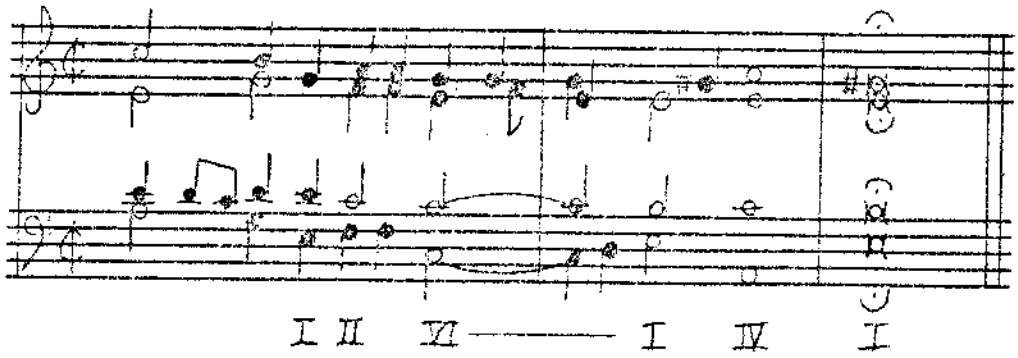
Ex. 279--Lassus: Missa super Ie ne menge poinct de porcq, Agnus Dei.



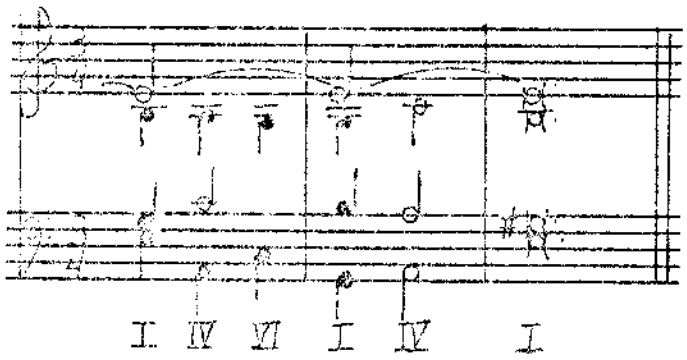
Ex. 280--Merulo: Missa Aspice Domine, Sanctus.



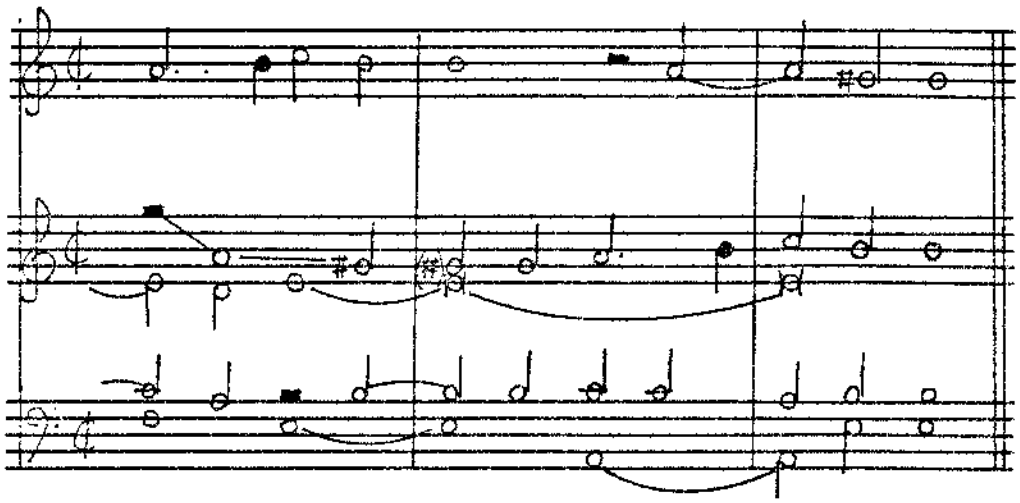
Ex. 281--Monte: Missa super Anchor che col partire, Credo.



Ex. 282--Palestrina: Missa Jesu, nostra redemptio, Benedictus.



Ex. 283--Victoria: Missa quarti toni, Agnus Dei.



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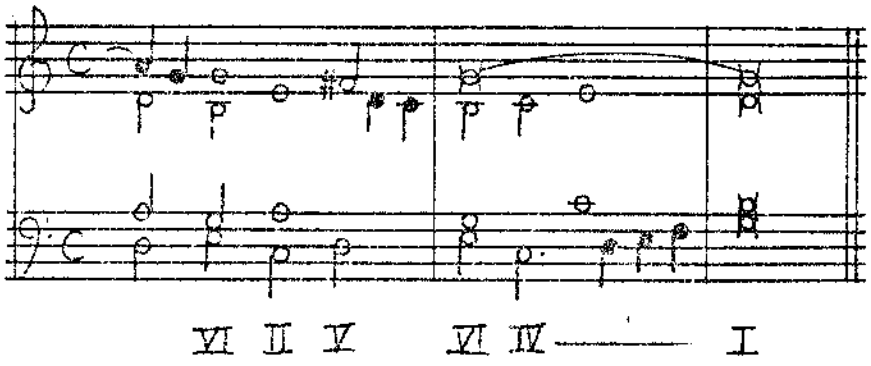
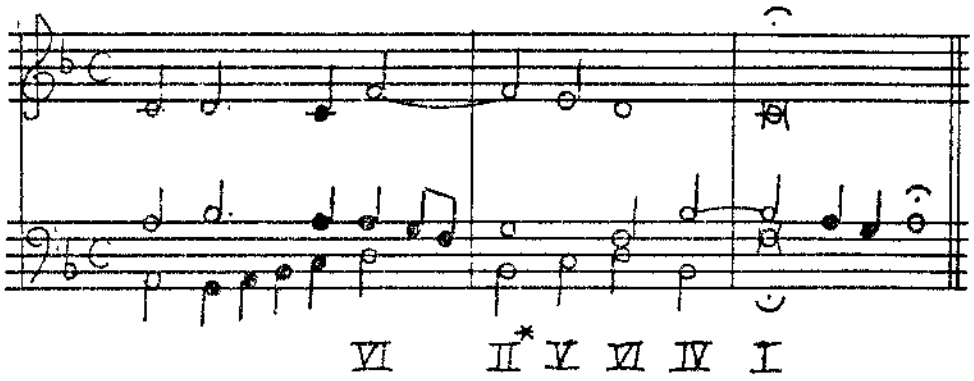
Ex. 284--Kerle: Missa Ut re me fa sol la, Gloria.

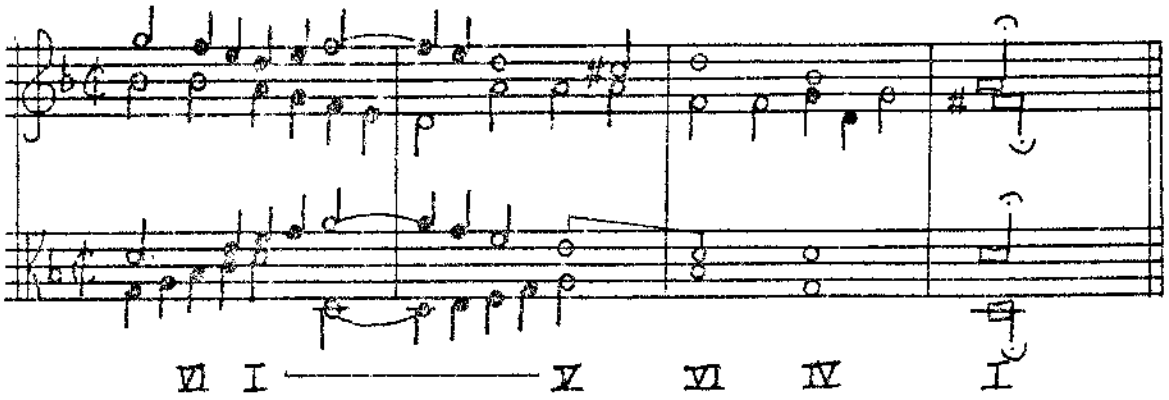


Ex. 285--Kerle: Missa resurrexit pastor bonus, Sanctus.

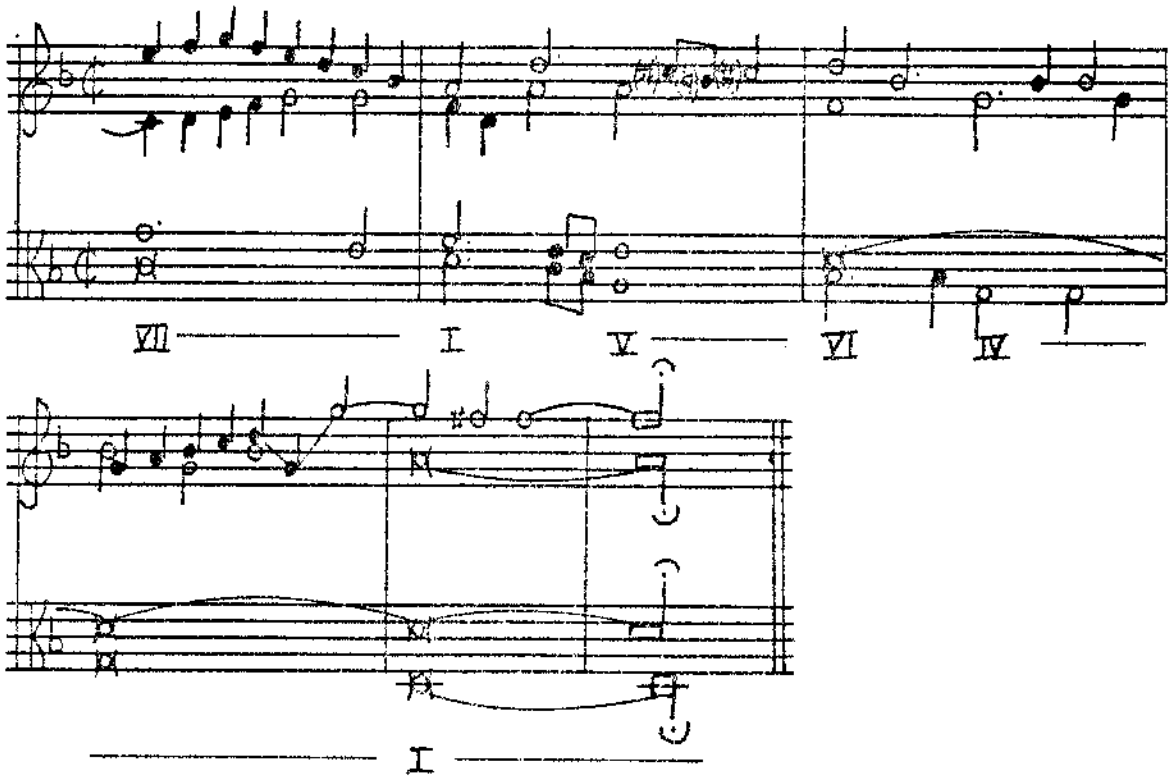


*Idiomatic II^{6}_{5} chord.

Ex. 286--Lassus: Missa super Je suis desheritee, Credo.

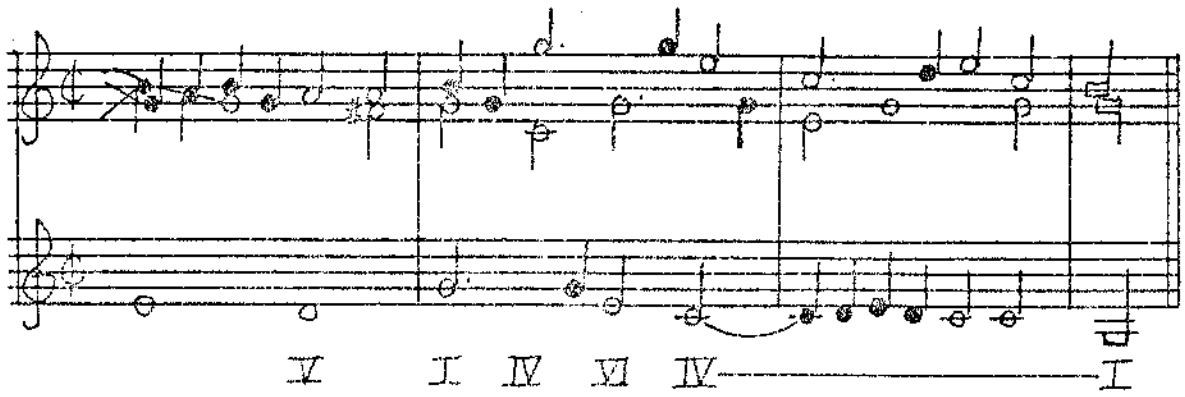


Ex. 287--Lassus: Missa super Je suis desheritee, Agnus Dei.

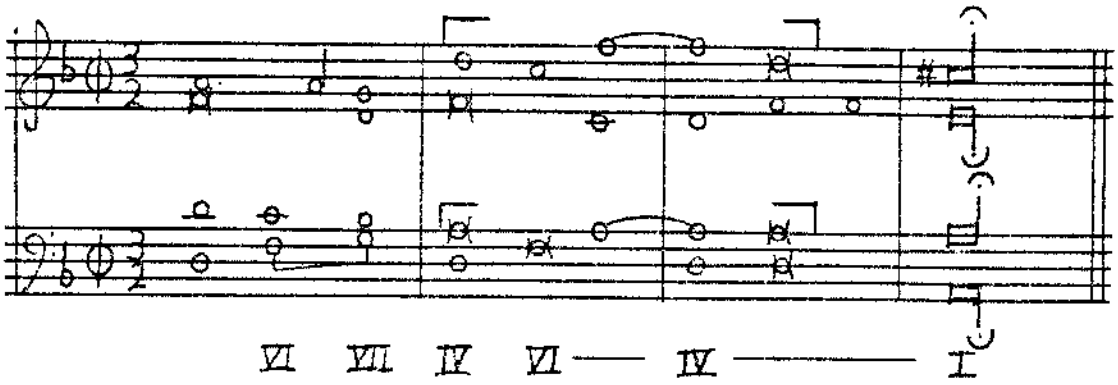


IV - VI - IV - I

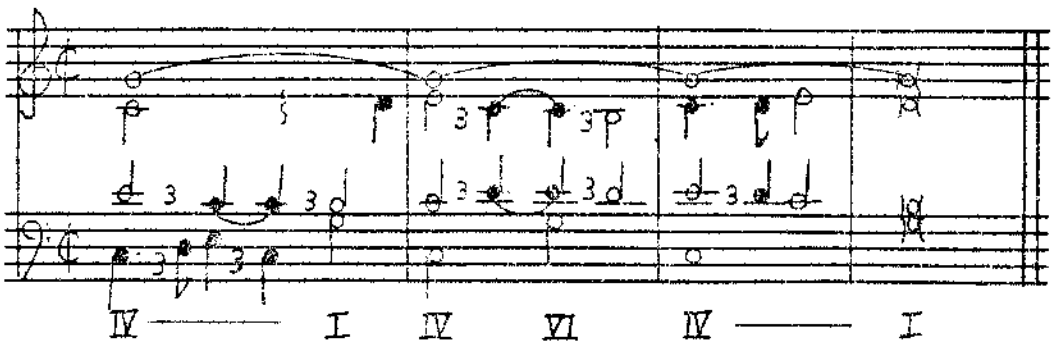
Ex. 288--Handl: Missa super Mixolydium, Benedictus.



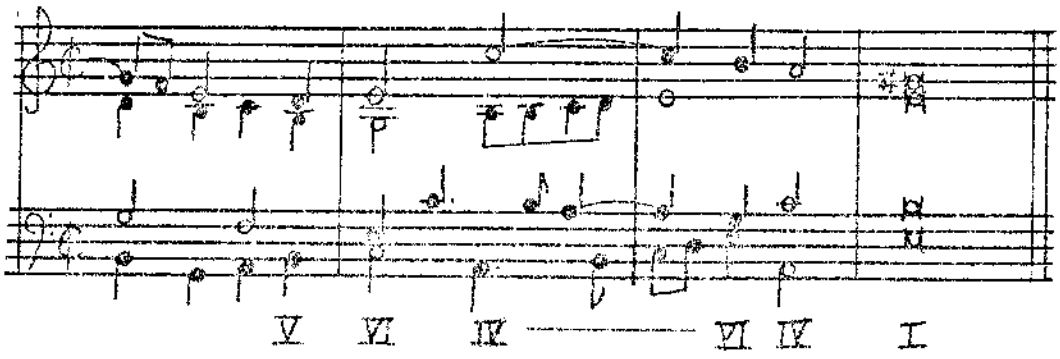
Ex. 289--Lassus: Missa super Je suis desheritee, Sanctus.



Ex. 290--Palestrina: Missa Ecce sacerdos magnus, Agnus Dei III.

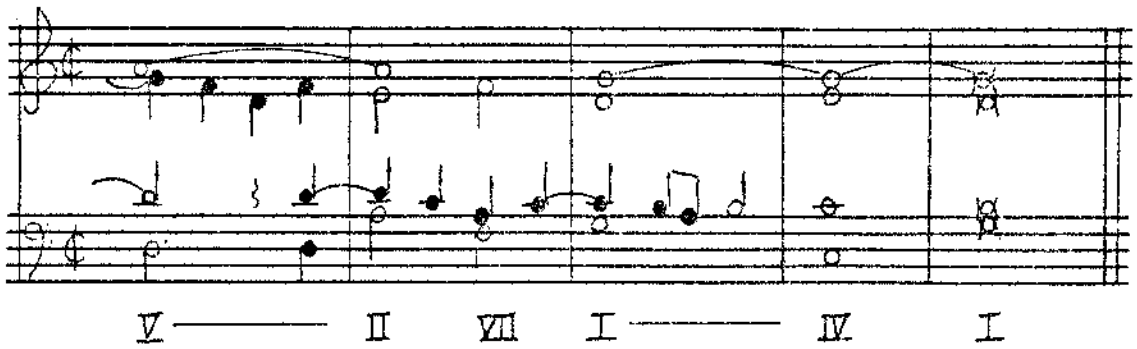


Ex. 291--Palestrina: Missa Jesu, nostra redemptio, Credo.

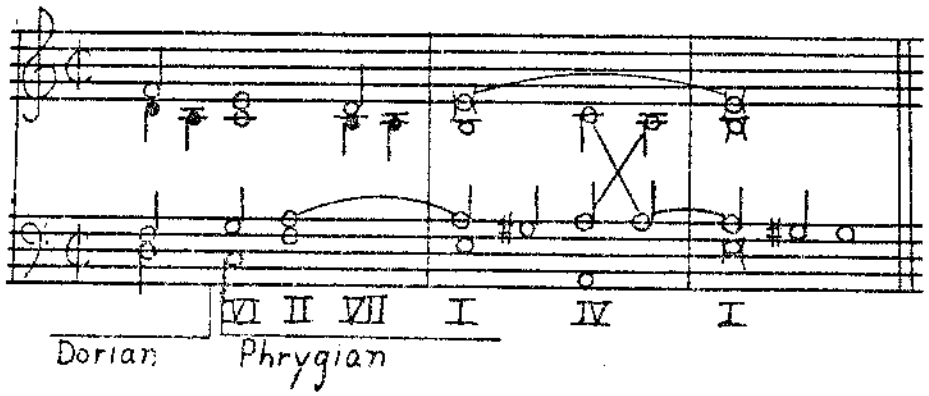


VII - I - IV - I

Ex. 292--Palestrina: Missa Ecce sacerdos magnus, Agnus Dei I.

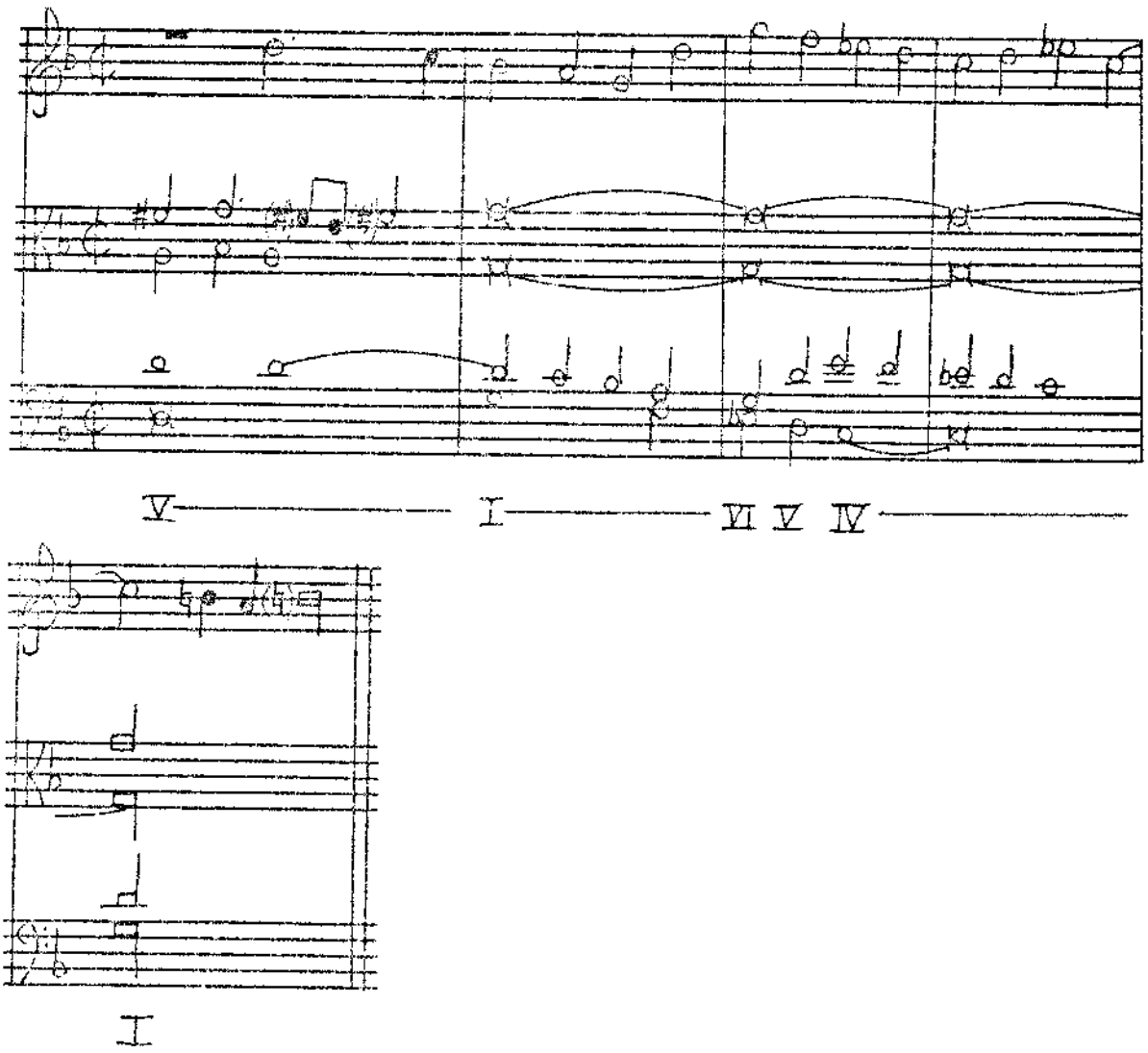


Ex. 293--Victoria: Missa quarti toni, Kyrie.

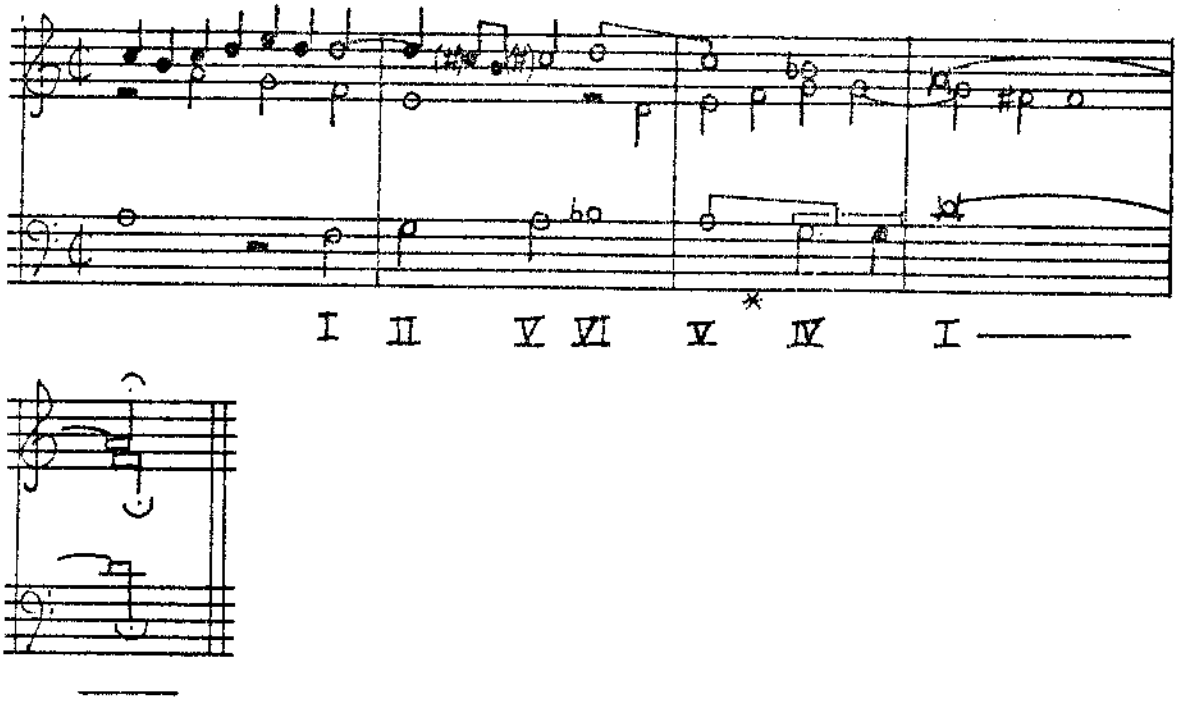


VI - V - IV - I

Ex. 294--Handl: Missa super Transeunte Domine, Agnus Dei.



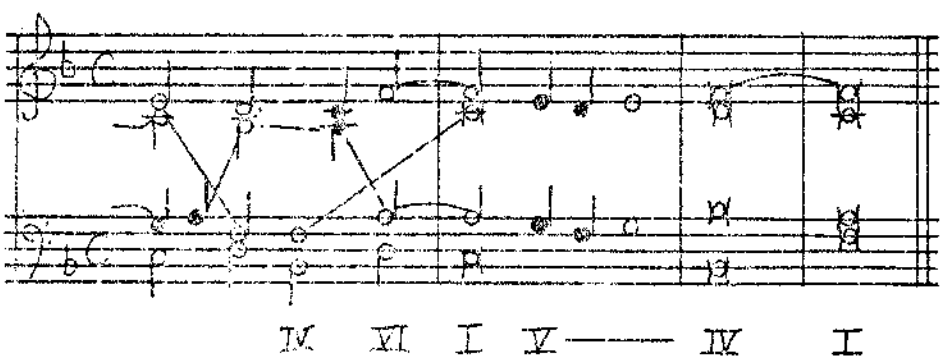
Ex. 295--Lassus: Missa ad imitationem moduli Surge propera, Benedictus.



*"F" is considered a passing tone.

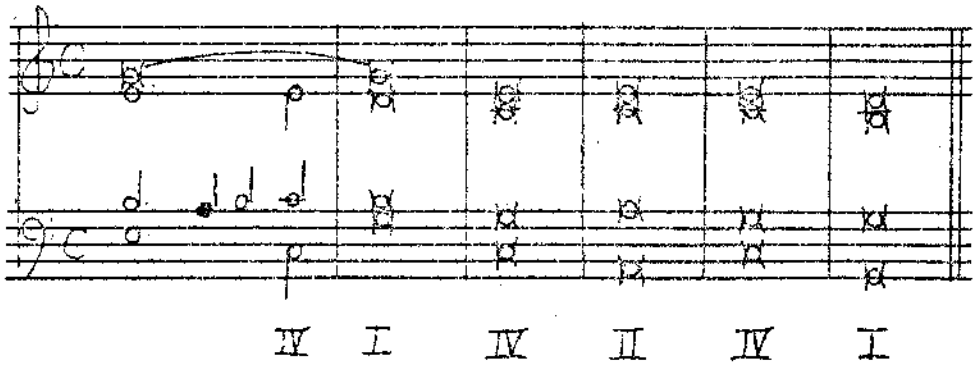
I - V - IV - I

Ex. 296--Kerle: Missa pro Defunctis, Kyrie.



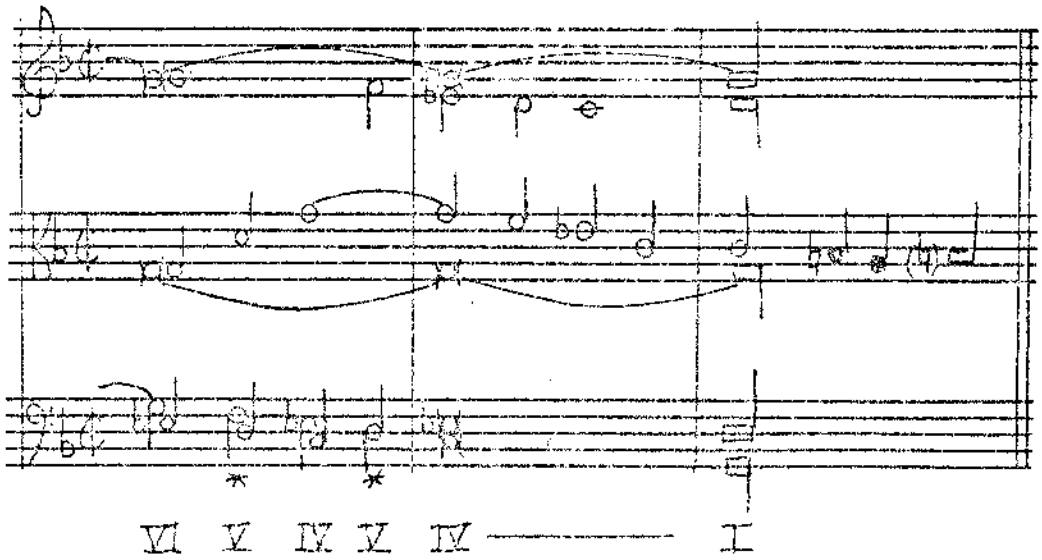
IV - II - IV - I

Ex. 297--Kerle: Missa pro Defunctis, Agnus Dei.



IV - V - IV - I

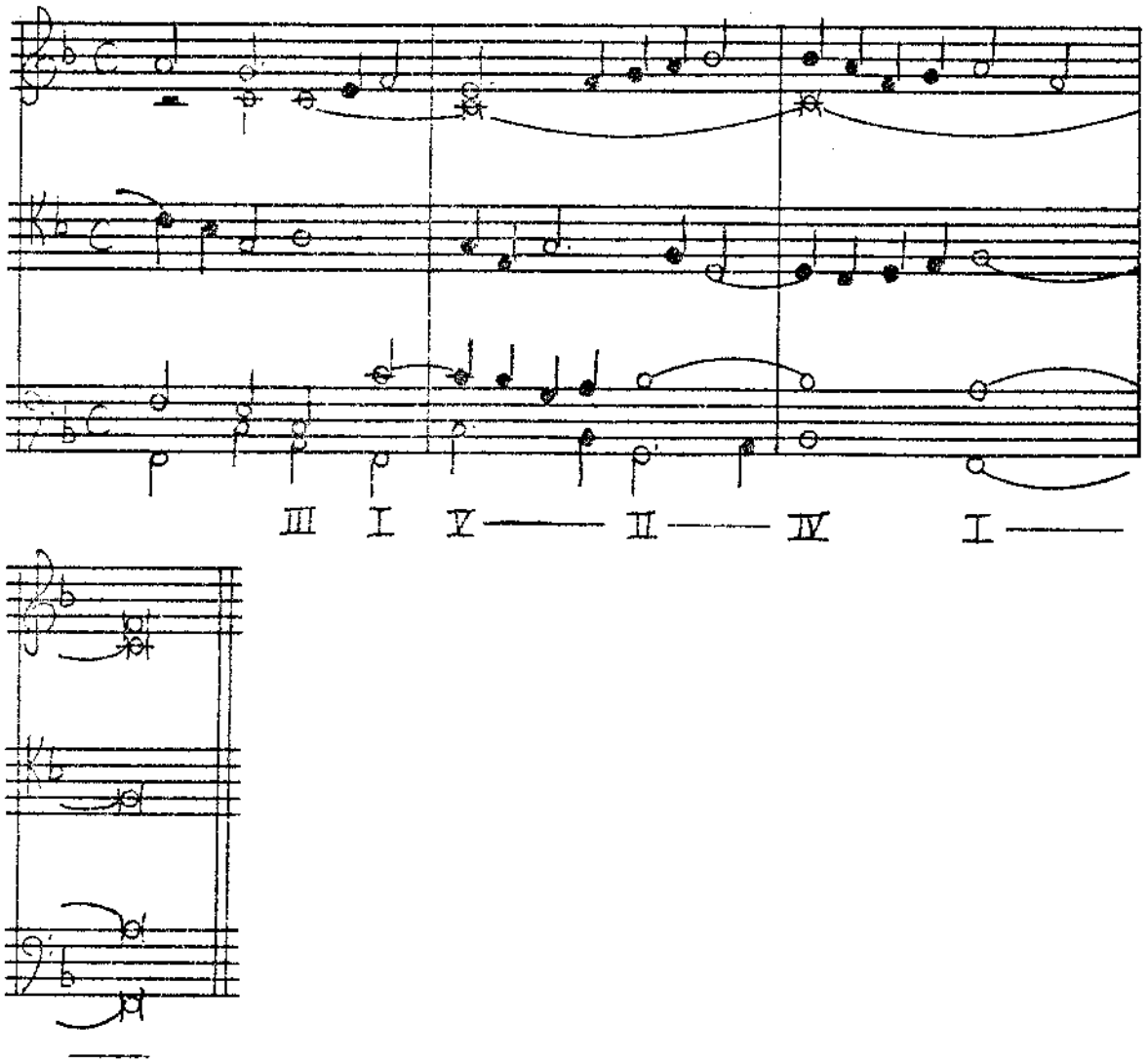
Ex. 298--Handl: Missa super Sancta Maria, Kyrie.



*"G's" in soprano and alto are suspensions.

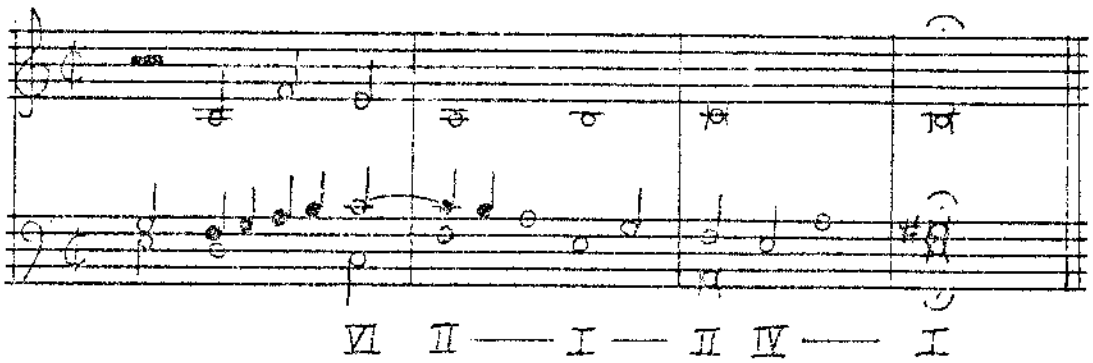
V - II - IV - I

Ex. 299--Kerle: Missa resurrexit pastor bonus, Gloria.



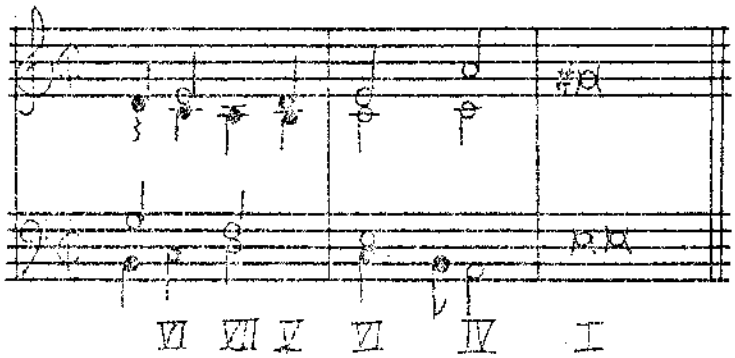
I - II - IV - I

Ex. 300--Monte: Missa super Anchor che col partire, Benedictus.



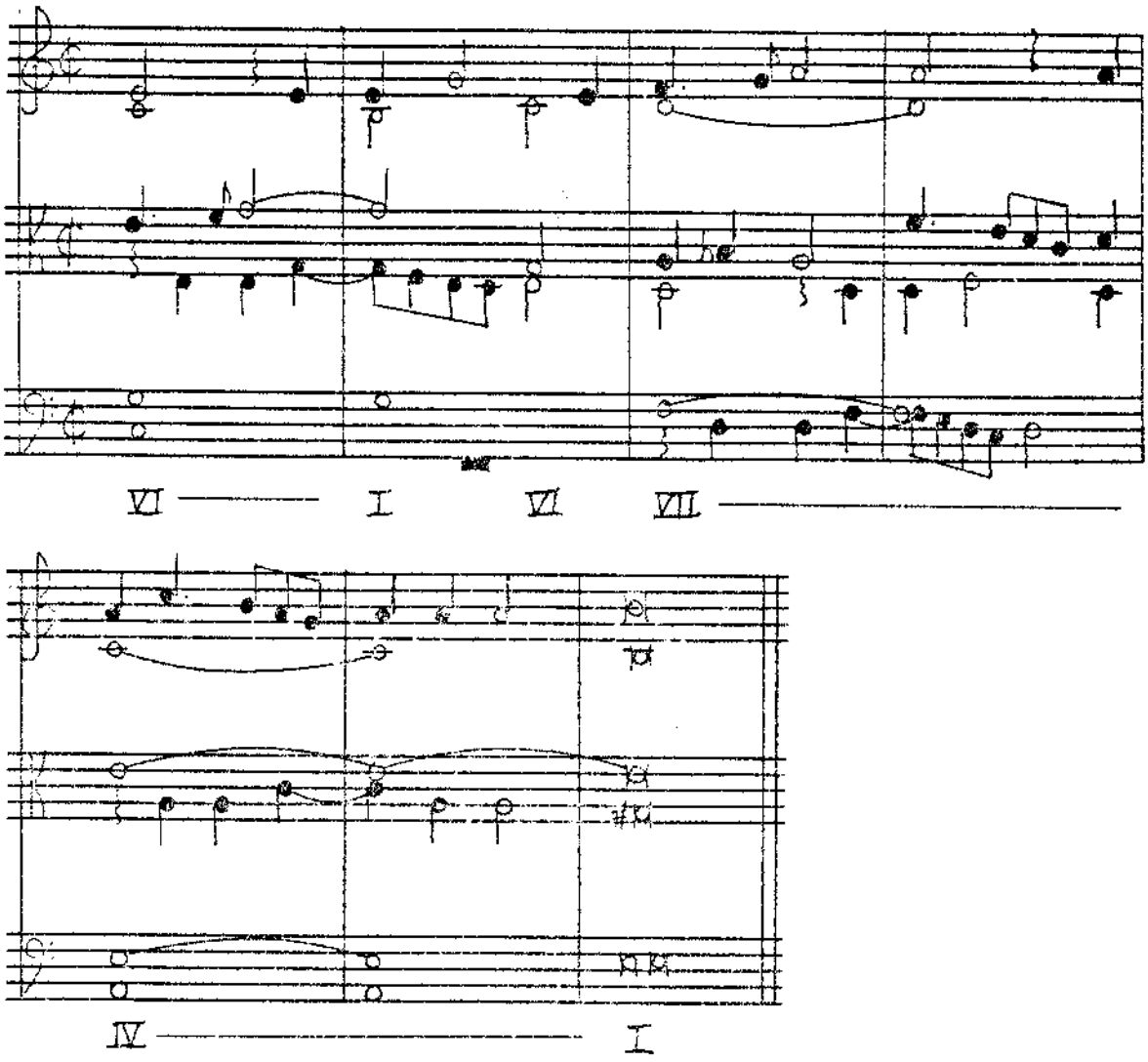
V - VI - IV - I

Ex. 301--Palestrina: Missa Jesu, nostra redemptio, Kyrie.



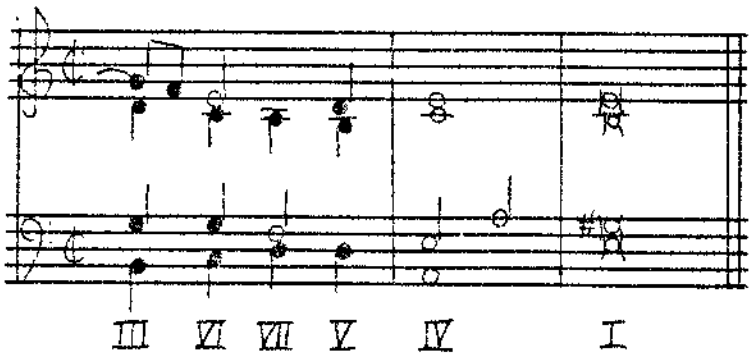
VI - VII - IV - I

Ex. 302--Palestrina: Missa Jesu, nostra redemptio, Agnus Dei II.



VII - V - IV - I

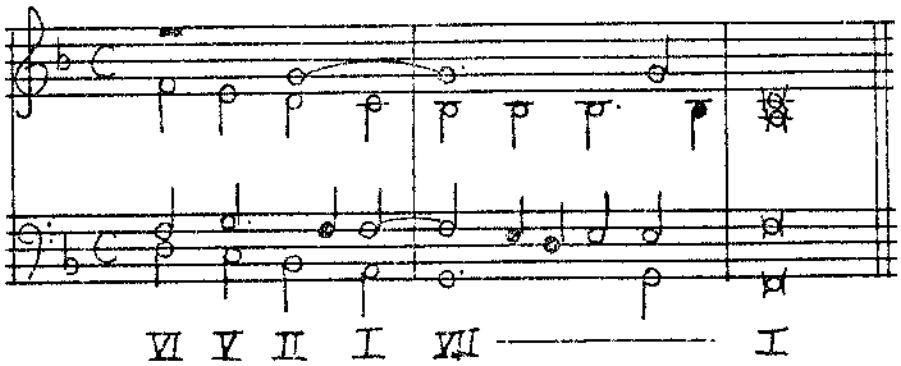
Ex. 303--Palestrina: Missa Jesu, nostra redemptio, Gloria.



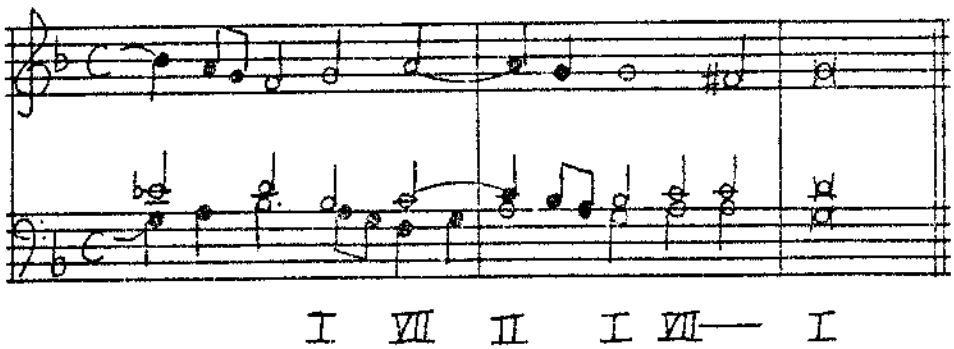
PROGRESSIONS CONCLUDING WITH VII - I

II - I - VII - I

Ex. 304--Kerle: Missa pro Defunctis, Introit.

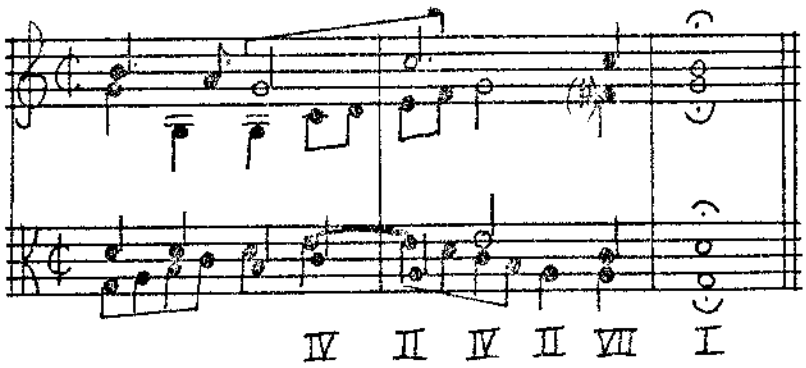


Ex. 305--Victoria: Missa O magnum mysterium, Benedictus.

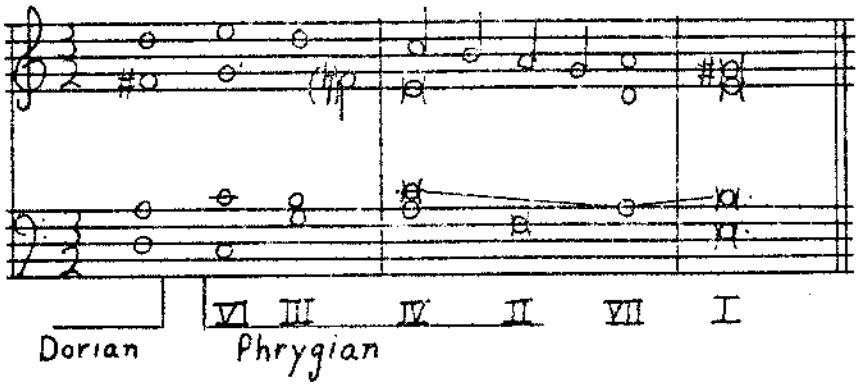


IV - II - VII - I

Ex. 306--Merulo: Missa Benedicta es coelorum Regina, Sanctus.

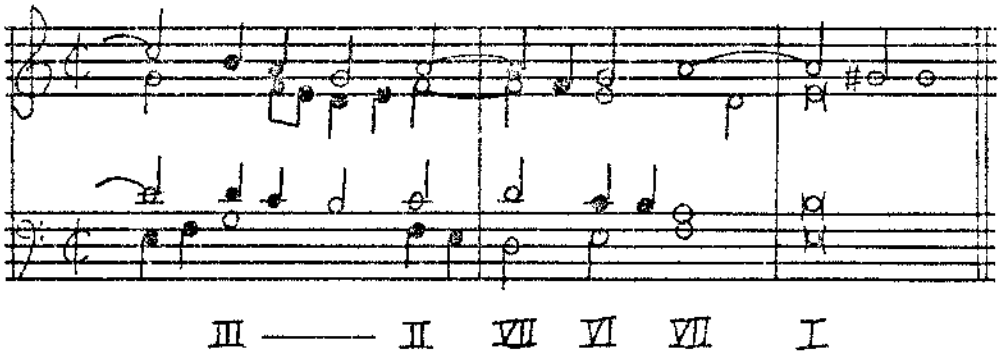


Ex. 307--Victoria: Missa quarti toni, Sanctus.

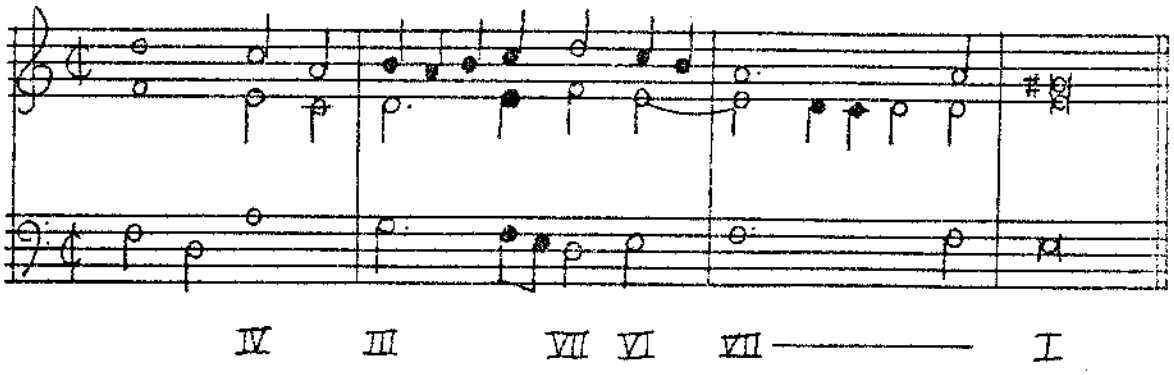


VII - VI - VII - I

Ex. 308--Victoria: Missa quarti toni, Kyrie.

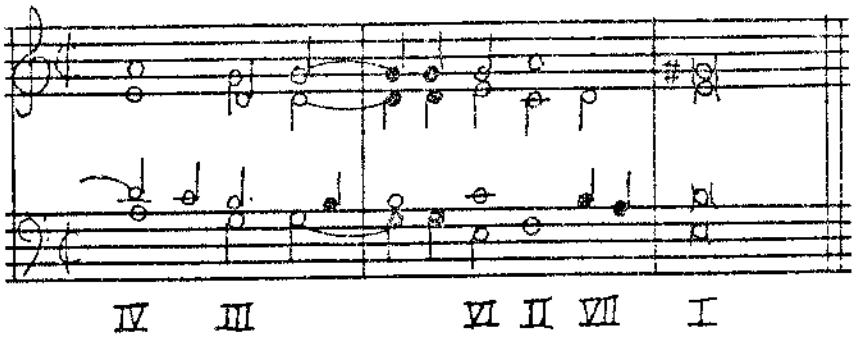


Ex. 309--Victoria: Missa quarti toni, Benedictus.



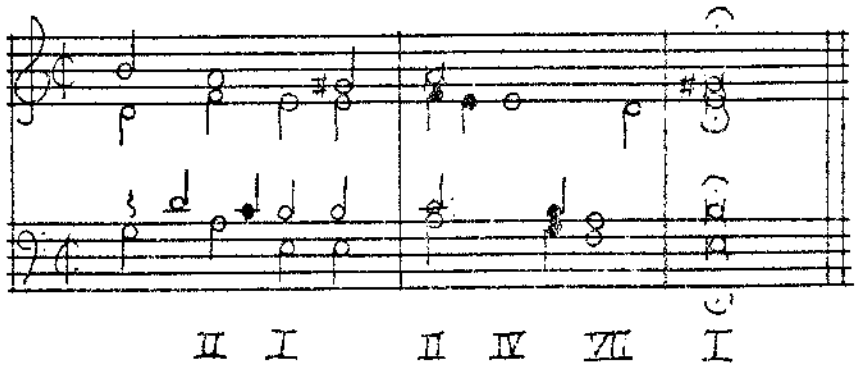
VI - II - VII - I

Ex. 310--Monte: Missa super Anchor che col partire, Sanctus.



II - IV - VII - I

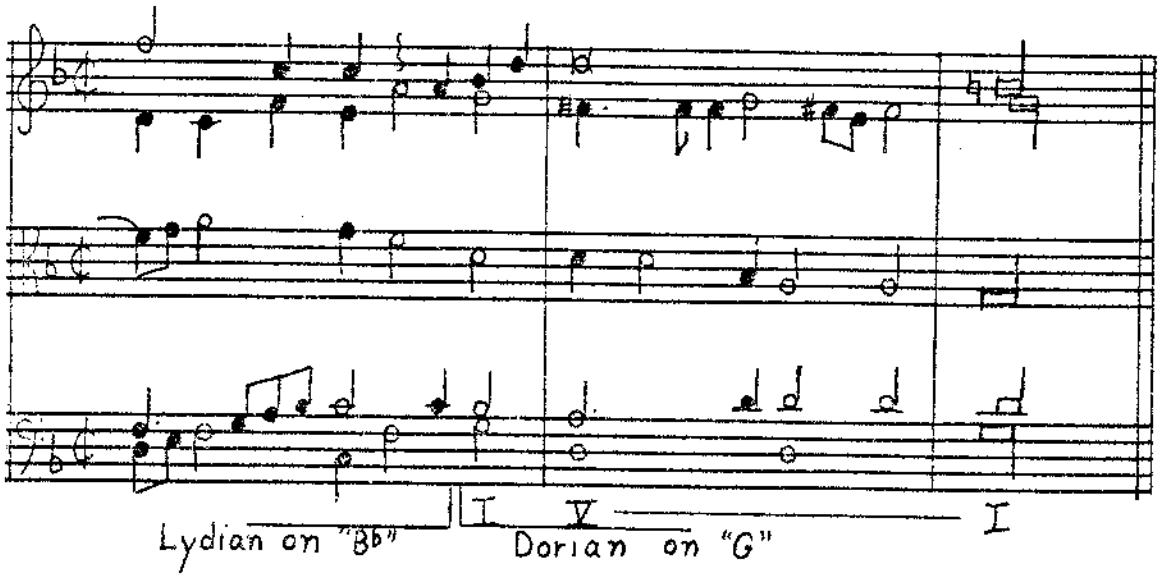
Ex. 311--Monte: Missa super Anchor che col partire, Kyrie.



PROGRESSIONS INVOLVING FEWER THAN FOUR CHORDS[1]

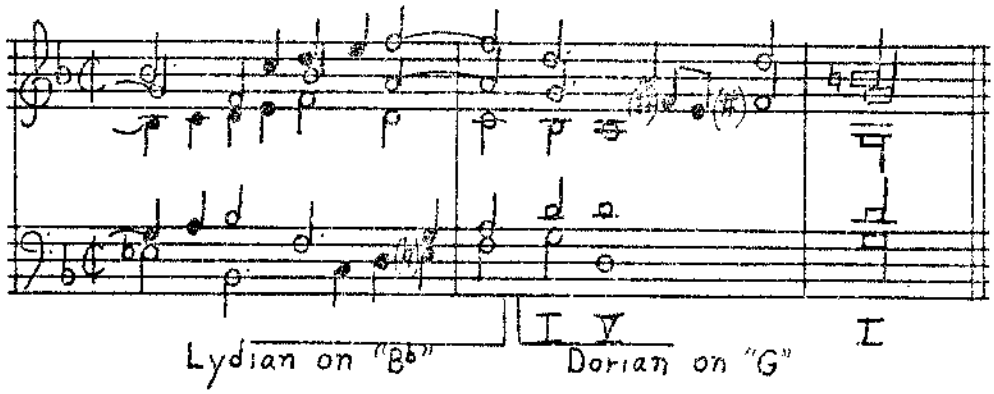
I - V - I

Ex. 312--Lassus: Missa super Triste depart, Credo.

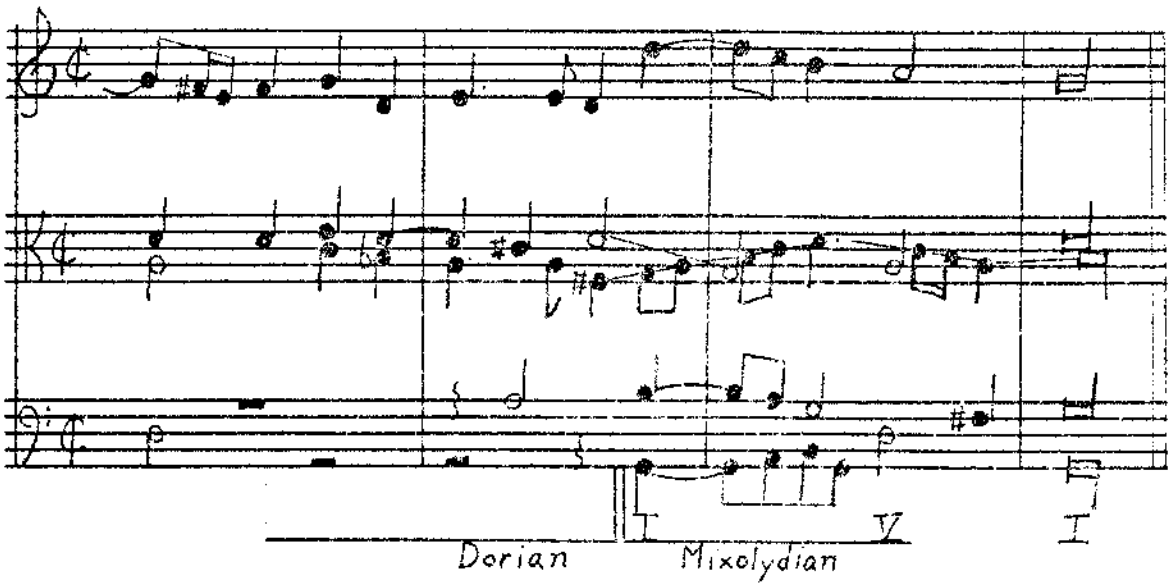


[1]See Chapter I, p. 9 for a discussion explaining why certain examples were analyzed with just three chords.

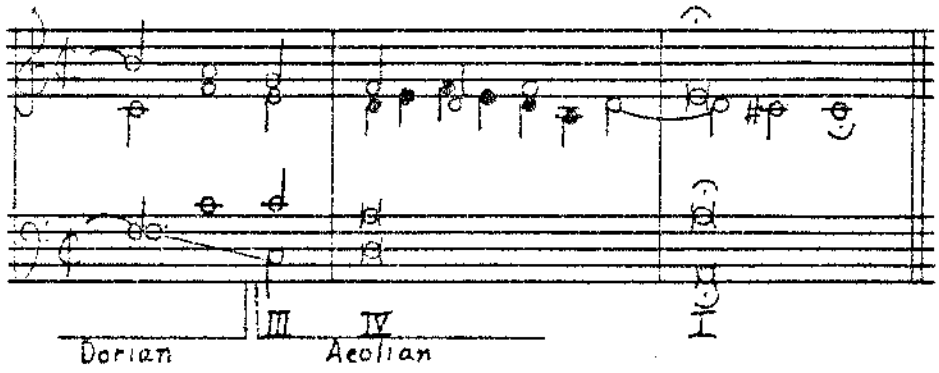
Ex. 313--Lassus: Missa super Triste depart, Kyrie.



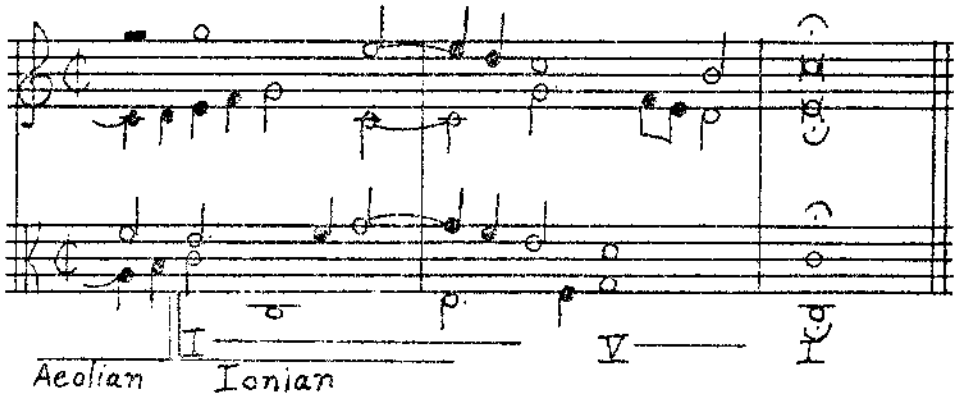
Ex. 314--Monte: Missa Emitte Domine, Credo.



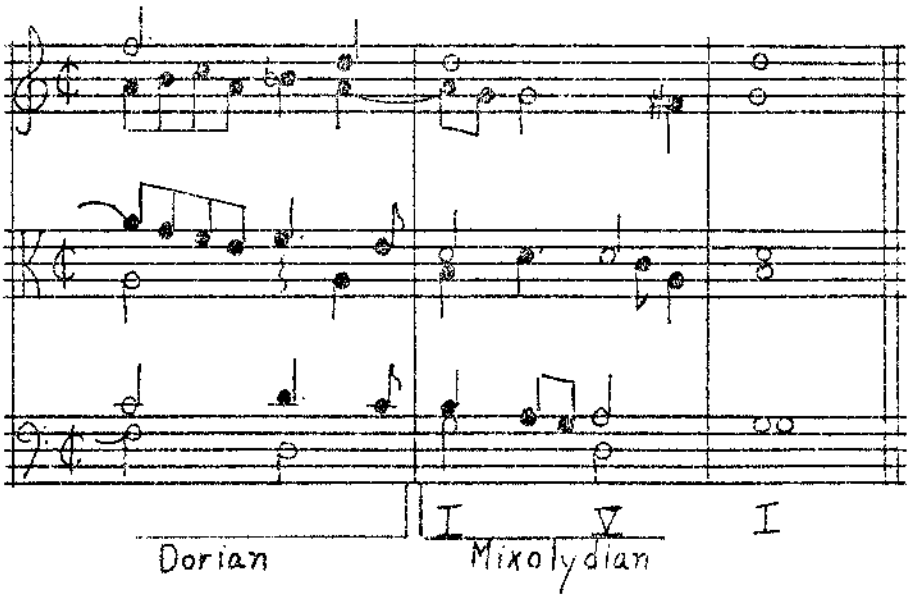
Ex. 315--Monte: Missa super Reviens vers moy, Sanctus.



Ex. 316--Monte: Missa Quaternis vocibus, Kyrie.

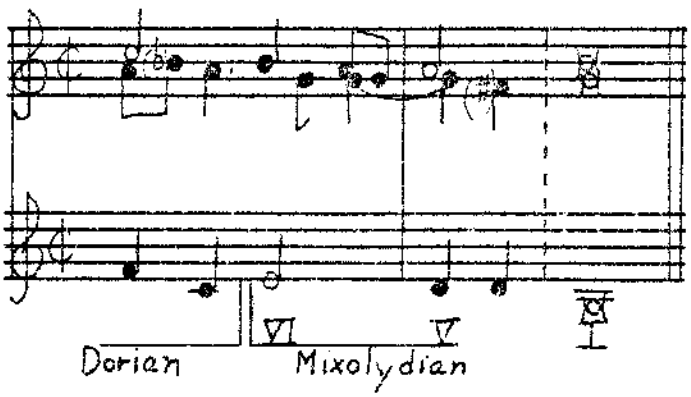


Ex. 317--Palestrina: Missa Ecce ego Joannes, Sanctus.



VI - V - I

Ex. 318--Palestrina: Missa Ad fugam, Benedictus.



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